

Lucent Technologies
Bell Labs Innovations



DACS II
Command and Message Manual
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Volume I

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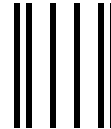
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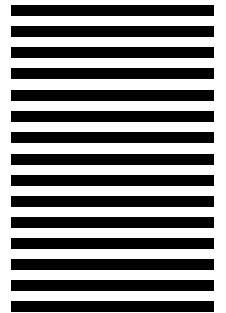
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GL

Glossary

V4



Contents

About This Manual

Background

Purpose

The *DACS II Release 9.1.3 Command and Message Manual* describes the input commands and output messages of Release 9.1.3 of the Digital Access and Cross-Connect System II (DACS II). In addition, it provides full support for previous product releases.



NOTE:

Those customers using this manual with Releases 3 through 7.0.3 software should be aware that all features of a particular message shown for Release 9.1.3 may or may not apply to previous releases.

Reason for Issue

The *DACS II Release 9.1.3 Command and Message Manual* has been issued to include updated and new commands applicable to Release 9.1.3.

Background (Continued)

Intended Audiences

This manual is a catalog of messages intended for reference by a technician or craftperson who needs additional details about a message. It provides the user with supplemental information for the Digital Access and Cross-Connect System II (DACS II) that is programmed in the HuMan-Machine Language (MML) Program Documentation Standards (PDS) language. An example of a user is someone performing a task from an operation and maintenance manual who needs the definition of a specific keyword to complete the task.

Manual Contents

Volume Breakdown

This manual consists of four volumes as follows:

- **Volume I** - This volume contains general information about the document, a detailed introduction that defines DACS II messages, relates how to communicate with DACS II, introduces the administrative links, and discusses in detail NPC addressing, on-line help feature, system configuration and features a listing of related documentation. Message listings in this volume include alphabetical and numerical, summary list of input commands and a list of autonomous messages. A comprehensive presentation of input commands and output messages (ABT through CTST) concludes this volume.
 - **Volume II, III, and IV** - These three volumes contain input commands and output messages in the following order:
 - **Volume II** - DCH through OPR
 - **Volume III** - REPT through TTST
 - **Volume IV** - UTL and the Glossary
-

Manual Conventions

Special Font Used This manual uses special fonts to differentiate computer input/output. The constant width font indicates message formats and messages as they would appear on a DACS II terminal screen.

Notes Notes inform users of special considerations, situations, or items to remember. An example of a Note is shown below:



NOTE:

Terminated connection for DMB concatenation is not allowed.

Safety Label

Cautions indicate the presence of a hazard that will or can cause a frame alarm or property damage if hazard is not avoided. An example of a Caution is shown below:



CAUTION:

The UMC is inserted towards the direction that is terminated, potentially causing a loss of service.

Related Documentation

Related DACS II Documents

The following documents support the DACS II:

- DACS II Installation Manual
 - IPH903 (DACS II CEF)
 - IPH903I (DACS II ESBF).

Audience: Customers planning to install the equipment

Content: Customer installation instructions.

- DACS II Release 7.0 Product Description Manuals:
 - 365-353-085 (24 Channel)
 - 365-353-086 (30 Channel).

Audience: Network planners, engineers, and others that need to know how the DACS II works and fits into the network

Content: Features, applications, and description and other reference information.

- DACS II Release 9.0 Operations and Maintenance:
 - 365-353-261(1.544 PDS)
 - 365-353-271 (1.544 MML)
 - 365-353-281(2.048 PDS)
 - 365-353-291 (2.048 MML)

Audience: End-user maintenance personnel

Contents: Procedures to operate and maintain the DACS II.

- DACS II Release 9.1.3 Feature Guide:
 - 365-353-298 (PDS)
 - 365-353-297 (MML)

Audience: End-user maintenance personnel

Content: Information and procedures for this new feature.

(Continued on next page)

Related Documentation (Continued)

Related DACS II Documents, Continued

- DACS II Release 9.1.3 Command and Message Manuals:

- 365-359-212 (PDS)
- 365-359-211 (MML)

Audience: End-user maintenance personnel

Content: Description of each software input message and its response along with a description of each system output report.

- X.50/X.57 Subrate Application
Release 1.0.3 for DACS II/Release 1.0.4 for DACS II ISX
MML 2.048 Mbit/s Interface User's Manual

- 365-350-101 (MML).

Audience: End-user maintenance personnel

Content: Complete manual describing how to install and operate the X.50/X.57 Subrate application on the DACS II or DACS II ISX. Commands and messages describing how to perform subrate cross-connects and subrate test access are included.

- DDS Subrate and MJU Application
Release 1.0.4 for DACS II/Release 1.0.5 for DACS II ISX
User's Manual

- 365-350-110 (PDS)
- 365-350-111 (MML).

Audience: End-user maintenance personnel

Content: Complete manual describing how to install and operate the DDS Subrate and MJU application on the DACS II or DACS II ISX. Commands and messages describing how to perform DDS subrate cross-connects, subrate test access, and subrate MJU operations are included.

(Continued on next page)

Related Documentation (Continued)

Related DACS II Documents, Continued

- Digital Multipoint Bridge (DMB)
DSP Platform Application
Release 1.0.2 for DACS II/Release 1.0.3 for DACS II ISX
User's Manual
 - 365-353-144 (PDS)
 - 365-353-154 (MML).

Audience: End-user maintenance personnel

Content: Complete manual describing how to install and operate the DMB application on the DACS II or DACS II ISX. Commands and messages describing how to perform DMB cross-connects and DMB test access operations are included.

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Overview

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-

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How to Order Documentation (Continued)

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Lucent Technologies
DACS II Documentation Coordinator
Attn: Patti Pearson-Kotz
Room 8B-205
2000 N. Naperville Rd.
Naperville, IL 60566-7033 USA

Electronic Documentation

Overview

Documentation for DACS II and DACS II ISX is now available in electronic form, on CD-ROM (compact disk, read-only memory). CD-ROM has many advantages over traditional paper documentation, including cost savings, search and retrieve capability, and the assurance of the most current documentation.

CD-ROM is available by annual subscription (on standing order).

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Technical Information

For technical information, call the DACS II Documentation Coordinator: (1-732-949-5989).

Introduction

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Background

Foreword

This manual contains commands and messages for Digital Access and Cross-Connect System II (DACS II) software Release 9.1.3.

Who Should Use This Manual

This manual is a catalog of messages intended for reference by a technician or craftsman who needs additional details about a message. It provides the user with supplemental information for the DACS II that is programmed in the Program Document Standards (PDS) language. An example of a user is someone performing a task from an operation and maintenance manual who needs the definition of a specific keyword to complete the task.

How To Use This Manual

The user refers to a particular message via the message number or the action verb. The messages are arranged in alphabetical order by action verb; for example, add, audit, broadcast, change, etc. A numerical list, an alphabetical list, and a summary of input commands list provide cross referencing of messages and should help in locating a particular message.

(Continued on next page)

Background (Continued)

How To Use This Manual, Con't

A *message* is a communication between a user* [†]and DACS II. Input messages, or *commands*, are sent by a user to a DACS II. Output messages are originated by a DACS II and sent to the user.

How the Manual Is Organized

This manual consists of four volumes as follows:

Volume I Contents

- Introduction
 - About This Manual
 - DACS II Messages
 - DACS II Administrative Links
 - NPC Addressing
 - On-Line Help Feature
 - System Configuration
 - Documentation Support
 - Message Lists
 - Alphabetical List of Messages
 - Numerical List of Messages
 - Summary of Input Commands
 - List of Autonomous Messages
 - Messages (ABT through CTST).

Volume II Contents

- Messages (DCH through OPR)

Volume III Contents

- Messages (REPT through TTST)

Volume IV Contents

- Messages (UTL)
- Glossary

* A *user* can be a person operating a terminal connected to a DACS II or an Operations System (OS), such as TIRKS[†] system, SARTS, etc.

[†] TIRKS is a registered trademark of Bell Communications Research, Inc.

DACS II Messages

Description

In this manual, DACS II messages are arranged in alphabetical order with the input command preceding the output message(s) associated with that command. Table 1, following the "Output Message Format" section, groups the messages according to functional category, message number, verb, and keyword. The inexperienced technician or craftsman should find this table helpful in locating a particular message, group of messages, verb, or keyword.

How Messages In This Manual Are Formatted

Each message is presented in actual input command format with accompanying explanations of parameters. Additionally, all responses to the input command, such as the completion, the denial, and any autonomous messages generated from the input or that are activated by the machine, are shown.

Understanding Message Numbering

Messages are grouped according to verbs and keywords and are indexed for reference by a *message number*.

IMPORTANT: In the PDS language, the message number is used for organization and reference and does not appear in an actual message.

Message numbers have the following format:

I . mmmn	Input command
O . mmmn	Output message reporting a successful or conditional completion (COMPL) of the input command
O . mmmn . pp	Output message reporting a denial (DNY) of the input command.

Input commands are prefixed by an I; output messages are prefixed by an O. All messages related to each other have the same mmm digits. An input command may have more than one completion output message. In this case, the last digit, n, indicates the particular completion message. Denial output messages are referenced by the additional digits pp.

(Continued on next page)

DACS II Messages (Continued)

Understanding Message Numbering

For example, consider the monitor test access group of messages (mmmm = 2100). Below is a replica of the input command followed by the possible output messages for this group:

```
I.21001      TTST:FRM xy,SEQ ww:MON[, TO ghijj], TP kk!
O.21001      ::TTST MON TP COMPL
O.21001.01   ::TTST TP DNY
O.21001.02   ::TTST MON TP DNY
O.21001.03   ::TTST MON TP ASSGN DNY
O.21001.04   ::TTST MON TP DNY
```

Usage of Uppercase and Lowercase Characters

In the command and message formats, uppercase and lowercase letters distinguish between information that is constant (uppercase) and information that is variable (lowercase). Any character written in uppercase appears on the output device exactly as written. A variable represented by lowercase letters will be replaced on the printout or screen by a value listed under the EXPLANATION OF PARAMETERS for that particular variable.

Representation of Lines Longer Than the Page Width

Many message lines in this document exceed the width of the margins of the page on which they are printed. Consequently, a way to present the message on more than one line while maintaining an accurate representation of the message's parameter fields and the character spacing between them has been devised. The backslash character is used in both input and output message representations to mark the point in the message text where a single line has been truncated and continued onto another line. This is consistent with the present use of the backslash character on input to enter a command whose length exceeds 80 characters. The user can easily construct the single-line representation because the backslash marks the extent of any blank characters in the message.

Rather than using the backslash convention discussed above, some utility (UTL) output messages are printed in a reduced type font because of their volume.

DACS II Messages (Continued)

Delimiters

Delimiters are used to enclose a field in a message:

- [] Brackets indicate an optional field, one which may or may not be used in the input command or appear in the output message.
 - { } Braces indicate a field containing alternate choices. For input commands, the user must select one of the choices. In output messages, braces indicate that only one of the fields within the braces will appear.
 - < > The less than and greater than symbols enclose an abbreviation representing variable length information. These delimiters are never used in actual DACS II input commands or output messages but are used only in describing the message format in this manual.
 - () Parentheses **are** part of the message text and must be entered where shown.
-

DACS II Messages (Continued)

Message Layout and Heading Definitions

The layout or skeleton for a message in this manual contains the following major headings:

EXPLANATION OF COMMAND

INPUT COMMAND

1.544 Mbit/s Termination (if applicable)

Nonhierarchical Format

Hierarchical Format

2.048 Mbit/s Termination (if applicable)

Nonhierarchical Format

Hierarchical Format

COMPLETION MESSAGE

1.544 Mbit/s Termination (if applicable)

Nonhierarchical Format

Hierarchical Format

2.048 Mbit/s Termination (if applicable)

Nonhierarchical Format

Hierarchical Format

DENIAL MESSAGE (Not applicable to every message)

1.544 Mbit/s Termination (if applicable)

Nonhierarchical Format

Hierarchical Format

2.048 Mbit/s Termination (if applicable)

Nonhierarchical Format

Hierarchical Format

AUTONOMOUS MESSAGE (Not applicable to every message)

1.544 Mbit/s Termination (if applicable)

Nonhierarchical Format

Hierarchical Format

2.048 Mbit/s Termination (if applicable)

Nonhierarchical Format

Hierarchical Format

EXPLANATION OF PARAMETERS

(Continued on next page)

DACS II Messages (Continued)

Message Layout and Heading Definitions, Con't

EXPLANATION OF COMMAND explains the input command in general terms.

INPUT COMMAND shows the command exactly as it appears when entered at the terminal. An exception is that some input commands are too long to be displayed on a single line; therefore, these messages are presented on multiple lines. Both the nonhierarchical and hierarchical NPC numbering formats are shown (refer to the "NPC Addressing" section).

COMPLETION MESSAGE is the normal response to the input command and indicates the successful completion of the command or the task requested by the command.

DENIAL MESSAGE indicates the input command has been denied and will not be executed. The denial message includes an error code describing the reason for the denial.

AUTONOMOUS MESSAGE report a change in the equipment/operations state of the DACS II. For example, a frame audit message (FRADTS) will be generated when a diagnostic and audit background test finds a problem with the equipment..

EXPLANATION OF PARAMETERS explains keywords and variables in detail, such as the specific entity, condition code, etc., for that command. The uppercase letters denote keywords and the lowercase letters denote variables.

Communicating With DACS II

Input Command Modes

An input command requests an action to be performed; this command contains necessary information for DACS II to accomplish the requested action. The user has two basic modes for inputting commands: The command mode and the menu/prompt mode.

Command Mode

The command mode is for the experienced user or machine-machine operation. A command must be selected along with variables and entered within a single line. The user types a single-line command with the only carriage return occurring at the end. "Single-line" refers to the input *command*, not to the display of the command. *A long single-line command may extend for several lines on a display terminal.*

DACS II accepts up to 120 characters of input per command. If an input command exceeds 80 characters (the standard width of most terminal screens), the input will continue on the next line of the display beginning with the 81st character. However, the command line can be broken at a convenient place by typing a backslash (\) followed by a carriage return. The display of the input command will continue on the next line, but the command will be interpreted as a single-line command. If 120 characters is not sufficient or if the user finds entering long commands error-prone, the single-line command can be broken up into several smaller commands.

Entering a carriage return without the backslash terminates the input and causes the line to be interrupted. An exclamation point (!) also terminates the input command (that is, DACS interprets the carriage return and ! as the end of the command). If the carriage return is used, ! is echoed back to the terminal.

Menu/Prompt Mode

The **menu/prompt mode** consists of **on-line help** to assist a user in completing an input command. This mode aids the user by providing a list of context sensitive alternative variables or keywords.

The user starts the menu/prompt mode by entering a question mark (?) in the command line at the point in question. In response, DACS II presents a list of possible keywords. This list is presented to the user in menu or prompt form. At this point, the user may continue or return to the command line. If the user continues, he/she should refer to the detailed examples (menu form and prompt form) in the "On-Line Help Feature" section.

Communicating With DACS II (Continued)

Aborting an Input Command or Output Message

The ABT command is entered to *interrupt an input command or an output message*. If ABT is entered for a particular link, the output from this link will be interrupted just after the ABT command is entered or after one or two output lines. The output message on the other links may or may not be interrupted, option dependent. When ABT is used, the command generating the output will be completed unless the autonomous message, ERR CMD ABT TM STOPPED (Message O.01121), appears. See the ABT command (I.55711) in this document for a list of commands and messages that may be aborted.

For a nonabortable message, the output message will not be affected.

If a nonabortable message is being printed out but DACS II is executing an abortable command, the ABT command will stop that command and ERR CMD ABT TM STOPPED will be outputted on all links.

Input Command Format

General Format

The general format for an input command is:

VERB:FRM xy,SEQ ww:DATA [] !

Command Explanation

VERB is the action verb telling the system to do something: add, change, cross-connect, restore, etc. The verbs are listed in Table 1 and in the Glossary.

The FRM xy field is optional and identifies the DACS II frame to which the command is being sent. A DACS II frame is identified by a 2-digit number whose range is from 00 through ZZ. This number is assigned to the frame when it is placed into operation.

The sequence field SEQ ww assigns an identifying 2-digit number to the command and is also optional. The number is arbitrarily chosen by the operator. This field is commonly used when two or more remote operators using an OS are sharing the same administrative link. Sequence numbers enable the operators to keep track of their commands. The frame and sequence fields are optional. If the sequence field is omitted, sequence number "00" is assigned to the command by default.

(Continued on next page)

Communicating With DACS II (Continued)

Data Field

Input Command Format, Con't

The DATA field consists of keywords and numbers as required by the command. A delimiter, brackets [] in this case, encloses variable optional information which gives specific information that is required by the verb to execute that command. All variables are positional by significance within the command line.

Colons are used to separate the variables (also called group, block, field); but if they are logically connected, these variables are separated by commas. The colon (:) is used as a variable field delimiter.

Additional variable information is contained in the EXPLANATION OF PARAMETERS as required for the message. Verbs, keywords, and variables are positionally significant within the command line.

Command Example:

```
RST:FRM 05,SEQ 12:NPC 097! PF
```

The above command asks DACS II to restore to service (RST) network processing circuit number 97 (NPC 097) in DACS II frame number 5 (FRM 05). The operator has arbitrarily assigned the sequence number 12 (SEQ 12) to the command.

Keywords

An input command consists of *keywords* that combine the equipment and circuit identification variables. A *keyword* is an alphanumeric string of characters representing:

- Verb (also called action verb or command verb)
- Entity identification
- Address specification
- Results of a command.

Verbs are keywords or action verbs that tell the system to do something.

Entity identification is a keyword that identifies a specific system or circuit pack within the system. For example, the keyword NPC refers to a network processing circuit.

(Continued on next page)

Communicating With DACS II (Continued)

Keywords, Con't

Address specification is a keyword that refers to a specific address. TP 03, for example, refers to a specific test port (Test Port 03).

Keywords sometimes report the results of a command. In response to a diagnostic command, DACS II might return the keyword ATP to indicate "All Tests Passed."

The "Glossary" section contains a listing of all keywords and their definitions.

Input Command Control Characters

The following characters may be used while entering the input command:

- **&** (or **CONTROL-x**, or **CTRL-x**). *Abandon message.* Entering any one of these characters will cause the message to be abandoned and will return the DACS II system prompt.
 - **^ h** (or **CONTROL-h** or **CTRL-h**), **_** (underline), **S** (or **BACKSPACE**). *Erase last character.* Depressing the CONTROL and the H keys simultaneously or depressing the underline key or the BACKSPACE key causes DACS II to ignore the last character of a message and echo an underline (_). Entering *n* number of erase character symbols causes DACS II to ignore the last *n* characters of a message.
 - **BREAK**. *Interrupt output message.* The BREAK key interrupts an output message. The message continues after an allotted amount of time has passed or after the operator completes entering the input command.
-

Communicating With DACS II (Continued)

Input Command Acknowledgements

After DACS II has received the execute character of the input command, an immediate reply will appear with one of the following acknowledgements:

- PF (Printout Follows)

DACS II received the input command and processed it. An output message will soon be returned. The output message will report the results of the work initiated by the command. If the system cannot complete the command, the reason will be printed.

- RL (Retry Later)

DACS II cannot execute the requested command now because it does not currently have system resources available.

- The system could be temporarily overloaded.
- The command queue could be excessively long.
- The requested program may be busy, etc.

Wait, and enter the command later.

- NG (No Good)

The basic format of the command is correct, but the system is in trouble. For example, MP = MCOND means the main processor is in the maintenance condition state.

- NA (No Acknowledgement)

The command has been accepted by the parser, but processing control has been lost, thus making correct acknowledgement impossible. An example is when the communications interface (CI) has detected a local area network (LAN) failure.

(Continued on next page)

Communicating With DACS II (Continued)

Input Command Acknowledgements, Con't

If either NA or RL is sent as an input acknowledgement, a normal or error output message may not be sent. Also, if the input command itself is in error, the input acknowledgement will indicate this fact and either the normal or error message will not be sent.

Acknowledgement	Meaning
?V<cr><lf>	Command code error
?D<cr><lf>	Parameter block error
?E<cr><lf>	Error in command, cannot be identified as either ?V or ?D
?P<cr><lf>	Parity error occurred in the input
?T<cr><lf>	The time between characters exceeded timeout threshold
?X<cr><lf>	Command aborted, in response to a <cancel> or <break> from user

Output Message Format

There are three types of DACS II output messages. The normal or **completion message** indicates that the input command from the user has been executed and completed. An error response or **denial message** means the input command has been denied and gives the reason or condition code for the denial. An autonomous output message reports a change in the operational state of the DACS II.

Communicating With DACS II (Continued)

General Format of a Single-Line Output Message

The format for an output message is:

PA TIME FRM,SEQ LINK IDENT DATA TERM

PA Field

The priority of action (PA) field is a 2-character field indicating the priority level as follows:

*C	Immediate action, critical alarm
**	Immediate action, major alarm
*	Action, minor alarm
M^	Results of manual action
A^	Autonomously generated action message
I^	Autonomously generated information message.



NOTE:
The ^ indicates a space.

TIME Field

TIME is the time of day using a 24-hour clock with an hours:minutes:seconds (hh:mm:ss) format.

FRM Field

The 2-digit FRM field identifies the DACS II frame that sent the message.

LINK Field

The LINK field contains a digit from 1 through 6, optionally followed by two more digits, that identifies the DACS II administrative link that originated the command. A blank LINK field indicates an autonomous message generated within DACS II. The optional two digits identify the virtual circuit number and range from 1 through 16.

(Continued on next page)

Communicating With DACS II (Continued)

**General Format
of a Single-Line
Output Message ,
Con't**

IDENT and DATA Fields

The IDENT and DATA fields identify the action verb and associated keywords, variables, and data to which the output message is responding.

TERM Field

The termination field, TERM, indicates the results of a requested command. Some possible terminations are:

COMPL	Requested action is completed.
STOPPED	Requested action stopped before normal completion.
IN PROGRESS	Requested action is in progress.
[] DNY	Requested action is denied. The reason for denial is indicated in the output message. The brackets signify various keywords and data used to explain the reason.

**Completion
Message**

A possible response to the input command RST:FRM 05,SEQ 12:NPC 097! (restore to service network processing circuit number 097 in DACS II Frame 05) could be:

M 07:39:20 05,12 2 RST NPC 097 TYPE DE100 COND 00 COMPL

M, the priority of action, indicates the result of a manually entered command. The time (07:39:20), the DACS II frame number executing the command (05), the message sequence number (12), and the link number (2) follow. The remaining fields reflect the input command that originated the output message and the results of the command. In this case, network processing circuit number 097 (NPC 097), a standard DE100 digroup card (TYPE DE100), was restored to service (RST). Restoration of the NPC occurred without error (COND 00), and the command was successfully completed (COMPL).

Communicating With DACS II (Continued)

Denial Message

A possible response to the input command RST:FRM 05,SEQ 12:NPC 097! could be:

M 07:39:20 05,12 2 RST NPC 097 TYPE DE100 COND 02 DNY

The denial reason in this example (COND 02) means that the NPC is not equipped. The other fields in the message are the same as the completion message.

Autonomous Messages

This example of an autonomous output message (65041) reports that a major or minor alarm for a parameter has been idled or cleared:

Nonhierarchical Format

I 07:39:20 05,12 ALM IDLD <parameter> NPC 097 COMPL

Hierarchical Format

I 07:39:20 05,12 ALM IDLD <parameter> NPC 01423 COMPL

Table 1-1. Functional Categories of Messages

MESSAGE CATEGORY	NUMBER	VERB	KEYWORD
Input Denials	01100	*	BAD, CMD, STOPPED, INACT
Startup Messages	01200	*	STARTUP, BOOT, RESET
Error Messages	01300	*	ERR, OVERLOAD, RESET
One-Way Cross-Connect Two-Way Cross-Connect	11000	OCON TCON	FROM, TO, MPM
One-Way Terminated and Two-Way Terminated Cross-Connections	12000	OCNT TCNT	FROM, TO, MPM
Broadcast Cross-Connect	13000	BCON	FROM, TO, TOX, BCAST, COND
Alternate Cross-Connect	14000	ACON	OLD, NEW, INCL, CUS, RDC

Table 1-1. Functional Categories of Messages (Contd)

MESSAGE CATEGORY	NUMBER	VERB	KEYWORD
One-Way Disconnect Two-Way Disconnect	15000	ODIS TDIS	FROM, TO, BCAST
Broadcast Disconnect	15200	BDIS	FROM, TOX, BCAST
Change Circuit Parameters	17000	CHG	TCON, OCON, FROM, TO
Change Circuit Parameters	18.20	CHG	BCON, SWCH
Edit Macro or Alternate Map	19000	ED	MACRO, MAP, APPEND, OPEN, DELETE, LIST, SAVE, MOVE
Two-Way Monitor	20000	CTST	FAD, FROM
Test Access	21000	TTST	MON, TP, ASSGN
Two-Way Split Test Access	23000	TTST	SPL, TP
Two-Way Hub Test Access	24000	TTST	HUB, TP
Two-Way Terminate and Leave Activate/Release Test Access	25000	TTST	TLA, TLR, TP, NUTST UASGN, PTLA, NTLA
Two-Way Test Port Release Test Access	27000	TTST	TPR, TP, ALL, COND
Two-Way Looped Test Access	29000	TTST	LPD, TP
Growth	30000	GRTH	FRAME, SYNC, UNIT, TB NPC, TP, TLI, RTMI, FC
Degrowth	32000	DGRTH	SYNC, UNIT, TB, TLI NPC, TP, FTMI, TYPE
Remove	33000	RMV	MC, LINK, SYNC, CCNI CCB, TSI, TSIS, UNIT CRO, CCN, UC, FC, NPC CCI, ETSI, ETSIS, ECCN

Table 1-1. Functional Categories of Messages (Contd)

MESSAGE CATEGORY	NUMBER	VERB	KEYWORD
One-Way Disconnect Two-Way Disconnect	15000	ODIS TDIS	FROM, TO, BCAST
Broadcast Disconnect	15200	BDIS	FROM, TOX, BCAST
Change Circuit Parameters	17000	CHG	TCON, OCON, FROM, TO
Change Circuit Parameters	18.20	CHG	BCON, SWCH
Edit Macro or Alternate Map	19000	ED	MACRO, MAP, APPEND, OPEN, DELETE, LIST, SAVE, MOVE
Two-Way Monitor	20000	CTST	FAD, FROM
Test Access	21000	TTST	MON, TP, ASSGN
Two-Way Split Test Access	23000	TTST	SPL, TP
Two-Way Hub Test Access	24000	TTST	HUB, TP
Two-Way Terminate and Leave Activate/Release Test Access	25000	TTST	TLA, TLR, TP, NUTST UASGN, PTLA, NTLA
Two-Way Test Port Release Test Access	27000	TTST	TPR, TP, ALL, COND
Two-Way Looped Test Access	29000	TTST	LPD, TP
Growth	30000	GRTH	FRAME, SYNC, UNIT, TB NPC, TP, TLI, RTMI, FC
Degrowth	32000	DGRTH	SYNC, UNIT, TB, TLI NPC, TP, FTMI, TYPE
Remove	33000	RMV	MC, LINK, SYNC, CCNI CCB, TSI, TSIS, UNIT CRO, CCN, UC, FC, NPC CCI, ETSI, ETSIS, ECCN

Table 1-1. Functional Categories of Messages (Contd)

MESSAGE CATEGORY	NUMBER	VERB	KEYWORD
Restore	34000	RST	MC, LINK, SYNC, CCNI CCB, TSI, TSIS, CCN UNIT, NPC, TLI, CRO ALL, UC, FC CCI, ETSI, ETSIS, ECCN
Configure	35000	CFR	XC, SYNC, FRAME
Add	36000	ADD	LINK, LEV, LANG
Edit/Delete	37000	DLT	NPC, USER, FPKG
Change Unit, CCN, NPC Parameters, User/Link profile, and Memory Allotment	38.20	CHG	FRM, SYNC, UNIT, SETOP NPC, PASSWD, SCR GR, MAP SPACE
Activate Map, Execute Macro, Login, Logoff	39000	ACT, EXC, STOP, LOGIN, LOGOFF	MAP, MACRO, USER, TCON
Diagnose	41000	DGN	FRM, MC, LINK, CI, SSC, DISK, TAPE, XC, SYNC, CCNI, CCB, TSI, TSIS, UNIT, NPC CCI, ETSI, ETSIS, ECCN
Utilities	51000	UTL	TOD, ACO, INIT, WHO QRY, DATE, BMTR, CLR FRM, VEDRSN, RCY, PASSWD CNFGR, ALM, FPKG
Utilities	52000	UTL	QRY, CMAP, DMAP, FROM TO, BCAST, TYPE, ALL, SYNC, EQD, UNITS, TSIS MARK
Utilities	53000	UTL	QRY, EQD, TPS, OPTS PEST, FAIL, OSS, ALMS ETSI
Utilities	55000	UTL	QRY, ESR, STR, ECCN

Table 1-1. Functional Categories of Messages (Contd)

MESSAGE CATEGORY	NUMBER	VERB	KEYWORD
Utilities	56000	UTL	CLR, STATE, LOC
Utilities	58.20	UTL	BOOT, CLR
Alarm	65000	ALM	CGA, DC, AR01, MJ, MN IDLD, ECCN, OOS, BMTR
Audits	8.200	AUD	QRY, ALL, FTU, NPCS
Frame Audits	8.200	FRADTS*	DGN, FRCMP, BMCMP, MC

* Autonomous Output Message

DACS II Administrative Links

Description

The DACS II can be administered (managed, operated) from a local terminal or remotely from an operations system (OS) connected via an administrative link. Seven physical links can be connected to the DACS II frame. Links 1–4 are asynchronous and links 5 and 6 can be asynchronous or synchronous depending on the communications interface. Link 7 (if running DACS II Release 9.0 and greater) can be configured as a TCP/IP link. Sixteen virtual circuits may be established on a synchronous link.

Physical and Virtual Link Numbers

Variables n and vv are used within the message formats to represent the physical and virtual link numbers, respectively.

Output Message Screening

A level of message screening can be assigned to each link. A user may choose to always receive output messages in response to his/her commands, to receive selected messages, or to receive all messages from the other links. Autonomous messages may be blocked for a particular link to prevent other output messages from being interspersed among the user's messages. Some uses of an administrative link are:

- DS0 channel and clear DS1 signal cross-connections and test access
 - Subrate data feature cross-connections
 - Common equipment and feature equipment provisioning and maintenance
 - Equipment and channel status information
 - DS1 and DS3 facility provisioning and maintenance
 - DS1 and DS3 facility performance readings
 - DS3 facility alarm surveillance and control (AS&C) and DS3 performance monitoring using telemetry asynchronous block serial (TABS) protocol.
-

DACS II Administrative Links (Continued)

Output Message Response

Administrative links carry output messages in response to one of the following occurrences:

- An input command

The output message reports that the input command was either completed successfully or denied; additionally, it may contain information requested by the input command. A *normal response* is an output message reporting a successful completion; and *error response* is an output message reporting a denial.

- An autonomous change in DACS II operation state

The output message reports a change in the DACS II system operation state which includes alarms and other trouble indications. This type of output message is referred to as an *autonomous response*.

NPC Addressing

Description	Two addressing or numbering schemes for network processing circuits are available: the nonhierarchical or extended format and the hierarchical . These numbering methods are used to provide a means of locating network processing circuits. The NPC numbering schemes for various NPC types are listed in Chapter 2.
Nonhierarchical Numbering	The nonhierarchical or extended method uses consecutive numbering to count through the units in the frame. Each unit has a fixed starting number (for example, 161 for unit 2; 21 for unit 3; 481 for unit 4). The starting number is the same for FTU or DSPU type units.
Hierarchical Numbering	The hierarchical method uses a three-part number: the unit number (uv), the module or group number within the unit (m), and the NPC number within the module (np) for a total of five digits (uvmnp).

On-Line Help Feature

Description

DACS II provides on-line assistance to the user when constructing commands at the terminal. This assistance is in the form of a menu-driven help routine. Different menus are displayed during the routine to provide the user with information on all of the command fields. The menu items include: command verbs, applicable keywords for a command, definitions of keywords, and the possible choices or number range for a variable field. Inappropriate selections bring error messages.

The help routine can be used to the degree needed to complete the command: either through the entire command in every field or only for a particular part of the command. Help will probably not be needed after some experience is gained at entering commands, since all the commands are documented and the direct entry of commands is so much faster.

Using the Question Mark and Return Keys

The Question mark and RETURN keys are entered to invoke different levels of the help routine. A question mark is entered by simultaneously depressing **SHIFT**

and **? /**. The question mark is used to initiate the routine or to get more information, and RETURN is used to see the alternative choices at a given point. The dialogue can be terminated either by typing CTRL-x or by completing the current command line when it is displayed. These functions are demonstrated in the following portion.

Summary: The Help Feature

By entering **SHIFT** **? /**, the user may ask DACS II for help at any time before or during the construction of an input command.

In the help mode, DACS II will offer the user menus for the selection of the message keywords and/or prompt for values of variable fields. Entering **SHIFT** **? /** provides a greater detail of information on the keywords or variables.

A user may select a keyword from a menu by selecting its index number or by entering the keyword itself.

The **RETURN** key displays the command line that has been constructed so far. The user may then enter the remaining keywords and values to complete the command or may enter **SHIFT** **? /** to return to the menu/prompt mode.

On-Line Help Feature (Continued)

Constructing An Entire Command Using Help

The following sequence demonstrates the use of the menus in the help routine to construct a simple UTL (utility) command. Only portions of long menu lists are shown here, but these examples still serve to demonstrate how selections are made.

To invoke the help routine at the start level, enter . DACS II will respond with OK and the following menu:

Select from:

- (1) 1. ABT
2. ADD
3. AUD

.

.

.

20. UTL

Selection?

To obtain more explanation, enter . DACS II will respond with OK and the following list:

Select from:

- (2) 1. ABT (abort the current command)
2. ADD (adjust link parameters)
3. AUD (query facility alarm data)

.

.

.

20. UTL (perform a general utility)

Selection (1-20 or the actual literal)?

Enter either 20 or UTL followed by . The DACS responds with this menu:

Select from:

- (3) 1. ,
2. :
3. FRM
4. SEQ

Selection?

To bypass the frame and sequence number, which is normally done unless that information is needed for records or to direct the command to a different location, enter either **1** or **:** followed by

.

The question mark prompts DACS II to respond with a list of possible keywords that could appear next in the command. The list is long; DACS II prompts the user to enter to page through it.

(4) Select from:

1. ACO
2. ALL
3. ALMS
- .
- .
- .
81. UNITS
82. WHO
83. XC

If the user enters a keyword and **?**, DACS II responds with OK and supplies the only appropriate keyword(s) to complete the command. For example, if the user enters:

(5) WHO and , DACS II responds:

UTL::WHO, QRY!
Command-line complete. Submit (YES/NO)?

(6) To enter the command, the user enters Y followed by .

On-Line Help Feature (Continued)

Obtaining Help at a Particular Point on a Command Line

In addition to being used to construct a command from scratch, DACS II's on-line help can be used to obtain information on particular fields of a command. If the command format is not known or if the keywords or variables are not clear, the help dialogue can be initiated at any point by entering .

Assume the user desires to cross-connect a multipoint circuit and enters the following command:

TCON:FROM 001001, TO 002003, MPM(SYM, LEG), TRSP!

DACS II responds:

(1)

```
M 08:19:06 01,00 2 TCON INERR BAD SYNTAX \
2 LN MSG:
TCON: :FROM 001001, TO 002003, \
=MPM=(SYM, LEG), TRSP! DNY
```

=MPM= indicates a problem.

The user can use the help feature to obtain information to reenter the correct command. If the user enters TCON: :FROM and , DACS II responds:

(2)

ds3u unit number =

The user desires a circuit using a DSPU NPC (Digital Signal Processing Unit Network Processing Circuit), not an FTU (Facility Terminating Unit). The user enters to see the next option, which is:

(3)

ftu npc number =

Another brings the desired option which is:

dspu npc number =

To get more information at this point, the user enters . DACS II responds:

(4)

dspu npc number (3-digit decimal integer, \ range 641-941) =

This is where the trouble occurred in the original command; one of the NPCs must be an MB-type in the range 641-941 (for specific values, see Message 11021).

- (5) The user enters 641 and .

DACS II responds:

dmb conference number =

The user enters to get more information. The following displays:

- (6) dmb conference number (decimal integer, \ range 1-85) =

The user enters the conference number, 2. To view the current command line, press . DACS II echoes the command line completed so far:

- (7)

TCON: :FROM 6412

The user may complete the command by directly entering remaining keywords and parameter values.

By entering , DACS II proceeds with the menu and prompts for the remainder of the command:

Select from:

- (8) 1. CUS
.
.
.
8. TO
9. TRB
10. TRSP

Selection?

The user enters 8 to select the T0 keyword (TCON: :FROM 641002, T0 . . .).

- (9) The user then enters to ask for information in the next command field. DACS II responds:

ftu npc number =

The user enters to get information on FTU NPC values. DACS II responds:

- (10) ftu npc number (3-digit decimal integer, \ range 001-640) =

The user enters FTU NPC number 002 and . DACS II responds with the command line developed to this point:

- (11) TCON: :FROM 6412, TO 002

By entering , the user may continue to be prompted through the construction of the remainder of the command or may directly input the remainder of the command for execution:

- (12) TCON: :FROM 641002, TO 002003, MPM(SYM, LEG), \ TRSP!

System Configuration

Frame Configuration and Bay Growth

This section discusses the frame configuration for a standard DACS II Capacity Expansion Frame (CEF) and for a retrofitted CEF. In addition, it details the bay growth schemes and requirements for the CEF.

Frame Configuration

A DACS II CEF supports one switch bay and up to six interface bays. The switch bay, always bay 2, controls the overall DACS II system operations and provides the switch matrix, power, timing and alarm, and administrative link connections. The interface bay terminates digital facilities and/or provides the digital signal processing function. Interface bays 1, 3, 4, and 5 support three unit positions, while interface bays 6 and 7 support two units. Therefore, a CEF can be equipped with a total of 16 units. Two interface bay types are supported:

- Original Interface Bay
 - Flexible Interface Bay
-

Original Interface Bay

The original interface bay supports two facility terminating units (FTUs) in its two upper unit positions and one digital signal processing unit (DSPU) or DS3 unit (DS3U) in its lower unit position. The original interface bay only appears in a retrofitted CEF. An interface bay used for a CEF can be an original interface bay only if the frame is a retrofit CEF. In such a case, the original interface bay can only be in bays 1 and 3. Bay 3 can be an original interface bay only if the CEF is retrofitted from a 3-bay frame. If bay 3 of a CEF is an original interface bay, bay 1 must also be an original interface bay.

Flexible Interface Bay

The flexible interface bay allows fully flexible unit provisioning. Each of the unit positions can be independently equipped as an IFTU, DSPU, or DS3U. The flexible interface bay can occupy any interface bay location; that is, it can occupy bay 1, 3, 4, 5, 6, or 7. The flexible interface bay is the standard interface bay type for the retrofitted CEF.

System Configuration, (Continued)

Bay Growth

The minimum bay equipage for a CEF is two bays: Bay 1 (an interface bay) and bay 2 (the switch bay). DACS II allows additional peripheral units and/or bays to be added to an in-service CEF without causing a hit to the existing service.

The bay choices and growth are provisioned by entries to the configuration file using the configuration file command:

```
[I.35021]  
CFR:FRM xy,SEQ ww:FRAME!
```

After all data is entered into the configuration file and it is accepted, DACS II outputs the following response:

```
[O.35021]  
M hh:mm:ss xy,ww n[vv] CFR FRAME[ COND cc] COMPL
```

Procedure For Configuring the Frame

When the configuration file command is entered, DACS II leads the user to complete the entry of the file by displaying the Main Menu below:

- 1: Initialize/Reset Configuration File
- 2: Add new bay(s) and unit(s)
- 3: Add unit(s) to existing bay(s)
- 4: Change unit(s) type
- 5: Remove unit(s) OR bay(s) and unit(s)
- 6: Recall configuration data
- 7: Exit

Option 1, Initialize/Reset Configuration File

If Option 1 (initializing or resetting the configuration file) is selected, DACS II leads the user through the steps detailed below.

Note: A default option has been assigned to each step and each time a step is entered, DACS II presents its default option unless a user has previously selected an option. In such case, the user-selected option is displayed.

1. Choose the Software Serial Number.
Default = 1234567890
2. Choose the height of the bay.

**Option 1,
Initialize/Reset
Configuration File
(Continued)**

The options are:

- 1: 7'0" (2133mm)
- 2: 11'6" (2200mm)

Default = 7'0".

- 3. Choose the allowable nonhierarchical NPC addressing scheme.

The options are:

- 1: Both 3-digit and 4-digit are allowed
- 2: Only 3-digit is allowed
- 3: Only 4-digit is allowed

Default = Option 1 (both 3-digit and 4-digit).



WARNING:

Selection of option 3 on a CEF will be denied if there is one or more administrative link or if the user has chosen the 3-digit scheme. Similarly, the selection of option 2 on a CEF will be denied if there is one or more administrative links or users using the 4-digit scheme. The denial causes an error message to be displayed; after that, DACS II returns to the Main Menu. In this case, all the choices entered in the previous steps are discarded. Once the Main Menu is shown, the user can either exit to change the provisioning of the link (or user) or select another option from the menu.

For domestic DACS II frames, the 3-digit NPC addressing scheme is the default for DACS II administrative links/users. Also, since the hierarchical NPC addressing scheme does not restrict the frame configuration, there is no selection needed here.

Option 1, Initialize/Reset Configuration File (Continued)

- 4. Choose total number of bays.

The options are:

- 1: 1 bay
- 2: 2 bays
- 3: 3 bays
- 4: 4 bays
- 5: 5 bays
- 6: 6 bays
- 7: 7 bays

Default = 2 bays (Option 2).

Option 1 above (1 bay) is not allowed for a CEF. Options 4 through 7 are allowed only if the 4-digit scheme (i.e., Option 3 of Step 4) is selected. Otherwise, an error message will be generated and Step 4 will be displayed again.

5. Choose bays.

- a. If the total number of bays selected is 2, choose bays 1 and 2.

Choose bay 1 type. In the figure below, the boxes shown represent the physical relationship between the switch bay (bay 2) and the bay selected; that is, the one surrounded by asterisks (*).

```

*****┌ — ┐
*Bay 1├ ECCN┤
*
*****└ — ┘

```

SELECT BAY 1 TYPE

- 1: Flexible Interface Bay (Units 1, 2, 5)
- 2: Original Interface Bay (Units 1, 2, 5)

Default = Option 1 (Flexible Interface Bay).

- b. If the total number of bays selected is 3, choose the third bay as below.

```

*****┌ — ┐ — ┐ — ┐ *****
*Bay 4├ Bay 1├ ECCN├ Bay 3 *
*
*****└ — ┘ — ┘ — ┘ *****

```

**Option 1,
Initialize/Reset
Configuration File
(Continued)**

SELECT THE NEXT BAY POSITION

- 1: (Bay 3, Flexible Interface Bay (Units 3, 4, 6))
- 2: (Bay 3, Original Interface Bay (Units 3, 4, 6))
- 3: (Bay 4 (Units 7, 8, 11))

Default = Option 1 Bay 3, Flexible Interface Bay)

- c. If the total number of bays selected is 4, select the fourth bay.

Depending on which bay is selected as the third bay, the options chosen for the fourth bay will be one of the following:

- If bay 3 is the third bay configured, the fourth bay can only be one of the following:

```
*****┐ — ┐ — ┐ — ┐*****
*Bay 4| Bay 1| ECCN| Bay 3| Bay 5*
*
*****└ — └ — └ — └*****
```

SELECT THE NEXT BAY POSITION

- 1: Bay 4 (Units 7, 8, 11)
- 2: Bay 5 (Units 9, 10, 12)

Default = Option 1.

- d. If Bay 4 is the third bay configured, the fourth bay can only be one of the followings:

```
*****┐ — ┐ — ┐ — ┐*****
*Bay 6| Bay 4| Bay 1| ECCN| Bay 3*
*
*****└ — └ — └ — └*****
```

SELECT THE NEXT BAY POSITION

- 1: Bay 3, Flexible Interface Bay (Units 3, 4, 5)
- 2: Bay 3, Original Interface Bay (Units 3, 4, 5)
- 3: Bay 6 (Units 13, 14)

Default = Option 1.

Bay 1 must also be an original interface bay. If this rule is violated, the type for both bays (bays 1 and 3) must be reentered.

**Option 1,
Initialize/Reset
Configuration File
(Continued)**

- e. If the total number of bays is 5, choose the fifth bay.
Depending on the third and fourth bays selected, the selection for the fifth bay will be one of the following:
 - If bays 3 and 4 are the third and fourth bays (in any order), the options are:

```

*****┌───┴───┴───┴───┐*****
*Bay 6│ Bay 4│ Bay 1│ ECCN│ Bay 3│ Bay 5*
*      │      │      │      │      │
*****└───┬───┬───┬───┘*****

```

SELECT THE NEXT BAY POSITION

- 1: Bay 5 (Units 9, 10, 12)
- 2: Bay 6 (Units 13, 14)

Default = Option 1.

- f. If bays 3 and 5 are the third and fourth bays (in any order), the options are:

```

*****┌───┴───┴───┴───┐*****
*Bay 4│ Bay 1│ ECCN│ Bay 3│ Bay 5│ Bay 7*
*      │      │      │      │      │
*****└───┬───┬───┬───┘*****

```

SELECT THE NEXT BAY POSITION

- 1: Bay 4 (Units 7, 8, 11)
- 2: Bay 7 (Units 15, 16)

Default = Option 1.

**Option 1,
Initialize/Reset
Configuration File
(Continued)**

- g. If bays 4 and 6 are the third and fourth bays, the options are:

```
*****┌───┴───┴───┴───┐*****
*Bay 6│ Bay 4│ Bay 1│ ECCN│ Bay 3 *
*      │      │      │      │
*****└───┬───┬───┬───┘*****
```

SELECT THE NEXT BAY POSITION

- 1: Bay 3, Flexible Interface Bay (Units 3, 4, 6)
- 2: Bay 3, Original Interface Bay (Units 3, 4, 6)

Default = Option 1.

Note: Option 2 is allowed only if bay 1 is an original interface bay. If this rule is violated, the bay type for both bays (bays 1 and 3) must be reentered.

- h. If the total number of bays is 6, choose the sixth bay.
- Depending on which bays are already configured, the option displayed will be one of the following:
- If bays 3, 4, and 5 were chosen:

```
*****┌───┴───┴───┴───┴───┐*****
*Bay 6│ Bay 4│ Bay 1│ ECCN│ Bay 3│ Bay 5│ Bay 7 *
*      │      │      │      │      │      │
*****└───┬───┬───┬───┬───┘*****
```

SELECT THE NEXT BAY POSITION

- 1: Bay 6 (Units 13, 14)
- 2: Bay 7 (Units 15, 16)

Default = Option 1.

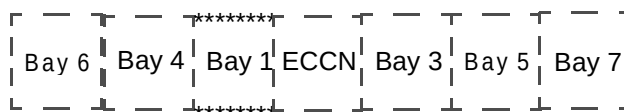
- If bay 4 has not been chosen, choose bay 4 as the sixth bay configured.

```
*****┌───┴───┴───┴───┴───┐
*Bay 4│ Bay 1│ ECCN│ Bay 3│ Bay 5│ Bay 7│
*      │      │      │      │      │
*****└───┬───┬───┬───┬───┘
```

Option 1, Initialize/Reset Configuration File (Continued)

-
- Figure 1. Experimental setup

- i. If the 7-bay option is selected, determine if the bay type for bays 1 and 3 has already been stored in the data base. If so, go to Step 7. Otherwise, choose these two bays.
- Choose the type for bay 1:



1: Flexible Interface Bay (Units 1, 2, 5)
2: Original Interface Bay (Units 1, 2, 5)

Bay 1

-
- Bay 6 Bay 4 Bay 1 ECCN Bay 3 Bay 3 Bay 5 Bay 7

1: Flexible Interface Bay (Units 3, 4, 6)
2: Original Interface Bay (Units 3, 4, 6)

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**Option 1,
Initialize/Reset
Configuration File
(Continued)**

6. Choose unit types.
 - a. For original interface bay 1, the unit types are:
Units 1, 2: FTU or NONE
Unit 5: DS3U, DSPU, or NONE
Default for units 1 and 2 = FTU.
Default for unit 5 = DSPU.
 - b. For the flexible interface bay 1, unit types are:
Units 1, 2, 5: IFTU, IFTU2, DSPU, DS3U or NONE
Default = IFTU. IFTU (eight-inch 411 Power Units) and IFTU2 (four-inch 424 Power Units).
 - c. For original interface bay 3, the unit types are:
Units 3, 4: FTU or NONE
Unit 6: DSPU, DS3U or NONE
Default for units 3 and 4 = FTU.
Default for unit 6 = DSPU.
 - d. For flexible interface bay 3, the unit type can be:
Units 3, 4, 6: IFTU, IFTU2, DSPU, DS3U or NONE
Default = IFTU.
 - e. Bay 4 is restricted to the flexible interface bay type, and the unit type can be:
Units 7, 8, 11: IFTU, IFTU2, DSPU, DS3U or NONE
Default = IFTU.
 - f. Bay 5 is restricted to a flexible interface bay type, and the unit type can be:
Units 9, 10, 12: IFTU, IFTU2, DSPU, DS3U or NONE
Default = IFTU.
 - g. Bay 6 is restricted to the flexible interface bay type, and the unit type can be:
Units 13, 14: IFTU, IFTU2, DSPU, DS3U or NONE
Default = IFTU.
 - h. Bay 7 is restricted to a flexible interface bay type, and the unit type can be:
Units 15, 16: IFTU, IFTU2, DSPU, DS3U or NONE
Default = IFTU.
- Note:** It is acceptable for all units to be configured with the option NONE. Also, if the software used on the frame does not support the DS3 termination feature, the DS3U option will not be displayed.

**Option 1,
Initialize/Reset
Configuration File
(Continued)**

7. After all unit types are chosen and accepted by DACS II, the following will be displayed:

Are the Frame # and UID to be unprotected?

- 1: YES
2: NO

Default = unprotected.

When all required data for initializing/resetting the configuration file is entered, the user must press the RETURN key to view the Main Menu. Recalling data, changing data or exiting must be implemented through the Main Menu. Note that DACS II does not back up the configuration data to PMEM until the user exits.

To interrupt the data entry and exit, press the DELETE key followed by the RETURN key. Once this interrupt signal is received, DACS II denies the input command, and all newly entered data is discarded. In this case, the input command I.35021 must be reentered to allow initialization or editing of the configuration file.

**Option 2, Add
New Bay(s) and
Unit(s)**

To add new bay(s) and/or unit(s) from the Main Menu, DACS II first verifies that the action is allowed. The action of adding new bay(s) and/or unit(s) (Option 2 from Main Menu) will be denied if any of the following conditions exist:

- The configuration file is not initialized.
- All bays are configured.
- DACS II is a 3-bay CEF equipped with bays 1, 2 and 3, and at least one of its links/users is using the 3-digit scheme.

Once the selection is accepted, DACS II displays the allowable nonhierarchical NPC addressing scheme. If DACS II is currently a 2-bay frame, DACS II displays the same choices as displayed in Step 4 above, except that, instead of the default option, the currently recorded option is displayed. In this case, all requirements for Step 4 above apply.

If the frame is already equipped with three or more bays, DACS II displays the following:

THE NONHIERARCHICAL NPC ADDRESS SCHEME IS THE 4-DIGIT SCHEME

**Option 3, Add
Unit(s) to Existing
Bay(s)**

To add unit(s) to an existing bay from the Main Menu, enter option 3. Units listed are those configured as type NONE. DACS II lists the units in ascending order, with the first unit listed being the default. Once the unit is selected, DACS II displays the unit type as shown in Step 7 above.

After the unit type is selected, if there are other units configured as NONE, DACS II asks the user if another unit is to be added. If the answer is yes, the unit list will be shown again and the same procedure must be repeated. Otherwise, DACS II will allow the user to return to the Main Menu.

The selection of option 3 from the Main Menu will be denied if either of the following two conditions exists:

- The configuration file is not initialized.
 - No units are configured as NONE.
-

**Option 4, Change
Unit(s) Type**

To change the unit(s) type, enter Option 4 from the Main Menu. Units listed are types IFTU, IFTU2, DSPU and DS3U. Note that an FTU cannot be changed to another unit type and vice versa. DACS II lists the units in ascending order. The first unit listed is the default.

Once the unit is selected, DACS II shows the two allowable choices of the new unit type.

- If the original unit type is IFTU or IFTU2 the choice is:
 - 1: DSPU
 - 2: DS3U
- If the original unit type is DSPU, the choice is:
 - 1: IFTU
 - 2: DS3U
- If the original unit type is DS3U, the choice is:
 - 1: IFTU
 - 2: DSPU

Note: The DS3U option will not be displayed if the DS3 termination feature is not supported by the frame.

**Option 4, Change
Unit(s) Type
(Continued)**

After the new type unit is selected, DACS II asks the user if another unit is to be changed to a new type. If the answer is yes, the same procedure must be repeated.

The choice of option 4 from the Main Menu will be denied if one of the following conditions exists:

- The configuration file is not initialized.
 - The selected unit is grown by the GRTH command.
 - All units are configured with type NONE or FTU.
-

Option 5, Delete Unit(s) or Bay(s) and Unit(s)

To delete unit(s) or bay(s) and units(s) from the Main Menu, choose the unit number. The units listed are those of a type other than NONE. DACS II lists the units in ascending order, and the first unit listed is the default.

Once the unit is selected, DACS II shows that the unit type is NONE and asks if another unit is to be deleted. If the answer is yes, the same procedure must be repeated. If the answer is no, DACS II then checks to verify if there is a bay with all units as type NONE. If such a bay exists and the bay is not bay 1, DACS II queries the user if the bay is to be deleted. If the response is yes, DACS II deletes the bay and its units from the configuration file. DACS II repeats the routine for each qualified bay. Note that although all three units of bay 1 can be designated as NONE, bay 1 cannot be deleted from the frame.

Note: If all units are configured as type NONE when the option is selected, DACS II immediately starts the bay deletion check.

The deletion of the unit is denied if either of the following conditions exists:

- The configuration file is not initialized.
- The selected unit is grown by the GRTH command.
- Option 6, Recall Configuration Data

If option 6 is entered from the Main Menu, DACS II presents the configuration file from the most recently completed session. If no session was previously completed, the file stored before the current command is entered will be displayed.

**7-Bay
Configuration
Example**

A 7-bay configuration is shown below as an example:

Bay6	Bay4	Bay1	Bay2	Bay3	Bay5	Bay7
Unit14 TYPE	Unit8 TYPE	Unit2 TYPE		Unit4 TYPE	Unit10 TYPE	Unit16 TYPE
Unit13 TYPE	Unit7 TYPE	Unit1 TYPE	ECCN	Unit3 TYPE	Unit9 TYPE	Unit15 TYPE
-----	Unit11 TYPE	Unit5 TYPE		Unit6 TYPE	Unit12 TYPE	-----

Bay 1 Type:	Original Interface Bay
Bay 3 Type:	Flexible Interface Bay
Height of Bay:	7'0"
Software Serial Number:	1234567890
Frame Number:	UNINITIALIZED (UNPROTECTED)
Unique Id:	UNINITIALIZED
Nonhierarchical NPC Address Scheme:	4 digits

Note that the TYPE can be IFTU, IFTU2, DSPU, DS3U, or NONE, depending on the type provisioned. The bay type for bays 1 and 3 can be either the original interface bay or flexible interface bay. The word "UNINITIALIZED" is shown for the frame number and for the unique ID number if these numbers are not entered. Otherwise, the number and/or ID stored will be output instead of the word "UNINITIALIZED." DACS II shows whether or not the frame number is protected (in parentheses).

3-Bay Frame Configuration Example

If a specific bay has not been selected, its space will be filled with blanks. An example of a 3-bay frame configuration follows:

Bay 1	Bay 2	Bay 3
Unit 2		Unit 4
TYPE		TYPE
Unit 1	ECCN	Unit 3
TYPE		TYPE
Unit 5		Unit 6
TYPE		TYPE

After the configuration file is recalled, DACS II instructs the user to return to the Main Menu. If the configuration file is not initialized, the recall option will be denied.

Option 7, Exit

If Option 7 is selected from the Main Menu, DACS II shows all data in the configuration file as if the "recall" option were chosen. In addition, DACS II displays the following:

```

Is the above data correct ? (if not, reenter the data)
1: YES
2: NO
IS DATA CORRECT ?
  
```

If the answer is yes, DACS II displays the following menu:

```

Preparing to write Configuration File to PMEM
Please wait while writing to disk
Are you sure? (YES/NO)
  
```

If the answer is yes, DACS II begins writing the configuration file to PMEM . When the configuration file backup is completed, output message O.35021 appears. DACS II backs up the configuration file to PMEM before generating message O.35021.



NOTE:

DACS II generates the completion message even if the content of the configuration file is unchanged.

Configuration File Completion

The configuration file command can only be executed if the conditions listed are met:

- The MC is in maintenance condition.
- The command is entered from link 1.
- The command is entered by the superuser.

The configuration file command allows the configuration information to be entered all at once or at the time that a new bay or unit is added to the frame. The entry of unit types into the unit positions in the configuration file does not equip these units; rather it limits unit equipage to be consistent with the configuration file and makes the equipment locate function available to assist the craft installation operations before the equipment has been placed in service.

Glossary

Some keywords are used in a generic manner by DACS II. For example, CCN also represents ECCN. Some other keywords used in this manner are: MIU and EMIU, MXR and EMXR, and FTU and IFTU. The Glossary is located in Vol III.

Documentation Support

Overview

The following sections provide descriptions of the following types of DACS II documents:

- Customer Reference Manual
- Operation and Maintenance Manual
- Command and Message Manual
- Quick Reference Guide
- Customer Information Releases.

Customer Reference Manual

This manual provides the overall description of the DACS II equipment and features including physical, functional, application, and capability considerations and administrative link connections.

The following table lists the Customer Reference Manual by select code, issue, and applicable software release.

Document #	Subject	Iss.	Release					
			1	2	3	4	5	6
365-301-002	DACS II Customer Reference Manual	1	X					
		2			X			
		3			X	X		
		4				X	X	
365-352-000	DACS II Customer Reference Manual	1	X	X	X	X	X	
365-353-000 *	DACS II Customer Reference Manual	1	X	X	X	X	X	X

* Last version.

Operation and Maintenance Manuals

The operation and maintenance manuals contain instructions on how to operate the DACS II and how to clear trouble messages. These manuals are intended to be the guide for daily use and for troubleshooting before requesting technical help.

The operation and maintenance manuals for the basic core software and all features are available in both MML and PDS versions.

The following table lists the Operation and Maintenance Manual by select code, issue, and applicable software release.

Operation and Maintenance Manual										
Document #	Subject	Iss.	Release							
			1	2	3	4	5	6	7	8
	DACS II Operation and Maintenance Manual	1	X							
365-301-601										
365-301-605	DACS II (PDS)	1		X						
365-301-606	DACS II (MML)	1		X						
365-301-615	DACS II (PDS)	1			X	X				
365-301-616	DACS II (MML)	1			X	X				
365-301-617	DACS II (PDS) Subrate Feature	1			X	X				
		2			X	X	X			
365-301-618	DACS II (MML) Subrate Feature	1			X	X				
		2			X	X	X			
365-301-619	DACS II (PDS) <i>SLC</i> [®] 96 Carrier Feature	B			X	X				
		2			X	X	X			
365-301-620	DACS II (MML) <i>SLC</i> [®] 96 Carrier Feature	A			X	X				
		2			X	X	X			
365-301-615AI	DACS II (PDS) 2.048 Mb/s and Enhanced 2.048 Mb/s Features	Prel.			X					
		1			X	X				
365-301-616AI	DACS II (MML) 2.048 Mb/s and Enhanced 2.048 Mb/s Features	1			X					
		2			X	X				

Operation and Maintenance Manual										
Document #	Subject	Iss.	Release							
			1	2	3	4	5	6	7	8
	DACS II Operation and Maintenance Manual	1	X							
365-301-601										
365-301-621	DACS II (PDS) Gateway Feature	1			X	X				
365-301-622	DACS II (MML) Gateway Feature	1			X	X				
365-301-623	DACS II PDS Domestic	2				X				
365-352-001	DACS II PDS Domestic	1				X	X			
365-352-011	DACS II MML Domestic	1				X	X			
365-352-021	DACS II PDS 2.048 Mb/s	1				X	X			
365-352-031	DACS II MML 2.048 Mb/s	1				X	X			
365-301-627	DACS II Capacity Expansion Frame, (PDS) Core with DS1, DS3, and Gateway Features	1					X			
365-301-627AI	DACS II Capacity Expansion Frame, (PDS) Core with 2.048 Mb/s and Enhanced 2.048 Mb/s Features	1					X			
365-301-628	DACS II Capacity Expansion Frame, (MML) Core with DS1, DS3, and Gateway Features	1					X			

Operation and Maintenance Manual

Document #	Subject	Iss.	Release							
			1	2	3	4	5	6	7	8
365-301-601	DACS II Operation and Maintenance Manual	1	X							
365-301-628AI	DACS II Capacity Expansion Frame, (MML) Core with 2.048 Mb/s and Enhanced 2.048 Mb/s Features	1					X			
365-353-001	DACS II PDS Domestic	1						X		
365-353-011	DACS II MML Domestic	1						X		
365-353-021	DACS II PDS 2.048 Mb/s	1						X		
365-353-031	DACS II MML 2.048 Mb/s	1						X		
365-353-054	DACS II PDS Domestic	1							X	
365-353-064	DACS II MML Domestic	1							X	
365-353-074	DACS II PDS 2.048 Mb/s	1							X	
365-353-084	DACS II MML 2.048 Mb/s	1							X	
365-353-121	DACS II PDS Domestic	1								X
365-353-131	DACS II MML Domestic	1								X
365-353-141	DACS II PDS 2.048 Mb/s	1								X
365-353-151	DACS II MML 2.048 Mb/s	1								X

Command and Message Manuals The command and message manuals are the reference documents for all the input and output messages and explanations of all message fields. These manuals are available in both MML and PDS versions.

Command and Message Manuals										
Document #	Subject	Iss.	Release							
			1	2	3	4	5	6	7	8
365-301-603	Volumes I and II	1	X							
365-301-606	DACS II PDS	1		X						
365-301-610	DACS II MML	1		X						
365-301-651	DACS II (PDS) Core	1			X	X				
365-301-651AI	DACS II (PDS) 2.048 Mb/s and Enhanced 2.048 Mb/s	1			X	X				
365-301-652	DACS II (MML) Core	1			X	X				
365-301-652AI	DACS II (MML) 2.048 Mb/s and Enhanced 2.048 Mb/s	1			X	X				
365-301-653	DACS II (PDS) Subrate Feature	1			X	X				
365-301-654	DACS II (MML) Subrate Feature	1			X	X				
365-301-655	DACS II (PDS) <i>SLC</i> [®] Carrier Feature	1			X	X				
365-301-656	DACS II (MML) <i>SLC</i> [®] Carrier Feature	1			X	X				

Command and Message Manuals (Contd)

Document #	Subject	Iss.	Release							
			1	2	3	4	5	6	7	8
	DACS II (PDS)									
365-301-657	Gateway Feature	1			X	X				
365-301-658	DACS II (MML) Gateway Feature	1			X	X				
365-301-661	DACS II (PDS)	1			X	X				
365-301-662	DACS II (MML)	1			X	X				
365-301-661AI	DACS II (PDS) 2.048 Mb/s	1			X	X				
365-301-662AI	DACS II (MML) 2.048 Mb/s	1			X	X				
365-301-663	DACS II (PDS)	1					X			
365-301-663AI	DACS II (PDS) 2.048 Mb/s	1					X			
365-301-664	DACS II (MML)	1					X			
365-301-664AI	DACS II (MML) 2.048 Mb/s	1					X			
365-352-002	DACS II PDS 24 Channel	1				X	X			
365-352-012	DACS II MML 24 Channel	1				X	X			
365-352-022	DACS II PDS 2.048 Mb/s	1				X	X			
365-352-032	DACS II MML 2.048 Mb/s	1				X	X			
365-353-002	DACS II PDS 24 Channel	1						X		
365-353-012	DACS II MML 24 Channel	1						X		
365-353-022	DACS II PDS 2.048 Mb/s	1						X		
365-353-032	DACS II MML 2.048 Mb/s	1						X		

Command and Message Manuals (Contd)

Document #	Subject	Iss.	Release							
			1	2	3	4	5	6	7	8
	DACS II (PDS)									
365-301-657	Gateway Feature	1			X	X				
365-353-052	DACS II PDS 24 Channel	1							X	
365-353-062	DACS II MML 24 Channel	1							X	
365-353-072	DACS II PDS 2.048 Mb/s	1							X	
365-353-082	DACS II MML 2.048 Mb/s	1							X	
365-353-122	DACS II PDS 24 Channel	1								X
365-353-132	DACS II MML 24 Channel	1								X
365-353-142	DACS II PDS 2.048 Mb/s	1								X
365-353-152	DACS II MML 2.048 Mb/s	1								X

Quick Reference Guides

These guides contain frequently used commands organized into categories of functions, tables and illustrations of cross-connections, a summary of corrective action for frame audit messages, and for PDS, the meanings of the command denial condition codes. The guides are intended to support the experienced user and to serve as a handy reference for commands. Different guides cover two feature set: 2.048 Mb/s alone or subrate SLC####V-Rg-V#### carrier, DS1, DS3, and clear-DS1. Both MML and PDS versions are available for each feature set.

The following table lists each Quick Reference Guide by select code, title, issue, and applicable software release.

Quick Reference Guide

Document #	Subject	Iss.	Release							
			1	2	3	4	5	6	7	8
365-301-602	DACS II Quick Reference Guide	1	X							
365-301-607	DACS II PDS	1		X						
365-301-608	DACS II MML	1		X						
365-301-625	DACS II (PDS) 24 Channel	1			X					
		2			X	X				
		3					X			
365-301-626	DACS II (MML) 24 Channel	1			X					
		2			X	X				
		3					X			
365-301-625AI	DACS II (PDS) 30 Channel	1			X	X				
		2					X			
365-301-626AI	DACS II (MML) 30 Channel	1			X					
		2			X	X				
		3					X			
365-352-003	DACS II PDS 24 Channel	1				X	X			
365-352-013	DACS II MML 24 Channel	1				X	X			
365-352-023	DACS II PDS 2.048 Mb/s	1				X	X			
365-352-033	DACS II MML 2.048 Mb/s	1				X	X			
365-353-003	DACS II PDS 24 Channel	1						X		
365-353-013	DACS II MML 24 Channel	1						X		

Quick Reference Guide

Document #	Subject	Iss.	Release							
			1	2	3	4	5	6	7	8
365-301-602	DACS II Quick Reference Guide	1	X							
365-353-023	DACS II PDS 2.048 Mb/s	1						X		
365-353-033	DACS II MML 2.048 Mb/s	1						X		
365-353-053	DACS II PDS 24 Channel	1							X	
365-353-063	DACS II MML 24 Channel	1							X	
365-353-073	DACS II PDS 2.048 Mb/s	1							X	
365-353-083	DACS II MML 2.048 Mb/s	1							X	
365-353-123	DACS II PDS 24 Channel	1								X
365-353-133	DACS II MML 24 Channel	1								X
365-353-143	DACS II PDS 2.048 Mb/s	1								X
365-353-153	DACS II MML 2.048 Mb/s	1								X

Customer Information Releases

Customer Information Releases (CIRs) are designed both to assist sales personnel and as a vehicle to get new feature information to customers.

The following table lists CIRs by number, issue and title.

Customer Information Releases		
CIR No.	Iss.	Title
365-099-031NP	2	Digital Access and Cross-Connect System II
365-099-032NP	1	Multiple DACS Complex
365-099-053TS	1	DACS II, Technical Specification
365-099-055TD	1	DACS II, Release 2 Features
365-099-059TD	1	DACS II, Stratum 2 Clock
365-099-091NP	1	DACS II, Release 2 Features
365-099-093TD	1	DACS II, Release 3 Features
365-099-095IR	1	DACS II Communication Interfaces Circuit Pack Ordering Information
365-099-098IR	1	New Dacs II Dual Digroup Card Announcement and Ordering Information
365-099-100MA	1	Normal Tape Operations for the DACS II, DACS III-2000, and DACS IV-2000 Systems
365-099-105TD	1	DACS II Release 4 Technical Description
365-099-111TD	1	DACS II Release 5.0 Technical Description
365-099-123IR	1	UL Listed DACS II Digital Access and Cross-Connect System
365-099-126TS	1	Digital Access and Cross-Connect System II (DACs II) Release 5.0 Technical Specification
365-099-129TD	1	DACS II Release 6.0 Technical Description
365-099-130TS	1	DACS II Release 6.0 Technical Specification

Customer Information Releases

CIR No.	Iss.	Title
365-099-126TS	1	Digital Access and Cross-Connect System II (DACS II) Release 5.0 Technical Specification
365-099-129TD	1	DACS II Release 6.0 Technical Description
365-099-130TS	1	DACS II Release 6.0 Technical Specification

NPC Numbering and XYZ Parameters

2

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Overview

Chapter Contents

This chapter contains information on the following topics:

- NPC Numbering Schemes
- xyz Parameters.

The numbering schemes and parameters are listed in this chapter to eliminate redundancy throughout the manual. Users should become familiar with these items before using any of the individual commands.

NPC Numbering Schemes

The two addressing or numbering schemes for network processing circuits are available:

- Nonhierarchical
- Hierarchical.

These numbering methods are used to provide a means of locating network processing circuits.

xyz Parameters

The xyz parameters define specific operational attributes.

Nonhierarchical NPC Numbering

Description

The **nonhierarchical method** uses consecutive numbering to count through the units in the frame. Each unit has a fixed starting number (for example, 161 for unit 2; 21 for unit 3; 481 for unit 4). The starting number is the same for FTU or DSPU type units.

Numbering Formats

Within the nonhierarchical numbering scheme, there are two numbering formats:

- 3-digit format (i.e., NPC abc)
- 4-digit (extended) format (i.e. NPC [s]abc).

NPC numbers denoted by [s]abc in commands can represent both formats of the nonhierarchical numbering scheme. The extended format variable, [s], is used with a Capacity Expansion Frame.

This section lists the non-hierarchical NPC numbering for various NPC types.

DE/DS/IU/DA Type NPC Numbering on the IFTU2/IFTU/FTU

Overview The nonhierarchical NPC numbering for DE, DS, and DA type NPCs on Unit Type FT (IFTU2/IFTU/FTU) are listed below. Includes IU type only for pre-R6.0 releases.

3-Digit NPC Numbers

If NPC numbers are expressed in three digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
NPC	NPC	NPC	NPC	NPC	NPC
001-160	161-320	321-480	481-640	641-800	801-960

4-Digit NPC Numbers

If NPC numbers are expressed in four digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4
NPC	NPC	NPC	NPC
0001-0160	0161-0320	0321-0480	0481-0640
Unit 5	Unit 6	Unit 7	Unit 8
NPC	NPC	NPC	NPC
0641-0800	0801-0960	0961-1120	1121-1280
Unit 9	Unit 10	Unit 11	Unit 12
NPC	NPC	NPC	NPC
1281-1440	1441-1600	1601-1760	1761-1920
Unit 13	Unit 14	Unit 15	Unit 16
NPC	NPC	NPC	NPC
1921-2080	2081-2240	2241-2400	2401-2560

PA/PB/PC Type NPC Numbering on the IFTU2/IFTU/FTU

Overview The nonhierarchical NPC numbering for PA, PB, and PC type NPCs on Unit Type FT (IFTU2/IFTU/FTU) is listed below.

3-Digit NPC Numbers

If NPC numbers are expressed in three digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
NPC	NPC	NPC	NPC	NPC	NPC
001-160	161-320	321-480	481-640	641-800	801-960

4-Digit NPC Numbers

If NPC numbers are expressed in four digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4
NPC	NPC	NPC	NPC
0001-0160	0161-0320	0321-0480	0481-0640
Unit 5	Unit 6	Unit 7	Unit 8
NPC	NPC	NPC	NPC
0641-0800	0801-0960	0961-1120	1121-1280
Unit 9	Unit 10	Unit 11	Unit 12
NPC	NPC	NPC	NPC
1281-1440	1441-1600	1601-1760	1761-1920
Unit 13	Unit 14	Unit 15	Unit 16
NPC	NPC	NPC	NPC
1921-2080	2081-2240	2241-2400	2401-2560

Synchronization Source PB/PC Type NPC Numbering IFTU2/IFTU/FTU

Overview The nonhierarchical NPC numbering for PB, and PC type NPCs used as a synchronization source on Unit Type FT (IFTU2/IFTU/FTU) listed below.

3-Digit NPC Numbers PB and PC type NPC numbers listed by unit number, Unit Type FT (FTU)
If NPC numbers are expressed in three digits, the valid values are:

Unit 1	Unit 2
NPC	NPC
030	190
032	192
070	230
072	232

4-Digit NPC Numbers PA, PB, and PC type NPC numbers listed by unit number, Unit Type FT (FTU)
If NPC numbers are expressed in four digits, the valid values are:

Unit 1	Unit 2
NPC	NPC
0030	0190
0032	0192
0070	0230
0072	0232

TA/TE/TI Type NPC Numbering on the DS3U/HDS3U

Overview

The following tables contain nonhierarchical TA, TE and TI type NPC numbering range on Unit Type DT (DS3U) or HT (HDS3U). Includes TI type only for pre-R6.0 releases.

3-Digit NPC Numbers

If NPC numbers are expressed in three digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
NPC	NPC	NPC	NPC	NPC	NPC
001-160	161-320	321-480	481-640	641-800	801-960
16A-16H	32A-32H	48A-48H	64A-64H	80A-80H	96A-96H

4-Digit NPC Numbers

If NPC numbers are expressed in four digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4
NPC	NPC	NPC	NPC
0001-0160	0161-0320	0321-0480	0481-0640
016A-016H	032A-032H	048A-048H	064A-064H

Unit 5	Unit 6	Unit 7	Unit 8
NPC	NPC	NPC	NPC
0641-0800	0801-0960	0961-1120	1121-1280
080A-080H	096A-096H	112A-112H	128A-128H

Unit 9	Unit 10	Unit 11	Unit 12
NPC	NPC	NPC	NPC
1281-1440	1441-1600	1601-1760	1761-1920
144A-144H	160A-160H	176A-176H	192A-192H

Unit 13	Unit 14	Unit 15	Unit 16
NPC	NPC	NPC	NPC
1921-2080	2081-2240	2241-2400	2401-2560
208A-208H	224A-224H	240A-240H	256A-256H

TH Type NPC Numbering on the HDS3U

Overview

The following tables contain the nonhierarchical TH type NPC numbering range on Unit Type HT (HDS3U).

3-Digit NPC Numbers

If NPC numbers are expressed in three digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
NPC	NPC	NPC	NPC	NPC	NPC
001-003	161-163	321-323	481-483	641-643	801-803
005-007	165-167	325-327	485-487	645-647	805-807
009-011	169-171	329-331	489-491	649-651	809-811

4-Digit NPC Numbers

If NPC numbers are expressed in four digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4
NPC	NPC	NPC	NPC
0001-0003	0161-0163	0321-0323	0481-0483
0005-0007	0165-0167	0325-0327	0485-0487
0009-0011	0169-0171	0329-0331	0489-0491
.	.	.	.
.	.	.	.
.	.	.	.
0157-0159	0317-0319	0477-0479	0637-0639
016A-016C	032A-032C	048A-048C	064A-064C
016E-016G	032E-032G	048E-048G	064E-064G
Unit 5	Unit 6	Unit 7	Unit 8
NPC	NPC	NPC	NPC
0641-0643	0801-0803	0961-0963	1121-1123

0645-0647	0805-0807	0965-0967	1125-1127
0649-0651	0809-0811	0969-0971	1129-1131
.	.	.	.
.	.	.	.
.	.	.	.
0797-0799	0957-0959	1117-1119	1277-1279
080A-080C	096A-096C	112A-112C	128A-128C
080E-080G	096E-096G	112E-112G	128E-128G

Unit 9	Unit 10	Unit 11	Unit 12
NPC	NPC	NPC	NPC
1281-1283	1441-1443	1601-1603	1761-1763
1285-1287	1445-1447	1605-1607	1765-1767
1289-1291	1449-1451	1609-1611	1769-1771
.	.	.	.
.	.	.	.
.	.	.	.
1437-1439	1597-1599	1757-1759	1917-1919
144A-144C	160A-160C	176A-176C	192A-192C
144E-144G	160E-160G	176E-176G	192E-192G

Unit 13	Unit 14	Unit 15	Unit 16
NPC	NPC	NPC	NPC
1921-1923	2081-2083	2241-2243	2401-2403
1925-1927	2085-2087	2245-2247	2405-2407
1929-1931	2089-2091	2249-2251	2409-2411
.	.	.	.
.	.	.	.
.	.	.	.
2077-2079	2237-2239	2397-2399	2557-2559
208A-208C	224A-224C	240A-240C	256A-256C
208E-208G	224E-224G	240E-240G	256E-256G

CB/MJ/SR Type NPC Numbering (Single or Non-Range) on the DSPU

Overview

The following tables contain the nonhierarchical CB, MJ, and SR type NPC numbering (single or non-range) on Unit Type DP (DSPU).

3-Digit NPC Numbers

If NPC numbers are expressed in three digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
NPC	NPC	NPC	NPC	NPC	NPC
001	161	321	481	641	801
021	181	341	501	661	821
041	201	361	521	681	851
061	221	381	541	701	861
081	241	401	561	721	881
101	261	421	581	741	901
121	281	441	601	761	921
141	301	461	621	781	941

4-Digit NPC Numbers

If NPC numbers are expressed in four digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4
NPC	NPC	NPC	NPC
0001	0161	0321	0481
0021	0181	0341	0501
0041	0201	0361	0521
0061	0221	0381	0541
0081	0241	0401	0561
0101	0261	0421	0581
0121	0281	0441	0601
0141	0301	0461	0621

Unit 5	Unit 6	Unit 7	Unit 8
NPC	NPC	NPC	NPC
0641	0801	0961	1121
0661	0821	0981	1141
0681	0851	1001	1161
0701	0861	1021	1181
0721	0881	1041	1201
0741	0901	1061	1221
0761	0921	1081	1241
0781	0941	1101	1261

Unit 9	Unit 10	Unit 11	Unit 12
NPC	NPC	NPC	NPC
1281	1441	1601	1761
1301	1461	1621	1781
1321	1481	1641	1801
1341	1501	1661	1821
1361	1521	1681	1841
1381	1541	1701	1861
1401	1561	1721	1881
1421	1581	1741	1901

Unit 13	Unit 14	Unit 15	Unit 16
NPC	NPC	NPC	NPC
1921	2081	2241	2401
1941	2101	2261	2421
1961	2121	2281	2441
1981	2141	2301	2461
2001	2161	2321	2481

Unit 5	Unit 6	Unit 7	Unit 8
NPC	NPC	NPC	NPC
0641	0801	0961	1121
0661	0821	0981	1141
0681	0851	1001	1161
0701	0861	1021	1181
0721	0881	1041	1201
0741	0901	1061	1221
0761	0921	1081	1241
0781	0941	1101	1261

Unit 9	Unit 10	Unit 11	Unit 12
NPC	NPC	NPC	NPC
1281	1441	1601	1761
1301	1461	1621	1781
1321	1481	1641	1801
1341	1501	1661	1821
1361	1521	1681	1841
1381	1541	1701	1861
1401	1561	1721	1881
1421	1581	1741	1901

Unit 13	Unit 14	Unit 15	Unit 16
NPC	NPC	NPC	NPC
1921	2081	2241	2401
1941	2101	2261	2421
1961	2121	2281	2441
1981	2141	2301	2461
2001	2161	2321	2481

2021	2181	2341	2501
2041	2201	2361	2521
2061	2221	2381	2541

MB Type NPC Numbering on the DSPU

Overview

The following tables contain the nonhierarchical MB type NPC numbering on Unit Type DP (DSPU).

3-Digit NPC Numbers

If NPC numbers are expressed in three digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
NPC	NPC	NPC	NPC	NPC	NPC
001-002	161-162	321-322	481-482	641-642	801-802
021-022	181-182	341-342	501-502	661-662	821-822
041-042	201-202	361-362	521-522	681-682	851-842
061-062	221-222	381-382	541-542	701-702	861-862
081-082	241-242	401-402	561-562	721-722	881-882
101-102	261-262	421-422	581-582	741-742	901-902
121-122	281-282	441-442	601-602	761-762	921-922
141-142	301-302	461-462	621-622	781-782	941-942

4-Digit NPC Numbers

If NPC numbers are expressed in four digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4
NPC	NPC	NPC	NPC
0001-0002	0161-0162	0321-0322	0481-0482
0021-0022	0181-0182	0341-0342	0501-0502
0041-0042	0201-0202	0361-0362	0521-0522
0061-0062	0221-0222	0381-0382	0541-0542
0081-0082	0241-0242	0401-0402	0561-0562
0101-0102	0261-0262	0421-0422	0581-0582
0121-0122	0281-0282	0441-0442	0601-0602
0141-0142	0301-0302	0461-0462	0621-0622

Unit 5	Unit 6	Unit 7	Unit 8
NPC	NPC	NPC	NPC
0641-0642	0801-0802	0961-0962	1121-1122
0661-0662	0821-0822	0981-0982	1141-1142
0681-0682	0851-0842	1001-1002	1161-1162
0701-0702	0861-0862	1021-1022	1181-1182
0721-0722	0881-0882	1041-1042	1201-1202
0741-0742	0901-0902	1061-1062	1221-1222
0761-0762	0921-0922	1081-1082	1241-1242
0781-0782	0941-0942	1101-1102	1261-1262

Unit 9	Unit 10	Unit 11	Unit 12
NPC	NPC	NPC	NPC
1281-1282	1441-1442	1601-1602	1761-1762
1301-1302	1461-1462	1621-1622	1781-1782
1321-1322	1481-1482	1641-1642	1801-1802
1341-1342	1501-1502	1661-1662	1821-1822
1361-1362	1521-1522	1681-1682	1841-1842
1381-1382	1541-1542	1701-1702	1861-1862
1401-1402	1561-1562	1721-1722	1881-1882
1421-1422	1581-1582	1741-1742	1901-1902

Unit 13	Unit 14	Unit 15	Unit 16
NPC	NPC	NPC	NPC
1921-1922	2081-2082	2241-2242	2401-2402
1941-1942	2101-2102	2261-2262	2421-2422
1961-1962	2121-2122	2281-2282	2441-2442
1981-1982	2141-2142	2301-2302	2461-2462
2001-2002	2161-2162	2321-2322	2481-2482

2021-2022	2181-2182	2341-2342	2501-2502
2041-2042	2201-2202	2361-2362	2521-2522
2061-2062	2221-2222	2381-2382	2541-2542

SD Type NPC Numbering on the IFTU2/IFTU/FTU

Overview The following tables contain the nonhierarchical SD type NPC numbering on Unit Type FT (IFTU2/IFTU/FTU).

2.048 Mbit/s Termination

Valid NPC Numbers Only odd NPC numbers are valid for SD type NPCs. The even numbered NPCs immediately following an odd SD type NPC are not available for any other NPC type.

3-Digit NPC Numbers

If NPC numbers are expressed in three digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
NPC	NPC	NPC	NPC	NPC	NPC
001-031	161-191	321-351	481-511	641-671	801-831
041-071	201-231	361-391	521-551	681-711	841-871
081-111	241-271	401-431	561-591	721-751	881-911
121-151	281-311	441-471	601-631	761-791	921-951

4-Digit NPC Numbers

If NPC numbers are expressed in four digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4
NPC	NPC	NPC	NPC
0001-0031	0161-0191	0321-0351	0481-0511
0041-0071	0201-0231	0361-0391	0521-0551
0081-0111	0241-0271	0401-0431	0561-0591
0121-0151	0281-0311	0441-0471	0601-0631
Unit 5	Unit 6	Unit 7	Unit 8

NPC	NPC	NPC	NPC
0641-0671	0801-0831	0961-0991	1121-1151
0681-0711	0841-0871	1001-1031	1161-1191
0721-0751	0881-0911	1041-1071	1201-1231
0761-0791	0921-0951	1081-1111	1241-1271

Unit 9	Unit 10	Unit 11	Unit 12
NPC	NPC	NPC	NPC
1281-1311	1441-1471	1601-1631	1761-1791
1321-1351	1481-1511	1641-1671	1801-1831
1361-1391	1521-1551	1681-1711	1841-1871
1401-1431	1561-1591	1721-1751	1881-1911

Unit 13	Unit 14	Unit 15	Unit 16
NPC	NPC	NPC	NPC
1921-1951	2081-2111	2241-2271	2401-2431
1961-1991	2121-2151	2281-2311	2441-2471
2001-2031	2161-2191	2321-2351	2481-2511
2041-2071	2201-2231	2361-2391	2521-2551

1.544 Mbit/s Termination

Valid NPC Numbers

Only odd NPC numbers are valid for SD type NPCs. The even numbered NPCs immediately following an odd SD type NPC are not available for any other NPC type.

3-Digit NPC Numbers

If NPC numbers are expressed in three digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
NPC	NPC	NPC	NPC	NPC	NPC
001-039	161-199	321-359	481-519	641-679	801-839
041-079	201-239	361-399	521-559	681-719	841-879
081-119	241-279	401-439	561-599	721-759	881-919
121-159	281-319	441-479	601-639	761-799	921-959

4-Digit NPC Numbers

If NPC numbers are expressed in four digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4
NPC	NPC	NPC	NPC
0001-0039	0161-0199	0321-0359	0481-0519
0041-0079	0201-0239	0361-0399	0521-0559
0081-0119	0241-0279	0401-0439	0561-0599
0121-0159	0281-0319	0441-0479	0601-0639

Unit 5	Unit 6	Unit 7	Unit 8
NPC	NPC	NPC	NPC
0641-0679	0801-0839	0961-0999	1121-1159
0681-0719	0841-0879	1001-1039	1161-1199
0721-0759	0881-0919	1041-1079	1201-1239
0761-0799	0921-0959	1081-1119	1241-1279

Unit 9	Unit 10	Unit 11	Unit 12
NPC	NPC	NPC	NPC
1281-1319	1441-1479	1601-1639	1761-1799
1321-1359	1481-1519	1641-1679	1801-1839
1361-1399	1521-1559	1681-1719	1841-1879
1401-1439	1561-1599	1721-1759	1881-1919

Unit 13	Unit 14	Unit 15	Unit 16
NPC	NPC	NPC	NPC

1921-1959	2081-2119	2241-2279	2401-2439
1961-1999	2121-2159	2281-2319	2441-2479
2001-2039	2161-2199	2321-2359	2481-2519
2041-2079	2201-2239	2361-2399	2521-2559

SP Type NPC Numbering on the FTU

Overview

The following tables contain the nonhierarchical SP type NPC numbering on Unit Type FT (FTU).

3-Digit NPC Numbers

If NPC numbers are expressed in three digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
NPC	NPC	NPC	NPC	NPC	NPC
001-031	161-191	321-351	481-511	641-671	801-831
041-071	201-231	361-391	521-551	681-711	841-871
081-111	241-271	401-431	561-591	721-751	881-911
121-151	281-311	441-471	601-631	761-791	921-951

4-Digit NPC Numbers

If NPC numbers are expressed in four digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4
NPC	NPC	NPC	NPC
0001-0031	0161-0191	0321-0351	0481-0511
0041-0071	0201-0231	0361-0391	0521-0551
0081-0111	0241-0271	0401-0431	0561-0591
0121-0151	0281-9311	0441-0471	0601-0631

Unit 5	Unit 6	Unit 7	Unit 8
NPC	NPC	NPC	NPC
0641-0671	0801-0831	0961-0991	1121-1151
0681-0711	0841-0871	1001-1031	1161-1191
0721-0751	0881-0911	1041-1071	1201-1231
0761-0791	0921-0951	1081-1111	1241-1271

Unit 9	Unit 10	Unit 11	Unit 12

NPC	NPC	NPC	NPC
1281-1311	1441-1471	1601-1631	1761-1791
1321-1351	1481-1511	1641-1671	1801-1831
1361-1391	1521-1551	1681-1711	1841-1871
1401-1431	1561-1591	1721-1751	1881-1911

Unit 13	Unit 14	Unit 15	Unit 16
NPC	NPC	NPC	NPC
1921-1951	2081-2111	2241-2271	2401-2431
1961-1991	2121-2151	2281-2311	2441-2471
2001-2031	2161-2191	2321-2351	2481-2511
2041-2071	2201-2231	2361-2391	2521-2551

ST type NPC Numbering on the IFTU2/IFTU/FTU

Overview

The hierarchical NPC numbering for ST type NPCs used as a schronization source on Unit Type FT (IFTU2/IFTU/FTU) listed below.

1.544 Mbit/s Termination

ST type NPC numbers listed by unit number, within a 1.544 Mbit/s module in Unit Type FT (FTU/IFTU/IFTU2).

3-Digit NPC Numbers

If NPC numbers are expressed in three digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
NPC	NPC	NPC	NPC	NPC	NPC
001-040	161-200	321-360	481-520	641-680	801-840
041-080	201-240	361-400	521-560	681-720	841-880
081-120	241-280	401-440	561-600	721-760	881-920
121-160	281-320	441-480	601-640	761-800	921-960

4-Digit NPC Numbers

If NPC numbers are expressed in four digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4
NPC	NPC	NPC	NPC
0001-0040	0161-0200	0321-0360	0481-0520
0041-0080	0201-0240	0361-0400	0521-0560
0081-0120	0241-0280	0401-0440	0561-0600
0121-0160	0281-0320	0441-0480	0601-0640

Unit 5	Unit 6	Unit 7	Unit 8
NPC	NPC	NPC	NPC
0641-0680	0801-0840	0961-1000	1121-1160

0681-0720	0841-0880	1001-1040	1161-1200
0721-0760	0881-0920	1041-1080	1201-1240
0761-0800	0921-0960	1081-1120	1241-1280

Unit 9	Unit 10	Unit 11	Unit 12
NPC	NPC	NPC	NPC
1281-1320	1441-1480	1601-1640	1761-1800
1321-1360	1481-1520	1641-1680	1801-1840
1361-1400	1521-1560	1681-1720	1841-1880
1401-1440	1561-1600	1721-1760	1881-1920

Unit 13	Unit 14	Unit 15	Unit 16
NPC	NPC	NPC	NPC
1921-1960	2081-2120	2241-2280	2401-2440
1961-2000	2121-2160	2281-2320	2441-2480
2001-2040	2161-2200	2321-2360	2481-2520
2041-2080	2201-2240	2361-2400	2521-2560

2.048 Mbit/s Termination

ST type NPC numbers listed by unit number, within a 2.048 Mbit/s module in Unit Type FT (FTU/IFTU/IFTU2).

If NPC numbers are expressed in three digits, the valid values are:

3-Digit NPC Numbers

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
NPC	NPC	NPC	NPC	NPC	NPC
001-032	161-192	321-352	481-512	641-672	801-832
041-072	201-232	361-392	521-552	681-712	841-872
081-112	241-272	401-432	561-592	721-752	881-912
121-152	281-312	441-472	601-632	761-792	921-952

4-Digit NPC Numbers

If NPC numbers are expressed in four digits, the valid values are:

Unit 1	Unit 2	Unit 3	Unit 4
NPC	NPC	NPC	NPC
0001-0032	0161-0192	0321-0352	0481-0512
0041-0072	0201-0232	0361-0392	0521-0552
0081-0112	0241-0272	0401-0432	0561-0592
0121-0152	0281-9312	0441-0472	0601-0632
Unit 5	Unit 6	Unit 7	Unit 8
NPC	NPC	NPC	NPC
0641-0672	0801-0832	0961-0992	1121-1152
0681-0712	0841-0872	1001-1032	1161-1192
0721-0752	0881-0912	1041-1072	1201-1232
0761-0792	0921-0952	1081-1112	1241-1272
Unit 9	Unit 10	Unit 11	Unit 12
NPC	NPC	NPC	NPC
1281-1312	1441-1472	1601-1632	1761-1792
1321-1352	1481-1512	1641-1672	1801-1832
1361-1392	1521-1552	1681-1712	1841-1872
1401-1432	1561-1592	1721-1752	1881-1912
Unit 13	Unit 14	Unit 15	Unit 16
NPC	NPC	NPC	NPC
1921-1952	2081-2112	2241-2272	2401-2432
1961-1992	2121-2152	2281-2312	2441-2472
2001-2032	2161-2192	2321-2352	2481-2512
2041-2072	2201-2232	2361-2392	2521-2552

VI Type (Virtual) NPC Numbering

Overview The following tables contain the nonhierarchical VI type NPC numbering range on Unit Type VI (Virtual).

Virtual NPC Support DACS II frames support six virtual NPCs using either a three digit or four digit NPC numbering scheme.

3-Digit NPC Numbers If NPC numbers are expressed in three digits, the valid values are:

Unit
NPC
961-966

4-Digit NPC Numbers If NPC numbers are expressed in four digits, the valid values are:

Unit
NPC
9961-9966

Hierarchical NPC Numbering

Description

The **hierarchical method** uses a three-part number: the unit number (uv), the module or group number within the unit (m), and the NPC number within the module (np) for a total of five digits (uvmnp) (uv-m-np) with dashes separating the parts.

This section lists the hierarchical NPC numbering for various NPC types.

DA/DE/DS/IU Type NPC Numbering on the IFTU2/IFTU/FTU

Hierarchical Numbering

The hierarchical NPC numbering for DA, DE, and DS type NPCs on Unit Type FT (IFTU2/IFTU/FTU) is listed below. Includes IU type only for pre-R6.0 releases.

Unit	Module	NPC
01 - 16	1 - 4	01 - 40

PA/PB/PC Type NPC Numbering on the IFTU2/IFTU/FTU

Hierarchical Numbering

NPC Numbering Range

The hierarchical NPC numbering for PA, PB, and PC type NPCs on Unit Type FT (IFTU2/IFTU/FTU).

Unit	Module	NPC
01 - 16	1 - 4	01 - 32

Synchronization Source PB/PC Type NPC Numbering on the IFTU2/IFTU/ FTU

Hierarchical Numbering

The hierarchical NPC numbering for PB, and PC type NPCs used as a synchronization source on Unit Type FT (IFTU2/IFTU/FTU).

Unit	Module	NPC
01, 02	1, 2	30, 32

TA/TE/TI Type NPC Numbering on the DS3U/HDS3U

Hierarchical Numbering

The hierarchical NPC numbering for TA, TE and TI type NPCs on Unit Type DT (DS3U) or HT (HDS3U) is listed below. TI type NPCs are relevant only for pre-R6.0 releases.

Unit	Module	NPC
01 - 16	1 - 6	01 - 28

TH Type NPC Numbering on the HDS3U

Hierarchical Numbering

The hierarchical NPC numbering for E1 TH type NPCs on Unit Type HT (HDS3U) is listed below.

Unit	Module	NPC
01 - 16	1 - 6	01 - 28



NOTE:

The valid TH NPC numbers are: 01-03, 05-07, 09-11, 13-15, 17-19, 21-23, 25-27.

CB/MJ/SR Type NPC Numbering on the DSPU

Hierarchical Numbering

NPC Numbering Single or Non-Range

The hierarchical NPC numbering for CB, MJ, and SR type NPCs on Unit Type DP (DSPU) are listed below.

Unit	Module	NPC
01-16	1 - 8	01

The NPC Number is always 01 when referencing the MB, MJ, or SR types. The module number is a unique reference to the NPC. A further reference to the NPC number would be redundant. In other words, the module number is sufficient to reference a particular NPC.

MB Type NPC Numbering on the DSPU

Hierarchical Numbering

The hierarchical NPC numbering for MB type NPCs on Unit Type DP (DSPU) are listed below.

Unit	Module	NPC
01 - 16	1 - 8	01 - 02

SD Type NPC Numbering on the IFTU2/IFTU/FTU

Hierarchical Numbering

The hierarchical NPC numbering for SD type NPCs on Unit Type FT (IFTU2/IFTU/FTU) are listed below.

Only odd NPC numbers are valid for SD type NPCs. The even numbered NPCs immediately following an odd SD type NPC are not available for any other NPC type.

1.544 Mbit/s Termination

Unit	Module	NPC
01 - 16	1 - 4	01 - 39

2.048 Mbit/s Termination

Unit	Module	NPC
01 - 16	1 - 4	01 - 31

SP Type NPC Numbering on the FTU

Hierarchical Numbering

The following table contains the hierarchical NPC numbering for SP type NPCs on Unit Type FT (FTU).



NOTE:

Only ODD NPC numbers are valid in the tables listed below. The even numbered NPC is not available for any other NPC type.

Unit	Module	NPC
01 - 16	1 - 4	01 - 31

ST Type NPC Numbering on the IFTU2/IFTU/FTU

Hierarchical Numbering

The following tables contain the hierachial NPC numbering for ST type NPCs on Unit Type FT (IFTU2/IFTU/FTU).

1.544 Mbit/s Termination

Unit	Module	NPC
01 - 16	1 - 4	1 - 40

2.048 Mbit/s Termination

Unit	Module	NPC
01 - 16	1 - 4	1 - 32

VI Type (Virtual) NPC Numbering

Hierarchical Numbering

The hierarchical NPC numbering range for VI type (Virtual) NPCs is listed below.

Unit	Module	NPC
99	1	01 - 06

XYZ Parameters

Overview

The following section contains xyz parameters for:

- NPC
 - TLI
 - MXR
 - MIU
-

NPC XYZ Parameters

Description

NPC parameters indicate specific conditions relating to that circuit type. NPC parameters differ between NPC types.

This section lists the XYZ parameters for various NPC types.

NPC Types

The various NPC types are:

- DA/DE
 - DS1 NPCs (NAS), define 24 64 Kbit/s channels
 - 2 NPCs on a DDC card
- DS
 - Subscribe Loop Carrier for DS1
- PA
 - E1 NPCs, define 30 or 31 64 Kbit/s channels
 - 2 NPCs on a DPC card
 - Supports both cable types
 - Supports clear channel
- PB/PC
 - E1 NPCs, define 30 or 31 64 Kbit/s channels
 - 2 NPCs on a DPC card
 - Defined for a 120/75 ohm (twisted pair/coaxial) cable
- TA/TE
 - DS3U NPCs, 28 NPCs on a MUX pack
 - Similar to DE/DA type NPCs
- TH
 - E1 NPC within a Hybrid DS3
- CB
 - DSPU type NPC
 - France Telecom C-bit Processor
- MB
 - DSPU type NPC

-
- Digital Multipoint Bridge (broadcast/symmetrical conference)
 - MJ/SR
 - DSPU type NPC
 - Subrate circuits, subrate broadcast
 - SD
 - DSP NPCs
 - Defined for DDS Subrate/MJU, X.50/X.57 Subrate, and DMB applications
 - SP
 - Digital Signal Processor
 - ST
 - Integrated Test Set
 - VI
 - Virtual NPC, not physically equipped
-

DA Type NPC Parameters

Valid Parameters The valid xyz parameters for ANSI DA type NPCs (which are received in FTUs) are listed below.

x	Multiframe format for the digroup	
	0	Not assigned
	1	D4
	2	ESF - Voice
	3	ESF - Data
	4	DDST (T1DM - R bit connection via channel 24)
	5-7	Not assigned
	8	Ericsson Cellular format
	9	Not assigned
y	Line and signaling format	
	0	ZCS - Zero code suppression
	1*	NZCS - No zero code suppression
	2*	B8ZS - Bipolar with 8 zero substitution
	3	Not assigned
	4	ZCS/DMI - Zero code suppression/DMI signaling
	5	NZCS/DMI - No zero code suppression/DMI signaling
	6	B8ZS/DMI - Bipolar with 8 zero substitution/DMI signaling
	7-9	Not assigned
* Only options 1 and 2 are applicable to DA-type clear-DS1 NPC.		



NOTE:

DMI signaling cannot be specified in the y field if the x field is 4 (DDST framing).

z	Channel numbering format
0	D4 channel bank channel numbering
1	D2 channel bank channel numbering
2	D1D channel bank channel numbering
3-8	Not assigned
9	Unchannelized Framed Clear DS1 Cross-connection

DA type NPCs provide Clear DS1 performance monitoring capability. This feature is enabled by provisioning a DA NPC with both a valid framing format (D4, ESF, T1DM) using the x field and at the same time, specifying an unchannelized Clear DS1 cross-connection using the z field.

The unframed Clear DS1 cross-connection which provides no path performance monitoring is not supported by the DA NPC type. If an unframed Clear DS1 cross-connection is desired on an NPC in a DACS II FTU, the NPC must be provisioned as NPC type DE9y9.

Zero Byte Time Slot Interchange (ZBTSI) encoding is not supported by the DA NPC type. If ZBTSI is desired on an NPC in a DACS II FTU, the NPC must be provisioned as a DE NPC type with its y option selecting ZBTSI (DEX3z).

DE Type NPC Parameters

Valid Parameters

The valid xyz parameters for DE type NPCs are listed below.

x	Multiframe format for the digroup	
	0	Not assigned
	1	D4
	2	ESF - Voice
	3	ESF - Data
	4	DDST (T1DM - R bit connection via channel 24)
	5-7	Not assigned
	8*	Ericsson Cellular format
	9	No framing format, transparent (TRSP), clear-DS1
	* Ericsson Cellular format is not compatible with y=4, y=5, and y=6, DMI signalling.	
y	Line and signaling format	
	0	ZCS - Zero code suppression
	1*	NZCS - No zero code suppression
	2*	B8ZS - Bipolar with 8 zero substitution
	3†	ZBTSI - Zero-bit time-slot interchanger
	4	ZCS/DMI - Zero code suppression/DMI signaling
	5	NZCS/DMI - No zero code suppression/DMI signaling
	6	B8ZS/DMI - Bipolar with 8 zero substitution/DMI signaling
	7-9	Not assigned
* Only options 1 and 2 are applicable to DE-type clear-DS1 NPC.		
† Only valid with ESF (x = 2 or 3)		



NOTE:

DMI signaling cannot be specified in the y field if the x field is 4 (DDS framing).

z	Channel numbering format
0	D4 channel bank channel numbering
1	D2 channel bank channel numbering
2	D1D channel bank channel numbering
3-8	Not assigned
9	No channel numbering format, clear-DS1

DS Type NPC Parameters

Valid Parameters The valid xyz parameters for DS type NPCs are listed below.

x	Multiframe format	
	0	Not assigned
	1	D4
	2	ESF - Voice
	3	Not assigned
	4	Not assigned
	5	Not assigned
	6	SLC [®] 96 carrier Fs
	7	SLC 5 carrier ESF with data link
	8-9	Not assigned
y	Line and signaling format	
	0	Zero code suppression (ZCS)
	1	No zero code suppression (NZCS)
	2	Bipolar with 8 zero substitution (B8ZS)
	3-9	Not assigned
z	Counting sequence format	
	0	SLC 96 carrier Mode III D4 counting sequence
	1	SLC 96 carrier Mode III D1D counting sequence
	2	SLC 96 carrier Mode I D1D counting sequence
	3	SLC Series 5 carrier D4 counting sequence
	4-9	Not assigned

PA Type NPC Parameters

Overview

The provisioning values for x, y, and z for the PA type are shown in the following tables. A 'Y' in a column of the table indicates that the feature at the top of the column is enabled by the corresponding (x, y or z) provisioning value.

Provisioning Values for x

The provisioning values for x are indicated in the following table.

Provisioning values for x

x value	CRC-4 Mode	Automatic CRC-4	Far-End PM	NPC used as Sync Source	TS0 Bit 5 used for SFI
0	Y				
1	Y		Y		Y
2	Y				Y
3	Y		Y		
4	Y			Y	
5	Y		Y	Y	Y
6	Y			Y	Y
7	Y		Y	Y	
8		Y	Y		
9		Y	Y		Y
A					Y
B					
C		Y	Y	Y	
D		Y	Y	Y	Y
E				Y	Y
F				Y	

Table Notes:

1. The columns "Automatic CRC-4*" and "Far-End PM" are new functions which were not available on the PB or PC types.

* Automatic CRC-4 is also known as CRC-4 Interworking.

2. If the CRC-4 mode is enabled (x values 0-7) the NPC will compute checksums over the transmitted data and transmit the checksum as part of the CRC-4 multiframe pattern in TS0. The NPC will also monitor the incoming CRC-4 multiframe and verify the CRC checksum. If the CRC-4 multiframe can not be found as per the CRC-4 reframe algorithm, the NPC will declare an alarm.

If the automatic CRC-4 option is selected (x values 8-9 and C-D), the NPC will perform all the functions of the CRC-4 mode. However, if the CRC-4 multiframe is lost, the NPC will not declare an alarm or apply consequent actions.

3. If the Far-End PM (Performance Monitoring) option is selected (x values 1, 3, 5, 7-9, and C-D), the E-bits contained within the CRC-4 multiframe are used to compute Far-End performance monitoring parameters.
4. If the NPC is to be used as a Sync Source (x values 4-7 and C-F), the clock from the NPC to the synchronizer will be enabled.
5. When the SFI (Synchronization Failure Indication) option is selected (x values 1-2, 5-6, 9-A and D-E), bit 5 of the TS0 Non Frame Word (NFW) is controlled by DACS II software. It will force the NPC to invert Bit 5 (or set to an alarm state) when the Synchronizer enters the holdover mode. The idle state of NFW bit 5 will default to a '1' when the NPC is grown. The idle state can be changed to a '0' with a subsequent CHG::NPC,TS0 command.

If the NPC is also used as a synchronization source and NFW bit 5 is received in the alarm state, that NPC will squelch the clock it puts out. If the DACS II is using this clock as a sync source, the sync pack terminating this clock will recognize that it is receiving a faulty clock and it will take appropriate actions which are the same as when the external sync source is detected to be faulty.

6. x value B does not enable any of the features shown in the Table; this is a valid option.

Provisioning Values for y

The provisioning values for y are indicated in the following table.

Provisioning values for y

y value	CAS Mode	NSA Mode	Telephone Numbering	Timeslot Numbering	Convert CTS 16	AIS in CTS 16	Framed Clear	Unframed Clear
0	Y		Y		Y	Y		
2	Y		Y		Y			
4	Y		Y			Y		
6	Y		Y					
8		Y	Y					
9		Y		Y				
C							Y	
D								Y

Table Notes:

1. The columns "Framed Clear" and "Unframed Clear" are new functions which were not available on the PB or PC types.
2. y values 1, 3, 5, 7, A-B and E-F are unassigned (that is, invalid).
3. For y values 0, 2, 4 and 6 Channel Associated Signaling (CAS) is enabled. In this mode the Telephone Channel Numbering system is always used.

If the "Convert TS16" option is selected (y values 0 and 2), the *abcd* bits of TS16 will be converted to '1111' if they are received as '0000'. This is to prevent false framing in the TS16 multiframe. If this option is not selected (y values 4 and 6), a value of '0000' in the *abcd* bits will be transmitted transparently.

If the "AIS in TS16" option is selected (y value 0 and 4), AIS will always be applied to received TS16 signaling channels on detection of RAI (Remote Alarm Indication, Bit 3 of TS0 NFW), RAIS (Remote AIS Indication, Bit 4 of TS0 NFW, if provisioned) or R16 (Remote Alarm Indication received in TS16). If this option is not selected (y values 2 and 6), AIS will not be applied on detection of RAI, RAIS, or R16.
4. For y values 8 and 9 the NPC will be Non Signaling Associated (NSA). In this mode, Telephone Channel Numbering (y=8) or Timeslot Channel Numbering (y=9) may be selected).

5. The NPC can be set up as a framed clear 2Mbit/s interface ($y=C$) or as an unframed clear 2Mbit/s interface ($y=D$). When provisioned as a clear 2 Mbit/s interface, an NPC does not modify the cross-connected data in any way. This means that the following functions are not performed in the clear 2 Mbit/s mode:
- Outgoing CRC4 checksum generation (applies to framed clear 2 Mbit/s interfaces with CRC4 option enabled).
 - Remote alarm indications (line format errors are reported locally, but no alarm indicators are sent in TS0 to the remote end).

Provisioning Values for z

The provisioning values for y are indicated in the following table.

Provisioning values for z

z value	C.A.Timing		RAI Set Time			NFW Bit 4 Use		RAIS Set Time		MBER	RPSFI
	HW	FW	2ms	144ms	480ms	RAIS	RBER	144ms	480ms	Enabled	Enabled
0	Y		Y								
1		Y	Y								
2	Y			Y							
3		Y			Y						
4	Y		Y			Y		Y			
5		Y	Y			Y			Y		
6	Y		Y				Y		Y		
7		Y	Y				Y		Y		
8	Y			Y		Y		Y			
9		Y			Y	Y			Y		
A	Y		Y							Y	
B		Y	Y							Y	
C	Y										
D	Y		Y			Y		Y			Y

Table Notes:

1. z value F and E are unassigned (i.e. not valid).
2. z value C selects TRANSMIC 1G.

3. z values 8, 9 select TRANSMIC 2G.
4. For z values 1, 3, 5, 7, 9, and B the Consequent Action (C. A.) timing is under Firmware control. For z values 0, 2, 4, 6, 8, A, C and D the Consequent Action timing is under Hardware control.

The G.732 Consequent Action of inserting the AIS in data channels is applied within 2 ms whether the timing is under HW control or FW control, but when under FW control, the AIS in data channels is overridden by the Insertion Word sourced from the Alternate Message Store (AMS) after detection of the local alarm:

in 480 ms
if z=1, 3, 5, or 9
in 2496 ms
if z=7 or B

The Insertion Word pattern can be specified in the cross-connect command; on 2Mbit/s NPCs in a gateway cross-connection the Insertion Word always defaults to AIS.

The selection of HW or FW control is also used to provision the consequent actions on signaling bits. On detection of loss of frame alignment (LOFA) or multiframe alignment (MFA) error, the hardware immediately applies a signaling freeze by using the last good frame's signaling information. The signaling freeze remains in effect until two multiframes without errors are received. When HW control is used, the AIS in signaling bits is applied within 2 ms, overriding the signaling freeze. When FW control is used, the trunk conditioning pattern from the AMS overrides the signaling freeze once the 2Mbit/s NPC goes into the alarm state.

5. The Consequent Action timing also selects the time after which the **local** alarms are declared and cleared:*

HW Control	Both remote and local alarms are declared and cleared in 144 ms.
FW Control	Only remote alarms are declared and cleared in 144 ms. The local alarms are declared and cleared in 480 ms, except when z=7 or B.

6. NFW bit 3, the remote alarm indication (RAI), will be processed as specified in CCITT Recommendation G.704 Section 2.3.2 (that is, within 2 ms after detecting the failure) when z = 0, 1, 4, 5, 6, 7, A or B. However, for

* Local alarms are those generated for the events: PWR, PBF, BER, AIS, LMA, and A16. Remote alarms are those generated for the events: RAI, RAIS, RBER, and R16.

z values 2 and 8 the set time is 144 ms and for z values 3 and 9 the set time is 480 ms. NFW bit 3 is always set to 0 for non-alarm condition and is set to 1 for alarm conditions.

7. When NFW bit 4 is used as RAIS (Remote AIS) indicator, NFW bit 4 will be set in 144 ms (for z = 4 and 8) or 480 ms (for z = 5 and 9) after AIS is detected in the received signal. The default idle state for Bit 4 is a '1'. The idle state can be changed to a '0' with the CHG::NPC,TS0 command. The bit is put into the active state by inverting the value of the idle state. Similarly, if NFW bit 4 is in the active state in the received signal, consequent actions are taken 144 ms after detecting this condition.
8. z values 6-7 and A-B enable the Minor Bit Error Rate and Signaling Freeze Delay Time Features.

Common Options (z=6-7 or A-B)

1. Enable BER calculations, and when in the BER state:

DACS takes the alarm state consequent actions: sending a message, and activating appropriate alarm relays and summary LEDs.

When out of the BER state, DACS retires the alarm state consequent actions: sends a retirement message, and deactivates appropriate alarm relays and summary LEDs.
2. RAI set in 2 ms
3. Signaling Freeze Delay Timing, Consequent Action Clear Timing:

z=6 or A hardware timing
z=7 or B firmware timing (SFDT=2496 ms, CACT=624 ms)
4. BER alarm level = DMA

Specific Options (z=6 or 7)

5. RBER alarm level = MI
 6. NFW bit 4=RBER:
- DACS II sends a remote indicator in bit 4 (RBER) of the time slot 0 Not Frame Word (NFW) upstream to the far end 144 ms after detecting the Minor Bit Error Rate (BER) condition.
 - DACS II sets the RBER bit to its idle state, on clearing of the BER condition.
 - DACS II detects the remote setting of the received bit 4 as an RBER condition and generates an appropriate message. Consequent actions are taken 144 ms after detecting this condition.
 - DACS II generates an appropriate retirement message when the received bit 4 returns to the idle state.

Specific Options for z=A or B

7. RBER unalarmed
8. NFW bit 4=disabled

NFW bit 4 is NOT used as RBER, although the local Minor Bit Error Rate (BER) condition is detected and cleared with the alarm state consequent actions.

9. To provision RPSFI, TS0 bit 5 used for SFI and CAS must be provisioned.

**Invalid Values
for x and y**

The following table provides a summary of invalid combinations of x and y for the PA type NPC.

Combinations of x and y Values

Invalid xyz Combinations	Explanation
8Cz 9Cz CCz DCz	Framed clear 2Mbit/s (y value C) is valid for all x options except those invoking automatic CRC-4 interworking. The interworking algorithm requires setting of outgoing E-bits, which is not permitted for a clear signal.
8Dz 9Dz CDz DDz	Unframed clear 2Mbit/s NPC is valid for all x options except those invoking automatic CRC-4 interworking.
0Dz 1Dz 2Dz 3Dz 4Dz 5Dz 6Dz 7Dz ADz EDz	Unframed clear 2Mbit/s (y value D) is only valid for x values B and F. These are the only x options which do not require decoding of TS0 content.

Table Notes:

1. If framed clear 2Mbit/s is selected with Far-End PM enabled z values 1, 3, 5 and 7) only the receive side of the feature shall be turned on. No outgoing E-bits may be transmitted during clear signal operation.

2. If framed clear 2Mbit/s is selected with Synchronization Failure Indication (SFI) enables (x values 1, 2, 5, 6, A and E) only the receive side of the feature shall be turned on. No outgoing SFI may be transmitted in Bit 5 during clear signal operation.

Invalid Values for y and z

The following table provides a summary of invalid combinations of y and z for the PA type NPC.

Combinations of y and z Values

Invalid xyz Combinations	Explanation
xC1 xC3 xC5 xC7 xC8 xC9 xCB xCC xD1 xD3 xD5 xD7 xD8 xD9 xDB xDC	Clear 2Mbit/s (y value C or D) cannot be used with Firmware controlled Consequent Action (z values 1, 3, 5, 7, 9 or B), TRANSMIC 1G (z value C) or TRANSMIC 2G (z value 8).
xD4 xD6	Unframed clear 2Mbit/s (y value D) cannot be used with z value 4 (NFW Bit 4 used for RAIS) or with z value 6 (NFW Bit 4 used for RBER) because unframed clear signals cannot obtain TS0 framing.
x0C x2C x4C x6C	Channel Associated Signaling (y values 0, 2, 4 and 6) is not valid for TRANSMIC 1G (z value C).

Table Notes:

1. If framed clear 2Mbit/s (y value C) is selected with z value 4 (NFW Bit 4 used for RAIS) only the receive side of this function will be enabled. Outgoing RAIS indicators cannot be transmitted during clear signal operation.
2. If framed clear 2Mbit/s (y value C) is selected with z= value 6 (NFW Bit 4 used for RBER) only the receive side of this function will be enabled. Outgoing RBER indicators cannot be transmitted during clear signal operation.

Invalid Values for x and z

The following table provides a summary of invalid combinations of x and z for the PA type NPC.

Combinations of x and z Values

Invalid xyz Combinations	Explanation
4yC 5yC 6yC 7yC CyC DyC EyC FyC	Use of NPC as Sync Source (x 4, 5, 6, 7, C, D, E and F) is not valid for TRANSMIC 1G (z value C). This is because the TSO Monitoring scheme used in TRANSMIC 1G prevents incoming SFI indicators from cutting off the signal to the Synchronizer.
0yD 3yD 4yD 7yD 8yD ByD CyD FyD	NPC provisioned for RPSFI must provision TS0 bit 5 used for SFI and CAS.

PB/PC Type NPC Parameters

Valid Parameters The valid xyz parameters for PB and PC type NPCs in the following tables.

NPC Provisioning Options

Digit	Bit	Value	Meaning
x	a	0	CRC multiframe in TS0
		1	Non-CRC framing in TS0
	b	0	NPC is not used as a synchronization source
		1	NPC is used as a synchronization source
	c	0	CCITT G.732 (hardware controlled) Consequent Actions, AIS in signaling
		1	Firmware controlled Consequent \$ Actions sup [c'] \$
	d	0	Non-signaling associated (NSA)
		1	16-state channel associated signaling (CAS)

Digit	Bit	Value	Meaning
y	e	0	Telephone channel numbering
		1	Channel timeslot numbering
	f	0	Convert the <i>abcd</i> bits of TS16 to 1111 if 0000
		1	Transmit the 0000 in the <i>abcd</i> bits transparently
	g	0	AIS applied to received TS16 on detection of RAI, RAIS, or R16
		1	AIS not applied to received TS16 on detection of RAI, RAIS, or R16
	h	0	NFW`bit 5=Synchronization Failure Indication (SFI) unaffected by Synchronizer Holdover (SH)
		1	NFW`bit 5=SFI inverted on SH on output and detected on input

Digit	Bit	Value	Meaning
z	jkl	000	NFW`bit`3=RAI set in < 2 ms,
		001	NFW`bit`3=RAI set in time \$ T sup [c"] \$
		010	NFW`bit`4=RAIS in time \$ T sup [c"] \$ and RAI in < 2 ms
		011	Enable BER calculations, BER alarm level = DMA, NFW`bit`4=RBER, RAI set in < 2 ms, for c=1 (SFDT=2496`ms, CACT=624`\$ms sup [jkl'] \$),
		100	NFW`bit`4=RAIS and RAI in time \$ T sup [c"] \$ (TRANSMIC`2G)
		101	Enable BER calculations, BER alarm level = DMA, NFW`bit`4=disabled, RAI set in < 2 ms, for c=1 (SFDT=2496`ms, CACT=624`\$ms sup [jkl'] \$),
		110	NFW`bits`3-8,in time 144ms (TRANSMIC 1G)
		111	Unassigned
	m	0	Unassigned, only m=0 is valid
		1	

Table Notes:

[b] Clock from NPC to synchronizer shall be enabled if this option bit is set to 1, otherwise it is disabled.

[c] The G.732 Consequent Action of inserting the AIS in data channels is applied within 2`ms whether mnxyz bit c=0 or c=1; but when c=1, the AIS in data channels is overridden by the Insertion Word sourced from the Alternate Message Store (AMS) after detection of the local alarm:
 in 480 ms
 if jkl not equal to 011 and jkl not equal to 101
 in 2496 ms
 if jkl=011 or jkl=101. See note [jkl].

The insertion word pattern can be specified in the cross-connect command; on CEPT NPCs in a gateway cross-connection the insertion word always defaults to AIS.

mnxyz`bit c is also used to provision the consequent actions on signaling bits. On detection of any single framing error or multiframe error, the hardware immediately applies a signaling freeze by using the last good frame's signaling information. The signaling freeze remains in effect until two multiframes without errors are received. When c=0, the AIS in signaling bits is applied within 2`ms, overriding the signaling freeze. When c=1 if the primary goes into the alarm state then the trunk conditioning pattern from the AMS overrides the signaling freeze.

In basic CEPT only, option c=0 is supported and both the AIS and RAI will be applied in less than 2`ms. NFW`bit`3 of TS0 in enhanced CEPT is controlled by selecting the jkl options. Also see note [jkl].

[c'] Option c also selects the time after which the **local** alarms are declared and cleared:*

Local alarms are those generated for the table entries PWR, PBF, BER, AIS, LMA, and A16. Remote alarms are those generated for the table entries RAI, RAIS, RBER, and R16.

c=0 Both remote and local alarms are declared and cleared in 144 ms.

c=1 Only remote alarms are declared and cleared in 144 ms. The local alarms are declared and cleared in 480 ms except when jkl=011 or jkl=101. For that case, see note [jkl].

[c"] Time T will be 144`ms when option c=0 and 480 ms when option c=1.

- [g]** Option g has meaning only if the NPC is provisioned for CAS; that is, option d=1, otherwise it is ignored. If option g=0 is selected, the AIS will always be applied to received TS16 on detection of RAI and will also be applied on detection of RAIS if the NPC is provisioned for RAIS.

If option g=1 is selected, the AIS will not be applied on detection of RAI, RAIS, or R16.

- [h]** NFW`bit`5 when used as SFI, and h=1, is controlled by DACS II software that will force the NPC to invert (or set to an alarm state) when the synchronizer enters the holdover mode.

NFW`bit`5 will default to 1 when the NPC is grown, without regard of whether option h was selected as either 0 or 1, unless it is later set to 0 by setting parameter e=0 in the TS0 field of the CHG::NPC (O.38321) command.

For Transmic`1G the information message REPT STATE EQPT (O.65201) is output. For all other combinations of xyz the alarm message REPT ALARM EQPT (O.65011) is output on detection of change of state of NFW spare bit`5 when option h=1.

If both b=1 and h=1 and the NPC (used as synchronization source) receives NFW bit`5 in the alarm state, that NPC will squelch the clock it outputs. If the DACS II is using this clock as a sync source the sync pack terminating this clock will recognize that it receives a faulty clock and it will take appropriate actions which are the same as when the external sync source is detected to be faulty.

- [jkl] [000]** NFW bit`3, the remote alarm indication (RAI), will be processed as specified in CCITT Recommendation G.704 Section`2.3.2 and is the same as in Basic CEPT when option c is selected as 0; that is, within 2`ms after detecting the failure. If this option is not specified as 000, use of NFW bit`3 as RAI will remain unchanged except the time when NFW bit`3 is set can be changed to 144`ms as opposed to 2 ms after detecting the failure. NFW`bit`3 is always set to 0 for nonalarm conditions and is set to 1 for alarm conditions.
- [010 or 100]** NFW`bit`4 when used as RAIS, and AIS is detected in the received signal, can only be set 144`ms after detecting this condition. Similarly, when the received NFW bit`4 is in the active state, consequent actions are taken 144`ms after detecting this condition.
- NFW`bit`4 use as REER is not supported in G4.0.
- [111]** The jkl=111 option will be denied.

[jkl'] minor bit error rate and signaling freeze delay time features:

jkl=011 or jkl=101 1.Enable BER calculations, and when in the BER state:

DACS takes the alarm state consequent actions: sending a message, and activating appropriate alarm relays and summary LEDs.

When out of the BER state, DACS retires the alarm state consequent actions: sends a retirement message, and deactivates appropriate alarm relays and summary LEDs.

2. RAI set in 2 ms
3. Signaling freeze Delay timing, consequent action clear timing:

c=0	hardware timing
c=1	firmware timing (SFDT=2496`ms, CACT=624`ms)
4. BER alarm level = DMA

jkl=011 5.RBER alarm level = MI

6. NFW`bit`4=RBER:

- DACS`II sends a remote indicator in bit`4 (RBER) of the timeslot 0 not frame word (NFW) upstream to the far end 144`ms after detecting the minor bit error rate (BER) condition.
- “ DACS`II sets the RBER bit to its idle state, on clearing of the BER condition.
- DACS`II detects the remote setting of the received bit`4 as an RBER condition and generates an appropriate message. Consequent actions are taken 144`ms after detecting this condition.
- “ DACS II generates an appropriate retirement message when the received bit`4 returns to the idle state.

jkl=101 7.RBER unalarmed

8. NFW`bit`4=disabled

NFW`bit`4 is NOT used as RBER, although the local minor bit error rate (BER) condition is detected and cleared with the alarm state consequent actions.

For the MBER/SFDT features, the required xyz options are ab1d`efgh`0110 or ab1d`efgh`1010. For MBER with hardware consequent action timing, the required xyz options are ab0d`efgh`0110 or ab0d`efgh`1010.

NFW`bit`4 will default to 1 when the NPC is grown. It may later be set to 0 by setting parameter d=0 in the TS0 field of the CHG::NPC (O.38321) command.

[m] The option bit "m" is unassigned. Its default value is "0". The equipage command must deny "m" specified as "1".

The default values for TS0 parameters are abcdefgh=11011111 (as per CCITT recommendations when crossing the international borders), unless the xyz parameters set them differently, that is, for Transmic`1G the abcdefgh=11000000.

The default values for TS0M parameters are abcdefgh=00000000, unless the xyz parameters set them differently, that is, for Transmic`1G the abcdefgh=00111111.

TA Type NPC Parameters

Valid Parameters The valid xyz parameters for ANSI TA type NPCs (which are DS1s received on DS3Us) are listed below.

x	Multiframe format for the digroup	
	0	Not assigned
	1	D4
	2	ESF - Voice
	3	ESF - Data
	4	DDST (T1DM - R bit connection via channel 24)
	5-7	Not assigned
	8	Ericsson Cellular format
	9	Not assigned
y	Line and signaling format	
	0	ZCS - Zero code suppression
	1*	NZCS - No zero code suppression
	2	Not assigned
	3	Not assigned
	4	ZCS/DMI - Zero code suppression/DMI signaling
	5	NZCS/DMI - No zero code suppression/DMI signaling
	6-9	Not assigned

* Only option 1 is applicable to TA-type clear-DS1 NPCs.



NOTE:

DMI signaling cannot be specified in the y field if the x field is 4 (DDST framing).

z	Channel numbering format
0	D4 channel bank channel numbering
1	D2 channel bank channel numbering
2	D1D channel bank channel numbering
3-8	Not assigned
9	Unchannelized Framed Clear DS1 Cross-connection

TA type NPCs provide Clear DS1 performance monitoring capability. This feature is enabled by provisioning a TA NPC with both a valid framing format (D4,ESF,T1DM) using the x field and at the same time, specifying an unchannelized Clear DS1 cross-connection using the z field.

The unframed Clear DS1 cross-connection which provides no path performance monitoring is not supported by the TA NPC type. If an unframed Clear DS1 cross-connection is desired on an NPC in a DACS II DS3U, the NPC must be provisioned as NPC type TE919.

TE Type NPC Parameters

Valid Parameters

The valid xyz parameters for TE type NPCs are listed below.

x	Multiframe format	
	0	Not assigned
	1	D4
	2	ESF - Voice
	3	ESF - Data
	4	DDST (T1DM - R bit connection via channel 24)
	5-7	Not assigned
	8*	Ericsson Cellular format
	9	No framing format, transparent (TRSP), clear-DS1
	* Ericsson Cellular format is not compatible with y=4 and y=5, DMI signalling.	
y	Line and signaling format	
	0	ZCS - Zero code suppression
	1*	NZCS - No zero code suppression
	2	Not assigned
	3	Not assigned
	4	ZCS/DMI - Zero code suppression/DMI signaling
	5	NZCS/DMI - No zero code suppression/DMI signaling
	6-9	Not assigned
	* Only option 1 is applicable to TE-type clear-DS1 NPCs.	



NOTE:

DMI signaling cannot be specified in the y field if the x field is 4 (DDS framing).

z	Channel numbering format
0	D4 channel bank channel numbering
1	D2 channel bank channel numbering
2	D1D channel bank channel numbering
3-8	Not assigned
9	No channel numbering format, clear-DS1

TH Type NPC Parameters

Valid Parameters The valid xyz parameters for CEPT TH type NPCs (which are received on HDS3Us) are listed in the tables below.

Overview The provisioning values of x, y, and z for the TH type are shown in the following tables. A 'Y' in a column of the Table indicates that the feature at the top of the column is enabled by the corresponding (x, y, or z) provisioning value.

Provisioning Values for x The provisioning values for x are indicated in the following table.

Provisioning values for x		
x value	CRC-4 Mode	Automatic CRC-4
0	Y	
8		Y
B		

Table Notes:

1. The "Automatic CRC-4" is also known as CRC-4 Interworking.
2. If the CRC-4 mode is enabled (x value 0) the NPC will compute checksums over the transmitted data and transmit the checksum as part of the CRC-4 multiframe pattern in TS0. The NPC will also monitor the incoming CRC-4 multiframe and verify the CRC-4 checksum. If the CRC-4 multiframe cannot be found using the CRC-4 reframe algorithm, then the NPC will declare an alarm.

If the automatic CRC-4 option is selected (x value 8), the NPC will perform all the functions of the CRC-4 mode. However, if the CRC-4 multiframe is lost, the NPC will not declare an alarm or apply consequent actions.
3. x value B does not enable any of the features shown in the Table; this is a valid option.
4. Only x values 0, 8, and B are valid x values, all other x values will be denied.

Provisioning Values for y

The provisioning values for y are indicated in the following table.

Provisioning Values for y

y value	CAS Mode	NSA Mode	Telephone Numbering	Timeslot Numbering	Convert CTS 16	AIS in CTS 16	Framed Clear	Unframed Clear
0	Y		Y		Y	Y		
2	Y		Y		Y			
4	Y		Y			Y		
6	Y		Y					
8		Y	Y					
9		Y		Y				
C							Y	
D								Y

Table Notes:

- y values 1, 3, 5, 7, A-B and E-F are unassigned (that is, invalid).
- For y values 0, 2, 4 and 6 Channel Associated Signaling (CAS) is enabled. In this mode the Telephone Channel Numbering system is always used.

If the "Convert TS16" option is selected (y values 0 and 2), the abcd bits of TS16 will be converted to '1111' if they are received as '0000'. This is to prevent false framing in the TS16 multiframe. If this option is not selected (y values 4 and 6), a value of '0000' in the abcd bits will be transmitted transparently.

If the "AIS in TS16" option is selected (y value 0 and 4), AIS will always be applied to received TS16 signaling channels on detection of RAI (Remote Alarm Indication, Bit 3 of TS0 NFW), RAIS (Remote AIS Indication, Bit 4 of TS0 NFW, if provisioned) or R16 (Remote Alarm Indication received in TS16). If this option is not selected (y values 2 and 6), AIS will not be applied on detection of RAI, RAIS, or R16.
- For y values 8 and 9 the NPC will be Non Signaling Associated (NSA). In this mode, Telephone Channel Numbering (y=8) or Timeslot Channel Numbering (y=9) may be selected.
- The NPC can be set up as a framed clear 2 Mbit/s interface (y=C) or as an unframed clear 2 Mbit/s interface (y=D). When provisioned as a clear 2 Mbit/s interface, an NPC does not modify the cross-connected data in any way. This means that the following functions are not performed in the clear 2 Mbit/s mode:
 - Outgoing CRC-4 checksum generation (applies to framed clear 2 Mbit/s interfaces with CRC-4 option enabled).

- Remote alarm indications (line format errors are reported locally, but no alarm indicators are sent in TS0 to the remote end).

Provisioning values for z

The provisioning values for z are indicated in the following table.

Provisioning Values for z

z	C.A.Timing		RAI Set Time			NFW Bit 4 Use		RAIS Set Time		MBER
value	HW	FW	2ms	166ms	500ms	RAIS	RBER	166ms	500ms	Enabled
0	Y		Y							
1		Y	Y							
2	Y			Y						
3		Y			Y					
4	Y		Y			Y		Y		
5		Y	Y			Y			Y	
6	Y		Y				Y			Y
7		Y	Y				Y			Y
A	Y		Y							Y
B		Y	Y							Y

Table Notes:

1. z values 8, 9, C, D, E and F are unassigned (that is, invalid).
2. For z values 1, 3, 5, 7 and B the consequent action timing is under firmware (FW) control. For z values 0, 2, 4, 6 and A the consequent action timing is under hardware (HW) control.

The G.732 consequent action of inserting the AIS in data channels is applied within 2 ms whether the timing is under HW control or FW control, but when under FW control, the AIS in data channels is overridden by the Insertion Word sourced from the Alternate Message Store (AMS) after detection of the local alarm:

in 500 ms
if z = 1, 3 or 5
in 2496 ms
if z = 7 or B

The Insertion Word pattern can be specified in the cross-connect command; on 2Mbit/s NPCs in a *gateway cross-connection* the Insertion Word always defaults to AIS.

The selection of HW or FW control is also used to provision the consequent actions on signaling bits. On detection of loss of frame (LOF) or multiframe alignment (LMA, Loss of Multiframe Alarm) error, the hardware immediately applies a signaling freeze by using the last good frame's signaling information. The signaling freeze remains in effect until two multiframes without errors are received. When HW control is used, the AIS in signaling bits is applied within 2 ms, overriding the signaling freeze. When FW control is used, the trunk conditioning pattern from the AMS overrides the signaling freeze once the 2Mbit/s NPC goes into the alarm state.

3. The Consequent Action timing also selects the time after which the **local** alarms are declared and cleared:*

HW Control: Both remote and local alarms are declared and cleared in 166 ms.

FW Control: Only remote alarms are declared and cleared in 166 ms. The local alarms are declared and cleared in 500 ms, except when $z = 7$ or B.

4. On the transmitting NPC, bit 3 in the NFW, the remote alarm indication (RAI), will be processed as specified in ITU-T Recommendation G.704 Section 2.3.2 (**that is, within 2 ms after detecting the failure**) when $z = 0, 1, 4, 5, 6, 7, A$ or B. However, for z value 2 the set time is 166 ms and for z value 3 the set time is 500 ms. NFW bit 3 is always set to 0 for non-alarm condition and is set to 1 for alarm conditions.
5. On the transmitting NPC, if bit 4 of the NFW is used as RAIS (Remote AIS) indicator, NFW bit 4 will be set in 166 ms (for $z = 4$) or 500 ms (for $z = 5$) after AIS is detected in the received signal. The default idle state for Bit 4 is a '1'. The idle state can be changed to a '0' with the CHG::NPC,TS0 command. /* pds */ The idle state can be changed to a '0' with the ED-PRMTR-EQPT::NPC:TS0 command. /* mml */ The bit is put into the active state by inverting the value of the idle state. Similarly, if NFW bit 4 is in the active state in the received signal, consequent actions are taken 166 ms after detecting this condition.
6. z values 6-7 and A-B enable the Minor Bit Error Rate and Signaling Freeze Delay Time Features.

Common Options ($z = 6-7$ or A-B)

9. Enable BER calculations, and when in the BER state:

* Local alarms are those generated for the events: PWR, PBF, BER, AIS, LMA, and A16. Remote alarms are those generated for the events: RAI, RAIS, RBER, and R16.

DACS takes the alarm state consequent actions: sending a message, and activating appropriate alarm relays and summary LEDs.

When out of the BER state, DACS II retires the alarm state consequent actions: sends a retirement message, and deactivates appropriate alarm relays and summary LEDs.

10. RAI set in 2 ms
11. Signaling Freeze Delay Timing, Consequent Action Clear Timing:

z=6 or A hardware timing

z=7 or B firmware timing (SFDT=2496 ms,
CACT=624 ms)

12. BER alarm level = DMA

Specific Options for z= 6 or 7

13. RBER alarm level = MI

- DACS II sends a remote indicator in bit 4 (RBER) of the time slot 0 Non Frame Word (NFW) upstream to the far end 166 ms after detecting the Minor Bit Error Rate (BER) condition.
- DACS II sets the RBER bit to its idle state, on clearing of the BER condition.
- DACS II detects the remote setting of the received bit 4 as an RBER condition and generates an appropriate message. Consequent actions are taken 166 ms after detecting this condition.
- DACS II generates an appropriate retirement message when the received bit 4 returns to the idle state.

Specific Options for z= A or B

14. RBER unalarmed
15. NFW bit 4=disabled

NFW bit 4 is NOT used as RBER, although the local Minor Bit Error Rate (BER) condition is detected and cleared with the alarm state consequent actions.

Additionally:

- For telephone channel numbering, channels 16 to 30 occupy time slots 17 to 31.
- For time slot channel numbering, channels 16 to 30 occupy time slots 16 to 30.

Invalid xyz Combinations The following tables provide a summary of invalid combinations of xyz for the TH type NPC.

Table 2-1. Combinations of x and y Values

Invalid xyz Combinations	Explanation
8Cz	Framed clear 2 Mbit/s (y value C) is valid for all valid x options except the one invoking automatic CRC-4 interworking. The interworking algorithm requires setting of outgoing E-bits, which is not permitted for a clear signal.
0Dz 8Dz	Unframed clear 2 Mbit/s (y value D) is only valid for x value B. This is the only x option which does not require decoding of TS0 content.
xC1 xC3 xC5 xC7 xCB xD1 xD3 xD5 xD7 xDB	Clear 2 Mbit/s (y value C or D) cannot be used with Firmware controlled Consequent Action (z values 1, 3, 5, 7 or B).
xD4 xD6	Unframed clear 2 Mbit/s (y value D) cannot be used with z value 4 (NFW Bit 4 used for RAIS) or with z value 6 (NFW Bit 4 used for RBER) because unframed clear signals cannot obtain TS0 framing.

Table Notes:

1. If framed clear 2 Mbit/s (y value C) is selected with z value 4 (NFW Bit 4 used for RAIS) only the receive side of this function will be enabled. Outgoing RAIS indicators cannot be transmitted during clear signal operation.
2. If framed clear 2Mbit/s (y value C) is selected with z= value 6 (NFW Bit 4 used for RBER) only the receive side of this function will be enabled. Outgoing RBER indicators cannot be transmitted during clear signal operation.

There are no combinations between valid x and z values that are invalid.

CB Type NPC Parameters

Valid Parameters The valid xyz parameters for CB type NPCs are listed below.

x	Fixed at 1
y	Fixed at 0
z	Network timer value (in milliseconds)
0	600 to 750
1	1500 to 1650
2	2400 to 2550
3	4650 to 4800

MB Type NPC Parameters

Valid Parameters The valid xyz parameters for MB type NPCs (which are received in FTUs) are listed below.

x Fixed at 1

y Fixed at 0

z Fixed at 0

MJ/SR Type NPC Parameters

The following contains the valid xyz parameters for MJ and SR type NPCs.

x	Fixed at 1
y	Fixed at 0
z	Fixed at 0

SD Type NPC Parameters

Valid Parameters The valid xyz parameters for SD type NPCs (used for Digital Signal Processing (DSP) Applications) are listed below.

SD111	X.50/X.57 International subrate application
SD311	Digital Multipoint Bridge application
SD411	North American DDS Subrate and MJU application
SDxyz	Possible future applications with specific values for xyz

SP Type NPC Parameters

Valid Parameters The valid xyz parameters for SP type NPCs are listed below.

x	Fixed at 1
y	Fixed at 0
z	Fixed at 0

ST Type NPC Parameters

Valid Parameters

The valid xyz parameters for ST type NPCs are listed below.

ST100	Integrated Test Set provisioned in for a 2.048 Mbit/s Termination module
ST110	Integrated Test Set provisioned in for a 1.544 Mbit/s Termination module

VI Type NPC Parameters

Valid Parameters The following contains the valid xyz parameters for VI type NPCs.

x	Fixed at 1
y	Fixed at 0
z	Fixed at 0

TLI XYZ Parameters

Description

TLI parameters indicate specific conditions relating to that circuit type. TLI parameters differ between TLI types.

This section lists the XYZ parameters for various TLI types.

TLI Types

The various TLI types are:

- TC
 - Composite Clock Timing Extractor
 - TD
 - Timing Extractor
 - TP
 - Primary Block Timing Extractor
 - TR
 - Basic System Reference Frequency (BSRF)
 - TU
 - Unipolar Clock Timing Extractor
-

TC/TR/TU Type TLI Parameters

Valid Parameters The valid xyz parameters for TC, TR, and TU type TLIs are listed below.

x	Frame format
y	Line format
z	Channel format

Values for x, y, and z are unassigned.

TD Type TLI Parameters

Valid Parameters

The valid xyz parameters for TD type TLIs are listed below.

x		Timing distributor identification
	1	Composite Clock Timing Distribution
	2	Sinusoidal 2.048 MHz Timing Distribution
y		Unassigned
z		Unassigned

TE Type TLI Parameters

Valid Parameters The valid xyz parameters for TE type TLIs are listed below.

x	Frame format	
	0	Invalid
	1	D4 Format
	2,3	ESF Format
	4	DDS (T1DM) Format
	5-9	Invalid
y	Line format	
	0,1	Bipolar Line Coding
	2	B8ZS Line Coding
	3	Invalid
	4,5	Bipolar Line Coding
	6	B8ZS Line Coding
z	Channel format	
	0-9	Unassigned

TP Type TLI Parameters

Valid Parameters The following contains the valid xyz parameters for TP type TLIs.

x	Frame format	
	1,5	Common Channel Signaling
	2,6	Channel Associated Signaling - Mode 0
	3,7	Channel Associated Signaling - Mode 1
	4,8	European Remote Switching Module
	0,9	Invalid
y	Line format	
	0,2	Alternate Mark Inversion (Bipolar)
	1,3	High Density Bipolar (HDB3)
	4-9	Invalid
z	Channel format	
	0-9	Unassigned

MXR XYZ Parameters

Description MXR parameters indicate specific conditions relating to that circuit type. This section lists the XYZ parameters for various MXR types.

MXR Types The various MXR types are:

- MX
 - KCR1 Multiplexer Circuit Pack DS3
- EX
 - KCR5 Multiplexer Circuit Pack DS3
- HX
 - KCR8 Multiplexer Hybrid DS3

MX/EX/HX Type XYZ Parameters

Valid Parameters The valid xyz parameters for MX, EX, and HX type MXRs are listed below.

x		DS3 framing format
	1	M13 format (default)
	2	C-bit parity format, not supported by HMXR
y		Not assigned (the only valid value is 0)
z		Not assigned (the only valid value is 0)

MIU XYZ Parameters

Description MIU parameters indicate specific conditions relating to that circuit type. This section lists the XYZ parameters for various MIU types.

MIU Types The various MIU types are:

- MI
 - KCR1 Multiplexer Circuit Pack DS3

MI Type XYZ Parameters

Valid Parameters The valid xyz parameters for MI type MIU xyz parameters are listed below.

x	Fixed at 1
y	Fixed at 0
z	Fixed at 0

Alphabetic List of Messages

3

Alphabetic List of Keywords

ABT	55711
ACO,ACTIVE	65071
ACON,OLD,NEW,CUS,INCL,RDC	14001
ACT,MAP,CLR,INCL	39201
ADD,LINK,APPL,ASCS,ASCD,PM,L2AD,POLL	36007
ADD,LINK,K,T1,T3,N2,A,B	36003
ADD,LINK,PTCOL,S,X,T,M,BAUD,ALM,BS,INIT,TABS,ENQ,XON	36001
ADD,LINK,W,P,T20,T22,T23,T25,T26,R20,R22,R23,R25,VC,DBIT	36005
ADD,NPC	36021
ADD,RT,DL,MD,DGA,DGB,DGC,DGD,DGP,NDL,RTF	36201
ADD,USER,LINK,LANG,M,P,F,NPCAD,E,H,X,LEV,RMON,RMOFF,RLK,A,I,CONVON,CONV OFF,INIT	36103
ADD,USER,NEW,PASSWD,COND	36101
ALM,CCN,OOS,COND,MJ,IDLD	65054
ALM,IDLD,NPC	65041

ALM,IDLD,NPC	65046
ALM,IDLD,UNIT,DS3,COMPL	66011
ALM,MJ,IDLD,ECCN,OOS	65055
ALM,MJ,MN,INFO,NPC	65031
ALM,MN,IDLD,DS3UNPROTALM,DS3U	66021
ALM,MN,IDLD,SMEM	65056
ALM,NPC	65036
ALM,PMA,PMC,MI,DMA,RPSFI,IDLD	65091
ALM,RESET,DATE,TOD,TOD,DATE,FORMAT,MDY,FORMAT,DMY	65051
ALM,UNIT,DS3,COMPL	66001
ALW,PMREPT,NPC	51171
ALWSW,UNIT,MMFG,TOPRTN,TOSRVC	35301
APPEND,END	19041
APPL,RESET	62011
AR01,MISC,ALM,CGA,PBA,LOS	65011
AR01,MISC,ALM,IDLD,CGA,PBA,LOS	65021
AUD,PARAMS,COMPL	81006
AUD,QRY,ALL,FTU,NPCS,TOT,DS3U,HSU	81002
AUD,QRY,ALL,NPCS,TOT	81004
AUD,QRY,BER,ALL,NPCS,TOT	81005
AUD,QRY,BER	81003
AUD,QRY,CFA,CGA,LOS,AR02,ALARM,SUM,REPORTS,FOLLOW,SC,ALM,AR01,MISC,END,PARAMS,ALL,FTU,NPCS,TOT,DS3U,HSU,PBA,FTM,PA,NPC	81001
BADVERB,FRMERR,SEQERR,BAD,SYNTAX,STOPPED	01101
BADVERB,FRMERR,SEQERR,CMD,INERR,STOPPED	01131
BC,R,TO,ZO,NA	65211
BCON,FROM,TO,NTR,LPD,CONV,CUS,INCL,RDC,NAM,BCAST,COND	13002
BCON,FROM,TO,RDC,CUS,INCL,NTR,LPD,CONV	13021
BCON,FROM,TOX,NTR,LPD,CONV,CUS,INCL,RDC,NAM,BCAST,COND	13001
BCON,FROM,TOX	13051
BDIS,FROM,TO,CONV,OOS,DCC,INCL	15201
BDIS,FROM,TO,OOS,INCL,CONV	15231

BDIS,FROM,TOX,CONV,OOS,DCC,INCL	15211
BDIS,FROM,TOX,OOS,INCL,CONV	15221
BOOT,FAILED,BAD,BOOT,DEVICE	65053
BOOT,FROM,PMEM,FAILED,ATTEMPTING,TO,SMEM	01242
BOOT,FROM,PMEM,SMEM	01241
BX,STARTUP,STF,ATP	01271
CBOFL,SIDE	65221
CFR,FRAME	35021
CFR,SYNC,FPLL	35011
CFR,SYNC,MASTER,SLAVED	35013
CFR,SYNC,STRATUM,STR2,STR3,TOLL,LOCAL	35012
CFR,XC,INCL	35001
CHG,ALMS	38355
CHG,BC,X,TO	38333
CHG,BCOFF,TO	38335
CHG,DD,TO	38331
CHG,DS1ALMDS2,ON,OFF	38621
CHG,DS3ALMDLY	38641
CHG,DS3UNPROTALM,ON,OFF	38611
CHG,ECLOC,TYPE,MJU,SRM,COND	38261
CHG,ERB,TYPE	38631
CHG,FALMS,TYPE,PMC,PMA,DMA,MI,RESET	38375
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CHG,FROM,TO,NOT,TLA,TLR,F,T,B,L,G,A,INCL,NEW,STATE,RNG,RDC,CUS,COND	17001
CHG,FROM,TO,TLP,NG,ES,INCL	17002
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CHG,INTV,ON,OFF	38451
CHG,MACRO,MAP,SPACE	38501
CHG,MSGLOG,ON,OFF	38471
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CHG,NPC,ALMOPT,AIS,PMC,PMA,DMA,MI,INFO,MJ,MN,PLOPT,PL,ENA,DSA	38281

CHG,NPC,LPBK	38341
CHG,NPC,NFS	38324
CHG,NPC,OPTS,THMODE,TYPE,IW,SLIP,BER,ERS,SERS,COFA,SANE,SAFE,THRESHOL DS,OPTIONS,OLD,DAILY,NE,CVP,ESP,SESP,SEFS,CSSP,UASP,CVL,ESL,SESL,FE,CRC, FRER,OFS,ES,SES,CSS,CV,UAS,UATC,MER,FEFE,FES,FSES,FUAS,HOURS,DM,US,SHO RT,INTERVAL,CON	38221
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CHG,SALMS,PMC,PMA,DMA,MI,RESET	38365
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CHG,SCON,OLD,NEW	19581
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CHG,SEQ,UNIT,CONN	38101
CHG,SETOP,TYPE,ALL,NPCOP,DS3OP	38203
CHG,SETOP,TYPE,ALL,NPCOP	38201
CHG,SWCH,TOX,INCL	18001
CHG,SWCH,TOX,INCL	18011
CHG,SYNC,TLI,SSP,TYPE,NPC,SRC	38011
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CHG,TLA,TLR,TO,NEW,STATE	19551
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CHG,UNIT,DS3,BERM,BERT,LBO,TYPE	38601
CHG,UNIT,DS3,OPTS	38661
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CONF,DROP,ID,OOS,DCC,INCL	18431
CONF,FROM,TO,ID,RDC,CUS,INCL	18611
CONF,QRY,ID,ALL	18511
CONF,QRY,REG,PORT,ALL	18521
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CTST,FAD,EMODE,FMODE,INCL	20111
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CTST,TNR,FAD,OOS,RDC,CUS,UMPD,EMODE,FMODE,COND,UNMAP	20201
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DGN,CCNI,CFT,X	41201
DGN,ETSI,CFT,X	41261
DGN,ETSI,ECCN,ALL	41271
DGN,ICI,CFT,X	41031
DGN,IN,PROGRESS	41004
DGN,LINK,CFT,X	41011
DGN,MC,CFT,ATP,CATP,STF,COND	41001
DGN,MP,CFT,ATP,CATP,STF,COND	41021

DGN,NPC,SIDE,CFT,X	41351
DGN,NPC	41361
DGN,PMEM,SMEM,CFT,EXCT,DBASE,VERIFY,ATP,STF,CATP,COND	41051
DGN,SNC,TLI,CRO	41111
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DGN,SYNC	41101
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DGN,UNIT,DSPI,CFT,X	41341
DGN,UNIT,FC,CFT,X	41331
DGN,UNIT,FLI,CFT,X	41401
DGN,UNIT,FMT,CFT,X	41411
DGN,UNIT,FTMI,CFT,X	41321
DGN,UNIT,MIU,CFT,X	41431
DGN,UNIT,MPR,DEV,ATP,STF,COND	41821
DGN,UNIT,MXR,DEV,CFT,ATP,CATP,STF,COND	41421
DGN,UNIT,OI	41801
DGN,UNIT,UC,CFT,X	41311
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DGRTH,NPC,NPCTP,TPR	32381
DGRTH,NPC	32341
DGRTH,SYNC,TB	32101
DGRTH,SYNC,TLI,SSP	32121
DGRTH,TG	32421
DGRTH,TP	32411
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DGRTH,UNIT,MIU	32511
DGRTH,UNIT,MXR	32501
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ERR,ESR,MC,MP,TN,EVENT	01311
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ERR,ESR,SYNC,TN,EVENT	01331
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GRTH,NPC,TYPE,OPTS,IW,INCL,AIS,INFO,MJ,MN,PL,ENA,DSA	31341
GRTH,NPC,TYPE,OPTS,IW,INCL,X,AIS,INFO,MJ,MN	31352
GRTH,NPC,TYPE,OPTS,IW,X,AIS,MI,PMA,DMA	31363
GRTH,NPC,TYPE,OPTS,IW,X,AIS,MI,PMA,PMC,DMA	31362
GRTH,NPC,TYPE,OPTS,IW,X	31371
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GRTH,SYNC,TB,TYPE	31101
GRTH,SYNC,TLI,TYPE,SSP,SRC,NPC	31121
GRTH,SYNC,TLI,TYPE	31111
GRTH,TG,NPCTG	31421
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GRTH,UNIT,FTMI,EQL,IMP	31321
GRTH,UNIT,MIU,TYPE	31501
GRTH,UNIT,MXR,TYPE,BERM,BERT,LBO	31511
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OCNT,FROM,TO,RDC,CUS,INCL,PRIOUT,NAM	12101
OCON,FROM,TO,MPM,NAM,CUS,INCL,RDC	11121
OCON,FROM,TO,RDC,CUS,INCL,PRIOUT,NAM	11101
OCON,FROM,TO,RDC,CUS,INCL,PRIOUT	11131
ODIS,FROM,TO,INCL,OOS,DCC,NOBBL,F,T,MPDIS,B,CUS,RDC	15102
ODIS,FROM,TO,INCL,OOS,DCC,PRIOUT	15101
ODIS,FROM,TO,OOS,INCL,PRIOUT	15111
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RMV,CCNI,PMC,PMA,DMA,MI	33201
RMV,ETSI	33261
RMV,ETSI,ECCN,ALL	33271
RMV,FRM,SEQ,LINK	33011
RMV,MC	33001
RMV,NPC,SIDE,INCL	33351
RMV,RT,DL	33481
RMV,SMEM,PMEM,COND,PMC,PMA,DMA,MI	33211
RMV,SYNC,TLI,COND,PMC,PMA,DMA,MI	33131
RMV,SYNC,TLI,CRO,PMC,PMA,DMA,MI	33111
RMV,SYNC,TLI,SSP,COND,PMC,PMA,DMA,MI	33121
RMV,SYNC	33101
RMV,TSI,PMC,PMA,DMA,MI	33221
RMV,TSIS,CCN,ALL	33241
RMV,TSIS,CCN,UNIT,CONN	33231
RMV,UNIT,FC,PMC,PMA,DMA,MI	33331
RMV,UNIT,FLI	33401
RMV,UNIT,FMT	33411
RMV,UNIT,FTMI,DSPI	33321
RMV,UNIT,MIU,INCL	33431
RMV,UNIT,MMFG,FRC,INCL	33421
RMV,UNIT,UC,PMC,PMA,DMA,MI	33311
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RST,CCNI	34201
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RST,ETSI,ECCN,ALL	34271
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RST,RT,DL	38481
RST,SYNC,TLI,CRO	34111
RST,SYNC,TLI,SSP	34121
RST,SYNC	34101
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RST,TSIS,CCN,ALL	34241
RST,TSIS,CCN,UNIT,CONN	34231
RST,UNIT,FC	34331
RST,UNIT,FLI	34401
RST,UNIT,FMT	34411
RST,UNIT,FTMI,DSPI	34321
RST,UNIT,MIU,INCL	34431
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SC,ALM,DPLX,SYNC,CCB,CCNI,TSI,FC,UNIT,FMT,NPC,SIDE,NE,CCI,ETSI	65151
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SCON,RATE,MPTM,MJU,MA	19221

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STST,MON,TO,TP	19601
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STST,SPL,TO,TP,RATE,UNMAPPED,LOOPED,CGA,TLA,DS0B	19631
STST,TLA,TLR,TP,RATE,CGA,MPTM,MJU	19661
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STST,TPR,TP	19671
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SW,BCAST,OLD,NEW,INCL	14061
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SW,DISC,OOS	14081
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SW,UNIT,MMFG,TOPTN,FRC	35111
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TCON,FROM,TO,MPM,NAM,NTR,RDC,CUS,INCL	11021
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TCON,FROM,TO,RDC,CUS,INCL,PRIOUT	11011
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TDIS,FROM,TO,INCL,OOS,DCC,PRIOUT,RDC	15001
TDIS,FROM,TO,INCL,OOS,DCC	15002
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TTST,LPD,TG	29021
TTST,LPD,TP	29001
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TTST,MON,TO,NAM,TP	21001
TTST,MON,TO,TG	21021
TTST,RT,DGA,DGB,DGC,DGD,DGP,LLB,TO,FROM,INI,TRM,ALW,INH	26101
TTST,SPL,TO,TG,NOYLW	23021
TTST,SPL,TP	23001
TTST,TGR,TG,OOS	27021
TTST,TLA,NOT,TP,RDC,CUS,T,UASGNDNY,PTLA,UASGN	25101
TTST,TLA,TG	25121
TTST,TLR,NOT,TP	25501
TTST,TLR,TG	25521
TTST,TPR,ALL,OOS	27002

TTST,TPR,TP,OOS	27001
TTST,TSG,TG,EAST,WEST,SIG	22021
TTST,TSM,TG,EAST,WEST,TINT	22421
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UTL,ALM,INTV	53351
UTL,ALM,SEV	53321
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UTL,CLR,ERR,HWER,SWER	56061
UTL,CLR,MSGLOG,RSTNUM	57031
UTL,CLR,NPC,AI,LOCN,MONDAT,MONTIM	56071
UTL,CLR,NPC,PARAMS	56051
UTL,CLR,NPC,RT,DL	56001
UTL,CLR,PWR	56052
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UTL,QRY,ALL,UNIT	53101
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UTL,QRY,ALM,DS3	56331
UTL,QRY,ALM,OI	56831
UTL,QRY,ALMOPT,NPC,AIS	56021
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UTL,QRY,ALMS,RT	53141
UTL,QRY,ALMS,TOTAL,SUMMARY,CR,MJ,MN,MC,PWR,SYNC,CRO,TLI,TSIS,EOP,DS3,UNIT,RT,DL,NPC,ETSI,UC,FTMI,FC,CCB,OOS,FLI,FMT,MXR,MPR,MIU,DU,DSPI,FTU,NPC S,DS3U,DSPU,HSU	53111
UTL,QRY,APPL,NPC	51201

UTL,QRY,BC,NPC,ALL	56351
UTL,QRY,BC,TO	56353
UTL,QRY,BCAST,ALL	52101
UTL,QRY,BCAST,FROM	52111
UTL,QRY,BCAST,FROM	52121
UTL,QRY,CMAP,ACTPL,NACTPL,SWMR,SWAR,FDL,NPCTP,NPCTG,ROLL,FAD,SDxyz,M B100,DPLX,TYPE,VI100,UEQD,COND	52011
UTL,QRY,CNFR	51091
UTL,QRY,CS,NPC	53121
UTL,QRY,DATE	51031
UTL,QRY,DD,DDCT,NPC,ALL	56343
UTL,QRY,DD	56341
UTL,QRY,DMAP,ACTPL,NACTPL,SWMR,SWAR,FDL,NPCTP,NPCTG,ROLL,FAD,SDxyz,M B100,DPLX,TYPE,VI100	52031
UTL,QRY,DS3,BERMT,UNIT	53221
UTL,QRY,DS3,LBO	53231
UTL,QRY,DS3ALM	56333
UTL,QRY,ECLOC	51511
UTL,QRY,EQD,COMMON	53109
UTL,QRY,EQD,CONN	53031
UTL,QRY,EQD,ETIS	53022
UTL,QRY,EQD,MIUS	53201
UTL,QRY,EQD,MXRS	53211
UTL,QRY,EQD,NPCS,TOTAL,UNIT,FTU,DS3U,HDS3U,DSPU,COND	53041
UTL,QRY,EQD,TSIS,TOTAL	53021
UTL,QRY,EQD,UNIT,SYNC,CRO,TLI,DACS,II,CEF,CCN,TOTAL,TSIS,EOP,ECCN,ETIS,UN ITS,M,UC,FTMI,FC,CCB,FLI,FMT,HFMT,MXR,HMXR,MIU,MPR,DSPI,FTU,NPCS,DS3U,HDS 3U,HSU,DSPU,COND	53108
UTL,QRY,EQD,UNITS	53011
UTL,QRY,ERR,SWER,HWER,INT,DATE,TOD,TN,EVENT,ERCL,ENTY,ALL	55011
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UTL,QRY,ESR,MP	55111
UTL,QRY,ESR,NPC,SIDE	55601

UTL,QRY,ESR,UNIT,DSPI	55531
UTL,QRY,ESR,UNIT,FC	55511
UTL,QRY,ESR,UNIT,FC	55521
UTL,QRY,ESR,UNIT,FLI	55801
UTL,QRY,ESR,UNIT,MIU	55831
UTL,QRY,ESR,UNIT,MPR	55891
UTL,QRY,ESR,UNIT,MXR	55821
UTL,QRY,ESR,UNIT	55501
UTL,QRY,FALMS,TYPE	53311
UTL,QRY,FPKG	51121
UTL,QRY,FROM,TYPE,DGP,CUS,RDC,UTST,TP,TG,TLA,T,UASGN,DCC,NOT,OCON,RT,D L,MD,UEQD,COND,RNGIE	52051
UTL,QRY,FROM	52071
UTL,QRY,HUBID	51501
UTL,QRY,INTV,NPC,TLI,SYNC,CCN,ALL	53331
UTL,QRY,LIST,MACRO,USER	54131
UTL,QRY,LIST,MAP	54101
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UTL,QRY,LOG,ALL	54011
UTL,QRY,LPBK,NPC	53131
UTL,QRY,LPBK,UNIT	53181
UTL,QRY,MACRO,ATTR,USER,ALL	54211
UTL,QRY,MACRO,MAP,SPACE,USER,ALL,SYSTEM	54221
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UTL,QRY,MAP,ATTR,ALL,USER,DACS,II	54201
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UTL,QRY,MARK	52211
UTL,QRY,MEMSTAT	51001
UTL,QRY,NETADDR	56391
UTL,QRY,NFS,NPC	56324
UTL,QRY,NPC,ALL,AI,LV,LOCN,MONDAT,MONTIM,NPCS,PARAM,COUNT,VLDTY,THMO DE,COND	56091

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UTL, QRY, NPC, MAP, USER	54111
UTL, QRY, NPC, RT, DL	56041
UTL, QRY, NPCTG	53091
UTL, QRY, NUM	51051
UTL, QRY, OPT, TYPE, ALL, NPCS	53051
UTL, QRY, OPT, TYPE, ALL, NPCS	53053
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UTL, QRY, PEST, FAIL, OOS, UNIT	53103
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UTL, QRY, PSTATE, UNIT	56511
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UTL, QRY, ROLL, DS0, NPC, ALL, UNIT, M	52081
UTL, QRY, ROLL, DS1, NPC, ALL, UNIT	52091
UTL, QRY, RPSFI	56326
UTL, QRY, RTMAP, DLMAP	52311
UTL, QRY, SALMS, SEV	53301
UTL, QRY, SCON, CH, TO	52511
UTL, QRY, SCON, TO	52521
UTL, QRY, SCR, LINK, USER, LINKS, USERS, CONVON, CONVOFF	54001
UTL, QRY, SDNUM	51061
UTL, QRY, SECH, TO	52501
UTL, QRY, SIGST, TYPE, COND	52601
UTL, QRY, SQN	51131
UTL, QRY, SRHDW, TO	52531
UTL, QRY, SROOF, TO, ALL	56501
UTL, QRY, STATE, ACO	54340
UTL, QRY, STATE, NPC	56311
UTL, QRY, STATE, NPC	56314
UTL, QRY, STATE, SCDG, NPC, RT, DL, ALL	52321
UTL, QRY, STATE, SYNC	56301

UTL,QRY,STATE,UNIT,DS3,TYPE,PSTATE,OOS,FAIL,PEST,OOF,LOS,HBER,AIS,IDLE,BE RM,BERT,LBO,DU,DS3UNPROTALM,COND,UEQD	56361
UTL,QRY,STR,LINK	55113
UTL,QRY,STR,SYNC,TLI,SSP	55321
UTL,QRY,STR,SYNC,TLI	55311
UTL,QRY,STR,SYNC	55201
UTL,QRY,STR,XC	55191
UTL,QRY,SYNC,TYPE	53001
UTL,QRY,TGS	53081
UTL,QRY,TO,TYPE,AIS,CUS,RDC,UTST,ROLL,ONEWAY,BCAST,UASGN,TLA,FAD,	52061
UTL,QRY,TO	52041
UTL,QRY,TPS	53061
UTL,QRY,TSIG,NPC	53161
UTL,QRY,TSM,TG	53401
UTL,QRY,TSO,NPC	56321
UTL,QRY,TSOM,NPC	56323
UTL,QRY,UNIT,DS3,ALLDS3,AI,LV,MONDAT,MONTIM	56111
UTL,QRY,UNIT,FTMI,EQL,IMP	53071
UTL,QRY,WHO	51041
UTL,QRY,XCSB,UNIT	55181
UTL,RCY,PASSWD,COND	51081
UTL,RCY	55021
UTL,SCHED,PMREPT,NPC,RI,ST,NI,LV,LOCN,AI,TOF,LK	51141
UTL,TOD,CFA,FAC,PRIM,MONDAT,MDNT,COND	51011
UTL,UPGRD,COND	55731
X,T,A,O,I	18121

Numeric List of Messages

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Numeric List of Keywords

01101	BADVERB,FRMERR,SEQERR,BAD,SYNTAX,STOPPED
01111	CMD,MC,OOS,MCOND,INSERVICE,MPDBASE
01121	ERR,CMD,ABT,TN
01131	BADVERB,FRMERR,SEQERR,CMD,INERR,STOPPED
01201	ICI,RESET
01211	ICI,STARTUP,STF,ATP
01221	MP,STARTUP,STF,ATP
01241	BOOT,FROM,PMEM,SMEM
01242	BOOT,FROM,PMEM,FAILED,ATTEMPTING,TO,SMEM
01251	RESET,STOPPED
01261	MC,RESET,RELEASE,DACSII,ISSUE
01271	BX,STARTUP,STF,ATP
01272	EBX,STARTUP,STF,ATP
01281	MTC,STF,ATP
01282	EMTC,STARTUP,STF,ATP
01291	INVALID,SFW,ID,BLOCK,COND

01301	ERR,PWR,TN
01311	ERR,ESR,MC,MP,TN,EVENT
01312	ERR,ESR,MC,MP,ICI,T
01315	ERR,PMEM,SMEM,TN,EVENT,COND
01321	ERR,LINK,TN,STATUS
01331	ERR,ESR,SYNC,TN,EVENT
01333	ERR,SYNC,TLI,SSP,NPC,TN,ALM,LOS,LEN,EXJ,PHS,OOF,MAJ,MIN,SET
01335	ERR,SYNC,TLI,SSP,NPC,TN
01337	ERR,MSG,TO,LOG,DISCARDED
01341	ERR,ESR,SYNC,TLI,SSP,TN,EVENT,NPC
01342	ERR,ESR,SYNC,TLI,TN,EVENT
01351	ERR,ESR,CCB,TN,EVENT
01352	ERR,ESR,CCNI,TN,EVENT
01353	ERR,ESR,TSI,TN,EVENT
01354	ERR,ESR,CCI,TN,EVENT
01362	ERR,SOFTWARE,MC,ERROR,MID,TN,RC,ACTION,ENTITY,SOURCE,DP,PROC,T SARGS
01364	ERR,ESR,UNIT,FC,TN,EVENT
01366	ERR,SYNC,MODE,FAST,HOLDOVER,NORMAL,MATE,CRO,TLI,SSP,TN,COND
01372	ERR,ESR,NPC,TN,EVENT
01392	ERR,HARDWARE,TN
01402	ERR,ESR,UNIT,FMT,TN,EVENT
01404	ERR,ESR,UNIT,MIU,TN,EVENT
01406	ERR,ESR,UNIT,HMXR,DEV,TN,EVENT
11001	TCON,FROM,TO,AIS,CUS,INCL,RDC,PRIOUT,NAM
11011	TCON,FROM,TO,RDC,CUS,INCL,PRIOUT
11021	TCON,FROM,TO,MPM,NAM,NTR,RDC,CUS,INCL
11041	TCON,FROM,CB,CUS,RDC,INCL
11051	TCON,FROM,TO,PFW,NFW
11101	OCON,FROM,TO,RDC,CUS,INCL,PRIOUT,NAM
11121	OCON,FROM,TO,MPM,NAM,CUS,INCL,RDC
11131	OCON,FROM,TO,RDC,CUS,INCL,PRIOUT

12001	TCNT, FROM, TO, AIS, CUS, INCL, RDC, PRIOUT, NAM
12021	TCNT, FROM, TO, MPM, NAM, NTR, RDC, CUS, INCL
12051	TCNT, FROM, TO, PFW, NFW
12101	OCNT, FROM, TO, RDC, CUS, INCL, PRIOUT, NAM
12121	OCNT, FROM, TO, MPM, NAM, CUS, INCL, RDC
13001	BCON, FROM, TOX, NTR, LPD, CONV, CUS, INCL, RDC, NAM, BCAST, COND
13002	BCON, FROM, TO, NTR, LPD, CONV, CUS, INCL, RDC, NAM, BCAST, COND
13021	BCON, FROM, TO, RDC, CUS, INCL, NTR, LPD, CONV
13051	BCON, FROM, TOX
14001	ACON, OLD, NEW, CUS, INCL, RDC
14021	SW, BCAST, OLD, NEW, INCL
14031	SW, ROLL, OLD, NEW, OOS, INCL, FRC
14041	SW, DISC, OOS
14061	SW, BCAST, OLD, NEW, INCL
14071	SW, ROLL, OLD, NEW, INCL, FRC, OOS, TWAY
14081	SW, DISC, OOS
14901	DSPC
15001	TDIS, FROM, TO, INCL, OOS, DCC, PRIOUT, RDC
15002	TDIS, FROM, TO, INCL, OOS, DCC
15004	TDIS, FROM, CB, INCL, OOS
15011	TDIS, FROM, TO, OOS, INCL, PRIOUT
15061	DDIS, FROM, TO
15101	ODIS, FROM, TO, INCL, OOS, DCC, PRIOUT
15102	ODIS, FROM, TO, INCL, OOS, DCC, NOBBL, F, T, MPDIS, B, CUS, RDC
15111	ODIS, FROM, TO, OOS, INCL, PRIOUT
15201	BDIS, FROM, TO, CONV, OOS, DCC, INCL
15211	BDIS, FROM, TOX, CONV, OOS, DCC, INCL
15221	BDIS, FROM, TOX, OOS, INCL, CONV
15231	BDIS, FROM, TO, OOS, INCL, CONV
17001	CHG, FROM, TO, NOT, TLA, TLR, F, T, B, L, G, A, INCL, NEW, STATE, RNG, RDC, CUS, CO ND
17002	CHG, FROM, TO, TLP, NG, ES, INCL

17011	CHG, FROM, TO, NOT, TLA, TLR, F, T, B, A, INCL
18001	CHG, SWCH, TOX, INCL
18011	CHG, SWCH, TOX, INCL
18121	X, T, A, O, I
18211	CONF, SW, FROM, TR, TO, ALL, ID, OOS, INCL
18311	CONF, TERM, ID, OOS, DCC, INCL, RDC, CUS, COND
18411	CONF, REG, PORT
18421	CONF, RLS, PORT
18431	CONF, DROP, ID, OOS, DCC, INCL
18511	CONF, QRY, ID, ALL
18521	CONF, QRY, REG, PORT, ALL
18611	CONF, FROM, TO, ID, RDC, CUS, INCL
18621	CONF, AOC, ID
19001	ED, MACRO, MAP
19031	ED, CRET, MAP, PIC
19041	APPEND, END
19051	DELETE, END
19061	LIST, END
19071	LINE, TOTAL
19081	SAVE, SPACE, USED
19091	MOVE, FROM, END, TO
19101	SECH, TO, DS0A, DS0B, SEC, PCH
19111	SECH, TO, RATE, DP, PCH
19151	DCH, TO, PCH, DCC
19201	SCON, RATE, TPT, FROM, TO
19211	SCON, DS0A, RATE, TPT, FROM, TO, DS0B
19221	SCON, RATE, MPTM, MJU, MA
19301	SCNT, RATE, TPT, FROM, TO
19311	SCNT, DS, RATE, TPT, FROM, TO
19321	SCNT, RATE, MPTM, MJU, MA
19401	SDIS, RATE, TPT, FROM, TO

19411	SDIS,RATE,TPT,FROM,TO
19421	SDIS,RATE,MPTM,MJU
19431	SDIS,RATE,MPTM,MJU,ALL,OLD,MA,BR1,BR2,BR3,BR4,NEW,OOS
19501	CHG,SECH,OLD,NEW,PCH,DCC
19551	CHG,TLA,TLR,TO,NEW,STATE
19561	CHG,TLA,TLR,TO,MJU
19581	CHG,SCON,OLD,NEW
19591	CHG,SCON,OLD,NEW,MPTM,OOS
19601	STST,MON,TO,TP
19621	STST,MON,TO,MJU,TP
19626	STST,MON
19631	STST,SPL,TO,TP,RATE,UNMAPPED,LOOPED,CGA,TLA,DS0B
19651	STST,SPL,TO,MJU,TP
19661	STST,TLA,TLR,TP,RATE,CGA,MPTM,MJU
19671	STST,TPR,TP
19681	STST,TPR,ALL,LINKS
20001	CTST,FAD,FROM,TO,AIS,INCL
20031	CTST,HUB,FAD,TO,INCL
20101	CTST,FAD,AIS,INCL
20111	CTST,FAD,EMODE,FMODE,INCL
20201	CTST,TNR,FAD,OOS,RDC,CUS,UMPD,EMODE,FMODE,COND,UNMAP
20202	CTST,TNR,ALL,OOS
20301	CTST,LPBKT,FAD,INCL
21001	TTST,MON,TO,NAM,TP
21021	TTST,MON,TO,TG
21031	TTST,MON,TG
22021	TTST,TSG,TG,EAST,WEST,SIG
22221	TTST,INS,TG
22421	TTST,TSM,TG,EAST,WEST,TINT
23001	TTST,SPL,TP
23021	TTST,SPL,TO,TG,NOYLW

24001	TTST,HUB,TO,TP
24021	TTST,HUB,TO,TG
25101	TTST,TLA,NOT,TP,RDC,CUS,T,UASGNDNY,PTLA,UASGN
25121	TTST,TLA,TG
25501	TTST,TLR,NOT,TP
25521	TTST,TLR,TG
26101	TTST,RT,DGA,DGB,DGC,DGD,DGP,LLB,TO,FROM,INI,TRM,ALW,INH
26141	OPR,LPBK,NPC,LOCN
26151	RLS,LPBK,NPC,LOCN
26161	OPR,LPBK,UNIT,MMFG
27001	TTST,TPR,TP,OOS
27002	TTST,TPR,ALL,OOS
27021	TTST,TGR,TG,OOS
28101	OPR,TSIG,NPC
28201	RLS,TSIG,NPC
29001	TTST,LPD,TP
29021	TTST,LPD,TG
30101	GRTH,FRAME,CHAR,UID
31101	GRTH,SYNC,TB,TYPE
31111	GRTH,SYNC,TLI,TYPE
31121	GRTH,SYNC,TLI,TYPE,SSP,SRC,NPC
31211	GRTH,UNIT,TYPE,CONN
31321	GRTH,UNIT,FTMI,EQL,IMP
31331	GRTH,NPC,TYPE
31341	GRTH,NPC,TYPE,OPTS,IW,INCL,AIS,INFO,MJ,MN,PL,ENA,DSA
31351	GRTH,NPC,TYPE,EQD,COND
31352	GRTH,NPC,TYPE,OPTS,IW,INCL,X,AIS,INFO,MJ,MN
31362	GRTH,NPC,TYPE,OPTS,IW,X,AIS,MI,PMA,PMC,DMA
31363	GRTH,NPC,TYPE,OPTS,IW,X,AIS,MI,PMA,DMA
31371	GRTH,NPC,TYPE,OPTS,IW,X
31381	GRTH,NPC,NPCTP

31401	GRTH,NPC,NPCTG
31411	GRTH,TP
31421	GRTH,TG,NPCTG
31501	GRTH,UNIT,MIU,TYPE
31511	GRTH,UNIT,MXR,TYPE,BERM,BERT,LBO
31521	COPY,NPC,TO,TYPE,IW,AIS,INFO,MJ,MN,SLIP,BER,ERS,SERS,COFA,THRESH OLDS,OPTIONS,PL,ENA,DSA,DAILY,NE,CVP,ESP,SESP,SEFS,CSSP,UASP,CVL ,ESL,SESL,FE,N,SANE,SAFE,MI,PMC,PMA,DMA,HOUR,DM,US,SHORT,INTERVA L,TS0,TS0M,CRC,FRER,OFS,ES,SES,CSS,CV,UAS,UATC,MER,FEBE,FES,FSES, FUAS,COND
32101	DGRTH,SYNC,TB
32121	DGRTH,SYNC,TLI,SSP
32211	DGRTH,UNIT
32321	DGRTH,UNIT,FTMI
32341	DGRTH,NPC
32381	DGRTH,NPC,NPCTP,TPR
32401	DGRTH,NPC,NPCTG,TGR
32411	DGRTH,TP
32421	DGRTH,TG
32501	DGRTH,UNIT,MXR
32511	DGRTH,UNIT,MIU
33001	RMV,MC
33011	RMV,FRM,SEQ,LINK
33101	RMV,SYNC
33111	RMV,SYNC,TLI,CRO,PMC,PMA,DMA,MI
33121	RMV,SYNC,TLI,SSP,COND,PMC,PMA,DMA,MI
33131	RMV,SYNC,TLI,COND,PMC,PMA,DMA,MI
33201	RMV,CCNI,PMC,PMA,DMA,MI
33202	RMV,CCB,PMC,PMA,DMA,MI
33211	RMV,SMEM,PMEM,COND,PMC,PMA,DMA,MI
33221	RMV,TSI,PMC,PMA,DMA,MI
33231	RMV,TSIS,CCN,UNIT,CONN
33241	RMV,TSIS,CCN,ALL

33251	RMV,CCI
33261	RMV,ETSI
33271	RMV,ETSI,ECCN,ALL
33311	RMV,UNIT,UC,PMC,PMA,DMA,MI
33321	RMV,UNIT,FTMI,DSPI
33331	RMV,UNIT,FC,PMC,PMA,DMA,MI
33351	RMV,NPC,SIDE,INCL
33401	RMV,UNIT,FLI
33411	RMV,UNIT,FMT
33421	RMV,UNIT,MMFG,FRC,INCL
33431	RMV,UNIT,MIU,INCL
33481	RMV,RT,DL
34001	RST,MC,MCOND,NOJRN,FC,CLR,ALL
34011	RST,LINK
34101	RST,SYNC
34111	RST,SYNC,TLI,CRO
34121	RST,SYNC,TLI,SSP
34201	RST,CCNI
34202	RST,CCB
34211	RST,PMEM,SMEM,CLR,FRC,BKGRND,COND
34221	RST,TSI
34231	RST,TSIS,CCN,UNIT,CONN
34241	RST,TSIS,CCN,ALL
34251	RST,CCI
34261	RST,ETSI
34271	RST,ETSI,ECCN,ALL
34311	RST,UNIT,UC
34321	RST,UNIT,FTMI,DSPI
34331	RST,UNIT,FC
34351	RST,NPC,SIDE
34361	RST,NPC,MON

34371	RST,NPC,TS0M
34401	RST,UNIT,FLI
34411	RST,UNIT,FMT
34421	RST,UNIT,MMFG,INCL
34431	RST,UNIT,MIU,INCL
34481	RST,RT,DL
35001	CFR,XC,INCL
35011	CFR,SYNC,FPLL
35012	CFR,SYNC,STRATUM,STR2,STR3,TOLL,LOCAL
35013	CFR,SYNC,MASTER,SLAVED
35021	CFR,FRAME
35101	SW,UNIT,FLI,TOPRTN
35105	SW,UNIT,FLI,TOSRVC
35111	SW,UNIT,MMFG,TOPRTN,FRC
35121	SW,UNIT,MMFG,TOSRVC
35301	ALWSW,UNIT,MMFG,TOPRTN,TOSRVC
35311	INHSW,UNIT,MMFG,TOPRTN,TOSRVC
36001	ADD,LINK,PTCOL,S,X,T,M,BAUD,ALM,BS,INIT,TABS,ENQ,XON
36003	ADD,LINK,K,T1,T3,N2,A,B
36005	ADD,LINK,W,P,T20,T22,T23,T25,T26,R20,R22,R23,R25,VC,DBIT
36007	ADD,LINK,APPL,ASCS,ASCD,PM,L2AD,POLL
36021	ADD,NPC
36101	ADD,USER,NEW,PASSWD,COND
36103	ADD,USER,LINK,LANG,M,P,F,NPCAD,E,H,X,LEV,RMON,RMOFF,RLK,A,I,CONVO N,CONVOFF,INIT
36201	ADD,RT,DL,MD,DGA,DGB,DGC,DGD,DGP,NDL,RTF
37001	DLT,NPC
37101	DLT,USER
37201	DLT,MACRO,MAP,USER
37211	DLT,RT,DL,DGA,DGB,DGC,DGD,DGP
37301	DLT,FPKG
38001	ED,PRMTR,EQPT,NPC,CBTIMER

38011	CHG,SYNC,TLI,SSP,TYPE,NPC,SRC
38101	CHG,SEQ,UNIT,CONN
38111	CHG,UNIT,FRMI,EQL
38201	CHG,SETOP,TYPE,ALL,NPCOP
38203	CHG,SETOP,TYPE,ALL,NPCOP,DS3OP
38211	CHG,NPC,TYPE,IW,INCL,X
38221	CHG,NPC,OPTS,THMODE,TYPE,IW,SLIP,BER,ERS,SERS,COFA,SANE,SAFE,TH RESHOLDS,OPTIONS,OLD,DAILY,NE,CVP,ESP,SESP,SEFS,CSSP,UASP,CVL,E SL,SESL,FE,CRC,FRER,OFS,ES,SES,CSS,CV,UAS,UATC,MER,FEFE,FES,FSES, FUAS,HOURS,DM,US,SHORT,INTERVAL,CON
38231	CHG,TYPE,OPTS,THMODE
38241	CHG,NPC,RT,DL,TYPE,OPTS
38251	CHG,HUBID,O
38261	CHG,ECLOC,TYPE,MJU,SRM,COND
38271	CHG,NPC,TYPE,IW,INCL,X
38281	CHG,NPC,ALMOPT,AIS,PMC,PMA,DMA,MI,INFO,MJ,MN,PLOPT,PL,ENA,DSA
38291	CHG,TYPE,THMODE
38301	CHG,PASSWD,OLD,NEW
38311	CHG,NPC,TYPE,IW,X
38321	CHG,NPC,TS0
38323	CHG,NPC,TS0M
38324	CHG,NPC,NFS
38331	CHG,DD,TO
38333	CHG,BC,X,TO
38335	CHG,BCOFF,TO
38341	CHG,NPC,LPBK
38351	CHG,RT,DL,TO
38355	CHG,ALMS
38361	CHG,RT,RFT
38365	CHG,SALMS,PMC,PMA,DMA,MI,RESET
38375	CHG,FALMS,TYPE,PMC,PMA,DMA,MI,RESET
38401	CHG,USER,LINK,INCL,SCR,GR,MCON,MCOFF,INIT

38451	CHG,INTV,ON,OFF
38461	CHG,NPC,ALL,TLI,SYNC,CCN,LEV
38471	CHG,MSGLOG,ON,OFF
38481	RST,RT,DL
38501	CHG,MACRO,MAP,SPACE
38601	CHG,UNIT,DS3,BERM,BERT,LBO,TYPE
38611	CHG,DS3UNPROTALM,ON,OFF
38621	CHG,DS1ALMDS2,ON,OFF
38631	CHG,ERB,TYPE
38641	CHG,DS3ALMDLY
38661	CHG,UNIT,DS3,OPTS
39001	LOGIN,USER,PASSWD,DACS,II
39101	LOGOFF,USER,LINK,INCL
39201	ACT,MAP,CLR,INCL
39301	EXC,MACRO
39311	STOP,MACRO,LINK
39401	SW,NPC,RT,PSW,USW,ALW,INH,FRC,INCL
41001	DGN,MC,CFT,ATP,CATP,STF,COND
41004	DGN,IN,PROGRESS
41011	DGN,LINK,CFT,X
41021	DGN,MP,CFT,ATP,CATP,STF,COND
41031	DGN,ICI,CFT,X
41051	DGN,PMEM,SMEM,CFT,EXCT,DBASE,VERIFY,ATP,STF,CATP,COND
41101	DGN,SYNC
41111	DGN,SNC,TLI,CRO
41121	DGN,SYNC,TLI,SSP
41201	DGN,CCNI,CFT,X
41221	DGN,TSI,CFT,X
41232	DGN,TSIS,CCN,UNIT,CONN
41251	DGN,CCI,CFT,X
41261	DGN,ETSI,CFT,X

41271	DGN,ETIS,ECCN,ALL
41311	DGN,UNIT,UC,CFT,X
41321	DGN,UNIT,FTMI,CFT,X
41331	DGN,UNIT,FC,CFT,X
41341	DGN,UNIT,DSPI,CFT,X
41351	DGN,NPC,SIDE,CFT,X
41361	DGN,NPC
41401	DGN,UNIT,FLI,CFT,X
41411	DGN,UNIT,FMT,CFT,X
41421	DGN,UNIT,MXR,DEV,CFT,ATP,CATP,STF,COND
41431	DGN,UNIT,MIU,CFT,X
41801	DGN,UNIT,OI
41821	DGN,UNIT,MPR,DEV,ATP,STF,COND
51001	UTL,QRY,MEMSTAT
51011	UTL,TOD,CFA,FAC,PRIM,MONDAT,MDNT,COND
51021	UTL,DATE,FORMAT,INT
51031	UTL,QRY,DATE
51041	UTL,QRY,WHO
51051	UTL,QRY,NUM
51061	UTL,QRY,SDNUM
51071	QRY,TOD,FAC,MDNT
51081	UTL,RCY,PASSWD,COND
51091	UTL,QRY,CNFGR
51101	UTL,INIT,ALM
51111	UTL,ACO
51121	UTL,QRY,FPKG
51131	UTL,QRY,SQN
51141	UTL,SCHED,PMREPT,NPC,RI,ST,NI,LV,LOCN,AI,TOF,LK
51151	UTL,QRY,PMSCHED,NPC,RI,RD,RT,NI,LV,LOCN,AI,TOF,IM,LK
51161	INH,PMREPT,NPC
51171	ALW,PMREPT,NPC

51201	UTL, QRY, APPL, NPC
51501	UTL, QRY, HUBID
51511	UTL, QRY, ECLOC
52011	UTL, QRY, CMAP, ACTPL, NACTPL, SWMR, SWAR, FDL, NPCTP, NPCTG, ROLL, FAD, SDxyz, MB100, DPLX, TYPE, VI100, UEQD, COND
52031	UTL, QRY, DMAP, ACTPL, NACTPL, SWMR, SWAR, FDL, NPCTP, NPCTG, ROLL, FAD, SDxyz, MB100, DPLX, TYPE, VI100
52041	UTL, QRY, TO
52051	UTL, QRY, FROM, TYPE, DGP, CUS, RDC, UTST, TP, TG, TLA, T, UASGN, DCC, NOT, OC ON, RT, DL, MD, UEQD, COND, RNGIE
52061	UTL, QRY, TO, TYPE, AIS, CUS, RDC, UTST, ROLL, ONEWAY, BCAST, UASGN, TLA, FAD,
52071	UTL, QRY, FROM
52081	UTL, QRY, ROLL, DS0, NPC, ALL, UNIT, M
52091	UTL, QRY, ROLL, DS1, NPC, ALL, UNIT
52101	UTL, QRY, BCAST, ALL
52111	UTL, QRY, BCAST, FROM
52121	UTL, QRY, BCAST, FROM
52201	UTL, QRY, MARK
52211	UTL, QRY, MARK
52311	UTL, QRY, RTMAP, DLMAP
52321	UTL, QRY, STATE, SCDG, NPC, RT, DL, ALL
52501	UTL, QRY, SECH, TO
52511	UTL, QRY, SCON, CH, TO
52521	UTL, QRY, SCON, TO
52531	UTL, QRY, SRHDW, TO
52581	UTL, QRY, LOAD, NPC, TOTAL
52601	UTL, QRY, SIGST, TYPE, COND
53001	UTL, QRY, SYNC, TYPE
53011	UTL, QRY, EQD, UNITS
53021	UTL, QRY, EQD, TSIS, TOTAL
53022	UTL, QRY, EQD, ETSIS
53031	UTL, QRY, EQD, CONN

53041	UTL, QRY, EQD, NPCS, TOTAL, UNIT, FTU, DS3U, HDS3U, DSPU, COND
53051	UTL, QRY, OPT, TYPE, ALL, NPCS
53053	UTL, QRY, OPT, TYPE, ALL, NPCS
53061	UTL, QRY, TPS
53071	UTL, QRY, UNIT, FTMI, EQL, IMP
53081	UTL, QRY, TGS
53091	UTL, QRY, NPCTG
53101	UTL, QRY, ALL, UNIT
53103	UTL, QRY, PEST, FAIL, OOS, UNIT
53104	UTL, QRY, ALL, COMMON
53105	UTL, QRY, PEST, FAIL, OOS, COMMON
53108	UTL, QRY, EQD, UNIT, SYNC, CRO, TLI, DACS, II, CEF, CCN, TOTAL, TSIS, EOP, ECCN, ETSIS, UNITS, M, UC, FTMI, FC, CCB, FLI, FMT, HFMT, MXR, HMXR, MIU, MPR, DSPI, FTU, NPCS, DS3U, HDS3U, HSU, DSPU, COND
53109	UTL, QRY, EQD, COMMON
53111	UTL, QRY, ALMS, TOTAL, SUMMARY, CR, MJ, MN, MC, PWR, SYNC, CRO, TLI, TSIS, EOP, DS3, UNIT, RT, DL, NPC, ETSIS, UC, FTMI, FC, CCB, OOS, FLI, FMT, MXR, MPR, MIU, DSPI, FTU, NPCS, DS3U, DSPU, HSU
53121	UTL, QRY, CS, NPC
53131	UTL, QRY, LPBK, NPC
53141	UTL, QRY, ALMS, RT
53151	UTL, QRY, ALMS, DBASE
53161	UTL, QRY, TSIG, NPC
53171	UTL, QRY, NPC, CBTIMER
53181	UTL, QRY, LPBK, UNIT
53201	UTL, QRY, EQD, MIUS
53211	UTL, QRY, EQD, MXRS
53221	UTL, QRY, DS3, BERMT, UNIT
53231	UTL, QRY, DS3, LBO
53301	UTL, QRY, SALMS, SEV
53311	UTL, QRY, FALMS, TYPE
53321	UTL, ALM, SEV
53331	UTL, QRY, INTV, NPC, TLI, SYNC, CCN, ALL

53351	UTL,ALM,INTV
53401	UTL,QRY,TSM,TG
54001	UTL,QRY,SCR,LINK,USER,LINKS,USERS,CONVON,CONVOFF
54011	UTL,QRY,LOG,ALL
54101	UTL,QRY,LIST,MAP
54111	UTL,QRY,NPC,MAP,USER
54121	UTL,QRY,MACRO,USER
54131	UTL,QRY,LIST,MACRO,USER
54201	UTL,QRY,MAP,ATTR,ALL,USER,DACS,II
54211	UTL,QRY,MACRO,ATTR,USER,ALL
54221	UTL,QRY,MACRO,MAP,SPACE,USER,ALL,SYSTEM
54340	UTL,QRY,STATE,ACO
55011	UTL,QRY,ERR,SWER,HWER,INT,DATE,TOD,TN,EVENT,ERCL,ENTY,ALL
55021	UTL,RCY
55111	UTL,QRY,ESR,MP
55113	UTL,QRY,STR,LINK
55181	UTL,QRY,XCSB,UNIT
55191	UTL,QRY,STR,XC
55201	UTL,QRY,STR,SYNC
55311	UTL,QRY,STR,SYNC,TLI
55321	UTL,QRY,STR,SYNC,TLI,SSP
55411	UTL,QRY,ESR,ECCN
55501	UTL,QRY,ESR,UNIT
55511	UTL,QRY,ESR,UNIT,FC
55521	UTL,QRY,ESR,UNIT,FC
55531	UTL,QRY,ESR,UNIT,DSPI
55601	UTL,QRY,ESR,NPC,SIDE
55701	UTL,BMTR,FROM,TO,EXCT,INCL,IN,PROGRESS,COND
55703	IN,PROGRESS
55704	TABS,IN,PROGRESS
55705	TABS

55711	ABT
55721	INSTALL
55731	UTL,UPGRD,COND
55801	UTL,QRY,ESR,UNIT,FLI
55811	QRY,ESR,UNIT,FMT
55821	UTL,QRY,ESR,UNIT,MXR
55831	UTL,QRY,ESR,UNIT,MIU
55891	UTL,QRY,ESR,UNIT,MPR
56001	UTL,CLR,NPC,RT,DL
56011	UTL,CLR,ALL
56021	UTL,QRY,ALMOPT,NPC,AIS
56031	UTL,QRY,ALL
56041	UTL,QRY,NPC,RT,DL
56051	UTL,CLR,NPC,PARAMS
56052	UTL,CLR,PWR
56061	UTL,CLR,ERR,HWER,SWER
56071	UTL,CLR,NPC,AI,LOCN,MONDAT,MONTIM
56091	UTL,QRY,NPC,ALL,AI,LV,LOCN,MONDAT,MONTIM,NPCS,PARAM,COUNT,VLDTY,THMODE,COND
56101	UTL,CLR,UNIT,DS3,ALLDS3,AI,MONDAT,MONTIM
56111	UTL,QRY,UNIT,DS3,ALLDS3,AI,LV,MONDAT,MONTIM
56301	UTL,QRY,STATE,SYNC
56311	UTL,QRY,STATE,NPC
56314	UTL,QRY,STATE,NPC
56321	UTL,QRY,TSO,NPC
56323	UTL,QRY,TSOM,NPC
56324	UTL,QRY,NFS,NPC
56326	UTL,QRY,RPSFI
56331	UTL,QRY,ALM,DS3
56333	UTL,QRY,DS3ALM
56341	UTL,QRY,DD
56343	UTL,QRY,DD,DDCT,NPC,ALL

56351	UTL,QRY,BC,NPC,ALL
56353	UTL,QRY,BC,TO
56361	UTL,QRY,STATE,UNIT,DS3,TYPE,PSTATE,OOS,FAIL,PEST,OOF,LOS,HBER,AIS ,IDLE,BERM,BERT,LBO,DU,DS3UNPROTALM,COND,UEQD
56391	UTL,QRY,NETADDR
56401	UTL,LOC
56411	UTL,INIT,IP,GATEWAY,IPMASK
56501	UTL,QRY,SROOF,TO,ALL
56511	UTL,QRY,PSTATE,UNIT
56831	UTL,QRY,ALM,OI
57001	UTL,QRY,RANGE,MSGLOG
57031	UTL,CLR,MSGLOG,RSTNUM
58001	UTL,BOOT,FRAME,CLR,COND,IN,PROGRESS
58011	MC,MCOND
61011	REPT,PM,NPC,COUNT,VLDTY,LOCN,AI,MONDAT,MONTIM
62011	APPL,RESET
65011	AR01,MISC,ALM,CGA,PBA,LOS
65021	AR01,MISC,ALM,IDLD,CGA,PBA,LOS
65031	ALM,MJ,MN,INFO,NPC
65036	ALM,NPC
65041	ALM,IDLD,NPC
65046	ALM,IDLD,NPC
65051	ALM,RESET,DATE,TOD,TOD,DATE,FORMAT,MDY,FORMAT,DMY
65053	BOOT,FAILED,BAD,BOOT,DEVICE
65054	ALM,CCN,OOS,COND,MJ,IDLD
65055	ALM,MJ,IDLD,ECCN,OOS
65056	ALM,MN,IDLD,SMEM
65061	RPT,NPC,LOCN,AI,COUNT,THLEV
65063	RPT,UNIT,DS3,AI,COUNT,THLEV
65071	ACO,ACTIVE
65091	ALM,PMA,PMC,MI,DMA,RPSFI,IDLD
65131	SC,ALM,CGA,INH,MSW,DLF,RT,DL,DGA,DGB,DGC,DGD,INH,DGP

65141	SC,ALM,RT,DL,FE
65151	SC,ALM,DPLX,SYNC,CCB,CCNI,TSI,FC,UNIT,FMT,NPC,SIDE,NE,CCI,ETSI
65161	SC,ALM,MC,UC,FTMI,DSPI,NE
65171	SC,ALM,COMP,RT,INDX,LBRV,AB,CD,P,ALP
65201	TS0,R,NPC,OLD,NEW
65211	BC,R,TO,ZO,NA
65221	CBOFL,SIDE
65231	TS0MBOFL,COMP
65861	THRESX,COUNT,THLEV
66001	ALM,UNIT,DS3,COMPL
66011	ALM,IDLD,UNIT,DS3,COMPL
66021	ALM,MN,IDLD,DS3UNPROTALM,DS3U
81001	AUD,QRY,CFA,CGA,LOS,AR02,ALARM,SUM,REPORTS,FOLLOW,SC,ALM,AR01,MISC,END,PARAMS,ALL,FTU,NPCS,TOT,DS3U,HSU,PBA,FTM,PA,NPC
81002	AUD,QRY,ALL,FTU,NPCS,TOT,DS3U,HSU
81003	AUD,QRY,BER
81004	AUD,QRY,ALL,NPCS,TOT
81005	AUD,QRY,BER,ALL,NPCS,TOT
81006	AUD,PARAMS,COMPL
82001	FRADTS,DGN,DEV,COMPL
82002	FRADTS,FRCMP,COMPL
82003	FRADTS,BMCMP,COMPL
82004	FRADTS,MC,DGN
83001	START,LOG,MSG
83011	END,LOG,MSG
83012	END,LOG,MSG,ABORTED

Summary of Input Commands

5

Introduction

Overview

This section provides a summary of the DACS II Release 9.1.3 input commands. The commands are presented in an alphabetical order and numerical order.

Alphabetic List of Keywords

[I.55711]

ABT!

[I.14001]

ACON:[FRM xy][,SEQ ww]:OLD [s]abcddd[-eee],\
NEW [t]ghijjj[-kkk][,INCL]!

[I.14001]

ACON:[FRM xy][,SEQ ww]:OLD uvmnpddd[-eee],\
NEW wxkqrjjj[-kkk][,INCL]!

[I.39201]

ACT:[FRM xy][,SEQ ww]:MAP <map name>[,CLR][,INCL]!

[I.39201]

ACT:[FRM xy][,SEQ ww]:MAP <map name>[,CLR][,INCL]!

[I.36001]

ADD:[FRM xy][,SEQ ww]:LINK j,PTCOL {S|X|T|M|I}[,BAUD bb][,ALM k] \
[,BS e][,ENQ q][,XON x][,INIT]!

[I.36001]

ADD:[FRM xy][,SEQ ww]:LINK j,PTCOL X[,ALM k][,INIT]!

[I.36001]

ADD:[FRM xy][,SEQ ww]:LINK j,PTCOL M[,ALM k][,INIT]!

[I.36021]

ADD:[FRM xy][,SEQ ww]:NPC {[s]abc-[t]def|[s]abc[, [s]ghi]...
[, [t]def]}!

[I.36021]

ADD:[FRM xy][,SEQ ww]:NPC {uvmnp-wxkqr|uvmnp[,edfgh]...
[,wxkqr]}!

[I.36201]

ADD:[FRM xy][,SEQ ww]:{RT|DL} ffff,MD g[g] \
[,DGA [s]aaa][,DGB [s]bbb][,DGC [s]ccc][,DGD [s]ddd] \
[,DGP[s]ppp][,{sss|NDL|RTF}]!

[I.36201]

ADD:[FRM xy][,SEQ ww]:{RT|DL} ffff,MD g[g][,DGA uvjab] \
[,DGB uvkcd][,DGC uvlef][,DGD uvmgh][,DGP uvjpr] \
[, {sss|NDL|RTF}]!

[I.36103]

ADD:FRM xy,SEQ ww:{USER <user id>|LINK j[mm][,INCL]|ALL} \
[,LANG {M|P|F}][,NPCAD {E|X|H}][,LEV(a,b,c,d,e,f)] \
[, {RMON|RMOFF}][,RLK {A|I}][, {CONVON|CONVOFF}][,INIT]!

[I.36103]

ADD:FRM xy,SEQ ww:{USER <user id>|LINK j[mm][,INCL]|ALL} \
[,LANG {M|P|F}][,NPCAD {E|X|H}][,LEV(a,b,c,d,e,f)] \
[, {RMON|RMOFF}][,RLK {A|I}][, {CONVON|CONVOFF}][,INIT]!

[I.36101]

ADD:[FRM xy][,SEQ ww]:USER <user id>[,NEW][,PASSWD <user
password>]!

[I.51171]

ALW:[FRM xy][,SEQ ww]:PMREPT,{NPC [s]abc[-[t]def]|ALL}!

[I.51171]

ALW:[FRM xy][,SEQ ww]:PMREPT,{NPC uvmnp[-wxkqr]|ALL}!

[I.35301]

ALWSW:[FRM xy][,SEQ ww]:UNIT [q]q,MMFG c[-d],{TOPRTN|TOSRVC}!

[I.19041]

APPEND[:FRM xy,SEQ ww:{<line number>|END}]!

[I.19041]

APPEND[:FRM xy,SEQ ww:{<line number>|END}]!

[I.13002]

BCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
,<tc>[, {NTR|LPD|CONV}][, {CUS|INCL}][,RDC]!

[I.13002]

BCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
,<tc>[, {NTR|LPD|CONV}][, {CUS|INCL}][,RDC]!

[I.13002]

BCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \[,<tc>][,<sc>][,{NTR|LPD|CONV}][,NAM][,{CUS|INCL}][,RDC]!

[I.13002]

BCON:FRM xy,SEQ ww:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \[,<tc>][,<sc>][,{NTR|LPD|CONV}][,NAM][,{CUS|INCL}][,RDC]!

[I.13021]

BCON:[FRM xy][,SEQ ww]:FROM [s]abc,TO [t]def[,RDC][,{CUS|INCL}] \[,,{NTR|LPD|CONV}]!

[I.13021]

BCON:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxkqr[,RDC][,{CUS|INCL}] \[,,{NTR|LPD|CONV}]!

[I.13001]

BCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee], \TOX ([t]ghijjj[, [t]klmnnn,...]),<tc>[,,{NTR|LPD|CONV}] \[,,{CUS|INCL}][,RDC]!

[I.13001]

BCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee], \TOX (wxkqrjjj[,edhfgnnn,...]),<tc>[,,{NTR|LPD|CONV}] \[,,{CUS|INCL}][,RDC]!

[I.13001]

BCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee], \TOX ([t]ghijjj[, [t]klmnnn,...])[,<tc>][,<sc>] \[,,{NTR|LPD|CONV}][,NAM][,{CUS|INCL}][,RDC]!

[I.13001]

BCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee], \TOX (wxkqrjjj[,edhfgnnn,...])[,<tc>][,<sc>] \[,,{NTR|LPD|CONV}] [,NAM][,{CUS|INCL}][,RDC]!

[I.13051]

BCON:FRM xy,SEQ ww:FROM [s]abc000, \TOX ([t]ghijjj[, [t]klmnnn,...])!

[I.13051]

BCON:FRM xy,SEQ ww:FROM uvmnp000, \TOX (wxkqrjjj[,edhfgnnn,...])!

[I.15201]

BDIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
[,CONV][,OOS][,DCC][,INCL]!

[I.15201]

BDIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
[,CONV][,OOS][,DCC][,INCL]!

[I.15231]

BDIS:[FRM xy][,SEQ ww]:FROM [s]abc,TO [t]ghi[,OOS][,INCL][,CONV]!

[I.15231]

BDIS:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxkqr[,OOS][,INCL][,CONV]!

[I.15211]

BDIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee], \
TOX ([t]ghijjj[, [u]klmnnn . . .])[,CONV][,OOS][,DCC][,INCL]!

[I.15211]

BDIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee], \
TOX (wxkqrjjj[,edhfgnnn, . . .])[,CONV][,OOS][,DCC][,INCL]!

[I.15221]

BDIS:[FRM xy][,SEQ ww]:FROM [s]abc, \
TOX ([t]ghi[, [u]jkl][, [v]mno][...])[,OOS][,INCL][,CONV]!

[I.15221]

BDIS:[FRM xy][,SEQ ww]:FROM uvmnp, \
TOX (wxkqr[,edhfg][,opqrs][...])[,OOS][,INCL][,CONV]!

[I.35021]

CFR:[FRM xy][,SEQ ww]:FRAME!

[I.35011]

CFR:[FRM xy][,SEQ ww]:SYNC a,FPLL!

[I.35013]

CFR:FRM xy,SEQ ww:SYNC,{MASTER|SLAVED}!

[I.35013]

CFR:FRM xy,SEQ ww:SYNC,{MASTER|SLAVED}!

[I.35001]
CFR:[FRM xy][,SEQ ww]:XC s[,INCL]!

[I.38355]
CHG:[FRM xy][,SEQ ww]:ALMS,{ON|OFF}!

[I.38333]
CHG:[FRM xy][,SEQ ww]:BC X'abcd, TO [s]abcddd[-eee]!

[I.38333]
CHG:[FRM xy][,SEQ ww]:BC X'abcd, TO uvmnpddd[-eee]!

[I.38335]
CHG:[FRM xy][,SEQ ww]:BCOFF,TO [s]abcddd[-eee]!

[I.38335]
CHG:[FRM xy][,SEQ ww]:BCOFF,TO uvmnpddd[-eee]!

[I.38331]
CHG:[FRM xy][,SEQ ww]:DD(m,w),TO [s]abcddd[-eee]!

[I.38331]
CHG:[FRM xy][,SEQ ww]:DD(m,w),TO uvmnpddd[-eee]!

[I.38261]
CHG:[FRM xy][,SEQ ww]:ECLOC,TYPE {MJU|SRM}!

[I.38631]
CHG:[FRM xy][,SEQ ww]:ERB ee,TYPE mn!

[I.38375]
CHG:[FRM xy][,SEQ ww]:FALMS,TYPEmn[xyz],falm,\ {PMACR|PMAMJ|DMAMN|MI|RESET}!

[I.17011]
CHG:[FRM xy][,SEQ ww]:FROM [s]abc,TO [t]ghi[,NOT [u]rst], \ {TLA|TLR} {F|T|B|A}[,INCL]!

[I.17011]
CHG:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxkqr[,NOT edhfg], \ {TLA|TLR} {F|T|B|A}[,INCL]!

[I.17001]

CHG:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
[,NOT [u]rstvvv},{TLA|TLR} {F|T|B|L|G|A}[,INCL]!

[I.17001]

CHG:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
[,NOT edhfgvvv},{TLA|TLR} {F|T|B|L|G|A}[,INCL]!

[I.17002]

CHG:[FRM xy][,SEQ ww]:FROM [s]abcddd,TO [t]ghijjj[,TLP(snn,smm)] \
[,NG nn][,ES ee][,INCL]!

[I.17002]

CHG:[FRM xy][,SEQ ww]:FROM uvmnpddd,TO wxkqrjjj \
[,TLP(snn,smm)][,NG nn][,ES ee][,INCL]!

[I.38251]

CHG:[FRM xy][,SEQ ww]:HUBID 0'ab!

[I.38451]

CHG:[FRM xy][,SEQ ww]:INTV,{ON|OFF}!

[I.38501]

CHG:[FRM xy][,SEQ ww]:{MACRO|MAP},SPACE sss!

[I.38471]

CHG:[FRM xy][,SEQ ww]:MSGLOG {ON|OFF}!

[I.38461]

CHG:[FRM xy][,SEQ ww]:{NPC {[s]abc[-[t]def]\
|ALL}|TLI|SYNC|CCN|ALL},LEV r!

[I.38461]

CHG:[FRM xy][,SEQ ww]:{NPC {uvmnp[-uvkqr]\
|ALL}|TLI|SYNC|CCN|ALL},LEV r!

[I.38281]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]ghi], \
{ALMOPT|PLOPT},{AIS {INFO|MJ|MN}|PL {ENA|DSA}}!

[I.38281]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr], \
{ALMOPT|PLOPT},{AIS {INFO|MJ|MN}|PL {ENA|DSA}}!

[I.38281]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]ghi],ALMOPT, \

AIS {MI|PMA|PMC|DMA}!

[I.38281]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],ALMOPT, \

AIS {MI|PMA|PMC|DMA}!

[I.38391]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def},{FORCEINH|FORCEWKG}!

[I.38391]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],{FORCEINH|FORCEWKG}!

[I.38381]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],INHTIM hrn!

[I.38381]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],INHTIM hrn!

[I.38341]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],LPBK [d]t!

[I.38341]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],LPBK [d]t!

[I.38324]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],NFS abcdefghi!

[I.38324]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],NFS abcdefghi!

[I.38221]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc,OPTS(rr/m[,rr/m][...])!

[I.38221]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp,OPTS(rr/m[,rr/m][...])!

[I.38221]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc,{OPTS(rr/<m>[,rr/<m>][...])| \

THMODE hhh}!

[I.38221]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp,{OPTS(rr/<m>[,rr/<m>][...])| \
THMODE hhh}!

[I.38241]

CHG:[FRM xy][,SEQ ww]:{NPC [s]abc|RT ffff|DL ffff|TYPE mnxyz}, \
OPTS(rr/m[,rr/m,...])!

[I.38241]

CHG:[FRM xy][,SEQ ww]:{NPC uvmnp|RT ffff|DL ffff|TYPE mnxyz}, \
OPTS(rr/m[,rr/m,...])!

[I.38321]

CHG:FRM xy,SEQ ww:NPC [s]abc[-[t]def],TS0 abcdefgh!

[I.38321]

CHG:FRM xy,SEQ ww:NPC uvmnp[-uvkqr],TS0 abcdefgh!

[I.38323]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TS0M abcdefgh!

[I.38323]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],TS0M abcdefgh!

[I.38211]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc,TYPE mnxyz[,IW X'pq[,INCL]]!

[I.38211]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp,TYPE mnxyz[,IW X'pq[,INCL]]!

[I.38211]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc,TYPE mnxyz[,IW X'pq[r]]!

[I.38211]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp,TYPE mnxyz[,IW X'pq[r]]!

[I.38271]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TYPE mnxyz\
[,IW X'pq[,INCL]]!

[I.38271]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],TYPE mnxyz\
[,IW X'pq[,INCL]]!

[I.38311]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc,TYPE mnxyz[,IW X'pq[r]]!

[I.38311]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp,TYPE mnxyz[,IW X'pq[r]]!

[I.38301]

CHG:[FRM xy][,SEQ ww]:PASSWD[,OLD <old password>, \
NEW <new password>]!

[I.38351]

CHG:[FRM xy][,SEQ ww]:{RT|DL} ffff,TO gggg!

[I.38361]

CHG:[FRM xy][,SEQ ww]:RT ffff,[{sss|RTF}][,SWMN x]!

[I.38365]

CHG:[FRM xy][,SEQ ww]:SALMS,salm,{PMACR|PMAMJ|DMAMN|MI|RESET}!

[I.19591]

CHG:[FRM xy][,SEQ ww]:SCON,OLD [s]abcddd[/ff],NEW [t]ghijjj[/ll], \
MPTM!

[I.19591]

CHG:[FRM xy][,SEQ ww]:SCON,OLD uvmnpddd[/ff],NEW wxkqrjjj[/ll], \
MPTM!

[I.19581]

CHG:[FRM xy][,SEQ ww]:SCON,OLD [s]abcddd[/ff],NEW [t]ghijjj[/ll]!

[I.19581]

CHG:[FRM xy][,SEQ ww]:SCON,OLD uvmnpddd[/ff],NEW wxkqrjjj[/ll]!

[I.19501]

CHG:[FRM xy][,SEQ ww]:SECH,OLD [s]abcddd[-eee],NEW [t]ghijjj \
[-kkk][,PCH ppp][,DCC]!

[I.19501]

CHG:[FRM xy][,SEQ ww]:SECH,OLD uvmnpddd[-eee],NEW wxkqrjjj[-kkk] \[,PCH ppp][,DCC]!

[I.38101]

CHG:[FRM xy][,SEQ ww]:UNIT q,CONN(a[,b[,c[,d[,e[,f]]]]))!

[I.18001]

CHG:[FRM xy][,SEQ ww]:SWCH,TOX([s]abcddd[, [t]ghijjj, \[u]klmnnn,...])[,INCL]!

[I.18001]

CHG:[FRM xy][,SEQ ww]:SWCH,TOX(uvmnpddd[,wxkqrjjj,edhfgnnn,...]) \[,INCL]!

[I.18001]

CHG:[FRM xy][,SEQ ww]:SWCH,TOX([s]abcddd[, [t]ghijjj, \[u]klmnnn,...])[,INCL]!

[I.18001]

CHG:[FRM xy][,SEQ ww]:SWCH,TOX(uvmnpddd[,wxkqrjjj,edhfgnnn,...]) \[,INCL]!

[I.18011]

CHG:[FRM xy][,SEQ ww]:SWCH,TOX([s]ghi[, [t]jkl][, [v]mno][...]) \[,INCL]!

[I.18011]

CHG:[FRM xy][,SEQ ww]:SWCH,TOX(uvmnp[,wxkqr][,edhfg][...]) \[,INCL]!

[I.38011]

CHG:[FRM xy][,SEQ ww]:SYNC,TLI m,SSP b,TYPE texyz!

[I.38011]

CHG:[FRM xy][,SEQ ww]:SYNC,TLI m,SSP b,{TYPE texyz|NPC [0]abc}!

[I.38011]

CHG:[FRM xy][,SEQ ww]:SYNC,TLI m,SSP b,{TYPE texyz|NPC uvmnp}!

[I.38371]

CHG:[FRM xy][,SEQ ww]:SYSINHTIM hr!

[I.19561]

CHG:[FRM xy][,SEQ ww]:{TLA|TLR} m,TO [s]abcddd[/ff],MJU ssss \[,BRI]!

[I.19561]

CHG:[FRM xy][,SEQ ww]:{TLA|TLR} m,TO uvmnpddd[/ff],MJU ssss \[,BRI]!

[I.19551]

CHG:[FRM xy][,SEQ ww]:{TLA|TLR} m,TO [s]abcddd[/ff]!

[I.19551]

CHG:[FRM xy][,SEQ ww]:{TLA|TLR} m,TO uvmnpddd[/ff]!

[I.38231]

CHG:[FRM xy][,SEQ ww]:TYPE mnxyz,OPTS(rr/<m>[,rr/<m>][...])!

[I.38231]

CHG:[FRM xy][,SEQ ww]:TYPE mnxyz,{OPTS(rr/<m>[,rr/<m>][...])| \THMODE hhh}!

[I.38291]

CHG:[FRM xy][,SEQ ww]:TYPE mn,THMODE hhh!

[I.38111]

CHG:[FRM xy][,SEQ ww]:UNIT [q]q,FTMI d,EQL(l,r)!

[I.38401]

CHG:[FRM xy][,SEQ ww]:{USER <user id>|LINK j[mm][,INCL]} \[,SCR n[,GR(a,b,c,d,e,f)]][, {MCON|MCOFF}][,INIT]!

[I.18621]

CONF:[FRM xy][,SEQ ww]:AOC{ ccc|(ccc,...,fff)},ID iii!

[I.18431]

CONF:[FRM xy][,SEQ ww]:DROP{ ccc|(ccc,...,fff)},ID iii[,00S] \[,DCC][,INCL]!

[I.18611]

CONF:[FRM xy][,SEQ ww]:FROM aaa[,TO{ ccc|(ccc,...,fff)}],ID iii, \<tc>[,RDC][,{CUS|INCL}]!

[I.18511]

CONF:[FRM xy][,SEQ ww]:QRY,{ID iii[-jjj]}|ALL}!

[I.18521]

CONF:[FRM xy][,SEQ ww]:QRY,REG,{PORT nnn[-qqq]}|ALL}!

[I.18411]

CONF:[FRM xy][,SEQ ww]:REG [s]abcbbb[-eee],PORT nnn!

[I.18411]

CONF:[FRM xy][,SEQ ww]:REG uvmnpbbb[-eee],PORT nnn!

[I.18421]

CONF:[FRM xy][,SEQ ww]:RLS [s]abcbbb[-eee],PORT nnn!

[I.18421]

CONF:[FRM xy][,SEQ ww]:RLS uvmnpbbb[-eee],PORT nnn!

[I.18211]

CONF:FRM xy,SEQ ww:SW[,FROM aaa[/TR]] \
[,TO{ ccc|(ccc,..,fff)}| ALL}],ID iii[,OOS][,INCL]!

[I.18311]

CONF:[FRM xy][,SEQ ww]:TERM,ID iii[,OOS][,DCC][,INCL]!

[I.31521]

COPY:[FRM xy][,SEQ ww]:NPC [s]abc,TO [t]def[-[u]ghi]!

[I.31521]

COPY:[FRM xy][,SEQ ww]:NPC uvmnp,TO wxkqr[-ghikl]!

[I.20101]

CTST:[FRM xy][,SEQ ww]:<tmode>,FAD ([s]abc[, [t]def])[,AIS][,INCL]!

[I.20101]

CTST:[FRM xy][,SEQ ww]:<tmode>,FAD (uvmnp[,wxkqr])[,AIS][,INCL]!

[I.20111]

CTST:[FRM xy][,SEQ ww]:FAD ([s]abc[, [t]def]) \
{[,EMODE <emode>][,FMODE <fmode>]}[,INCL];

[I.20111]

CTST:[FRM xy][,SEQ ww]:FAD (uvmnp[,wxkqr]) \
{[,EMODE <emode>][,FMODE <fmode>]}[,INCL];

[I.20001]

CTST:[FRM xy][,SEQ ww]:<tmode>,FAD ([s]abc[, [t]def]),FROM [u]ghi \
[,TO [v]jkl][,AIS][,INCL]!

[I.20001]

CTST:[FRM xy][,SEQ ww]:<tmode>,FAD (uvmnp[,wxkqr]),FROM eghij \
[,TO jklmn][,AIS][,INCL]!

[I.20031]

CTST:[FRM xy][,SEQ ww]:HUB,FAD [s]abc,TO [t]jkl[,INCL]!

[I.20031]

CTST:[FRM xy][,SEQ ww]:HUB,FAD uvmnp,TO wxkqr[,INCL]!

[I.20301]

CTST:FRM xy,SEQ ww:LPBKT,FAD [s]abc[,INCL]!

[I.20301]

CTST:FRM xy,SEQ ww:LPBKT,FAD uvmnp[,INCL]!

[I.20202]

CTST:[FRM xy][,SEQ ww]:TNR,ALL[,OOS]!

[I.19151]

SDCH:FRM xy,SEQ ww:TO [s]abcddd[-eee][,PCH[ppp]][,DCC]!

[I.19151]

SDCH:FRM xy,SEQ ww:TO uvmnpddd[-eee][,PCH[ppp]][,DCC]!

[I.15061]

DDIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [v]ghijjj[-kkk]!

[I.15061]

DDIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk]!

[I.19051]

DELETE[:FRM xy,SEQ ww:{<starting line>|END}]{-<ending line> \
|END}}]!

[I.19051]

DELETE[:FRM xy,SEQ ww:{<starting line>|END}[-{<ending line> \
|END}]]!

[I.41251]

DGN:[FRM xy][,SEQ ww]:CCI s[,CFT X'vwxy]!

[I.41201]

DGN:[FRM xy][,SEQ ww]:CCNI s[,CFT X'vwxy]!

[I.41261]

DGN:[FRM xy][,SEQ ww]:ETSI sqq[,CFT X'vwxy]!

[O.41261.01]

DGN:[FRM xy][,SEQ ww]:ETSI S,ECCN s,ALL!

[I.41031]

DGN:[FRM xy][,SEQ ww]:ICI[,CFT X'vwxy]!

[I.41011]

DGN:[FRM xy][,SEQ ww]:LINK a[,CFT X'vwxy]!

[I.41001]

DGN:[FRM xy][,SEQ ww]:MC[,CFT X'vwxy]!

[I.41021]

DGN:[FRM xy][,SEQ ww]:MP[,CFT X'vwxy]!

[I.41351]

DGN:[FRM xy][,SEQ ww]:NPC [s]abc[,SIDE s][,CFT X'vwxy]!

[I.41351]

DGN:[FRM xy][,SEQ ww]:NPC uvmnp[,SIDE s][,CFT X'vwxy]!

[I.41361]

DGN:[FRM xy][,SEQ ww]:NPC [s]abc-[t]def!

[I.41361]

DGN:[FRM xy][,SEQ ww]:NPC uvmnp-uvkqr!

[I.41051]

DGN:[FRM xy][,SEQ ww]:{PMEM|SMEM}\
[, {CFT X'vwxy|EXCT|DBASE}][,VERIFY]!

[I.41121]

DGN:[FRM xy][,SEQ ww]:SYNC a,TLI m[,SSP b]!

[I.41101]

DGN:[FRM xy][,SEQ ww]:SYNC a!

[I.41221]

DGN:[FRM xy][,SEQ ww]:TSI sft[,CFT X'vwxy]!

[I.41232]

DGN:[FRM] xy[,SEQ] ww:TSIS,CCN s,UNIT q, \
[,CONN(a[,b[,c[,d[,e[,f]]]]))]]]!

[I.41341]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,DSPI[,CFT X'vwxy]!

[I.41331]

DGN:[FRM xy] [,SEQ ww]:UNIT [q]q,FC sb[,CFT X'vwxy]!

[I.41401]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,FLI k[,CFT X'vwxy]!

[I.41411]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,FMT s[,CFT X'vwxy]!

[I.41321]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,FTMI d[,CFT X'vwxy]!

[I.41431]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,MIU c[,CFT X'vwxy]!

[I.41821]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,MPR c!

[I.41421]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,MXR c[,DEV devc[,CFT X'vwxy]]!

[I.41801]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,OI kk!

[I.41801]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,OI kk!

[I.41311]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,UC[,CFT X'vwxy]!

[I.32401]

DGRTH:[FRM xy][,SEQ ww]:NPC [s]abc,NPCTG rrr[,TGR]!

[I.32401]

DGRTH:[FRM xy][,SEQ ww]:NPC uvmnp,NPCTG rrr[,TGR]!

[I.32381]

DGRTH:FRM xy,SEQ ww:NPC [s]abc,NPCTP n[,TPR]!

[I.32381]

DGRTH:FRM xy,SEQ ww:NPC uvmnp,NPCTP n[,TPR]!

[I.32341]

DGRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def]!

[I.32341]

DGRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr]!

[I.32101]

DGRTH:[FRM xy][,SEQ ww]:SYNC,TB!

[I.32121]

DGRTH:[FRM xy][,SEQ ww]:SYNC,TLI m[,SSP a]!

[I.32421]

DGRTH:FRM xy,SEQ ww:TG mmm[-nnn]!

[I.32411]

DGRTH:[FRM xy][,SEQ ww]:TP kk!

[I.32321]

DGRTH:[FRM xy][,SEQ ww]:UNIT [q]q,FTMI d!

[I.32511]

DGRTH:[FRM xy][,SEQ ww]:UNIT [q]q,MIU c[-d]!

[I.32501]

DGRTH:[FRM xy][,SEQ ww]:UNIT [q]q,MXR c[-d]!

[I.32211]

DGRTH:[FRM xy][,SEQ ww]:UNIT [q]q!

[I.37301]

DLT:[FRM xy][,SEQ ww]:FPKG nnnnnnnnn!

[I.37201]

DLT:[FRM xy][,SEQ ww]:{MACRO <macro name>|MAP <map name>} \
[,USER <user id>]!

[I.37001]

DLT:[FRM xy][,SEQ ww]:NPC {[s]abc-[t]def|[s]abc[, [s]ghi]...
[, [t]def]}!

[I.37001]

DLT:[FRM xy][,SEQ ww]:NPC {uvmnp-wxkqr|uvmnp[,abcde]...[,wxkqr]}!

[I.37001]

DLT:[FRM xy][,SEQ ww]:NPC {[s]abc-[t]def|[s]abc[, [s]ghi]...
[, [t]def]}!

[I.37001]

DLT:[FRM xy][,SEQ ww]:NPC {uvmnp-wxkqr|uvmnp[,abcde]...[,wxkqr]}!

[I.37211]

DLT:[FRM xy][,SEQ ww]:{RT|DL} ffff[,DGA [s]aaa][,DGB [s]bbb] \
[,DGC [s]ccc][,DGD [s]ddd][,DGP [s]ppp]!

[I.37211]

DLT:[FRM xy][,SEQ ww]:{RT|DL} ffff \
[,DGA uvjab][,DGB uvkcd][,DGC uvlef][,DGD uvmgh] \
[,DGP uvjpr]!

[I.37101]

DLT:[FRM xy][,SEQ ww]:USER <user id>!

[I.14901]

DSPC:[FRM xy][,SEQ ww]: \
{[s]aaa|[s]aaa-[v]bbb|SDxyz}:<pds_application command>

[I.14901]

DSPC:[FRM xy][,SEQ ww]:{uvnmp|uvnmp-wxkqr|SDxyz}: \
<pds_application command>

[I.19031]

ED:[FRM xy][,SEQ ww]:CRET,MAP <new map name> ,PIC <reference map \
name>!

[I.19001]

ED:[FRM xy][,SEQ ww]:{MACRO <macro name>|MAP <map name>}!

[I.38001]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],CBTIMER [t]v!

[I.38001]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],CBTIMER [t]v!

[I.30101]

GRTH:[FRM xy][,SEQ ww]:FRAME fg[,CHAR m][,UID <uid>]!

[I.31401]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc,NPCTG rrr!

[I.31401]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp,NPCTG rrr!

[I.31381]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc,NPCTP n!

[I.31381]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp,NPCTP n!

[I.31351]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc,TYPE mnxyz[,CBTIMER [t]v]!

[I.31351]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp,TYPE mnxyz[,CBTIMER [t]v]!

[I.31341]

GRTH:[FRM xy,SEQ ww]:NPC [s]abc[-[t]def],TYPE mnxyz[,OPTS(rr/m \[,rr/m][...])][,IW X'pq[,INCL]][,AIS {INFO|MJ|MN}][,PL {ENA|DSA}]!

[I.31341]

GRTH:[FRM xy,SEQ ww]:NPC uvmnp[-uvkqr],TYPE mnxyz[,OPTS(rr/m \[,rr/m][...])][,IW X'pq[,INCL]][,AIS {INFO|MJ|MN}][,PL {ENA|DSA}]!

[I.31352]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def][,TYPE mnxyz] \[,OPTS(rr/m[,rr/m][...])][,IW X'pq[,INCL]][,AIS {INFO|MJ|MN}]!

[I.31352]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr][,TYPE mnxyz] \[,OPTS(rr/m[,rr/m][...])][,IW X'pq[,INCL]][,AIS {INFO|MJ|MN}]!

[I.31363]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TYPE mnxyz[,OPTS (rr/<m>[,rr/<m>...])][,IW X'pq[r]][,AIS {MI|PMA|DMA|PMC}][,LEV g]!

[I.31363]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],TYPE mnxyz[,OPTS (rr/<m>[,rr/<m>...])][,IW X'pq[r]][,AIS {MI|PMA|DMA|PMC}][,LEV g]!

[I.31363]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TYPE mnxyz[,OPTS (rr/<m>[,rr/<m>...])][,IW X'pq[r]][,AIS {MI|PMA|DMA|PMC}][,LEV g]!

[I.31363]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],TYPE mnxyz[,OPTS (rr/<m>[,rr/<m>...])][,IW X'pq[r]][,AIS {MI|PMA|DMA|PMC}][,LEV g]!

[I.31362]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def] \[,TYPE mnxyz][,OPTS (rr/<m>[,rr/<m>...])]\[,IW X'pq[r]][,AIS {MI|PMA|PMC|DMA}][,LEV g]!

[I.31362]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr] \[,TYPE mnxyz][,OPTS (rr/<m>[,rr/<m>...])]\[,IW X'pq[r]][,AIS {MI|PMA|PMC|DMA}][,LEV g]!

[I.31371]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TYPE DSxyz \
[,OPTS(rr/m [,rr/m][...])][,IW X'pq]!

[I.31371]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],TYPE DSxyz \
[,OPTS(rr/m [,rr/m][...])][,IW X'pq]!

[I.31331]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TYPE mnxyz!

[I.31331]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],TYPE mnxyz!

[I.31101]

GRTH:[FRM xy][,SEQ ww]:SYNC,TB,TYPE TBpqr!

[I.31101]

GRTH:[FRM xy][,SEQ ww]:SYNC,TB,TYPE TBpqr!

[I.31121]

GRTH:[FRM xy][,SEQ ww]:SYNC,TLI m, \
{TYPE texyz,SSP a,SRC p|TYPE TDxyz}!

[I.31121]

GRTH:[FRM xy][,SEQ ww]:SYNC,TLI m, \
{TYPE texyz,SSP a,SRC p[,NPC [0]abc]|TYPE TDxyz}!

[I.31121]

GRTH:[FRM xy][,SEQ ww]:SYNC,TLI m, \
{TYPE texyz,SSP a,SRC p[,NPC uvmnp]|TYPE TDxyz}!

[I.31421]

GRTH:[FRM xy][,SEQ ww]:TG mmm,NPCTG (rrr,eee[-fff];sss,www[-xxx]) \
[,<tc>]!

[I.31411]

GRTH:[FRM xy][,SEQ ww]:TP kk[,<tc>]!

[I.31411]

GRTH:[FRM xy][,SEQ ww]:TP kk[,<tc>]!

[I.31321]

GRTH:[FRM xy][,SEQ ww]:UNIT [q]q,FTMI d,EQL(l,r)!

[I.31321]

GRTH:[FRM xy][,SEQ ww]:UNIT [q]q,FTMI d,IMP <imp>!

[I.31501]

GRTH:[FRM xy][,SEQ ww]:UNIT [q]q,MIU c[-d][,TYPE mnxyz]!

[I.31511]

GRTH:[FRM xy][,SEQ ww]:UNIT [q]q,MXR c[-d] \
[,TYPE mnxyz][,OPTS(rr/m[,rr/m][...])][,BERM s][,BERT t][,LBO]!

[I.31211]

GRTH:[FRM xy][,SEQ ww]:UNIT [q]q[,TYPE utxyz]!

[I.51161]

INH:[FRM xy][,SEQ ww]:PMREPT,{NPC [s]abc[-[t]def]|ALL}!

[I.51161]

INH:[FRM xy][,SEQ ww]:PMREPT,{NPC uvmpn[-wxkqr]|ALL}!

[I.35311]

INHSW:[FRM xy][,SEQ ww]:UNIT [q]q,MMFG c[-d],{TOPRTN|TOSRVC}!

[I.55721]

INSTALL;

[I.19071]

LINE:[FRM xy][,SEQ ww]:!

[I.19061]

LIST:[FRM xy][,SEQ ww]:{<starting line>|END}[-{<ending line>| \
END}]]!

[I.39001]

LOGIN:[FRM xy][,SEQ ww]:USER <user id>[,PASSWD <user password>]!

[I.39001]

LOGIN:[FRM xy][,SEQ ww]:USER <user id>[,PASSWD <user password>]!

[I.39101]

LOGOFF:[FRM xy][,SEQ ww]:{USER <user id>|LINK j[{mm|,INCL}]}}!

[I.39101]

LOGOFF:[FRM xy][,SEQ ww]:{USER <user id>|LINK j[{mm|,INCL}]}}!

[I.19091]

MOVE:[FRM xy][,SEQ ww]:FROM {<starting line>|END} \ [-<ending line>|END]],TO {<destination line>|END}!

[I.12121]

OCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \ MPM(fmd,tmd),<tc>[, {CUS|INCL}][,RDC]!

[I.12121]

OCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \ MPM(fmd,tmd)[,<tc>][,NAM][,{CUS|INCL}][,RDC]!

[I.12101]

OCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \ ,<tc>[,RDC][,{CUS|INCL}][,PRIOUT]!

[I.12101]

OCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \ [,<tc>][,<sc>][,NAM][,RDC][,{CUS|INCL}][,PRIOUT]!

[I.11121]

OCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \ MPM(fmd,tmd),<tc>[, {CUS|INCL}][,RDC]!

[I.11121]

OCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxqrrjjj[-kkk], \ MPM(fmd,tmd),<tc>[, {INCL|CUS}][,RDC]!

[I.11121]

OCON:FRM xy,SEQ ww:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \ MPM(fmd,tmd),<tc>[, {CUS|INCL}][,RDC]!

[I.11121]

OCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxqrrjjj[-kkk], \ MPM(fmd,tmd)[,<tc>][,NAM][,{INCL|CUS}][,RDC]!

[I.11101]

OCN:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \<tc>[,RDC][{,CUS|,INCL}][,PRIOUT]!

[I.11131]

OCN:[FRM xy][,SEQ ww]:FROM uvmnp,TO \wxkqr[,RDC][,{CUS|INCL}][,PRIOUT]!

[I.15102]

ODIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \[,INCL][,OOS][,DCC]!

[I.15102]

ODIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \[,INCL][,OOS][,DCC]!

[I.15101]

ODIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \[,INCL][,OOS][,DCC][,PRIOUT]!

[I.15101]

ODIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \[,INCL][,OOS][,DCC][,PRIOUT]!

[I.15111]

ODIS:[FRM xy][,SEQ ww]:FROM [s]abc,TO [t]ghi[,OOS][,INCL][,PRIOUT]!

[I.15111]

ODIS:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxkqr[,OOS][,INCL][,PRIOUT]!

[I.26141]

OPR:[FRM xy][,SEQ ww]:LPBK loop[t],NPC [s]abc,LOCN locn!

[I.26141]

OPR:[FRM xy][,SEQ ww]:LPBK loop[t],NPC uvmnp,LOCN locn!

[I.26161]

OPR:[FRM xy][,SEQ ww]:LPBK d[t],UNIT [q]q,MMFG a!

[I.28101]

OPR:[FRM xy][,SEQ ww]:TSIG test,NPC [s]abc!

[I.28101]

OPR:[FRM xy][,SEQ ww]:TSIG test,NPC uvmnp!

[I.26151]

RLS:[FRM xy][,SEQ ww]:LPBK loop,NPC [s]abc,LOCN locn!

[I.26151]

RLS:[FRM xy][,SEQ ww]:LPBK loop,NPC uvmnp,LOCN locn!

[I.28201]

RLS:[FRM xy][,SEQ ww]:TSIG test,NPC [s]abc!

[I.28201]

RLS:[FRM xy][,SEQ ww]:TSIG test,NPC uvmnp!

[I.33202]

RMV:FRM xy,SEQ ww:CCB sf!

[I.33202]

RMV:FRM xy,SEQ ww:CCB sf!

[I.33251]

RMV:[FRM xy][,SEQ ww]:CCI s!

[I.33251]

RMV:[FRM xy][,SEQ ww]:CCI s!

[I.33201]

RMV:FRM xy,SEQ ww:CCNI s!

[I.33201]

RMV:FRM xy,SEQ ww:CCNI s!

[I.33261]

RMV:[FRM xy][,SEQ ww]:ETSI sqq!

[I.33271]

RMV:[FRM xy][,SEQ ww]:ETSI S,ECCN s,ALL!

[I.33011]

RMV:[FRM xy][,SEQ ww]:LINK j!

[I.33001]

RMV:[FRM xy][,SEQ ww]:MC!

[I.33351]

RMV:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def][,SIDE s][,INCL]!

[I.33351]

RMV:[FRM xy][,SEQ ww]:NPC uvmp[-uvkqr][,SIDE s][,INCL]!

[I.33481]

RMV:[FRM xy][,SEQ ww]:{RT|DL} ffff!

[I.33211]

RMV:[FRM xy][,SEQ ww]:{SMEM|PMEM}!

[I.33121]

RMV:[FRM xy][,SEQ ww]:SYNC a,TLI m[,SSP b]!

[I.33121]

RMV:[FRM xy][,SEQ ww]:SYNC a,TLI m[,SSP b]!

[I.33101]

RMV:[FRM xy][,SEQ ww]:SYNC a!

[I.33221]

RMV:FRM xy,SEQ ww:TSI sft!

[I.33221]

RMV:FRM xy,SEQ ww:TSI sft!

[I.33241]

RMV:[FRM xy,SEQ ww]:TSIS,CCN s,ALL!

[I.33231]

RMV:FRM xy,SEQ ww:TSIS,CCN s,UNIT q
[,CONN(a[,b[,c[,d[,e[,f]]]]))]]!

[I.33231]

RMV:FRM xy,SEQ ww:TSIS,CCN s,UNIT q
[,CONN(a[,b[,c[,d[,e[,f]]]]))]]!

[I.33331]

RMV:[FRM xy][,SEQ ww]:UNIT [q]q,FC sb!

[I.33401]

RMV:[FRM xy][,SEQ ww]:UNIT [q]q,FLI k!

[I.33411]

RMV:[FRM xy][,SEQ ww]:UNIT [q]q,FMT s!

[I.33321]

RMV:[FRM xy][,SEQ ww]:UNIT [q]q,{FTMI d|DSPi}!

[I.33431]

RMV:[FRM xy][,SEQ ww]:UNIT [q]q,MIU c[-d][,INCL]!

[I.33421]

RMV:[FRM xy][,SEQ ww]:UNIT [q]q,MMFG c[-d][,FRC[,INCL]]!

[I.33311]

RMV:[FRM xy][,SEQ ww]:UNIT [q]q,UC!

[I.34202]

RST:FRM xy,SEQ ww:CCB sf!

[I.34202]

RST:FRM xy,SEQ ww:CCB sf!

[I.34251]

RST:[FRM xy][,SEQ ww]:CCI s!

[I.34201]

RST:FRM xy,SEQ ww:CCNI s!

[I.34201]

RST:FRM xy,SEQ ww:CCNI s!

[I.34261]

RST:[FRM xy][,SEQ ww]:ETSI sqq!

[I.34271]

RST:[FRM xy][,SEQ ww]:ETSI, ECCN s, ALL!

[I.34011]

RST:[FRM xy][,SEQ ww]:LINK j!

[I.34001]

RST:[FRM xy][,SEQ ww]:MC[, {MCOND|NOJRN|FRC}]!

[I.34361]

RST:[FRM xy][,SEQ ww]:NPC [s]abc,MON!

[I.34361]

RST:[FRM xy][,SEQ ww]:NPC uvmnp,MON!

[I.34351]

RST:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def][,SIDE s]\
[,INH[,INHTIM hrnm]]!

[I.34351]

RST:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr][,SIDE s]\
[,INH[,INHTIM hrnm]]!

[I.34371]

RST:[FRM xy][,SEQ ww]:NPC [s]abc,TS0M!

[I.34371]

RST:[FRM xy][,SEQ ww]:NPC uvmnp,TS0M!

[I.34211]

RST:[FRM xy][,SEQ ww]:{PMEM|SMEM[{,CLR|[,FRC][,BKGRND]}}]!

[I.34481]

RST:FRM xy,SEQ ww:{RT|DL} ffff!

[I.34121]

RST:[FRM xy][,SEQ ww]:SYNC a,TLI m[,SSP b]!

[I.34101]

RST:[FRM xy][,SEQ ww]:SYNC a!

[I.34221]

RST:FRM xy,SEQ ww:TSI sft!

[I.34221]

RST:FRM xy,SEQ ww:TSI sft!

[I.34241]

RST:FRM xy,SEQ ww:TSIS,CCN s,ALL!

[I.34241]

RST:FRM xy,SEQ ww:TSIS,CCN s,ALL!

[I.34231]

RST:FRM xy,SEQ ww:TSIS,CCN s,UNIT q
[,CONN(a[,b[,c[,d[,e[,f]]]])))]!

[I.34231]

RST:FRM xy,SEQ ww:TSIS,CCN s,UNIT q
[,CONN(a[,b[,c[,d[,e[,f]]]])))]!

[I.34331]

RST:[FRM xy][,SEQ ww]:UNIT [q]q,FC sb!

[I.34401]

RST:FRM xy,SEQ ww:UNIT [q]q,FLI k!

[I.34411]

RST:[FRM xy][,SEQ ww]:UNIT [q]q,FMT s!

[I.34321]

RST:[FRM xy][,SEQ ww]:UNIT [q]q,{FTMI d|DSPi}!

[I.34431]

RST:[FRM xy][,SEQ ww]:UNIT [q]q,MIU c[-d][,INCL]!

[I.34421]

RST:[FRM xy][,SEQ ww]:UNIT [q]q,MMFG c[-d][,INCL]!

[I.34311]

RST:FRM xy,SEQ ww:UNIT [q]q,UC!

[I.19081]

SAVE:[FRM xy][,SEQ ww]:!

[I.19311]

SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM [s]abcddd/ff-mm, \
TO [t]ghijjj/ll-nn!

[I.19311]

SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM uvmnpddd/ff-mm, \
TO wxkqrjjj/ll-nn!

[I.19321]

SCNT:[FRM xy][,SEQ ww]:[RATE rr,]MPTM [s]abcddd[/ff],MJU ssss \
[,MA(tttt,u)],<branch>[,<branch>][,<branch>][,<branch>]!

[I.19321]

SCNT:[FRM xy][,SEQ ww]:[RATE rr,]MPTM uvmnpddd[/ff],MJU ssss \
[,MA(tttt,u)],<branch>[,<branch>][,<branch>][,<branch>]!

[I.19301]

SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM [s]abcddd[/ff], \
TO [t]ghijjj[/ll]!

[I.19301]

SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM uvmnpddd[/ff], \
TO wxkqrjjj[/ll]!

[I.19221]

SCON:[FRM xy][,SEQ ww]:[RATE rr,]MPTM [s]abcddd[/ff],MJU ssss \
[,MA(tttt,u)] [,<branch>][,<branch>][,<branch>][,<branch>]!

[I.19221]

SCON:[FRM xy][,SEQ ww]:[RATE rr,]MPTM uvmnpddd[/ff],MJU ssss \
[,MA(tttt,u)][,<branch>][,<branch>][,<branch>][,<branch>]!

[I.19201]

SCON:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM [s]abcddd[/ff], \
TO [t]ghijjj[/ll]!

[I.19201]

SCON:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM uvmnpddd[/ff], \
TO wxkqrjjj[/ll]!

[I.19431]

SDIS:[FRM xy][,SEQ ww]:[RATE rr,]MPTM [s]abcddd[/ff],MJU ssss \
[,ALL]!

[I.19431]

SDIS:[FRM xy][,SEQ ww]:[RATE rr,]MPTM uvmnpddd[/ff],MJU ssss \[,ALL]!

[I.19421]

SDIS:[FRM xy][,SEQ ww]:[RATE rr,]MPTM [s]abcddd[/ff],MJU ssss, \<branch>[,<branch>][,<branch>][,<branch>]!

[I.19421]

SDIS:[FRM xy][,SEQ ww]:[RATE rr,]MPTM uvmnpddd[/ff],MJU ssss, \<branch>[,<branch>][,<branch>][,<branch>]!

[I.19401]

SDIS:[FRM xy][,SEQ ww]:[RATE rr[,TPT],] FROM [s]abcddd[/ff], \TO [t]ghijjj[/ll]!

[I.19401]

SDIS:[FRM xy][,SEQ ww]:[RATE rr[,TPT],] FROM uvmnpddd[/ff], \TO wxkqrjjj[/ll]!

[I.19101]

SECH:FRM xy,SEQ ww:TO [s]abcddd[-eee],{DS0A rr|DS0B nn} \[, {SEC|PCH[ppp]}]!

[I.19101]

SECH:FRM xy,SEQ ww:TO uvmnpddd[-eee],{DS0A rr|DS0B nn} \[, {SEC|PCH[ppp]}]!

[I.19111]

SECH:[FRM xy][,SEQ ww]:TO [s]abcddd[-eee],RATE rr[,DP] \[,PCH[ppp]]!

[I.19111]

SECH:[FRM xy][,SEQ ww]:TO uvmnpddd[-eee],RATE rr[,DP] \[,PCH[ppp]]!

[I.39311]

STOP:[FRM xy][,SEQ ww]:MACRO[,LINK j[mm]]!

[I.19621]

STST:[FRM xy][,SEQ ww]:MON,TO [s]abcddd[/ff],MJU ssss,[BRi,] \TP kk!

[I.19621]

STST:[FRM xy][,SEQ ww]:MON,TO uvmnpddd[/ff],MJU ssss,[BRi,] \ TP kk!

[I.19601]

STST:[FRM xy][,SEQ ww]:MON[,TO [s]abcdddd[/ff]],TP kk!

[I.19601]

STST:[FRM xy][,SEQ ww]:MON[,TO uvmnpddd[/ff]],TP kk!

[I.19651]

STST:[FRM xy][,SEQ ww]:SPL,TO [s]abcdddd[/ff],MJU ssss,[BRi,],TP kk!

[I.19651]

STST:[FRM xy][,SEQ ww]:SPL,TO uvmnpddd[/ff],MJU ssss,[BRi,],TP kk!

[I.19631]

STST:[FRM xy][,SEQ ww]:SPL[,TO [s]abcdddd[/ff]],TP kk!

[I.19631]

STST:[FRM xy][,SEQ ww]:SPL[,TO uvmnpddd[/ff]],TP kk!

[I.19661]

STST:[FRM xy][,SEQ ww]:{TLA|TLR} m,TP kk!

[I.19681]

STST:[FRM xy][,SEQ ww]:TPR,{ALL|LINKS}!

[I.19671]

STST:[FRM xy][,SEQ ww]:TPR,TP kk!

[I.14021]

SW:[FRM xy][,SEQ ww]:BCAST,OLD [s]abcdddd[-eee],NEW [t]ghijjj \ [-kkk][,INCL]

[I.14021]

SW:[FRM xy][,SEQ ww]:BCAST,OLD uvmnpddd[-eee],NEW wxkqrjjj \ [-kkk][,INCL]

[I.14061]

SW:[FRM xy][,SEQ ww]:BCAST,OLD [s]abc,NEW [t]ghi[,INCL]

[I.14061]

SW:[FRM xy][,SEQ ww]:BCAST,OLD uvmnp,NEW wxkqr[,INCL]

[I.14041]

SW:[FRM xy][,SEQ ww]:DISC [s]abcddd[-eee][,OOS]

[I.14041]

SW:[FRM xy][,SEQ ww]:DISC uvmnpddd[-eee][,OOS]

[I.14081]

SW:[FRM xy][,SEQ ww]:DISC [s]abc[,OOS]

[I.14081]

SW:[FRM xy][,SEQ ww]:DISC uvmnp[,OOS]

[I.39401]

SW:[FRM xy][,SEQ ww]:{NPC [s]abc|RT ffff,xxx}, \ {PSW|USW|ALW|INH}[,FRC][,INCL]!

[I.39401]

SW:[FRM xy][,SEQ ww]:{NPC uvmnp|RT ffff,xxx}, \ {PSW|USW|ALW|INH}[,FRC][,INCL]!

[I.14071]

SW:[FRM xy][,SEQ ww]:ROLL,OLD [s]abc,NEW [t]ghi[,INCL][,FRC] \ [,OOS][,TWAY]

[I.14071]

SW:[FRM xy][,SEQ ww]:ROLL,OLD uvmnp,NEW wxkqr[,INCL][,FRC] \ [,OOS][,TWAY]

[I.14031]

SW:[FRM xy][,SEQ ww]:ROLL,OLD [s]abcddd[-eee],NEW [t]ghijjj[-kkk] \ [,INCL][,FRC][,OOS]

[I.14031]

SW:[FRM xy][,SEQ ww]:ROLL,OLD uvmnpddd[-eee],NEW wxkqrjjj[-kkk] \ [,INCL][,FRC][,OOS]

[I.35101]

SW:FRM xy,SEQ ww:UNIT [q]q,FLI,TOPRTN!

[I.35105]

SW:[FRM xy][,SEQ ww]:UNIT [q]q,FLI,TOSRVC!

[I.35111]

SW:[FRM xy][,SEQ ww]:UNIT [q]q,MMFG c,TOPTN[,FRC]!

[I.35121]

SW:FRM xy,SEQ ww:UNIT [q]q,MMFG c,TOSRVC!

[I.35121]

SW:FRM xy,SEQ ww:UNIT [q]q,MMFG c,TOSRVC!

[I.12001]

TCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \<tc>[,AIS][,{CUS|INCL}][,RDC][,PRIOUT]!

[I.12001]

TCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \[,<tc>][,<sc>][,NAM][,{CUS|INCL}][,RDC][,PRIOUT]!

[I.12051]

TCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd,TO [t]ghijjj[, {PFw(abcd ef g, ij k l m n o) | N F w}]!

[I.11041]

TCON:FRM xy,SEQ ww:FROM [s]abc,CB[,CUS][,RDC][,INCL]!

[I.11041]

TCON:FRM xy,SEQ ww:FROM uvmnp,CB[,CUS][,RDC][,INCL]!

[I.11001]

TCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \<tc>[,AIS][,{CUS|INCL}][,RDC][,PRIOUT]!

[I.11001]

TCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \<tc>[,AIS][,{CUS|INCL}][,RDC][,PRIOUT]!

[I.11001]

TCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \[,<tc>][,<sc>][,NAM][,{CUS|INCL}][,RDC][,PRIOUT]!

[I.11001]

TCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \

[I.11021]

TCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \

[I.11021]

TCON:FRM xy,SEQ ww:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \

[I.11021]

TCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \

[I.11021]

TCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \

[I.11051]

TCON:[FRM xy][,SEQ ww]:FROM [s]abcddd,TO [t]ghijjj \

[I.11051]

TCON:[FRM xy][,SEQ ww]:FROM uvmnpddd,TO wxkqrjjj \

[I.11011]

TCON:[FRM xy][,SEQ ww]:FROM [s]abc,TO \

[I.11011]

TCON:[FRM xy][,SEQ ww]:FROM uvmnp,TO

[I.15004]

TDIS:[FRM xy][,SEQ ww]:FROM [s]abc,CB[,INCL][,OOS]!

[I.15004]

TDIS:[FRM xy][,SEQ ww]:FROM uvmnp,CB[,INCL][,OOS]!

[I.15001]

TDIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
[,INCL][,OOS][{,DCC|,DCP}][,PRIOUT]!

[I.15001]

TDIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
[,INCL][,OOS][{,DCC|,DCP}][,PRIOUT]!

[I.15002]

TDIS:[FRM xy][,SEQ ww]:FROM [s]abcddd,TO [t]ghijjj[,INCL][,OOS]
[,DCC]!

[I.15002]

TDIS:[FRM xy][,SEQ ww]:FROM uvmnpddd,TO wxkqrjjj[,INCL][,OOS]
[,DCC]!

[I.15011]

TDIS:[FRM xy][,SEQ ww]:FROM [s]abc,TO [t]ghi[,OOS][,INCL][,PRIOUT]!

[I.15011]

TDIS:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxkqr[,OOS][,INCL][,PRIOUT]!

[I.24021]

TTST:[FRM xy][,SEQ ww]:HUB,TO ([s]abcddd,[t]ghijjj),TG mmm[,<tc>]!

[I.24021]

TTST:[FRM xy][,SEQ ww]:HUB,TO (uvmnpddd,wxkqrjjj),TG mmm[,<tc>]!

[I.24001]

TTST:[FRM xy][,SEQ ww]:HUB,<tc>,TO [t]ghijjj,TP kk!

[I.24001]

TTST:[FRM xy][,SEQ ww]:HUB,<tc>,TO uvmnpjjj,TP kk!

[I.24001]

TTST:[FRM xy][,SEQ ww]:HUB,TO [t]ghijjj,TP kk[,<tc>][,NAM]!

[I.24001]

TTST:[FRM xy][,SEQ ww]:HUB,TO uvmnpjjj,TP kk[,<tc>][,NAM]!

[I.22221]

TTST::[FRM xy][,SEQ ww]:INS,TG mmm!

[I.29021]

TTST:[FRM xy][,SEQ ww]:LPD,TG mmm[,<tc>]!

[I.29021]

TTST:[FRM xy][,SEQ ww]:LPD,TG mmm[,<tc>]!

[I.29001]

TTST:[FRM xy][,SEQ ww]:LPD,TP kk,<tc>!

[I.21031]

TTST:[FRM xy][,SEQ ww]:MON,TG mmm!

[I.21001]

TTST:[FRM xy][,SEQ ww]:MON[,TO [t]ghijjj][,<tc>],TP kk!

[I.21001]

TTST:[FRM xy][,SEQ ww]:MON[,TO uvmnpjjj][,<tc>],TP kk!

[I.21001]

TTST:[FRM xy][,SEQ ww]:MON[,TO [t]ghijjj][,<tc>][,NAM],TP kk!

[I.21001]

TTST:[FRM xy][,SEQ ww]:MON[,TO uvmnpjjj][,<tc>][,NAM],TP kk!

[I.21021]

TTST:FRM xy,SEQ ww:MON,TO [t]ghi(jjj[-kkk][,lll,...])[,<tc>], \ TG mmm!

[I.21021]

TTST:FRM xy,SEQ ww:MON,TO wxkqr(jjj[-kkk][,lll,...])[,<tc>], \ TG mmm!

[I.21021]

TTST:FRM xy,SEQ ww:MON,TO [t]ghi(jjj[-kkk][,lll,...])[,<tc>], \ TG mmm!

[I.21021]

TTST:FRM xy,SEQ ww:MON,TO wxkqr(jjj[-kkk][,lll,...])[,<tc>], \ TG mmm!

[I.26101]

TTST:FRM xy,SEQ ww:RT ffff,{DGA|DGB|DGC|DGD|DGP}, \ LLB[, {TO|FROM}], {INI|TRM|ALW|INH}!

[I.23021]

TTST:[FRM xy][,SEQ ww]:SPL,TG mmm[,NOYLW]!

[I.23021]

TTST:[FRM xy][,SEQ ww]:SPL,TG mmm!

[I.23001]

TTST:[FRM xy][,SEQ ww]:SPL,TP kk!

[I.27021]

TTST:[FRM xy][,SEQ ww]:TGR,TG mmm[-nnn][,OOS]!

[I.25101]

TTST:[FRM xy][,SEQ ww]:TLA m[,NOT [t]rstvvv],TP kk!

[I.25101]

TTST:[FRM xy][,SEQ ww]:TLA m[,NOT uvmnpvvv],TP kk!

[I.25121]

TTST:[FRM xy][,SEQ ww]:TLA m,TG mmm!

[I.25501]

TTST:[FRM xy][,SEQ ww]:TLR m[,NOT [t]rstvvv],TP kk!

[I.25501]

TTST:[FRM xy][,SEQ ww]:TLR m[,NOT uvmnpvvv],TP kk!

[I.25521]

TTST:[FRM xy][,SEQ ww]:TLR m,TG mmm!

[I.27002]

TTST:[FRM xy][,SEQ ww]:TPR,ALL[,OOS]!

[I.27002]

TTST:[FRM xy][,SEQ ww]:TPR,ALL[,OOS]!

[I.27001]

TTST:[FRM xy][,SEQ ww]:TPR,TP kk[,OOS][,FRC]!

[I.22021]

TTST:[FRM xy][,SEQ ww]:TSG {ON|OFF},TG \\
mmm[,<pattern>,{EAST|WEST}[,SIG abcd]]!

[I.22421]

TTST:[FRM xy][,SEQ ww]:TSM {ON|OFF},TG mmm \\
[, {EAST|WEST}[,TINT nnn]]!

[I.51111]

UTL:[FRM xy][,SEQ ww]:ACO!

[O.51111]

pahh:mm:ss xy,ww n[vv] UTL ACO {ACTIVE|INACT} COMPL

[I.53351]

UTL:[FRM xy][,SEQ ww]:QRY,ALM,INTV!

[I.53321]

UTL:[FRM xy][,SEQ ww]:QRY,ALM,SEV!

[I.55701]

UTL:[FRM xy][,SEQ ww]:BMTR,FROM <from>,TO \\
<to>[, {EXCT|INCL|UPGRD}]!

[I.58001]

UTL:[FRM xy][,SEQ ww]:BOOT,FRAME[,CLR]!

[I.56011]

UTL:FRM xy,SEQ ww:CLR,<parameter>,ALL!

[I.56061]

UTL:[FRM xy][,SEQ ww]:CLR,ERR,{HWER|SWER}!

[I.57031]

UTL:[FRM xy][[,SEQ ww]:CLR,MSGLOG[,RSTNUM]!

[I.56071]

UTL:[FRM xy][,SEQ ww]:CLR,{NPC [s]abc[-[t]def]|ALL},<parameter> \\
[,AI aaaaa] [,LOCN locn][,MONDAT dddd][,MONTIM tttt]!

[I.56071]

UTL:[FRM xy][,SEQ ww]:CLR,{NPC uvmnp[-wxkqr]|ALL},<parameter> \[,AI aaaaa [,LOCN locn][,MONDAT dddd][,MONTIM tttt]!

[I.56071]

UTL:[FRM xy][,SEQ ww]:CLR,{NPC [s]abc[-[t]def]|ALL},<parameter>, \AI aaaaa [,MONDAT dddd][,MONTIM tttt]!

[I.56071]

UTL:[FRM xy][,SEQ ww]:CLR,{NPC uvmnp[-wxkqr]|ALL},<parameter>, \AI aaaaa [,MONDAT dddd][,MONTIM tttt]!

[I.56051]

UTL:[FRM xy][,SEQ ww]:CLR,NPC [s]abc,PARAMS!

[I.56051]

UTL:[FRM xy][,SEQ ww]:CLR,NPC uvmnp,PARAMS!

[I.56001]

UTL:[FRM xy][,SEQ ww]:CLR,<parameter>, \{NPC [s]abc[-[t]def]| RT ffff |DL ffff}!

[I.56001]

UTL:[FRM xy][,SEQ ww]:CLR,<parameter>,{NPC uvmnp[-wxkqr]| \RT ffff|DL ffff}!

[I.56001]

UTL:[FRM xy][,SEQ ww]:CLR,<parameter>,NPC [s]abc[-[t]def]!

[I.56001]

UTL:[FRM xy][,SEQ ww]:CLR,<parameter>,NPC uvmnp[-wxkqr]!

[I.56052]

UTL:[FRM xy][,SEQ ww]:CLR,PWR pp!

[I.51021]

UTL:[FRM]xy[,SEQ] ww:DATE <new-date>[,FORMAT ggg][,INT ii]!

[O.53101]

UTL:[FRM xy][,SEQ ww]:QRY,<parameter>,ALL!

[I.52111]

UTL:[FRM xy][,SEQ ww]:QRY,BCAST,FROM [s]abcddd!

[I.52111]

UTL:[FRM xy][,SEQ ww]:QRY,BCAST,FROM uvmnpddd!

[I.52111]

UTL:[FRM xy][,SEQ ww]:QRY,BCAST,FROM [s]abcddd!

[I.52111]

UTL:[FRM xy][,SEQ ww]:QRY,BCAST,FROM uvmnpddd!

[I.52121]

UTL:[FRM xy][,SEQ ww]:QRY,BCAST,FROM [s]abc!

[I.52121]

UTL:[FRM xy][,SEQ ww]:QRY,BCAST,FROM uvmnp!

[I.52011]

UTL:[FRM xy][,SEQ ww]:QRY,CMAP [s]abc[-[t]def]!

[I.52011]

UTL:[FRM xy][,SEQ ww]:QRY,CMAP uvmnp[-wxkqr]!

[I.51091]

UTL:[FRM xy][,SEQ ww]:QRY,CNFR!

[I.53121]

UTL:[FRM xy][,SEQ ww]:QRY,CS,NPC [s]abc!

[I.53121]

UTL:[FRM xy][,SEQ ww]:QRY,CS,NPC uvmnp!

[I.51031]

UTL:[FRM xy][,SEQ ww]:QRY,DATE!

[I.56343]

UTL:[FRM xy][,SEQ ww]:QRY,{DD,NPC [s]abc[-[t]def]|DDCT,ALL}!

[I.56343]

UTL:[FRM xy][,SEQ ww]:QRY,{DD,NPC uvmnp[-wxkqr]|DDCT,ALL}!

[I.56341]

UTL:[FRM xy][,SEQ ww]:QRY,DD [s]abcddd[-fff]!

[I.56341]

UTL:[FRM xy][,SEQ ww]:QRY,DD uvmnpddd[-fff]!

[I.52031]

UTL:[FRM xy][,SEQ ww]:QRY,DMAP!

[I.51511]

UTL:[FRM xy][,SEQ ww]:QRY,ECLOC!

[I.53109]

UTL:[FRM xy][,SEQ ww]:QRY,EQD,COMMON!

[I.53031]

UTL:[FRM xy][,SEQ ww]:QRY,EQD,CONN!

[I.53022]

UTL:[FRM xy][,SEQ ww]:QRY,EQD,ETISIS!

[I.53201]

UTL:[FRM xy][,SEQ ww]:QRY,EQD,MIUS!

[I.53211]

UTL:[FRM xy][,SEQ ww]:QRY,EQD,MXRS!

[I.53041]

UTL:[FRM xy][,SEQ ww]:QRY,EQD,NPCS[, {TOTAL|UNIT [q]q}]!

[O.53041]

UTL:[FRM xy][,SEQ ww]:QRY,EQD,TSIS!

[I.53108]

UTL:[FRM xy][,SEQ ww]:QRY,EQD[,UNIT [q]q]!

[I.53011]

UTL:[FRM xy][,SEQ ww]:QRY,EQD,UNITS!

[I.55011]

UTL:FRM xy,SEQ ww:QRY,ERR,{SWER|HWER} \
[, {INT mn|[DATE moda[ce]yr,] TOD hrmsc}]
[,TN X'dddd][,EVENT X'eeee][,ERCL{HARD|TRANS|APPINT}] \
[,ENTY <entity>]|ALL}!

[I.55411]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,ECCN s!

[I.55111]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,MP!

[I.55601]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,NPC [s]abc[,SIDE s]!

[I.55601]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,NPC uvmp[,SIDE s]!

[I.55531]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,UNIT [q]q,DSPI!

[I.55521]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,UNIT [q]q,FC sb!

[I.55521]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,UNIT [q]q,FC sb!

[I.55801]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,UNIT [q]q,FLI k!

[I.55891]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,UNIT [q]q,MPR z!

[I.55821]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,UNIT [q]q,MXR c!

[I.55501]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,UNIT [q]q!

[I.53311]

UTL:[FRM xy][,SEQ ww]:QRY,FALMS,TYPE {mn[xyz]|ALL},{<falms>|ALL}!

[I.51121]

UTL:[FRM xy][,SEQ ww]:QRY,FPKG!

[I.52051]

UTL:[FRM xy][,SEQ ww]:QRY,FROM [s]abcddd[-eee]!

[I.52051]

UTL:[FRM xy][,SEQ ww]:QRY,FROM uvmnpddd[-eee]!

[I.52071]

UTL:[FRM xy][,SEQ ww]:QRY,FROM [s]abc!

[I.52071]

UTL:[FRM xy][,SEQ ww]:QRY,FROM uvmnp!

[I.51501]

UTL:[FRM xy][,SEQ ww]:QRY,HUBID!

[I.53341]

UTL:[FRM xy][,SEQ ww]:QRY,INH,{NPC [s]abc[-[t]def]|ALL}!

[I.53341]

UTL:[FRM xy][,SEQ ww]:QRY,INH,{NPC uvmnp[-wxkqr]|ALL}!

[I.53331]

UTL:[FRM xy][,SEQ ww]:QRY,INTV,{NPC {[s]abc[-[t]def]|ALL}| \
TLI m|CCN|SYNC|ALL}!

[I.53331]

UTL:[FRM xy][,SEQ ww]:QRY,INTV,{NPC {uvmnp-uvkqr|ALL}| \
TLI m|CCN|SYNC|ALL}!

[I.54131]

UTL:FRM xy,SEQ ww:QRY,LIST,MACRO <macro name>
[,USER <user id>]!

[I.54101]

UTL:[FRM xy][,SEQ ww]:QRY,LIST,MAP <name>[,USER <user id>]!

[I.52581]

UTL:[FRM xy][,SEQ ww]:QRY,LOAD,{NPC [s]abc|TOTAL}!

[I.52581]

UTL:[FRM xy][,SEQ ww]:QRY,LOAD,{NPC uvmnp|TOTAL}!

[I.54011]

UTL:[FRM xy][,SEQ ww]:QRY,LOG[,ALL]!

[I.53131]

UTL:[FRM xy][,SEQ ww]:QRY,LPBK,NPC [s]abc[-[t]def]!

[I.53131]

UTL:[FRM xy][,SEQ ww]:QRY,LPBK,NPC uvmnp[-wxkqr]!

[I.53131]

UTL:[FRM xy][,SEQ ww]:QRY,LPBK,NPC [s]abc[-[t]def]!

[I.53131]

UTL:[FRM xy][,SEQ ww]:QRY,LPBK,NPC uvmnp[-wxkqr]!

[I.53181]

UTL:[FRM xy][,SEQ ww]:QRY,LPBK,UNIT [q]q!

[I.54211]

UTL:FRM xy,SEQ ww:QRY,MACRO,ATTR[, {USER <user id>|ALL}]!

[I.54221]

UTL:FRM xy,SEQ ww:QRY,{MACRO|MAP},SPACE[, {USER <user id>|ALL| \ SYSTEM}]!

[I.54121]

UTL:FRM xy,SEQ ww:QRY,MACRO <name>[,USER <user id>]!

[I.54201]

UTL:FRM xy,SEQ ww:QRY,MAP,ATTR[, {ALL|USER <user id>|MAPNM <name>}]!

[I.52201]

UTL:[FRM xy][,SEQ ww]:QRY,MARK [s]abc[-[t]def]!

[I.52201]

UTL:[FRM xy][,SEQ ww]:QRY,MARK uvmnp[-wxkqr]!

[I.52211]

UTL:[FRM xy][,SEQ ww]:QRY,MARK [s]abcjjj[-kkk]!

[I.52211]

UTL:[FRM xy][,SEQ ww]:QRY,MARK uvmnpjjj[-kkk]!

[I.51001]

UTL:[FRM xy][,SEQ ww]:QRY,MEMSTAT!

[I.56391]

UTL:[FRM xy][,SEQ ww]:QRY,NETADDR!

[I.56324]

UTL:[FRM xy][,SEQ ww]:QRY,NFS,NPC [s]abc[-[t]def]!

[I.56324]

UTL:[FRM xy][,SEQ ww]:QRY,NFS,NPC uvmnp[-wxkqr]!

[I.56091]

UTL:[FRM xy][,SEQ ww]:QRY,{NPC [s]abc[-[t]def]|ALL},<parameter>, \
AI aaaaa [,LV llllllllll][,LOCN locn][,MONDAT dddd][,MONTIM \
tttt]!

[I.56091]

UTL:[FRM xy][,SEQ ww]:QRY,{NPC uvmnp[-wxkqr]|ALL},<parameter>, \
AI aaaaa [,LV llllllllll][,LOCN locn][,MONDAT dddd][,MONTIM tttt]!

[I.56091]

UTL:[FRM xy][,SEQ ww]:QRY,{NPC [s]abc[-[t]def]|ALL},<parameter>, \
AI aaaaa [,LV llllllllll][,MONDAT dddd][,MONTIM tttt]!

[I.56091]

UTL:[FRM xy][,SEQ ww]:QRY,{NPC uvmnp[-wxkqr]|ALL},<parameter>,AI \
aaaaa [,LV llllllllll][,MONDAT dddd][,MONTIM tttt]!

[I.53171]

UTL:[FRM xy][,SEQ ww]:QRY,NPC [s]abc[-[t]def],CBTIMER!

[I.53171]

UTL:[FRM xy][,SEQ ww]:QRY,NPC uvmnp[-uvkqr],CBTIMER!

[I.54111]

UTL:FRM xy,SEQ ww:QRY,NPC,MAP <name>[,USER <user id>]!

[I.56041]

UTL:[FRM xy][,SEQ ww]:QRY,<parameter>,{NPC [s]abc[-[t]def]}| \\
RT ffff|DL ffff}!

[I.56041]

UTL:[FRM xy][,SEQ ww]:QRY,<parameter>,{NPC uvmnp[-wxkqr]}| \\
RT ffff|DL ffff}!

[I.56041]

UTL:[FRM xy][,SEQ ww]:QRY,<parameter>,NPC [s]abc[-[t]def]!

[I.56041]

UTL:[FRM xy][,SEQ ww]:QRY,<parameter>,NPC uvmnp[-wxkqr]!

[I.53091]

UTL:[FRM xy][,SEQ ww]:QRY,NPCTG rrr[-sss]!

[I.51051]

UTL:[FRM xy][,SEQ ww]:QRY,NUM!

[I.53051]

UTL:[FRM xy][,SEQ ww]:QRY,OPT[, {TYPE mn|ALL}],NPCS!

[I.53053]

UTL:[FRM xy][,SEQ ww]:QRY,OPT,TYPE mn!

[I.51151]

UTL:[FRM xy][,SEQ ww]:QRY,PMSCHED,{NPC [s]abc[-[t]def]}|ALL}!

[I.51151]

UTL:[FRM xy][,SEQ ww]:QRY,PMSCHED,{NPC uvmnp[-wxkqr]}|ALL}!

[I.52081]

UTL:[FRM xy][,SEQ ww]:QRY,ROLL,DS0,{NPC uvmnp[-wxkqr]}|ALL \\
[,UNIT [q]q]}!

[I.52081]

UTL:[FRM xy][,SEQ ww]:QRY,ROLL,DS0,{NPC [s]abc[-[t]def]}|ALL \\
[,UNIT [q]q]}!

[I.52311]

UTL:[FRM xy][,SEQ ww]:QRY,{RTMAP|DLMAP}[ffff]!

[I.56301]

UTL:[FRM xy][,SEQ ww]:QRY,STATE,SYNC!

[I.52061]

UTL:[FRM xy][,SEQ ww]:QRY,TO [s]abc!

[I.52061]

UTL:[FRM xy][,SEQ ww]:QRY,TO uvmnp!

[I.53061]

UTL:[FRM xy][,SEQ ww]:QRY,TPS!

[I.56323]

UTL:[FRM xy][,SEQ ww]:QRY,TSØM,NPC uvmnp[-wxkqr]!

[I.51141]

UTL:[FRM xy][,SEQ ww]:SCHED,PMREPT,NPC [s]abc[-[t]def], \
RI rrrrr,ST ssss,NI nn,<parameter>,LV llllllllll, \
LOCN locn,AI aaaaa,TOF ttttt[-ooooo][,LK p[vv][q[vv]]]!

[I.51141]

UTL:[FRM xy][,SEQ ww]:SCHED,PMREPT,NPC uvmnp[-wxkqr], \
RI rrrrr,ST ssss,NI nn,<parameter>,LV llllllllll, \
LOCN locn,AI aaaaa,TOF ttttt[-ooooo][,LK p[vv][q[vv]]]!

[I.55731]

UTL:[FRM xy,SEQ ww]:UPGRD!

[I.51011]

UTL:[FRM xy][,SEQ ww]:[TOD hrnsc][,{CFA|PRIM X'ghij|MONDAT}]!

[I.51011]

UTL:[FRM xy][,SEQ ww]:[TOD hrnsc][,{CFA|FAC X'abcdef| \
PRIM X'ghij|MONDAT}]!

[I.51081]

UTL:[FRM xy][,SEQ ww]:RCY,PASSWD!

[I.55181]

UTL:[FRM xy][,SEQ ww]:QRY,XCSB[,UNIT [q]q]!

[I.51041]

UTL:[FRM xy][,SEQ ww]:QRY,WHO

[I.53071]

UTL:[FRM xy][,SEQ ww]:QRY,UNIT [q]q,FTMI b[,IMP]!

[I.53071]

UTL:[FRM xy][,SEQ ww]:QRY,UNIT [q]q,FTMI b[,EQL]!

[I.56323]

UTL:[FRM xy][,SEQ ww]:QRY,TS0M,NPC [s]abc[-[t]def]!

[I.56321]

UTL:[FRM xy][,SEQ ww]:QRY,TS0 s,NPC uvmnp[-wxkqr]!

[I.56321]

UTL:[FRM xy][,SEQ ww]:QRY,TS0 s,NPC [s]abc[-[t]def]!

[I.53401]

UTL:[FRM xy][,SEQ ww]:QRY,TSM,TG mmm!

[I.53161]

UTL:[FRM xy][,SEQ ww]:QRY,TSIG,NPC uvmnp[-wxkqr]!

[I.53161]

UTL:[FRM xy][,SEQ ww]:QRY,TSIG,NPC [s]abc[-[t]def]!

[I.52041]

UTL:[FRM xy][,SEQ ww]:QRY,TO uvmnpddd[-eee]!

[I.52041]

UTL:[FRM xy][,SEQ ww]:QRY,TO [s]abcddd[-eee]!

[I.53081]

UTL:[FRM xy][,SEQ ww]:QRY,TGS mmm[-nnn]!

[I.53001]

UTL:[FRM xy][,SEQ ww]:QRY,SYNC,TYPE!

[I.55191]

UTL:[FRM xy][,SEQ ww]:QRY,STR,XC a!

[I.55201]

UTL:[FRM xy][,SEQ ww]:QRY,STR,SYNC a!

[I.55311]

UTL:[FRM xy][,SEQ ww]:QRY,STR,SYNC a,TLI m!

[I.55321]

UTL:[FRM xy][,SEQ ww]:QRY,STR,SYNC a,TLI m,SSP b!

[I.55113]

UTL:[FRM xy][,SEQ ww]:QRY,STR,LINK j[mm][-jnn]!

[I.52321]

UTL:[FRM xy][,SEQ ww]:QRY[,STATE],SCDG,{NPC uvmnp|RT ffff| \
DL ffff|ALL}!

[I.52321]

UTL:[FRM xy][,SEQ ww]:QRY[,STATE],SCDG,{NPC [s]abc|RT ffff| \
DL ffff|ALL}!

[I.56314]

UTL:[FRM xy][,SEQ ww]:QRY,STATE,NPC uvmnp[-wxqqr]!

[I.56314]

UTL:[FRM xy][,SEQ ww]:QRY,STATE,NPC [s]abc[-[t]def]!

[I.56311]

UTL:[FRM xy][,SEQ ww]:QRY,STATE,NPC uvmnp[-wxqqr]!

[I.56311]

UTL:[FRM xy][,SEQ ww]:QRY,STATE,NPC [s]abc[-[t]def]!

[I.56501]

UTL:FRM xy,SEQ ww:QRY,SR00F,{TO uvmnpddd[-eee]|ALL}!

[I.56501]

UTL:[FRM xy][,SEQ ww]:QRY,SR00F,{TO [s]abcddd[-eee]|ALL}!

[I.52531]

UTL:[FRM xy][,SEQ ww]:QRY,SRHDW,TO uvmnpddd[/ff]!

[I.52531]

UTL:[FRM xy][,SEQ ww]:QRY,SRHDW,TO [s]abcddd[/ff]!

[I.51131]

UTL:[FRM xy][,SEQ ww]:QRY,SQN!

[I.52601]

UTL:[FRM xy][,SEQ ww]:QRY,SIGST uvmnpddd

[I.52601]

UTL:[FRM xy][,SEQ ww]:QRY,SIGST abcddd

[I.52501]

UTL:[FRM xy][,SEQ ww]:QRY,SECH,TO uvmnpddd[-eee]!

[I.52501]

UTL:[FRM xy][,SEQ ww]:QRY,SECH,TO [s]abcddd[-eee]!

[I.54001]

UTL:[FRM xy][,SEQ ww]:QRY,SCR,{LINK j[mm[-jnn]]| \
USER <user id>|LINKS|USERS}!

[I.52521]

UTL:[FRM xy][,SEQ ww] ww:QRY,SCON,TO uvmnpddd[/ff]!

[I.52521]

UTL:[FRM xy][,SEQ ww] ww:QRY,SCON,TO [s]abcddd[/ff]!

[I.52511]

UTL:[FRM xy][,SEQ ww] ww:QRY,SCON,CH,TO uvmnpddd[-eee]!

[I.52511]

UTL:[FRM xy][,SEQ ww] ww:QRY,SCON,CH,TO [s]abcddd[-eee]!

[I.53301]

UTL:[FRM xy][,SEQ ww]:QRY,SALMS,{sal|m|ALL}!

[I.56326]

UTL:[FRM xy][,SEQ ww]:QRY,RPSFI!

[I.57001]

UTL:[FRM xy][,SEQ ww]:QRY,MSGLOG,RANGE!

[I.56511]

UTL:[FRM xy][,SEQ ww]:QRY,PSTATE,UNIT [q]q!

[I.53103]

UTL:[FRM] xy[,SEQ] ww:QRY,{PEST|FAIL|OOS}[,UNIT [q]q]!

[I.53105]

UTL:[FRM xy][,SEQ ww]:QRY,{PEST|FAIL|OOS},COMMON!

[I.52101]

UTL::QRY,BCAST,ALL!

[I.56353]

UTL:[FRM xy][,SEQ ww]:QRY,BC s,TO uvmnpddd!

[I.56353]

UTL:[FRM xy][,SEQ ww]:QRY,BC s,TO [s]abcddd!

[I.56351]

UTL:[FRM xy][,SEQ ww]:QRY,BC s,{NPC uvmnp[-wxkqr]|ALL}!

[O.51201.01]

UTL:[FRM xy][,SEQ ww]:QRY,BC s,{NPC [s]abc[-[t]def]|ALL}!

[I.51201]

UTL:[FRM xy][,SEQ ww]:QRY,APPL,{NPC uvmnp|ALL}!

[I.51201]

UTL:[FRM xy][,SEQ ww]:QRY,APPL,{NPC [s]abc|ALL}!

[I.53111]

UTL:[FRM xy][,SEQ ww]:QRY,ALMS!

[I.53141]

UTL:[FRM xy][,SEQ ww]:QRY,ALMS,{RT|DL} ffff!

[I.53151]

UTL:[FRM xy][,SEQ ww]:QRY,ALMS,DBASE!

[I.56021]

UTL:[FRM xy][,SEQ ww]:QRY,ALMOPT,NPC uvmnp[-wxkqr],AIS!

[I.56021]

UTL:[FRM xy][,SEQ ww]:QRY,ALMOPT,NPC [s]abc[-[v]ghi],AIS!

[I.56831]

UTL:[FRM xy][,SEQ ww]:QRY,ALM,OI!

[I.53101]

UTL:[FRM xy][,SEQ ww]:QRY,ALL[,UNIT [q]q]!

[I.53104]

UTL:[FRM xy][,SEQ ww]:QRY,ALL,COMMON!

[I.56401]

UTL:[FRM xy][,SEQ ww]:LOC,<entity>!

[I.56411]

UTL:[FRM xy][,SEQ ww]:INIT,{IP|GATEWAY|IPMASK} x.x.x.x!

[O.51101]

M hh:mm:ss xy,ww n[vv] UTL INIT ALM a COMPL

[I.51101]

UTL:[FRM xy][,SEQ ww]:INIT,ALM a!

[I.12051]

TCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd,TO wxkqrjjj
[, {PFW(abcdefg,ijklmno)|NFW}]!

[I.12001]

TCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \\
[,<tc>][,<sc>][NAM][,{CUS|INCL}][,RDC][,PRIOUT]!

[I.12001]

TCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \\
<tc>[,AIS][,{CUS|INCL}][,RDC][,PRIOUT]!

[I.34001]

RST:[FRM xy][,SEQ ww]:MC,CLR[,ALL]!

[I.12101]

OCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \\
[,<tc>][,<sc>][,NAM][,RDC][,{CUS|INCL}][,PRIOUT]!

[I.12101]

OCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
,<tc>[,RDC][,{CUS|INCL}][,PRIOUT]!

[I.12121]

OCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \
MPM(fmd,tmd)[,<tc>][,NAM][,{INCL|CUS}][,RDC]!

[I.12121]

OCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \
MPM(fmd,tmd),<tc>[,,{INCL|CUS}][,RDC]!

[I.39001]

LOGIN:[FRM xy][,SEQ ww]:USER <user id>!

[I.39001]

LOGIN:[FRM xy][,SEQ ww]:USER <user id>!

[I.18211]

CONF:FRM xy,SEQ ww:SW[,FROM([aaa[/TR]];[bbb[/TR]])] \
[,TO([{ccc,..,fff|ALL}];[{ggg,..,jjj|ALL}])], \
ID iii[,OOS][,INCL]!

[I.18611]

CONF:[FRM xy][,SEQ ww]:FROM(aaa;bbb)[,TO([ccc,..,fff]; \
[ggg,..,jjj])],ID iii, <tc>[,RDC][,{CUS|INCL}]!

[I.18621]

CONF:[FRM xy][,SEQ ww]:AOC([ccc,..,fff];[ggg,..,jjj]),ID iii!

[I.38011]

CHG:[FRM xy][,SEQ ww]:SYNC,TLI,SRC\
(i/(a,b)[,j/(c,d)[,k/(e,f)[,l/(g,h)]])!)

[I.38011]

CHG:[FRM xy][,SEQ ww]:SYNC, TLI, SRC\
(i/(a,b)[,j/(c,d)[,k/(e,f)[,l/(g,h)]])!)

[I.38011]

CHG:FRM xy,SEQ ww:SYNC, TLI, SRC\
(i/(a,b)[,j/(c,d)[,k/(e,f)[,l/(g,h)]])!)

[I.38301]

CHG:[FRM xy][,SEQ ww]:PASSWD!

[I.81001]

RTRV-ALM-EQPT:[<xy>]:NPC:[<ww>]:{CFA|CGA|LOS};

[I.81001]

RTRV-ALM-EQPT:[<xy>]:NPC:[<ww>]:{CFA|CGA|LOS};

[I.36101]

ADD:[FRM xy][,SEQ ww]:USER <user id>[,NEW]!

[I.36001]

ADD:[FRM xy][,SEQ ww]:LINK j,PTCOL I[,ALM k][,INIT]!

[I.36001]

ADD:[FRM xy][,SEQ ww]:LINK j,PTCOL T[,BAUD bb][,ALM k][,INIT]!

[I.36001]

ADD:[FRM xy][,SEQ ww]:LINK j,PTCOL S[,BAUD bb][,ALM k] \
[,BS e][,ENQ q][,XON x][,INIT]!

[I.36003]

ADD:[FRM xy][,SEQ ww]:LINK j[,K b][,T1 ee][,T3 ggg][,N2 aa] \
[,FRMAD {A|B}]!

[I.38621]

CHG:[FRM xy][,SEQ ww]:DS1ALMDS3 {ON|OFF}!

[I.38201]

CHG:[FRM xy][,SEQ ww]:SETOP rr,{TYPE mn|ALL},NPCOP(set1,set2,set3)!

[I.39301]

EXC:[FRM xy][,SEQ ww]:MACRO <macro name>[(,(<p1>[,<p2>[,<p3> \
[,...[,<p10>]]]]))!]

[I.19311]

SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM [s]abcd-dd-eee[/01], \
TO [t]ghijj-jkk[/01]!

[I.19411]

SDIS:[FRM xy][,SEQ ww]:[RATE rr,][TPT,] FROM [s]abcddd{-eee[/01]| \ /ff-mm},TO [t]ghijjj{-kkk[/01]|/ll-nn}!

[I.52091]

UTL:[FRM xy][,SEQ ww]:QRY,ROLL,DS1,{NPC [s]abc[-[t]def]|ALL \ [,UNIT [q]q]}!

[I.52091]

UTL:[FRM xy][,SEQ ww]:QRY,ROLL,DS1,{NPC uvmnp[-wxkqr]|ALL \ [,UNIT [q]q]}!

[I.19411]

SDIS:[FRM xy][,SEQ ww]:[RATE rr,][TPT,] FROM uvmnpdd{-eee[/01]| \ /ff-mm},TO wxkqrjjj{-kkk[/01]|/ll-nn}!

[I.19311]

SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM uvmnpddd-eee[/01], \ TO wxkqrjjj-kkk[/01]!

[I.36007]

ADD:FRM xy,SEQ ww:LINK j,APPL {ASCS|ASCD|PM}[,L2AD aa] \ [,POLL ttt]!

[I.35012]

CFR:FRM xy,SEQ ww:SYNC,STRATUM {STR2|STR3}!

[I.35012]

CFR:FRM xy,SEQ ww:SYNC,STRATUM {STR2|STR3|TOLL|LOCAL}!

[I.34111]

RST:[FRM xy][,SEQ ww]:SYNC,TLI 3,CRO!

[I.31111]

GRTH:[FRM xy][,SEQ ww]:SYNC,TLI 3,TYPE TBpqr!

[I.41111]

DGN:[FRM xy][,SEQ ww]:SYNC,TLI 3,CRO!

[I.38661]

CHG:[FRM xy][,SEQ ww]:UNIT [q]q,DS3 c[-d],OPTS (rr/m[,rr/m][...])!

[I.56101]

UTL:[FRM xy][,SEQ ww]:CLR,{UNIT [q]q,DS3 c[-d]|ALLDS3}, \<parameter> ,AI aaaaa[,MONDAT dddd][,MONTIM tttt]!

[I.56331]

UTL:[FRM xy][,SEQ ww]:QRY,ALM,DS3!

[I.53221]

UTL:[FRM xy][,SEQ ww]:QRY,DS3,BERMT[,UNIT [q]q]!

[I.56361]

UTL:[FRM xy][,SEQ ww]:QRY,STATE,UNIT [q]q,DS3 c[-d]!

[I.56111]

UTL:[FRM xy][,SEQ ww]:QRY,{UNIT [q]q,DS3 c[-d]|ALLDS3}, \<parameter> AI aaaaa[,LV llllllllll][,MONDAT dddd][,MONTIM tttt]!

[I.53231]

UTL:[FRM xy][,SEQ ww]:QRY,DS3,LBO!

[I.56333]

UTL:[FRM xy][,SEQ ww]:QRY,DS3ALM!

[I.31111]

GRTH:[FRM xy][,SEQ ww]:SYNC,TLI 3,TYPE TBpqr!

[I.33111]

RMV:[FRM xy][,SEQ ww]:SYNC,TLI 3,CRO!

[I.38611]

CHG:[FRM xy][,SEQ ww]:DS3UNPROTALM {ON|OFF}!

[I.38641]

CHG:[FRM xy][,SEQ ww]:DS3ALMDLY [x]x!

[I.38601]

CHG:[FRM xy][,SEQ ww]:UNIT [q]q,DS3 c[-d][,BERM s][,BERT t] \[,LBO][,TYPE mnxyz]!

[I.38203]

CHG:[FRM xy][,SEQ ww]:SETOP <rr>,TYPE mn,DS3OP(set1,set2,set3)!

[I.38481]

CHG:[FRM xy][,SEQ ww]:{RT|DL} ffff,{ZCS|B8ZS}!

[I.36005]

ADD:FRM xy,SEQ ww:LINK j[mm][,W c][,P ddd][,T20 iii]
[,T22 jjj][,T23 kkk][,T25 lll][,T26 mmm][,R20 nn]
[,R22 p][,R23 qq][,R25 r][,DBIT v][,VC(ppss,gghh)]!

Numeric List of Keywords

[I.11001]

TCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \<tc>[,AIS][,{CUS|INCL}][,RDC][,PRIOUT]!

[I.11001]

TCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \[,<tc>][,<sc>][,NAM][,{CUS|INCL}][,RDC][,PRIOUT]!

[I.11001]

TCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \<tc>[,AIS][,{CUS|INCL}][,RDC][,PRIOUT]!

[I.11001]

TCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \[,<tc>][,<sc>][,NAM][,{CUS|INCL}][,RDC][,PRIOUT]!

[I.11011]

TCON:[FRM xy][,SEQ ww]:FROM [s]abc,TO \[t]ghi[,RDC][,{CUS|INCL}][,PRIOUT]!

[I.11011]

TCON:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxkqr[,RDC][,{CUS|INCL}][,PRIOUT]!

[I.11021]

TCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \MPM(fmd,tmd),<tc>[,NTR m][,RDC][,{CUS|INCL}]!

[I.11021]

TCON:FRM xy,SEQ ww:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \MPM(fmd,tmd),<tc>[,NTR m][,RDC][,{CUS|INCL}]!

[I.11021]

TCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \MPM(fmd,tmd)[,<tc>][,NAM][,NTR m][,RDC][,{CUS|INCL}]!

[I.11021]

TCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \MPM(fmd,tmd)[,<tc>][,NAM][,NTR m][,RDC][,{CUS|INCL}]!

[I.11041]

TCON:FRM xy,SEQ ww:FROM [s]abc,CB[,CUS][,RDC][,INCL]!

[I.11041]

TCON:FRM xy,SEQ ww:FROM uvmnp,CB[,CUS][,RDC][,INCL]!

[I.11051]

TCON:[FRM xy][,SEQ ww]:FROM [s]abcd,TO [t]ghij \
[, {PFW(abcdefg,ijklmno)|NFW}]!

[I.11051]

TCON:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxqrrjj \
[, {PFW(abcdefg,ijklmno)|NFW}]!

[I.11101]

OCON:[FRM xy][,SEQ ww]:FROM [s]abcd[-eee],TO [t]ghij[-kkk], \
<tc>[,RDC][,{CUS|INCL}][,PRIOUT]!

[I.11121]

OCON:[FRM xy][,SEQ ww]:FROM [s]abcd[-eee],TO [t]ghij[-kkk], \
MPM(fmd,tmd),<tc>[, {CUS|INCL}][,RDC]!

[I.11121]

OCON:[FRM xy][,SEQ ww]:FROM uvmnp[-eee],TO wxqrrjj[-kkk], \
MPM(fmd,tmd)[,<tc>][,NAM][,{INCL|CUS}][,RDC]!

[I.11121]

OCON:FRM xy,SEQ ww:FROM [s]abcd[-eee],TO [t]ghij[-kkk], \
MPM(fmd,tmd),<tc>[, {CUS|INCL}][,RDC]!

[I.11121]

OCON:[FRM xy][,SEQ ww]:FROM uvmnp[-eee],TO wxqrrjj[-kkk], \
MPM(fmd,tmd),<tc>[, {INCL|CUS}][,RDC]!

[I.11131]

OCON:[FRM xy][,SEQ ww]:FROM uvmnp,TO \
wxqrr[,RDC][,{CUS|INCL}][,PRIOUT]!

[I.12001]

TCNT:[FRM xy][,SEQ ww]:FROM [s]abcd[-eee],TO [t]ghij[-kkk], \
<tc>[,AIS][,{CUS|INCL}][,RDC][,PRIOUT]!

[I.12001]

TCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \<tc>[,AIS][,{CUS|INCL}][,RDC][,PRIOUT]!

[I.12001]

TCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \<tc>[,<sc>][,NAM][,{CUS|INCL}][,RDC][,PRIOUT]!

[I.12001]

TCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \<tc>[,<sc>][,NAM][,{CUS|INCL}][,RDC][,PRIOUT]!

[I.12051]

TCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd,TO [t]ghijjj[, {PFW(abcdefg,ijklmno)|NFW}]!

[I.12051]

TCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd,TO wxkqrjjj[, {PFW(abcdefg,ijklmno)|NFW}]!

[I.12101]

OCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \<tc>[,RDC][,{CUS|INCL}][,PRIOUT]!

[I.12101]

OCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \<tc>[,RDC][,{CUS|INCL}][,PRIOUT]!

[I.12101]

OCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \<tc>[,<sc>][,NAM][,RDC][,{CUS|INCL}][,PRIOUT]!

[I.12101]

OCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \<tc>[,<sc>][,NAM][,RDC][,{CUS|INCL}][,PRIOUT]!

[I.12121]

OCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \MPM(fmd,tmd),<tc>[, {CUS|INCL}][,RDC]!

[I.12121]

OCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \MPM(fmd,tmd),<tc>[, {INCL|CUS}][,RDC]!

[I.12121]

OCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \
MPM(fmd,tmd)[,<tc>][,NAM][,{INCL|CUS}][,RDC]!

[I.12121]

OCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \
MPM(fmd,tmd)[,<tc>][,NAM][,{CUS|INCL}][,RDC]!

[I.13001]

BCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee], \
TOX ([t]ghijjj,[t]klmnnn,...)[,<tc>][,{NTR|LPD|CONV}] \
[, {CUS|INCL}][,RDC]!

[I.13001]

BCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee], \
TOX (wxkqrjjj [edhfgnnn,...])[,<tc>][,<sc>] \
[, {NTR|LPD|CONV}] [,NAM][,{CUS|INCL}][,RDC]!

[I.13001]

BCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee], \
TOX ([t]ghijjj,[t]klmnnn,...)[,<tc>][,<sc>] \
[, {NTR|LPD|CONV}][,NAM][,{CUS|INCL}][,RDC]!

[I.13001]

BCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee], \
TOX (wxkqrjjj[edhfgnnn,...])[,<tc>][,{NTR|LPD|CONV}] \
[, {CUS|INCL}][,RDC]!

[I.13002]

BCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
,<tc>[, {NTR|LPD|CONV}][,{CUS|INCL}][,RDC]!

[I.13002]

BCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
,<tc>[, {NTR|LPD|CONV}][,{CUS|INCL}][,RDC]!

[I.13002]

BCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
[,<tc>][,<sc>][,{NTR|LPD|CONV}][,NAM][,{CUS|INCL}][,RDC]!

[I.13002]

BCON:FRM xy,SEQ ww:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
[,<tc>][,<sc>][,{NTR|LPD|CONV}][,NAM][,{CUS|INCL}][,RDC]!

[I.13021]

BCON:[FRM xy][,SEQ ww]:FROM [s]abc,TO [t]def[,RDC][,{CUS|INCL}] \
[, {NTR|LPD|CONV}]!

[I.13021]

BCON:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxkqr[,RDC][,{CUS|INCL}] \
[, {NTR|LPD|CONV}]!

[I.13051]

BCON:FRM xy,SEQ ww:FROM [s]abc000, \
TOX ([t]ghijjj[, [t]klmnnn,...])!

[I.13051]

BCON:FRM xy,SEQ ww:FROM uvmnp000, \
TOX (wxkqrjjj [,edhfgnnn,...])!

[I.14001]

ACON:[FRM xy][,SEQ ww]:OLD [s]abcddd[-eee],\
NEW [t]ghijjj[-kkk][,INCL]!

[I.14001]

ACON:[FRM xy][,SEQ ww]:OLD uvmnpddd[-eee],\
NEW wxkqrjjj[-kkk][,INCL]!

[I.14021]

SW:[FRM xy][,SEQ ww]:BCAST,OLD [s]abcddd[-eee],NEW [t]ghijjj \
[-kkk][,INCL]

[I.14021]

SW:[FRM xy][,SEQ ww]:BCAST,OLD uvmnpddd[-eee],NEW wxkqrjjj \
[-kkk][,INCL]

[I.14031]

SW:[FRM xy][,SEQ ww]:ROLL,OLD [s]abcddd[-eee],NEW [t]ghijjj[-kkk] \
[,INCL][,FRC][,OOS]

[I.14031]

SW:[FRM xy][,SEQ ww]:ROLL,OLD uvmnpddd[-eee],NEW wxkqrjjj[-kkk] \
[,INCL][,FRC][,OOS]

[I.14041]

SW:[FRM xy][,SEQ ww]:DISC [s]abcddd[-eee][,OOS]

[I.14041]

SW:[FRM xy][,SEQ ww]:DISC uvmnpddd[-eee][,OOS]

[I.14061]

SW:[FRM xy][,SEQ ww]:BCAST,OLD [s]abc,NEW [t]ghi[,INCL]

[I.14061]

SW:[FRM xy][,SEQ ww]:BCAST,OLD uvmnp,NEW wxkqr[,INCL]

[I.14071]

SW:[FRM xy][,SEQ ww]:ROLL,OLD [s]abc,NEW [t]ghi[,INCL][,FRC] \[,OOS][,TWAY]

[I.14071]

SW:[FRM xy][,SEQ ww]:ROLL,OLD uvmnp,NEW wxkqr[,INCL][,FRC] \[,OOS][,TWAY]

[I.14081]

SW:[FRM xy][,SEQ ww]:DISC [s]abc[,OOS]

[I.14081]

SW:[FRM xy][,SEQ ww]:DISC uvmnp[,OOS]

[I.14901]

DSPC:[FRM xy][,SEQ ww]: \{[s]aaa|[s]aaa-[v]bbb|SDxyz}<pds_application command>

[I.14901]

DSPC:[FRM xy][,SEQ ww]:{uvmnp|uvmnp-wxkqr|SDxyz}: \<pds_application command>

[I.15001]

TDIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \[,INCL][,OOS][{,DCC|,DCP}][,PRIOUT]!

[I.15001]

TDIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \[,INCL][,OOS][{,DCC|,DCP}][,PRIOUT]!

[I.15002]

TDIS:[FRM xy][,SEQ ww]:FROM [s]abcddd,TO [t]ghijjj[,INCL][,OOS][,DCC]!

[I.15002]

TDIS:[FRM xy][,SEQ ww]:FROM uvmnpddd,TO wxkqrjjj[,INCL][,OOS]
[,DCC]!

[I.15004]

TDIS:[FRM xy][,SEQ ww]:FROM [s]abc,CB[,INCL][,OOS]!

[I.15004]

TDIS:[FRM xy][,SEQ ww]:FROM uvmnp,CB[,INCL][,OOS]!

[I.15011]

TDIS:[FRM xy][,SEQ ww]:FROM [s]abc,TO [t]ghi[,OOS][,INCL][,PRIOUT]!

[I.15011]

TDIS:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxkqr[,OOS][,INCL][,PRIOUT]!

[I.15061]

DDIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [v]ghijjj[-kkk]!

[I.15061]

DDIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk]!

[I.15101]

ODIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
[,INCL][,OOS][,DCC][,PRIOUT]!

[I.15101]

ODIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
[,INCL][,OOS][,DCC][,PRIOUT]!

[I.15102]

ODIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
[,INCL][,OOS][,DCC]!

[I.15102]

ODIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
[,INCL][,OOS][,DCC]!

[I.15111]

ODIS:[FRM xy][,SEQ ww]:FROM [s]abc,TO [t]ghi[,OOS][,INCL][,PRIOUT]!

[I.15111]

ODIS:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxkqr[,OOS][,INCL][,PRIOUT]!

[I.15201]

BDIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
[,CONV][,OOS][,DCC][,INCL]!

[I.15201]

BDIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
[,CONV][,OOS][,DCC][,INCL]!

[I.15211]

BDIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee], \
TOX ([t]ghijjj[, [u]klmnnn . . .)][,CONV][,OOS][,DCC][,INCL]!

[I.15211]

BDIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee], \
TOX (wxkqrjjj[,edhfgnnn, . . .)][,CONV][,OOS][,DCC][,INCL]!

[I.15221]

BDIS:[FRM xy][,SEQ ww]:FROM [s]abc, \
TOX ([t]ghi[, [u]jkl][, [v]mno][...])[,OOS][,INCL][,CONV]!

[I.15221]

BDIS:[FRM xy][,SEQ ww]:FROM uvmnp, \
TOX (wxkqr[,edhfg][,opqrs][...])[,OOS][,INCL][,CONV]!

[I.15231]

BDIS:[FRM xy][,SEQ ww]:FROM [s]abc,TO [t]ghi[,OOS][,INCL][,CONV]!

[I.15231]

BDIS:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxkqr[,OOS][,INCL][,CONV]!

[I.17001]

CHG:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
[,NOT [u]rstvvv]{TLA|TLR}{F|T|B|L|G|A}[,INCL]!

[I.17001]

CHG:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
[,NOT edhfgvvv]{TLA|TLR}{F|T|B|L|G|A}[,INCL]!

[I.17002]

CHG:[FRM xy][,SEQ ww]:FROM [s]abcddd,TO [t]ghijjj[,TLP(snn,smm)] \[,NG nn][,ES ee][,INCL]!

[I.17002]

CHG:[FRM xy][,SEQ ww]:FROM uvmnpddd,TO wxkqrjjj \[,TLP(snn,smm)][,NG nn][,ES ee][,INCL]!

[I.17011]

CHG:[FRM xy][,SEQ ww]:FROM [s]abc,TO [t]ghi[,NOT [u]rst], \{TLA|TLR} {F|T|B|A}[,INCL]!

[I.17011]

CHG:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxkqr[,NOT edhfg], \{TLA|TLR} {F|T|B|A}[,INCL]!

[I.18001]

CHG:[FRM xy][,SEQ ww]:SWCH,TOX([s]abcddd[, [t]ghijjj, \[u]klmnnn,...])[,INCL]!

[I.18001]

CHG:[FRM xy][,SEQ ww]:SWCH,TOX(uvmnpddd[,wxkqrjjj,edhfgnnn,...]) \[,INCL]!

[I.18001]

CHG:[FRM xy][,SEQ ww]:SWCH,TOX([s]abcddd[, [t]ghijjj, \[u]klmnnn,...])[,INCL]!

[I.18001]

CHG:[FRM xy][,SEQ ww]:SWCH,TOX(uvmnpddd[,wxkqrjjj,edhfgnnn,...]) \[,INCL]!

[I.18011]

CHG:[FRM xy][,SEQ ww]:SWCH,TOX([s]ghi[, [t]jkl][, [v]mno][...]) \[,INCL]!

[I.18011]

CHG:[FRM xy][,SEQ ww]:SWCH,TOX(uvmnp[,wxkqr][,edhfg][...]) \[,INCL]!

[I.18211]

CONF:FRM xy,SEQ ww:SW[,FROM aaa[/TR]] \[,TO{ ccc|(ccc,...,fff)| ALL}],ID iii[,OOS][,INCL]!

[I.18211]

CONF:FRM xy,SEQ ww:SW[,FROM([aaa[/TR]];[bbb[/TR]])] \
[,TO([ccc,..,fff|ALL]);[ggg,..,jjj|ALL])], \
ID iii[,OOS][,INCL]!

[I.18311]

CONF:[FRM xy][,SEQ ww]:TERM,ID iii[,OOS][,DCC][,INCL]!

[I.18411]

CONF:[FRM xy][,SEQ ww]:REG [s]abcbbbb[-eee],PORT nnn!

[I.18411]

CONF:[FRM xy][,SEQ ww]:REG uvmnpbbbb[-eee],PORT nnn!

[I.18421]

CONF:[FRM xy][,SEQ ww]:RLS [s]abcbbbb[-eee],PORT nnn!

[I.18421]

CONF:[FRM xy][,SEQ ww]:RLS uvmnpbbbb[-eee],PORT nnn!

[I.18431]

CONF:[FRM xy][,SEQ ww]:DROP{ccc|(ccc,..,fff)},ID iii[,OOS] \
[,DCC][,INCL]!

[I.18511]

CONF:[FRM xy][,SEQ ww]:QRY,{ID iii[-jjj]|ALL}!

[I.18521]

CONF:[FRM xy][,SEQ ww]:QRY,REG,{PORT nnn[-qqq]|ALL}!

[I.18611]

CONF:[FRM xy][,SEQ ww]:FROM aaa[,TO{ccc|(ccc,..,fff)}],ID iii, \
<tc>[,RDC][,{CUS|INCL}]!

[I.18611]

CONF:[FRM xy][,SEQ ww]:FROM(aaa;bbb)[,TO([ccc,..,fff]; \
[ggg,..,jjj])],ID iii, <tc>[,RDC][,{CUS|INCL}]!

[I.18621]

CONF:[FRM xy][,SEQ ww]:AOC{ccc|(ccc,..,fff)},ID iii!

[I.18621]

CONF:[FRM xy][,SEQ ww]:AOC([ccc,...,fff];[ggg,...,jjj]),ID iii!

[I.19001]

ED:[FRM xy][,SEQ ww]:{MACRO <macro name>|MAP <map name>}!

[I.19031]

ED:[FRM xy][,SEQ ww]:CRET,MAP <new map name> ,PIC <reference map \ name>!

[I.19041]

APPEND[:FRM xy,SEQ ww:{<line number>|END}]!

[I.19041]

APPEND[:FRM xy,SEQ ww:{<line number>|END}]!

[I.19051]

DELETE[:FRM xy,SEQ ww:{<starting line>|END}[-{<ending line> \ |END}]]!

[I.19051]

DELETE[:FRM xy,SEQ ww:{<starting line>|END}[-{<ending line> \ |END}]]!

[I.19061]

LIST:[FRM xy][,SEQ ww]:{<starting line>|END}[-{<ending line>| \ END}]]!

[I.19071]

LINE:[FRM xy][,SEQ ww]:!

[I.19081]

SAVE:[FRM xy][,SEQ ww]:!

[I.19091]

MOVE:[FRM xy][,SEQ ww]:FROM {<starting line>|END} \ [-{<ending line>|END}],TO {<destination line>|END}!

[I.19101]

SECH:FRM xy,SEQ ww:TO [s]abcddd[-eee],{DS0A rr|DS0B nn} \ [, {SEC|PCH[ppp]}}!

[I.19101]

SECH:FRM xy,SEQ ww:TO uvmnpddd[-eee],{DS0A rr|DS0B nn} \

[,{SEC|PCH[ppp]}}]!

[I.19111]

SECH:[FRM xy][,SEQ ww]:TO [s]abcddd[-eee],RATE rr[,DP] \

[,PCH[ppp]]!

[I.19111]

SECH:[FRM xy][,SEQ ww]:TO uvmnpddd[-eee],RATE rr[,DP] \

[,PCH[ppp]]!

[I.19151]

SDCH:FRM xy,SEQ ww:TO [s]abcddd[-eee][,PCH[ppp]][,DCC]!

[I.19151]

SDCH:FRM xy,SEQ ww:TO uvmnpddd[-eee][,PCH[ppp]][,DCC]!

[I.19201]

SCON:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM [s]abcddd[/ff], \

TO [t]ghijjj[/ll]!

[I.19201]

SCON:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM uvmnpddd[/ff], \

TO wxkqrjjj[/ll]!

[I.19221]

SCON:[FRM xy][,SEQ ww]:[RATE rr,]MPTM [s]abcddd[/ff],MJU ssss \

[,MA(tttt,u)] [,<branch>][,<branch>][,<branch>][,<branch>]!

[I.19221]

SCON:[FRM xy][,SEQ ww]:[RATE rr,]MPTM uvmnpddd[/ff],MJU ssss \

[,MA(tttt,u)][,<branch>][,<branch>][,<branch>][,<branch>]!

[I.19301]

SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM [s]abcddd[/ff], \

TO [t]ghijjj[/ll]!

[I.19301]

SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM uvmnpddd[/ff], \

TO wxkqrjjj[/ll]!

[I.19311]

SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM [s]abcd-dd-eee[/01], \

TO [t]ghijjj-kkk[/01]!

[I.19311]

SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM [s]abcd-dd/ff-mm, \

TO [t]ghijjj/ll-nn!

[I.19311]

SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM uvmnpddd/ff-mm, \

TO wxkqrjjj/ll-nn!

[I.19311]

SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM uvmnpddd-eee[/01], \

TO wxkqrjjj-kkk[/01]!

[I.19321]

SCNT:[FRM xy][,SEQ ww]:[RATE rr,]MPTM [s]abcd-dd[/ff],MJU ssss \

[,MA(tttt,u)],<branch>[,<branch>][,<branch>][,<branch>]!

[I.19321]

SCNT:[FRM xy][,SEQ ww]:[RATE rr,]MPTM uvmnpddd[/ff],MJU ssss \

[,MA(tttt,u)],<branch>[,<branch>][,<branch>][,<branch>]!

[I.19401]

SDIS:[FRM xy][,SEQ ww]:[RATE rr[,TPT],] FROM [s]abcd-dd[/ff], \

TO [t]ghijjj[/ll]!

[I.19401]

SDIS:[FRM xy][,SEQ ww]:[RATE rr[,TPT],] FROM uvmnpddd[/ff], \

TO wxkqrjjj[/ll]!

[I.19411]

SDIS:[FRM xy][,SEQ ww]:[RATE rr,][TPT,] FROM [s]abcd-dd{-eee[/01]| \

/ff-mm},TO [t]ghijjj{-kkk[/01]|/ll-nn}!

[I.19411]

SDIS:[FRM xy][,SEQ ww]:[RATE rr,][TPT,] FROM uvmnpdd{-eee[/01]| \

/ff-mm},TO wxkqrjjj{-kkk[/01]|/ll-nn}!

[I.19421]

SDIS:[FRM xy][,SEQ ww]:[RATE rr,]MPTM [s]abcd-dd[/ff],MJU ssss, \

<branch>[,<branch>][,<branch>][,<branch>]!

[I.19421]

```
SDIS:[FRM xy][,SEQ ww]:[RATE rr,]MPTM uvmnpddd[/ff],MJU ssss, \
<branch>[,<branch>][,<branch>][,<branch>]!
```

[I.19431]

```
SDIS:[FRM xy][,SEQ ww]:[RATE rr,]MPTM [s]abcddd[/ff],MJU ssss \
[,ALL]!
```

[I.19431]

```
SDIS:[FRM xy][,SEQ ww]:[RATE rr,]MPTM uvmnpddd[/ff],MJU ssss \
[,ALL]!
```

[I.19501]

CHG:[FRM xy][,SEQ ww]:SECH,OLD [s]abcddd[-eee],NEW [t]ghijjj \ [-kkk][,PCH ppp][,DCC]!

[I.19501]

```
CHG:[FRM xy][,SEQ ww]:SECH,OLD uvmnpddd[-eee],NEW wxkqrjjj[-kkk] \
[,PCH ppp][,DCC]!
```

[I.19551]

CHG: [FRM xy][, SEQ ww]:{TLA|TLR} m, TO [s]abcd[/ff]!

[I.19551]

CHG: [FRM xy][,SEQ ww]:{TLA|TLR} m,TO uvmnpddd[/ff]!

[I.19561]

CHG:[FRM xy][,SEQ ww]:{TLA|TLR} m,TO [s]abcddd[/ff],MJU ssss \[,BRi]!

[I.19561]

CHG:[FRM xy][,SEQ ww]:{TLA|TLR} m,TO uvmnpddd[/ff],MJU ssss \

[I.19581]

CHG:[FRM xy][,SEQ ww]:SCON,OLD [s]abcddd[/ff],NEW [t]ghijjj[/ll]!

[I.19581]

CHG:[FRM xy][,SEQ ww]:SCON,OLD uvmnpddd[/ff],NEW wxkqrjjj[/ll]!

[I.19591]

CHG: [FRM xy][, SEQ ww]: SCON, OLD [s]abcddd[/ff], NEW [t]ghijjj[/ll], \ MPTM!

[I.19591]

CHG:[FRM xy][,SEQ ww]:SCON,OLD uvmnpddd[/ff],NEW wxkqrjjj[/ll], \
MPTM!

[I.19601]

STST:[FRM xy][,SEQ ww]:MON[,TO [s]abcdddd[/ff]],TP kk!

[I.19601]

STST:[FRM xy][,SEQ ww]:MON[,TO uvmnpddd[/ff]],TP kk!

[I.19621]

STST:[FRM xy][,SEQ ww]:MON,TO [s]abcdddd[/ff],MJU ssss,[BRi,] \
TP kk!

[I.19621]

STST:[FRM xy][,SEQ ww]:MON,TO uvmnpddd[/ff],MJU ssss,[BRi,] \
TP kk!

[I.19631]

STST:[FRM xy][,SEQ ww]:SPL[,TO [s]abcdddd[/ff]],TP kk!

[I.19631]

STST:[FRM xy][,SEQ ww]:SPL[,TO uvmnpddd[/ff]],TP kk!

[I.19651]

STST:[FRM xy][,SEQ ww]:SPL,TO [s]abcdddd[/ff],MJU ssss,[BRi,],TP kk!

[I.19651]

STST:[FRM xy][,SEQ ww]:SPL,TO uvmnpddd[/ff],MJU ssss,[BRi,],TP kk!

[I.19661]

STST:[FRM xy][,SEQ ww]:{TLA|TLR} m,TP kk!

[I.19671]

STST:[FRM xy][,SEQ ww]:TPR,TP kk!

[I.19681]

STST:[FRM xy][,SEQ ww]:TPR,{ALL|LINKS}!

[I.20001]

CTST:[FRM xy][,SEQ ww]:<tmode>,FAD ([s]abc[, [t]def]),FROM [u]ghi \
[,TO [v]jkl][,AIS][,INCL]!

[I.20001]

CTST:[FRM xy][,SEQ ww]:<tmode>,FAD (uvmnp[,wxkqr]),FROM eghij \
[,TO jklmn][,AIS][,INCL]!

[I.20031]

CTST:[FRM xy][,SEQ ww]:HUB,FAD [s]abc,TO [t]jkl[,INCL]!

[I.20031]

CTST:[FRM xy][,SEQ ww]:HUB,FAD uvmnp,TO wxkqr[,INCL]!

[I.20101]

CTST:[FRM xy][,SEQ ww]:<tmode>,FAD ([s]abc[, [t]def])[,AIS][,INCL]!

[I.20101]

CTST:[FRM xy][,SEQ ww]:<tmode>,FAD (uvmnp[,wxkqr])[,AIS][,INCL]!

[I.20111]

CTST:[FRM xy][,SEQ ww]:FAD ([s]abc[, [t]def]) \
{[,EMODE <emode>][,FMODE <fmode>}][,INCL];

[I.20111]

CTST:[FRM xy][,SEQ ww]:FAD (uvmnp[,wxkqr]) \
{[,EMODE <emode>][,FMODE <fmode>}][,INCL];

[I.20202]

CTST:[FRM xy][,SEQ ww]:TNR,ALL[,OOS]!

[I.20301]

CTST:FRM xy,SEQ ww:LPBKT,FAD [s]abc[,INCL]!

[I.20301]

CTST:FRM xy,SEQ ww:LPBKT,FAD uvmnp[,INCL]!

[I.21001]

TTST:[FRM xy][,SEQ ww]:MON[,TO [t]ghijjj][,<tc>],TP kk!

[I.21001]

TTST:[FRM xy][,SEQ ww]:MON[,TO uvmnpjjj][,<tc>],TP kk!

[I.21001]

TTST:[FRM xy][,SEQ ww]:MON[,TO [t]ghijjj][,<tc>][,NAM],TP kk!

[I.21001]

TTST:[FRM xy][,SEQ ww]:MON[,TO uvmnpjjj][,<tc>][,NAM],TP kk!

[I.21021]

TTST:FRM xy,SEQ ww:MON,TO [t]ghi(jjj[-kkk][,lll,...])[,<tc>], \ TG mmm!

[I.21021]

TTST:FRM xy,SEQ ww:MON,TO [t]ghi(jjj[-kkk][,lll,...])[,<tc>], \ TG mmm!

[I.21021]

TTST:FRM xy,SEQ ww:MON,TO wxkqr(jjj[-kkk][,lll,...])[,<tc>], \ TG mmm!

[I.21021]

TTST:FRM xy,SEQ ww:MON,TO wxkqr(jjj[-kkk][,lll,...])[,<tc>], \ TG mmm!

[I.21031]

TTST:[FRM xy][,SEQ ww]:MON,TG mmm!

[I.22021]

TTST:[FRM xy][,SEQ ww]:TSG {ON|OFF},TG \ mmm[,<pattern>,{EAST|WEST}[,SIG abcd]]!

[I.22221]

TTST::[FRM xy][,SEQ ww]:INS,TG mmm!

[I.22421]

TTST:[FRM xy][,SEQ ww]:TSM {ON|OFF},TG mmm \ [, {EAST|WEST}[,TINT nnn]]!

[I.23001]

TTST:[FRM xy][,SEQ ww]:SPL,TP kk!

[I.23021]

TTST:[FRM xy][,SEQ ww]:SPL,TG mmm[,NOYLW]!

[I.23021]

TTST:[FRM xy][,SEQ ww]:SPL,TG mmm!

[I.24001]

TTST:[FRM xy][,SEQ ww]:HUB,<tc>,TO [t]ghijjj,TP kk!

[I.24001]

TTST:[FRM xy][,SEQ ww]:HUB,TO [t]ghijjj,TP kk[,<tc>][,NAM]!

[I.24001]

TTST:[FRM xy][,SEQ ww]:HUB,<tc>,TO uvmnpjjj,TP kk!

[I.24001]

TTST:[FRM xy][,SEQ ww]:HUB,TO uvmnpjjj,TP kk[,<tc>][,NAM]!

[I.24021]

TTST:[FRM xy][,SEQ ww]:HUB,TO ([s]abcddd,[t]ghijjj),TG mmm[,<tc>]!

[I.24021]

TTST:[FRM xy][,SEQ ww]:HUB,TO (uvmnpddd,wxkqrjjj),TG mmm[,<tc>]!

[I.25101]

TTST:[FRM xy][,SEQ ww]:TLA m[,NOT [t]rstvvv],TP kk!

[I.25101]

TTST:[FRM xy][,SEQ ww]:TLA m[,NOT uvmnpvvv],TP kk!

[I.25121]

TTST:[FRM xy][,SEQ ww]:TLA m,TG mmm!

[I.25501]

TTST:[FRM xy][,SEQ ww]:TLR m[,NOT [t]rstvvv],TP kk!

[I.25501]

TTST:[FRM xy][,SEQ ww]:TLR m[,NOT uvmnpvvv],TP kk!

[I.25521]

TTST:[FRM xy][,SEQ ww]:TLR m,TG mmm!

[I.26101]

TTST:FRM xy,SEQ ww:RT ffff,{DGA|DGB|DGC|DGD|DGP}, \
LLB[, {TO|FROM}], {INI|TRM|ALW|INH}!

[I.26141]

OPR:[FRM xy][,SEQ ww]:LPBK loop[t],NPC [s]abc,LOCN locn!

[I.26141]

OPR:[FRM xy][,SEQ ww]:LPBK loop[t],NPC uvmnp,LOCN locn!

[I.26151]

RLS:[FRM xy][,SEQ ww]:LPBK loop,NPC [s]abc,LOCN locn!

[I.26151]

RLS:[FRM xy][,SEQ ww]:LPBK loop,NPC uvmnp,LOCN locn!

[I.26161]

OPR:[FRM xy][,SEQ ww]:LPBK d[t],UNIT [q]q,MMFG a!

[I.27001]

TTST:[FRM xy][,SEQ ww]:TPR,TP kk[,00S][,FRC]!

[I.27002]

TTST:[FRM xy][,SEQ ww]:TPR,ALL[,00S]!

[I.27002]

TTST:[FRM xy][,SEQ ww]:TPR,ALL[,00S]!

[I.27021]

TTST:[FRM xy][,SEQ ww]:TGR,TG mmm[-nnn][,00S]!

[I.28101]

OPR:[FRM xy][,SEQ ww]:TSIG test,NPC [s]abc!

[I.28101]

OPR:[FRM xy][,SEQ ww]:TSIG test,NPC uvmnp!

[I.28201]

RLS:[FRM xy][,SEQ ww]:TSIG test,NPC [s]abc!

[I.28201]

RLS:[FRM xy][,SEQ ww]:TSIG test,NPC uvmnp!

[I.29001]

TTST:[FRM xy][,SEQ ww]:LPD,TP kk,<tc>!

[I.29021]

TTST:[FRM xy][,SEQ ww]:LPD,TG mmm[,<tc>]!

[I.29021]
TTST:[FRM xy][,SEQ ww]:LPD,TG mmm[,<tc>]!

[I.30101]
GRTH:[FRM xy][,SEQ ww]:FRAME fg[,CHAR m][,UID <uid>]!

[I.31101]
GRTH:[FRM xy][,SEQ ww]:SYNC,TB,TYPE TBpqr!

[I.31101]
GRTH:[FRM xy][,SEQ ww]:SYNC,TB,TYPE TBpqr!

[I.31111]
GRTH:[FRM xy][,SEQ ww]:SYNC,TLI 3,TYPE TBpqr!

[I.31111]
GRTH:[FRM xy][,SEQ ww]:SYNC,TLI 3,TYPE TBpqr!

[I.31121]
GRTH:[FRM xy][,SEQ ww]:SYNC,TLI m, \
{TYPE texyz,SSP a,SRC p|TYPE TDxyz}!

[I.31121]
GRTH:[FRM xy][,SEQ ww]:SYNC,TLI m, \
{TYPE texyz,SSP a,SRC p[,NPC uvmnp]|TYPE TDxyz}!

[I.31121]
GRTH:[FRM xy][,SEQ ww]:SYNC,TLI m, \
{TYPE texyz,SSP a,SRC p[,NPC [0]abc]|TYPE TDxyz}!

[I.31211]
GRTH:[FRM xy][,SEQ ww]:UNIT [q]q[,TYPE utxyz]!

[I.31321]
GRTH:[FRM xy][,SEQ ww]:UNIT [q]q,FTMI d,EQL(l,r)!

[I.31321]
GRTH:[FRM xy][,SEQ ww]:UNIT [q]q,FTMI d,IMP <imp>!

[I.31331]
GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TYPE mnxyz!

[I.31331]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],TYPE mnxyz!

[I.31341]

GRTH:[FRM xy,SEQ ww]:NPC [s]abc[-[t]def],TYPE mnxyz[,OPTS(rr/m \[,rr/m][...])][,IW X'pq[,INCL]][,AIS {INFO|MJ|MN}}[,PL {ENA|DSA}}]!

[I.31341]

GRTH:[FRM xy,SEQ ww]:NPC uvmnp[-uvkqr],TYPE mnxyz[,OPTS(rr/m \[,rr/m][...])][,IW X'pq[,INCL]][,AIS {INFO|MJ|MN}}[,PL {ENA|DSA}}]!

[I.31351]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc,TYPE mnxyz[,CBTIMER [t]v]!

[I.31351]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp,TYPE mnxyz[,CBTIMER [t]v]!

[I.31352]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def][,TYPE mnxyz] \[,OPTS(rr/m[,rr/m][...])][,IW X'pq[,INCL]][,AIS {INFO|MJ|MN}}]!

[I.31352]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr][,TYPE mnxyz] \[,OPTS(rr/m[,rr/m][...])][,IW X'pq[,INCL]][,AIS {INFO|MJ|MN}}]!

[I.31362]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def] \[,TYPE mnxyz][,OPTS (rr/<m>[,rr/<m>...])]\[,IW X'pq[r]][,AIS {MI|PMA|PMC|DMA}}[,LEV g]!

[I.31362]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr] \[,TYPE mnxyz][,OPTS (rr/<m>[,rr/<m>...])]\[,IW X'pq[r]][,AIS {MI|PMA|PMC|DMA}}[,LEV g]!

[I.31363]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TYPE mnxyz[,OPTS (rr/<m>[,rr/<m>...])][,IW X'pq[r]][,AIS {MI|PMA|DMA|PMC}}[,LEV g]!

[I.31363]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TYPE mnxyz[,OPTS (rr/<m>[,rr/<m>...])][,IW X'pq[r]][,AIS {MI|PMA|DMA|PMC}}[,LEV g]!

[I.31363]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],TYPE mnxyz[,OPTS (rr/
<m>[,rr/<m>...])]
[,IW X'pq[r]][,AIS {MI|PMA|DMA|PMC}][,LEV g]!

[I.31363]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],TYPE mnxyz[,OPTS (rr/
<m>[,rr/<m>...])]
[,IW X'pq[r]][,AIS {MI|PMA|DMA|PMC}][,LEV g]!

[I.31371]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TYPE DSxyz \
[,OPTS(rr/m [,rr/m][...])][,IW X'pq]!

[I.31371]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],TYPE DSxyz \
[,OPTS(rr/m [,rr/m][...])][,IW X'pq]!

[I.31381]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc,NPCTP n!

[I.31381]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp,NPCTP n!

[I.31401]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc,NPCTG rrr!

[I.31401]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp,NPCTG rrr!

[I.31411]

GRTH:[FRM xy][,SEQ ww]:TP kk[,<tc>]!

[I.31411]

GRTH:[FRM xy][,SEQ ww]:TP kk[,<tc>]!

[I.31421]

GRTH:[FRM xy][,SEQ ww]:TG mmm,NPCTG (rrr,eee[-fff];sss,www[-xxx]) \
[,<tc>]!

[I.31501]

GRTH:[FRM xy][,SEQ ww]:UNIT [q]q,MIU c[-d][,TYPE mnxyz]!

[I.31511]

GRTH:[FRM xy][,SEQ ww]:UNIT [q]q,MXR c[-d] \
[,TYPE mnxyz][,OPTS(rr/m[,rr/m[...]])][,BERM s][,BERT t][,LBO]!

[I.31521]

COPY:[FRM xy][,SEQ ww]:NPC [s]abc,TO [t]def[-[u]ghi]!

[I.31521]

COPY:[FRM xy][,SEQ ww]:NPC uvmnp,TO wxkqr[-ghikl]!

[I.32101]

DGRTH:[FRM xy][,SEQ ww]:SYNC,TB!

[I.32121]

DGRTH:[FRM xy][,SEQ ww]:SYNC,TLI m[,SSP a]!

[I.32211]

DGRTH:[FRM xy][,SEQ ww]:UNIT [q]q!

[I.32321]

DGRTH:[FRM xy][,SEQ ww]:UNIT [q]q,FTMI d!

[I.32341]

DGRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def]!

[I.32341]

DGRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr]!

[I.32381]

DGRTH:FRM xy,SEQ ww:NPC [s]abc,NPCTP n[,TPR]!

[I.32381]

DGRTH:FRM xy,SEQ ww:NPC uvmnp,NPCTP n[,TPR]!

[I.32401]

DGRTH:[FRM xy][,SEQ ww]:NPC [s]abc,NPCTG rrr[,TGR]!

[I.32401]

DGRTH:[FRM xy][,SEQ ww]:NPC uvmnp,NPCTG rrr[,TGR]!

[I.32411]

DGRTH:[FRM xy][,SEQ ww]:TP kk!

[I.32421]
DGRTH:FRM xy,SEQ ww:TG mmm[-nnn]!

[I.32501]
DGRTH:[FRM xy][,SEQ ww]:UNIT [q]q,MXR c[-d]!

[I.32511]
DGRTH:[FRM xy][,SEQ ww]:UNIT [q]q,MIU c[-d]!

[I.33001]
RMV:[FRM xy][,SEQ ww]:MC!

[I.33011]
RMV:[FRM xy][,SEQ ww]:LINK j!

[I.33101]
RMV:[FRM xy][,SEQ ww]:SYNC a!

[I.33111]
RMV:[FRM xy][,SEQ ww]:SYNC,TLI 3,CRO!

[I.33121]
RMV:[FRM xy][,SEQ ww]:SYNC a,TLI m[,SSP b]!

[I.33121]
RMV:[FRM xy][,SEQ ww]:SYNC a,TLI m[,SSP b]!

[I.33201]
RMV:FRM xy,SEQ ww:CCNI s!

[I.33201]
RMV:FRM xy,SEQ ww:CCNI s!

[I.33202]
RMV:FRM xy,SEQ ww:CCB sf!

[I.33202]
RMV:FRM xy,SEQ ww:CCB sf!

[I.33211]
RMV:[FRM xy][,SEQ ww]:{SMEM|PMEM}!

[I.33221]

RMV:FRM xy,SEQ ww:TSI sft!

[I.33221]

RMV:FRM xy,SEQ ww:TSI sft!

[I.33231]

RMV:FRM xy,SEQ ww:TSIS,CCN s,UNIT q
[,CONN(a[,b[,c[,d[,e[,f]]]]))]]!

[I.33231]

RMV:FRM xy,SEQ ww:TSIS,CCN s,UNIT q
[,CONN(a[,b[,c[,d[,e[,f]]]]))]]!

[I.33241]

RMV:[FRM xy,SEQ ww]:TSIS,CCN s,ALL!

[I.33251]

RMV:[FRM xy][,SEQ ww]:CCI s!

[I.33251]

RMV:[FRM xy][,SEQ ww]:CCI s!

[I.33261]

RMV:[FRM xy][,SEQ ww]:ETSI sqq!

[I.33271]

RMV:[FRM xy][,SEQ ww]:ETSI,ECN s,ALL!

[I.33311]

RMV:[FRM xy][,SEQ ww]:UNIT [q]q,UC!

[I.33321]

RMV:[FRM xy][,SEQ ww]:UNIT [q]q,{FTMI d|DSPi}!

[I.33331]

RMV:[FRM xy][,SEQ ww]:UNIT [q]q,FC sb!

[I.33351]

RMV:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def][,SIDE s][,INCL]!

[I.33351]
RMV:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr][,SIDE s][,INCL]!

[I.33401]
RMV:[FRM xy][,SEQ ww]:UNIT [q]q,FLI k!

[I.33411]
RMV:[FRM xy][,SEQ ww]:UNIT [q]q,FMT s!

[I.33421]
RMV:[FRM xy][,SEQ ww]:UNIT [q]q,MMFG c[-d][,FRC[,INCL]]!

[I.33431]
RMV:[FRM xy][,SEQ ww]:UNIT [q]q,MIU c[-d][,INCL]!

[I.33481]
RMV:[FRM xy][,SEQ ww]:{RT|DL} ffff!

[I.34001]
RST:[FRM xy][,SEQ ww]:MC[, {MCOND|NOJRN|FRC}]!

[I.34001]
RST:[FRM xy][,SEQ ww]:MC,CLR[,ALL]!

[I.34011]
RST:[FRM xy][,SEQ ww]:LINK j!

[I.34101]
RST:[FRM xy][,SEQ ww]:SYNC a!

[I.34111]
RST:[FRM xy][,SEQ ww]:SYNC,TLI 3,CRO!

[I.34121]
RST:[FRM xy][,SEQ ww]:SYNC a,TLI m[,SSP b]!

[I.34201]
RST:FRM xy,SEQ ww:CCNI s!

[I.34201]
RST:FRM xy,SEQ ww:CCNI s!

[I.34202]

RST:FRM xy,SEQ ww:CCB sf!

[I.34202]

RST:FRM xy,SEQ ww:CCB sf!

[I.34211]

RST:[FRM xy][,SEQ ww]:{PMEM|SMEM[{,CLR|[,FRC][,BKGRND]}}]!

[I.34221]

RST:FRM xy,SEQ ww:TSI sft!

[I.34221]

RST:FRM xy,SEQ ww:TSI sft!

[I.34231]

RST:FRM xy,SEQ ww:TSIS,CCN s,UNIT q
[,CONN(a[,b[,c[,d[,e[,f]]]]))]]!

[I.34231]

RST:FRM xy,SEQ ww:TSIS,CCN s,UNIT q
[,CONN(a[,b[,c[,d[,e[,f]]]]))]]!

[I.34241]

RST:FRM xy,SEQ ww:TSIS,CCN s,ALL!

[I.34241]

RST:FRM xy,SEQ ww:TSIS,CCN s,ALL!

[I.34251]

RST:[FRM xy][,SEQ ww]:CCI s!

[I.34261]

RST:[FRM xy][,SEQ ww]:ETSI sqq!

[I.34271]

RST:[FRM xy][,SEQ ww]:ETSI,ECN s,ALL!

[I.34311]

RST:FRM xy,SEQ ww:UNIT [q]q,UC!

[I.34321]

RST:[FRM xy][,SEQ ww]:UNIT [q]q,{FTMI d|DSPi}!

[I.34331]

RST:[FRM xy][,SEQ ww]:UNIT [q]q,FC sb!

[I.34351]

RST:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def][,SIDE s]\
[,INH[,INHTIM hrnm]]!

[I.34351]

RST:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr][,SIDE s]\
[,INH[,INHTIM hrnm]]!

[I.34361]

RST:[FRM xy][,SEQ ww]:NPC [s]abc,MON!

[I.34361]

RST:[FRM xy][,SEQ ww]:NPC uvmnp,MON!

[I.34371]

RST:[FRM xy][,SEQ ww]:NPC [s]abc,TSOM!

[I.34371]

RST:[FRM xy][,SEQ ww]:NPC uvmnp,TSOM!

[I.34401]

RST:FRM xy,SEQ ww:UNIT [q]q,FLI k!

[I.34411]

RST:[FRM xy][,SEQ ww]:UNIT [q]q,FMT s!

[I.34421]

RST:[FRM xy][,SEQ ww]:UNIT [q]q,MMFG c[-d][,INCL]!

[I.34431]

RST:[FRM xy][,SEQ ww]:UNIT [q]q,MIU c[-d][,INCL]!

[I.34481]

RST:FRM xy,SEQ ww:{RT|DL} ffff!

[I.35001]

CFR:[FRM xy][,SEQ ww]:XC s[,INCL]!

[I.35011]

CFR:[FRM xy][,SEQ ww]:SYNC a,FPLL!

[I.35012]

CFR:FRM xy,SEQ ww:SYNC,STRATUM {STR2|STR3}!

[I.35012]

CFR:FRM xy,SEQ ww:SYNC,STRATUM {STR2|STR3|TOLL|LOCAL}!

[I.35013]

CFR:FRM xy,SEQ ww:SYNC,{MASTER|SLAVED}!

[I.35013]

CFR:FRM xy,SEQ ww:SYNC,{MASTER|SLAVED}!

[I.35021]

CFR:[FRM xy][,SEQ ww]:FRAME!

[I.35101]

SW:FRM xy,SEQ ww:UNIT [q]q,FLI,TOPRTN!

[I.35105]

SW:[FRM xy][,SEQ ww]:UNIT [q]q,FLI,TOSRVC!

[I.35111]

SW:[FRM xy][,SEQ ww]:UNIT [q]q,MMFG c, TOPRTN[,FRC]!

[I.35121]

SW:FRM xy,SEQ ww:UNIT [q]q,MMFG c,TOSRVC!

[I.35121]

SW:FRM xy,SEQ ww:UNIT [q]q,MMFG c,TOSRVC!

[I.35301]

ALWSW:[FRM xy][,SEQ ww]:UNIT [q]q,MMFG c[-d],{TOPRTN|TOSRVC}!

[I.35311]

INHSW:[FRM xy][,SEQ ww]:UNIT [q]q,MMFG c[-d],{TOPRTN|TOSRVC}!

[I.36001]

ADD:[FRM xy][,SEQ ww]:LINK j,PTCOL {S|X|T|M|I}[,BAUD bb][,ALM k] \[,BS e][,ENQ q][,XON x][,INIT]!

[I.36001]

ADD:[FRM xy][,SEQ ww]:LINK j,PTCOL I[,ALM k][,INIT]!

[I.36001]

ADD:[FRM xy][,SEQ ww]:LINK j,PTCOL S[,BAUD bb][,ALM k] \[,BS e][,ENQ q][,XON x][,INIT]!

[I.36001]

ADD:[FRM xy][,SEQ ww]:LINK j,PTCOL M[,ALM k][,INIT]!

[I.36001]

ADD:[FRM xy][,SEQ ww]:LINK j,PTCOL T[,BAUD bb][,ALM k][,INIT]!

[I.36001]

ADD:[FRM xy][,SEQ ww]:LINK j,PTCOL X[,ALM k][,INIT]!

[I.36003]

ADD:[FRM xy][,SEQ ww]:LINK j[,K b][,T1 ee][,T3 ggg][,N2 aa] \[,FRMAD {A|B}]!

[I.36005]

ADD:FRM xy,SEQ ww:LINK j[mm][,W c][,P ddd][,T20 iii][,T22 jjj][,T23 kkk][,T25 lll][,T26 mmm][,R20 nn][,R22 p][,R23 qq][,R25 r][,DBIT v][,VC(ppss,gggh)]!

[I.36007]

ADD:FRM xy,SEQ ww:LINK j,APPL {ASCS|ASCD|PM}[,L2AD aa] \[,POLL ttt]!

[I.36021]

ADD:[FRM xy][,SEQ ww]:NPC {[s]abc-[t]def|[s]abc[, [s]ghi]...[, [t]def]]!

[I.36021]

ADD:[FRM xy][,SEQ ww]:NPC {uvmnp-wxkqr|uvmnp[,edfgh]...[,wxkqr]]!

[I.36101]

ADD:[FRM xy][,SEQ ww]:USER <user id>[,NEW][,PASSWD <user password>]!

[I.36101]

ADD:[FRM xy][,SEQ ww]:USER <user id>[,NEW]!

[I.36103]

ADD:FRM xy,SEQ ww:{USER <user id>|LINK j[mm][,INCL]|ALL} \
[,LANG {M|P|F}][,NPCAD {E|X|H}][,LEV(a,b,c,d,e,f)] \
[, {RMON|RMOFF}][,RLK {A|I}][, {CONVON|CONVOFF}][,INIT]!

[I.36103]

ADD:FRM xy,SEQ ww:{USER <user id>|LINK j[mm][,INCL]|ALL} \
[,LANG {M|P|F}][,NPCAD {E|X|H}][,LEV(a,b,c,d,e,f)] \
[, {RMON|RMOFF}][,RLK {A|I}][, {CONVON|CONVOFF}][,INIT]!

[I.36201]

ADD:[FRM xy][,SEQ ww]:{RT|DL} ffff,MD g[g] \
[,DGA [s]aaa][,DGB [s]bbb][,DGC [s]ccc][,DGD [s]ddd] \
[,DGP[s]ppp][,{sss|NDL|RTF}]!

[I.36201]

ADD:[FRM xy][,SEQ ww]:{RT|DL} ffff,MD g[g][,DGA uvjab] \
[,DGB uvkcd][,DGC uvlef][,DGD uvmgh][,DGP uvjpr] \
[, {sss|NDL|RTF}]!

[I.37001]

DLT:[FRM xy][,SEQ ww]:NPC {[s]abc-[t]def|[s]abc[, [s]ghi]...
[, [t]def]]}!

[I.37001]

DLT:[FRM xy][,SEQ ww]:NPC {uvmnp-wxkqr|uvmnp[,abcde]...[,wxkqr]}!

[I.37001]

DLT:[FRM xy][,SEQ ww]:NPC {[s]abc-[t]def|[s]abc[, [s]ghi]...
[, [t]def]]}!

[I.37001]

DLT:[FRM xy][,SEQ ww]:NPC {uvmnp-wxkqr|uvmnp[,abcde]...[,wxkqr]}!

[I.37101]

DLT:[FRM xy][,SEQ ww]:USER <user id>!

[I.37201]

DLT:[FRM xy][,SEQ ww]:{MACRO <macro name>|MAP <map name>} \

[,USER <user id>]!

[I.37211]

DLT:[FRM xy][,SEQ ww]:{RT|DL} ffff[,DGA [s]aaa][,DGB [s]bbb] \

[,DGC [s]ccc][,DGD [s]ddd][,DGP [s]ppp]!

[I.37211]

DLT:[FRM xy][,SEQ ww]:{RT|DL} ffff \

[,DGA uvjab][,DGB uvkcd][,DGC uvlef][,DGD uvmgh] \

[,DGP uvjpr]!

[I.37301]

DLT:[FRM xy][,SEQ ww]:FPKG nnnnnnnn!

[I.38001]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],CBTIMER [t]v!

[I.38001]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],CBTIMER [t]v!

[I.38011]

CHG:[FRM xy][,SEQ ww]:SYNC,TLI m,SSP b,TYPE texyz!

[I.38011]

CHG:[FRM xy][,SEQ ww]:SYNC,TLI, SRC\

(i/(a,b)[,j/(c,d)[,k/(e,f)[,l/(g,h)]])!)

[I.38011]

CHG:[FRM xy][,SEQ ww]:SYNC,TLI m,SSP b,{TYPE texyz|NPC [0]abc}!

[I.38011]

CHG:[FRM xy][,SEQ ww]:SYNC, TLI, SRC\

(i/(a,b)[,j/(c,d)[,k/(e,f)[,l/(g,h)]])!)

[I.38011]

CHG:FRM xy,SEQ ww:SYNC, TLI, SRC\

(i/(a,b)[,j/(c,d)[,k/(e,f)[,l/(g,h)]])!)

[I.38011]

CHG:[FRM xy][,SEQ ww]:SYNC,TLI m,SSP b,{TYPE texyz|NPC uvmnp}!

[I.38101]

CHG:[FRM xy][,SEQ ww]:UNIT q,CONN(a[,b[,c[,d[,e[,f]]]]))!

[I.38111]

CHG:[FRM xy][,SEQ ww]:UNIT [q]q,FTMI d,EQL(l,r)!

[I.38201]

CHG:[FRM xy][,SEQ ww]:SETOP rr,{TYPE mn|ALL},NPCOP(set1,set2,set3)!

[I.38203]

CHG:[FRM xy][,SEQ ww]:SETOP <rr>,TYPE mn,DS3OP(set1,set2,set3)!

[I.38211]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc,TYPE mnxyz[,IW X'pq[,INCL]]!

[I.38211]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp,TYPE mnxyz[,IW X'pq[r]]!

[I.38211]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp,TYPE mnxyz[,IW X'pq[,INCL]]!

[I.38211]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc,TYPE mnxyz[,IW X'pq[r]]!

[I.38221]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc,OPTS(rr/m[,rr/m][...])!

[I.38221]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp,OPTS(rr/m[,rr/m][...])!

[I.38221]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc,{OPTS(rr/<m>[,rr/<m>][...])| \ THMODE hhh}!

[I.38221]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp,{OPTS(rr/<m>[,rr/<m>][...])| \ THMODE hhh}!

[I.38231]

CHG:[FRM xy][,SEQ ww]:TYPE mnxyz,OPTS(rr/<m>[,rr/<m>][...])!

[I.38231]

CHG:[FRM xy][,SEQ ww]:TYPE mnxyz,{OPTS(rr/<m>[,rr/<m>][...])| \ THMODE hhh}!

[I.38241]

CHG:[FRM xy][,SEQ ww]:{NPC [s]abc|RT ffff|DL ffff|TYPE mnxyz}, \ OPTS(rr/m[,rr/m,...])!

[I.38241]

CHG:[FRM xy][,SEQ ww]:{NPC uvmnp|RT ffff|DL ffff|TYPE mnxyz}, \ OPTS(rr/m[,rr/m,...])!

[I.38251]

CHG:[FRM xy][,SEQ ww]:HUBID 0'ab!

[I.38261]

CHG:[FRM xy][,SEQ ww]:ECLOC,TYPE {MJU|SRM}!

[I.38271]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TYPE mnxyz\ [,IW X'pq[,INCL]]!

[I.38271]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],TYPE mnxyz\ [,IW X'pq[,INCL]]!

[I.38281]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]ghi], \ {ALMOPT|PLOPT},{AIS {INFO|MJ|MN}|PL {ENA|DSA}}!

[I.38281]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],ALMOPT, \ AIS {MI|PMA|PMC|DMA}!

[I.38281]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr], \ {ALMOPT|PLOPT},{AIS {INFO|MJ|MN}|PL {ENA|DSA}}!

[I.38281]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]ghi],ALMOPT, \ AIS {MI|PMA|PMC|DMA}!

[I.38291]

CHG:[FRM xy][,SEQ ww]:TYPE mn,THMODE hhh!

[I.38301]

CHG:[FRM xy][,SEQ ww]:PASSWD[,OLD <old password>, \
NEW <new password>]!

[I.38301]

CHG:[FRM xy][,SEQ ww]:PASSWD!

[I.38311]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc,TYPE mnxyz[,IW X'pq[r]]!

[I.38311]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp,TYPE mnxyz[,IW X'pq[r]]!

[I.38321]

CHG:FRM xy,SEQ ww:NPC [s]abc[-[t]def],TS0 abcdefgh!

[I.38321]

CHG:FRM xy,SEQ ww:NPC uvmnp[-uvkqr],TS0 abcdefgh!

[I.38323]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TS0M abcdefgh!

[I.38323]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],TS0M abcdefgh!

[I.38324]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],NFS abcdefghi!

[I.38324]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],NFS abcdefghi!

[I.38331]

CHG:[FRM xy][,SEQ ww]:DD(m,w),TO [s]abcddd[-eee]!

[I.38331]

CHG:[FRM xy][,SEQ ww]:DD(m,w),TO uvmnpddd[-eee]!

[I.38333]

CHG:[FRM xy][,SEQ ww]:BC X'abcd, TO [s]abcddd[-eee]!

[I.38333]
CHG:[FRM xy][,SEQ ww]:BC X'abcd, TO uvmnpddd[-eee]!

[I.38335]
CHG:[FRM xy][,SEQ ww]:BCOFF, TO [s]abcddd[-eee]!

[I.38335]
CHG:[FRM xy][,SEQ ww]:BCOFF, TO uvmnpddd[-eee]!

[I.38341]
CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],LPBK [d]t!

[I.38341]
CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],LPBK [d]t!

[I.38351]
CHG:[FRM xy][,SEQ ww]:{RT|DL} ffff,TO gggg!

[I.38355]
CHG:[FRM xy][,SEQ ww]:ALMS,{ON|OFF}!

[I.38361]
CHG:[FRM xy][,SEQ ww]:RT ffff,[{sss|RTF}][,SWMN x]!

[I.38365]
CHG:[FRM xy][,SEQ ww]:SALMS,salm,{PMACR|PMAMJ|DMAMN|MI|RESET}!

[I.38371]
CHG:[FRM xy][,SEQ ww]:SYSINHTIM hr!

[I.38375]
CHG:[FRM xy][,SEQ ww]:FALMS,TYPEmn[xyz],falm,\
{PMACR|PMAMJ|DMAMN|MI|RESET}!

[I.38381]
CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],INHTIM hrnm!

[I.38381]
CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],INHTIM hrnm!

[I.38391]
CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def},{FORCEINH|FORCEWKG}!

[I.38391]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],{FORCEINH|FORCEWKG}!

[I.38401]

CHG:[FRM xy][,SEQ ww]:{USER <user id>|LINK j[mm][,INCL]} \
[,SCR n[,GR(a,b,c,d,e,f)]][, {MCON|MCOFF}][,INIT]!

[I.38451]

CHG:[FRM xy][,SEQ ww]:INTV,{ON|OFF}!

[I.38461]

CHG:[FRM xy][,SEQ ww]:{NPC {[s]abc[-[t]def]\
|ALL}|TLI|SYNC|CCN|ALL},LEV r!

[I.38461]

CHG:[FRM xy][,SEQ ww]:{NPC {uvmnp[-uvkqr]\
|ALL}|TLI|SYNC|CCN|ALL},LEV r!

[I.38471]

CHG:[FRM xy][,SEQ ww]:MSGLOG {ON|OFF}!

[I.38481]

CHG:[FRM xy][,SEQ ww]:{RT|DL} ffff,{ZCS|B8ZS}!

[I.38501]

CHG:[FRM xy][,SEQ ww]:{MACRO|MAP},SPACE sss!

[I.38601]

CHG:[FRM xy][,SEQ ww]:UNIT [q]q,DS3 c[-d][,BERM s][,BERT t] \
[,LBO][,TYPE mnxyz]!

[I.38611]

CHG:[FRM xy][,SEQ ww]:DS3UNPROTALM {ON|OFF}!

[I.38621]

CHG:[FRM xy][,SEQ ww]:DS1ALMDS3 {ON|OFF}!

[I.38631]

CHG:[FRM xy][,SEQ ww]:ERB ee,TYPE mn!

[I.38641]

CHG:[FRM xy][,SEQ ww]:DS3ALMDLY [x]x!

```
[I.38661]
CHG:[FRM xy][,SEQ ww]:UNIT [q]q,DS3 c[-d],OPTS (rr/m[,rr/m][...])!

[I.39001]
LOGIN:[FRM xy][,SEQ ww]:USER <user id>[,PASSWD <user password>]!

[I.39001]
LOGIN:[FRM xy][,SEQ ww]:USER <user id>!

[I.39001]
LOGIN:[FRM xy][,SEQ ww]:USER <user id>[,PASSWD <user password>]!

[I.39001]
LOGIN:[FRM xy][,SEQ ww]:USER <user id>!

[I.39101]
LOGOFF:[FRM xy][,SEQ ww]:{USER <user id>|LINK j[{mm}|INCL]}}!

[I.39101]
LOGOFF:[FRM xy][,SEQ ww]:{USER <user id>|LINK j[{mm}|INCL]}}!

[I.39201]
ACT:[FRM xy][,SEQ ww]:MAP <map name>[,CLR][,INCL]!

[I.39201]
ACT:[FRM xy][,SEQ ww]:MAP <map name>[,CLR][,INCL]!

[I.39301]
EXC:[FRM xy][,SEQ ww]:MACRO <macro name>[( <p1>[, <p2>[, <p3> \
[, ...[, <p10>]]]])]!

[I.39311]
STOP:[FRM xy][,SEQ ww]:MACRO[,LINK j[mm]]!

[I.39401]
SW:[FRM xy][,SEQ ww]:{NPC [s]abc|RT ffff,xxx}, \
{PSW|USW|ALW|INH}[,FRC][,INCL]!

[I.39401]
SW:[FRM xy][,SEQ ww]:{NPC uvmnp|RT ffff,xxx}, \
{PSW|USW|ALW|INH}[,FRC][,INCL]!
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[I.41001]

DGN:[FRM xy][,SEQ ww]:MC[,CFT X'vwxy]!

[I.41011]

DGN:[FRM xy][,SEQ ww]:LINK a[,CFT X'vwxy]!

[I.41021]

DGN:[FRM xy][,SEQ ww]:MP[,CFT X'vwxy]!

[I.41031]

DGN:[FRM xy][,SEQ ww]:ICI[,CFT X'vwxy]!

[I.41051]

DGN:[FRM xy][,SEQ ww]:{PMEM|SMEM}\
[, {CFT X'vwxy|EXCT|DBASE}][,VERIFY]!

[I.41101]

DGN:[FRM xy][,SEQ ww]:SYNC a!

[I.41111]

DGN:[FRM xy][,SEQ ww]:SYNC,TLI 3,CRO!

[I.41121]

DGN:[FRM xy][,SEQ ww]:SYNC a,TLI m[,SSP b]!

[I.41201]

DGN:[FRM xy][,SEQ ww]:CCNI s[,CFT X'vwxy]!

[I.41221]

DGN:[FRM xy][,SEQ ww]:TSI sft[,CFT X'vwxy]!

[I.41232]

DGN:[FRM] xy[,SEQ] ww:TSIS,CCN s,UNIT q, \
[,CONN(a[,b[,c[,d[,e[,f]]]]))]]]!

[I.41251]

DGN:[FRM xy][,SEQ ww]:CCI s[,CFT X'vwxy]!

[I.41261]

DGN:[FRM xy][,SEQ ww]:ETSI sqq[,CFT X'vwxy]!

[O.41261.01]

DGN:[FRM xy][,SEQ ww]:ETISIS,ECCN s,ALL!

[I.41311]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,UC[,CFT X'vwxy]!

[I.41321]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,FTMI d[,CFT X'vwxy]!

[I.41331]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,FC sb[,CFT X'vwxy]!

[I.41341]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,DSPI[,CFT X'vwxy]!

[I.41351]

DGN:[FRM xy][,SEQ ww]:NPC [s]abc[,SIDE s][,CFT X'vwxy]!

[I.41351]

DGN:[FRM xy][,SEQ ww]:NPC uvmnp[,SIDE s][,CFT X'vwxy]!

[I.41361]

DGN:[FRM xy][,SEQ ww]:NPC [s]abc-[t]def!

[I.41361]

DGN:[FRM xy][,SEQ ww]:NPC uvmnp-uvkqr!

[I.41401]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,FLI k[,CFT X'vwxy]!

[I.41411]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,FMT s[,CFT X'vwxy]!

[I.41421]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,MXR c[,DEV devc[,CFT X'vwxy]]!

[I.41431]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,MIU c[,CFT X'vwxy]!

[I.41801]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,OI kk!

[I.41801]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,OI kk!

[I.41821]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,MPR c!

[I.51001]

UTL:[FRM xy][,SEQ ww]:QRY,MEMSTAT!

[I.51011]

UTL:[FRM xy][,SEQ ww]:[TOD hrnsc][,{CFA|FAC X'abcdef| \
PRIM X'ghij|MONDAT}]!

[I.51011]

UTL:[FRM xy][,SEQ ww]:[TOD hrnsc][,{CFA|PRIM X'ghij|MONDAT}]!

[I.51021]

UTL:[FRM]xy[,SEQ] ww:DATE <new-date>[,FORMAT ggg][,INT ii]!

[I.51031]

UTL:[FRM xy][,SEQ] ww:QRY,DATE!

[I.51041]

UTL:[FRM xy][,SEQ ww]:QRY,WHO

[I.51051]

UTL:[FRM xy][,SEQ ww]:QRY,NUM!

[I.51061]

UTL:[FRM xy][,SEQ ww]:QRY,SDNUM!

[I.51081]

UTL:[FRM xy][,SEQ ww]:RCY,PASSWD!

[I.51091]

UTL:[FRM xy][,SEQ ww]:QRY,CNFR!

[I.51101]

UTL:[FRM xy][,SEQ ww]:INIT,ALM a!

[O.51101]

M hh:mm:ss xy,ww n[vv] UTL INIT ALM a COMPL

[I.51111]

UTL:[FRM xy][,SEQ ww]:ACO!

[O.51111]

pahh:mm:ss xy,ww n[vv] UTL ACO {ACTIVE|INACT} COMPL

[I.51121]

UTL:[FRM xy][,SEQ ww]:QRY,FPKG!

[I.51131]

UTL:[FRM xy][,SEQ ww]:QRY,SQL!

[I.51141]

UTL:[FRM xy][,SEQ ww]:SCHED,PMREPT,NPC [s]abc[-[t]def], \
RI rrrrr,ST ssss,NI nn,<parameter>,LV llllllllll, \
LOCN locn,AI aaaaa,TOF ttttt[-ooooo][,LK p[vv][q[vv]]]!

[I.51141]

UTL:[FRM xy][,SEQ ww]:SCHED,PMREPT,NPC uvmnp[-wxkqr], \
RI rrrrr,ST ssss,NI nn,<parameter>,LV llllllllll, \
LOCN locn,AI aaaaa,TOF ttttt[-ooooo][,LK p[vv][q[vv]]]!

[I.51151]

UTL:[FRM xy][,SEQ ww]:QRY,PMSCHED,{NPC [s]abc[-[t]def]|ALL}!

[I.51151]

UTL:[FRM xy][,SEQ ww]:QRY,PMSCHED,{NPC uvmnp[-wxkqr]|ALL}!

[I.51161]

INH:[FRM xy][,SEQ ww]:PMREPT,{NPC [s]abc[-[t]def]|ALL}!

[I.51161]

INH:[FRM xy][,SEQ ww]:PMREPT,{NPC uvmnp[-wxkqr]|ALL}!

[I.51171]

ALW:[FRM xy][,SEQ ww]:PMREPT,{NPC [s]abc[-[t]def]|ALL}!

[I.51171]

ALW:[FRM xy][,SEQ ww]:PMREPT,{NPC uvmnp[-wxkqr]|ALL}!

[I.51201]

UTL:[FRM xy][,SEQ ww]:QRY,APPL,{NPC [s]abc|ALL}!

[I.51201]

UTL:[FRM xy][,SEQ ww]:QRY,APPL,{NPC uvmnp|ALL}!

[O.51201.01]

UTL:[FRM xy][,SEQ ww]:QRY,BC s,{NPC [s]abc[-[t]def]|ALL}!

[I.51501]

UTL:[FRM xy][,SEQ ww]:QRY,HUBID!

[I.51511]

UTL:[FRM xy][,SEQ ww]:QRY,ECLOC!

[I.52011]

UTL:[FRM xy][,SEQ ww]:QRY,CMAP [s]abc[-[t]def]!

[I.52011]

UTL:[FRM xy][,SEQ ww]:QRY,CMAP uvmnp[-wxkqr]!

[I.52031]

UTL:[FRM xy][,SEQ ww]:QRY,DMAP!

[I.52041]

UTL:[FRM xy][,SEQ ww]:QRY,TO [s]abccddd[-eee]!

[I.52041]

UTL:[FRM xy][,SEQ ww]:QRY,TO uvmnpddd[-eee]!

[I.52051]

UTL:[FRM xy][,SEQ ww]:QRY,FROM [s]abccddd[-eee]!

[I.52051]

UTL:[FRM xy][,SEQ ww]:QRY,FROM uvmnpddd[-eee]!

[I.52061]

UTL:[FRM xy][,SEQ ww]:QRY,TO [s]abc!

[I.52061]

UTL:[FRM xy][,SEQ ww]:QRY,TO uvmnp!

[I.52071]

UTL:[FRM xy][,SEQ ww]:QRY,FROM [s]abc!

[I.52071]

UTL:[FRM xy][,SEQ ww]:QRY, FROM uvmnp!

[I.52081]

UTL:[FRM xy][,SEQ ww]:QRY,ROLL,DS0,{NPC [s]abc[-[t]def]|ALL \[,UNIT [q]q]}!

[I.52081]

UTL:[FRM xy][,SEQ ww]:QRY,ROLL,DS0,{NPC uvmnp[-wxkqr]|ALL \[,UNIT [q]q]}!

[I.52091]

UTL:[FRM xy][,SEQ ww]:QRY,ROLL,DS1,{NPC [s]abc[-[t]def]|ALL \[,UNIT [q]q]}!

[I.52091]

UTL:[FRM xy][,SEQ ww]:QRY,ROLL,DS1,{NPC uvmnp[-wxkqr]|ALL \[,UNIT [q]q]}!

[I.52101]

UTL::QRY,BCAST,ALL!

[I.52111]

UTL:[FRM xy][,SEQ ww]:QRY,BCAST, FROM [s]abcddd!

[I.52111]

UTL:[FRM xy][,SEQ ww]:QRY,BCAST, FROM uvmnpddd!

[I.52111]

UTL:[FRM xy][,SEQ ww]:QRY,BCAST, FROM [s]abcddd!

[I.52111]

UTL:[FRM xy][,SEQ ww]:QRY,BCAST, FROM uvmnpddd!

[I.52121]

UTL:[FRM xy][,SEQ ww]:QRY,BCAST, FROM [s]abc!

[I.52121]

UTL:[FRM xy][,SEQ ww]:QRY,BCAST, FROM uvmnp!

[I.52201]

UTL:[FRM xy][,SEQ ww]:QRY,MARK [s]abc[-[t]def]!

[I.52201]

UTL:[FRM xy][,SEQ ww]:QRY,MARK uvmnp[-wxkqr]!

[I.52211]

UTL:[FRM xy][,SEQ ww]:QRY,MARK [s]abcjjj[-kkk]!

[I.52211]

UTL:[FRM xy][,SEQ ww]:QRY,MARK uvmnpjjj[-kkk]!

[I.52311]

UTL:[FRM xy][,SEQ ww]:QRY,{RTMAP|DLMAP}[ffff]!

[I.52321]

UTL:[FRM xy][,SEQ ww]:QRY[,STATE],SCDG,{NPC [s]abc|RT ffff| \
DL ffff|ALL}!

[I.52321]

UTL:[FRM xy][,SEQ ww]:QRY[,STATE],SCDG,{NPC uvmnp|RT ffff| \
DL ffff|ALL}!

[I.52501]

UTL:[FRM xy][,SEQ ww]:QRY,SECH,TO [s]abcddd[-eee]!

[I.52501]

UTL:[FRM xy][,SEQ ww]:QRY,SECH,TO uvmnpddd[-eee]!

[I.52511]

UTL:[FRM xy][,SEQ ww] ww:QRY,SCON,CH,TO [s]abcddd[-eee]!

[I.52511]

UTL:[FRM xy][,SEQ ww] ww:QRY,SCON,CH,TO uvmnpddd[-eee]!

[I.52521]

UTL:[FRM xy][,SEQ ww] ww:QRY,SCON,TO [s]abcddd[/ff]!

[I.52521]

UTL:[FRM xy][,SEQ ww] ww:QRY,SCON,TO uvmnpddd[/ff]!

[I.52531]

UTL:[FRM xy][,SEQ ww]:QRY,SRHDW,TO [s]abcddd[/ff]!

[I.52531]

UTL:[FRM xy][,SEQ ww]:QRY,SRHDW,TO uvmnpddd[/ff]!

[I.52581]

UTL:[FRM xy][,SEQ ww]:QRY,LOAD,{NPC [s]abc|TOTAL}!

[I.52581]

UTL:[FRM xy][,SEQ ww]:QRY,LOAD,{NPC uvmnp|TOTAL}!

[I.52601]

UTL:[FRM xy][,SEQ ww]:QRY,SIGST abcd

[I.52601]

UTL:[FRM xy][,SEQ ww]:QRY,SIGST uvmnpddd

[I.53001]

UTL:[FRM xy][,SEQ ww]:QRY,SYNC,TYPE!

[I.53011]

UTL:[FRM xy][,SEQ ww]:QRY,EQD,UNITS!

[I.53022]

UTL:[FRM xy][,SEQ ww]:QRY,EQD,ETIS!

[I.53031]

UTL:[FRM xy][,SEQ ww]:QRY,EQD,CONN!

[I.53041]

UTL:[FRM xy][,SEQ ww]:QRY,EQD,NPCS[, {TOTAL|UNIT [q]q}]!

[O.53041]

UTL:[FRM xy][,SEQ ww]:QRY,EQD,TSIS!

[I.53051]

UTL:[FRM xy][,SEQ ww]:QRY,OPT[, {TYPE mn|ALL}],NPCS!

[I.53053]

UTL:[FRM xy][,SEQ ww]:QRY,OPT,TYPE mn!

[I.53061]

UTL:[FRM xy][,SEQ ww]:QRY,TPS!

[I.53071]

UTL:[FRM xy][,SEQ ww]:QRY,UNIT [q]q,FTMI b[,EQL]!

[I.53071]

UTL:[FRM xy][,SEQ ww]:QRY,UNIT [q]q,FTMI b[,IMP]!

[I.53081]

UTL:[FRM xy][,SEQ ww]:QRY,TGS mmm[-nnn]!

[I.53091]

UTL:[FRM xy][,SEQ ww]:QRY,NPCTG rrr[-sss]!

[I.53101]

UTL:[FRM xy][,SEQ ww]:QRY,ALL[,UNIT [q]q]!

[O.53101]

UTL:[FRM xy][,SEQ ww]:QRY,<parameter>,ALL!

[I.53103]

UTL:[FRM xy][,SEQ ww]:QRY,{PEST|FAIL|OOS}[,UNIT [q]q]!

[I.53104]

UTL:[FRM xy][,SEQ ww]:QRY,ALL,COMMON!

[I.53105]

UTL:[FRM xy][,SEQ ww]:QRY,{PEST|FAIL|OOS},COMMON!

[I.53108]

UTL:[FRM xy][,SEQ ww]:QRY,EQD[,UNIT [q]q]!

[I.53109]

UTL:[FRM xy][,SEQ ww]:QRY,EQD,COMMON!

[I.53111]

UTL:[FRM xy][,SEQ ww]:QRY,ALMS!

[I.53121]

UTL:[FRM xy][,SEQ ww]:QRY,CS,NPC [s]abc!

[I.53121]

UTL:[FRM xy][,SEQ ww]:QRY,CS,NPC uvmpn!

[I.53131]
UTL:[FRM xy][,SEQ ww]:QRY,LPBK,NPC [s]abc[-[t]def]!

[I.53131]
UTL:[FRM xy][,SEQ ww]:QRY,LPBK,NPC [s]abc[-[t]def]!

[I.53131]
UTL:[FRM xy][,SEQ ww]:QRY,LPBK,NPC uvmnp[-wxkqr]!

[I.53131]
UTL:[FRM xy][,SEQ ww]:QRY,LPBK,NPC uvmnp[-wxkqr]!

[I.53141]
UTL:[FRM xy][,SEQ ww]:QRY,ALMS,{RT|DL} ffff!

[I.53151]
UTL:[FRM xy][,SEQ ww]:QRY,ALMS,DBASE!

[I.53161]
UTL:[FRM xy][,SEQ ww]:QRY,TSIG,NPC [s]abc[-[t]def]!

[I.53161]
UTL:[FRM xy][,SEQ ww]:QRY,TSIG,NPC uvmnp[-wxkqr]!

[I.53171]
UTL:[FRM xy][,SEQ ww]:QRY,NPC [s]abc[-[t]def],CBTIMER!

[I.53171]
UTL:[FRM xy][,SEQ ww]:QRY,NPC uvmnp[-uvkqr],CBTIMER!

[I.53181]
UTL:[FRM xy][,SEQ ww]:QRY,LPBK,UNIT [q]q!

[I.53201]
UTL:[FRM xy][,SEQ ww]:QRY,EQD,MIUS!

[I.53211]
UTL:[FRM xy][,SEQ ww]:QRY,EQD,MXRS!

[I.53221]
UTL:[FRM xy][,SEQ ww]:QRY,DS3,BERMT[,UNIT [q]q]!

[I.53231]

UTL:[FRM xy][,SEQ ww]:QRY,DS3,LB0!

[I.53301]

UTL:[FRM xy][,SEQ ww]:QRY,SALMS,{sa1m|ALL}!

[I.53311]

UTL:[FRM xy][,SEQ ww]:QRY,FALMS,TYPE {mn[xyz]|ALL},{<fa1m>|ALL}!

[I.53321]

UTL:[FRM xy][,SEQ ww]:QRY,ALM,SEV!

[I.53331]

UTL:[FRM xy][,SEQ ww]:QRY,INTV,{NPC {[s]abc[-[t]def]|ALL}| \
TLI m|CCN|SYNC|ALL}!

[I.53331]

UTL:[FRM xy][,SEQ ww]:QRY,INTV,{NPC {uvmnp-uvkqr|ALL}| \
TLI m|CCN|SYNC|ALL}!

[I.53341]

UTL:[FRM xy][,SEQ ww]:QRY,INH,{NPC [s]abc[-[t]def]|ALL}!

[I.53341]

UTL:[FRM xy][,SEQ ww]:QRY,INH,{NPC uvmnp[-wxkqr]|ALL}!

[I.53351]

UTL:[FRM xy][,SEQ ww]:QRY,ALM,INTV!

[I.53401]

UTL:[FRM xy][,SEQ ww]:QRY,TSM,TG mmm!

[I.54001]

UTL:[FRM xy][,SEQ ww]:QRY,SCR,{LINK j[mm[-jnn]]| \
USER <user id>|LINKS|USERS}!

[I.54011]

UTL:[FRM xy][,SEQ ww]:QRY,LOG[,ALL]!

[I.54101]

UTL:[FRM xy][,SEQ ww]:QRY,LIST,MAP <name>[,USER <user id>]!

[I.54111]

UTL:FRM xy,SEQ ww:QRY,NPC,MAP <name>[,USER <user id>]!

[I.54121]

UTL:FRM xy,SEQ ww:QRY,MACRO <name>[,USER <user id>]!

[I.54131]

UTL:FRM xy,SEQ ww:QRY,LIST,MACRO <macro name>
[,USER <user id>]!

[I.54201]

UTL:FRM xy,SEQ ww:QRY,MAP,ATTR[, {ALL|USER <user id>|MAPNM <name>}]!

[I.54211]

UTL:FRM xy,SEQ ww:QRY,MACRO,ATTR[, {USER <user id>|ALL}]!

[I.54221]

UTL:FRM xy,SEQ ww:QRY,{MACRO|MAP},SPACE[, {USER <user id>|ALL| \
SYSTEM}]!

[I.55011]

UTL:FRM xy,SEQ ww:QRY,ERR,{ {SWER|HWER} \
[, {INT mn|[DATE moda[ce]yr,] TOD hrmsc}]
[,TN X'dddd][,EVENT X'eeee][,ERCL{HARD|TRANS|APPINT}] \
[,ENTY <entity>]|ALL}]!

[I.55111]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,MP!

[I.55113]

UTL:[FRM xy][,SEQ ww]:QRY,STR,LINK j[mm][-jnn]!

[I.55181]

UTL:[FRM xy][,SEQ ww]:QRY,XCSB[,UNIT [q]q]!

[I.55191]

UTL:[FRM xy][,SEQ ww]:QRY,STR,XC a!

[I.55201]

UTL:[FRM xy][,SEQ ww]:QRY,STR,SYNC a!

[I.55311]

UTL:[FRM xy][,SEQ ww]:QRY,STR,SYNC a,TLI m!

[I.55321]

UTL:[FRM xy][,SEQ ww]:QRY,STR,SYNC a,TLI m,SSP b!

[I.55411]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,ECCN s!

[I.55501]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,UNIT [q]q!

[I.55521]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,UNIT [q]q,FC sb!

[I.55521]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,UNIT [q]q,FC sb!

[I.55531]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,UNIT [q]q,DSPI!

[I.55601]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,NPC [s]abc[,SIDE s]!

[I.55601]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,NPC uvmnp[,SIDE s]!

[I.55701]

UTL:[FRM xy][,SEQ] ww:BMTR,FROM <from>,TO \
<to>[, {EXCT|INCL|UPGRD}]!

[I.55711]

ABT!

[I.55721]

INSTALL;

[I.55731]

UTL:[FRM xy,SEQ ww]:UPGRD!

[I.55801]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,UNIT [q]q,FLI k!

[I.55821]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,UNIT [q]q,MXR c!

[I.55891]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,UNIT [q]q,MPR z!

[I.56001]

UTL:[FRM xy][,SEQ ww]:CLR,<parameter>, \ {NPC [s]abc[-[t]def]}| RT ffff |DL ffff}!

[I.56001]

UTL:[FRM xy][,SEQ ww]:CLR,<parameter>,{NPC uvmnp[-wxkqr]}| \ RT ffff|DL ffff}!

[I.56001]

UTL:[FRM xy][,SEQ ww]:CLR,<parameter>,NPC [s]abc[-[t]def]!

[I.56001]

UTL:[FRM xy][,SEQ ww]:CLR,<parameter>,NPC uvmnp[-wxkqr]!

[I.56011]

UTL:FRM xy,SEQ ww:CLR,<parameter>,ALL!

[I.56021]

UTL:[FRM xy][,SEQ ww]:QRY,ALMOPT,NPC [s]abc[-[v]ghi],AIS!

[I.56021]

UTL:[FRM xy][,SEQ ww]:QRY,ALMOPT,NPC uvmnp[-wxkqr],AIS!

[I.56041]

UTL:[FRM xy][,SEQ ww]:QRY,<parameter>,{NPC [s]abc[-[t]def]}| \ RT ffff|DL ffff}!

[I.56041]

UTL:[FRM xy][,SEQ ww]:QRY,<parameter>,NPC uvmnp[-wxkqr]!

[I.56041]

UTL:[FRM xy][,SEQ ww]:QRY,<parameter>,NPC [s]abc[-[t]def]!

[I.56041]

UTL:[FRM xy][,SEQ ww]:QRY,<parameter>,{NPC uvmnp[-wxkqr]}| \ RT ffff|DL ffff}!

[I.56051]

UTL:[FRM xy][,SEQ ww]:CLR,NPC [s]abc,PARAMS!

[I.56051]

UTL:[FRM xy][,SEQ ww]:CLR,NPC uvmnp,PARAMS!

[I.56052]

UTL:[FRM xy][,SEQ ww]:CLR,PWR pp!

[I.56061]

UTL:[FRM xy][,SEQ ww]:CLR,ERR,{HWER|SWER}!

[I.56071]

UTL:[FRM xy][,SEQ ww]:CLR,{NPC [s]abc[-[t]def]|ALL},<parameter> \
[,AI aaaaa] [,LOCN locn][,MONDAT dddd][,MONTIM tttt]!

[I.56071]

UTL:[FRM xy][,SEQ ww]:CLR,{NPC uvmnp[-wxkqr]|ALL},<parameter> \
[,AI aaaaa] [,LOCN locn][,MONDAT dddd][,MONTIM tttt]!

[I.56071]

UTL:[FRM xy][,SEQ ww]:CLR,{NPC [s]abc[-[t]def]|ALL},<parameter>, \
AI aaaaa [,MONDAT dddd][,MONTIM tttt]!

[I.56071]

UTL:[FRM xy][,SEQ ww]:CLR,{NPC uvmnp[-wxkqr]|ALL},<parameter>, \
AI aaaaa [,MONDAT dddd][,MONTIM tttt]!

[I.56091]

UTL:[FRM xy][,SEQ ww]:QRY,{NPC [s]abc[-[t]def]|ALL},<parameter>, \
AI aaaaa [,LV llllllllll][,LOCN locn][,MONDAT dddd][,MONTIM \
tttt]!

[I.56091]

UTL:[FRM xy][,SEQ ww]:QRY,{NPC [s]abc[-[t]def]|ALL},<parameter>, \
AI aaaaa [,LV llllllllll][,MONDAT dddd][,MONTIM tttt]!

[I.56091]

UTL:[FRM xy][,SEQ ww]:QRY,{NPC uvmnp[-wxkqr]|ALL},<parameter>,AI \
aaaaa [,LV llllllllll][,MONDAT dddd][,MONTIM tttt]!

[I.56091]

UTL:[FRM xy][,SEQ ww]:QRY,{NPC uvmnp[-wxkqr]|ALL},<parameter>, \
AI aaaaa [,LV llllllllll][,LOCN locn][,MONDAT dddd][,MONTIM tttt]!

[I.56101]

UTL:[FRM xy][,SEQ ww]:CLR,{UNIT [q]q,DS3 c[-d]|ALLDS3}, \
<parameter> ,AI aaaaa[,MONDAT dddd][,MONTIM tttt]!

[I.56111]

UTL:[FRM xy][,SEQ ww]:QRY,{UNIT [q]q,DS3 c[-d]|ALLDS3}, \
<parameter> AI aaaaa[,LV llllllllll][,MONDAT dddd][,MONTIM tttt]!

[I.56301]

UTL:[FRM xy][,SEQ ww]:QRY,STATE,SYNC!

[I.56311]

UTL:[FRM xy][,SEQ ww]:QRY,STATE,NPC [s]abc[-[t]def]!

[I.56311]

UTL:[FRM xy][,SEQ ww]:QRY,STATE,NPC uvmnp[-wxkqr]!

[I.56314]

UTL:[FRM xy][,SEQ ww]:QRY,STATE,NPC [s]abc[-[t]def]!

[I.56314]

UTL:[FRM xy][,SEQ ww]:QRY,STATE,NPC uvmnp[-wxkqr]!

[I.56321]

UTL:[FRM xy][,SEQ ww]:QRY,TS0 s,NPC [s]abc[-[t]def]!

[I.56321]

UTL:[FRM xy][,SEQ ww]:QRY,TS0 s,NPC uvmnp[-wxkqr]!

[I.56323]

UTL:[FRM xy][,SEQ ww]:QRY,TS0M,NPC [s]abc[-[t]def]!

[I.56323]

UTL:[FRM xy][,SEQ ww]:QRY,TS0M,NPC uvmnp[-wxkqr]!

[I.56324]

UTL:[FRM xy][,SEQ ww]:QRY,NFS,NPC [s]abc[-[t]def]!

[I.56324]

UTL:[FRM xy][,SEQ ww]:QRY,NFS,NPC uvmnp[-wxkqr]!

[I.56326]

UTL:[FRM xy][,SEQ ww]:QRY,RPSFI!

[I.56331]

UTL:[FRM xy][,SEQ ww]:QRY,ALM,DS3!

[I.56333]

UTL:[FRM xy][,SEQ ww]:QRY,DS3ALM!

[I.56341]

UTL:[FRM xy][,SEQ ww]:QRY,DD [s]abcddd[-fff]!

[I.56341]

UTL:[FRM xy][,SEQ ww]:QRY,DD uvmnpddd[-fff]!

[I.56343]

UTL:[FRM xy][,SEQ ww]:QRY,{DD,NPC [s]abc[-[t]def]|DDCT,ALL}!

[I.56343]

UTL:[FRM xy][,SEQ ww]:QRY,{DD,NPC uvmnp[-wxkqr]|DDCT,ALL}!

[I.56351]

UTL:[FRM xy][,SEQ ww]:QRY,BC s,{NPC uvmnp[-wxkqr]|ALL}!

[I.56353]

UTL:[FRM xy][,SEQ ww]:QRY,BC s,TO [s]abcddd!

[I.56353]

UTL:[FRM xy][,SEQ ww]:QRY,BC s,TO uvmnpddd!

[I.56361]

UTL:[FRM xy][,SEQ ww]:QRY,STATE,UNIT [q]q,DS3 c[-d]!

[I.56391]

UTL:[FRM xy][,SEQ ww]:QRY,NETADDR!

[I.56401]

UTL:[FRM xy][,SEQ ww]:LOC,<entity>!

[I.56411]

UTL:[FRM xy][,SEQ ww]:INIT,{IP|GATEWAY|IPMASK} x.x.x.x!

[I.56501]

UTL:[FRM xy][,SEQ ww]:QRY,SR00F,{TO [s]abcddd[-eee]|ALL}!

[I.56501]

UTL:FRM xy,SEQ ww:QRY,SR00F,{TO uvmnpddd[-eee]|ALL}!

[I.56511]

UTL:[FRM xy][,SEQ ww]:QRY,PSTATE,UNIT [q]q!

[I.56831]

UTL:[FRM xy][,SEQ ww]:QRY,ALM,OI!

[I.57001]

UTL:[FRM xy][,SEQ ww]:QRY,MSGLOG,RANGE!

[I.57031]

UTL:[FRM xy][[,SEQ ww]:CLR,MSGLOG[,RSTNUM]!

[I.58001]

UTL:[FRM xy][,SEQ ww]:BOOT,FRAME[,CLR]!

[I.81001]

AUD:[FRM xy][,SEQ ww]:QRY,{CFA|CGA|LOS}!

List of Autonomous Messages

6

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Introduction

Overview

This section provides a summary of the autonomous messages that can appear on the DACS II Release 9.1.3 output printer. The following are the categories of autonomous messages:

- Alarms Messages
 - Audits Messages
 - Error Recovery Messages
 - Event and Scheduled PM Reporting Messages
 - Input Denial Messages
 - Startup Messages
-

Alarms Messages

[O.65011]

pa <il> hh:mm:ss xy,ww AR01 MISC ALM <state> PBA uvmnp k COMPL

[O.65011]

pa hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|LOS} [s]abc \
[k] COMPL

[O.65011]

pa hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|LOS} uvmnp \
[k] COMPL

pa <il> hh:mm:ss xy,ww AR01 MISC ALM <state> PBA [s]abc k COMPL

[O.65021]

I hh:mm:ss xy,ww AR01 MISC ALM IDLD {CGA|LOS} [s]abc [k] COMPL

[O.65021]

I hh:mm:ss xy,ww AR01 MISC ALM IDLD {CGA|LOS} uvmnp [k] COMPL

[O.65021]

I hh:mm:ss xy,ww AR01 MISC ALM IDLD PBA [s]abc k COMPL

[O.65021]

I hh:mm:ss xy,ww AR01 MISC ALM IDLD PBA uvmnp k COMPL

[O.65031]

pahh:mm:ss xy,ww ALM {MJ|MN|INFO} <parameter> NPC [s]abc COMPL

[O.65031]

pahh:mm:ss xy,ww ALM {MJ|MN|INFO} <parameter> NPC uvmnp COMPL

[O.65036]

pa <il> hh:mm:ss xy,ww ALM <state> <parameter> NPC [s]abc COMPL

[O.65036]

pa <il> hh:mm:ss xy,ww ALM <state> <parameter> NPC uvmnp COMPL

[O.65041]

I hh:mm:ss xy,ww ALM IDLD <parameter> NPC [s]abc COMPL

[O.65041]

I hh:mm:ss xy,ww ALM IDLD <parameter> NPC uvmnp COMPL

[O.65046]

I hh:mm:ss xy,ww ALM IDLD[<parameter>][AI aaaaa] NPC [s]abc \ COMPL

[O.65046]

I hh:mm:ss xy,ww ALM IDLD[<parameter>][AI aaaaa] NPC uvmnp \ COMPL

[O.65051]

pa <il> hh:mm:ss xy,ww ALM RESET {DATE|TOD|TOD DATE} hr:mn:sc \ {mo/da/yr FORMAT MDY|da/mo/yr FORMAT DMY} [PMC|PMA|DMA|MI] COMPL

[O.65053]

**hh:mm:ss xy,ww BOOT FAILED - BAD BOOT DEVICE

[O.65054]

pa <il> hh:mm:ss xy,ww ALM [PMC|PMA|DMA|MI] CCN s OOS COMPL

[O.65054]

pa <il> hh:mm:ss xy,ww ALM [PMC|PMA|DMA|MI] CCN s OOS COMPL

[O.65055]

pa <il> hh:mm:ss xy,ww ALM {PMC|PMA|DMA|MI} ECCN s OOS COMPL

[O.65056]

pa <il> hh:mm:ss xy,ww ALM [PMC|PMA|DMA|MI|MJ|MN|CR|INFO] SMEM \ COMPL

[O.65071]

I hh:mm:ss xy,ww ACO ACTIVE COMPL

[O.65091]

pa <il> hh:mm:ss xy,ww ALM [PMC|PMA|DMA|MI] NPC uvmnp RPSFI COMPL

[O.65091]

pa <il> hh:mm:ss xy,ww ALM [PMC|PMA|DMA|MI] NPC [s]abc RPSFI \ COMPL

[O.65092]

I hh:mm:ss xy,ww ALM IDLD NPC [s]abc RPSFI COMPL

[O.65092]

I hh:mm:ss xy,ww ALM IDLD NPC uvmnp RPSFI COMPL

[O.65131]

pahh:mm:ss xy,ww SC ALM <state>[{CGA|DLF|INH|MRV|MSW|PSW}]/
{RT|DL}
ffff {DGA|DGB|DGC|DGD|DGP} [s]abc[k] <location> COMPL

[O.65131]

pahh:mm:ss xy,ww SC ALM <state>[{CGA|DLF|INH|MRV|MSW|PSW}]/
{RT|DL}
ffff {DGA|DGB|DGC|DGD|DGP} uvmnp[k] <location> COMPL

[O.65141]

pahh:mm:ss xy,ww SC ALM[<alarm type>] <state> {RT|DL} \
ffff[FE] COMPL

[O.65151]

I hh:mm:ss xy,ww SC ALM <state> DPLX {SYNC a|CCB sf|CCNI s| \
CCI s|TSI sft|ETSI sqq|FC sb UNIT [q]q|FMT s UNIT [q]q| \
NPC [s]abc SIDE s} NE COMPL

[O.65151]

I hh:mm:ss xy,ww SC ALM <state> DPLX {SYNC a|CCB sf|CCNI s| \
CCI s|TSI sft|ETSI sqq|FC sb UNIT [q]q|FMT s UNIT [q]q| \
NPC uvmnp SIDE s} NE COMPL

[O.65161]

I hh:mm:ss xy,ww SC ALM <state> {MC|UC [q]q|FTMI [q]qb| \
DSPI [q]q} NE COMPL

[O.65171]

I hh:mm:ss xy,ww SC ALM COMP <state> RT ffff[INDX][LBRV] \
[AB][CD][P][ALP] COMPL

[O.65201]

I hh:mm:ss xy,ww TS0 R NPC [s]abc OLD abcdefgh NEW \
abcdefgh COMPL

[O.65201]

I hh:mm:ss xy,ww TS0 R NPC uvmnp OLD abcdefgh NEW \
abcdefgh COMPL

[O.65211]

I hh:mm:ss xy,ww BC R TO [s]abcd {X'abcd|ZO|NA} COMPL

[O.65211]

I hh:mm:ss xy,ww BC R TO uvmnpddd {X'abcd|ZO|NA} COMPL

[O.65221]

I hh:mm:ss xy,ww CBOFL abc [SIDE s] 5 LN MSG:
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno \
EOM

I hh:mm:ss xy,ww CBOFL abc [SIDE s] 5 LN MSG:
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno \
EOM

I hh:mm:ss xy,ww CBOFL abc [SIDE s] 3 LN MSG:
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno \
COMPL

[O.65221]

I hh:mm:ss xy,ww CBOFL uvmnp [SIDE s] 5 LN MSG:
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno EOM

I hh:mm:ss xy,ww CBOFL uvmnp [SIDE s] 5 LN MSG:
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno EOM

I hh:mm:ss xy,ww CBOFL uvmnp [SIDE s] 3 LN MSG:
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno COMPL

[O.65231]

I hh:mm:ss xy,ww TS0MBOFL [s]abc COMPL

[O.65231]

I hh:mm:ss xy,ww TS0MBOFL uvmnp COMPL

[O.66001]

pahh:mm:ss xy,ww ALM UNIT [q]q DS3 c <state> COMPL

[O.66011]

I hh:mm:ss xy,ww ALM IDLD UNIT [q]q DS3 c <state> COMPL

[O.66021]

* hh:mm:ss xy,ww ALM {MN|IDLD} DS3UNPROTALM DS3U [q]q COMPL

Audits Messages

[O.81001]

```
M hh:mm:ss xy,ww n[vv] AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
M hh:mm:ss xy,ww n[vv] SC ALM <state> CGA [s]abc k COMPL
M hh:mm:ss xy,ww n[vv] SC ALM <state> CGA [s]abc k COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> {CGA|CFA|LOS} [s]abc \
[k] COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> {CGA|CFA|LOS} [s]abc \
[k] COMPL
M hh:mm:ss xy,ww n[vv] AUD {CGA|CFA|LOS} END COMPL
M hh:mm:ss xy,ww n[vv] AUD PARAMS COMPL
```

[O.81001]

```
M hh:mm:ss xy,ww n[vv] AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
M hh:mm:ss xy,ww n[vv] SC ALM <state> CGA [s]abc k COMPL
M hh:mm:ss xy,ww n[vv] SC ALM <state> CGA [s]abc k COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> {CGA|CFA|LOS} [s]abc \
[k] COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> {CGA|CFA|LOS} [s]abc \
[k] COMPL
M hh:mm:ss xy,ww n[vv] AUD {CGA|CFA|LOS} END COMPL
```

[O.81001]

```
M hh:mm:ss xy,ww n[vv] AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
M hh:mm:ss xy,ww n[vv] SC ALM <state> CGA uvmnp k COMPL
M hh:mm:ss xy,ww n[vv] SC ALM <state> CGA uvmnp k COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> {CGA|CFA|LOS} uvmnp \
[k] COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> {CGA|CFA|LOS} uvmnp \
[k] COMPL
M hh:mm:ss xy,ww n[vv] AUD {CGA|CFA|LOS} END COMPL
M hh:mm:ss xy,ww n[vv] AUD PARAMS COMPL
```

[O.81001]

```
M hh:mm:ss xy,ww n[vv] AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
M hh:mm:ss xy,ww n[vv] SC ALM <state> CGA uvmnp k COMPL
M hh:mm:ss xy,ww n[vv] SC ALM <state> CGA uvmnp k COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> {CGA|CFA|LOS} uvmnp \
[k] COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> {CGA|CFA|LOS} uvmnp \
[k] COMPL
M hh:mm:ss xy,ww n[vv] AUD {CGA|CFA|LOS} END COMPL
```

[O.81001]

M hh:mm:ss xy,ww n[vv] AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> PBA [s]abc k COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> PBA [s]abc k COMPL
M hh:mm:ss xy,ww n[vv] AUD {CGA|CFA} END COMPL
M hh:mm:ss xy,ww n[vv] AUD PARAMS COMPL

[O.81001]

M hh:mm:ss xy,ww n[vv] AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> PBA [s]abc k COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> PBA [s]abc k COMPL
M hh:mm:ss xy,ww n[vv] AUD {CGA|CFA} END COMPL

[O.81001]

M hh:mm:ss xy,ww n[vv] AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> PBA uvmnp k COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> PBA uvmnp k COMPL
M hh:mm:ss xy,ww n[vv] AUD CGA END COMPL
M hh:mm:ss xy,ww n[vv] AUD PARAMS COMPL

[O.81001]

M hh:mm:ss xy,ww n[vv] AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> PBA uvmnp k COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> PBA uvmnp k COMPL
M hh:mm:ss xy,ww n[vv] AUD CFA END COMPL

[O.81001]

I hh:mm:ss xy,ww AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
I hh:mm:ss xy,ww SC ALM <state> CGA [s]abc k COMPL
I hh:mm:ss xy,ww SC ALM <state> CGA [s]abc k COMPL
I hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|CFA|LOS} [s]abc [k] \ COMPL
I hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|CFA|LOS} [s]abc [k] \ COMPL
I hh:mm:ss xy,ww AUD {CGA|CFA|LOS} END COMPL
I hh:mm:ss xy,ww AUD PARAMS COMPL

[O.81001]

I hh:mm:ss xy,ww AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
I hh:mm:ss xy,ww SC ALM <state> CGA uvmnp k COMPL
I hh:mm:ss xy,ww SC ALM <state> CGA uvmnp k COMPL
I hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|CFA|LOS} uvmnp [k] \ COMPL
I hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|CFA|LOS} uvmnp [k] \ COMPL
I hh:mm:ss xy,ww AUD {CGA|CFA|LOS} END COMPL
I hh:mm:ss xy,ww AUD PARAMS COMPL

[O.81001]

```
I hh:mm:ss xy,ww AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
I hh:mm:ss xy,ww SC ALM <state> CGA [s]abc k COMPL
I hh:mm:ss xy,ww SC ALM <state> CGA [s]abc k COMPL
I hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|CFA|LOS} [s]abc [k] \
COMPL
I hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|CFA|LOS} [s]abc [k] \
COMPL
I hh:mm:ss xy,ww AUD {CGA|CFA|LOS} END COMPL
I hh:mm:ss xy,ww AUD PARAMS COMPL
```

[O.81001]

```
I hh:mm:ss xy,ww AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
I hh:mm:ss xy,ww SC ALM <state> CGA uvmnp k COMPL
I hh:mm:ss xy,ww SC ALM <state> CGA uvmnp k COMPL
I hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|CFA|LOS} uvmnp [k] \
COMPL
I hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|CFA|LOS} uvmnp [k] \
COMPL
I hh:mm:ss xy,ww AUD {CGA|CFA|LOS} END COMPL
I hh:mm:ss xy,ww AUD PARAMS COMPL
```

[O.81002]

```
M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL FTU NPCS [s]abc- \
[t]def TOT nnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
.
.
.
M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL DS3U NPCS [s]abc- \
[t]def TOT nnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
.
.
.
M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL HSU NPCS [s]abc- \
[t]def TOT nnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
.
.
.
```


[O.81002]

M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL FTU NPCS [s]abc- \

[t]def TOT nnn 5 LN MSG:

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM

.
.
.

M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL FTU NPCS [s]abc- \

[t]def TOT nnn 5 LN MSG:

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx COMPL

[O.81002]

M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL FTU NPCS [s]abc- \

[t]def TOT nnn 6 LN MSG:

xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \

xxxxxxxxxx

xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \

xxxxxxxxxx

xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \

xxxxxxxxxx

xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \

xxxxxxxxxx

xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx EOM

.
.
.

M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL FTU NPCS [s]abc- \

[t]def TOT nnn 6 LN MSG:

xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \

xxxxxxxxxx

xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \

xxxxxxxxxx

xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \

xxxxxxxxxx

xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \

xxxxxxxxxx

xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx COMPL

[O.81002]

M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL FTU NPCS uvmnp- \

uvmqr TOT nnn 5 LN MSG:

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

[O.81002]

```
.  
. .  
M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL FTU NPCS uvmnp- \  
uvmqr TOT nnn 6 LN MSG:  
xxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx \  
xxxxxxxxxx  
xxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx \  
xxxxxxxxxx  
xxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx \  
xxxxxxxxxx  
xxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx \  
xxxxxxxxxx  
xxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx COMPL
```

[O.81002]

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```

XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX EOM
.
.
.
I hh:mm:ss xy,ww AUD QRY <parameter> ALL HSU NPCS \
[s]abc-[t]def TOT nnn 5 LN MSG:
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX EOM
.
.
.
I hh:mm:ss xy,ww AUD QRY <parameter> ALL HDS3U NPCS \
[s]abc-[t]def TOT nnn 8 LN MSG:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx COMPL

[O.81002]

I hh:mm:ss xy,ww AUD QRY <parameter> ALL FTU NPCS \
uvmnp-uvmqr TOT nnn 5 LN MSG:
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX EOM
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.
.
I hh:mm:ss xy,ww AUD QRY <parameter> ALL DS3U NPCS \
uvmnp-uvmqr TOT nnn 5 LN MSG:
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX EOM
.
.
.
I hh:mm:ss xy,ww AUD QRY <parameter> ALL HSU NPCS \
uvmnp-uvmqr TOT nnn 5 LN MSG:
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX

```

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xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
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.
I hh:mm:ss xy,ww AUD QRY <parameter> ALL HDS3U NPCS \
uvmnp-uvmqr TOT nnn 8 LN MSG:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx COMPL

```

[O.81002]

```

I hh:mm:ss xy,ww AUD QRY <parameter> ALL FTU NPCS \
[s]abc-[t]def TOT nnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
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.
I hh:mm:ss xy,ww AUD QRY <parameter> ALL FTU NPCS \
[s]abc-[t]def TOT nnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx COMPL

```

[O.81002]

```

I hh:mm:ss xy,ww AUD QRY <parameter> ALL FTU NPCS [s]abc-[t]def \
TOT nnn 6 LN MSG:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx EOM
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I hh:mm:ss xy,ww AUD QRY <parameter> ALL FTU NPCS [s]abc-[t]def \
TOT nnn 6 LN MSG:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

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xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
xxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
xxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
xxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx COMPL

```

[O.81002]

```

I hh:mm:ss xy,ww AUD QRY <parameter> ALL FTU NPCS \
uvmnp-uvmqr TOT nnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM

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I hh:mm:ss xy,ww AUD QRY <parameter> ALL FTU NPCS \
uvmnp-uvmqr TOT nnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx COMPL

```

[O.81002]

```

I hh:mm:ss xy,ww AUD QRY <parameter> ALL FTU NPCS uvmnp-uvmqr \
TOT nnn 6 LN MSG:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
xxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
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xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
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xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
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xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
xxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx EOM

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I hh:mm:ss xy,ww AUD QRY <parameter> ALL FTU NPCS uvmnp-uvmqr \
TOT nnn 6 LN MSG:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
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xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
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xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
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xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
xxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \
xxxxxxxxxxxxxxxx

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xxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx COMPL

[O.81003]

M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL FTU NPCS [s]abc-[t]def \\
TOT nnn 5 LN MSG:
xx xx xx xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx xx xx xx EOM

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M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL FTU NPCS [s]abc-[t]def \\
TOT nnn 5 LN MSG:
xx xx xx xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx xx xx xx COMPL

[O.81003]

M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL DS3U NPCS [s]abc-[t]def \\
TOT nnn 5 LN MSG:
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx EOM

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M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL DS3U NPCS [s]abc-[t]def \\
TOT nnn 5 LN MSG:
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx COMPL

[O.81003]

M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL HSU NPCS [s]abc-[t]def \\
TOT nnn 5 LN MSG:
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx EOM

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M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL HSU NPCS [s]abc-[t]def \\
TOT nnn 5 LN MSG:
xx xx xx xx xx xx xx xx

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XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX  COMPL
```

[O.81003]

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL HDS3U NPCS [s]abc-[t]def \
TOT nnn 8 LN MSG:
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX  EOM
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```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL HDS3U NPCS [s]abc-[t]def \
TOT nnn 8 LN MSG:
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX  COMPL
```

[O.81003]

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL FTU NPCS uvmnp-uvmqr\
TOT nnn 5 LN MSG:
XX XX XX XX XX  XX XX XX XX XX
XX XX XX XX XX  XX XX XX XX XX
XX XX XX XX XX  XX XX XX XX XX
XX XX XX XX XX  XX XX XX XX XX  EOM
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```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL FTU NPCS uvmnp-uvmqr \
TOT nnn 5 LN MSG:
XX XX XX XX XX  XX XX XX XX XX
XX XX XX XX XX  XX XX XX XX XX
XX XX XX XX XX  XX XX XX XX XX
XX XX XX XX XX  XX XX XX XX XX  COMPL
```

[O.81003]

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL DS3U NPCS uvmnp-uvmqr \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
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XX XX XX XX XX XX XX
XX XX XX XX XX XX XX EOM

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M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL DS3U NPCS uvmnp-uvmqr\
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX COMPL

[O.81003]

M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL HSU NPCS uvmnp-uvmqr \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX EOM

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M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL HSU NPCS uvmnp-uvmqr \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX COMPL

[O.81003]

M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL DS3U NPCS uvmnp-uvmqr \
TOT nnn 8 LN MSG:
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX EOM

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M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL DS3U NPCS uvmnp-uvmqr \
TOT nnn 8 LN MSG:
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX

XX XX XX XX
XX XX XX XX COMPL

[O.81003]

M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX EOM

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M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX COMPL

[O.81003]

M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL NPCS uvmnp-uvmqr \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX EOM

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M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL NPCS uvmnp-uvmqr \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX COMPL

[O.81003]

I hh:mm:ss xy,ww AUD QRY BER ALL FTU NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX EOM

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I hh:mm:ss xy,ww AUD QRY BER ALL FTU NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX


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XX XX XX XX XX  XX XX XX XX XX
XX XX XX XX XX  XX XX XX XX XX
XX XX XX XX XX  XX XX XX XX XX  COMPL
```

[O.81003]

```
I hh:mm:ss xy,ww  AUD QRY BER ALL DS3U NPCS [s]abc-[t]def \
TOT nnn  5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX  EOM
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I hh:mm:ss xy,ww  AUD QRY BER ALL DS3U NPCS [s]abc-[t]def \
TOT nnn  5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX  COMPL
```

[O.81003]

```
I hh:mm:ss xy,ww  AUD QRY BER ALL HSU NPCS [s]abc-[t]def \
TOT nnn  5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX  EOM
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```
I hh:mm:ss xy,ww  AUD QRY BER ALL HSU NPCS [s]abc-[t]def \
TOT nnn  5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX  COMPL
```

[O.81003]

```
I hh:mm:ss xy,ww  AUD QRY BER ALL HDS3U NPCS [s]abc-[t]def \
TOT nnn  8 LN MSG:
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX  EOM
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```
.
I hh:mm:ss xy,ww AUD QRY BER ALL HDS3U NPCS [s]abc-[t]def \
TOT nnn 8 LN MSG:
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX COMPL
```

[O.81003]

```
I hh:mm:ss xy,ww AUD QRY BER ALL FTU NPCS uvmnp-uvmqr \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX EOM
```

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.
I hh:mm:ss xy,ww AUD QRY BER ALL FTU NPCS uvmnp-uvmqr \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX COMPL
```

[O.81003]

```
I hh:mm:ss xy,ww AUD QRY BER ALL DS3U NPCS uvmnp-uvmqr \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX EOM
```

```
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.
I hh:mm:ss xy,ww AUD QRY BER ALL DS3U NPCS uvmnp-uvmqr \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX COMPL
```

[O.81003]

```
I hh:mm:ss xy,ww AUD QRY BER ALL HSU NPCS uvmnp-uvmqr \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
```

XX XX XX XX XX XX XX
XX XX XX XX XX XX XX EOM

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.
.

I hh:mm:ss xy,ww AUD QRY BER ALL HSU NPCS uvmnp-uvmqr\
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX COMPL

[O.81003]

I hh:mm:ss xy,ww AUD QRY BER ALL DS3U NPCS uvmnp-uvmqr \
TOT nnn 8 LN MSG:
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX EOM

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.
.

I hh:mm:ss xy,ww AUD QRY BER ALL DS3U NPCS uvmnp-uvmqr \
TOT nnn 8 LN MSG:
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX COMPL

[O.81003]

I hh:mm:ss xy,ww AUD QRY BER ALL NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX EOM

.
.
.

I hh:mm:ss xy,ww AUD QRY BER ALL NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX

XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX COMPL

[O.81003]

I hh:mm:ss xy,ww AUD QRY BER ALL NPCS uvmnp-uvmqr \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX EOM

.
.
.

I hh:mm:ss xy,ww AUD QRY BER ALL NPCS uvmnp-uvmqr \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX COMPL

[O.81004]

M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL NPCS TOT 000 \
COMPL

[O.81004]

I hh:mm:ss xy,ww AUD QRY <parameter> ALL NPCS TOT 000 \
COMPL

[O.81005]

M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL NPCS TOT 0000 COMPL

[O.81005]

I hh:mm:ss xy,ww AUD QRY BER ALL NPCS TOT 0000 COMPL

[O.81006]

I hh:mm:ss xy,ww AUD PARAMS COMPL

[O.82001]

I hh:mm:ss xy,ww FRADTS DGN <ttt> <eee>[DEV <devc>] d0 COMPL

[O.82001]

I hh:mm:ss xy,ww FRADTS DGN <ttt> <eee> d0 COMPL

[O.82002]

I hh:mm:ss xy,ww FRADTS FRCMP ttt[d9 d8 d7 d6] \
d5 d4 d3 d2 d1 d0 COMPL

[O.82003]

I hh:mm:ss xy,ww FRADTS BMCMP <ttt> d8 d7 d6 d5 d4 d3 d2 d1 COMPL

[O.82004]

I hh:mm:ss xy,ww FRADTS MC DGN <tt> COMPL

Error Recovery Messages

[O.01301]

pa <il> hh:mm:ss xy,ww ERR PWR [PMC|PMA|DMA|MI|MJ|MN|CR|ONFO] \\
aaaa bbbb cccc dddd TN dddd COMPL

[O.01301]

pa <il> hh:mm:ss xy,ww ERR PWR [PMC|PMA|DMA|MI|MJ|MN|CR|ONFO] \\
aaaa bbbb cccc dddd TN dddd COMPL

[O.01311]

I hh:mm:ss xy,ww ERR[ESR] MC[MP] TN dddd EVENT eeee 2 LN MSG:
abab bbbb cccc dddd eeee ffff COND cc COMPL

[O.01311]

I hh:mm:ss xy,ww ERR[ESR] MC[CI] TN dddd EVENT eeee 2 LN MSG:
COND cc COMPL

[O.01311]

I hh:mm:ss xy,ww ERR[ESR] MC[{BX|EBX}] TN dddd EVENT eeee \\
2 LN MSG:
abab bbbb cccc dddd eeee ffff COND cc COMPL

[O.01311]

I hh:mm:ss xy,ww ERR[ESR] MC[{MTC|EMTC}] TN dddd \\
EVENT eeee 2 LN MSG:
abab bbbb cccc dddd eeee ffff gggg hhhh iiii jjjj COND cc COMPL

[O.01312]

I hh:mm:ss xy,ww ERR [ESR] MC [, {MP|ICI}] TN dddd COMPL

[O.01315]

I hh:mm:ss xy,ww ERR {PMEM|SMEM} TN dddd EVENT eeee COND cc COMPL

[O.01321]

I hh:mm:ss xy,ww ERR LINK a TN dddd STATUS a0 a1 a2 COMPL

[O.01331]

I hh:mm:ss xy,ww ERR [ESR] SYNC a TN dddd EVENT eeee 2 LN MSG:
<byte1> <byte2> <byte3> <byte4> <byte5> COND cccc COMPL

[O.01331]

I hh:mm:ss xy,ww ERR [ESR] SYNC a TN dddd EVENT eeee 2 LN MSG:
<byte1> <byte2> <byte3> <byte4> <byte5> COND cccc COMPL

[O.01333]

pa <il> hh:mm:ss xy,ww ERR SYNC a TLI m SSP b TN dddd 3 LN MSG: \
ALM[LOS][LEN][EXJ][PHS][OOF][MAJ][MIN] {PMC|PMA|DMA|MI} \
SET <byte 1> <byte 2> <byte 3> <byte 4> <byte 5> COND cccc COMPL

[O.01333]

pa <il> hh:mm:ss xy,ww ERR SYNC a TLI m SSP b TN dddd 3 LN MSG: \
ALM[LOS][LEN][EXJ][PHS][OOF][MAJ][MIN] {PMC|PMA|DMA|MI} \
SET <byte 1> <byte 2> <byte 3> <byte 4> <byte 5> COND cccc COMPL

[O.01333]

pa <il> hh:mm:ss xy,ww ERR SYNC a TLI m SSP b [NPC abc] \
TN dddd 3 LN MSG:
ALM[LOS][LEN][EXJ][PHS][OOF][MAJ][MIN] {PMC|PMA|DMA|MI} SET
<byte 1> <byte 2> <byte 3> <byte 4> <byte 5> COND cccc COMPL

[O.01333]

pa <il> hh:mm:ss xy,ww ERR SYNC a TLI m SSP b [NPC uvmnp] TN dddd \
3 LN MSG:
ALM[LOS][LEN][EXJ][PHS][OOF][MAJ][MIN] {PMC|PMA|DMA|MI} SET
<byte 1> <byte 2> <byte 3> <byte 4> <byte 5> COND cccc COMPL

[O.01335]

I hh:mm:ss xy,ww ERR SYNC a TLI m SSP b [NPC abc] \
TN dddd 3 LN MSG:
ALM[LOS][LEN][EXJ][PHS][OOF][MAJ][MIN] CLR
<byte 1> <byte 2> <byte 3> <byte 4> <byte 5> COND cccc COMPL

[O.01335]

I hh:mm:ss xy,ww ERR SYNC a TLI m SSP b [NPC uvmnp] TN dddd \
3 LN MSG:
ALM[LOS][LEN][EXJ][PHS][OOF][MAJ][MIN] CLR
<byte 1> <byte 2> <byte 3> <byte 4> <byte 5> COND cccc COMPL

[O.01337]

I hh:mm:ss xy,ww ERR MSGS TO LOG DISCARDED COMPL

[O.01341]

I hh:mm:ss xy,ww ERR[ESR] SYNC a TLI m SSP b TN dddd EVENT eeee \
2 LN MSG:
<synchronizer status data bytes>[COND cccc] COMPL

[O.01341]

I hh:mm:ss xy,ww ERR[ESR] SYNC a TLI m SSP b TN dddd EVENT eeee \
2 LN MSG:
<synchronizer status data bytes>[COND cccc] COMPL

[O.01341]

I hh:mm:ss xy,ww ERR[ESR] SYNC a TLI m SSP b TN dddd EVENT eeee \
2 LN MSG:
<synchronizer status data bytes>[NPC [s]abc][COND cccc] COMPL

[O.01342]

I hh:mm:ss xy,ww ERR [ESR] SYNC a TLI m TN dddd EVENT eeee 2 LN MSG:
<synchronizer status data bytes> COND cccc COMPL

[O.01342]

I hh:mm:ss xy,ww ERR [ESR] SYNC a TLI m TN dddd EVENT eeee 2 LN MSG:
<synchronizer status data bytes> COND cccc COMPL

[O.01354]

I hh:mm:ss xy,ww ERR[ESR] CCI s \
TN dddd EVENT eeee 2 LN MSG:
wd01 wd02 wd03 wd04 wd05 wd06 wd07 wd08 wd09 wd10 wd11 \
wd12 COND cc COMPL

[O.01354]

I hh:mm:ss xy,ww ERR[ESR] CCI s \
TN dddd EVENT eeee 2 LN MSG
wd01 wd02 wd03 wd04 wd05 wd06 wd07 wd08 wd09 wd10 wd11 \
wd12 COND cc COMPL

[O.01362]

I hh:mm:ss xy,ww ERR {SOFTWARE|MC} <error type> ERROR 4 LN MSG:
MID=<mid> TN=dddd RC=<rc> ACTION=<action> ENTITY=<entity>
SOURCE=<source> DP=<dp> PROC=<proc>
TSARGS=<tsargs> COMPL

[O.01364]

I hh:mm:ss xy,ww ERR[ESR] UNIT [q]q FC sb \
TN dddd EVENT eeee 2 LN MSG:
<error analysis data> COND cc COMPL

[O.01364]

I hh:mm:ss xy,ww ERR[ESR] UNIT [q]q FC sb \
TN dddd EVENT eeee 2 LN MSG:
<error analysis data> COND cc COMPL

[O.01366]

I hh:mm:ss xy,ww ERR SYNC a MODE {FAST|HOLDOVER|NORMAL} \ {MATE|CRO|TLI m SSP c} TN dddd 2 LN MSG:
<synchronizer status data bytes> COND cccc COMPL

[O.01366]

I hh:mm:ss xy,ww ERR SYNC a MODE {FAST|HOLDOVER|NORMAL} \ {MATE|CRO|TLI m SSP c} TN dddd 2 LN MSG:
<synchronizer status data bytes> COND cccc COMPL

[O.01372]

I hh:mm:ss xy,ww ERR[ESR] NPC [s]abc-[t]def TN dddd \ EVENT eeee 2 LN MSG:
<error analysis data bytes>[COND cc] COMPL

[O.01372]

I hh:mm:ss xy,ww ERR[ESR] NPC uvmnp-wxkqr TN dddd \ 2 LN MSG:
EVENT eeee <error analysis data bytes>[COND cc] COMPL

[O.01372]

I hh:mm:ss xy,ww ERR[ESR] NPC [s]abc-[t]def TN dddd \ EVENT eeee 2 LN MSG:
<error analysis data bytes>[COND cc] COMPL

[O.01372]

I hh:mm:ss xy,ww ERR[ESR] NPC uvmnp-wxkqr TN dddd \ 2 LN MSG:
EVENT eeee <error analysis data bytes>[COND cc] COMPL

[O.01392]

I hh:mm:ss xy,ww ERR HARDWARE <entity> 4 LN MSG:
TN=dddd COND=cc EVENT=xxxx ACTION=<action>
SOURCE=<source> DP=<dp> PROC=<proc> <load>
TSARGS=cn [<tsargs>] COMPL

[O.01392]

I hh:mm:ss xy,ww ERR HARDWARE <entity> 4 LN MSG:
TN=dddd COND=cc EVENT=xxxx ACTION=<action>
SOURCE=<source> DP=<dp> PROC=<proc> <load>
TSARGS=cn [<tsargs>] COMPL

[O.01402]

I hh:mm:ss xy,ww ERR[ESR] UNIT [q]q FMT s TN dddd \
EVENT eeee 2 LN MSG:
<error analysis data> COND cc COMPL

[O.01404]

I hh:mm:ss xy,ww ERR[ESR] UNIT [q]q MIU c TN dddd \
EVENT eeee 2 LN MSG:
<error analysis data> COND cc COMPL

[O.01406]

I hh:mm:ss xy,ww ERR[ESR] UNIT [q]q HMXR c[DEV <devc>]
TN dddd EVENT eeee 2 LN MSG:
<error analysis data> COND cc COMPL

Event and Scheduled PM Reporting Messages

[O.51141.01]

M hh:mm:ss xy,ww n[vv] UTL SCHED PMREPT NPC [s]abc[-[t]def] \\
3 LN MSG:
RI rrrrr ST ssss NI nn <parameter> LV llllllllll LOCN locn AI aaaaa
TOF ttttt[-ooooo][LK p[vv][q[vv]]] COND cc DNY

[O.51141.01]

M hh:mm:ss xy,ww n[vv] UTL SCHED PMREPT NPC uvmnp[-wxkqr] 3 LN MSG:
RI rrrrr ST ssss NI nn <parameter> LV llllllllll LOCN locn AI aaaaa
TOF ttttt[-ooooo][LK p[vv][q[vv]]] COND cc DNY

[O.51141]

M hh:mm:ss xy,ww n[vv] UTL SCHED PMREPT NPC [s]abc[-[t]def] \\
3 LN MSG:
RI rrrrr ST ssss NI nn <parameter> LV llllllllll LOCN locn AI aaaaa
TOF ttttt[-ooooo][LK p[vv][q[vv]]] COMPL

[O.51151.01]

M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED {NPC [s]abc[-[t]def]|ALL} \\
COND cc DNY

[O.51151.01]

M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED {NPC uvmnp[-wxkqr]|ALL} \\
COND cc DNY

[O.51151]

M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED {NPC [s]abc[-[t]def]|ALL} \\
000 COMPL

[O.51151]

M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC [v]ghi RI rrrrr 3 LN MSG:
RD dddd RT cccc NI nn <parameter> LV llllllllll LOCN locn AI aaaaa
TOF ttttt[-ooooo] IM iii[LK p[vv][q[vv]]] EOM

.
.
.

[M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC [u]jkl RI rrrrr \\
3 LN MSG:]
[RD dddd RT cccc NI nn <parameter> LV llllllllll LOCN locn \

```

AI aaaaa]
[TOF ttttt[-ooooo] IM iii[ LK p[vv][ q[vv]]] EOM]
M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC [s]abc[-[t]def] COMPL

[O.51151]

M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC edhfg RI rrrrr 3 LN MSG:
RD dddd RT cccc NI nn <parameter> LV llllllllll LOCN locn AI aaaaa
TOF ttttt[-ooooo] IM iii[ LK p[vv][ q[vv]]] EOM
.
.
.
[M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC opjst RI rrrrr \
3 LN MSG:]
[RD dddd RT cccc NI nn <parameter> LV llllllllll LOCN locn \
AI aaaaa]
[TOF ttttt[-ooooo] IM iii[ LK p[vv][ q[vv]]] EOM]
M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC uvmnp[-wxkqr] COMPL

[O.51161.01]

M hh:mm:ss xy,ww n[vv] INH PMREPT {NPC [s]abc[-[t]def]|ALL} \
COND cc DNY

[O.51161.01]

M hh:mm:ss xy,ww n[vv] INH PMREPT {NPC uvmnp[-wxkqr]|ALL} \
COND cc DNY

[O.51161]

M hh:mm:ss xy,ww n[vv] INH PMREPT {NPC [s]abc[-[t]def]|ALL} COMPL

[O.51161]

M hh:mm:ss xy,ww n[vv] INH PMREPT {NPC uvmnp[-wxkqr]|ALL} COMPL

[O.51171.01]

M hh:mm:ss xy,ww n[vv] ALW PMREPT {NPC uvmnp[-wxkqr]|ALL} \
COND cc DNY

[O.51171.01]

M hh:mm:ss xy,ww n[vv] ALW PMREPT {NPC [s]abc[-[t]def]|ALL} \
COND cc DNY

[O.51171]

M hh:mm:ss xy,ww n[vv] ALW PMREPT {NPC [s]abc-[t]def|ALL} COMPL

```

[O.65061]

pa <il> hh:mm:ss xy,ww ALM <state> <parameter> NPC uvmnp 2 LN
MSG: /
AI aaaaa COUNT cccccccc THLEV llllllll COMPL

[O.65091]

pa <il> hh:mm:ss xy,ww ALM [PMC|PMA|DMA|MI] NPC uvmnp RPSFI COMPL

[O.65091]

pa <il> hh:mm:ss xy,ww ALM [PMC|PMA|DMA|MI] NPC [s]abc RPSFI
COMPL

[O.51141]

M hh:mm:ss xy,ww n[vv] UTL SCHED PMREPT NPC uvmnp[-wxkqr] 3 LN MSG:
RI rrrrr ST ssss NI nn <parameter> LV llllllll LOCN locn AI aaaaa
TOF ttttt[-ooooo][LK p[vv][q[vv]]] COMPL

[O.51171]

M hh:mm:ss xy,ww n[vv] ALW PMREPT {NPC uvmnp-wxkqr|ALL} COMPL

[O.65061]

pa <il> hh:mm:ss xy,ww ALM <state> <parameter> NPC [s]abc 2 LN
MSG: /
AI aaaaa COUNT cccccccc THLEV llllllll COMPL

[O.65061]

I hh:mm:ss xy,ww RPT T-<parameter> NPC uvmnp 2 LN MSG:
LOCN locn AI aaaaa COUNT cccccccc THLEV llllllll COMPL

[O.65061]

I hh:mm:ss xy,ww RPT T-<parameter> NPC [s]abc 2 LN MSG:
LOCN locn AI aaaaa COUNT cccccccc THLEV llllllll COMPL

[O.65092]

I hh:mm:ss xy,ww ALM IDLD NPC uvmnp RPSFI COMPL

[O.65092]

I hh:mm:ss xy,ww ALM IDLD NPC [s]abc RPSFI COMPL

[O.51151]

M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC [v]ghi[-[u]jkl] \
RI rrrrr 3 LN MSG:
RD dddd RT cccc NI nn <parameter> LV llllllll LOCN locn AI aaaaa
TOF ttttt[-ooooo][LK p[vv][q[vv]]] EOM

```
.
.
.
[M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC [v]ghi[-[u]jkl] \
RI rrrrr 3 LN MSG:]
[RD dddd RT cccc NI nn <parameter> LV llllllllll LOCN locn \
AI aaaaa]
[TOF ttttt[-ooooo][ LK p[vv][ q[vv]]] EOM]
M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED ALL COMPL
```

[O.51151]

```
M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED {NPC uvmnp[-wxkqr]|ALL} \
000 COMPL
```

[O.65061]

```
pa <il> hh:mm:ss xy,ww ALM <state> <parameter> NPC [s]abc 2 LN
MSG:
AI aaaaa COUNT ccccccccc THLEV llllllllll COMPL
```

[O.65061]

```
pa <il> hh:mm:ss xy,ww ALM <state> <parameter> NPC uvmnp 2 LN
MSG:
AI aaaaa COUNT ccccccccc THLEV llllllllll COMPL
```

[O.65861]

```
I hh:mm:ss xy,ww UNIT q(q) OI kk[ MPR b][ VT (s)abc] 2 LN MSG:
THRESX <par> LOCN locn AI aaaaa COUNT ccccccccc THLEV llllllllll \
COMPL
```

[O.65861]

```
I hh:mm:ss xy,ww UNIT q(q) OI kk[ MPR b][ VT uvmnp] 2 LN MSG:
THRESX <par> COUNT ccccccccc THLEV llllllllll COMPL
```

[O.65861]

```
A hh:mm:ss xy,ww UNIT q(q) OI kk[ MPR b][ VT [s]abc] 2 LN MSG:
THRESX <par> COUNT ccccccccc THLEV llllllllll COMPL
```

[O.65861]

```
A hh:mm:ss xy,ww UNIT q(q) OI kk[ MPR b][ VT uvmnp] 2 LN MSG:
THRESX <par> COUNT ccccccccc THLEV llllllllll COMPL
```

Input Denial Messages

[O.01101]

M hh:mm:ss xy,ww n[vv] {BADVERB|FRMERR|SEQERR} BAD SYNTAX e LN MSG:
First 70 characters of input message.
Remaining text of input message STOPPED

[O.01111]

M hh:mm:ss xy,ww n[vv] CMD MC {OOS|MCOND|INSERVICE|MPDBASE} \
e LN MSG:
<First 70 characters of input message.>
<Remaining text of input message> STOPPED

[O.01121]

A hh:mm:ss xy,ww ERR CMD ABT [TN abcd] e LN MSG:
<First 70 characters of input message.>
<Remaining text of input message> STOPPED

Startup Messages

[O.01201]

**ICI RESET

[O.01211]

ICI STARTUP {STF|ATP}

[O.01221]

MP STARTUP {STF|ATP}

[O.01241]

BOOT FROM {PMEM|SMEM}

[O.01242]

BOOT FROM PMEM FAILED
ATTEMPTING TO BOOT FROM SMEM

[O.01251]

RESET STOPPED

[O.01261]

I hh:mm:ss xy,ww n[vv] MC RESET RELEASE DACSIgg.pp ISSUE r \
2 LN MSG:
FPKG kkttuuvv [COND cc] COMPL

[O.01271]

BX2 {STF|ATP}

[O.01272]

EBX STARTUP {STF|ATP}

[O.01281]

MTC {STF|ATP}

[O.01282]

EMTC STARTUP {STF|ATP}

[O.01291]

I hh:mm:ss xy,ww INVALID SFW ID BLOCK COND cc COMPL

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ABORT

Explanation of Command

The abort command enables a user to stop a currently executing abortable task previously initiated by the same user from continuing execution. This command is helpful to use when a task is producing large amounts of output that the user does not wish to view, or to stop a task that is operating over a range of entities.

If no users are logged in, a command entered on one link CANNOT be aborted from another link. If the same user is logged in on two different links, commands entered from one link CAN be aborted from another link. Only USER DAX can abort commands entered on any link issued by any user.

When an abortable task is operating over a range of entities, DACS II completes the task on the current entity, and then stop the task for the remaining entities in the specified range. Since the abort command also deletes all messages queued for output for the link or virtual circuit on which the abort command was entered, the user should use appropriate query commands to determine which entities in the range have been operated upon before the task was stopped.

In the case where a task has already executed, or no task is executing when the abort command is entered, the abort command does not take effect. Any remaining output is not generated, and DACS II does not generate a completion message or an ABT completion message.

The following commands may be aborted:

31341 GRTH	NPC
31352 GRTH	NPC
31362 GRTH	NPC
31363 GRTH	NPC
31371 GRTH	NPC
32341 DGR	NPC
33351 RMV	NPC
34351 RST	NPC
38271 CHG	NPC,TYPE (abortable only for DS3 NPCs.)
38281 CHG	NPC,TYPE,ALMOPT,AIS

38321 CHG	NPC,TS0
38323 CHG	NPC,TS0M
38324 CHG	NPC,NFS
38341 CHG	NPC,LPBK
51151 UTL	QRY,PMSCHED
51161 INH	PMREPT
51171 ALW	PMREPT
52011 UTL	QRY,CMAP
52031 UTL	QRY,DMAP
52041 UTL	QRY,TO
52051 UTL	QRY,FROM
52101 UTL	QRY,BCAST,ALL
52201 UTL	QRY,MARK
52211 UTL	QRY,MARK
52311 UTL	QRY,RTMAP DLMAP
52321 UTL	QRY,SCDG,ALL,STATE
52501 UTL	QRY,SECH,TO
52511 UTL	QRY,SCON,CH
52581 UTL	QRY,LOAD
53041 UTL	QRY,EQD,NPCS
53101 UTL	QRY,ALL
53103 UTL	QRY,UNIT
53104 UTL	QRY,ALL,COMMON
53105 UTL	QRY,COMMON
53151 UTL	QRY,ALMS,DBASE
55011 UTL	QRY,SWER,ERR
55012 UTL	QRY,HWER,ERR
55181 UTL	QRY,XCSB
56021 UTL	QRY,ALMOPT,NPC
56311 UTL	QRY,STATE,NPC
56314 UTL	QRY,STATE,NPC

56321 UTL	QRY,TS0,NPC
56323 UTL	QRY,TS0M,NPC
56324 UTL	QRY,NFS,NPC
56341 UTL	QRY,DD
56343 UTL	QRY,DD
56351 UTL	QRY,NPC
56353 UTL	QRY,BC,NPC
56501 UTL	QRY,SROOF

Command

[I.55711]

ABT!

Completion Message

[O.55711]

M hh:mm:ss xy,ww n[vv] CMD ABT e LN MSG:
<First 70 characters of aborted command>
<Remaining text of aborted command> ABT COMPL

Explanation of Parameters

ABT Abort
e Number of lines in the message
cc Hexadecimal condition code

ALARM CUTOFF ACTIVE

Explanation of Command

This output message automatically reports the activation (depressing) of the alarm cutoff (ACO) switch. Activation of this switch silences the audible alarms. The ACO switch will be inactivated when all alarms are retired or when a new alarm appears on the frame. For example, if there is a minor alarm on the frame before the CGA major alarm is induced, when the CGA major alarm is retired by an ACO action, the minor alarm will remain. In this case, there will be a second ACO ACTIVE message.

Autonomous Message

[O.65071]

I hh:mm:ss xy,ww ACO ACTIVE COMPL

Explanation of Parameters

ACO	Alarm cutoff
ACTIVE	Active
state	Explanation
ACTIVE	Alarm cutoff is active

ALTERNATE CROSS-CONNECTIONS

Explanation of Command



NOTE:

This command applies to 1.544 Mbit/s Terminations only.

This command moves single or a range of 64 kbit/s circuits from one (OLD) service-carrying digroup to another (NEW) service-carrying digroup. All circuit parameters associated with the circuit on the OLD digroup before the ACON command is executed are retained with the circuit on the NEW digroup after the ACON command is executed.

The ACON command creates a new connection consistent with existing DACS II cross-connect topologies. The user should make sure that this connection is suitable for the type of traffic intended for the circuit.



NOTE:

The ACON command cannot be done on either Gateway or DSP applications.

Command

Nonhierarchical

[I.14001]

```
ACON:[FRM xy][,SEQ ww]:OLD [s]abcddd[-eee],\
NEW [t]ghijjj[-kkk][,INCL]!
```

Hierarchical

[I.14001]

```
ACON:[FRM xy][,SEQ ww]:OLD uvmnpddd[-eee],\
NEW wxkqrjjj[-kkk][,INCL]!
```

Completion Message

Nonhierarchical

[O.14001]

```
M hh:mm:ss xy,ww n[vv] ACON [s]abcddd[-eee],[t]ghijjj[-kkk] \
[ INCL] COMPL
```

Hierarchical

[O.14001]

M hh:mm:ss xy,ww n[vv] ACON uvmnpddd[-eee],wxkqrjjj[-kkk]\
[INCL] COMPL

Denial Message

Nonhierarchical

[O.14001.01]

M hh:mm:ss xy,ww n[vv] ACON [s]abcddd[-eee],[t]ghijjj[-kkk]\
[INCL] COND cc DNY

Hierarchical

[O.14001.01]

M hh:mm:ss xy,ww n[vv] ACON uvmnpddd[-eee],wxkqrjjj[-kkk]\
[INCL] COND cc DNY

Explanation of Parameters

[s]abc	The 3- or 4-digit nonhierarchical OLD NPC number
[t]ghi	The 3- or 4-digit nonhierarchical NEW NPC number
uvmnp	The 3- or 4-digit hierarchical OLD NPC number
wxkqr	The 3- or 4-digit hierarchical NEW NPC number
eee, kkk	End of channel range



NOTE:

Valid types for old and new NPCs are mnxyz where mn=DE, DA, TE, or TA and where z cannot = 9. Also, an NPC which supports these circuits cannot be manually removed unless the INCL keyword is given in the remove message.

cc Hexadecimal condition code

cc	<i>Explanation</i>
1E	Customer control or red circuit exists
01	Invalid range for specified NPC type
10	NPC out of service or failed

cc	<i>Explanation</i>
11	NPC not equipped
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
18	DSPI not in service, or failed
21	Trunk conditioning is invalid
32	Termination is under test
80	Database conference width does not match the range in input command
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
62	Invalid channel number
BA	Inactive side NPC out of service and inactive side in service
DF	Unmatched channel range
EC	Invalid channel 000 cross-connection specified
70	NPC invalid type
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed
ED	OLD termination is not mapped

cc	<i>Explanation</i>
EF	Invalid circuit type
F0	Range not allowed for circuit type
F4	OLD and NEW channels cannot be the same
F5	Conference first channel doesn't match input
F6	Leg type mismatch
F7	OLD data channel cannot be parity channel type
F8	OLD and NEW Data and Parity channels partially overlap
4A	channel part of a TP or TG

ACTIVATE ALTERNATE MAPS

Explanation of Command

This command requests the activation of an alternate map.

DACS II will not generate individual completion messages for each successful cross-connection; however, it will generate individual denial messages. Moreover, the individual denial messages will only be output to the link/user where the alternate map command was entered, independent of the output screening level.

When only one end of a TCON is remapped via this command, the trunk conditioning specified for a particular cross-connection when that cross-connection was first established will be applied to a disconnected channel.

Command

1.544 Mbit/s Termination

[I.39201]

ACT:[FRM xy][,SEQ ww]:MAP <map name>[,CLR][,INCL]!

2.048 Mbit/s Termination

[I.39201]

ACT:[FRM xy][,SEQ ww]:MAP <map name>[,CLR][,INCL]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.39201]

M hh:mm:ss xy,ww n[vv] ACT MAP <map name>[CLR][INCL]
[NPC [s]abc] COND cc COMPL

Hierarchical

[O.39201]

M hh:mm:ss xy,ww n[vv] ACT MAP <map name>[CLR][INCL]
[NPC uvmp] COND cc COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.39201]

M hh:mm:ss xy,ww n[vv] ACT MAP <map name>[CLR][INCL]
[NPC [s]abc] COND cc COMPL

Hierarchical

[O.39201]

M hh:mm:ss xy,ww n[vv] ACT MAP <map name>[CLR][INCL]
[NPC uvmp] COND cc COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.39201.02]

M hh:mm:ss xy,ww n[vv] ACT MAP <map name>[CLR][INCL]
2 LN MSG:
TCON [s]jklddd[-eee],[t]ghijjj[-kkk][<tc>][AIS]
[CUS][INCL][RDC] COND cc DNY

Hierarchical

[O.39201.02]

M hh:mm:ss xy,ww n[vv] ACT MAP <map name>[CLR][INCL]
2 LN MSG:
TCON edhfgddd[-eee],wxkqrjjj[-kkk][<tc>][AIS]
[CUS|INCL][RDC] COND cc DNY

Common

[O.39201.01]

M hh:mm:ss xy,ww n[vv] ACT MAP <map name>[CLR][INCL]
COND cc DNY

[O.55703]

M hh:mm:ss xy,ww n[vv] ACT MAP IN PROGRESS



NOTE:

As the alternate map is being executed, DACS II will generate the above IN PROGRESS message every 20 seconds.

2.048 Mbit/s Termination

Nonhierarchical

[O.39201.02]

```
M hh:mm:ss xy,ww n[vv] ACT MAP <map name>[ CLR][ INCL]
2 LN MSG:
TCON [s]jklddd[-eee],[t]ghijjj[-kkk][ <tc>][ <sc>]
[ NAM][ CUS][ INCL][ RDC] COND cc DNY
```

Hierarchical

[O.39201.02]

```
M hh:mm:ss xy,ww n[vv] ACT MAP <map name>[ CLR][ INCL]
2 LN MSG:
TCON edhfgddd[-eee],wxkqrjjj[-kkk][ <tc>][ <sc>]
[ NAM][ CUS|INCL][ RDC] COND cc DNY
```

Common

[O.39201.01]

```
M hh:mm:ss xy,ww n[vv] ACT MAP <map name>[ CLR][ INCL]
COND cc DNY
```

[O.55703]

```
M hh:mm:ss xy,ww n[vv] ACT MAP IN PROGRESS
```



NOTE:

As the alternate map is being executed, DACS II will generate the above IN PROGRESS message every 20 seconds.

Explanation of Parameters

MAP	Map
map name	Map name (1 to 7 uppercase alphanumeric characters) Name of an already existing alternate map.
CLR	Clear

	Clear all cross-connections on all NPCs included in the map before activating the alternate map.
INCL	Inclusive
	When an alternate map is activated, existing circuits that are marked CUS or RDC will be overwritten only if the INCL keyword has been specified. Otherwise, a denial will be issued as is currently done for channels under test, etc.
NPC	Network processing circuit
[s]abc	The first 3- or 4-digit nonhierarchical NPC number of NPC containing a non-two-way, two-point cross-connect.
[s]jkl,[t]ghi	The 3- or 4-digit nonhierarchical NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	First hierarchical NPC number of NPC containing a non-two-way, two-point cross-connection.
edhfg	Hierarchical NPC number
wxkqr	Hierarchical NPC number
	uv,wx,ed Unit number
	m,k,h Module number
	np,qr,fg NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd,jjj	Channel number, the first channel of a range
eee,kkk	Channel number, the last channel of a range
	001-024
	000-031 (CEPT)
tc	Trunk conditioning

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AIS	Alarm Indication Signal (All 1's)
sc	Signaling control
	This variable represents the optional signaling bit control specification and is used only in the Channel Associated Signaling (CAS) to CAS application with CAS signaling.

If this option is not used, all four cross-connected time slot 16 (abcd) signaling bits in each direction will be cross-connected unchanged.

Signaling control is specified as follows:

SC(abcd,efgh)

abcd Time slot 16 signalling bits, From direction

efgh Time slot 16 signalling bits, To direction

All 8 bits can be controlled independently. Control is applied by replacing each character in variable abcd or efgh with the appropriate control character.

The allowable control characters are:

P Pass through unchanged

V Pass through inverted

0 Set output to 0

1 Set output to 1

The effect of the V control character depends upon whether the connection is international or gateway.

International: Inversion takes place on both the From and To-direction sides. The net effect is to cancel out the inversion. Hence it will appear that no inversion took place.

Gateway: Inversion takes place only on the international side of the connection. The effect is an inversion.

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NAM No A to Mu (conversion)

A- to μ -law conversion is inhibited.

cc Hexadecimal condition code

cc *Explanation*

00 No conditions

62 File is being accessed

64 File doesn't exist/can't be accessed

cc	<i>Explanation</i>
70	Some circuits not activated, cleared or pictured
71	The reference map does not exist
72	The map is not valid
73	Both sides of CCN are OOS
74	At least one UC is OOS or At least one UC is failed
75	At least one UC is not the correct type
D5	No user is logged in on the link/vc
01	Invalid range for specified NPC type
02	Invalid NPC type for AIS insertion
06	Invalid range for specified FROM NPC type
07	Invalid range for specified TO NPC type
10	NPC out of service or failed
11	NPC not equipped
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
21	Trunk conditioning is invalid
30	Termination is already assigned
32	Termination is under test
35	Termination is protected (RDLD)
36	Termination is not connected as indicated
40	CCN denied request
54	Conversion leg is terminated

cc	<i>Explanation</i>
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
A6	Deny SLC for Alternate maps
A7	Deny non-channelized NPCs for Alternate Maps
E8	SC invalid for cross-connection specified
E9	MUX or TRB invalid for cross-connection specified
EA	AIS invalid for cross-connection specified
EB	NAM invalid for cross-connection specified
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
85	Using the 24th channel of a T1DM NPC
FF	Termination is in process of being rolled
B0	Unit 1 denied request
B1	Unit 2 denied request
B2	Unit 3 denied request
B3	Unit 4 denied request
B4	Unit 5 denied request
B5	Unit 6 denied request
2A	Deny Clear-2MB for Alternate Maps
4A	channel part of a TP or TG

ADD TABS LINK PARAMETERS

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This command is used to provision a TABS administrative link.

Command

[I.36007]

ADD:FRM xy,SEQ ww:LINK j,APPL {ASCS|ASCD|PM}[,L2AD aa] \\
[,POLL ttt]!

Completion Message

[O.36007]

M hh:mm:ss xy,ww n[vv] ADD LINK j APPL {ASCS|ASCD|PM}\
[L2AD aa][POLL ttt] COMPL

Denial Message

[O.36007.01]

M hh:mm:ss xy,ww n[vv] ADD LINK j APPL {ASCS|ASCD|PM}\
[L2AD aa][POLL ttt] COND cc DNY

Explanation of Parameters

LINK	Link
j	Administrative link number (either 3 or 4)
POLL	Polling
ttt	Time in seconds
	001 through 255 for ASCS or ASCD applications
	000 through 044 for PM applications
APPL	Application of the TABS link

ASCS	Alarm surveillance and control, summary
ASCD	Alarm surveillance and control, detailed
PM	Performance monitoring
L2AD aa	Layer 2 address (00 through 31)
cc	Hexadecimal condition code
cc	<i>Explanation</i>
DF	Command and protocol are inconsistent
3A	Invalid poll time
3B	Unspecified L2 address
3C	Duplicate L2 address

ADD LINK, X.25, PROTOCOL, DATA LINK, LAYER PARAMETERS

Explanation of Command

This command allows the user to provision the protocol-specific parameters in the data link layer of an X.25 administrative link.

Command

```
[I.36003]  
ADD: [FRM xy][, SEQ ww]: LINK j[, K b][, T1 ee][, T3 ggg][, N2 aa] \  
[, FRMAD {A|B}]!
```

Completion Message

```
[O.36003]  
M hh:mm:ss xy, ww n[vv] ADD LINK j[ K b][ T1 ee][ T3 ggg] \  
[ N2 aa][ FRMAD {A|B}] COMPL
```

Denial Message

```
[O.36003.01]  
M hh:mm:ss xy, ww n[vv] ADD LINK j[ K b][ T1 ee][ T3 ggg] \  
[ N2 aa][ FRMAD {A|B}] COND cc DNY
```

Explanation of Parameters

LINK	Link
j	Administrative link number (5 or 6)
FRMAD	Frame address used by each frame in the Data Link Layer of X.25 protocol.
A	Data link layer frame address A. Default is A
B	Data link layer frame address B
K	Maximum number of outstanding I frames
b	Number of frames (1 through 7). Default is 7
T1	Acknowledgment timer

ee	Timer setting in seconds (2 through 20). Default is 3 seconds
T3	Disconnect (or Idle channel) timer
ggg	Timer setting in seconds (4 through 120). Default is 26 seconds
N2	Maximum number of frame transmissions
aa	Number of frame transmissions (2 through 16) (including original transmission). Default is 7
cc	Hexadecimal condition code

cc	<i>Explanation</i>
03	Subject entity is in service
D0	Command is Frame administrator (DAX) only.

ADD LINK, PROTOCOL, BAUD

Explanation of Command

2.048 Mbit/s Termination

This command adds a Snider, X.25, TABS, or TCP/IP administrative link.

1.544 Mbit/s Termination

This command adds a Snider, Modified Snider, X.25, TABS, or TCP/IP administrative link. Only one modified Snider link may be provisioned.

This command can also be used to initialize or change the performance parameters of the link, including the protocol (PTCOL), link speed (BAUD), alarm class (ALM), backspace (BS), Xon/Xoff flow control (XON), and Enq/Ack flow control (ENQ) provisioning.

At least one parameter must be given.

On input, if a virtual circuit range is specified as zero (0), the corresponding group number specified is ignored by DACS II.

Command

[I.36001]

ADD: [FRM xy][, SEQ ww]: LINK j, PTCOL {S|X|T|M|I}[, BAUD bb][, ALM k] \\
[, BS e][, ENQ q][, XON x][, INIT]!

If the protocol is Snider:

[I.36001]

ADD: [FRM xy][, SEQ ww]: LINK j, PTCOL S[, BAUD bb][, ALM k] \\
[, BS e][, ENQ q][, XON x][, INIT]!

If the protocol is X.25:

[I.36001]

ADD: [FRM xy][, SEQ ww]: LINK j, PTCOL X[, ALM k][, INIT]!

If the protocol is TABS:

[I.36001]

ADD: [FRM xy][, SEQ ww]: LINK j, PTCOL T[, BAUD bb][, ALM k][, INIT]!

If the protocol is Modified Snider:

[I.36001]

ADD: [FRM xy][, SEQ ww]: LINK j, PTCOL M[, ALM k][, INIT]!

If the protocol is TCP/IP:

[I.36001]

ADD: [FRM xy][, SEQ ww]: LINK j, PTCOL I[, ALM k][, INIT]!

Completion Message

The output message received depends upon whether ENQ and XON are specified in the input command. If ENQ and XON are not specified in the input command, the output message is the following:

[O.36001]

M hh:mm:ss xy, ww n[vv] ADD LINK j[PTCOL {S|X|T|M|I}] \
[BAUD bb][ALM k][BS e][INIT] COMPL

If ENQ and XON are specified in the input command, the output message is the following:

M hh:mm:ss xy, ww n[vv] ADD LINK j[PTCOL {S|X|T|M|I}] \
[BAUD bb][ALM k][BS e][INIT] 2 LN MSG:
[ENQ q][XON x] COMPL

Denial Message

The output message received depends upon whether ENQ and XON are specified in the input command. If ENQ and XON are not specified in the input command, the output message is the following:

[O.36001.01]

M hh:mm:ss xy, ww n[vv] ADD LINK j[PTCOL {S|X|T|M|I}] \
[BAUD bb][ALM k][BS e][INIT] COND cc DNY

If ENQ and XON are specified in the input command, the output message is the following:

M hh:mm:ss xy, ww n[vv] ADD LINK j[PTCOL {S|X|T|M|I}] \
[BAUD bb][ALM k][BS e][INIT] 2 LN MSG:
[ENQ q][XON x] COND cc DNY

**Explanation of
Parameters**

LINK	Link
j	Administrative link number (1 through 7)
PTCOL	Protocol
S	SCCSAI (Snider protocol)
X	X.25 Synchronous protocol
T	TABS (Telemetry Asynchronous Block Serial protocol)
M	Modified Snider Protocol (requires baud rate of 1200)
I	Internet Protocol
BAUD	Baud
bb	Baud rate
	The baud rate is not provisioned for synchronous X.25 and TCP/IP links. Timing for X.25 links is received from the connected X.25 network or device. Provisioning the baud rate applies only to asynchronous Snider links.
	03 300
	06 600
	12 1200
	24 2400
	48 4800
	96 9600
ALM	Alarm
k	Alarm class for link hardware failures
	1 Minor (default)
	2 Major
BS	Backspace
e	Character echoed for backspace or control-h
	0 Backspace is echoed (default)
	1 Underscore is echoed
ENQ	Enquire
q	ENQ/ACK Protocol Enable/Disable Control
	0 Disabled

	1	Enabled (default)
	If the DACS II frame has been set to expect the ENQ/ACK Protocol Enable/Disable Control and the sending terminal is not set up properly to send the ACK in response to ENQ, then after several attempts to receive ACK the DACS II frame autonomously declares a protocol OOS for ENQ/ACK, removes the link, performs diagnostics and then restores the link. At this point the ENQ/ACK protocol is set to disabled.	
XON	XON	
x	XON/XOFF Protocol Enable/Disable Control	
	0	Disabled (default)
	1	Enabled
	The XON/XOFF Protocol Enable/Disable Control only takes effect when the DACS II frame is in output mode. The effect of XOFF lasts for 60 seconds or until an XON is received. If the frame has data to be output on the given link (that is, from a command executed on that link, or output data from another monitored link), and XOFFs are received in a manner such that at the end of an 60 second OFF interval, a new 60 second OFF interval begins, thus preventing the frame from delivering output data, then the frame declares a software error based on the assumption that a software communications error exists. The link is autonomously removed, diagnosed, and restored. Following restoral, queued output data is flushed. The XON protocol is still in effect after the link is restored.	
INIT	Initialize Initialize the administrative link; all parameters are set to default except those specified in the command.	
cc	Hexadecimal condition code	
	cc	<i>Explanation</i>
	01	Subject entity is equipped
	03	Subject entity is in service
	D0	Command is Frame administrator (DAX) only.
	DF	Command and protocol are inconsistent

cc	<i>Explanation</i>
2A	Incorrect pack type in slot
EA	XON/XOFF flow control is supported only on Snider link
EB	ENQ/ACK flow control is supported only on Snider link

ADD X.25 LINK PARAMETERS

Explanation of Command

This command allows a user to provision an X.25 administrative link with packet layer parameters.

If a virtual circuit (VC) range is specified as zero (0), the corresponding group number specified in gghh is ignored by DACS II.

Parameters T20, R20, DBIT, and VC() are per-link parameters and the remaining parameters are per-VC parameters.

If a 3-digit link+VC number (501, 502, ..) is used and only per-VC parameters are specified, then the command is accepted and the values apply only to the specified VC.

If a 3-digit link+VC number is used and at least one per-link parameter is specified, then the command is denied.

If a 1-digit link number (5 or 6) is used and any per-link and/or per-VC parameter is specified, then the command is accepted and the values apply to all VCs in the link. To ensure proper interface between DACS II and the packet network, packet layer parameters at DACS II and network ends of the X.25 link must be identical.

Command

[I.36005]

```
ADD:FRM xy,SEQ ww:LINK j[mm][,W c][,P ddd][,T20 iii]
[,T22 jjj][,T23 kkk][,T25 lll][,T26 mmm][,R20 nn]
[,R22 p][,R23 qq][,R25 r][,DBIT v][,VC(ppss,gghh)]!
```

Completion Message

[O.36005]

```
M hh:mm:ss xy,ww n[vv] ADD LINK j[mm][ W c][ P ddd]
[ T20 iii][ T22 jjj][ T23 kkk][ T25 lll][ T26 mmm]
[ R20 nn][ R22 p][ R23 qq][ R25 r][ DBIT v][ VC(ppss,gghh)] COMPL
```



NOTE:

If output message is longer than 80 characters, the following is output.

[O.36005]

```
M hh:mm:ss xy,ww n[vv] ADD LINK j[mm][ W c][ P ddd] \  
[ T20 iii][ T22 jjj] 2 LN MSG:  
[ T23 kkk][ T25 lll][ T26 mmm][ R20 nn][ R22 p][ R23 qq] \  
[ R25 r][ DBIT v][ VC(ppss,gghh)] COMPL
```

Denial Message

[O.36005.01]

```
M hh:mm:ss xy,ww n[vv] ADD LINK j[mm][ W c][ P ddd] \  
[ T20 iii][ T22 jjj][ T23 kkk] [ T25 lll][ T26 mmm] \  
[ R20 nn][ R22 p][ R23 qq][ R25 r][ DBIT v][ VC(ppss,gghh)] \  
COND cc DNY
```



NOTE:

If output message is longer than 80 characters:

[O.36005.01]

```
M hh:mm:ss xy,ww n[vv] ADD LINK j[mm][ W c][ P ddd] \  
[ T20 iii][ T22 jjj] 2 LN MSG:  
[ T23 kkk][ T25 lll][ T26 mmm][ R20 nn][ R22 p][ R23 qq] \  
[ R25 r][ DBIT v][ VC(ppss,gghh)] COND cc DNY
```

Explanation of Parameters

LINK	Link
j[mm]	Administrative link number
j	Physical link number (l is either 5 or 6)
mm	Virtual circuit number (01 through 16)
W	Window
c	Window size (1 through 7). Default window size is 2
P	Packet
ddd	Packet size. Can be 128, 256, 512 octets. Default is 128 octets
T20	Restart request response timer
iii	Timer setting (10 through 180 seconds). Default is 180 seconds
	T20 is valid only on a per link basis and is denied on an individual virtual circuit.
T22	Reset request response timer
jjj	Timer setting (10 through 180 seconds). Default is 180 seconds

T23	Disconnect (or idle channel) timer
kkk	Timer setting (10 through 180 seconds). Default is 180 seconds
T25	Data packet acknowledgement timer
lll	Timer setting (10 through 200 seconds). Default is 200 seconds
T26	Interrupt response timer.
mmm	Timer setting (10 through 180 seconds). Default is 180 seconds
R20	Restart request retransmission counter
nn	Counter setting (1 through 10). Default is 1
	R20 is valid only on a per link basis and will be denied on an individual virtual circuit
R22	Reset request retransmission counter
p	Counter setting (1 through 3). Default is 1
R23	Clear request retransmission counter
qq	Counter setting (1 through 10). Default is 1
R25	Data packet retransmission counter
r	Counter setting (0 through 3). Default is 0
VC	Virtual circuit
ppss	Virtual circuit number
pp	Range of PVCs
ss	Range of SVCs

The sum of the number of PVCs and SVCs must be equal to 16.

Table 1 shows the default values for these fields.

Tables 1 and 2 show the acceptable values for these fields, allowing for an LCN numbering scheme of 00-255.

"pp"	"ss"	Number of PVCs	Number of SVCs	Starting LCN for first PVC Channel	Starting LCN for first SVC Channel
00	16	00	16	--	01
01	15	01	15	01	02
02	14	02	14	01	03

"pp"	"ss"	Number of PVCs	Number of SVCs	Starting LCN for first PVC Channel	Starting LCN for first SVC Channel
03	13	03	13	01	04
04	12	04	12	01	05
05	11	05	11	01	06
06	10	06	10	01	07
07	09	07	09	01	08
08	08	08	08	01	09
09	07	09	07	01	10
10	06	10	06	01	11
11	05	11	05	01	12
12	04	12	04	01	13
13	03	13	03	01	14
14	02	14	02	01	15
15	01	15	01	01	16
16	00	16	00	01	--

"pp"	"ss"	Number of PVCs	Number of SVCs	Starting LCN for first PVC Channel	Starting LCN for first SVC Channel
$0 \leq nn \leq 48$					
20	nn	00	16	--	nn
21	nn	01	15	nn	nn+1
22	nn	02	14	nn	nn+2
23	nn	03	13	nn	nn+3
24	nn	04	12	nn	nn+4

"pp"	"ss"	Number of PVCs	Number of SVCs	Starting LCN for first PVC Channel	Starting LCN for first SVC Channel
25	nn	05	11	nn	nn+5
26	nn	06	10	nn	nn+6
27	nn	07	09	nn	nn+7
28	nn	08	08	nn	nn+8
29	nn	09	07	nn	nn+9
30	nn	10	06	nn	nn+10
31	nn	11	05	nn	nn+11
32	nn	12	04	nn	nn+12
33	nn	13	03	nn	nn+13
34	nn	14	02	nn	nn+14
35	nn	15	01	nn	nn+15
36	nn	16	00	nn	--
40	nn	00	16	--	nn+64
41	nn	01	15	nn+64	nn+65
42	nn	02	14	nn+64	nn+66
43	nn	03	13	nn+64	nn+67
44	nn	04	12	nn+64	nn+68
45	nn	05	11	nn+64	nn+69
46	nn	06	10	nn+64	nn+70
47	nn	07	09	nn+64	nn+71
48	nn	08	08	nn+64	nn+72
49	nn	09	07	nn+64	nn+73
50	nn	10	06	nn+64	nn+74

"pp"	"ss"	Number of PVCs	Number of SVCs	Starting LCN for first PVC Channel	Starting LCN for first SVC Channel
51	nn	11	05	nn+64	nn+75
52	nn	12	04	nn+64	nn+76
53	nn	13	03	nn+64	nn+77
54	nn	14	02	nn+64	nn+78
55	nn	15	01	nn+64	nn+79
56	nn	16	00	nn+64	--
60	nn	00	16	--	nn+128
61	nn	01	15	nn+128	nn+129
62	nn	02	14	nn+128	nn+130
63	nn	03	13	nn+128	nn+131
64	nn	04	12	nn+128	nn+132
65	nn	05	11	nn+128	nn+133
66	nn	06	10	nn+128	nn+134
67	nn	07	09	nn+128	nn+135
68	nn	08	08	nn+128	nn+136
69	nn	09	07	nn+128	nn+137
70	nn	10	06	nn+128	nn+138
71	nn	11	05	nn+128	nn+139
72	nn	12	04	nn+128	nn+140
73	nn	13	03	nn+128	nn+141
74	nn	14	02	nn+128	nn+142
75	nn	15	01	nn+128	nn+143
76	nn	16	00	nn+128	--

"pp"	"ss"	Number of PVCs	Number of SVCs	Starting LCN for first PVC Channel	Starting LCN for first SVC Channel
80	nn	00	16	--	nn+192
81	nn	01	15	nn+192	nn+193
82	nn	02	14	nn+192	nn+194
83	nn	03	13	nn+192	nn+195
84	nn	04	12	nn+192	nn+196
85	nn	05	11	nn+192	nn+197
86	nn	06	10	nn+192	nn+198
87	nn	07	09	nn+192	nn+199
88	nn	08	08	nn+192	nn+200
89	nn	09	07	nn+192	nn+201
90	nn	10	06	nn+192	nn+202
91	nn	11	05	nn+192	nn+203
92	nn	12	04	nn+192	nn+204
93	nn	13	03	nn+192	nn+205
94	nn	14	02	nn+192	nn+206
95	nn	15	01	nn+192	nn+207
96	nn	16	00	nn+192	--

gghh

Group number

gg Group number for all PVCs (00 through 15)

hh Group number for all SVCs (00 through 15)

VC() is valid only on a per link basis and is denied on an individual virtual circuit.

DBIT

D-bit

<i>v</i>	<i>X.25 d-bit setting</i>
0	Off (unset) (acknowledgement done from local DTE). Default
1	On (set) (acknowledgement done from remote DTE)
	DBIT is valid only on a per link basis and is denied on an individual virtual circuit.
cc	Hexadecimal condition code
cc	<i>Explanation</i>
03	Subject entity is in service
DF	Command and protocol are inconsistent
E2	Invalid link number specified
E3	Can't Use LCN 0/LGN 0 - designated as a supervisory channel only

ADD NETWORK PROCESSING CIRCUIT

Explanation of Command

This message adds one or more network processing circuits (NPCs) of the facility terminating unit (FTU) into an alternate map while in a map session.

Command

Nonhierarchical

[I.36021]

```
ADD:[FRM xy][,SEQ ww]:NPC {[s]abc-[t]def|[s]abc[, [s]ghi]...
[, [t]def]]!
```

Hierarchical

[I.36021]

```
ADD:[FRM xy][,SEQ ww]:NPC {uvmnp-wxkqr|uvmnp[,edfgh]...
[,wxkqr]]!
```

Completion Message

If the command is accepted by DACS II, the following acknowledgement will be output.

OK

Explanation of Parameters

NPC Network processing circuit

[s]abc,[t]def,[s]ghi

The 3- or 4-digit nonhierarchical NPC numbers

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp Hierarchical NPC number at beginning of range

wxkqr Hierarchical NPC number at end of range

edfgh Hierarchical NPC number

uv,wx,ed Unit number

m,k,f Module number

np,qr,gh NPC number

For a listing of the hierarchical numbering scheme, refer
to Chapter 2, "NPC Numbering and XYZ Parameters."

ADD RT| DL

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This command is used to request assignment of from one to five network processing circuits of type DSxyz to a specific SLC[®] carrier bank or a digital carrier line unit system. This command also allows for designation of remote terminal digital line parameters to a grown DS-type network processing circuit.

Use this command to enter the bank's identification number, its mode of operation and to designate the digroups associated with the network processing circuit.

Data Link

For SLC 96 carrier, the existence of a data link on digroup A and the meaning of the PWR/MISC alarm carried on the data link are identified. For a SLC Series 5 Carrier Feature Package C (FPC) interface, this message allows the user to specify if the remote terminal is to be retrofitted from a Central Office Terminal (COT) to DACS II.

RFT Keyword

The retrofit (RTF) keyword is applicable only to SLC Series 5 Carrier FPC remote terminals. If the remote terminal exists and is to be cutover from an RT-COT interface to DACS II, the RTF keyword must be entered in this command, and the remote terminal retrofit procedure must be followed. Note that, at least one digroup with its associated NPC number must be present on input. Also note that options sss and no data line (NDL) can only be specified if DGA aaa is present on input. This command is used to request assignment of from one to five network processing circuits of type DSxyz to a specific SLC[®] carrier bank or a DCLU system.

Bank Identification Number

In this message, the bank's identification number, its mode of operation and its designated digroups display. For SLC 96, the existence of a data link on the digroup A and the meaning of the PWR/MISC alarm carried on the data link, if it exists, are identified. For SLC Series 5 Feature Package C (FPC) interface, this

message allows the user to specify if the remote terminal is to be retrofitted from a COT to DACS II.

This message also allows for designation of RT (DL) parameters to a grown DS-type NPC. Note that, at least one digroup with its associated network processing number must be present on the input message. Also note that the options of sss and NDL can only be specified.

RT-COT Interface

The RTF keyword is applicable only to SLC Series 5 FPC remote terminals. If the remote terminal exists and is to be cutover from a RT-COT interface to DACS II, the RTF must be entered in this command, and the remote terminal retrofit procedure must be followed. Note that at least one digroup with its associated NPC number must be present on the input message. Also note that the options of sss and NDL can only be specified if the DGA [s]aaa is present on the input message. The RTF key word is applicable only to SLC Series 5 FPC RTs. If the FPC RT is in service and is to be cutover from an RT-COT interface to DACS II, the RTF keyword must be entered in this command, and the RT retrofit procedure must be followed.

Command

Nonhierarchical

[I.36201]

```
ADD:[FRM xy][,SEQ ww]:{RT|DL} ffff,MD g[g] \
[,DGA [s]aaa][,DGB [s]bbb][,DGC [s]ccc][,DGD [s]ddd] \
[,DGP[s]ppp][,{sss|NDL|RTF}]!
```

Hierarchical

[I.36201]

```
ADD:[FRM xy][,SEQ ww]:{RT|DL} ffff,MD g[g][,DGA uvjab] \
[,DGB uvkcd][,DGC uvlef][,DGD uvmgh][,DGP uvjpr] \
[, {sss|NDL|RTF}]!
```

Completion Message

Nonhierarchical

[O.36201]

```
M hh:mm:ss xy,ww n[vv] ADD {RT|DL} ffff MD g[g] 2 LN MSG:
[DGA [s]aaa][ DGB [s]bbb][ DGC [s]ccc][ DGD [s]ddd] \
[ DGP [s]ppp][ {sss|NDL|RTF}] COMPL
```

Hierarchical

[O.36201]

M hh:mm:ss xy,ww n[vv] ADD {RT|DL} ffff MD g[g] 2 LN MSG:
[DGA uvjab][DGB uvkcd][DGC uvlef][DGD uvmgh][DGP uvjpr] \
[{sss|NDL|RTF}] COMPL

Denial Message

Nonhierarchical

[O.36201.01]

M hh:mm:ss xy,ww n[vv] ADD {RT|DL} ffff MD g[g] 2 LN MSG:
[DGA [s]aaa][DGB [s]bbb][DGC [s]ccc][DGD [s]ddd] \
[DGP [s]ppp][{sss|NDL|RTF}][{A|B|C|D|P}] COND cc DNY

Hierarchical

[O.36201.01]

M hh:mm:ss xy,ww n[vv] ADD {RT|DL} ffff MD g[g] 2 LN MSG:
[DGA uvjab][DGB uvkcd][DGC uvlef][DGD uvmgh][DGP uvjpr] \
[{sss|NDL|RTF}][{A|B|C|D|P}] COND cc DNY

Explanation of Parameters

DGA	Digroup A of SLC carrier bank
DGB	Digroup B of SLC carrier bank
DGC	Digroup C of SLC carrier bank
DGD	Digroup D of SLC carrier bank
DGP	Digroup P of SLC carrier bank

[s]aaa The 3- or 4-digit nonhierarchical DGA NPC number

[s]bbb The 3- or 4-digit nonhierarchical DGB NPC number

[s]ccc The 3- or 4-digit nonhierarchical DGC NPC number

[s]ddd The 3- or 4-digit nonhierarchical DGD NPC number

[s]ppp The 3- or 4-digit nonhierarchical DGP NPC number

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvjab Hierarchical DGA NPC number

uvkcd	Hierarchical DGA NPC number
uvlef	Hierarchical DGA NPC number
uvmgh	Hierarchical DGA NPC number
uvjpr	Hierarchical DGA NPC number
uv	Unit number
j,k,l,m	Module number within the unit
(For FPC RT j=k=l=m)	
ab	DGA NPC number within the module
cd	DGB NPC number within the module
ef	DGC NPC number within the module
gh	DGD NPC number within the module
pr	DGP NPC number within the module
For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."	
RT	SLC remote terminal
DL	Digital carrier line unit
fff	Bank identification number (0000 through 9999)
NDL	No data link
RTF	Retrofit (only applies to SLC Series 5 FPC RT)
MD g[g]	Mode of operation of SLC carrier bank
1	SLC 96 Carrier Mode I
3	SLC 96 Carrier Mode III
C	SLC Series 5 Carrier
sss	Power or miscellaneous alarm option
PMJ	The PWR/MISC alarm from the data link is a power major alarm
PMN	The PWR/MISC alarm from the data link is a power minor alarm
MMJ	The PWR/MISC alarm from the data link is a miscellaneous major alarm
MMN	The PWR/MISC alarm from the data link is a miscellaneous minor alarm
A,B,C,D,P	Digroup name indicating the digroup that caused the denial.

cc	Hexadecimal condition code
cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
15	NPC is unequipped
2D	RTF keyword is used without DGA
2E	RTF keyword and the operation mode does not match
64	NPC is already grown and added as SLC digroup
65	Another NPC is grown and added as this digroup
66	DGP designated to bank without data link
67	DGA is not added
68	NDL option is used without DGA
6A	NPC type is not DS type
6B	Operation mode and digroup name don't match
6C	Framing format, digroup name & operational mode don't match
6D	Counting sequence and operational mode don't match
6E	DGA with NDL option is not provisioned with D4 or ESF framing format
6F	Adding two digroups from one bank on same DDC
70	Digroups from same bank have different modes
71	Digroups from same bank have different counting sequence
72	Digroups from same bank are added to two different FTUs
73	Invalid PWR/MISC alarm level

cc	<i>Explanation</i>
74	PWR/MISC alarm is specified to a digroup other than DGA
76	Alarm option and bank mode don't match
77	Unassigned operational mode
78	Protection switch process failed
79	DGA/DGP of RT/DL Mode I must be assigned to one DDC
7A	Mode I RT/DL IDs don't match for DGA/DGP on same DDC
7B	Other NPC on this DDC not the same digroup for Mode I DGA/DGP
7C	Different DSxyz types are used for DGA/DGP on same DDC for Mode I
7D	The NDL options are different for DGA's on the same DDC for Mode I
82	DL ffff is used w/ operational mode other than Mode I
94	Mate RT/DL mode is different
AF	Number of SLC RT's on each unit is limited to 80
BC	DGA and DGB must be specified together in the command
BD	DGC and DGD must be specified together in the command
BE	NPC type option Y is invalid for SLC-96 NPC
1B	Two digroups from same bank added to different FTMI's
D4	Active CCN side is out of service
E5	Adding DL DGP forbidden for SLC 96 MD 1
E6	No DL digroups can be added until the associated RT bank is created

cc	<i>Explanation</i>
58	SLC 96 MD 1 RT DGP requires mate NPC to be unequipped
59	Number of DGPs on each unit is limited to 32
69	Use of this NPC is RESERVED for SLC 96 MD 1

ADD USER/LINK LANGUAGE, NPC ADDRESSING AND PRIORITY

Explanation of Command

This command *is used by the DACS II frame administrator* to assign to a user or link or all users and links any of the following attributes:

- The language with which users converse with the DACS II machine
- The type of addressing used to specify a network processing circuit
- The execution priority level assigned to a given message category
- The ability to remove a link

The command can also be used to initialize these attributes, except for the language and NPC addressing type attributes, to their default values.

To change the type of addressing, the frame administrator must issue this command and then logout and login again.

Command

1.544 Mbit/s Termination

[I.36103]

```
ADD:FRM xy,SEQ ww:{USER <user id>|LINK j[mm][,INCL]|ALL} \  
[,LANG {M|P|F}][,NPCAD {E|X|H}][,LEV(a,b,c,d,e,f)] \  
[, {RMON|RMOFF}][,RLK {A|I}][,{CONVON|CONVOFF}][,INIT]!
```

2.048 Mbit/s Termination

[I.36103]

```
ADD:FRM xy,SEQ ww:{USER <user id>|LINK j[mm][,INCL]|ALL} \  
[,LANG {M|P|F}][,NPCAD {E|X|H}][,LEV(a,b,c,d,e,f)] \  
[, {RMON|RMOFF}][,RLK {A|I}][,{CONVON|CONVOFF}][,INIT]!
```

**Completion
Message**

1.544 Mbit/s Termination

[O.36103]

M hh:mm:ss xy,ww n[vv] ADD {USER <user id>|LINK j[mm][,INCL]|ALL} \
2 LN MSG:
[LANG {M|P|F}][NPCAD {E|X|H}][LEV(a,b,c,d,e,f)] \
[{RMON|RMOFF}][RLK {A|I}][{CONVON|CONVOFF}][INIT] COMPL

2.048 Mbit/s Termination

[O.36103]

M hh:mm:ss xy,ww n[vv] ADD {USER <user id>|LINK j[mm][,INCL]|ALL} \
2 LN MSG:
[LANG {M|P|F}][NPCAD {E|X|H}][LEV(a,b,c,d,e,f)] \
[{RMON|RMOFF}][RLK {A|I}][{CONVON|CONVOFF}][INIT] COMPL

Denial Message

1.544 Mbit/s Termination

[O.36103.01]

M hh:mm:ss xy,ww n[vv] ADD {USER <user id>|LINK j[mm][,INCL]|ALL} \
2 LN MSG:
[LANG {M|P|F}][NPCAD {E|X|H}][LEV(a,b,c,d,e,f)] \
[{RMON|RMOFF}][RLK {A|I}][INIT][{CONVON|CONVOFF}] COND cc DNY

2.048 Mbit/s Termination

[O.36103.01]

M hh:mm:ss xy,ww n[vv] ADD {USER <user id>|LINK j[mm][,INCL]|ALL} \
2 LN MSG:
[LANG {M|P|F}][NPCAD {E|X|H}][LEV(a,b,c,d,e,f)] \
[{RMON|RMOFF}][RLK {A|I}][INIT][{CONVON|CONVOFF}] COND cc DNY

**Explanation of
Parameters**

USER	User
user id	User identifier The users login identifier (two to eight alphabetic characters). The command is denied if the user identifier does not exist.
LINK	Link
j[mm]	Administrative link number j Physical link number (1 through 7)

	mm	Virtual circuit/Session number (01 through 16) for j= 5, 6 or 7
INCL	Inclusive	Include virtual circuits of links 5 and 6 or sessions of link 7. The INCL keyword can only be entered with TCP/IP link 7 and X.25 links 5 and 6, and no virtual circuit/session number is allowed when this keyword is used. That is, mm and INCL are mutually exclusive. In addition, the INCL keyword is also mutually exclusive with the user id and the keyword ALL. When INCL is entered, it means that all provisioning data specified in this command, for example, LANG, NPCAD, LEV(a,b,c,d,e,f), RMON/RMOFF and RLK, is applied to all virtual circuits of the link (5 or 6) or all sessions of the link 7.
ALL	All	All users and links (including virtual circuits). The ALL keyword can only be used together with the NPCAD option. When used, it changes the NPC addressing scheme for ALL users and links including virtual circuits. There is a single exception: the ALL keyword does not affect the NPC addressing scheme for a virtual circuit that is provisioned with the facility data link communication protocol F.
LANG	Language	The LANG keyword specifies the language used by a link communicating with the DACS II system. All languages cannot be used on all links. The protocol determines which languages are permissible. Three languages are available: PDS, MML, and FDL. See the following table for permissible combinations of protocol and language.

protocol	language
Snider	PDS or MML
X.25	PDS, MML, or FDL
TABS	Not applicable
Modified Snider	Not applicable
TCP/IP	PDS or MML

To change the language on a TCP/IP link, the USER keyword must be used.

1.544 Mbit/s Termination

Otherwise, the language defaults to PDS if LANG is not specified.

2.048 Mbit/s Termination

Otherwise, the language defaults to MML if LANG is not specified.

P Program Documentation Standards (PDS)

M HuMan-Machine Language (MML)

1.544 Mbit/s Termination

F Facility Data Link (FDL) Communication Protocol

This language may only be provisioned for a single virtual circuit on an X.25 link. A virtual circuit provisioned with this language provides a communication path between an Operations Support System and the ESF data link of a DA or TA type (ANSI) Network Processing Circuit. Such a virtual circuit is completely dedicated to this function and does not interact with other DACS II input/output (I/O) messages. Once the X.25 link is set up, provisioning this function only requires the user to specify the language F for the virtual circuit; no other I/O parameters affect this channel, except the NPC addressing option.

NPCAD Network processing circuit addressing

E Extended 3-digit nonhierarchical NPC addressing

If the 3-digit nonhierarchical NPC addressing scheme is allowed in the configuration file, it is used as the default NPC addressing scheme.

X Extended 4-digit nonhierarchical NPC addressing

If the 3-digit nonhierarchical NPC addressing scheme is not allowed in the configuration file, the 4-digit scheme is used as the default NPC addressing scheme.

H Hierarchical NPC addressing



NOTE:

To place a new addressing scheme into effect, the frame administrator must first request the new addressing scheme with this command and then logout and login again.



NOTE:

All the administration links of a DACS II should never be provisioned for LEV (0,0,0,0,0,0). In that case, no user can issue any command without logging in first. If the user DAX forgats his password, he cannot recover it with the recovery card because the link will not allow the command.

LEV

Level

- a** Execution priority level for circuit provisioning commands
- b** Execution priority level for equipment provisioning commands
- c** Execution priority level for maintenance commands
- d** Execution priority level for test access commands
- e** Execution priority level for monitoring commands
- f** Execution priority level for common commands

A table giving the command verbs associated with each of the above command sets is given below.

LEV is used in combination with the command set identifiers a through f to set the execution priority level for each command set. A priority level applies to a user or link as appropriate. Priority levels range from 0 through 3. A list of these levels and their meaning is given below for a. The list for b through f is similar to the a list.

a	Explanation
0	Commands in the command set assigned this execution priority level cannot be executed.
1	Highest execution priority level. Commands in the command set assigned this execution priority level will be executed before commands with priority level 2 or 3.
2	Middle execution priority level. Commands in the command set assigned this execution priority level will be executed before commands with priority level 3
3	Lowest execution priority level. Commands in the command set assigned this execution priority level will be executed after all priority level 1 and 2 commands have been executed. Level 3 is the default priority level.

- The execution priority level of the command set assigned; this execution priority level is not to be changed.

⇒ NOTE:
The commands used to login, logoff, cross-connect, stop, and abort always have the highest priority.

⇒ NOTE:
The commands used to login, logoff, cross-connect, stop, abort, and fast switch always have the highest priority.

A single queue is used for DACS II commands. When multiple commands arrive at the same time, they will be queued for execution according to the priority assigned to their command set. Commands with the same priority will be executed in the order of arrival, that is, first come first served. A timeout feature insures that no command will wait in the queue forever. When the timeout period has expired for a given command that command will be executed regardless of its priority level.

a	b	c	d	e	f
Circuit Prov.	Equipment Prov.	Maint.	Test Access	Monitoring	Common
BCON	COPY	CFR	CTST	AUD	ACT
BDIS	DGRTH	DGN	TTST	UTL	ADD
CONF	DLT	RMV			ALW
OCNT	GRTH	RST			CHG
OCON					ED
ODIS					EXC
OPR					INH
RLS					
SCNT					

a	b	c	d	e	f
Circuit Prov.	Equipment Prov.	Maint.	Test Access	Monitoring	Common
SCON					
SDCH					
SDIS					
SECH					
SW					
TCNT					
TCON					
TDIS					
RMON	Restricted maintenance privilege ON The RMON keyword is used to assign to a user the privilege of issuing the commands normally restricted to the Frame Administrator. The following commands are restricted to the Frame Administrator (or superuser).				
RST::SMEM,CLR,FRC!				(I.34211)	
CFR::FRAME!				(I.35021)	
DLT::FPKG!				(I.37301)	
CHG::ALMS,{ON OFF}!				(I.38355)	
CHG::INTV,{ON OFF}!				(I.38451)	
CHG::MSGLOG:{ON OFF}!				(I.38471)	
UTL::BMTR,FROM SMEM,TO PMEM,EXCT!				(I.55701)	
UTL::UPGRD!				(I.55731)	
UTL::INIT,IP!				(I.56411)	

UTL::CLR,MSGLOG!

(I.57031)

RMOFF

Restricted maintenance privilege OFF

The RMOFF keyword is used to eliminate a user's privilege to issue the commands restricted to the Frame Administrator. RMOFF is the default value.

RLK

Remove Link

A

Allowed

A is the default value.

I

Inhibited

RLK is used to assign to a user or link the privilege of removing a link. There is a relationship between the link privilege and the execution priority level. If c (see previous Command Sets table) in the LEV field is set to zero, then the command to remove a link cannot be executed, hence the remove link privilege is inhibited even if the RLK option is set to A or I.

INIT

Initialize

INIT is used to assign the default values to the link/user parameters LEV, RMON/RMOFF and RLK. Parameters specified in the command take on the specified values.

CONVON

Mixed Addressing Conversion ON

CONVOFF

Mixed Addressing Conversion OFF

This mixed addressing conversion feature is only applicable to PDS commands in an environment that uses 4-digit sequential NPC numbers. This conversion feature is useful when a DACS II frame is converted from 3-digit sequential NPC addressing to 4-digit sequential NPC addressing for growth reasons. In that case, this conversion feature allows certain Operational Support Systems to use 3-digit NPC numbers, even though the frame has been changed to normally accept only 4-digit NPC numbers.

Assuming sequential NPC number usage, DACS II normally accepts only fixed length NPC numbers in its input commands. This conversion feature transfers the fixed length requirement from NPC number to channel number on a link basis. This allows the DACS II parser to accept 3- or 4-digit NPC numbers assuming that the channel number is interpreted to be of 2-digit fixed length. If a 3-digit NPC number is entered with CONVON in effect, then DACS II internally expands 3-digit NPC numbers to 4-digit NPC numbers.

For some feature configurations this conversion feature is not available, and the CONVOFF keyword does not appear in the output of this command.

cc

Hexadecimal condition code

cc	<i>Explanation</i>
D0	Command is Frame administrator (DAX) only.
D1	Cannot create any more users
D2	User has been created
D3	User does not exist
D6	Incorrect or missing password
D8	Cannot remove Frame administrator
DC	No zeros allowed for DAX privilege
DF	Command and protocol are inconsistent
25	Invalid FPI value
C0	NPC addressing scheme selected is not allowed in the config file
E1	Virtual circuit is not specified for X.25 link
E2	Invalid link number specified
E3	Invalid keyword(s) combination specified
E4	Invalid NPC addressing scheme specified
E5	No user/link needs to be changed
3B	Not valid for frame administrator
40	Only one channel allowed to have this language
41	Language ÒFÓ provisioned for this channel
83	Language is not allowed

ADD USER

Explanation of Command

This message is used by the frame administrator to create a new user login identification and password or to reassign a login identification and password to a previous user of DACS II.

The NEW keyword indicates that a new user is being created. The frame administrator uses this command without the NEW keyword to reassign a password to a user who is currently on DACS II.

A user is identified to DACS II by his or her user id associated with the login.

The administrator divulges a password to a new user for the initial log on to DACS II. Afterwards, the user can change this initial password through the CHG PASSWD command to a password known only to him or her.

Output from this command is sent only to the link on which the command was input.

Command

[I.36101]

```
ADD: [FRM xy][, SEQ ww]:USER <user id>[, NEW][, PASSWD <user  
password>]!
```

If the message is entered on a Snider link:

[I.36101]

```
ADD: [FRM xy][, SEQ ww]:USER <user id>[, NEW]!
```

DACS II then generates the message below and a dialog is started.

PASSWD: (The frame administrator enters user password.)

REENTER PASSWD: (The frame administrator again enters the user password.).

Note that the user password is not echoed by DACS II.

**Completion
Message**

[O.36101]
M hh:mm:ss xy,ww n[vv] ADD USER <user id>[NEW] COMPL

Denial Message

[O.36101.01]
M hh:mm:ss xy,ww n[vv] ADD USER <user id>[NEW] COND cc DNY

**Explanation of
Parameters**

USER	User
user id	User identifier User login identification (two to eight alphabetic characters).
NEW	New Create a user identifier for a new user.
PASSWD	Password
user password	User password The password assigned to the user, where password is at least six alphanumeric characters.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
D0	Command is Frame administrator (DAX) only.
D1	Cannot create any more users
D2	User has been created
D3	User does not exist
D6	Incorrect or missing password

mmmm	<i>Explanation</i>
SNVS	Command is Frame administrator (DAX) only.
SNVS	Cannot create any more users

mmmm	<i>Explanation</i>
SNVS	User has been created
SNVS	User does not exist
SNVS	Incorrect or missing password

ALARM CROSS-CONNECT NETWORK

Explanation of Command

This message reports an alarm on a cross-connect network (CCN) side if the CCN duplexed entities are in an unprotected state. An alarm is generated when a CCN side is out-of-service (OOS) and pested for two or more consecutive minutes.

Autonomous Message

1.544 Mbit/s Termination

[O.65054]

pa <il> hh:mm:ss xy,ww ALM [PMC|PMA|DMA|MI] CCN s OOS COMPL

2.048 Mbit/s Termination

[O.65054]

pa <il> hh:mm:ss xy,ww ALM [PMC|PMA|DMA|MI] CCN s OOS COMPL

Explanation of Parameters

pa	Priority of action field.
I	Information
*	Minor alarm
**	Major alarm
*C	Critical alarm
il	Intervention Level
AMI	Immediate maintenance action
AMD	Deferred maintenance action
SI	No intervention
ALM	Alarm
IDLD	Idled
PMC	Prompt Maintenance Action Critical
PMA	Prompt Maintenance Action Major

DMA	Deferred Maintenance Action Minor
MI	Maintenance Information
COND	Condition
CCN	Cross-connect network
s	Cross-connect Network side number (0 or 1)
OOS	Out-of-service

ALARM IDLED, DE, DS, OR TE NPCs

Explanation of Command

This autonomous output message reports that a major or minor alarm has been cleared for a given parameter on a facility that terminates on a particular network processing circuit (NPC).

Autonomous Message

Nonhierarchical

[O.65041]

I hh:mm:ss xy,ww ALM IDLD <parameter> NPC [s]abc COMPL

Hierarchical

[O.65041]

I hh:mm:ss xy,ww ALM IDLD <parameter> NPC uvmpn COMPL

Explanation of Parameters

[s]abc The 3- or 4-digit nonhierarchical NPC number

uvmpn Hierarchical NPC number

uv Unit number

m Module number

np NPC number within the module

IDLS Idled

parameter Facility performance parameter

Parameter	Programmable Threshold Range	Default Threshold
Bit Error Rate (BER) Major	1E-6* to 1E-3†	1E-3†
Bit Error Rate (BER) Minor	1E-6* to 1E-3†	1E-6

*For T1DM and Fe framing, the lower limit of the programmable threshold range is 1E-7.

† For DE-type Clear DS1 NPC and DS-type NPC, the range and default value is 1E-4.

ALARM CEPT NPC

Explanation of Command

This autonomous output message reports the clearance of a 15-minute, 1-hour, or 24-hour threshold exception alarm on a particular network processing circuit (NPC).

Autonomous Message

Nonhierarchical

[O.65046]

I hh:mm:ss xy,ww ALM IDLD[<parameter>][AI aaaaa] NPC [s]abc \ COMPL

Hierarchical

[O.65046]

I hh:mm:ss xy,ww ALM IDLD[<parameter>][AI aaaaa] NPC uvmpn \ COMPL

Explanation of Parameters

parameter	Facility Performance Parameter
	For PB and PC type NPCs:
DM1H	Degraded Minutes 1 hour
DM24H	Degraded Minutes 24 hours
SERS15M	Severely Errored Seconds 15 minutes
ERS24H	Severely Errored Seconds 24 hours
ERS15M	Errored Seconds 15 minutes
ERS24H	Errored Seconds 24 hours
US15M	Unavailable Seconds 15 minutes
US24H	Unavailable Seconds 24 hours
SLIPS15M	Slip Events 15 minutes
SLIPS24H	Slip Events 24 hours

For PA type NPCs:

CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
CV	Coding Violations
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors
FEBE	Far End Block Errors
FES	Far End Errored Seconds
FSES	Far End Severely Errored Seconds
FUAS	Far End Unavailable Seconds

For TH type NPCs:

CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors

AI	Accumulation Interval
aaaaa	The accumulation time period for the specified parameter. (Only for PA/TH type NPCs)
15MIN	Parameter count from a 15-minute accumulator
DAILY	Parameter count from a daily accumulator
NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number

uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module

ALARM IDLED DS3U or HDS3U

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This autonomous output message reports that a failure detected on an incoming DS3 or Hybrid DS3 facility has been cleared.

Autonomous Message

[O.66011]

I hh:mm:ss xy,ww ALM IDLD UNIT [q]q DS3 c <state> COMPL

Explanation of Parameters

ALM	Alarm
UNIT	Unit
[q]q	Unit number (1 through 16)
DS3	Digital signal 3
c	DS3 number (1 through 6)
state	Alarm state
	LOS Loss of signal
	BER Bit error rate
	OOF Out of frame
	RAI Remote Alarm Indication signal (Hybrid DS3s only)
	AIS Alarm indication signal
	IDLE Idle signal
IDLD	Idled

ALARM ECCN

Explanation of Command

This message reports an alarm on side 0 or 1 of the expanded cross-connect network side. The reported alarm notifies the craft when the ECCN duplexed entities are in an unprotected state. An alarm is generated when an ECCN side is out-of-service and pested for two or more consecutive minutes.

Autonomous Message

[O.65055]
pa <il> hh:mm:ss xy,ww ALM {PMC|PMA|DMA|MI} ECCN s OOS COMPL

Explanation of Parameters

pa	Priority of action field.
I	Information
*	Minor alarm
**	Major alarm
*C	Critical alarm
il	Intervention level
AMI	Immediate maintenance action
AMD	Deferred maintenance action
SI	No intervention
ALM	Alarm
IDLD	Idled
PMC	Prompt Maintenance Action Critical
PMA	Prompt Maintenance Action Major
DMA	Deferred Maintenance Action Minor
MI	Maintenance Information
ECCN	Expanded cross-connect network
s	Side number (0 or 1)
OOS	Out-of-service

ALARM, DE, DS OR TE NPCs

Explanation of Command



NOTE:

This command applies to 1.544 Mbit/s Terminations only.

This autonomous message reports a major or minor alarm state for a facility performance parameter that is terminated on a DE, DS, or TE type network processing circuit.

Autonomous Message

Nonhierarchical

[O.65031]

pahh:mm:ss xy,ww ALM {MJ|MN|INFO} <parameter> NPC [s]abc COMPL

Hierarchical

[O.65031]

pahh:mm:ss xy,ww ALM {MJ|MN|INFO} <parameter> NPC uvmnp COMPL

Explanation of Parameters

pa	Priority of Action
pa	Explanation
I	Information
*	Minor alarm, nonservice affecting
**	Major alarm, service affecting
*C	Critical alarm, service affecting
ALM	Alarm
MJ	Major
MN	Minor
INFO	Informational

[s]abc	The 3- or 4-digit nonhierarchical NPC number
uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module
parameter	Facility performance parameter:

ALARM DS3 PROTECTION STATUS

Explanation of Command

This message reports an alarm on a DS3U or a HDS3U. A minor alarm message is generated if DS3 service on a DS3U or a HDS3U is unprotected as a result of manual commands.

This alarm is only generated if the user uses another input command (CHG::DS3UNPROTALM) to activate the alarm generation. If the user deactivates it (using the same command), the alarm is not generated, even if DS3 service is unprotected.

Autonomous Message

1.544 Mbit/s Termination

[O.66021]

* hh:mm:ss xy,ww ALM {MN|IDLD} DS3UNPROTALM DS3U [q]q COMPL

Explanation of Parameters

ALM Alarm

MN Minor

This indicates a minor alarm

IDLD Idled

This indicates that the alarm has been idled.

DS3U DS3 or Hybrid DS3 Unit

[q]q DS3 or Hybrid DS3 Unit number

DS3UNPROTALM

DS3 Unprotected Alarm

Alarm indicating unprotected DS3 service due to manual commands

ALARM BACKUP MEMORY TRANSFER

Explanation of Command

This message reports when Secondary Memory card (SMEM) is out-of-service (OOS). It is cleared when SMEM is restored to service.

Autonomous Message

[O.65056]

pa <il> hh:mm:ss xy,ww ALM [PMC|PMA|DMA|MI|MJ|MN|CR|INFO] SMEM \ COMPL

Explanation of Parameters

pa	Priority of action field
I	Information
*	Minor alarm
**	Major alarm
*C	Critical alarm
PMC	Prompt Maintenance Action Critical Alarm
PMA	Prompt Maintenance Action Major Alarm
DMA	Deferred Maintenance Action Minor Alarm
MI	Maintenance Information Alarm
ALM	Alarm
MN	Minor alarm
IDLD	Alarm Idled
SMEM	Secondary memory card

REPORT PERFORMANCE MONITORING ALARMS FOR CEPT PB and PC NPCs

Explanation of Command

This output message reports the performance monitoring alarm state on a 15-minute, 1-hour, or a 24-hour interval whenever the threshold exception has been equaled or exceeded for the designated facility performance parameter on a particular PB or PC network processing circuit (NPC).

Autonomous Message

Nonhierarchical

[O.65036]

pa <il> hh:mm:ss xy,ww ALM <state> <parameter> NPC [s]abc COMPL

Hierarchical

[O.65036]

pa <il> hh:mm:ss xy,ww ALM <state> <parameter> NPC uvmnp COMPL

Explanation of Parameters

pa	Priority of Action	
	I	Information
	*	Minor alarm
	**	Major alarm, service affecting
	*C	Critical alarm, service affecting
	Intervention Level	
	AMI	Immediate maintenance action
	AMD	Deferred maintenance action
il	SI	No intervention
	Alarm state	
	state	
	MI	Maintenance Information
	DMA	Deferred Maintenance Alarm Minor (MN)

	PMA	Prompt Maintenance Alarm Major (MJ)
	PMC	Prompt Maintenance Alarm Critical (CR)
parameter		Facility Performance Parameters
	DM1H	Degraded Minutes 1 hour
	DM24H	Degraded Minutes 24 hours
	SERS15M	Severely Errored Seconds 15 minutes
	SERS24H	Severely Errored Seconds 24 hours
	ERS15M	Errored Seconds 15 minutes
	ERS24H	Errored Seconds 24 hours
	US15M	Unavailable Seconds 15 minutes
	US24H	Unavailable Seconds 24 hours
	SLIPS15M	
		Slip Events 15 minutes
	SLIPS24H	
		Slip Events 24 hours.
NPC		Network processing circuit
[s]abc		The 3- or 4-digit nonhierarchical NPC number
uvmnp		Hierarchical NPC number
	uv	Unit number
	m	Module number
	np	NPC number

Report RPSFI condition

Explanation of Command



NOTE:

This command applies to 2.048 Mbit/s Termination only.

One alarm message is output when a Remote Power Supply Failure Indicator condition has been detected on an NPC. The alarm idled message is output when it is detected that the RPSFI condition no longer exists on the NPC.

Autonomous Message

Nonhierarchical

[O.65091]

pa <il> hh:mm:ss xy,ww ALM [PMC|PMA|DMA|MI] NPC [s]abc RPSFI \ COMPL

[O.65092]

I hh:mm:ss xy,ww ALM IDLD NPC [s]abc RPSFI COMPL

Hierarchical

[O.65091]

pa <il> hh:mm:ss xy,ww ALM [PMC|PMA|DMA|MI] NPC uvmnp RPSFI COMPL

[O.65092]

I hh:mm:ss xy,ww ALM IDLD NPC uvmnp RPSFI COMPL

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number
uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number

	np	NPC number within the module
ALM		Alarm
EQPT		Equipment
pa		priority of action
	I	Informational
	A	Autonomous
	*	Minor
	**	Major
	*C	Critical
PMA		Prompt Maintenance Action Major Alarm
PMC		Prompt Maintenance Action Critical Alarm
DMA		Deferred Maintenance Action Minor Alarm
MI		Maintenance Information
CR		Critical Alarm
MJ		Major Alarm
MN		Minor Alarm
INFO		Informational Alarm
il		Intervention level
	AMI	Immediate maintenance action
	AMD	Deferred maintenance action
	SI	No intervention
RPSFI		Remote Power Supply Failure Indicator
IDLD		Idled
		The alarm has been idled since the RPSFI condition no longer exists.

ALARM RESET

Explanation of Command

This autonomous output message reports that the date and/or time have been reset because of a DACS II frame reset or because Message I.34001 (RST MC) has been entered.

Autonomous Message

[O.65051]

```
pa <il> hh:mm:ss xy,ww  ALM RESET {DATE|TOD|TOD DATE} hr:mn:sc \
{mo/da/yr FORMAT MDY|da/mo/yr FORMAT DMY} [PMC|PMA|DMA|MI] COMPL
```

Explanation of Parameters

pa	Priority of action field.	
	I	Information
	*	Minor alarm
	**	Major alarm
	*C	Critical alarm
il	Intervention level	
	AMI	Immediate maintenance action
	AMD	Deferred maintenance action
	SI	No intervention
PMC	Prompt Maintenance Action Critical	
PMA	Prompt Maintenance Action Major	
DMA	Deferred Maintenance Action Minor	
MI	Maintenance Information	
DATE	Date	
TOD	Time of day	
FORMAT	Allows user to set date format to either USA or International format	
MDY	USA format (Month, Day, Year)	
DMY	International format (Day, Month, Year)	

yr	Year number (four digits)
mo	Month number
da	Day of month number
hr	Hour of day
mn	Minute of hour
sc	Second of minute

ALARM DS3U or HDS3U

Explanation of Command



NOTE:

This message applies to 1.544 Mbit/s Terminations only.

This autonomous message reports a failure detected on an incoming DS3 or Hybrid DS3 facility. It also reports an increase in the severity of the situation that caused the alarm (see the alarm states shown in the Explanation of Parameters below).



NOTE:

Starting with Release 8.0, the alarm messages for DS1s that are embedded within a DS3 are suppressed if the alarm is really due to a DS3 failure condition, provided that DS1 alarm suppression has been turned on by command I.38621. DS1 and E1 alarm suppression is always on for Hybrid DS3s.



WARNING:

When DS1 alarm suppression is on, then under certain conditions when Bit Errors occur on the DS3, it is possible for DS1s (E1s for Hybrid DS3s as well) to incur a bit error alarm before the DS3 goes into BER alarm. This condition is particularly noticable if the BER is set to 10^3 and bit errors occur close to that rate.

Autonomous Message

[O.66001]

pahh:mm:ss xy,ww ALM UNIT [q]q DS3 c <state> COMPL

Explanation of Parameters

pa

Priority of action

***C**

Critical

Major (for RAI, Hybrid DS3 only)

	I	Information (AIS or IDLE)
UNIT		Unit
[q]q		Unit number (1 through 16)
DS3		Digital signal 3
c		DS3 number (1 through 6)
state		Alarm state (listed according to severity)
	LOS	Loss of signal
	BER	(High) Bit error rate
	OOF	Out of frame
	RAI	Remote Alarm Indication signal (Hybrid DS3s only)
	AIS	Alarm indication signal
	IDLE	Idle signal

ALLOW DS1 PERFORMANCE MONITORING REPORT

Explanation of Command

This command reenables DACS II scheduled performance monitoring report output for DA and TA type NPCs that had been inhibited by the use of the Inhibit Performance Monitoring Report message (I.51161). The user may reenables performance monitoring report output for a single, a range or all NPCs on the frame.

NPC Addressing

This command handles NPC addressing in the input command as follows:

- If only a single NPC is addressed in the input command, then either a completion or denial response is generated for the addressed NPC. DACS II always denies invalid commands to specifically addressed NPCs.
- If a range of NPCs is addressed and the feature applies to one or more NPCs within the range, DACS II reenables outputting the scheduled reports for the NPCs in the range that support this feature, but skips the NPCs which do not support this feature.

DACS II provides a variety of line termination types which support different features and can be randomly mixed within the frame. If at least one of the NPCs in the addressed range supports this feature, DACS II generates a completion response for the entire range of NPCs; individual denial responses are not generated for NPCs within the range which do not support the feature. If *none* of the NPCs in the addressed range support the requested feature, DACS II generates a range denial response.

Command

Nonhierarchical

[I.51171]

ALW: [FRM xy][, SEQ ww]:PMREPT,{NPC [s]abc[-[t]def]|ALL}!

Hierarchical

[I.51171]

ALW: [FRM xy][, SEQ ww]:PMREPT,{NPC uvmnp[-wxkqr]|ALL}!

**Completion
Message**

Nonhierarchical

[O.51171]
M hh:mm:ss xy,ww n[vv] ALW PMREPT {NPC [s]abc-[t]def|ALL} COMPL

Hierarchical

[O.51171]
M hh:mm:ss xy,ww n[vv] ALW PMREPT {NPC uvmnp-wxkqr|ALL} COMPL

Denial Message

Nonhierarchical

[O.51171.01]
M hh:mm:ss xy,ww n[vv] ALW PMREPT {NPC [s]abc[-[t]def]|ALL} \
COND cc DNY

Hierarchical

[O.51171.01]
M hh:mm:ss xy,ww n[vv] ALW PMREPT {NPC uvmnp[-wxkqr]|ALL} \
COND cc DNY

**Explanation of
Parameters**

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical starting NPC number
[t]def	The 3- or 4-digit nonhierarchical ending NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical starting NPC number
wxkqr	Hierarchical ending NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
PMREPT	Performance Monitoring Report
cc	Hexadecimal condition code

cc	<i>Explanation</i>
15	NPC is unequipped
26	NPC type error
0D	PM scheduling report is already allowed for this entity
17	Command did not execute for any entity specified in the command
89	Interval is not valid/not available

ALLOW SWITCH OF MMFG

Explanation of Command

This command requests removal of the inhibition of automatic protection switching from a range of service multiplexer-multiple interface unit functional group (MMFG) in a DS3 unit (DS3U) or a Hybrid DS3 unit (HDS3U) to the protection MMFG in that unit or the automatic switch back from the protection MMFG of a DS3U or a HDS3U to the service MMFG c[-d] of that unit. Only automatic protection switches due to failure are affected by this message.

The command will always specifies the number of the service MMFGs involved, even in the case of the command to allow switch back from the protection MMFG.

When the TOSRVC keyword is specified, a range of MMFGs is not acceptable. The command is denied by the parser.

This command may cause an immediate protection switching/switch back if the original MMFG is out-of-service or is pested. In this case, an autonomous message that indicates the occurrence of the switch is printed out.

Command

[I.35301]
ALWSW: [FRM xy][, SEQ ww]:UNIT [q]q, MMFG c[-d], {TOPRTN|TOSRVC}!

Completion Message

There is one completion or denial output message for every request.

[O.35301]
M hh:mm:ss xy,ww n[vv] ALWSW UNIT [q]q MMFG a {TOPRTN|TOSRVC} \ COMPL

Denial Message

[O.35301.01]
M hh:mm:ss xy,ww n[vv] ALWSW UNIT [q]q MMFG a {TOPRTN|TOSRVC} \ COND cc DNY

Explanation of Parameters	UNIT	Unit
	[q]q	Unit number (1 through 16)
	MMFG	Multiplexer-multiple interface unit functional group
	c,d	The number of the MMFG within the unit (1 through 6)
		When the TOSRVC keyword is specified, a range of MMFGs is not acceptable. The command is denied by the parser.
	TOPRTN	To protection pack
	TOSRVC	To service pack
	a	The number of the service MMFG within the range c and d
	cc	Hexadecimal condition code
	cc	<i>Explanation</i>
	10	Unit is not equipped
	11	UC is out of service
	12	UC is in service but failed
	44	Service MXR is not equipped
	4B	The Service MMFG is already under protection
	4C	The Service MMFG is not under protection
	4D	The switch is allowed (not inhibited)

APPEND COMPONENT COMMAND

Explanation of Command

This message is used, during a macro session, to add one or more commands to an existing macro. Commands are added following the location specified by line number or END. If neither line number or END is specified, then the command(s) being added are added on the line following the current position of the line pointer. This position may be determined by use of the LINE command.

Command

1.544 Mbit/s Termination

[I.19041]

APPEND[:FRM xy,SEQ ww:{<line number>|END}]!

2.048 Mbit/s Termination

[I.19041]

APPEND[:FRM xy,SEQ ww:{<line number>|END}]!

Completion Message

1.544 Mbit/s Termination

[O.19041]

M hh:mm:ss xy,ww n[vv] APPEND[{<line number>|END}] COMPL

2.048 Mbit/s Termination

[O.19041]

M hh:mm:ss xy,ww n[vv] APPEND[{<line number>|END}] COMPL

Denial Message

1.544 Mbit/s Termination

[O.19041.01]

M hh:mm:ss xy,ww n[vv] APPEND[{<line number>|END}] COND cc DNY

2.048 Mbit/s Termination

[O.19041.01]

M hh:mm:ss xy,ww n[vv] APPEND[{<line number>|END}] COND cc DNY

Explanation of Parameters

line number	Line number at which to begin appending (0, 1, 2, 3, ...) If a line number is specified, a command being added is appended to this line. That is, the new command is placed on the line following the line pointed to by the line number. The line pointer then moves down to point to the position of the new command. If more than one command has been entered the line pointer moves to the position of the last line entered.
END	End End is a special line number that marks the position of the last line in the macro. If END is specified, the new command is placed on the line following the line pointed to by END. The line pointer then moves down to point to the position of the new command. END is then the line number of the new command. If more than one command has been entered, END is the line number of the last line entered.
COND	Condition
cc	Hexadecimal condition code
cc	<i>Explanation</i>
60	User macro/map space is full
6B	Invalid line number
6E	No edit session active

UTILITY QUERY, APPLICATION RESET

Explanation of Command

This message reports that a reset of all the DSP Application cards is complete. During the reset operation, an APPL RESET IN-PROGRESS message is generated every 20 seconds until the reset operation is completed.

Autonomous Message

[O.62011]

I hh:mm:ss xy,ww APPL RESET COMPL

[O.62010]

I hh:mm:ss xy,ww APPL RESET IN PROGRESS

Explanation of Parameters

APPL

Digital Signaling Processing Application

The following applications are currently supported:

- SD111** X.50/X.57 International Subrate application
 - SD311** Digital Multipoint Bridge (DMB) application
 - SD411** DDS Subrate and Multipoint Junction Unit application
-

AR01 MISCELLANEOUS ALARM, CGA, PBA OR LOS

Explanation of Command

1.544 Mbit/s Termination

This autonomous message reports a DACS II Carrier Group Alarm (CGA) or Loss of Signal (LOS) on a facility terminated on a particular Network Processing Circuit. Once a CGA Red/LOS has been detected, DACS II inserts downstream trunk conditioning and transmits a yellow signal in the upstream direction.

2.048 Mbit/s Termination

This autonomous message reports a DACS II Primary Block Alarm (PBA) on a facility terminated on a particular Network Processing Circuit. Once a PBA has been detected, DACS II inserts downstream trunk conditioning and performs upstream consequent actions, if they are provisioned.

Autonomous Message

1.544 Mbit/s Termination

Nonhierarchical

[O.65011]

```
pa hh:mm:ss xy,ww  AR01 MISC ALM <state> {CGA|LOS} [s]abc \  
[k] COMPL
```

Hierarchical

[O.65011]

```
pa hh:mm:ss xy,ww  AR01 MISC ALM <state> {CGA|LOS} uvmnp \  
[k] COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

[O.65011]

```
pa <il> hh:mm:ss xy,ww  AR01 MISC ALM <state> PBA [s]abc k COMPL
```

Hierarchical

[O.65011]

pa <il> hh:mm:ss xy,ww AR01 MISC ALM <state> PBA uvmnp k COMPL

**Explanation of
Parameters**

pa	Priority of action
I	Information
*	Minor alarm
**	Major alarm
*C	Critical alarm
il	Intervention level
AMI	Immediate maintenance action
AMD	Deferred maintenance action
SI	No intervention
MISC	Miscellaneous
ALM	Alarm

1.544 Mbit/s Termination

CGA	Carrier Group Alarm
LOS	Loss Of Signal
k	Type of CGA alarm
A	AIS - Alarm Indication Signal; also known as All Ones Signal or Blue Signal
B	Both - Yellow and Red (Note: B is valid only for SLC [®] Series 5 NPCs)
L	LMA - Local Multiframe Alarm
M	RMA - Remote Multiframe Alarm
R	Red
Y	Yellow

Both Terminations

NPC	Network Processing Circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical NPC number

uv Unit number

m Module number

np NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

state**Alarm status**

1.544 Mbit/s Termination

MJ Major

MIN Minor

INFO Information

2.048 Mbit/s Termination

PMA Prompt Maintenance Major Alarm (MJ)

PMC Prompt Maintenance Critical Alarm (CR)

DMA Deferred Maintenance Minor Alarm (MN)

MI Maintenance Information

2.048 Mbit/s Termination

PBA Primary block alarm

k Type of PBA alarm

For PA type NPCs:

A	Primary AIS	AIS received in all 32 time slots
B	BER	Bit error rate detected in received signal
C	LCMA	Loss of CRC4 multiframe alignment in TS0
E	RBER	Remote bit error rate detected in TS0 bit 4
F	LOF	Loss of Frame type Primary block failure

G	FLCMA	Far-end Loss of CRC4 multiframe alignment in TS0
I	RAIS	Remote AIS detected in TS0 bit 4
L	LMA	Loss of multiframe alignment in CAS TS16
M	R16	RAI received in TS16 bit 6 of frame 0
P	PFWOOF	TS0 Pseudo Frame Word Out-Of-Frame
R	LOS	Loss of Signal type Primary block failure
S	SFI	Synchronization failure indication in TS0 bit 5
V	A16	AIS received in CAS TS16
X	EER	Excessive error rate
Y	RAI	Remote alarm indication received in TS0 bit 3
Z	RPSFI	Remote Power Supply Failure Indicator

For PB and PC type NPCs:

A	Primary AIS	AIS received in all 32 time slots
B	BER	Bit error rate detected in received signal
E	RBER	Remote bit error rate detected in TS0 bit 4
I	RAIS	Remote AIS detected in TS0 bit 4
L	LMA	Loss of multiframe alignment in CAS TS16
M	R16	RAI received in TS16 bit 6 of frame 0
R	PBF	Primary block failure caused by LOS or LOF
S	SFI	Synchronization failure indication in TS0 bit 5
V	A16	AIS received in CAS TS16

X	EER	Excessive error rate
Y	RAI	Remote alarm indication received in TS0 bit 3
Z	RPSFI	Remote Power Supply Failure Indicator

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

ALARM IDLD

Explanation of Command

1.544 Mbit/s Termination

This autonomous message indicates that the carrier group alarm (CGA) on a facility terminated on a particular network processing circuit has been cleared.

2.048 Mbit/s Termination

This autonomous message indicates that the primary block alarm (PBA) on a facility terminated on a particular network processing circuit has been cleared.

Autonomous Message

1.544 Mbit/s Termination

Nonhierarchical

[O.65021]

I hh:mm:ss xy,ww AR01 MISC ALM IDLD {CGA|LOS} [s]abc[k] COMPL

Hierarchical

[O.65021]

I hh:mm:ss xy,ww AR01 MISC ALM IDLD {CGA|LOS} uvmnp[k] COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.65021]

I hh:mm:ss xy,ww AR01 MISC ALM IDLD PBA [s]abc k COMPL

Hierarchical

[O.65021]

I hh:mm:ss xy,ww AR01 MISC ALM IDLD PBA uvmnp k COMPL

**Explanation of
Parameters****1.544 Mbit/s Termination**

CGA	Carrier group alarm
LOS	Loss of signal
k	Type of CGA alarm
A	AIS - Alarm Indication Signal; also known as All Ones Signal or Blue Signal
B	Both - Yellow and Red (Note: B is valid only for SLC® Series 5 NPCs)
L	LMA - Local Multiframe Alarm
M	RMA - Remote Multiframe Alarm
R	Red
Y	Yellow

Both Terminations

MISC	Miscellaneous
ALM	Alarm
IDLD	Idled
NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

2.048 Mbit/s Termination

PBA	Primary block alarm
k	Type of PBA alarm

A	Primary AIS	AIS received in all 32 time slots.
B	BER	Bit error rate detected in received signal.
C	LCMA	Loss of CRC4 multiframe alignment in TS0.
G	FLCMA	Far-end Loss of CRC4 multiframe alignment in TS0.
E	RBER	Remote bit error rate detected in TS0 bit 4.
I	RAIS	Remote AIS detected in TS0 bit 4.
L	LMA	Loss of multiframe alignment in CAS TS16.
M	R16	RAI received in TS16 bit 6 of frame 0.
P	PFWOOF	TS0 Pseudo Frame Word Out-Of-Frame
R	LOS PBF	Loss of Signal type Primary block failure.
F	LOF PBF	Loss of Frame type Primary block failure.
S	SFI	Synchronization failure indication in TS0 bit 5.
V	A16	AIS received in CAS TS16
X	EER	Excessive error rate
Y	RAI	Remote alarm indication received in TS0 bit 3.

ERROR RECOVERY

Explanation of Command

This autonomous output message indicates the end-of-midnight report.

Autonomous Message

[O.81006]
I hh:mm:ss xy,ww AUD PARAMS COMPL

Explanation of Parameters

NPC Network processing circuit.

AUDIT QUERY NPC PARAMETER

Explanation of Command

This command is used to request the value of selected facility performance parameters of all FTU, DS3U or HSU NPCs that are associated with active Carrier Group Alarms (CGAs) or Carrier Failure Alarms (CFAs). Only those parameters that were enabled by the UTL::TOD,FAC (51011) command are reported. Also see messages O.81001, O.81003, O.81004, and O.81005 for other output on performance parameters.

The output messages may be the result of executing the AUD::QRY, {CFA|CGA|LFVR|FFER} command or they may be autonomously produced.

The output messages are part of the "midnight report" parameter count section. The parameter count section appears

- Manually: Immediately when requested by the AUD::QRY,CFA command.
- Autonomously: Daily at the time scheduled with the UTL::TOD command (default is midnight).

1.544 Mbit/s Termination

Sections of the output message are generated in different formats, depending on whether the NPCs are within an FTU/IFTU, a DS3U, a hybrid DS3U or an HSU.

For a hybrid DS3U the message is formatted, such that the values for the NPCs in each DS2 (there are seven DS2s within the DS3) are presented as a separate line. An individual DS2 may be provisioned with up to four DS1 NPCs or three E1 NPCs. If any DS2 within that DS3 is provisioned with E1 NPCs (TH type), then the output for the fourth NPC is not present, since there is no fourth NPC.

Command

[I.81001]

AUD: [FRM xy] [, SEQ ww] : QRY, {CFA|CGA|LOS} !

[I.81001]

RTRV-ALM-EQPT: [<xy>] : NPC: [<ww>] : {CFA|CGA|LOS};

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.81002]

M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL FTU NPCS [s]abc- \
[t]def TOT nnn 5 LN MSG:

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM

.
.
.

M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL DS3U NPCS [s]abc- \
[t]def TOT nnn 5 LN MSG:

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM

.
.
.

M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL HSU NPCS [s]abc- \
[t]def TOT nnn 5 LN MSG:

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM

.
.
.

M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL HDS3U NPCS \
[s]abc- [t]def TOT nnn 8 LN MSG:

xxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx COMPL

Hierarchical

[O.81002]

M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL FTU NPCS uvmnp- \
uvmqr TOT nnn 5 LN MSG:

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

```

XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX EOM
.
.
.
M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL DS3U NPCS uvmnp- \
uvmqr TOT nnn 5 LN MSG:
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX EOM
.
.
.
M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL HSUU NPCS uvmnp- \
uvmqr TOT nnn 5 LN MSG:
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX EOM
.
.
.
M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL HDS3U NPCS uvmnp- \
uvmqr TOT nnn 8 LN MSG:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx COMPL

```

2.048 Mbit/s Termination

Nonhierarchical

One command response output segment is generated for each FTM.

If the FTM does not have any PA type NPCs or if the parameter is not applicable to PA type NPCs, the following output format is generated:

[O.81002]

```

M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL FTU NPCS [s]abc- \
[t]def TOT nnn 5 LN MSG:
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX

```

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[O.81002]

M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL FTU NPCS uvmnp- \

uvmqr TOT nnn 5 LN MSG:

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM

.
.
.

M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL FTU NPCS uvmnp- \

uvmqr TOT nnn 5 LN MSG:

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx COMPL

If the FTM has at least one PA type NPC and the parameter is applicable to a PA type NPC, the following output format is generated:

[O.81002]

M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL FTU NPCS uvmnp- \

uvmqr TOT nnn 6 LN MSG:

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx EOM

.
.
.

M hh:mm:ss xy,ww n[vv] AUD QRY <parameter> ALL FTU NPCS uvmnp- \

uvmqr TOT nnn 6 LN MSG:

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx \

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx COMPL

Autonomous Message

1.544 Mbit/s Termination

Nonhierarchical

[O.81002]

```
I hh:mm:ss xy,ww AUD QRY <parameter> ALL FTU NPCS \
[s]abc-[t]def TOT nnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
```

.
.
.

```
I hh:mm:ss xy,ww AUD QRY <parameter> ALL DS3U NPCS \
[s]abc-[t]def TOT nnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
```

.
.
.

```
I hh:mm:ss xy,ww AUD QRY <parameter> ALL HSU NPCS \
[s]abc-[t]def TOT nnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
```

.
.
.

```
I hh:mm:ss xy,ww AUD QRY <parameter> ALL HDS3U NPCS \
[s]abc-[t]def TOT nnn 8 LN MSG:
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx COMPL
```

Hierarchical

[O.81002]

```
I hh:mm:ss xy,ww AUD QRY <parameter> ALL FTU NPCS \
uvmnp-uvmqr TOT nnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
```



```

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
.
.
.
I hh:mm:ss xy,ww AUD QRY <parameter> ALL DS3U NPCS \
uvmnp-uvmqr TOT nnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
.
.
.
I hh:mm:ss xy,ww AUD QRY <parameter> ALL HSU NPCS \
uvmnp-uvmqr TOT nnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
.
.
.
I hh:mm:ss xy,ww AUD QRY <parameter> ALL HDS3U NPCS \
uvmnp-uvmqr TOT nnn 8 LN MSG:
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx COMPL

```

2.048 Mbit/s Termination

Nonhierarchical

One output segment is generated for each FTM.

The output format shown below is generated if one of the following condition exists:

- The output is only for Non PA type NPC midnight report. In this case dashes ("-") are output for PA type NPCs.
- All NPCs are scheduled with the same report time, but the parameter is not applicable to PA type NPCs. In this case dashes ("-") are output for PA type NPCs.
- All NPCs are scheduled with the same report time and the parameter is common to all NPC types, but the FTM does not have any PA type NPCs.

[O.81002]

```
I hh:mm:ss xy,ww  AUD QRY <parameter> ALL FTU NPCS \
[s]abc-[t]def TOT nnn 5 LN MSG:
```

```
xxxxx xxxxx xxxxx xxxxx  xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx  xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx  xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx  xxxxx xxxxx xxxxx xxxxx EOM
```

.
.

.

```
I hh:mm:ss xy,ww  AUD QRY <parameter> ALL FTU NPCS \
[s]abc-[t]def TOT nnn 5 LN MSG:
```

```
xxxxxx xxxxxx xxxxxx xxxxxx  xxxxxx xxxxxx xxxxxx xxxxxx
xxxxxx xxxxxx xxxxxx xxxxxx  xxxxxx xxxxxx xxxxxx xxxxxx
xxxxxx xxxxxx xxxxxx xxxxxx  xxxxxx xxxxxx xxxxxx xxxxxx
xxxxxx xxxxxx xxxxxx xxxxxx  xxxxxx xxxxxx xxxxxx xxxxxx COMPL
```

The output format shown below is generated if one of the following condition exists:

- The output is only for PA type NPC daily report. In this case dashes ("-") are output for non PA type NPCs.
- All NPCs are scheduled with the same report time, and the parameter is for PA type NPCs only. In this case dashes ("-") are output for non PA type NPCs.
- All NPCs are scheduled with the same report time; the parameter is common to all NPC types; there is at least one PA type NPC in the FTM. In this case, the "h" is output as a dash ("-") for non PA type NPCs.

[O.81002]

```
I hh:mm:ss xy,ww  AUD QRY <parameter> ALL FTU NPCS [s]abc-[t]def \
TOT nnn 6 LN MSG:
```

```
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \
xxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \
xxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \
xxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \
xxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \
xxxxxxxxxx EOM
```

.
.

.

```
I hh:mm:ss xy,ww  AUD QRY <parameter> ALL FTU NPCS [s]abc-[t]def \
TOT nnn 6 LN MSG:
```

```
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \
xxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \
```

```

xxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \
xxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx \
xxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx COMPL

```

Hierarchical

One output segment is generated for each FTM.

The output format shown below is generated if one of the following condition exists:

- The output is only for Non PA type NPC midnight report. In this case dashes ("-") are output for PA type NPCs.
- All NPCs are scheduled with the same report time, but the parameter is not applicable to PA type NPCs. In this case dashes ("-") are output for PA type NPCs.
- All NPCs are scheduled with the same report time and the parameter is common to all NPC types, but the FTM does not have any PA type NPCs.

[O.81002]

```

I hh:mm:ss xy,ww AUD QRY <parameter> ALL FTU NPCS \
uvmnp-uvmqr TOT nnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
.
.
.

```

```

I hh:mm:ss xy,ww AUD QRY <parameter> ALL FTU NPCS \
uvmnp-uvmqr TOT nnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx COMPL

```

The output format shown below is generated if one of the following condition exists:

- The output is only for PA type NPC daily report. In this case dashes ("-") are output for non PA type NPCs.
- All NPCs are scheduled with the same report time, and the parameter is for PA type NPCs only. In this case dashes ("-") are output for non PA type NPCs.

- [O.81002]

Explanation of Parameters

parameter	Facility performance parameter

For DS1 signal (not applicable to DA or TA or SA type NPCs):

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SAFE Shelf Alarm Far End

2.048 Mbit/s Termination

For PB or PC type NPCs:

DM1H	Degraded Minutes 1 hour
DM24H	Degraded Minutes 24 hour
SERS15M	Severely Errored Seconds 15 minute
SERS24H	Severely Errored Seconds 24 hour
ERS15M	Errored Seconds 15 minute
ERS24H	Errored Seconds 24 hour
US15M	Unavailable Seconds 15 minute
US24H	Unavailable Seconds 24 hour
SLIP15M	Slip events 15 minute
SLIP24H	Slip events 24 hour
CRC	Cyclic Redundancy Code
FRER	Frame Error
LOFA	Loss of Frame Alignment
MER	Multiframe Alignment Error Events (time slot 16)

For PA type NPCs:

CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
CV	Coding Violations
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors
FEBE	Far End Block Errors
FES	Far End Errored Seconds
FSES	Far End Severely Errored Seconds

FUAS Far End Unavailable Seconds

 **NOTE:**
For PA type NPCs, only the daily parameters are output by this message.

1.544 Mbit/s Termination

For TH type NPCs:

CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
CV	Coding Violations
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors

 **NOTE:**
For TH type NPCs, only the daily parameters are output by this message.

[s]abc The 3- or 4-digit nonhierarchical NPC number, the first NPC in a module.

[t]def The 3- or 4-digit nonhierarchical NPC number, the last NPC in a module.

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp Hierarchical NPC number, the first NPC in a module.

uvmqr Hierarchical NPC number, the last NPC in a module.

uv Unit number

m Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

TOT Total

nnn	Cumulative total number of NPCs in the module A module is either an FTM or a Multiplexer on a DS3U or a Mapper on an HSU with the specified facility performance parameter value greater than 0. One DS3U output module contains the information about NPCs on one Multiplexer. One HSU output module contains the information about NPCs on one Mapper circuit.
xxxxx	Facility performance parameter value (00000 through 65536)

1.544 Mbit/s Termination

	This value is used when there is no TH type NPC provisioned.
h	Thresholding Mode for TH type NPCs.
I	Inhibited
A	Allowed

If the count of a common parameter, that is, CRC, FRER or MER, is to be output, a dash ("-") is output in this field for a non TH type NPC within a hybrid DS3U with mixed NPC types.

xxxxxxxxx	Facility performance parameter value for TH type NPCs (000000000 through 345600000)

2.048 Mbit/s Termination

	This value is used when there is no PA type NPC provisioned.
h	Thresholding Mode for PA type NPCs.
I	Inhibited
A	Allowed

If the count of a common parameter, that is, CRC, FRER or MER, is to be output, a dash ("-") is output in this field for a non PA type NPC within FTMs with mixed NPC types.

xxxxxxxxx	Facility performance parameter value for PA type NPCs (000000000 through 345600000)

AUDIT QUERY FACILITY PERFORMANCE PARAMETERS

Explanation of Command

1.544 Mbit/s Termination

This message indicates all equipped facility terminating, DS3 unit, Hybrid DS3 unit (HDS3U) and High Speed Unit (HSU) network processing circuits have zero values for a specified facility performance parameter since local midnight. See message I.51011 for setting those performance parameters you would like to have measured and collected. Also see messages O.81001, O.81002, O.81003, and O.81005 for other output on performance parameters.

2.048 Mbit/s Termination

This message indicates all equipped facility terminating network processing circuits have zero values for a specified facility performance parameter since local midnight. See message I.51011 for setting those performance parameters you would like to have measured and collected. Also see messages O.81001, O.81002, O.81003, and O.81005 for other output on performance parameters.

Command

[I.81001]

AUD: [FRM xy] [, SEQ ww] : QRY, {CFA|CGA|LOS}!

[I.81001]

RTRV-ALM-EQPT: [<xy>] : NPC: [<ww>] : {CFA|CGA|LOS};

Completion Message

[O.81004]

M hh:mm:ss xy, ww n[vv] AUD QRY <parameter> ALL NPCS TOT 000 \
COMPL

**Autonomous
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.81004]

I hh:mm:ss xy,ww AUD QRY <parameter> ALL NPCS TOT 000 \
COMPL

2.048 Mbit/s Termination

**Explanation of
Parameters**

CFA	Carrier failure alarm
CGA	Carrier group alarm
ALL	All
NPCS	Network processing circuits
TOT	Total
	Total of all NPCs
parameter	Facility performance parameter

1.544 Mbit/s Termination

For DS1 signal:

OOF	Out Of Frame
SLIP	Slip counts
ERS	Errored Seconds
SERS	Severely Errored Second
COFA	Change Of Frame Alignment
BPV	Bipolar Violation
SANE	Shelf Alarm Near End
SAFE	Shelf Alarm Far End

2.048 Mbit/s Termination

For PB and PC type NPCs:

DM1H	Degraded Minutes (1 hour)
DM24H	Degraded Minutes (24 hour)
SERS15M	Severely Error Seconds (15 minutes)
SERS24H	Severely Error Seconds (24 hours)

ERS15M	Error Seconds (15 minutes)
ERS24H	Error Seconds (24 hours)
US15M	Unavailable Seconds (15 minutes)
US24H	Unavailable Seconds (24 hours)
SLIP15M	Slip events (15 minutes)
SLIP24H	Slip events (24 hours)
CRC	Cyclic Redundancy Code
FRER	Frame Error
LOFA	Loss of Frame Alignment
MER	Multiframe Alignment Error Events (time slot 16)

2.048 Mbit/s Termination

For PA type NPCs:

CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
CV	Coding Violations
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors
FEBE	Far End Block Errors
FES	Far End Errored Seconds
FSES	Far End Severely Errored Seconds
FUAS	Far End Unavailable Seconds

1.544 Mbit/s Termination

For TH type NPCs:

CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds

ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors

AUDIT QUERY

Explanation of Command

1.544 Mbit/s Termination

This message indicates all equipped facility terminating DS3 unit, Hybrid DS3 unit or HSU network processing circuits have zero values for the BER parameter since local midnight.

The scope of this message includes FTU, DS3U, HDS3U and HSU type NPCs.

See message I.51011 for setting those performance parameters you would like to have measured and collected. Also see messages O.81001, O.81002, O.81003, and O.81004 for other output on performance parameters.

2.048 Mbit/s Termination

This message indicates all equipped facility terminating network processing circuits have zero values for the BER parameter since local midnight.

See message I.51011 for setting those performance parameters you would like to have measured and collected. Also see messages O.81001, O.81002, O.81003, and O.81004 for other output on performance parameters.

Completion Message

[O.81005]

M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL NPCS TOT 0000 COMPL

Autonomous Message

[O.81005]

I hh:mm:ss xy,ww AUD QRY BER ALL NPCS TOT 0000 COMPL

Explanation of Parameters

BER Bit error rate
ALL NPCS TOT Total of all NPCs

RETRIEVE EVENT EQUIPMENT

Explanation of Command

2.048 Mbit/s Termination

This message lists all facility terminating unit network processing circuits associated with facilities exceeding bit error rate thresholds. See message I.51011 for setting those performance parameters you would like to have measured and collected. See message I.81001 for invoking output on performance parameters. Also see messages O.81001, O.81002, O.81004, and O.81005 for other output on performance parameters.

1.544 Mbit/s Termination

This message lists all facility terminating, DS3, Hybrid DS3, and HSU unit network processing circuits associated with facilities exceeding bit error rate thresholds. See message I.51011 for setting those performance parameters you would like to have measured and collected. See message I.81001 for invoking output on performance parameters. Also see messages O.81001, O.81002, O.81004, and O.81005 for other output on performance parameters.

The output message for a hybrid DS3 Unit is structured differently than the output message for a non-hybrid DS3 Unit. This message is formatted, such that the values for the NPCs in each DS2 (there are seven DS2s within the DS3) are presented as a separate line. An individual DS2 may be provisioned with up to four DS1 NPCs or three E1 NPCs. If any DS2 within that DS3 is provisioned with E1 NPCs (TH type), then the output for the fourth NPC is not present, since there is no fourth NPC.

Command

See the input command in I.81001.

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

For a Facility Terminating Module (FTM):

[O.81003]

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL FTU NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX EOM
.
.
.
```

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL FTU NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX COMPL
```

For a DS3 module (Multiplexer):

[O.81003]

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL DS3U NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX EOM
.
.
.
```

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL DS3U NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX COMPL
```

For an HSU module (Mapper):

[O.81003]

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL HSU NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX EOM
.
.
.
```

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL HSU NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX COMPL
```

For a Hybrid DS3 module (Hybrid Multiplexer):

[O.81003]

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL HDS3U NPCS [s]abc-[t]def \
TOT nnn 8 LN MSG:
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX EOM
```

.
.

.

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL HDS3U NPCS [s]abc-[t]def \
TOT nnn 8 LN MSG:
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX COMPL
```

Hierarchical

For a Facility Terminating Module (FTM):

[O.81003]

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL FTU NPCS uvmnp-uvmqr\
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX EOM
```

.
.

.

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL FTU NPCS uvmnp-uvmqr \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX
```

```
XX XX XX XX XX  XX XX XX XX XX
XX XX XX XX XX  XX XX XX XX XX  COMPL
```

For a DS3 module (Multiplexer):

[O.81003]

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL DS3U NPCS uvmnp-uvmqr \
TOT nnn  5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX  EOM
```

.
.
.

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL DS3U NPCS uvmnp-uvmqr \
TOT nnn  5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX  COMPL
```

For an HSU module (Mapper):

[O.81003]

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL HSU NPCS uvmnp-uvmqr \
TOT nnn  5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX  EOM
```

.
.
.

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL HSU NPCS uvmnp-uvmqr \
TOT nnn  5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX  COMPL
```

For a Hybrid DS3 module (Hybrid Multiplexer):

[O.81003]

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL DS3U NPCS uvmnp-uvmqr \
TOT nnn  8 LN MSG:
XX XX XX XX
XX XX XX XX
XX XX XX XX
```



```

XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX EOM
.
.
.
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL DS3U NPCS uvmnp-uvmqr \
TOT nnn 8 LN MSG:
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX COMPL

```

2.048 Mbit/s Termination

Nonhierarchical

[O.81003]

```

M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX EOM
.
.
.
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX COMPL

```

Hierarchical

[O.81003]

```

M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL NPCS uvmnp-uvmqr \
TOT nnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX EOM
.
.
.

```

```
M hh:mm:ss xy,ww n[vv] AUD QRY BER ALL NPCS uvmnp-uvmqr \
TOT nnn 5 LN MSG:
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx COMPL
```

Autonomous Message

1.544 Mbit/s Termination

Nonhierarchical

For a Facility Terminating Module (FTM):

[O.81003]

```
I hh:mm:ss xy,ww AUD QRY BER ALL FTU NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx EOM
```

.
.
.

```
I hh:mm:ss xy,ww AUD QRY BER ALL FTU NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx COMPL
```

For a DS3 module (Multiplexer):

[O.81003]

```
I hh:mm:ss xy,ww AUD QRY BER ALL DS3U NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx EOM
```

.
.
.

```
I hh:mm:ss xy,ww AUD QRY BER ALL DS3U NPCS [s]abc-[t]def \
TOT nnn 5 LN MSG:
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx
```

```
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX  COMPL
```

For an HSU module (Mapper):

[O.81003]

```
I hh:mm:ss xy,ww  AUD QRY BER ALL HSU NPCS [s]abc-[t]def \
TOT nnn  5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX  EOM
```

.
.
.

```
I hh:mm:ss xy,ww  AUD QRY BER ALL HSU NPCS [s]abc-[t]def \
TOT nnn  5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX  COMPL
```

For a Hybrid DS3 module (Hybrid Multiplexer):

[O.81003]

```
I hh:mm:ss xy,ww  AUD QRY BER ALL HDS3U NPCS [s]abc-[t]def \
TOT nnn  8 LN MSG:
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX  EOM
```

.
.
.

```
I hh:mm:ss xy,ww  AUD QRY BER ALL HDS3U NPCS [s]abc-[t]def \
TOT nnn  8 LN MSG:
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX  COMPL
```

Hierarchical

For a Facility Terminating Module (FTM):

[O.81003]

```
I hh:mm:ss xy,ww  AUD QRY BER ALL FTU NPCS uvmnp-uvmqr \
TOT nnn  5 LN MSG:
xx xx xx xx xx  xx xx xx xx xx
xx xx xx xx xx  xx xx xx xx xx
xx xx xx xx xx  xx xx xx xx xx
xx xx xx xx xx  xx xx xx xx xx  EOM
```

.
.
.

```
I hh:mm:ss xy,ww  AUD QRY BER ALL FTU NPCS uvmnp-uvmqr \
TOT nnn  5 LN MSG:
xx xx xx xx xx  xx xx xx xx xx
xx xx xx xx xx  xx xx xx xx xx
xx xx xx xx xx  xx xx xx xx xx
xx xx xx xx xx  xx xx xx xx xx  COMPL
```

For a DS3 module (Multiplexer):

[O.81003]

```
I hh:mm:ss xy,ww  AUD QRY BER ALL DS3U NPCS uvmnp-uvmqr \
TOT nnn  5 LN MSG:
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx  EOM
```

.
.
.

```
I hh:mm:ss xy,ww  AUD QRY BER ALL DS3U NPCS uvmnp-uvmqr \
TOT nnn  5 LN MSG:
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx  COMPL
```

For an HSU module (Mapper):

[O.81003]

```
I hh:mm:ss xy,ww  AUD QRY BER ALL HSU NPCS uvmnp-uvmqr \
TOT nnn  5 LN MSG:
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx  EOM
```

.
.
.

```
I hh:mm:ss xy,ww  AUD QRY BER ALL HSU NPCS uvmnp-uvmqr\
TOT nnn  5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX  COMPL
```

For a Hybrid DS3 module (Hybrid Multiplexer):

[O.81003]

```
I hh:mm:ss xy,ww  AUD QRY BER ALL DS3U NPCS uvmnp-uvmqr \
TOT nnn  8 LN MSG:
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX  EOM
```

.
.
.

```
I hh:mm:ss xy,ww  AUD QRY BER ALL DS3U NPCS uvmnp-uvmqr \
TOT nnn  8 LN MSG:
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX
XX XX XX XX  COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

[O.81003]

```
I hh:mm:ss xy,ww  AUD QRY BER ALL NPCS [s]abc-[t]def \
TOT nnn  5 LN MSG:
XX XX XX XX  XX XX XX XX
XX XX XX XX  XX XX XX XX
XX XX XX XX  XX XX XX XX
XX XX XX XX  XX XX XX XX  EOM
```

.
.
.

```
I hh:mm:ss xy,ww  AUD QRY BER ALL NPCS [s]abc-[t]def \
TOT nnn  5 LN MSG:
XX XX XX XX  XX XX XX XX
XX XX XX XX  XX XX XX XX
```

```

XX XX XX XX  XX XX XX XX
XX XX XX XX  XX XX XX XX COMPL

```

Hierarchical

[O.81003]

```

I hh:mm:ss xy,ww  AUD QRY BER ALL NPCS uvmnp-uvmqr \
TOT nnn  5 LN MSG:
XX XX XX XX  XX XX XX XX
XX XX XX XX  XX XX XX XX
XX XX XX XX  XX XX XX XX
XX XX XX XX  XX XX XX XX EOM
.
.
.
I hh:mm:ss xy,ww  AUD QRY BER ALL NPCS uvmnp-uvmqr \
TOT nnn  5 LN MSG:
XX XX XX XX  XX XX XX XX
XX XX XX XX  XX XX XX XX
XX XX XX XX  XX XX XX XX
XX XX XX XX  XX XX XX XX COMPL

```

Explanation of Parameters

1.544 Mbit/s Termination

BER Bit error rate

2.048 Mbit/s Termination

BER Bit error rate

Minor Bit Error Rate for NPCs.

[s]abc The 3- or 4-digit nonhierarchical NPC number
The first NPC in a module.

[t]def The 3- or 4-digit nonhierarchical NPC number
The last NPC in a module.

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp Hierarchical NPC number
The first NPC in a range.

uvmqr Hierarchical NPC number
The last NPC in a range.

uv Unit number

m Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

nnn Number of NPCs with BER values greater than BER minor threshold or number of NPCs with the parameter threshold exceeded.

1.544 Mbit/s Termination

xx Alarm State

CL Clear

ER Error

MJ Major

MN Minor

-- NPC is unequipped or out of service



NOTE:

For the NPCs in Multiplexers (MXRs) or Hybrid Multiplexers (HMXRs) or Mappers (MPRs), one output module corresponds to all the NPCs in an MXR or HMXR or MPR respectively.

2.048 Mbit/s Termination

xx BER Alarm State

This state represents a combination of the Excessive Bit Error Rate (EER), Bit Error Rate (BER), and Remote Bit Error Rate (RBER). It is interpreted as either a Prompt Maintenance Alarm - Major (PMA), Prompt Maintenance Alarm - Critical (PMC), Deferred Maintenance Alarm (DMA), or Clear.

xx	EER/BER state	RBER state
CR	PMC	
MJ	EER/PMA	Not applicable
MN	DMA	Inactive
RN	DMA	Active

xx	EER/BER state	RBER state
CL	Clear*	Inactive
RL	Clear*	Active
--	NPC unequipped, out of service or with an inappropriate type	

* Clear refers to a Facility type NPC whose received error rate is less than the Minor BER threshold.

without CRC (\$ 10 sup -5 \$)

with CRC (\$ 10 sup -6 \$)

Note that EER has priority over the BER/RBER states. EER does not coexist with them; however, BER and RBER coexist with each other.

Unless the CHG::NPC,TS0 command is used to redefine the active value of bit 4 of CTS 0, the RBER values are:

1 inactive

0 Active

Note that if the autonomous output is the midnight report for non PA NPCs only, the xx is output as dashes (-) for the PA NPCs within the same FTM. In this case, an FTM with PA NPCs only is skipped. Similarly, if the autonomous output is the daily report for PA NPCs only, the xx for non PA NPCs is output as dashes (-).

QUERY FACILITY ALARMS

Explanation of Command

1.544 Mbit/s Termination

This command requests a listing of all Network Processing Circuits (NPCs) reporting a Carrier Failure Alarm (CFA), a Carrier Group Alarm (CGA), or a Loss of Signal (LOS) alarm.

For carrier group alarms the CGA and CFA keywords are alternatives and may be used interchangeably on input. However, the CFA keyword has the capability to cause a report of the alarms enabled via command I.51011.

The end of the report is indicated by AUD PARAMS COMPL.

2.048 Mbit/s Termination

This message requests a listing of all Network Processing Circuits reporting a Primary Block Alarm. See message I.51011 for setting those performance parameters you would like to have measured and collected.

The alarm report is followed by reports of the form [O.81002], [O.81003] and [O.81004] — if their respective parameters have been enabled as specified in Message I.51011.

The end of the report is indicated by REPT EVT EQPT::NPC COMPLD.

Both Terminations

For an autonomous message, the link field n is blank.

Command

[I.81001]

AUD: [FRM xy][, SEQ ww]:QRY, {CFA|CGA|LOS}!

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

CGA report

[O.81001]

```
M hh:mm:ss xy,ww n[vv] AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
M hh:mm:ss xy,ww n[vv] SC ALM <state> CGA [s]abc k COMPL
M hh:mm:ss xy,ww n[vv] SC ALM <state> CGA [s]abc k COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> {CGA|CFA|LOS} [s]abc \
[k] COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> {CGA|CFA|LOS} [s]abc \
[k] COMPL
M hh:mm:ss xy,ww n[vv] AUD {CGA|CFA|LOS} END COMPL
M hh:mm:ss xy,ww n[vv] AUD PARAMS COMPL
```

CFA report

[O.81001]

```
M hh:mm:ss xy,ww n[vv] AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
M hh:mm:ss xy,ww n[vv] SC ALM <state> CGA [s]abc k COMPL
M hh:mm:ss xy,ww n[vv] SC ALM <state> CGA [s]abc k COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> {CGA|CFA|LOS} [s]abc \
[k] COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> {CGA|CFA|LOS} [s]abc \
[k] COMPL
M hh:mm:ss xy,ww n[vv] AUD {CGA|CFA|LOS} END COMPL
```

⇒ NOTE:

The preceding message can be followed by messages 0.81002, 0.81003 and 0.81004 if their respective parameters have been enabled by Message I.51011. Please refer to Message I.51011 for the list of presently implemented parameter audit reports.

M hh:mm:ss xy,ww n[vv] AUD PARAMS COMPL

Hierarchical

CGA report

[O.81001]

```
M hh:mm:ss xy,ww n[vv] AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
M hh:mm:ss xy,ww n[vv] SC ALM <state> CGA uvmnp k COMPL
M hh:mm:ss xy,ww n[vv] SC ALM <state> CGA uvmnp k COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> {CGA|CFA|LOS} uvmnp \
[k] COMPL
```

```
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> {CGA|CFA|LOS} uvmnp \
[k] COMPL
M hh:mm:ss xy,ww n[vv] AUD {CGA|CFA|LOS} END COMPL
M hh:mm:ss xy,ww n[vv] AUD PARAMS COMPL
```

CFA report

[O.81001]

```
M hh:mm:ss xy,ww n[vv] AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
M hh:mm:ss xy,ww n[vv] SC ALM <state> CGA uvmnp k COMPL
M hh:mm:ss xy,ww n[vv] SC ALM <state> CGA uvmnp k COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> {CGA|CFA|LOS} uvmnp \
[k] COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> {CGA|CFA|LOS} uvmnp \
[k] COMPL
M hh:mm:ss xy,ww n[vv] AUD {CGA|CFA|LOS} END COMPL
```



NOTE:

The preceding message can be followed by messages 0.81002, 0.81003 and 0.81004 if their respective parameters have been enabled by Message I.51011. Please refer to Message I.51011 for the list of presently implemented parameter audit reports.

```
M hh:mm:ss xy,ww n[vv] AUD PARAMS COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

CGA report

[O.81001]

```
M hh:mm:ss xy,ww n[vv] AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> PBA [s]abc k COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> PBA [s]abc k COMPL
M hh:mm:ss xy,ww n[vv] AUD {CGA|CFA} END COMPL
M hh:mm:ss xy,ww n[vv] AUD PARAMS COMPL
```

CFA report

[O.81001]

```
M hh:mm:ss xy,ww n[vv] AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> PBA [s]abc k COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> PBA [s]abc k COMPL
M hh:mm:ss xy,ww n[vv] AUD {CGA|CFA} END COMPL
```



NOTE:

The preceding message can be followed by messages 0.81002, 0.81003 and 0.81004 if their respective parameters have been enabled by Message I.51011. Please refer to Message I.51011 for the list of presently implemented parameter audit reports.

M hh:mm:ss xy,ww n[vv] AUD PARAMS COMPL

Hierarchical

CGA report

[O.81001]

M hh:mm:ss xy,ww n[vv] AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> PBA uvmnp k COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> PBA uvmnp k COMPL
M hh:mm:ss xy,ww n[vv] AUD CGA END COMPL
M hh:mm:ss xy,ww n[vv] AUD PARAMS COMPL

CFA report

[O.81001]

M hh:mm:ss xy,ww n[vv] AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> PBA uvmnp k COMPL
M hh:mm:ss xy,ww n[vv] AR01 MISC ALM <state> PBA uvmnp k COMPL
M hh:mm:ss xy,ww n[vv] AUD CFA END COMPL



NOTE:

The preceding message can be followed by messages 0.81002, 0.81003 and 0.81004 if their respective parameters have been enabled by Message I.51011. Please refer to Message I.51011 for the list of presently implemented parameter audit reports.

M hh:mm:ss xy,ww n[vv] AUD PARAMS COMPL

**Autonomous
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.81001]

I hh:mm:ss xy,ww AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
I hh:mm:ss xy,ww SC ALM <state> CGA [s]abc k COMPL

```
I hh:mm:ss xy,ww SC ALM <state> CGA [s]abc k COMPL
I hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|CFA|LOS} [s]abc [k] \
COMPL
I hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|CFA|LOS} [s]abc [k] \
COMPL
I hh:mm:ss xy,ww AUD {CGA|CFA|LOS} END COMPL
I hh:mm:ss xy,ww AUD PARAMS COMPL
```

Hierarchical

[O.81001]

```
I hh:mm:ss xy,ww AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
I hh:mm:ss xy,ww SC ALM <state> CGA uvmnp k COMPL
I hh:mm:ss xy,ww SC ALM <state> CGA uvmnp k COMPL
I hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|CFA|LOS} uvmnp [k] \
COMPL
I hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|CFA|LOS} uvmnp [k] \
COMPL
I hh:mm:ss xy,ww AUD {CGA|CFA|LOS} END COMPL
I hh:mm:ss xy,ww AUD PARAMS COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

[O.81001]

```
I hh:mm:ss xy,ww AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
I hh:mm:ss xy,ww SC ALM <state> CGA [s]abc k COMPL
I hh:mm:ss xy,ww SC ALM <state> CGA [s]abc k COMPL
I hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|CFA|LOS} [s]abc [k] \
COMPL
I hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|CFA|LOS} [s]abc [k] \
COMPL
I hh:mm:ss xy,ww AUD {CGA|CFA|LOS} END COMPL
I hh:mm:ss xy,ww AUD PARAMS COMPL
```

Hierarchical

[O.81001]

```
I hh:mm:ss xy,ww AUD AR02 ALARM SUM nnnn REPORTS FOLLOW:
I hh:mm:ss xy,ww SC ALM <state> CGA uvmnp k COMPL
I hh:mm:ss xy,ww SC ALM <state> CGA uvmnp k COMPL
I hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|CFA|LOS} uvmnp [k] \
COMPL
I hh:mm:ss xy,ww AR01 MISC ALM <state> {CGA|CFA|LOS} uvmnp [k] \
COMPL
I hh:mm:ss xy,ww AUD {CGA|CFA|LOS} END COMPL
I hh:mm:ss xy,ww AUD PARAMS COMPL
```

**Explanation of
Parameters**

CFA	Carrier failure alarm Use this keyword to list carrier group alarms and alarms enabled by command UTL::TOD (I.51011).
CGA	Carrier group alarm Use this keyword to list only carrier group alarms.

1.544 Mbit/s Termination

LOS	Loss of signal
PARAMS	Parameters
AR01	Alarm report 1
AR02	Alarm report 2
ALARM	Alarm
SUM	Summary
REPORTS	Reports
FOLLOW	Follow
NPC	Network processing circuits
MISC	Miscellaneous
END	End

2.048 Mbit/s Termination

PBA	Primary Block Alarm
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
nnnn	Total number of CGA/CFA reports
SC	Subscriber (loop) carrier

ALM Alarm
state Alarm status

1.544 Mbit/s Termination

MJ Major
MN Minor
INFO Information

2.048 Mbit/s Termination

PMA Prompt Maintenance Alarm (MJ)
PMC Prompt Maintenance Critical Alarm (CR)
DMA Deferred Maintenance Alarm (MN)
MI Maintenance Information

k Type of alarm

1.544 Mbit/s Termination

A AIS - Alarm Indication Signal; also known as All
Ones Signal or Blue Signal
B Both - Yellow and Red (Note: B is valid only for
SLC[®] Series 5 NPCs)
L LMA - Local Multiframe Alarm
M RMA - Remote Multiframe Alarm
R Red
Y Yellow

2.048 Mbit/s Termination

For PA type NPCs:

A	Primary AIS	AIS received in all 32 time slots
B	BER	Bit error rate detected in received signal
C	LCMA	Loss of CRC4 multiframe alignment in TS0
E	RBER	Remote bit error rate detected in TS0 bit 4
F	LOF	Loss of Frame type Primary block failure

G	FLCMA	Far-end Loss of CRC4 multiframe alignment in TS0
I	RAIS	Remote AIS detected in TS0 bit 4
L	LMA	Loss of multiframe alignment in CAS TS16
M	R16	RAI received in TS16 bit 6 of frame 0
P	PFWOOF	TS0 Pseudo Frame Word Out-Of-Frame
R	LOS	Loss of Signal type Primary block failure
S	SFI	Synchronization failure indication in TS0 bit 5
V	A16	AIS received in CAS TS16
X	EER	Excessive error rate
Y	RAI	Remote alarm indication received in TS0 bit 3
Z	RPSFI	Remote Power Supply Failure Indicator

For PB and PC type NPCs:

A	Primary AIS	AIS received in all 32 time slots
B	BER	Bit error rate detected in received signal
E	RBER	Remote bit error rate detected in TS0 bit 4
I	RAIS	Remote AIS detected in TS0 bit 4
L	LMA	Loss of multiframe alignment in CAS TS16
M	R16	RAI received in TS16 bit 6 of frame 0
R	PBF	Primary block failure caused by LOS or LOF
S	SFI	Synchronization failure indication in TS0 bit 5
V	A16	AIS received in CAS TS16

X	EER	Excessive error rate
Y	RAI	Remote alarm indication received in TS0 bit 3
Z	RPSFI	Remote Power Supply Failure Indicator

AUD, QRY, CFA, CGA, LOS, AR02, ALARM, SUM, REPORT
S, FOLLOW, SC, ALM, AR01, MISC, END, PARAMS, ALL, FT
U, NPC, TOT, DS3U, HSU, PBA, FTM, PA, NPC

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INPUT DENIAL

Explanation of Message

Processing of the input message is STOPPED because the action verb is unrecognized (BADVERB) or the frame or sequence number is incorrect (FRMERR or SEQERR).

Output from this command is sent only to the link on which the command was input.

Autonomous Message

[O.01101]

M hh:mm:ss xy,ww n[vv] {BADVERB|FRMERR|SEQERR} BAD SYNTAX e LN MSG:
First 70 characters of input message.
Remaining text of input message STOPPED

Explanation of Parameters

BADVERB	Bad verb The action verb was not recognized.
FRMERR	Frame error - incorrect frame number
SEQERR	Sequence error - incorrect sequence number
BAD	Bad
STOPPED	Stopped
SYNTAX	Syntax
e	Number of lines in the message

INPUT DENIAL

Explanation of Message

If the message reports STOPPED, it means that the input command has been stopped or has been denied processing.

If the message reports DNY, it means that an attempt has been made to execute an unlicensed or inactive command.



NOTE:

The error field, action verb, and category are optional; a reason is always given.

Addressing Attempts

Attempts to address entities (units and NPCs) dependent upon nonconfigured units result in the following message:

BAD ARG CONFIG ERR.

Output

Output from this command is sent only to the link on which the command was input.

Autonomous Message

[O.01131.01]

M hh:mm:ss xy,ww n[vv] [<BADVERB|FRMERR|SEQERR|CMD>|<actverb>] \\
[<INERR>] <reason> e LN MSG:
<First 70 characters of input message.>
[<Text continued from input message>]
<Remaining text of input message> {STOPPED|DNY}

Explanation of Parameters

BADVERB	Bad verb
	The action verb was not recognized.
FRMERR	Frame error - incorrect frame number
SEQERR	Sequence error - incorrect sequence number

actverb	Action verb - a valid action verb of the stopped or denied command
CMD	Command - other command error
INERR	Input error
STOPPED	Stopped
e	Number of lines in the message
reason	Reason for stop or denial
	BAD ARG Bad argument
	BAD ARG CONFIG ERR
	Bad argument and configuration error; attempted to address entities such as units and Network Processing Circuits (NPCs) dependent on non-configured units
	BAD SYNTAX
	Bad syntax
	CMD NOT ALLOWED
	Command is not allowed in a macro or alternative map
	RESTRICTED
	Command is restricted to frame administrator only
	ERR CMD ABT
	Command error and aborted
INACT	Command is for a feature package which currently is inactive
	MC OOS,MCOND,INSERVICE
	Main Controller is out-of-service, maintenance condition, or in-service
	RANGE ERROR
	Range error

REPORT CHANGE OF C-BIT STATUS

Explanation of Command

**NOTE:**

This message applies to 2.048 Mbit/s Terminations only.

This message reports one of three states for the monitor time slot:

- idle,
- framed and c-bit, and
- network.

Autonomous Message

Nonhierarchical

[O.65211]

I hh:mm:ss xy,ww BC R TO [s]abcdddd {X'abcd|ZO|NA} COMPL

Hierarchical

[O.65211]

I hh:mm:ss xy,ww BC R TO uvmnpddd {X'abcd|ZO|NA} COMPL

Explanation of Parameters

[s]abc	Non-Hierarchical NPC number
uvmnp	Hierarchical NPC number
ddd	C-bit channel number, valid values are 1-30.
abcd	Received c-bit pattern
ZO	All zero (or idle) pattern
NA	Network Alarm

BROADCAST CROSS-CONNECTION

Explanation of Command

This command adds a single tributary leg to a broadcast cross-connection. It cross-connects the tributary to the indicated source.

It can be used to create a new one-way cross-connection from an existing broadcast source to the specified tributary channel. It can also be used to convert an existing two-way, two-point cross-connection to a broadcast cross-connection while adding a new tributary leg.

Data received on the broadcast tributary leg is discarded because a one-way cross-connection is created. Only data from the full tributary leg is returned to the broadcast source.

The FROM end field designates the conference backbone (source). The optional range fields indicate the conference width.

1.544 Mbit/s Termination

The allowable range is from 01 to 24 channels.

The FROM end receives return data from the TO end, if and only if

- the TO end is the initial connection (first tributary), and
- the FROM end is not provisioned with the LPD or NTR keywords.

The field in the TO end designates the tributary. The width of the tributary is indicated by a range designation and must match the backbone width. If necessary, more tributaries can be added by subsequent broadcast cross-connect commands. Received data from broadcast-only TO terminations is dead-ended as it enters DACS II.



NOTE:

Broadcast cross-connections are not allowed from or to the 24th channel of a DS1 using the T1DM framing format.

2.048 Mbit/s Termination

The allowable range is from 01 to 31 channels.

The FROM end receives return data from the TO end, if and only if

- The TO end is the initial connection (first tributary), and
- The FROM end is not provisioned with the LPD or NTR keywords.

The field in the TO end designates the tributary. The width of the tributary is indicated by a range designation and must match the backbone width. If necessary, more tributaries can be added by subsequent broadcast cross-connect commands. Received data from broadcast-only TO terminations is dead-ended as it enters DACS II.



NOTE:

Broadcast cross-connections are not allowed from or to the 24th channel of a DS1 using the T1DM framing format.

For broadcast circuits (in contrast to two-point circuits), the A-law to μ -law conversion is turned on as a default. Therefore, all broadcast connections dealing with E1 circuits need to use the NAM keyword to turn the A-law to μ -law conversion off, if that is desired.

There is an exception. If the broadcast circuit is started as a two-way connection between E1 circuits that are later on converted to broadcast connections using the CONV keyword, then the default for E1 two-way connections governs, and there is no A-law to μ -law conversion. In fact a broadcast circuit that is started as a two-way circuit can never be operated with A-law to μ -law conversion. If A-law to μ -law conversion is desired for the broadcast connections, then the user must provision the circuit immediately as a broadcast circuit.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.13002]

```
BCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
,<tc>[, {NTR|LPD|CONV}][, {CUS|INCL}][,RDC]!
```

Hierarchical

[I.13002]

```
BCON:[FRM xy][,SEQ ww]:FROM uvmpdd[-eee],TO wxkqrjjj[-kkk] \
,<tc>[, {NTR|LPD|CONV}][, {CUS|INCL}][,RDC]!
```

2.048 Mbit/s Termination

Nonhierarchical

[I.13002]

BCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
[,<tc>][,<sc>][,{NTR|LPD|CONV}][,NAM][,{CUS|INCL}][,RDC]!

Hierarchical

[I.13002]

BCON:FRM xy,SEQ ww:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
[,<tc>][,<sc>][,{NTR|LPD|CONV}][,NAM][,{CUS|INCL}][,RDC]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.13002]

M hh:mm:ss xy,ww n[vv] BCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
2 LN MSG:
<tc>[{NTR|LPD|CONV}][CUS][RDC] COMPL

Hierarchical

[O.13002]

M hh:mm:ss xy,ww n[vv] BCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
2 LN MSG:
<tc>[{NTR|LPD|CONV}][CUS][RDC] COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.13002]

M hh:mm:ss xy,ww n[vv] BCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
2 LN MSG:
<tc>[<sc>][{NTR|LPD|CONV}][NAM][CUS][RDC] COMPL

Hierarchical

[O.13002]

M hh:mm:ss xy,ww n[vv] BCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
2 LN MSG:
[<tc>][<sc>][{NTR|LPD|CONV}][NAM][CUS][RDC] COMPL



NOTE:

On output, the primary line in the preceding message is split into two lines if it exceeds 80 characters long.

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.13002.01]

M hh:mm:ss xy,ww n[vv] BCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
2 LN MSG:
[[t]wxyzzz] cc BCAST DNY

[O.13002.02]

M hh:mm:ss xy,ww n[vv] BCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
2 LN MSG:
[[t]wxyzzz] COND cc DNY

Hierarchical

[O.13002.01]

M hh:mm:ss xy,ww n[vv] BCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
2 LN MSG:
[opjstzzz] cc BCAST DNY

[O.13002.02]

M hh:mm:ss xy,ww n[vv] BCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
2 LN MSG:
[opjstzzz] COND cc DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.13002.01]

M hh:mm:ss xy,ww n[vv] BCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
2 LN MSG:
[[t]wxyzzz] cc BCAST DNY

[O.13002.02]

M hh:mm:ss xy,ww n[vv] BCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
2 LN MSG:
[[t]wxyzzz] COND cc DNY

Hierarchical

[O.13002.01]

M hh:mm:ss xy,ww n[vv] BCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
2 LN MSG:
[opjstzzz] cc BCAST DNY

[O.13002.02]

M hh:mm:ss xy,ww n[vv] BCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
2 LN MSG:
[opjstzzz] COND cc DNY

Explanation of Parameters

FROM	From
TO	To
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

ddd, jjj	Channel numbers for beginning of channel range
eee, kkk	Channel numbers for end of channel range
001-024	
000-030	CEPT type NPCs grown as CAS
000-031	CEPT type NPCs grown as NSA
	Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.
001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
	For CEPT type NPCs, channel associated signaling (CAS) channel 031 (TS16) is not allowed in a range of channel numbers. tc Trunk conditioning
	The desired cross-connected signaling and insertion word applied when a failure occurs. The signaling and the insertion word specification are entered separately, with a comma as the delimiter.

1.544 Mbit/s Termination

The following signaling options are allowed:

TC(ijkl,mnop) 2-way, 4-state signaling in binary. For ESF type framing format, software expands 4-state to 16-state by duplicating the format on the remaining frames on a superframe.

TC(efghijkl,mnopqrst)

	2-way, 16-state in binary. Only valid for ESF framing formats.
TC(X'ab,X'cd)	2-way, 16-state in hexadecimal. Only valid for ESF framing formats.
TRSP	Transparent, no signaling.

2.048 Mbit/s Termination

The following signaling options are allowed:

TC(efghijkl,mnopqrst)

	2-way, 16-state in binary.
TC(X'ab,X'cd)	2-way, 16-state in hexadecimal.
TRSP	Transparent, no signaling (that is, channel 000 in TS16)
Omitted	Defaults to TC(X'FF,X'FF) if both terminations are channel associated signaling (CAS) type. It defaults to TRSP if one of the terminations is nonsignaling associated (NSA) type.

1.544 Mbit/s Termination

The following insertion word options are allowed:

IW X'pq	The 8-bit pattern corresponding to the hexadecimal value of pq is inserted in the downstream direction of a failure on either line.
TRB	Standard trouble code, equal to IW X'E4.
MUX	MUX out of sync code, equal to IW X'1A.

2.048 Mbit/s Termination

The following insertion word options are allowed:

IW X'pq	The 8-bit pattern corresponding to the hexadecimal value of pq is inserted in the downstream direction of a failure on either line.
Omitted	Defaults to IW X'FF.

Additional rules apply for CEPT cross-connections. See Table 1 for allowable signaling type and signaling consequence action and Table 2 for allowable cross-connected time slot consequence action.

Allowable Signaling Type and Signaling Consequent Action

Primary Type in X-connect	Allowable <tc> sig. type/ type/ sig. consequent action keyword	Resulting Signaling Code consequent action TO	Resulting sig. Code (when used) TO	Resulting Disconnect
CAS ↔ CAS	TRSP	None (fixed at X'D)	Sig. fixed at X'D	X'D
	TC(--, X'tu)	CAS	X'F	X'u
	Omitted	CAS	X'F	X'F
NSA ↔ CAS or CAS ↔ NSA	TRSP/ Omitted	None (Fixed at X'D in CAS direction)	Sig. fixed at X'D in CAS direction	X'D in CAS direction
NSA ↔ NSA	TRSP/ Omitted	None	Not appl.	Not appl.

Allowable Cross-Connected Time slot Consequent Action

Allowable <tc> Time slot X-connect keyword	Resulting Cross-Connected Time slot Consequent Action TO	Resulting Disconnect Code (when used) TO
Omitted	X'FF	X'FF
IW X'pq*	X'FF	X'pq

Allowable Cross-Connected Time slot Consequent Action

Allowable <tc> Time slot X-connect keyword	Resulting Cross- Connected Time slot Consequent Action TO	Resulting Disconnect Code (when used) TO
* Only used as a means of providing per time slot DCC codes. If the DCC code is not used when issuing the disconnect command, then the insertion word at the time the NPC was grown is used. This growth insertion word defaults to hex "D5" if not explicitly specified at growth time.		



NOTE:

In a gateway application, when E1 channels are connected to T1 channels, the following rules apply to the transmittal of the Insertion Word (IW) towards the facility. If the Insertion Word needs to be transmitted towards the facility as a result of consequent action, then the Insertion Word transmitted by the T1 NPC towards its transmission facility is the Insertion Word specified in this command; however, the Insertion Word transmitted by the E1 NPC towards its facility is always X'FF.

sc

Signaling control

This variable represents the optional signaling bit control specification and is used only in the Channel Associated Signaling (CAS) to CAS application with CAS signaling.

If this option is not used, all four cross-connected time slot 16 (abcd) signaling bits in each direction will be cross-connected unchanged.

Signaling control is specified as follows:

SC(abcd,efgh)

abcd Time slot 16 signalling bits, From direction

efgh Time slot 16 signalling bits, To direction

All 8 bits can be controlled independently. Control is applied by replacing each character in variable abcd or efgh with the appropriate control character.

The allowable control characters are

P Pass through unchanged

V Pass through inverted

0 Set output to 0

1 Set output to 1

The effect of the V control character depends upon whether the connection is international or gateway.

International: Inversion takes place on both the From and To-direction sides. The net effect is to cancel out the inversion. Hence it appears that no inversion took place.

Gateway: Inversion takes place only on the international side of the connection. The effect is an inversion.

NTR No Transmit

All tributaries are broadcast only. There is no return path to the source.

1.544 Mbit/s Termination

LPD Looped

The source loops its broadcast back to itself. All the tributaries are broadcast only.

2.048 Mbit/s Termination

LPD Looped

The source loops its broadcast back to itself. All the tributaries are broadcast only. When the LPD keyword is used, the signaling conversion of the FROM side overrides that of the TO side. If neither NTR nor LPD is used, and the source (FROM abcd[-eee]) is being established for the first time, ghijkl is a full tributary, capable of transmitting back to the source. If the source has been previously established, all tributaries are broadcast only.

CONV Convert

CONV is given to convert a two-way, two-point circuit to a broadcast circuit. The first termination (NPC and channel) listed in the input message is the FROM (or source) termination in the current two-point connection. The termination next following in the command is the full tributary leg to be added in the conversion to a broadcast connection. If the range fields eee and kkk are used, the entire width of the conference tributaries must be indicated.

NAM No A-law to μ -law

The A-law to μ -law and μ -law to A-law code translators on the E1 type NPC are disabled. This keyword is valid in the following types of cross-connects:

E1 to E1 Multi-point cross-connects have A-law to μ -law and μ -law to A-law set as a default. This conversion is performed on pure E1 multi-point connections in case a DS1 leg is ever added to the broadcast connection. The NAM keyword is used to disable the conversions. It may be desirable to disable conversions in a pure E1 multi-point cross-connect since such a connection has more quantization noise than a pure E1 two-point cross-connect. This is due to the back to back A-law to μ -law and μ -law to A-law conversions which are taking place.

E1 to DS1 or DS1 to E1

Same explanation as E1 to E1.

DS1 to DS1

Not applicable.

CUS	Customer Indicates a customer controlled circuit
RDC	Red circuit This keyword causes the associated circuit to be flagged as a red circuit.
INCL	Inclusive To connect a circuit or range of circuits including one or more circuits previously marked as Customer Controlled, use the INCL (inclusive) option. If this option is not used, the message is denied if any circuits in the range are customer controlled. INCL is not needed to connect a circuit or circuits previously marked as Red Circuits.
[t]wxy	The 3- or 4-digit nonhierarchical NPC number involved in the denial, otherwise the same as [s]abc
opjst	Hierarchical NPC number involved in the denial, otherwise the same as uvmnp
zzz	Channel number involved in the denial; otherwise, the same as ddd
BCAST	Denial specific to broadcast conferences
COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
01	Invalid range for specified NPC type
03	No RDLD or CUS circuits and INCL keyword used
04	No NPC's out of service and OOS keyword used
05	Invalid use of CONV keyword
06	Invalid range for specified FROM NPC type
10	NPC out of service or failed
11	NPC not equipped
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
20	Line format types are incompatible
21	Trunk conditioning is invalid
22	FMC cannot be cross-connected in this format
30	Termination is already assigned
32	Termination is under test
34	Termination is under customer control (CUS)
35	Termination is protected (RDLD)
36	Termination is not connected as indicated
50	Trunk conditioning doesn't match that of conference
51	CUS flag doesn't match that of conference
52	RDLD flag doesn't match that of conference
53	TO side of two-way to be converted is not an FTU NPC

cc	<i>Explanation</i>
54	Conversion leg is terminated
55	Width of existing two way does not match conference width
56	FROM is a two-way and no CONV specified
57	FROM is not a backbone leg
58	Specified width does not match existing conference width
59	NTR invalid since existing conference is not already NTR
5A	LPD invalid since existing conference is not already LPD
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
95	Range overlapping between FROM and TO or between two TOs
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D3	Corresponding NPC for FROM virtual channel is not provisioned
D4	Corresponding NPC for TO virtual channel is not provisioned
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range

cc	<i>Explanation</i>
DC	A loopback is active on the FROM termination
E3	Attempt to broadcast a locally switched channel
E8	SC invalid for cross-connection specified
E9	MUX or TRB invalid for cross-connection specified
EA	AIS invalid for cross-connection specified
EB	NAM invalid for cross-connection specified
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
70	NPC invalid type
85	Using the 24th channel of a T1DM NPC
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed
4A	channel part of a TP or TG

st	d	<i>Explanation</i>
ROLL	{F T B}	Circuit is involved in a roll

BROADCAST CONNECT

Explanation of Command

This command connects a new broadcast circuit from a nonchannelized source network processing circuit (NPC) to a single nonchannelized tributary. It also adds a single nonchannelized tributary to an existing conference.

This message also adds the indicated tributary and converts (CONV) a two-way, two-point circuit to a broadcast conference.

When a failure occurs or during an alarm state, the alarm-indication signal (AIS or all ones signal) is transmitted to the failed tributaries or to all tributaries if the source NPCs fail. If the failure occurs during the execution of this command, it is canceled and no broadcast circuit is set up.

Command

Nonhierarchical

[I.13021]

```
BCON:[FRM xy][,SEQ ww]:FROM [s]abc,TO [t]def[,RDC][,{CUS|INCL}] \
[, {NTR|LPD|CONV}]!
```

Hierarchical

[I.13021]

```
BCON:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxkqr[,RDC][,{CUS|INCL}] \
[, {NTR|LPD|CONV}]!
```

Completion Message

Nonhierarchical

[O.13021]

```
M hh:mm:ss xy,ww n[vv] BCON [s]abc,[t]def[ RDC][ {CUS|INCL}] \
[ {NTR|LPD|CONV}] COMPL
```

Hierarchical

[O.13021]

M hh:mm:ss xy,ww n[vv] BCON uvmnp,wxkqr[RDC][{CUS|INCL}] \[{NTR|LPD|CONV}] COMPL

Denial Message

Nonhierarchical

[O.13021.01]

M hh:mm:ss xy,ww n[vv] BCON [s]abc,[t]def[[t]ghi] cc <st> DNY

Hierarchical

[O.13021.01]

M hh:mm:ss xy,ww n[vv] BCON uvmnp,wxkqr[edfhg] cc <st> DNY

Explanation of Parameters

FROM	From termination
TO	To termination
[s]abc	The 3- or 4-digit non-hierarchical non-channelized source (backbone) NPC number
[t]def	The 3- or 4-digit non-hierarchical non-channelized tributary NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical number of nonchannelized source NPC
wxkqr	Hierarchical number of nonchannelized tributary NPC
uv,wx	Unit number
m,k	Module number
np,qr	NPC number
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."



NOTE:

An NPC cannot be broadcast-connected to itself. The desired effect can be achieved by specifying the LPD option.

RDC	Red circuit
CUS	Customer-controlled circuit
INCL	The INCL keyword removes CUS marking
NTR	No transmit No transmit or return path; the tributary is broadcast only
LPD	Looped One signal is looped back to source If neither the NTR nor LPD keyword is specified and the broadcast conference is being established for the first time, the tributary is a full tributary, capable of transmitting back to the source; if the source has been previously established then the tributary is broadcast only.
CONV	Convert CONV is given to convert a two-way, two-point circuit to a broadcast circuit. The first termination (NPC and channel) listed in the input message is the FROM (or source) termination in the current two-point connection. The termination next following in the command is the full tributary leg to be added in the conversion to a broadcast connection.
[t]ghi	The 3- or 4-digit backbone leg (bbl) or tributary NPC number causing denial
edfhg	Hierarchical number of the backbone leg or tributary NPC causing denial
st	Status Status of denial
cc	Hexadecimal condition code

cc	<i>Explanation</i>
01	Invalid range for specified NPC type
03	No RDLD or CUS circuits and INCL keyword used
05	Invalid use of CONV keyword
06	Invalid range for specified FROM NPC type
10	NPC out of service or failed

cc	<i>Explanation</i>
11	NPC not equipped
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
30	Termination is already assigned
32	Termination is under test
33	Termination is a test port
34	Termination is under customer control (CUS)
35	Termination is protected (RDLD)
36	Termination is not connected as indicated
50	Trunk conditioning doesn't match that of conference
51	CUS flag doesn't match that of conference
52	RDLD flag doesn't match that of conference
53	TO side of two-way to be converted is not an FTU NPC
54	Conversion leg is terminated
55	Width of existing two way does not match conference width
56	FROM is a two-way and no CONV specified
57	FROM is not a backbone leg
58	Specified width does not match existing conference width
59	NTR invalid since existing conference is not already NTR
5A	LPD invalid since existing conference is not already LPD

cc	<i>Explanation</i>
62	NPC type mismatch
63	NPC is a channelized NPC
64	NPC is a non-channelized NPC
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
95	Range overlapping between FROM and TO or between two TOs
DF	Unmatched channel range
70	NPC invalid type
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed

BROADCAST CROSS-CONNECTIONS

Explanation of Command

This command sets up a broadcast from a source (FROM) NPC to up to eight tributary (TO) receiving NPCs in the same broadcast. This message is also used to add multiple TOs to an existing broadcast connection based on the specified FROM. Each of the TOs is connected to the specified FROM. There are at most eight TOs allowed in the argument list to the TO keyword. Note that no channel range can be specified on the TO arguments.

2.048 Mbit/s Termination

The channel range from 001 to 031 channels is determined by the range given for the FROM.

1.544 Mbit/s Termination

The channel range from 001 to 024 channels is determined by the range given for the FROM.

Both Terminations

The FROM field designates the source termination. The optional range field [-eee] indicates the width of the conference backbone

2.048 Mbit/s Termination

The allowable width ranges from 001 to 031 channels and must be the same as the width of the existing conference backbone (if any).

1.544 Mbit/s Termination

The allowable width ranges from 001 to 024 channels and must be the same as the width of the existing conference backbone (if any).

Both Terminations

The fields following the SOURCE designation assign the tributaries to be connected to the backbone. Although a conference may have any number of tributaries (limited only by frame configuration), at most eight at a time may be added using this command.

More tributaries can be added by subsequent BCON commands. Each specified tributary has the same range width as the backbone.

If a command attempts to cross-connect a channel to the 24th channel of a DS1 provisioned with the T1DM format, the command is denied.

2.048 Mbit/s Termination

For broadcast circuits (in contrast to two-point circuits) the A-law to μ -law conversion is turned on as a default. Therefore, all broadcast connections dealing with E1 circuits need to use the NAM keyword to turn the A-law to μ -law conversion off, if that is desired.

There is an exception. If the broadcast circuit is started as a two-way connection between E1 circuits that are later on converted to broadcast connections using the CONV keyword, then the default for E1 two-way connections governs, and there is no A-law to μ -law conversion. In fact a broadcast circuit that is started as a two-way circuit can never be operated with A-law to μ -law conversion on. If A-law to μ -law conversion is desired for the broadcast connections, then the user must provision the circuit immediately as a broadcast circuit.

Command

1.544 Mbit/s Termination

Nonhierarchical

[l.13001]

```
BCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee], \
TOX ([t]ghijjj[, [t]klmnnn, ...]),<tc>[, {NTR|LPD|CONV}] \
[, {CUS|INCL}][,RDC]!
```

Hierarchical

[l.13001]

```
BCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee], \
TOX (wxkqrjjj[,edhfgnnn, ...]),<tc>[, {NTR|LPD|CONV}] \
[, {CUS|INCL}][,RDC]!
```

2.048 Mbit/s Termination

Nonhierarchical

[l.13001]

```
BCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee], \
TOX ([t]ghijjj[, [t]klmnnn, ...]),<tc>[,<sc>] \
[, {NTR|LPD|CONV}][,NAM][, {CUS|INCL}][,RDC]!
```

Hierarchical

[I.13001]

BCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee], \
TOX (wxkqrjjj[,edhfgnnn,...])[,<tc>][,<sc>] \
[, {NTR|LPD|CONV}] [,NAM][,{CUS|INCL}][,RDC]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.13001]

M hh:mm:ss xy,ww n[vv] BCON [s]abcddd[-eee] 3 LN MSG:
TOX [t]ghijjj[, [u]klmnnn,...]
<tc>[{NTR|LPD|CONV}][{CUS|INCL}][RDC] COMPL

Hierarchical

[O.13001]

M hh:mm:ss xy,ww n[vv] BCON uvmnpddd[-eee] 3 LN MSG:
TOX wxkqrjjj[,edhfgnnn,...]
<tc>[{NTR|LPD|CONV}][{CUS|INCL}][RDC] COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.13001]

M hh:mm:ss xy,ww n[vv] BCON [s]abcddd[-eee] 3 LN MSG:
TOX [t]ghijjj[, [u]klmnnn,...]
[<tc>][<sc>][{NTR|LPD|CONV}][{CUS|INCL}][RDC] COMPL

Hierarchical

[O.13001]

M hh:mm:ss xy,ww n[vv] BCON uvmnpddd[-eee] 3 LN MSG:
TOX wxkqrjjj[,edhfgnnn,...]
[<tc>][<sc>][{NTR|LPD|CONV}][{CUS|INCL}][RDC] COMPL

Denial Message 1.544 Mbit/s Termination

Nonhierarchical

[O.13001.01]

M hh:mm:ss xy,ww n[vv] BCON [s]abcddd[-eee] 3 LN MSG:
TOX [t]ghijjj[, [t]klmnnn, ...]
[[t]wxyzzz] cc BCAST DNY

[O.13001.02]

M hh:mm:ss xy,ww n[vv] BCON [s]abcddd[-eee] 3 LN MSG:
TOX [t]ghijjj[, [t]klmnnn, ...]
[[t]wxyzzz] COND cc DNY

Hierarchical

[O.13001.01]

M hh:mm:ss xy,ww n[vv] BCON uvmnpddd[-eee] 3 LN MSG:
TOX wxkqrjjj[, edhfgnnn, ...]
[opjstzzz] cc BCAST DNY

[O.13001.02]

M hh:mm:ss xy,ww n[vv] BCON uvmnpddd[-eee] 3 LN MSG:
TOX wxkqrjjj[, edhfgnnn, ...]
[opjstzzz] COND cc DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.13001.01]

M hh:mm:ss xy,ww n[vv] BCON [s]abcddd[-eee] 3 LN MSG:
TOX [t]ghijjj[, [t]klmnnn, ...]
[[t]wxyzzz] cc BCAST DNY

[O.13001.02]

M hh:mm:ss xy,ww n[vv] BCON [s]abcddd[-eee] 3 LN MSG:
TOX [t]ghijjj[, [t]klmnnn, ...]
[[t]wxyzzz] COND cc DNY

Hierarchical

[O.13001.01]

M hh:mm:ss xy,ww n[vv] BCON uvmnpddd[-eee] 3 LN MSG:
TOX wxkqrjjj[, edhfgnnn, ...]
[opjstzzz] cc BCAST DNY

[O.13001.02]

M hh:mm:ss xy,ww n[vv] BCON uvmnpddd[-eee] 3 LN MSG:
TOX wxkqrjjj[,edhfgnnn,...]
[opjstzzz] COND cc DNY

Explanation of Parameters

FROM	From The FROM field is the source termination.
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
[u]klm	The 3- or 4-digit nonhierarchical TO NPC number For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	FROM channel number
eee	FROM channel number denoting the end of the range
jjj	TO channel number
nnn	TO channel number denoting the end of the range
001-024	
000-030	CEPT type NPCs grown as CAS
000-031	CEPT type NPCs grown as NSA
Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.	
001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)

049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

The optional range field *eee* indicates the width of the conference backbone. The range field must not be repeated on the tributary legs' specification. A termination cannot be broadcast connected to itself. The desired effect can be reached by specifying the LPD option. If this message is used to add tributary legs, the width must be the same as the width of the existing conference backbone. However, a conference can have an unlimited number of tributaries, limited only by the frame configuration. More tributaries can be added by subsequent commands.

2.048 Mbit/s Termination

For CEPT type NPCs, CAS channel 031 (TS16) is not allowed in a range of channel numbers.

tc

Trunk conditioning

tc represents the desired cross-connected signaling and insertion word applied when a failure occurs. The signaling and the insertion word specification are entered separately, with a comma as the delimiter, which have the following form:

<*tc_sig*>,<*tc_iw*>

The following signaling options are allowed:

TC(*ijkl,mnop*) 2-way, 4-state signaling in binary. For ESF type framing format, software expands 4-state to 16-state by duplicating the format on the remaining frames on a superframe.

TC(*efghijkl,mnopqrst*)

2-way, 16-state in binary. Only valid for ESF and CEPT framing formats.

TC(*X'ab,X'cd*) 2-way, 16-state in hexadecimal. Only valid for ESF and CEPT framing formats.

TRSP

Transparent, no signaling.

The following insertion word options are allowed:

IW *X'pq* The 8-bit pattern corresponding to the hexadecimal value of *pq* is inserted in the downstream direction of a failure on either line.

TRB

Standard trouble code, equal to IW *X'E4*, not valid for CEPT.

MUX

MUX out of sync code, equal to IW *X'1A*, not valid for CEPT.

Omitted Only valid for CEPT, defaults to IW-X-FF.

2.048 Mbit/s Termination

Additional rules apply for CEPT cross-connections. See the following table.

Allowable Signaling Type and Signaling Consequent Action

Primary Type in Cross-connect	Allowable <tc> Signaling Specification	Resulting Signaling Code FROM, TO	Resulting Signaling Consequent Action (Hardware) FROM, TO	Resulting Signaling Consequent Action (Firmware) FROM, TO	Resulting Disconnect (When DCC used in disconnect command)
CAS ↔ CAS	TRSP	Fixed at X'D	Fixed at X'D	Fixed at X'D	X'D
	TC-X'uv,X'yz*	CAS (Passed Through)	X'F	X'uv,X'yz	X'v,X'z
	Omitted	CAS (Passed Through)	X'F	X'F	X'F
NSA ↔ CAS	TRSP/Omitted	None (Fixed at X'D in CAS direction)	Fixed at X'D in CAS direction	Fixed at X'D in CAS direction	X'D in CAS direction
NSA ↔ NSA	TRSP/Omitted	Not appl.	Not appl.	Not appl.	Not appl.

⇒ NOTE:
For TCON and TCNT TC is X'uv,X'yz.
For OCON, OCNT and BCON TC is --,X'yz.

* Only used as a means of providing per time slot DCC codes. If the DCC code is not used when issuing the disconnect command, then the insertion word at the time the NPC was grown is used. This growth insertion word defaults to hex D5 if not explicitly specified at growth time.

Allowable Cross-Connected Time Slot Consequence Action		
Allowable <tc> Time Slot X- connect keyword	Resulting Cross-Connected Time Slot Consequence Action TO	Resulting Disconnect Code (when used) TO
Omitted	X'FF	X'FF
IW X'pq*	X'FF	X'pq



NOTE:

In a gateway application, when E1 channels are connected to T1 channels, the following rules apply to the transmittal of the Insertion Word (IW) towards the facility. If the Insertion Word needs to be transmitted towards the facility as a result of consequent action, then the Insertion Word transmitted by the T1 NPC towards its transmission facility is the Insertion Word specified in this command; however, the Insertion Word transmitted by the E1 NPC towards its facility is always X'FF.

sc

Signaling control

This variable represents the optional signaling bit control specification and is used only in the Channel Associated Signaling (CAS) to CAS application with CAS signaling.

If this option is not used, all four cross-connected time slot 16 (abcd) signaling bits in each direction will be cross-connected unchanged.

Signaling control is specified as follows:

SC(abcd,efgh)

abcd Time slot 16 signalling bits, From direction

efgh Time slot 16 signalling bits, To direction

All 8 bits can be controlled independently. Control is applied by replacing each character in variable abcd or efgh with the appropriate control character.

The allowable control characters are

P Pass through unchanged

V Pass through inverted

0 Set output to 0

1 Set output to 1

The effect of the V control character depends upon whether the connection is international or gateway.

International: Inversion takes place on both the From and To-direction sides. The net effect is to cancel out the inversion. Hence it appears that no inversion took place.

Gateway: Inversion takes place only on the international side of the connection. The effect is an inversion.

NTR	No transmit All tributaries are broadcast only. There is no return path to the source.
LPD	Looped The source loops its broadcast back to itself. All the tributaries are broadcast only. 2.048 Mbit/s Termination When the LPD keyword is used, the signaling conversion of the FROM side overrides that of the TO side. Both Terminations If neither NTR nor LPD is used, and the source (FROM abcdde[-eee]) is being established for the first time, ghijj is a full tributary, capable of transmitting back to the source. If the source has been previously established, all tributaries are broadcast only.
CONV	Convert CONV is given to convert a two-way, two-point circuit to a broadcast circuit. The first termination (NPC and channel) listed in the input message is the FROM (or source) termination in the current two-point connection. The termination next following in the command is the full tributary leg to be added in the conversion to a broadcast connection. Additional legs may be added simultaneously by specifying additional terminations. 2.048 Termination
NAM	No A-law to μ-law The A-law to μ-law and μ-law to A-law code translators on the E1 type NPC are disabled. This keyword is valid in the following types of cross-connects:

Multi-Point:

E1 to E1	Multi-point cross-connects have A-law to μ -law and μ -law to A-law set as a default. This conversion is performed on pure E1 multi-point connections in case a DS1 leg is ever added to the broadcast connection. The NAM keyword is used to disable the conversions. It may be desirable to disable conversions in a pure E1 multi-point cross-connect since such a connection has more quantization noise than a pure E1 two-point cross-connect. This is due to the back to back A-law to μ -law and μ -law to A-law conversions which are taking place.
E1 to DS1 or DS1 to E1	Same explanation as E1 to E1.
DS1 to DS1	Not applicable.
	Both Terminations
CUS	Customer Indicates a Customer-controlled Circuit.
RDC	Red circuit
INCL	Inclusive To connect a circuit or range of circuits including one or more circuits previously marked as customer controlled, use the INCL (inclusive) option. If this option is not used, the message is denied if any circuits in the range are customer controlled. INCL is not needed to connect a circuit or circuits previously marked as red circuits.
[t]wxy	NPC number involved in the denial; otherwise, the same as [s]abc.
zzz	Channel number involved in the denial; otherwise, the same as ddd.
opjst	Hierarchical NPC number involved in the denial, otherwise the same as uvmnp
BCAST	Denial specific to broadcast conferences
cc	Hexadecimal condition code

cc	<i>Explanation</i>
01	Invalid range for specified NPC type
03	No RDLD or CUS circuits and INCL keyword used
04	No NPC's out of service and OOS keyword used
05	Invalid use of CONV keyword
06	Invalid range for specified FROM NPC type
10	NPC out of service or failed
11	NPC not equipped
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
20	Line format types are incompatible
21	Trunk conditioning is invalid
22	FMC cannot be cross-connected in this format
30	Termination is already assigned
32	Termination is under test
34	Termination is under customer control (CUS)
35	Termination is protected (RDLD)
36	Termination is not connected as indicated
50	Trunk conditioning doesn't match that of conference
51	CUS flag doesn't match that of conference
52	RDLD flag doesn't match that of conference
53	TO side of two-way to be converted is not an FTU NPC

cc	<i>Explanation</i>
54	Conversion leg is terminated
55	Width of existing two way does not match conference width
56	FROM is a two-way and no CONV specified
57	FROM is not a backbone leg
58	Specified width does not match existing conference width
59	NTR invalid since existing conference is not already NTR
5A	LPD invalid since existing conference is not already LPD
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
95	Range overlapping between FROM and TO or between two TOs
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D3	Corresponding NPC for FROM virtual channel is not provisioned
D4	Corresponding NPC for TO virtual channel is not provisioned
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range

cc	<i>Explanation</i>
DC	A loopback is active on the FROM termination
E3	Attempt to broadcast a locally switched channel
E8	SC invalid for cross-connection specified
E9	MUX or TRB invalid for cross-connection specified
EA	AIS invalid for cross-connection specified
EB	NAM invalid for cross-connection specified
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
70	NPC invalid type
85	Using the 24th channel of a T1DM NPC
8A	ACON invalid for CEPT NPC type
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed
4A	channel part of a TP or TG
st	d <i>Explanation</i>
ROLL	{F T B} Circuit is involved in a roll

BROADCAST TS0 to Non TS0 CROSS-CONNECTIONS

Explanation of Command



NOTE:

This command applies to the 2.048 Mbit/s Termination Interface only.

The FROM NPC must be grown as a PA or TH type. The broadcast connection defaults to NTR - no return leg. The broadcast connection defaults to NAM-no a-law to u-law conversion. The TS0 source defaults to NFW-non frame word mode. The broadcast connection defaults to TRSP-transparent signalling and uses a default insertion word of X'FF. This message is also used to add multiple TOs to an existing broadcast connection based on the specified FROM. Each of the TOs is connected to the specified FROM. At most, eight TOs are allowed in the argument list to the TO keyword.

The FROM field designates the source termination.

The fields following the SOURCE designation assign the tributaries to be connected to the backbone. Although a conference may have any number of tributaries (limited only by frame configuration), at most eight at a time may be added using this command.

More tributaries can be added by subsequent BCON commands.

If a command attempts to cross-connect a channel to the 24th channel of a DS1 provisioned with the T1DM format, the command is denied.

Command

Nonhierarchical

[I.13051]

```
BCON:FRM xy,SEQ ww:FROM [s]abc000, \  
TOX ([t]ghijjj[, [t]klmnnn, ...])!
```


Hierarchical

[I.13051]

BCON:FRM xy,SEQ ww:FROM uvmnp000, \
TOX (wxkqrjjj [,edhfgnnn,...])!

Completion Message

Nonhierarchical

[O.13051]

M hh:mm:ss xy,ww n[vv] BCON [s]abc000 3 LN MSG:
TOX [t]ghijjj[, [u]klmnnn,...]
NTR NAM NFW COMPL

Hierarchical

[O.13051]

M hh:mm:ss xy,ww n[vv] BCON uvmnp000 3 LN MSG:
TOX wxkqrjjj[,edhfgnnn,...]
NTR NAM NFW COMPL

Denial Message

Nonhierarchical

[O.13051.01]

M hh:mm:ss xy,ww n[vv] BCON [s]abc000 3 LN MSG:
TOX [t]ghijjj[, [t]klmnnn,...]
[[t]wxyz] cc BCAST DNY

[O.13051.02]

M hh:mm:ss xy,ww n[vv] BCON [s]abc000 3 LN MSG:
TOX [t]ghijjj[, [t]klmnnn,...]
[[t]wxyz] COND cc DNY

Hierarchical

[O.13051.01]

M hh:mm:ss xy,ww n[vv] BCON uvmnp000 3 LN MSG:
TOX wxkqrjjj[,edhfgnnn,...]
[opjstzzz] cc BCAST DNY

[O.13051.02]

M hh:mm:ss xy,ww n[vv] BCON uvmnp000 3 LN MSG:
TOX wxkqrjjj[,edhfgnnn,...]
[opjstzzz] COND cc DNY

Explanation of Parameters

FROM	From The FROM field is the source termination.
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
[u]klm	The 3- or 4-digit nonhierarchical TO NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
edhfg	Hierarchical TO NPC number within a range of NPC numbers uv,wx,ed Unit number m,k,h Module number np,qr,fg NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
000	FROM channel number is 000
jjj	TO channel number 000-030 CEPT type NPCs grown as CAS 000-031 CEPT type NPCs grown as NSA Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.

Allowable Cross-Connected Time Slot Consequence Action

Allowable <tc>	Resulting Cross-Connected	Resulting Disconnect
Time slot X-connect	Time slot Consequence Action	Code (when used)
keyword	TO	TO
Omitted	X'FF	X'FF
IW X'pq*	X'FF	X'pq

*Only used as a means of providing per time slot DCC codes. If the DCC code is not used when issuing the disconnect command, then the insertion word at the time the NPC was grown is used. This growth insertion word defaults to hex "D5" if not explicitly specified at growth time.

[t]wxy	NPC number involved in the denial; otherwise, the same as [s]abc
zzz	Channel number involved in the denial; otherwise, the same as ddd
opjst	Hierarchical NPC number involved in the denial, otherwise the same as uvmnp
BCAST	Denial specific to broadcast conferences
cc	Hexadecimal condition code

cc	Explanation
01	Invalid range for specified NPC type
03	No RDLD or CUS circuits and INCL keyword used
04	No NPC's out of service and OOS keyword used
05	Invalid use of CONV keyword
06	Invalid range for specified FROM NPC type
10	NPC out of service or failed
11	NPC not equipped
12	Active CCN side not IS or failed or pested or hardware OOS

cc	<i>Explanation</i>
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
20	Line format types are incompatible
21	Trunk conditioning is invalid
22	FMC cannot be cross-connected in this format
30	Termination is already assigned
32	Termination is under test
33	Termination is a test port
34	Termination is under customer control (CUS)
35	Termination is protected (RDLD)
36	Termination is not connected as indicated
50	Trunk conditioning doesn't match that of conference
51	CUS flag doesn't match that of conference
52	RDLD flag doesn't match that of conference
53	TO side of two-way to be converted is not an FTU NPC
54	Conversion leg is terminated
55	Width of existing two way does not match conference width
56	FROM is a two-way and no CONV specified
57	FROM is not a backbone leg
58	Specified width does not match existing conference width
59	NTR invalid since existing conference is not already NTR

cc	<i>Explanation</i>
5A	LPD invalid since existing conference is not already LPD
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
25	Invalid FPI value
95	Range overlapping between FROM and TO or between two TOs
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D3	Corresponding NPC for FROM virtual channel is not provisioned
D4	Corresponding NPC for TO virtual channel is not provisioned
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
E3	Attempt to broadcast a locally switched channel
E8	SC invalid for cross-connection specified
E9	MUX or TRB invalid for cross-connection specified
EA	AIS invalid for cross-connection specified

cc	<i>Explanation</i>
EB	NAM invalid for cross-connection specified
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
70	NPC invalid type
85	Using the 24th channel of a T1DM NPC
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed
9D	NPC containing channel 000 is invalid type.

BROADCAST DISCONNECTIONS

Explanation of Command

This command disconnects a broadcast circuit cross-connection. It can be used to disconnect any one-way tributary from a broadcast circuit, or the full tributary once all of the one-way tributaries have been disconnected.

Command

Nonhierarchical

[I.15201]

```
BDIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \  
[,CONV][,OOS][,DCC][,INCL]!
```

Hierarchical

[I.15201]

```
BDIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \  
[,CONV][,OOS][,DCC][,INCL]!
```

Completion Message

Nonhierarchical

[O.15201]

```
M hh:mm:ss xy,ww n[vv] BDIS [s]abcddd[-eee],[t]ghijjj[-kkk] \  
[ BRDIS][ CONV][ OOS][ CUS][ RDC][ DCC] COMPL
```

Hierarchical

[O.15201]

```
M hh:mm:ss xy,ww n[vv] BDIS uvmnpddd[-eee],wxkqrjjj[-kkk] \  
[ BRDIS][ CONV][ OOS][ CUS][ RDC][ DCC] COMPL
```

Denial Message**Nonhierarchical**

[O.15201.01]

M hh:mm:ss xy,ww n[vv] BDIS [s]abcddd[-eee],[t]ghijjj[-kkk] \
[[t]wxyzzz] cc BCAST DNY

[O.15201.02]

M hh:mm:ss xy,ww n[vv] BDIS [s]abcddd[-eee],[t]ghijjj[-kkk] \
[[t]wxyzzz] COND cc DNY

Hierarchical

[O.15201.01]

M hh:mm:ss xy,ww n[vv] BDIS uvmnpddd[-eee],wxkqrjjj[-kkk] \
[edhfgzzz] cc BCAST DNY

[O.15201.02]

M hh:mm:ss xy,ww n[vv] BDIS uvmnpddd[-eee],wxkqrjjj[-kkk] \
[edhfgzzz] COND cc DNY

**Explanation of
Parameters****[s]abc**

The 3- or 4-digit nonhierarchical FROM NPC number

[t]ghi

The 3- or 4-digit nonhierarchical TO NPC number

For a listing of the nonhierarchical numbering scheme, refer to
Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical FROM NPC number

wxkqr

Hierarchical TO NPC number

uv,wx Unit number**m,k** Module number**np,qr** NPC number within the module

For a listing of the hierarchical numbering scheme, refer
to Chapter 2, "NPC Numbering and XYZ Parameters."

ddd,jjj

Channel number for beginning of channel range

eee,kkk

Channel number for end of channel range.

Without the optional CONV keyword, ddd and jjj must be the
lowest numbered channels in the range of channels that make
up the broadcast circuit. If the range fields [-eee] and [-kkk] are
used, the entire width of the conference tributaries must be
indicated.

001-024**000-030** CEPT type NPCs grown as CAS**000-031** CEPT type NPCs grown as NSA

Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.

001-047 Odd only (SLC 96[®] Carrier, Mode 3, DGA)**049-095** Odd only (SLC 96 Carrier, Mode 3, DGC)**001-024** Odd and Even (SLC 96 Carrier, Mode 1, DGA)**025-048** Odd and Even (SLC 96 Carrier, Mode 1, DGB)**049-072** Odd and Even (SLC 96 Carrier, Mode 1, DGC)**073-096** Odd and Even (SLC 96 Carrier, Mode 1, DGD)**001-024** Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)**025-048** Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)**049-072** Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)**073-096** Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)**CONV** Convert

The CONV keyword is given to disconnect the specified one-way tributary from the broadcast circuit and convert the circuit to a two-way, two-point circuit. For a command with this option to succeed, only the broadcast source and the full tributary leg must remain on the circuit following the disconnection of the specified one-way tributary. That is, this option is denied if the user attempts to disconnect the full tributary rather than a one-way tributary, or if any other one-way tributaries remain on the broadcast circuit following the disconnection of the one-way tributary specified in the command.

OOS

Out-of-service

An OOS disconnection may be done by giving the optional OOS keyword. At least one end of the circuit must be out-of-service or the OOS disconnection is denied.

INCL

Inclusive

	Use the optional INCL keyword to disconnect a circuit or range of circuits including one or more circuits marked as a red circuit or under customer control. If this option is not used, the message is denied if any circuits in the range are red circuits or customer controlled.
DCC	Disconnect code If the DCC keyword is specified, DACS II inserts the user-defined disconnect code and signaling into the disconnected channels. This disconnect code and signaling are specified by the trunk conditioning field used to connect the circuit. If the DCC option is not used, the disconnect code specified in the GRTH::NPC command is used.
[t]wxy	The 3- or 4-digit nonhierarchical NPC number that caused the denial, with the same valid values as [s]abc.
edhfg	Hierarchical NPC number that caused the denial
zzz	Channel number that caused the denial, with the same valid values as ddd.
BRDIS	Broadcast disconnect The BRDIS keyword indicates that the conference is entirely disconnected (no tributaries remain).
CUS	Customer-controlled circuit CUS indicates a customer controlled circuit.
RDC	Red circuit Indicates that the disconnection was performed on a red circuit. This implies that the INCL keyword was given in the input message. If the disconnection was given on more than one circuit, at least one of them was a red circuit or under customer control.
BCAST	Broadcast
cc	Hexadecimal condition code

cc	<i>Explanation</i>
01	Invalid range for specified NPC type
03	No RDLD or CUS circuits and INCL keyword used
04	No NPC's out of service and OOS keyword used

cc	<i>Explanation</i>
05	Invalid use of CONV keyword
10	NPC out of service or failed
11	NPC not equipped
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
32	Termination is under test
34	Termination is under customer control (CUS)
35	Termination is protected (RDLD)
53	TO side of two-way to be converted is not an FTU NPC
55	Width of existing two way does not match conference width
57	FROM is not a backbone leg
58	Specified width does not match existing conference width
59	NTR invalid since existing conference is not already NTR
5A	LPD invalid since existing conference is not already LPD
5B	TO is not a leg of this/any conference
5C	Can't disconnect return leg unless entire conference disconnected
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed

cc	<i>Explanation</i>
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
95	Range overlapping between FROM and TO or between two TOs
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D3	Corresponding NPC for FROM virtual channel is not provisioned
D4	Corresponding NPC for TO virtual channel is not provisioned
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed

st	d	<i>Explanation</i>
ROLL	{F T B}	Circuit is involved in a roll

BROADCAST DISCONNECTION

Explanation of Command

This command disconnects a single nonchannelized tributary network processing circuit from a nonchannelized digital signal broadcast circuit. It also disconnects a single tributary and converts a broadcast conference to a two-way, two-point circuit.

When the circuit is disconnected, the idle code (AIS) is transmitted.

Command

Nonhierarchical

[I.15231]

BDIS:[FRM xy][,SEQ ww]:FROM [s]abc,TO [t]ghi[,OOS][,INCL][,CONV]!

Hierarchical

[I.15231]

BDIS:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxkqr[,OOS][,INCL][,CONV]!

Completion Message

Nonhierarchical

[O.15231]

M hh:mm:ss xy,ww n[vv] BDIS [s]abc,[t]ghi[OOS][CUS] \[RDC][BRDIS][CONV] COMPL

Hierarchical

[O.15231]

M hh:mm:ss xy,ww n[vv] BDIS uvmnp,wxkqr[OOS][CUS][RDC][BRDIS][CONV] COMPL

Denial Message**Nonhierarchical**

[O.15231.01]

M hh:mm:ss xy,ww n[vv] BDIS [s]abc,[t]ghi[[t]qrs] cc <st> \
DNY**Hierarchical**

[O.15231.01]

M hh:mm:ss xy,ww n[vv] BDIS uvmnp,wxkqr[uvqrs] cc <st> DNY

**Explanation of
Parameters**

[s]abc	The 3- or 4-digit nonhierarchical nonchannelized source (backbone) NPC number
[t]ghi	The 3- or 4-digit nonhierarchical nonchannelized tributary NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical nonchannelized source (backbone) NPC number
wxkqr	Hierarchical nonchannelized tributary NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
OOS	Out-of-service keyword may be specified if one or more of the backbone or tributary NPCs is out of service
INCL	Inclusive keyword required for Customer-controlled (CUS) or Red circuits
CONV	Convert circuit to a two-way, two-point circuit by disconnecting the indicated tributary; as long as more than two tributaries remain, or no return path exists, the option is denied. If the indicated tributary is a full tributary, it can be disconnected only when there are no other tributaries.
[t]qrs	The 3- or 4-digit nonhierarchical NPC number causing denial
uvqrs	Hierarchical NPC number causing denial
RDC	Red circuit

CUS	Customer-controlled circuit
BRDIS	Broadcast conference completely disconnected
st	Status of denial
cc	Hexadecimal condition code

cc	<i>Explanation</i>
01	Invalid range for specified NPC type
03	No RDLD or CUS circuits and INCL keyword used
04	No NPC's out of service and OOS keyword used
05	Invalid use of CONV keyword
10	NPC out of service or failed
11	NPC not equipped
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
30	Termination is already assigned
32	Termination is under test
33	Termination is a test port
34	Termination is under customer control (CUS)
35	Termination is protected (RDLD)
51	CUS flag doesn't match that of conference
52	RDLD flag doesn't match that of conference
57	FROM is not a backbone leg

cc	<i>Explanation</i>
58	Specified width does not match existing conference width
5B	TO is not a leg of this/any conference
5C	Can't disconnect return leg unless entire conference disconnected
62	NPC type mismatch
63	NPC is a channelized NPC
64	NPC is a non-channelized NPC
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
95	Range overlapping between FROM and TO or between two TOs
DF	Unmatched channel range
70	NPC invalid type
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed

BROADCAST DISCONNECTION

Explanation of Command

This command disconnects up to eight tributary legs from the source of a broadcast cross-connection circuit.

1.544 Mbit/s Termination

The FROM field designates the source termination. The optional range field [-eee] indicates the width of the conference backbone. The allowable width ranges from 001 to 024 channels and must be the same as the width of the existing conference backbone (if any).

2.048 Mbit/s Termination

The FROM field designates the source termination. The optional range field [-eee] indicates the width of the conference backbone. When disconnecting a TS0 to non TS0 broadcast, the width of the conference is one. The allowable width ranges from 001 to 031 channels and must be the same as the width of the existing conference backbone (if any).

Both Terminations

The fields in the TO end designate the tributaries to be connected to the backbone. Although a conference may have any number of tributaries (limited only by the frame configuration), at most eight at a time may be disconnected using this command. More tributaries can be disconnected by subsequent broadcast disconnect commands.

Command

Nonhierarchical

[I.15211]

```
BDIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee], \  
TOX ([t]ghijjj[, [u]klmnnn . . .)][,CONV][,OOS][,DCC][,INCL]!
```

Hierarchical

[I.15211]

```
BDIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee], \  
TOX (wxkqrjjj[,edhfgnnn, . . .)][,CONV][,OOS][,DCC][,INCL]!
```

**Completion
Message**

Nonhierarchical

[O.15211]

M hh:mm:ss xy,ww n[vv] BDIS [s]abcddd[-eee] 3 LN MSG:
TOX [t]ghijjj[, [u]klmnnn, . . .]
[BRDIS][CONV][OOS][CUS][RDC][DCC] COMPL

Hierarchical

[O.15211]

M hh:mm:ss xy,ww n[vv] BDIS uvmnpddd[-eee] 3 LN MSG:
TOX wxkqrjjj[, edhfgnnn, . . .]
[BRDIS][CONV][OOS][CUS][RDC][DCC] COMPL

Denial Message

Nonhierarchical

[O.15211.01]

M hh:mm:ss xy,ww n[vv] BDIS [s]abcddd[-eee] 3 LN MSG:
TOX [t]ghijjj[, [u]klmnnn, . . .]
[[t]wxyz] COND cc BCAST DNY

[O.15211.02]

M hh:mm:ss xy,ww n[vv] BDIS [s]abcddd[-eee] 3 LN MSG:
TOX [t]ghijjj[, [u]klmnnn, . . .]
[[t]wxyz] COND cc DNY

Hierarchical

[O.15211.01]

M hh:mm:ss xy,ww n[vv] BDIS uvmnpddd[-eee] 3 LN MSG:
TOX wxkqrjjj[, edhfgnnn, . . .]
[opjstzz] COND cc BCAST DNY

[O.15211.02]

M hh:mm:ss xy,ww n[vv] BDIS uvmnpddd[-eee] 3 LN MSG:
TOX wxkqrjjj[, edhfgnnn, . . .]
[opjstzz] COND cc DNY

Explanation of Parameters	[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number designating the source termination
	[t]ghi,[u]klm	The 3- or 4-digit nonhierarchical tributary NPC numbers For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	uvmnp	Hierarchical FROM NPC number designating the source termination
	wxkqr	Hierarchical FROM NPC number designating the source termination
	edhfg	Hierarchical tributary NPC numbers uv,wx,ed Unit number m,k,h Module number np,qr,fg NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	ddd	FROM channel number
	eee	FROM channel number denoting end of width The optional range field [-eee] or [&&-eee] indicates the width of the conference backbone. Note that a range may be specified for the source only.
	jjj	Channel number of tributary legs
	nnn	Channel number of the last tributary leg of the range Without the optional CONV keyword, ddd and jjj must be the lowest numbered channels in the range of channels that make up the broadcast circuit. If the range field [-eee] is used, the entire width of the conference tributaries must be indicated.
		001-024
	000-030	CEPT type NPCs grown as CAS
	000-031	CEPT type NPCs grown as NSA Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.

**NOTE:**

Channel 000 of a CEPT NPC (TS0) can be BCONEd to a non TS0 of a CEPT NPC.

	001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
FROM	From	
	The FROM field designates the source termination.	
	The fields following the TOX keyword (or the subsequent channel numbers in MML) designate the tributaries that are connected to the backbone.	
CONV	Convert	
	The CONV keyword is given to disconnect the specified one-way tributaries from the broadcast circuit and convert the circuit to a two-way, two-point circuit. For a command with this option to succeed, only the broadcast source and the full tributary leg must remain on the circuit following the disconnection of the specified one-way tributaries. That is, this option is denied if the user attempts to disconnect the full tributary rather than a one-way tributary, or if any other one-way tributaries remain on the broadcast circuit following the disconnection of the one-way tributaries specified in the command.	
OOS	Out-of-service	
	An OOS disconnection may be done by giving the optional OOS keyword. At least one end of the circuit must be out-of-service or the OOS disconnection is denied.	
DCC	Disconnect code	
	If the DCC keyword is specified, DACS II inserts the user-defined disconnect code and signaling into the disconnected channels. This disconnect code and signaling are specified by	

	the trunk conditioning field used to connect the circuit. If the DCC option is not used, the disconnect code specified in the GRTH::NPC command is used.
INCL	Inclusive To disconnect a circuit or range of circuits including one or more circuits marked as a red circuit or under customer control, use the INCL option. If this option is not used, the message is denied if any circuits in the range are red circuits or customer controlled.
[t]wxy	The 3- or 4-digit nonhierarchical NPC number involved in the denial (with the same valid value as [s]abc).
opjst	Hierarchical NPC number involved in the denial
zzz	Channel number involved in the denial. Otherwise the same as ddd.
BCAST	Broadcast
cc	Hexadecimal condition code

cc	<i>Explanation</i>
01	Invalid range for specified NPC type
03	No RDLD or CUS circuits and INCL keyword used
04	No NPC's out of service and OOS keyword used
05	Invalid use of CONV keyword
10	NPC out of service or failed
11	NPC not equipped
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS

cc	<i>Explanation</i>
32	Termination is under test
34	Termination is under customer control (CUS)
35	Termination is protected (RDLD)
53	TO side of two-way to be converted is not an FTU NPC
55	Width of existing two way does not match conference width
57	FROM is not a backbone leg
58	Specified width does not match existing conference width
59	NTR invalid since existing conference is not already NTR
5A	LPD invalid since existing conference is not already LPD
5B	TO is not a leg of this/any conference
5C	Can't disconnect return leg unless entire conference disconnected
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
95	Range overlapping between FROM and TO or between two TOs
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D3	Corresponding NPC for FROM virtual channel is not provisioned

cc	<i>Explanation</i>
D4	Corresponding NPC for TO virtual channel is not provisioned
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed

BROADCAST DISCONNECT

Explanation of Command

This command disconnects up to eight nonchannelized tributaries from a nonchannelized source network processing circuit (NPC). The NPCs can be in different units. This message also disconnects tributaries and can convert a broadcast conference to a two-way, two-point circuit. When the circuit is disconnected, the idle code (AIS) is transmitted.

Command

Nonhierarchical

[I.15221]

BDIS:[FRM xy][,SEQ ww]:FROM [s]abc, \
TOX ([t]ghi[, [u]jkl][, [v]mno][...])[,OOS][, INCL][, CONV]!

Hierarchical

[I.15221]

BDIS:[FRM xy][,SEQ ww]:FROM uvmnp, \
TOX (wxkqr[,edhfg][,opqrs][...])[,OOS][, INCL][, CONV]!

Completion Message

Nonhierarchical

[O.15221]

M hh:mm:ss xy,ww n[vv] BDIS [s]abc 3 LN MSG:
TOX [t]ghi[, [u]jkl][, [v]mno][...]
[OOS][CUS][RDC][BRDIS][CONV]COMPL

Hierarchical

[O.15221]

M hh:mm:ss xy,ww n[vv] BDIS uvmnp 3 LN MSG:
TOX wxkqr[,edhfg][,opqrs][...]
[OOS][CUS][RDC][BRDIS][CONV]COMPL

Denial Message

Nonhierarchical

[O.15221.01]

M hh:mm:ss xy,ww n[vv] BDIS [s]abc 3 LN MSG:
TOX [t]ghi[, [u]jkl][, [v]mno][...]
[[t]qrs] cc <st> DNY

Hierarchical

[O.15221.01]

M hh:mm:ss xy,ww n[vv] BDIS uvmnp 3 LN MSG:
TOX wxkqr[, edhfg][, opqrs][...]
[uvjkl] cc <st> DNY

Explanation of Parameters

[s]abc	The 3- or 4-digit nonhierarchical nonchannelized Source (backbone) NPC number
[t]ghi	The 3- or 4-digit nonhierarchical nonchannelized tributary NPC number
[u]jkl	Explained for [t]ghi
[v]mno	Explained for [t]ghi
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical number of nonchannelized source NPC
wxkqr	Hierarchical NPC number of nonchannelized tributary
edhfg	Hierarchical number of NPC
opqrs	Hierarchical number of tributary
	uv,wx,ed,op
	Unit number
	m,x,h,q Module number
	np,qr,fg,rs
	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
OOS	Out-of-service keyword may be specified if one or more of the backbone or tributary NPCs is out of service
INCL	Inclusive keyword required for customer-controlled or Red circuits

CONV	Convert circuit to a two-way, two-point circuit by disconnecting the indicated tributaries; as long as more than two tributaries remain, or if no return path exists, the option is denied If the broadcast circuit has one full tributary, it can be disconnected only when there are no other tributaries.
[t]qrs	The 3- or 4-digit nonhierarchical NPC number causing denial
uvjkl	Hierarchical NPC number causing denial
BRDIS	Broadcast conference completely disconnected
st	Status of denial
cc	Hexadecimal condition code

cc	<i>Explanation</i>
01	Invalid range for specified NPC type
03	No RDLD or CUS circuits and INCL keyword used
04	No NPC's out of service and OOS keyword used
05	Invalid use of CONV keyword
10	NPC out of service or failed
11	NPC not equipped
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
32	Termination is under test
33	Termination is a test port
34	Termination is under customer control (CUS)
35	Termination is protected (RDLD)

cc	<i>Explanation</i>
51	CUS flag doesn't match that of conference
52	RDLD flag doesn't match that of conference
57	FROM is not a backbone leg
58	Specified width does not match existing conference width
5B	TO is not a leg of this/any conference
5C	Can't disconnect return leg unless entire conference disconnected
62	NPC type mismatch
63	NPC is a channelized NPC
64	NPC is a non-channelized NPC
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
95	Range overlapping between FROM and TO or between two TOs
DF	Unmatched channel range
70	NPC invalid type
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed

BOOT FAILED

Explanation of Command

This autonomous output message reports that a system boot has failed while entering the RST::MC command (Message I.34001).

Autonomous Message

[O.65053]
**hh:mm:ss xy,ww BOOT FAILED - BAD BOOT DEVICE

STARTUP

Explanation of Message	If the Primary memory Card (PMEM) had a corrupted generic load or the generic is absent from the PMEM, the bootstrap loader displays this message.

Autonomous Message	[O.01242] BOOT FROM PMEM FAILED ATTEMPTING TO BOOT FROM SMEM

Explanation of Parameters	BOOT Boot.
	PMEM Primary memory card.
	SMEM Secondary memory card.

STARTUP

Explanation of Message	The main processor has successfully loaded the boot program from either the Primary Memory (PMEM) or the Secondary Memory (SMEM).

Autonomous Message	[O.01241] BOOT FROM {PMEM SMEM}

Explanation of Parameters	<table><tr><td>BOOT</td><td>Boot</td></tr><tr><td>PMEM</td><td>Primary memory.</td></tr><tr><td>FROM</td><td>From</td></tr><tr><td>SMEM</td><td>Secondary memory.</td></tr></table>	BOOT	Boot	PMEM	Primary memory.	FROM	From	SMEM	Secondary memory.
BOOT	Boot								
PMEM	Primary memory.								
FROM	From								
SMEM	Secondary memory.								

BUS EXTENDER STARTUP

Explanation of Message	This message indicates that the communications interface bus extender has initialized itself and has performed self-diagnostics. The results of these diagnostics are reported as some tests failed or all tests passed.		
Autonomous Message	[O.01271] BX2 {STF ATP}		
Explanation of Parameters	BX2	Bus extender	
	STF	Some tests failed	
	ATP	All tests passed	
		For ATP no action is required.	

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C-BIT BUFFER OVERFLOW

Explanation of Command

**NOTE:**

This message applies to 2.048 Mbit/s Terminations only.

This message is an autonomous report of a buffer overflow condition on a c-bit processing circuit pack. Only network processing circuits reporting buffer overflow are printed.

Autonomous Message

Nonhierarchical

[O.65221]

```
I hh:mm:ss xy,ww  CBOFL abc [SIDE s]  5 LN MSG:
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno \
EOM
```

```
I hh:mm:ss xy,ww  CBOFL abc [SIDE s]  5 LN MSG:
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno \
EOM
```

```
I hh:mm:ss xy,ww  CBOFL abc [SIDE s]  3 LN MSG:
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno
ghi abcdefghijklmno ghi abcdefghijklmno ghi abcdefghijklmno \
COMPL
```

Hierarchical

[O.65221]

```
I hh:mm:ss xy,ww  CBOFL uvmnp [SIDE s]  5 LN MSG:
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
```

```
abcdefghijklmno
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno EOM
```

```
I hh:mm:ss xy,ww CBOFL uvmnp [SIDE s] 5 LN MSG:
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno EOM
```

```
I hh:mm:ss xy,ww CBOFL uvmnp [SIDE s] 3 LN MSG:
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno
fghij abcdefghijklmno fghij abcdefghijklmno fghij \
abcdefghijklmno COMPL
```

**Explanation of
Parameters**

abc	Nonhierarchical NPC number NPC number of the CB type NPC on the Digital Signal Processing Unit For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
SIDE	Side
s	Network processing circuit side (0 through 1)
ghi	Nonhierarchical NPC number NPC number of the Facility Terminating Unit type NPC For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number NPC number of the CB type NPC on the Digital Signal Processing Unit For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
fghij	Hierarchical NPC number NPC number of the Facility Terminating Unit type NPC

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

abcdefghijklmno

C-bit channel activity word (hexadecimal)

This word contains 15 digits each representing two adjacent c-bit channels for a total of 30 consecutive channels. Channel numbering is 0 to 30 beginning at the left with "a". Each digit contains four bits which represent two adjacent channels at two bits per channel. The two bits have four discrete values. The meaning of each bit pair is given below:

00	No activity on a c-bit channel
01	One change of state on a c-bit channel
10	Two to five changes of state on a c-bit channel
11	More than five changes of state on a c-bit channel

Example:

X'9 = 1001 indicates two to five changes of state on the channel represented by the leftmost two bits and one change of state on a c-bit channel represented by the rightmost two bits.

CONFIGURE FRAME

Explanation of Command

This command initializes or changes the frame configuration. After this command is successfully completed, DACS II autonomously updates the location information for the packs in the frame.

**WARNING:**

A manual backup from RAM to MEM must be invoked prior to entering Maintenance Condition, else the command may not complete.

Entering this command causes DACS II to present the user with self-explanatory menus. These menus allow the user to select the total number of bays and units to be equipped and to specify the bay and unit type for each of them. With the user specified information, DACS II then determines the physical location of each circuit pack in the frame. The completion message is output when the user exits from the menu mode.

This command can only be entered under the following conditions:

- It is entered from link 1
- The frame is in the maintenance condition
- The user is a superuser

Command

[I.35021]
CFR:[FRM xy][,SEQ ww]:FRAME!

Completion Message

[O.35021]
M hh:mm:ss xy,ww n[vv] CFR FRAME[COND cc] COMPL

Denial Message

[O.35021.01]
M hh:mm:ss xy,ww n[vv] CFR FRAME COND cc DNY

**Explanation of
Parameters****FRAME**

Frame

COND

Condition

cc

Hexadecimal condition code

cc *Explanation***8D** DB PMEM error OP-CL-RD-WR-SK**8F** Can't lock or unlock ram database**96** Unit(s) OOS, and additional backup required**98** Unable to verify Configuration file since MP
DB not loaded**92** Can't mount or unmount PMEM**97** User quit the menu**01** Backup required before executing this
command

CONFIGURE SYNCHRONIZER

Explanation of Command This command requests the fast start of the phase-locked loop in a synchronizer.

Command [I.35011]
CFR: [FRM xy][, SEQ ww]:SYNC a,FPLL!

Completion Message [O.35011]
M hh:mm:ss xy,ww n[vv] CFR SYNC a FPLL COMPL

Denial Message [O.35011.01]
M hh:mm:ss xy,ww n[vv] CFR SYNC a FPLL COND cc DNY

Explanation of Parameters	SYNC	Synchronizer
	a	Synchronizer number (0 or 1)
	FPLL	Fast start phase-locked loop
	cc	Hexadecimal condition code

cc	<i>Explanation</i>
16	SYNC TB is not equipped
17	SYNC is out of service
BF	Sync mode is same
C8	Sync pack denied command

CONFIGURE SYNCHRONIZER

Explanation of Command

This command requests configuration of the synchronizer to extract timing from itself (stand-alone or **MASTER** mode) or from external sources (**SLAVED** mode).

The **CFR : :SYNC** command modifies the Main Controller (MC) data base for the synchronizers, thus allowing appropriate combinations of time bases, timing extractors, and timing distributors to be equipped. This command is also used by the MC to instruct the Digital Phase Locked Loops (DPLLs) to implement the specified architecture. Condition codes for completion indicate architecture states, dependent on the current equipage. Condition codes for denial indicate that the requested architecture is not consistent with the current equipage.

Command

1.544 Mbit/s Termination

[I.35013]

CFR:FRM xy,SEQ ww:SYNC,{MASTER|SLAVED}!

2.048 Mbit/s Termination

[I.35013]

CFR:FRM xy,SEQ ww:SYNC,{MASTER|SLAVED}!

Completion Message

1.544 Mbit/s Termination

[O.35013]

M hh:mm:ss xy,ww n[vv] CFR SYNC {MASTER|SLAVED} COND 00
COMPL

2.048 Mbit/s Termination

[O.35013]

M hh:mm:ss xy,ww n[vv] CFR SYNC {MASTER|SLAVED} COND 00
COMPL

Denial Message**1.544 Mbit/s Termination**

[O.35013.01]

M hh:mm:ss xy,ww n[vv] CFR SYNC {MASTER|SLAVED} COND cc DNY

2.048 Mbit/s Termination

[O.35013.01]

M hh:mm:ss xy,ww n[vv] CFR SYNC {MASTER|SLAVED} COND cc DNY

**Explanation of
Parameters**

SYNC	Synchronizer
MASTER	Master
	The frame will use its own sources for timing.
SLAVED	Slaved
	Timing will be extracted from external sources.
COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
16	SYNC TB is not equipped
B6	Sync architecture is same
B7	Some TLIs are still equipped
B8	CRO is still equipped
B9	Timing Extractor type TLIs are present
BA	TLI 3 or 4 still equipped
BC	SSP with 0 priority present
BD	SSP with non 0 priority present
C8	Sync pack denied command

CONFIGURE SYNCHRONIZER STRATUM

Explanation of Command

This command requests the configuration of the synchronizer at a particular stratum level.

The command can be entered to configure the synchronizer at a lower stratum than the capability of the equipped time bases. The message can also be used to change the operating stratum level of the synchronizer to a higher level if the synchronizer is so equipped.

Command

1.544 Mbit/s Termination

[I.35012]

CFR:FRM xy,SEQ ww:SYNC,STRATUM {STR2|STR3}!

2.048 Mbit/s Termination

[I.35012]

CFR:FRM xy,SEQ ww:SYNC,STRATUM {STR2|STR3|TOLL|LOCAL}!

Completion Message

1.544 Mbit/s Termination

[O.35012]

M hh:mm:ss xy,ww n[vv] CFR SYNC STRATUM {STR2|STR3} COMPL

2.048 Mbit/s Termination

[O.35012]

M hh:mm:ss xy,ww n[vv] CFR SYNC STRATUM
{STR2|STR3|TOLL|LOCAL} COMPL

Denial Message**1.544 Mbit/s Termination**

[O.35012.01]

M hh:mm:ss xy,ww n[vv] CFR SYNC STRATUM {STR2|STR3} COND cc DNY

2.048 Mbit/s Termination

[O.35012.01]

M hh:mm:ss xy,ww n[vv] CFR SYNC STRATUM
{STR2|STR3|TOLL|LOCAL} COND cc DNY**Explanation of
Parameters**

SYNC	Synchronizer
STRATUM	Stratum
STR2	Stratum 2 Time Base
STR3	Stratum 3 Time Base
	2.048 Mbit/s Termination
TOLL	CEPT Toll Time Base
LOCAL	CEPT Local Time Base
COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
16	SYNC TB is not equipped
C0	Sync stratum is same
C1	Stratum not allowed
C8	Sync pack denied command

CONFIGURE DIGROUP CIRCUITS

Explanation of Message

This command requests that all Network Processing Circuits (NPCs) select data and clocks from the specified cross-connect network side. Starting with Release 8.2, this command not only applies to the cross-connect network, it also applies to the Digital Phase Locked Loop (DPLL) that provides timing to the cross-connect network. The situation where the active synch is not on the same side as the active cross-connect network will now be considered a transient state.

This change was made in Release 8.2 to avoid a single hardware problem in the active DPLL affecting both sides of the cross-connect network, which can lead to service problems.

If the frame is in the maintenance condition state, then the user must be logged in as the system administrator (DAX) on link 1. In addition, the INCL keyword must be specified in order for the command to be accepted. If these conditions are not met, the command will be denied.

Command

[I.35001]
CFR:[FRM xy][,SEQ ww]:XC s[,INCL]!

Completion Message

[O.35001]
M hh:mm:ss xy,ww n[vv] CFR XC s[INCL] COMPL

Denial Message

[O.35001.01]
M hh:mm:ss xy,ww n[vv] CFR XC s[INCL] COND cc DNY

Autonomous Message

[O.35001]
I hh:mm:ss xy,ww n[vv] CFR XC s[TN abcd] COMPL

Explanation of Parameters	XC	Cross-connect
	s	Cross-connect side (0 or 1)
	INCL	Inclusive
	a,b	The CCN side representations used for the autonomous report, with the same definition as s. a and b each represents a CCN side. If a is 1, b must be 0, and vice versa.
	TN	Transaction
	abcd	Transaction number (hexadecimal) The transaction number is shown only in the autonomous output message.
	COND	Condition
	cc	Hexadecimal condition code
	cc	<i>Explanation</i>
	1C	CCN side s is out of service
	98	Unable to verify Configuration file since MP DB not loaded
	F5	INCL keyword needed to perform this command
	64	Frame is not in MCOND
	65	Link being used is not Link 1
	66	User login-id is not DAX

TURN ON OR OFF THE ALARM SEVERITY FEATURE

Explanation of Command



NOTE:

This command applies to the 2.048 Mbit/s Termination Interface only.

This command is used to turn ON or OFF the Alarm Severity Feature which is used to change the alarm severity of the system alarms. When this feature is ON, messages I.38365 and I.38375 can be used to change the alarm severity of shelf and facility alarms. This command is restricted to those with super user privileges.

This command can only be used if the alarm severity feature has been purchased as part of the DACS II software generic.

Command

[I.38355]

CHG: [FRM xy][, SEQ ww]:ALMS, {ON|OFF}!

Completion Message

[O.38355]

M hh:mm:ss xy,ww n[vv] CHG ALMS {ON|OFF} COMPL

Denial Message

[O.38355.01]

M hh:mm:ss xy,ww n[vv] CHG ALMS {ON|OFF} COND cc DNY

Explanation of Parameters

ALMS	Alarms
ON	Turn feature ON
OFF	Turn feature OFF
cc	Hexadecimal condition code

cc	<i>Explanation</i>
F7	Alarm Severity Feature (already) OFF
F9	Alarm Severity Feature Already ON

CHANGE BIT-C TO

Explanation of Command

**NOTE:**

This command applies to the 2.048 Mbit/s Termination Interface only.

This command allows you to send any 15-bit pattern of 0s and 1s on the addressed c-bit circuit. The addressed c-bit circuit must be provisioned as a Director DACS (DD) for the overwrite function (Message I.38331). The pattern can be changed on a single channel or a range of channels without disconnecting and reconnecting the circuits.

Bits

abcd is the hexadecimal value of the 15-bit pattern to be sent on the address c-bit circuit(s). Bit 1 is a framing bit generated on the CPR circuit pack. The other 14 bits are specified as follows:

HEX DIGIT	BIT POSITION
a	Bits 2 and 3*
b	Bits 4 through 7
c	Bits 8 through 11
d	Bits 12 through 15

*Bits 2 and 3 are the two least significant values of Hex digit a. The two most significant values of Hex digit a will always be input as 00. Hex digit a is always be a number between 0 and 3 (0000 - 0011).

Command

Nonhierarchical

[I.38333]

CHG:[FRM xy][,SEQ ww]:BC X'abcd, TO [s]abcddd[-eee]!

Hierarchical

[I.38333]

CHG:[FRM xy][,SEQ ww]:BC X'abcd, TO uvmnpddd[-eee]!

Completion Message

Nonhierarchical

[O.38333]

M hh:mm:ss: xy, ww n[vv] CHG BC X'abcd TO [s]abcdddd[-eee] COMPL

Hierarchical

[O.38333]

M hh:mm:ss: xy, ww n[vv] CHG BC X'abcd TO uvmnpddd[-eee] COMPL

Denial Message

Nonhierarchical

[O.38333.01]

M hh:mm:ss xy,ww n[vv] CHG BC X'abcd TO [s]abcdddd[-eee] COND cc DNY

Hierarchical

[O.38333.01]

M hh:mm:ss xy,ww n[vv] CHG BC X'abcd TO uvmnpddd[-eee] COND cc DNY

Explanation of Parameters

BC	BIT-C
abcd	Hexadecimal representation of bits 2 through 15 of the c-bit transmission pattern (X'0000 through X'3FFF)
TO	NPC identifier
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number

np NPC number

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

ddd Channel number at the beginning of a range

eee Ending channel number

001-030 2.048 Mbit/s Termination type NPCs grown as CAS



NOTE:

Channel 000 of CEPT NPCs (TS0) can be connected to another channel 000 of CEPT NPCs (TS0). Also, the channel 000 of 2.048 Mbit/s Termination NPCs can be connected to a channel other than the channel 000 of 2.048 Mbit/s Termination NPCs (non-TS0). Channel 031 of CAS NPCs (TS16) can only be cross-connected to another channel 031 of CAS (TS16) or one-way cross-connected to another channel. Also these two channels can not be part of any conference.

cc Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
15	NPC is unequipped
1E	Customer control or red circuit exists
1F	FTMI is in service but failed
24	Unit type error
36	DSPI not equipped
37	DSPI out-of-service
3E	DSPI failed
2C	Write to CPR failed
51	C-bit modify function is disabled
53	CPR is out of service

cc	<i>Explanation</i>
54	Cross-connect to CPR is required
58	DSPU is not equipped
59	DSPU unit controller is out of service
5A	DSPU unit controller is failed
F1	Parameter only valid with PA, PB, or PC type NPCs
F2	Invalid NPC number specified
FF	Termination is in process of being rolled

CHANGE BIT-C-OFF TO

Explanation of Command

**NOTE:**

This command applies to the 1.544 Mbit/s Termination Interface only.

This command requests that the system stop sending the 15-bit pattern on the addressed c-bit circuit(s). You can request the "stop" on a single channel or a range of channels on the specified network processing circuit (NPC).

Command

Nonhierarchical

[I.38335]

CHG:[FRM xy][,SEQ ww]:BCOFF,TO [s]abcddd[-eee]!

Hierarchical

[I.38335]

CHG:[FRM xy][,SEQ ww]:BCOFF,TO uvmnpddd[-eee]!

Completion Message

Nonhierarchical

[O.38335]

M hh:mm:ss xy,ww n[vv] CHG BCOFF TO [s]abcddd[-eee] COMPL

Hierarchical

[O.38335]

M hh:mm:ss xy,ww n[vv] CHG BCOFF TO uvmnpddd[-eee] COMPL

Denial Message**Nonhierarchical**

[O.38335.01]

M hh:mm:ss xy,ww n[vv] CHG BCOFF TO [s]abcddd[-eee] COND cc DNY

Hierarchical

[O.38335.01]

M hh:mm:ss xy,ww n[vv] CHG BCOFF TO uvmnpddd[-eee] COND cc DNY

**Explanation of
Parameters**

TO	To TO NPC identifier
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Starting channel number
eee	Ending channel number
	001-030 2.048 Mbit/s Termination type NPCs grown as CAS
	NOTE: Channel 000 of 2.048 Mbit/s Termination NPCs (TS0) can be connected to another channel 000 of 2.048 Mbit/s Termination NPCs (TS0). Also, the channel 000 of CEPT NPCs can be connected to a channel other than the channel 000 of 2.048 Mbit/s Termination NPCs (non-TS0). Channel 031 of CAS NPCs (TS16) can only be cross-connected to another channel 031 of CAS (TS16) or one-way cross-connected to another channel. Also these two channels can not be part of any conference.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
15	NPC is unequipped
1E	Customer control or red circuit exists
1F	FTMI is in service but failed
24	Unit type error
36	DSPI not equipped
37	DSPI out-of-service
3E	DSPI failed
2C	Write to CPR failed
51	C-bit modify function is disabled
52	CPR is not equipped
53	CPR is out of service
54	Cross-connect to CPR is required
58	DSPU is not equipped
59	DSPU unit controller is out of service
5A	DSPU unit controller is failed
F1	Parameter only valid with PA, PB, or PC type NPCs
F2	Invalid NPC number specified
FF	Termination is in process of being rolled

CHANGE DIRECTOR DACS TO

Explanation of Command

**NOTE:**

This command applies to the 2.048 Mbit/s Termination Interface only.

This command allows the designation or change of the c-bit signaling bit(s) for the Director DACS (DD) function of monitoring, overwriting, or both; or to stop monitoring, overwriting, or both. This change can be made on a single channel or a range of channels without disconnecting and reconnecting the circuit.

Command

Nonhierarchical

[I.38331]

CHG:[FRM xy][,SEQ ww]:DD(m,w),TO [s]abcddd[-eee]!

Hierarchical

[I.38331]

CHG:[FRM xy][,SEQ ww]:DD(m,w),TO uvmnpddd[-eee]!

Completion Message

Nonhierarchical

[O.38331]

M hh:mm:ss xy,ww n[vv] CHG DD(m,w) TO [s]abcddd[-eee] COMPL

Hierarchical

[O.38331]

M hh:mm:ss xy,ww n[vv] CHG DD(m,w) TO uvmnpddd[-eee] COMPL

Denial Message**Nonhierarchical**

[O.38331.01]

M hh:mm:ss xy,ww n[vv] CHG DD(m,w) TO [s]abcddd[-eee] COND cc DNY

Hierarchical

[O.38331.01]

M hh:mm:ss xy,ww n[vv] CHG DD(m,w) TO uvmnpddd[-eee] COND cc DNY

**Explanation of
Parameters**

DD	Director DACS
m	Monitor function parameter for c-bits entering the C-bit Processing Circuit Pack
0	Disable the monitor function
1	Enable the monitor function
-	Do not change current setting
w	Write function parameter for c-bits leaving the C-bit Processing Pack
0	Disable the write function
1	Enable the write function
-	Do not change current setting
TO	NPC identifier keyword
[s]abc	The 3- or 4-digit non-hierarchical NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Starting channel number

Valid values are listed below:

000-030 CEPT type NPCs grown as CAS

000-031 CEPT type NPCs grown as NSA

Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.

eee

Ending channel number

Valid values are identical to those for ddd.

cc

Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
10	Unit is not equipped
13	FTMI is not equipped
15	NPC is unequipped
24	Unit type error
36	DSPI not equipped
37	DSPI out-of-service
3E	DSPI failed
2C	Write to CPR failed
50	CPR in buffer overflow condition
52	CPR is not equipped
53	CPR is out of service
54	Cross-connect to CPR is required
58	DSPU is not equipped
59	DSPU unit controller is out of service
5A	DSPU unit controller is failed
5B	C-bit modify function is active
F1	Parameter only valid with PA, PB, or PC type NPCs
F2	Invalid NPC number specified
FF	Termination is in process of being rolled
8A	Modify disable denied on channel connected to NPC in RPSFI condition

CHANGE DS1 ALARM SUPPRESSION FOR DS1(S) WITHIN A DS3

Explanation of Command

Prior to Release 8.0 of DACS II, it was not possible for the user to suppress alarm messages for DS1s that were a consequence of a failure of a DS3 in which the DS1s were embedded. Starting with Release 8.0, the user is able to turn those DS1 alarm messages off. Only the DS3 alarm message still appears. By doing this, the user can avoid message congestion within DACS II. However, even though the messages for DS1 alarms are suppressed, the individual DS1s are still marked as being in CGA as always, and utility query commands retrieving the alarm state of these DS1s show them to be in alarm. Trunk conditioning is also handled in the same way as previous releases handled it.

This command activates or deactivates the suppression of DS1 alarm messages for DS1s embedded within a DS3. The keyword ON suppresses the alarm messages, the keyword OFF allows the individual DS1 alarm messages to appear.



NOTE:

This command can only be executed by the frame administrator or users who have frame administrator privileges.

Threshold Messages

If DS1 alarm messages are suppressed, then messages reporting that performance monitoring thresholds have been exceeded are also suppressed. However, if the thresholds for TA type NPCs that are handled on a Multiplexer Interface Unit (MIU) are set very short, then it is possible for some of the threshold messages to initially appear, because the Unit Controller does not become aware of a DS3 failure until 10 seconds* have elapsed.

The default for message suppression is no message suppression.

Also, Hybrid DS3 Units always suppress DS1 and E1 messages that are due to DS3 failures.

* The time value of 10 seconds may be changed by command I.38641 to a value between 2 seconds and 10 seconds if the customer so desires.

**WARNING:**

Under certain conditions when Bit Errors occur on the DS3, it is possible for DS1s (E1s for Hybrid DS3s as well) to incur a bit error alarm before the DS3 goes into BER alarm. This condition is particularly noticable if the BER is set to 10^{-3} and bit errors occur close to that rate.

If the user turns the message suppression off while a DS3 on the frame is still in failure, then ALARM IDLE messages appear once the DS3 returns to normal (for all DS1s embedded in that DS3), even though the initial alarm messages for those DS1s had been suppressed.

Independent Failure

DS1s embedded in a DS3 that incur an independent failure, while its associated DS3 is in failure, generate their own alarm message, if and when the DS3 returns to normal before the DS1 returns to normal while message suppression is active. If message suppression is turned off during such a combined DS3 and DS1 failure, then this DS1 alarm message is not generated, which creates an ALARM IDLE message once the DS1 returns to normal that is not preceded by an ALARM message for that DS1.

Command

[I.38621]

CHG: [FRM xy][,SEQ ww]:DS1ALMDS3 {ON|OFF}!

**Completion
Message**

[O.38621]

M hh:mm:ss xy,ww n[vv] CHG DS1ALMDS3 {ON|OFF} COMPL

Denial Message

[O.38621]

M hh:mm:ss xy,ww n[vv] CHG DS1ALMDS3 {ON|OFF} COND CC DNY

**Explanation of
Parameters**

DS1ALMDS3	DS1 alarm message suppression
ON	DS1 alarm messages that are due to a DS3 failure are suppressed
OFF	DS1 alarm messages, even those due to a DS3 failure are not suppressed

COND	Condition
cc	Hexadecimal condition code
cc	<i>Explanation</i>
F3	No DS3 is equipped in the frame
F4	DS1 Alarm Suppression Already ON
F5	DS1 Alarm Suppression Already OFF

CHANGE DELAY TIME OF DS3 ALARM MESSAGE OUTPUT

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination interface only.

This command changes the alarm activate integration time for DS3 alarms. Until Release 8.2 of the DACS II generic, the alarm message for a DS3 alarm (in a DS3U or Hybrid DS3U), such as Loss Of Signal (LOS), Loss Of Frame (LOF), or Excessive Bit Error Rate (BER), was delayed 10 seconds from the beginning of the event until it is printed. The reason for this delay is to ensure that an oscillating alarm condition, such as an LOS that comes and goes, does not generate an excessive number of alarm messages. Thus a transmission problem that generates a momentary LOS of 5 seconds does not generate an alarm message and a subsequent alarm idle message.

Shorter Interval

Starting with Release 8.2, the user is able to change the alarm activate integration time from 10 seconds (default) to a shorter interval via this command. The change in alarm activate integration (delay) time applies to all DS3 facilities terminated on the frame regardless of whether they are terminated on a DS3 unit or a Hybrid DS3 unit. Also, the new time value is used when the DACS II system is rebooted. The default DS3 alarm activate integration time remains 10 seconds if this command is not used.



NOTE:

This command is completed even when there is no Hybrid/DS3U equipped or when a Hybrid/DS3U is not in service.

This command can only be executed by the frame administrator or users that have frame administrator privileges.

Command

[I.38641]

CHG: [FRM xy][,SEQ ww]:DS3ALMDLY [x]x!

**Completion
Message**

[O.38641]
M hh:mm:ss xy,ww n[vv] CHG DS3ALMDLY [x]x COMPL

Denial Message

[O.38641.01]
M hh:mm:ss xy,ww n[vv] CHG DS3ALMDLY [x]x COND cc DNY

**Explanation of
Parameters**

DS3ALMDLY Delay time for DS3 alarm message output
[x]x Delay time. The number is either 2, 3, 4, 5, 6, 7, 8, 9, or 10 seconds.

CHANGE UNPROTECTED ALARM SETTING

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination interface only.

This message activates or deactivates the generation of minor alarms when DS3 or HDS3 service is unprotected as a result of manual commands. DS3 or HDS3 service can be unprotected due to manual commands when the user manually switches service from a MMFG-S to the protection MMFG, when the user manually removes one of the FLIs, when s/he manually removes the protection MMFG, or when s/he manually removes the Unit Controller of a DS3 or HDS3 unit.

DS3U/HDS3U Minor Alarm

Even though a minor alarm is generated per unprotected DS3U or HDS3U, this message activates/deactivates the alarm generation for **all** DS3Us or HDS3Us in the frame. If the frame is not equipped with any DS3U or HDS3U, the command indicates that fact.

Deactivating the alarm generation idles all active DS3 or HDS3 unprotected alarms previously generated.

Command

[I.38611]

CHG: [FRM xy][,SEQ ww]:DS3UNPROTALM {ON|OFF}!

Completion Message

Nonhierarchical

When the frame is not equipped with DS3 or HDS3, the following output appears:

[O.38611]

M hh:mm:ss xy,ww n[vv] CHG DS3UNPROTALM UNEQPD COMPL

When the frame is equipped with DS3 or HDS3, the following output appears:

[O.38612]

M hh:mm:ss xy,ww n[vv] CHG DS3UNPROTALM STATUS <a> COMPL

Denial Message

Explanation of Parameters

DS3UNPROTALM DS3 or HDS3 Unprotected Alarm

UNEQPD Unequipped with DS3 or HDS3

STATUS Status

<a> Status of activation/deactivation

ON Activated. Alarm is generated when DS3 or HDS3
is unprotected.

OFF Deactivated. Alarm is not generated.

COND Condition

CHANGE SUBRATE ERROR CORRECTION LOCATION

Explanation of Command

For Subrate, this command changes the error correction location to either the multipoint junction unit (MJU) or Subrate multiplexer unit (SRM) type of a Subrate pack. As a result of this command, all new error correction functions that require Subrate circuit pack resources are allocated to the pack type specified for subsequent Subrate circuit provisioning commands (SECH, SCON, SCNT).

Command

[I.38261]
CHG: [FRM xy][, SEQ ww]:ECLOC, TYPE {MJU|SRM}!

Completion Message

[O.38261]
M hh:mm:ss xy,ww n[vv] CHG ECLOC TYPE {MJU|SRM} COMPL

Denial Message

[O.38261.01]
M hh:mm:ss xy,ww n[vv] CHG ECLOC TYPE {MJU|SRM} COND cc DNY

Explanation of Parameters

ECLOC	Subrate error correction location
MJU	Multipoint junction unit
SRM	Subrate multiplexer unit

As a result of this command, all new error correction functions that require Subrate circuit pack resources are allocated to the pack type specified for subsequent Subrate circuit provisioning commands (SECH, SCON, SCNT).. Such error correction resources are allocated for channels requiring parity channel error correction and for circuits with subrate error correction that do not connect to a subrate multiplexer or an MJU. This command does not result in reallocation of any existing error correction resources to the new circuit pack type.

cc	Hexadecimal condition code

cc	<i>Explanation</i>
9F	current error corrector pack type specified in command

SET ERRORED BLOCK THRESHOLD RATIO

Explanation of Command

**NOTE:**

This command applies to the 2.048 Mbit/s Termination interface only.

This command allows users to set an error threshold for PA type NPCs that is used to determine that a severely errored second or a far-end severely errored second has occurred. The threshold is set in terms of a percentage of blocks in error (errored blocks). At system start up, this percentage is set to 81 percent. Execution of this command changes the threshold to the percentage of errored blocks requested in the command for all provisioned PA NPCs. Once the percentage is set by this command it is applied to all PA NPCs subsequently provisioned.

Command

[I.38631]

CHG: [FRM xy][, SEQ ww]:ERB ee,TYPE mn!

Completion Message

[O.38631]

M hh:mm:ss xy,ww n[vv] CHG ERB ee TYPE mn COMPL

Denial Message

[O.38631.01]

M hh:mm:ss xy,ww n[vv] CHG ERB ee TYPE mn COND cc DNY

Explanation of Parameters

ERB	Errored Block
ee	Percentage of errored blocks (1% through 91%, default is 81%) The number of errored blocks, expressed as a percentage, used to declare a severely errored second (SES) or far-end SES (FSES).
NPC	Network processing circuit
TYPE	Type

mn	NPC type identifier
PA	CEPT NPC (75-ohm or 120-ohm)

 **NOTE:**
PA is the only value that can be entered in this field.

COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
26	NPC type error

CHANGE FACILITY ALARMS SEVERITY

Explanation of Command

**NOTE:**

This command applies to the 2.048 Mbit/s Termination Interface only.

This command changes the Alarm Severity of the system facility alarms. The Alarm Severity must be turned ON using command I.38355. If type is specified, the command does not verify whether the facility alarm being changed is supported by that type.

Command

[I.38375]

CHG: [FRM xy][, SEQ ww]:FALMS,TYPEmn[xyz],fal\m,\
{PMACR|PMAMJ|DMAMN|MI|RESET}!

Completion Message

[O.38375]

M hh:mm:ss xy,ww n[vv] CHG FALMS TYPE mn[xyz] fal\m \
{PMACR|PMAMJ|DMAMN|MI|RESET} COMP

Denial Message

[O.38375.01]

M hh:mm:ss xy,ww n[vv] CHG FALMS TYPE mn[xyz] fal\m \
{PMACR|PMAMJ|DMAMN|MI|RESET} COND cc DNY

Explanation of Parameters

mn	NPC Type
PA	E1 NPC (75 ohm and 120 ohm)
PB	E1 NPC (75 ohm)
PC	E1 NPC (120 ohm)
[xyz]	If the xyz is not specified, all NPCs of the PA, PB, or PC are changed. This implies that the default value for the

specified type are changed and that any changes for specific xyz of that type done prior are lost.

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

falm

Facility Alarms

For PA type NPCs, valid values are

RPSFI	Remote Power Supply Failure Indicator
LOS	Loss of Signal
LOF	Loss of Frame
AIS	Alarm Indication Signal
EER	Excessive Error Rate
BER	Bit Error Rate
LCMA	Loss of CRC-4 Multiframe Alignment
FLC	Far End Loss of CRC-4 Multiframe Alignment
RAI	Remote Alarm Indication
RBER	Remote Bit Error Rate
SFI	Sync failure Indication
POF	Psuedo Frame Word Out of Frame
TAI	TS-16 All Ones Alarm
RAIS	Remote AIS
LMA	Loss of Multiframe
RABS	Remote Alarm bit 6,TS16
PBF	Primary Block Failure
ALL	ALL above identified facility alarms

For PB and PC type NPCs, valid values are

RPSFI	Remote Power Supply Failure Indicator
AIS	Alarm Indication Signal
EER	Excessive Error Rate
BER	Bit Error Rate
RAI	Remote Alarm Indication
RBER	Remote Bit Error Rate
SFI	Sync failure Indication

TAI	TS-16 All Ones Alarm
RAIS	Remote AIS
LMA	Loss of Multiframe
RABS	Remote Alarm bit 6,TS16
PBF	Primary Block Failure
ALL	ALL above identified facility alarms



NOTE:

The command does not check for valid facility alarm - NPC type combinations.

PMACR	Prompt Maintenance Action CRITICAL alarm severity
PMAMJ	Prompt Maintenance Action MAJOR alarm severity
DMAMN	Deferred Maintenance Action MINOR alarm severity
MI	MESSAGE INFORMATION alarm severity
RESET	Reset Alarm Severity to default value
cc	Hexadecimal condition code

cc	<i>Explanation</i>
26	NPC type error
34	NPC type option xyz is unassigned, or invalid for feature package
30	NPC not provisioned for CAS
31	NPC not provisioned for NSA
BB	Timeslot channel numbering not allowed with CAS
A3	Transmic 1G NPC designated as SYNC source invalid
A4	Firmware timing invalid for Transmic 1G NPC
7E	Framed/Unframed clear 2Mbit/s NPC invalid for Automatic CRC-4
7F	Unframed clear 2Mbit/s NPC invalid for TS0 processing
80	Framed/Unframed clear 2Mbit/s NPC invalid for Transmic 1G, 2G

cc	<i>Explanation</i>
81	Framed/Unframed clear 2Mbit/s NPC invalid for Firmware Timing
82	Unframed clear 2Mbit/s NPC invalid for Bit 4 used as RA IS/RBER
F6	Alarm Severity DB full, reset to defaults
F7	Alarm Severity Feature (already) OFF
F8	Alarm Severity of facility Alarm not changed

CHANGE CIRCUIT PARAMETERS

Explanation of Command

This command changes the termination state of a cross-connected non-channelized network processing circuit. This command can affect either a two-way, a one-way or a broadcast nonchannelized digital signal cross-connection. This command has the ability to change the termination states of all of the legs of a broadcast circuit. However, an option is provided to exclude one of the legs from being changed. The idle code for nonchannelized digital signal cross-connections is the alarm indication signal which is transmitted over a terminated connection.

Command

Nonhierarchical

[I.17011]

```
CHG:[FRM xy][,SEQ ww]:FROM [s]abc,TO [t]ghi[,NOT [u]rst], \
{TLA|TLR} {F|T|B|A}[ ,INCL]!
```

Hierarchical

[I.17011]

```
CHG:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxkqr[,NOT edhfg], \
{TLA|TLR} {F|T|B|A}[ ,INCL]!
```

Completion Message

Nonhierarchical

[O.17011]

```
M hh:mm:ss xy,ww n[vv] CHG [s]abc,[t]ghi[ RDC] \
[ CUS][ NOT [u]rst] {TLA|TLR} {F|T|B|A} COMPL
```

Hierarchical

[O.17011]

```
M hh:mm:ss xy,ww n[vv] CHG uvmnp,wxkqr[ RDC] \
[ CUS][ NOT edhfg] {TLA|TLR} {F|T|B|A} COMPL
```

Denial Message**Nonhierarchical**

[O.17011.01]

M hh:mm:ss xy,ww n[vv] CHG [s]abc,[t]ghi cc <st> DNY

[O.17011.02]

M hh:mm:ss xy,ww n[vv] CHG [s]abc,[t]ghi <d> <st> DNY

Hierarchical

[O.17011.01]

M hh:mm:ss xy,ww n[vv] CHG uvmnp,wxkqr cc <st> DNY

[O.17011.02]

M hh:mm:ss xy,ww n[vv] CHG uvmnp,wxkqr <d> <st> DNY

**Explanation of
Parameters**

FROM	From termination
TO	To termination
[s]abc	The 3- or 4-digit nonhierarchical nonchannelized FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical nonchannelized TO NPC number
[u]rst	The 3- or 4-digit nonhierarchical nonchannelized NPC number that is not affected by this command. For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical number of nonchannelized FROM NPC
wxkqr	Hierarchical number of nonchannelized TO NPC
edhfg	Hierarchical number of a leg of a nonchannelized digital signal broadcast circuit that is not affected by this command. uv,wk,ed Unit number m,x,h Module number np,qr,fg NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
INCL	Inclusive keyword, required if one or more circuits are marked Customer-controlled (CUS) or Red (RDC)

TLA	Terminate and leave activate
TLR	Terminate and leave release
	The direction in which TLA or TLR is to be applied is specified by the use of F, T, B, A, and NOT as defined below:
F	Towards the FROM NPC
T	Towards the TO NPC
B	In both directions
A	All directions of a broadcast circuit
NOT	In conjunction with the A options, all directions of a broadcast circuit except the one specified
RDC	Red circuit
	NPC is a red circuit
CUS	Customer
	NPC is a Customer-controlled Circuit
d	Direction
F	From
T	To
B	Both
A	All
st	Status of denial
cc	Hexadecimal condition code

cc	<i>Explanation</i>
15	NPC is unequipped
01	Invalid range for specified NPC type
03	No RDLD or CUS circuits and INCL keyword used
10	NPC out of service or failed
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed

cc	<i>Explanation</i>
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
32	Termination is under test
34	Termination is under customer control (CUS)
35	Termination is protected (RDLD)
57	FROM is not a backbone leg
5B	TO is not a leg of this/any conference
5D	TO is the backbone leg of a conference
5F	Conference is NTR
90	Invalid change parameter combinations
C5	Option NOT leg can not appear with F, T, or B
C7	Option NOT leg is not in conference
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
FF	Termination is in process of being rolled

st	d	Explanation
CUS	{F T B A}	Customer-controlled Circuit
FAIL	{F T B A}	Failed
NOMTH	{F T B A}	No match of NPCs
OOS	{F T B A}	Out-of-service
RDC	{F T B A}	Red Circuit
RDLD	{F T B A}	Red Lined
UEQD	{F T B A}	Unequipped
UNPAS GN	{F T B A}	Unassigned or Not Properly Assigned
UTST	{F T B A}	Under Test
INVLD	{F T B}	Invalid NPC type
ROLL	{F T B}	Circuit is involved in a roll

CHANGE CROSS-CONNECT TERMINATION STATUS

Explanation of Command

This command changes the termination status of the specified cross-connected circuit or range of circuits which were established by a two-point or multipoint cross-connect command.

If successful, the requested change is echoed ([NOT [u]rst-vvv]{TLA|TLR}{F|T|B|L|G|A}), followed by the new termination state (**NEW STATE**) of the circuit. If the range option was given, the new states of the circuits in the range may differ, noted by the RNG keyword.

Command

Nonhierarchical

[I.17001]

```
CHG: [FRM xy][, SEQ ww]:FROM [s]abcddd[-eee], TO [t]ghijjj[-kkk] \
[, NOT [u]rstvvv], {TLA|TLR} {F|T|B|L|G|A}[, INCL]!
```

Hierarchical

[I.17001]

```
CHG: [FRM xy][, SEQ ww]:FROM uvmnpddd[-eee], TO wxkqrjjj[-kkk] \
[, NOT edhfgvvv], {TLA|TLR} {F|T|B|L|G|A}[, INCL]!
```

Completion Message

Nonhierarchical

[O.17001]

```
M hh:mm:ss xy, ww n[vv] CHG [s]abcddd[-eee], [t]ghijjj[-kkk] 2 LN \
MSG:
[NOT [u]rstvvv ]{TLA|TLR} {F|T|B|L|G|A} \
[ NEW STATE {TLA s|RNG}][ RDC][ CUS] COMPL
```

Hierarchical

[O.17001]

M hh:mm:ss xy,ww n[vv] CHG uvmnpddd[-eee],wxkqrjjj[-kkk] 2 LN MSG:
[NOT edhfgvvv] {TLA|TLR} {F|T|B|L|G|A} \
[NEW STATE {TLA s|RNG}][RDC][CUS] COMPL

Denial Message

Nonhierarchical

[O.17001.01]

M hh:mm:ss xy,ww n[vv] CHG [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.17001.02]

M hh:mm:ss xy,ww n[vv] CHG [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] <d> <st> DNY

[O.17001.03]

M hh:mm:ss xy,ww n[vv] CHG [s]abcddd[-eee],[t]ghijjj[-kkk] 2 LN \
MSG:
{TLA|TLR} {F|T|B} COND cc DNY

Hierarchical

[O.17001.01]

M hh:mm:ss xy,ww n[vv] CHG uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.17001.02]

M hh:mm:ss xy,ww n[vv] CHG uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] <d> <st> DNY

[O.17001.03]

M hh:mm:ss xy,ww n[vv] CHG uvmnpddd[-eee],wxkqrjjj[-kkk] 2 LN MSG:
{TLA|TLR} {F|T|B} COND cc DNY

Explanation of Parameters

FROM	From
TO	To
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number

[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
[u]rst	The 3- or 4-digit nonhierarchical NPC number not affected by this message
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
edfhg	Hierarchical NPC number not affected by this message
	uv,wx,ed Unit number
	m,k,f Module number
	np,qr,hg NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	FROM channel number
jjj	TO channel number
eee	FROM channel number denoting the end of the range
kkk	TO channel number denoting the end of range
vvv	Channel number not affected by this command.
	The valid channel numbers are
	001-024
	000-030 CEPT type NPCs grown as CAS
	000-031 CEPT type NPCs grown as NSA
	Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.
	001-047 Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)

	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
	Conference numbers	
	001-085	(MB NPC)
	001-500	(Virtual NPC)
	TLA	Terminate and leave activate
s		Direction of transmission to be terminated
		If the cross-connection is between a facility terminating unit (FTU) and a virtual NPC (VI type NPC), once terminated, the FTU NPC sends out its provisioning insertion word (PIW) as the idle code.
	TLR	Terminate and leave release
	A	Towards the facilities and the bridge (multipoint only)
	B	Towards both terminations
	F	Towards the FROM termination
	G	Towards the bridge (multipoint connection only)
	L	Towards the facilities (multipoint connection only)
	T	Towards the TO termination
	INCL	Inclusive
		Use this keyword, to change the termination status on a channel or range of channels including one or more channels marked as a red. The command is otherwise denied if one or more of the cross-connected circuits in the range are marked as red.
	NOT	Not
		The LEG is not affected by this command
	mmm,nnn	Channel number involved in the denial
		Otherwise, the same as ddd.
	RNG	Range
	RDC	Red circuit

	The change in termination status was performed on a red circuit. If the command specified a range of circuits, then at least one of the circuits involved was a red circuit. This keyword appears only if the INCL keyword was specified in the command.
CUS	Customer
	The change in termination status was performed on a customer controlled circuit. If the command specified a range of circuits, then at least one of the circuits involved was a customer controlled circuit.
d	Direction
	F From
	T To
	B Both
st	Status
cc	Hexadecimal condition code

cc	<i>Explanation</i>
06	Invalid range for specified FROM NPC type
07	Invalid range for specified TO NPC type
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
72	The NPC of VC BBL leg doesn't match that in the input command
73	The first channel of VC BBL leg doesn't match that in the input cmd

cc	<i>Explanation</i>
75	The input BRD leg is not in VC
76	The first channel of VC BRD leg doesn't match that in the input cmd
90	Invalid change parameter combinations
A1	Illegal BBL BBL combination
A2	Illegal BRD BRD combination
A3	Illegal SYM BRD combination
A4	Illegal BRD SYM combination
A5	Illegal BBL SYM combination
A6	Illegal SYM BBL combination
B7	Cannot perform DMB CHG on input direction F
B8	Cannot perform DMB CHG on input direction T
B9	Cannot perform DMB CHG on input direction B
C0	Cannot perform DMB CHG on input direction L
C1	Cannot perform DMB CHG on input direction G
C2	Cannot perform DMB CHG on input direction A
C3	Can't perform DMB CHG because NTR flag set on FROM side
C4	Can't perform DMB CHG because NTR flag set on TO side
C5	Option NOT leg can not appear with F, T, or B
C6	Option NOT leg is not a FTU leg
C7	Option NOT leg is not in conference
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed

cc	<i>Explanation</i>
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D3	Corresponding NPC for FROM virtual channel is not provisioned
D4	Corresponding NPC for TO virtual channel is not provisioned
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
DD	A loopback is active on the TO termination
DF	Unmatched channel range
E0	Unmatched channel range involving SLC Mode III termination
E4	RT-DCLU cross-connect with different ids
E5	RT-DCLU cross-connect with different channel number
E6	Cross-connect a non Mode I channel to DCLU
E7	Cross-connect a non SLC channel to DCLU
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified

cc	<i>Explanation</i>
70	NPC invalid type
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed

st	d	<i>Explanation</i>
CUS	{F T B}	Customer-controlled Circuit
FAIL	{F T B}	Failed
NOMTH	{F T B}	No Match
OOS	{F T B}	Out-of-service
RDC	{F T B}	Red Circuit
RDLD	{F T B}	Red Lined
ROLL	{F T B}	Circuit is involved in a roll
TP	{F T B}	NPC is used for test access
UEQD	{F T B}	Unequipped
UNPAS GN	{F T B}	Unassigned or Not Properly Assigned
UTST	{F T B}	Under Test

CHANGE CIRCUIT PARAMETERS

Explanation of Command

This message requests DACS II to change the parameters of a multipoint circuit leg. Termination [s]abcddd must be either a termination on an FTU (facility terminating unit), IFTU (integrated Facility Terminating Unit), DS3U (DS3 Unit), HDS3U (Hybrid DS3 Unit), or DSPU (Digital Signal Processing Unit) NPC. Termination [t]ghijj must be a termination on a DSPU NPC.

Command

Nonhierarchical

[I.17002]

CHG: [FRM xy][, SEQ ww]: FROM [s]abcddd, TO [t]ghijj[, TLP(snn, smm)] \[, NG nn][, ES ee][, INCL]!

Hierarchical

[I.17002]

CHG: [FRM xy][, SEQ ww]: FROM uvmnpddd, TO wxkqrjjj \[, TLP(snn, smm)][, NG nn][, ES ee][, INCL]!

Completion Message

Nonhierarchical

[O.17002]

M hh:mm:ss xy, ww n[vv] CHG [s]abcddd, [t]ghijj 2 LN MSG:
[TLP(snn, smm)][NG nn][ES ee] \
NEW STATE spp, sqq NG ff ES hh[RDC][CUS] COMPL

Hierarchical

[O.17002]

M hh:mm:ss xy, ww n[vv] CHG uvmnpddd, wxkqrjjj 2 LN MSG:
[TLP(snn, smm)][NG nn][ES ee] \
NEW STATE spp, sqq NG ff ES hh[RDC][CUS] COMPL

Denial Message

Nonhierarchical

[O.17002.01]

M hh:mm:ss xy,ww n[vv] CHG [s]abcddd,[t]ghijjj 2 LN MSG:
[TLP(snn,smm)][NG nn][ES ee] COND cc DNY

Hierarchical

[O.17002.01]

M hh:mm:ss xy,ww n[vv] CHG uvmnpddd,wxkqrjjj 2 LN MSG:
[TLP(snn,smm)][NG nn][ES ee] COND cc DNY

Explanation of Parameters

FROM	From
TO	To
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	FROM channel number
001-024	
001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)

025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)

049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

000-030 CEPT type NPCs grown as CAS

000-031 CEPT type NPCs grown as NSA

Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.

jjj TO channel number

001-085 (MB NPC)

TLP

Transmission level point

Specify the incoming and outgoing gain adjustments relative to the TO multipoint circuit by using the TLP (snn,smm) field. Gain adjustment snn is applied as the signal enters the bridge, while smm is applied as the signal leaves.

snn

Incoming gain adjust parameter

smm

Outgoing gain adjust parameter

s Sign (+ or -)

nn Incoming gain adjust value (-90 through +88)

mm Outgoing gain adjust value (-90 through +88)

These are the parameters requested for the TO termination. Values are given in steps of two and the units are tenths of a db.

Certain situations require replacement of the gain adjust parameter values with "---". In general "---" is used for either snn or smm (but not both) when no change is to be made to that parameter. This feature allows changing only one of the two parameters if desired. Also, if the cross-connection was provisioned with the NTR (no transmit) option, the gain adjustment in the direction for which transmission is shut off MUST be ---. See the following table to see what situations require "---".

FROM	TO	snn	smm
BRD	BBL	---	smm
BBL	BRD	snn	---
LEG	BBL	---	smm
LEG	BRD	snn	---
LEG	SYM	snn	smm
BBL	LEG	Invalid combination	
BBL	SYM	Invalid combination	
BRD	LEG	Invalid combination	
BRD	SYM	Invalid combination	

NG

Noise guard

nn

Requested NG level setting (00, 06, 12, or 18) db

To specify the noise guard level setting, use NG nn. The following default values apply:

For Symmetrical bridges Default: NG = -18 db

For Polling circuits Default: NG = 0 db

ES

Echo suppression

ee

Requested ES level setting (00, 06, 12, or 18) db

To specify the echo suppression level setting, use ES ee. The following default values apply:

For Symmetrical bridges Default: ES = -18 db

For Polling circuits Default: ES = 0 db

At least one of the three parameters (TLP, NG, ES) must be specified. Since a BBL (backbone leg) has no input to the bridge and the bridge has no output to a BRD (broadcast) leg, transmission values in these directions cannot be changed.

INCL

Inclusive

INCL is used to change the parameters on a circuit marked either as a red or a customer controlled circuit. If this option is not used, the command will be denied such a circuit.

spp,sqq

New gain setting. Otherwise, the same as snn and smm.

ff

New noise guard setting. Otherwise, the same as nn.

hh	New echo suppression setting. Otherwise, the same as ee.
RDC	Red circuit These keywords indicate the connection is marked as a red circuit.
CUS	Customer The connection is a Customer-controlled Circuit.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
03	No RDLD or CUS circuits and INCL keyword used
13	UNIT not equipped, not in service, or failed
18	DSPI not in service, or failed
A0	Illegal LEG LEG combination
A1	Illegal BBL BBL combination
A2	Illegal BRD BRD combination
A3	Illegal SYM BRD combination
A4	Illegal BRD SYM combination
A5	Illegal BBL SYM combination
A6	Illegal SYM BBL combination
AF	Delete or change a leg from a conference that has no leg
B2	Transmission parameters in command will not change existing settings
B3	Trying to change level out on BRD leg
B4	Trying to change level in on BBL leg
B6	TO side is not a DMB type NPC
AE	A substrate circuit pack is specified in the command line
B5	CPR circuit pack specified in the command
D0	FROM NPC is not provisioned as DGA

cc	<i>Explanation</i>
D3	Corresponding NPC for FROM virtual channel is not provisioned
D6	Invalid FROM channel number
43	Trying to change in NTR direction

CHANGE HUB IDENTIFICATION**Explanation of Command**

For Subrate, this command changes the frame Hub Identification (HUBID) number. The HUBID must be set, using this change command before any TYPE MJ100 NPCs can be grown in the frame.

Command

[I.38251]
CHG:[FRM xy][,SEQ ww]:HUBID 0'ab!

Completion Message

[O.38251]
M hh:mm:ss xy,ww n[vv] CHG HUBID 0'ab COND cc COMPL

Denial Message

[O.38251.01]
M hh:mm:ss xy,ww n[vv] CHG HUBID 0'ab COND cc DNY

Explanation of Parameters

HUBID	Hub identification
ab	Multipoint junction unit (MJU) hub identification code, octal (00 through 77) subrate MJU use this code in response to in-band test messages.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
11	UC is out of service
12	UC is in service but failed
37	DSPI out-of-service
3E	DSPI failed
9D	current hub id specified in command

TURN ON OR OFF THE INTERVENTION LEVEL SETTING FEATURE

Explanation of Command

2.048 Mbit/s Termination

This command is used to turn ON or OFF the Intervention Level Setting Feature, which is used to change the intervention level of the alarm severities for various system resources. When this feature is ON, message I.31363 can be used to change the intervention level of NPCs. This command is restricted to users with superuser privileges.

This command can only be used if the intervention level feature has been purchased as part of the DACS II software generic.

Command

[I.38451]

CHG: [FRM xy][, SEQ ww]:INTV, {ON|OFF}!

Completion Message

[O.38451]

M hh:mm:ss xy,ww n[vv] CHG INTV {ON|OFF} COMPL

Denial Message

[O.38451.01]

M hh:mm:ss xy,ww n[vv] CHG INTV COND cc DNY

Explanation of Parameters

ON	Turn feature ON
OFF	Turn feature OFF
cc	Hexadecimal condition code

cc	<i>Explanation</i>
FC	Intervention Level Feature Already ON
FD	Intervention Level Feature (already) OFF
FF	NPC escalated alarm condition exists

CHANGE MACRO SPACE

Explanation of Command

This command is used by the frame administrator to request a change in the amount of memory space allocated to macros or maps for all users of the system.

Command

[I.38501]
CHG: [FRM xy][, SEQ ww]:{MACRO|MAP}, SPACE sss!

Completion Message

[O.38501]
M hh:mm:ss xy,ww n[vv] CHG {MACRO|MAP} SPACE NEW sss OLD ttt COMPL

Denial Message

[O.38501.01]
M hh:mm:ss xy,ww n[vv] CHG {MACRO|MAP} SPACE sss COND cc DNY

Explanation of Parameters

SPACE	Space
sss	User macro or map space allocation (000 through 100 percent) Variable sss represents the space allocated to user macros or maps for entire DACS II system as a percentage of the system macro space.
ttt	Old user macro space allocation (000 through 100 percent) Variable ttt represents the space previously allocated to user macros for the entire DACS II system as a percentage of the system macro space.
cc	Hexadecimal condition code
cc	<i>Explanation</i>
D0	Command is Frame administrator (DAX) only.

TURN ON OR OFF THE MESSAGE LOGGING FEATURE

Explanation of Command

This command is used to turn ON or OFF the Message Logging feature, which is used to log the MML messages, so they can be retrieved at a later time. Turning ON the Message Logging feature resets the Message Log Number to 1. This command is restricted to those with superuser permissions.

This command can only be used if the message logging feature has been purchased as part of the DACS II software generic.

Command

[I.38471]
CHG: [FRM xy][, SEQ ww]:MSGLOG {ON|OFF}!

Completion Message

[O.38471]
M hh:mm:ss xy,ww n[vv] CHG MSGLOG {ON|OFF} COMPL

Denial Message

[O.38471.01]
M hh:mm:ss xy,ww n[vv] CHG MSGLOG {ON|OFF} COND cc DNY

Explanation of Parameters

MSGLOG	Message Log
ON	Turn feature ON
OFF	Turn feature OFF
cc	Hexadecimal condition code

cc	<i>Explanation</i>
01	Subject entity is equipped
02	Subject entity is not equipped
06	Feature is (already) off

CHANGE INTERVENTION LEVEL

Explanation of Command



NOTE:

This command applies to the 2.048 Mbit/s Termination Interface only.

This command is used to change the Intervention Level Setting for the following resources:

- NPC
- SYNC
- TLI.

NPC Intervention Level Setting

The Intervention Level setting affects the alarm severity level reported for all NPC alarms including the facility and performance monitoring alarms. The escalation for greater than 5 NPC alarms will not happen when Intervention Level is ON.

SYNC and TLI Intervention Level Setting

All alarms associated with these resources are affected by Intervention Level and the escalation mechanism associated with these resources will occur. This command can be executed while the resource is in service.

Command

Nonhierarchical

[I.38461]

```
CHG:[FRM xy][,SEQ ww]:{NPC {[s]abc[-[t]def]\  
|ALL}|TLI|SYNC|CCN|ALL},LEV r!
```

Hierarchical

[I.38461]

```
CHG:[FRM xy][,SEQ ww]:{NPC {uvmnp[-uvkqr]\  
|ALL}|TLI|SYNC|CCN|ALL},LEV r!
```

Completion Message

Nonhierarchical

[O.38461]

M hh:mm:ss xy,ww n[vv] CHG INTV {NPC-{[s]abc[&&- [t]def]|ALL}|TLI| \
SYNC|CCN|ALL} LEV r COMPL

Hierarchical

[O.38461]

M hh:mm:ss xy,ww n[vv] CHG INTV {NPC {uvmnp[-uvkqr]|ALL}|TLI| \
SYNC|CCN|ALL} LEV r COMPL

Denial Message

Nonhierarchical

[O.38461.01]

M hh:mm:ss xy,ww n[vv] CHG INTV {NPC-{[s]abc[&&- [t]def]|ALL}|TLI| \
SYNC|CCN|ALL} LEV r COND cc DNY

Hierarchical

[O.38461.01]

M hh:mm:ss xy,ww n[vv] CHG INTV {NPC {uvmnp[-uvkqr]|ALL}|TLI| \
SYNC|CCN|ALL} LEV r COND cc DNY

Explanation of Parameters

NPC	Network Processing Number
abc,def	NPC number
ALL	ALL NPCs
TLI	Timing Link Interfaces (TLI 1, TLI 2, TLI 3, TLI 4)
SYNC	Synchronizer
CCN	Cross Connect Network (ECCN)
ALL	All equipment
	All NPCs, TLI 1, TLI 2, TLI 3, TLI 4 SYNCS 0,1 and CCN 0,1

**NOTE:**

When the intervention level setting of the TLI is changed, the SSPs on that TLI, if it is an extractor, inherits the same setting.

LEV Intervention Level Setting
r Intervention Level Setting (1-6)

Listed below are the Intervention actions for the different Intervention levels and alarm serieses.

Intv. Level Setting	Alarm Severity			Info.
	PMA- Critical	PMA-Major	DMA-Minor	
1	IMA	IMA	IMA	DMA
2	IMA	IMA	DMA	DMA
3	IMA	DMA	DMA	NI
4	DMA	DMA	NI	NI
5	DMA	NI	NI	NI
6	NI	NI	NI	NI

where

IMA	Immediate Maintenance Action
	PMA Critical Alarm LED
	Critical Relay
DMA	Deferred Maintenance Action
	PMA Major Alarm LED
	Major Relay
NI	No Action
	No Alarm LED
	No relay

The Intervention Level setting for other resources other than the TLI, NPC, CCN, and SYNC is set to 2 and cannot be changed. These other resources are:

- Power Failure (feeder or fuse)
- SMEM
- MC
- CCI
- ETSI
- FC
- FTMI
- DSPI
- FTU UC
- CCB
- DSPU UC
- System Date and Time

cc Hexadecimal condition code

cc *Explanation*

FE Intervention Level setting not changed

CHANGE NPC AIS ALARM OPTION

Explanation of Command

1.544 Mbit/s Termination

This command may be used to program either the Network Processing Circuit (NPC) Alarm Indication Signal (AIS) alarm option or the ANSI NPC payload loopback capability, but not both simultaneously.

To program the payload loopback capability, the NPC(s) must be out of service.

To program the AIS alarm option, the input command must contain the ALMOPT and AIS {INFO|MJ|MN} keywords in the command line; it must not contain the PLOPT and PL {ENA|DSA} keywords. In this case, the command changes the NPC AIS alarm option to Information (INFO), Major (MJ), or Minor (MN) alarm for all domestic non-SLC[®] NPC types. This command is not valid for DS-type NPCs.

To program the payload loopback capability, the input command must contain the PLOPT and PL {ENA|DSA} keywords in the command line; it must not contain the ALMOPT and AIS {INFO|MJ|MN} keywords. In this case, the command changes the far-end initiated (via the ESF data link) payload loopback capability for ANSI NPCs to Enabled (ENA) or Disabled (DSA) for domestic ANSI NPCs (DA and TA types).

If both keyword sets appear simultaneously in the input command, or if the AIS and payload loopback keywords are mixed, the command is denied.

If the feature applies to one or more NPCs within the addressed range, DACS II performs the command on the NPCs in the range that support the requested feature, but skip the NPCs which do not support the requested feature. DACS II provides a variety of line termination types which support different features and can be randomly mixed within the frame. If at least one of the NPCs in the addressed range supports the requested feature, DACS II generates a completion message for the entire unit of NPCs; individual denial messages are not generated for NPCs within the range which do not support the feature. If *none* of the NPCs in the addressed range support the requested feature, DACS II generates a range denial message.

2.048 Mbit/s Termination

This command requests a change of the NPC alarm option to Maintenance Information (MI), Prompt Maintenance Alarm (PMA), Deferred Maintenance Alarm (DMA), or Prompt Maintenance Action Critical (PMC) for all CEPT NPC types.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.38281]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]ghi], \
{ALMOPT|PLOPT},{AIS {INFO|MJ|MN}|PL {ENA|DSA}}!

Hierarchical

[I.38281]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr], \
{ALMOPT|PLOPT},{AIS {INFO|MJ|MN}|PL {ENA|DSA}}!

2.048 Mbit/s Termination

Nonhierarchical

[I.38281]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]ghi],ALMOPT, \
AIS {MI|PMA|PMC|DMA}!

Hierarchical

[I.38281]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],ALMOPT, \
AIS {MI|PMA|PMC|DMA}!

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

FOR FT UNIT

[O.38281]

M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc[-[s]def] \
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} e LN MSG:
TOT nnn
stttt stttt stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt stttt stttt

EOM

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M hh:mm:ss xy,ww n[vv] CHG NPC [t]jkl[-[t]ghi] \
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} e LN MSG:
TOT nnn
stttt stttt stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt stttt stttt
EOM

M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc[-[t]ghi] \
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} COMPL

FOR DS3 or HDS3 UNIT or HSU

[O.38281]

M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc[-[s]def] \
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} e LN MSG:
TOT nnn
stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt EOM

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.

M hh:mm:ss xy,ww n[vv] CHG NPC [t]jkl[-[t]ghi] \
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} e LN MSG:
TOT nnn
stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt EOM

M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc[-[t]ghi] \
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} COMPL

Hierarchical

FOR FT UNIT

[O.38281]

M hh:mm:ss xy,ww n[vv] CHG NPC uvmp[-defgh] \
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} \
e LN MSG:
TOT nnn
stttt stttt stttt stttt stttt stttt stttt stttt stttt stttt

stttt stttt stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt stttt stttt
EOM

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M hh:mm:ss xy,ww n[vv] CHG NPC ijklm[-wxkqr] \
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} \
e LN MSG:
TOT nnn

stttt stttt stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt stttt stttt
EOM

M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp[-wxkqr] \
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} COMPL

FOR DS3 or HDS3 UNIT

[O.38281]

M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp[-defgh] \
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} \
e LN MSG:
TOT nnn

stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt EOM

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.
.

M hh:mm:ss xy,ww n[vv] CHG NPC ijklm[-wxkqr] \
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} \
e LN MSG:
TOT nnn

stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt
stttt stttt stttt stttt stttt stttt stttt stttt EOM

M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp[-wxkqr] \
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} COMPL

2.048 Mbit/s Termination

Nonhierarchical

FOR FT UNIT

[O.38281]

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc[-[s]def] \  
ALMOPT AIS {MI|DMA|PMA|PMC} e LN MSG:  
TOT nnn  
stttt stttt stttt stttt stttt stttt stttt stttt  
stttt stttt stttt stttt stttt stttt stttt stttt  
stttt stttt stttt stttt stttt stttt stttt stttt  
stttt stttt stttt stttt stttt stttt stttt stttt EOM
```

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.
.

```
M hh:mm:ss xy,ww n[vv] CHG NPC [t]jkl[-[t]ghi] \  
ALMOPT AIS {MI|DMA|PMA|PMC} e LN MSG:  
TOT nnn  
stttt stttt stttt stttt stttt stttt stttt stttt  
stttt stttt stttt stttt stttt stttt stttt stttt  
stttt stttt stttt stttt stttt stttt stttt stttt  
stttt stttt stttt stttt stttt stttt stttt stttt EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc[-[t]ghi] \  
ALMOPT AIS {MI|DMA|PMA|PMC} COMPL
```

FOR HSU

[O.38281]

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc[-[s]def] \  
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} e LN MSG:  
TOT nnn  
stttt stttt stttt stttt stttt stttt stttt  
stttt stttt stttt stttt stttt stttt stttt  
stttt stttt stttt stttt stttt stttt stttt  
stttt stttt stttt stttt stttt stttt stttt EOM
```

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.
.

```
M hh:mm:ss xy,ww n[vv] CHG NPC [t]jkl[-[t]ghi] \  
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} e LN MSG:  
TOT nnn  
stttt stttt stttt stttt stttt stttt stttt  
stttt stttt stttt stttt stttt stttt stttt  
stttt stttt stttt stttt stttt stttt stttt  
stttt stttt stttt stttt stttt stttt stttt EOM  
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc[-[t]ghi] \  
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} COMPL
```

Hierarchical

FOR FT UNIT

[O.38281]

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp[-defgh] \  
ALMOPT AIS {MI|DMA|PMA|PMC} \  
e LN MSG:  
TOT nnn  
sttt sttt sttt sttt sttt sttt sttt sttt  
sttt sttt sttt sttt sttt sttt sttt sttt  
sttt sttt sttt sttt sttt sttt sttt sttt  
sttt sttt sttt sttt sttt sttt sttt sttt EOM  
.  
.  
.  
M hh:mm:ss xy,ww n[vv] CHG NPC ijklm[-wxkqr] \  
ALMOPT AIS {MI|DMA|PMA|PMC} \  
e LN MSG:  
TOT nnn  
sttt sttt sttt sttt sttt sttt sttt sttt  
sttt sttt sttt sttt sttt sttt sttt sttt  
sttt sttt sttt sttt sttt sttt sttt sttt  
sttt sttt sttt sttt sttt sttt sttt sttt EOM  
  
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp[-wxkqr] \  
ALMOPT AIS {MI|DMA|PMA|PMC} COMPL
```

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.38281.01]

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc[-[t]ghi] \  
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} COND cc DNY
```

[O.38281.02]

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc[-[t]ghi] \  
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} UEQD DNY
```

Hierarchical

[O.38281.01]

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp[-wxkqr] \  
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} COND cc DNY
```


[O.38281.02]

M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp[-wxkqr] \
{ALMOPT|PLOPT} {AIS {INFO|MJ|MN}|PL {ENA|DSA}} UEQD DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.38281.01]

M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc[-[t]ghi] \
ALMOPT AIS {MI|PMA|PMC|DMA} COND cc DNY

[O.38281.02]

M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc[-[t]ghi] \
ALMOPT AIS {MI|PMA|PMC|DMA} UEQD DNY

Hierarchical

[O.38281.01]

M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp[-wxkqr] \
ALMOPT AIS {MI|PMA|PMC|DMA} COND cc DNY

[O.38281.02]

M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp[-wxkqr] \
ALMOPT AIS {MI|PMA|PMC|DMA} UEQD DNY

Explanation of Parameters

[s]abc	The 3- or 4-digit nonhierarchical NPC number at beginning of a range
[t]ghi	The 3- or-4 digit nonhierarchical NPC number at end of a range
[s]def	The 3- or 4-digit nonhierarchical NPC number between [s]abc and [t]jkl
[t]jkl	The 3- or 4-digit nonhierarchical NPC number between [s]def and [t]ghi
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number at beginning of range
wxkqr	Hierarchical NPC number at beginning of range
defgh	Hierarchical NPC number between uvmnp and ijklm
ijklm	Hierarchical NPC number between defgh and wxkqr

uv,wx	Unit number
m,k	Module number in unit uv
np,qr	NPC number in module m
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ALMOPT	Alarm option
AIS	Alarm indication signal
	Type of alarm. AIS is not detected by unframed clear (unchannelized) 2Mbit/s PAXDz or THxDz type NPCs. Therefore, specifying AIS with one of the alarm level types MI, DMA, PMA, or PMC is unnecessary. However, the command is not denied if AIS is specified with an alarm level for unframed clear PAXDz or THxDz NPCs. AIS with its alarm level is simply never reported for unframed clear PAXDz or THxDz NPCs.

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INFO	Information
	Information message (not an alarm). This is the default option for domestic NPCs.
MJ	Major
	Major alarm
MN	Minor
	Minor alarm

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MI	Maintenance information
	Maintenance information message (not an alarm). Default.
PMC	Prompt Maintenance Action Critical Alarm
PMA	Prompt Maintenance Action Major Alarm
DMA	Deferred Maintenance Action Minor Alarm
TOT nnn	Total number of NPCs in the output segment
PLOPT	Payload loopback option
	The NPC(s) must be out of service to use this option.

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PL	Payload loopback

ENA	Enabled
	The ANSI NPC responds to payload loopback requests received from the far-end terminal over the ESF data link. This is the default option.
DSA	Disabled
	The ANSI NPC does not respond to payload loopback requests received from the far-end terminal over the ESF data link.
s	Status of the AIS alarm or payload loopback capability
*	The AIS alarm option/payload loopback capability of the NPC has been changed
blank	The AIS alarm option/payload loopback capability of the NPC has not been changed
tttt	The old AIS alarm option/payload loopback setting for the NPC
INFO	AIS programmed for Information message
MJ	AIS programmed for Major Alarm
MN	AIS programmed for Minor Alarm

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MI	AIS programmed for Information message
PMA	AIS programmed for Prompt Maintenance Major Alarm
PMC	AIS programmed for Prompt Maintenance Critical Alarm
DMA	AIS programmed for Deferred Maintenance Minor Alarm

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ENA	ANSI payload loopback capability enabled
DSA	ANSI payload loopback capability disabled
----	Not applicable (for unequipped NPCs or not valid NPC type within the specified NPC range)

FORCE INHIBIT/START-UP STATE OR WORKING STATE

Explanation of Command

The following command is used to force a NPC in a specific in service substate:
Inhibit state,startup state or working state.



NOTE:

The options FORCEINH and FORCEWKG are incompatible with DSPU NPCs because AISP does not apply for DSPU NPCs. Consequently, the presence of NPC number belonging to DSPU will not allow the FORCEINH and FORCEWKG options.

There is a completion message for each individual NPC. There may be a denied message for an interval of NPCs (case FTMI OOS). Messages are printed in line mode.

Command

Nonhierarchical

[I.38391]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def,{FORCEINH|FORCEWKG}!

Hierarchical

[I.38391]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr},{FORCEINH|FORCEWKG}!

Completion Message

Nonhierarchical

[O.38391]

M hh:mm:ss [xy,ww] n[vv] CHG NPC [s]abc\
{FORCEING|FORCEWKG} COMPL

Hierarchical

[O.38391]

M hh:mm:ss [xy,ww] n[vv] CHG NPC uvmnp,{FORCEINH|FORCEWKG}\
COMPL

Denial Message

Nonhierarchical

[O.38391.01]

M hh:mm:ss [xy,ww] n[vv] CHG NPC [v]ghi[-[w]jkl]\
{FORCEINH|FORCEWKG}COND cc DNY

Hierarchical

[O.38391.01]

M hh:mm:ss [xy,ww] n[vv] CHG NPC edhfg[-hijkl]\
{FORCEINH|FORCEWKG}COND cc DNY

Explanation of Parameters

NPC	Network processing circuit
[s]abc, [s]cde	The 3- or 4-digit nonhierarchical NPC number (beginning of the range).
[t]def	The 3- or 4-digit nonhierarchical NPC number (end of the range).
[t]jkl	
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number (beginning of the range).
uvkqr	Hierarchical NPC number (end of the range).
	uv Unit number
	m,k Module number
	np,qr NPC number within the module
[v]ghi	The 3- or 4- digit nonhierarchical NPC number (beginning of the range)
[w]jkl	The 3- or -4 digit nonhierarchical NPC number (end of the range)

edhfg	The 3- or 4- digit hierarchical NPC number (beginning of the range)
hijkl	The 3- or -4 digit hierarchical NPC number (end of the range)
FORCEINH	Force to Inhibit state keyword
FORCEWKG	Force to Working state keyword
cc	Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
15	NPC is unequipped
24	Unit type error
F2	Invalid NPC number specified
A0	MIU OOS
9B	MXR is not equipped
B2	MXR OOS
B7	MXR IS but pested
F1	Parameter only valid with TA,TE,DA,DE,TH,PA,PB,PC NPC type
E3	Invalid keyword combination
04	Subject entity is out of service
F4	NPC is already in that state

SET PORT/RANGE OF PORTS START-UP INTERVAL

Explanation of Command

This command is used to set the port/range of ports start-up time interval.



NOTE:

The option INHTIM is incompatible with DSPU NPCs because AISP does not apply for DSPU NPCs. Consequently, the presence of an NPC number belonging to a DSPU will not allow the INHTIM option.

There is a completion message for each individual NPC. There may be a denied message for an interval of NPCs (case FTMI OOS). Messages are presented in line mode.

Command

Nonhierarchical

[I.38381]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],INHTIM hrnm!

Hierarchical

[I.38381]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],INHTIM hrnm!

Completion Message



NOTE:

There is a completion message for each individual NPC.

Nonhierarchical

[O.38381]

M hh:mm:ss [xy,ww] n[vv] CHG NPC [s]abc INHTIM hrnm COMPL

Hierarchical

[O.38381]

M hh:mm:ss [xy,ww] n[vv] CHG NPC uvmnp INHTIM hrnm COMPL

Denial Message**Nonhierarchical**

[O.38381.01]

M hh:mm:ss [xy,ww] n[vv] CHG NPC [v]ghi[-[w]jkl] INHTIM hrnm \
COND cc DNY

Hierarchical

[O.38381.01]

M hh:mm:ss [xy,ww] n[vv] CHG NPC edhfg[-hijkl] INHTIM hrnm \
COND cc DNY

**Explanation of
Parameters**

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number (beginning of the range).
[t]ghi, [t]def	The 3- or 4-digit nonhierarchical NPC number (end of the range).
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number (beginning of the range).
uvkqr	Hierarchical NPC number (end of the range).
uv	Unit number
m,k	Module number
np,qr	NPC number within the module
[v]ghi	The 3- or 4- digit nonhierarchical NPC number (beginning of the range)
[w]jkl	The 3- or -4 digit nonhierarchical NPC number (end of the range)
edhfg	The 3- or 4- digit hierarchical NPC number (beginning of the range)
hijkl	The 3- or -4 digit hierarchical NPC number (end of the range)
INHTIM	Inhibit timer keyword

hrmn	0001<=hrmn<=4800
cc	Hexadecimal condition code
cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
15	NPC is unequipped
24	Unit type error
F2	Invalid NPC number specified
A0	MIU OOS
B7	MXR IS but pested
9B	MXR is not equipped
B2	MXR is out of service
F1	Parameter only Valid with DA,DE,TA,TE,TH,PA,PB,PC type NPC

CHANGE NPC LOOPBACK

Explanation of Command



NOTE:

This command applies to the 2.048 Mbit/s Termination Interface only.

This command requests a loopback, or the changing of the provisioning of the loopback, for a 2048-kb/s signal received on the addressed NPC(s). It allows changing provisioning for either a single NPC or a range of NPCs.

Variables

LPBK controls loopback and provisioning. For PB/PC type NPCs, variable d is not allowed and the variable t may be set as follows:

For PA type NPCs, variable d and t may be set as follows:

LPBK-t

t FUNCTION

- A Starts looping the signal towards the facility and sends AIS downstream. Turns off facility performance monitoring and freezes alarm states and parameter counts.
- T Transparently passes through the received signal.
- N Stops looping the signal.

LPBK-dt

d t FUNCTION

- F A Starts looping the incoming signal back towards the facility and sends AIS downstream. Turns off facility performance monitoring and freezes alarm states and parameter counts.

LPBK-dt

d t FUNCTION

F	B	Starts looping the incoming signal back towards the facility and sends AIS downstream. Performance Monitoring activity and alarm processing is maintained.
F	C	Starts looping the incoming signal back towards the facility and transparently passes through the received signal. Turns off facility performance monitoring and freezes alarm states and parameter counts.
F	T	Starts looping the incoming signal back towards the facility and transparently passes through the received signal. Performance Monitoring activity and alarm processing is maintained.
E	A	Starts looping the outgoing signal back towards the DACS II equipment and sends AIS upstream. Turns off facility performance monitoring and freezes alarm states and parameter counts.
E	B	Starts looping the outgoing signal back towards the DACS II equipment and sends AIS upstream. Performance Monitoring activity and alarm processing is maintained.
E	C	Starts looping the outgoing signal back towards the DACS II equipment and transparently passes through the outgoing signal in the upstream direction. Turns off facility performance monitoring and freezes alarm states and parameter counts.
E	T	Starts looping the outgoing signal back towards the DACS II equipment and transparently passes through the outgoing signal in the upstream direction. Performance Monitoring activity and alarm processing is maintained.
N	N	Stop loopback.

Loopback Activation

When the NPC loopback is activated towards the facility, DACS II no longer outputs its own clock on the line. Equipment connected to this NPC should not rely on timing from DACS II in that case.

Command**Nonhierarchical**

[I.38341]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],LPBK [d]t!

Hierarchical

[I.38341]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],LPBK [d]t!

**Completion
Message****Nonhierarchical**

[O.38341]

M hh:mm:ss xy,ww n[vv] CHG NPC [v]ghi LPBK [d]t COMPL

Hierarchical

[O.38341]

M hh:mm:ss xy,ww n[vv] CHG NPC edhfg LPBK [d]t COMPL

Denial Message**Nonhierarchical**

[O.38341.01]

M hh:mm:ss xy,ww n[vv] CHG NPC [v]ghi LPBK [d]t COND cc DNY

Hierarchical

[O.38341.01]

M hh:mm:ss xy,ww n[vv] CHG NPC edhfg LPBK [d]t COND cc DNY

**Explanation of
Parameters****NPC** Network processing circuit

If an NPC range is specified in the input command, the following floating window rules apply:

- Unequipped NPCs within the requested range are skipped.
- If a CEPT gap is within the requested range, the NPCs in the gap are skipped.

- If an endpoint of the requested range is in a CEPT gap, then the NPCs in the portion of the range which is in the gap are denied.

[s]abc	The 3- or 4-digit beginning nonhierarchical NPC For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
[t]def	The 3- or 4-digit ending nonhierarchical NPC number Valid values are identical to those for [s]abc.
uvmnp	Beginning hierarchical NPC number
wxkqr	Ending hierarchical NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
LPBK	Loopback
d	Loopback direction specifier; required for PA NPCs, but not allowed for PB/PC NPCs. See previous table for PA type NPCs.
t	Loopback signal transmission and performance monitoring specifier. See tables above for PB/PC type NPCs and for PA type NPCs. For PB/PC type NPCs, only the t flag is allowed. If the optional d flag is also entered, the command is denied. The t flag is allowed to be changed while a loopback is active. That is, this command can be entered to change the signal transmission and/or the PM options while a loopback is being performed. The change of the loopback direction for PA NPCs, that is, change the d flag between F and E, while a loopback is active is not allowed. For PB/PC NPCs, a loopback will be stopped when this command is entered with LPBK N. For PA NPCs, a loopback will be stopped only if this command is entered with LPBK NN. For PB/PC NPCs if LPBK T or LPBK N is entered from the LPBK A state, Facility Performance Monitoring is enabled and alarm and parameter counts are reset. For PA NPCs when the t flag is changed from A or C to another state, Facility Performance Monitoring is enabled and alarm and parameter counts are reset.

For a range command, if the d field is specified, the command will only be applied to PA NPCs; PB/PC NPCs will be skipped. Similarly, if the d field is not entered, the command is only applied to PB/PC NPCs and skips PA NPCs. In either cases, if no NPCs with the appropriate NPC type is in the specified range, the command will be denied.

[v]ghi The 3- or 4-digit nonhierarchical NPC number ([s]abc ≤ [v]ghi ≤ [t]def)

edhfg Hierarchical NPC number (uvmnp ≤ edhfg ≤ wxkqr)

cc Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
15	NPC is unequipped
24	Unit type error
46	NPC Failed or Out of Service
F1	Parameter only valid with PA, PB, or PC type NPCs
F2	Invalid NPC number specified
FD	NPC range crosses unit boundary
A1	The parameter specified does not match with the NPC type
17	Command did not execute for any entity specified in the command
AE	NPC used as a timing reference

CHANGE NPC NON FRAME-WORD SETTING

Explanation of Command

This command allows control of the spare national and international bits in time slot zero (TS0).

Control Variable

Control is exercised through variable abcdefghi. Each letter in this variable represents one of the spare national or international bits in TS0. The bit represented by a given letter is controlled by assigning an appropriate value to the letter. Each letter may be set to one of the following: 0, 1, p or -. p indicates that the incoming bit is passed through unchanged if cross-connected. A 0 and 1 set for any of the bits (except c) overrides the cross-connected bits. This applies also to NPCs assigned as test NPCs. A hyphen (-) means that the bit is not affected by this command.

Summary Denial Message

When a command covering a range of NPCs is denied for successive NPCs in the range for the same reason, a summary denial message is output, giving the range of NPCs denied and the reason. The execution of the normal completions, or of denials for a reason other than diagnostic failures, then resumes at the next NPC and continues to the end of the range.

Command

Nonhierarchical

[I.38324]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],NFS abcdefghi!

Hierarchical

[I.38324]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],NFS abcdefghi!

**Completion
Message****Nonhierarchical**

[O.38324]

M hh:mm:ss xy,ww n[vv] CHG NPC [s]jkl OLD abcdefghi \
NEW abcdefghi NFS COMPL

Hierarchical

[O.38324]

M hh:mm:ss xy,ww n[vv] CHG NPC uvjkl OLD abcdefghi \
NEW abcdefghi NFS COMPL

Denial Message**Nonhierarchical**

[O.38324.01]

M hh:mm:ss [<xy>],ww n[vv] CHG NPC [s]jkl[-[t]mno] abcdefghi \
NFS COND cc DNY

Hierarchical

[O.38324.01]

M hh:mm:ss xy,ww n[vv] CHG NPC uvjkl[-uvmno] abcdefghi \
NFS COND cc DNY

**Explanation of
Parameters**

[s]abc	The 3- or 4-digit nonhierarchical NPC number, start of range
[t]def	The 3- or 4-digit nonhierarchical NPC number, end of range, must be in the same unit as [s]abc
[s]jkl	The 3- or 4-digit nonhierarchical NPC number within the range of [s]abc and [t]def.
[t]mno	The 3- or 4-digit nonhierarchical NPC number within the range of [s]abc and [t]def.
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number, start of range
uvkqr	Hierarchical NPC number, end of range
uvjkl	Hierarchical NPC number (uvmnp through uvkqr)
uvmno	Hierarchical NPC number (uvmnp through uvkqr)

uv Unit number
m,k,j Module number
**np,qr,
kl,no** NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

NFS Nonframe-word Setting

abcdefghi Input variables corresponding to spare bits in TS0

a b c d e f g h i Variables of old spare bits in TS0.

a Bit 1 of Frame Word (FW) - International spare bit for TS0 to non-TS0 cross-connect in Mode 2, this variable can only be - or b
b Bit 1 of Non Frame Word (NFW) - International spare bit
c Bit 2 of NFW
d Bit 3 of NFW - Remote Alarm Indicator
e-f Bits 4-5 of Non Frame Word, National spare bits
g Bit 6 of Non Frame Word, RPSFI bit if provisioned for RPSFI otherwise a national spare bit.
h-i Bits 7-8 of Non Frame Word, National spare bits

Variable Input

Value	Action on Corresponding TS0 bit
0 or 1	Set TS0 bit to this value
V	Received bit is inverted and passed through
P	Received bit is passed through unchanged
-	Neither the variable nor the TS0 bit is changed by this command

The output parameters take on values dependent on the message language (PDS or MML) and position (OLD or NEW) as shown in the following table:

previous value may be one of 0, 1, V or P

For example:

Input	Output		OLD	NEW
	Primary Line	(MML)		
0	0		previous	0
1	1		previous	1
V	V		previous	V
P	P		previous	P
-	-		previous	previous
11V---00P	11V---00P		0011PPPPV	11V1PP00P

If this command is not entered for a NPC, the default value for all the bits is P.

cc Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
24	Unit type error
26	NPC type error
46	NPC Failed or Out of Service
F2	Invalid NPC number specified
FF	Termination is in process of being rolled
2C	not allowed for clear 2MB
2D	TS0 is crossconnected to TS0
2F	TS0 connected to nonTS0 in Mode 2 - "a" should be "-" or "b"
3A	Invalid FPI value

CHANGE NPC OPTIONS

Explanation of Command

This message changes the facility performance parameter threshold values on a specified Network Processing Circuit (NPC) without disconnecting and reconnecting provisioned circuits.

One or more alarm or information threshold values for the designated NPC may be changed to a value previously stored in the DACS II threshold data base. These previously stored values are selected through use of the indices rr/m.

Each facility parameter of an NPC has a default threshold and up to three user-programmable threshold values stored in the DACS II threshold data base. The CHG SETOP NPCOP command sets these values.



NOTE:

This command does not reboot the NPC hardware. Therefore, if any NPCs are in service, use the UTL::BOOT,FRAME command (Message I.58001) to avoid any possible inconsistency.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.38221]

```
CHG:[FRM xy][,SEQ ww]:NPC [s]abc,OPTS(rr/m[,rr/m][...])!
```

Hierarchical

[I.38221]

```
CHG:[FRM xy][,SEQ ww]:NPC uvmnp,OPTS(rr/m[,rr/m][...])!
```

2.048 Mbit/s Termination

Nonhierarchical

[I.38221]

```
CHG:[FRM xy][,SEQ ww]:NPC [s]abc,{OPTS(rr/<m>[,rr/<m>][...])| \
THMODE hhh}!
```

Hierarchical

[I.38221]

```
CHG: [FRM xy][,SEQ ww]:NPC uvmnp,{OPTS(rr/<m>[,rr/<m>][...])| \
THMODE hhh}!
```

**Completion
Message****1.544 Mbit/s Termination****Nonhierarchical****For DE, TE, or DS type NPCs:**

[O.38221]

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ IW pq] 5 LN MSG:
      SLIP      BER      ERS      SERS      COFA      [SANE]      [SAFE]
THRESHOLDS mmm nnn p q      rrrrr sss      ttt uuu [xxxxx] \
[zzzzz]
OPTIONS      e      f      g h      i      j      k      l      [m]      [n]
OLD OPTIONS s      t      u v      w      x      y      z      [b]      [c] \
COMPL
```

For ANSI (DA, SA and TA type) NPCs:

[O.38222]

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ IW pq] 5 LN MSG:
DAILY NE      CVP      ESP      SESP      SEFS      CSSP      UASP      CVL      ESL \
SESL
THRESHOLDS aaaaaaaaaa bbbbbb ccccc ddddd eeeee fffff gggggggggg \
hhhhh iiii
OPTIONS      a      b      c      d      e      f      g      h      i
OLD OPTIONS 'a      'b      'c      'd      'e      'f      'g \
'h      'i      EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ IW pq] 5 LN MSG:
DAILY FE      CVP      ESP      SESP      SEFS      CSSP      UASP      ESL
THRESHOLDS jjjjjjjjj kkkkk lllll mmmm nnnn ooooo ppppp
OPTIONS      j      k      l      m      n      o      p
OLD OPTIONS 'j      'k      'l      'm      'n      'o      'p      EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ IW pq] 5 LN MSG:
15MIN NE      CVP      ESP      SESP      SEFS      CSSP      UASP      CVL      ESL \
SESL
THRESHOLDS a a a a a a a b b b c c c d d d e e e f f f \
g g g g g g h h h i i i
OPTIONS      a      b      c      d      e      f      g      h      i
OLD OPTIONS 'a      'b      'c      'd      'e      'f      'g      'h \
```

```
'i      EOM

M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ IW pq] 5 LN MSG:
15MIN FE      CVP      ESP      SESP      SEFS      CSSP      UASP      ESL
THRESHOLDS   j j j j j j j k k k l l l m m m n n n o o o \
p p p
OPTIONS      j          k          l          m          n          o          p
OLD OPTIONS  'j          'k          'l          'm          'n          'o          'p      COMPL
```

Hierarchical

For DE, TE, or DS type NPCs:

[O.38221]

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ IW pq] 5 LN MSG:
                        SLIP      BER      ERS      SERS      COFA      [SANE] \
[SAFE]
THRESHOLDS   mmm nnn  p q          rrrrr  sss          ttt uuu  [xxxxx] \
[zzzzz]
OPTIONS      e  f    g h    i      j          k  l    [m]          [n]
OLD OPTIONS  s  t    u v    w      x          y  z    [b]          [c]
COMPL
```

For ANSI (DA, and TA type) NPCs:

[O.38222]

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ IW pq] 5 LN MSG:
DAILY NE      CVP      ESP      SESP      SEFS      CSSP      UASP      CVL      ESL \
SESL
THRESHOLDS   aaaaaaaaa bbbbbb ccccc ddddd eeeee fffff ggggggggg \
hhhhh iiiii
OPTIONS      a          b      c      d      e      f      g          h      i
OLD OPTIONS  'a          'b      'c      'd      'e      'f      'g      \
'h      'i      EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ IW pq] 5 LN MSG:
DAILY FE      CVP      ESP      SESP      SEFS      CSSP      UASP      CVL      ESL \
THRESHOLDS   jjjjjjjjj kkkkk llll  mmmmm nnnnn ooooo ppppp
OPTIONS      j          k          l          m          n          o          p
OLD OPTIONS  'j          'k          'l          'm          'n          'o          'p      EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ IW pq] 5 LN MSG:
15MIN NE      CVP      ESP      SESP      SEFS      CSSP      UASP      CVL      ESL \
SESL
THRESHOLDS   a a a a a a a b b b c c c d d d e e e f f f \
g g g g g g g h h h i i i
OPTIONS      a          b      c      d      e      f      g          h      i
OLD OPTIONS  'a          'b      'c      'd      'e      'f      'g      \
'h      'i      EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ IW pq] 5 LN MSG:
15MIN FE CVP ESP SESP SEFS CSSP UASP ESL
THRESHOLDS j j j j j j k k k l l l m m m n n n o o o \
p p p
OPTIONS j k l m n o p
OLD OPTIONS 'j 'k 'l 'm 'n 'o 'p COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

For PA type NPCs:

[O.38222]

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ IW pqr] 5 LN MSG:
DAILY CRC FRER OFS ES SES CSS CV
THRESHOLDS aaaaaaaaaa bbbbbbbbbb ccccc dddd eeee ffff gggggggg
OPTIONS a b c d e f g
OLD OPTIONS 'a 'b 'c 'd 'e 'f 'g \
EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ IW pqr] 5 LN MSG:
DAILY UAS UATC MER FEBE FES FSES FUAS
THRESHOLDS hhhh iiii jjjj kkkkkkkk llll mmmm nnnn
OPTIONS h i j k l m n
OLD OPTIONS 'h 'i 'j k 'l 'm 'n EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ IW pqr] 5 LN MSG:
15MIN CRC FRER OFS ES SES CSS CV
THRESHOLDS a a a a a a b b b b b b c c c d d d e e e \
f f f g g g g g g
OPTIONS a b c d e f g
OLD OPTIONS 'a 'b 'c 'd 'e 'f 'g \
EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ IW pqr] 5 LN MSG:
15MIN UAS UATC MER FEBE FES FSES FUAS
THRESHOLDS h h h i i j j j k k k k k k l l l m m m n n n
OPTIONS h i j k l m n
OLD OPTIONS 'h 'i 'j 'k 'l 'm 'n COMPL
```

[O.38223]

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ IW pqr] THMODE \
hhh COMPL
```

For PB and PC type NPCs:

[O.38221]

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ IW pqr] 5 LN MSG:
24 HOURS      DM      SERS      ERS      US      SLIP
THRESHOLDS    nnnnn  ppppp  qqqqq  rrrrr  sssss
OPTIONS        e      f      g      h      i
OLD OPTIONS    s      t      u      v      w  EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ IW pqr] 5 LN MSG:
SHORT INTERVAL  DM      SERS      ERS      US      SLIP
THRESHOLDS      n n n n n      p p p p p      q q q q q \
r r r r r      s s s s s
OPTIONS          e      f      g      h      i
OLD OPTIONS      s      t      u      v      w  COMPL
```

Hierarchical

For PA type NPCs:

[O.38222]

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ IW pqr] 5 LN MSG:
DAILY      CRC      FRER      OFS      ES      SES      CSS      CV
THRESHOLDS aaaaaaaa bbbbbbbbb ccccc ddddd eeeee fffff gggggggg
OPTIONS     a      b      c      d      e      f      g
OLD OPTIONS 'a      'b      'c      'd      'e      'f      'g \
EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ IW pqr] 5 LN MSG:
DAILY      UAS      UATC MER      FEBE      FES      FSES      FUAS
THRESHOLDS hhhhh iiii jjjjj kkkkkkkk llll mmmm nnnnn
OPTIONS     h      i      j      k      l      m      n
OLD OPTIONS 'h      'i      'j      'k      'l      'm      'n  EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ IW pqr] 5 LN MSG:
15MIN      CRC      FRER      OFS      ES      SES      CSS      CV
THRESHOLDS a a a a a a  b b b b b b  c c c  d d d  e e e \
f f f  g g g g g g g
OPTIONS     a      b      c      d      e      f      g
OLD OPTIONS 'a      'b      'c      'd      'e      'f      'g \
EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ IW pqr] 5 LN MSG:
15MIN      UAS      UATC MER      FEBE      FES      FSES      FUAS
THRESHOLDS h h h  i i  j j j  k k k k k k  l l l m m m  n n n
OPTIONS     h      i      j      k      l      m      n
OLD OPTIONS 'h      'i      'j      'k      'l      'm      'n  COMPL
```

[O.38223]

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ IW pqr] THMODE \
hhh COMPL
```

For PB and PC type NPCs:

[O.38221]

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ IW pqr] 5 LN MSG:
24 HOURS      DM      SERS      ERS      US      SLIP
THRESHOLDS    nnnnn  ppppp  qqqqq  rrrrr  sssss
OPTIONS        e      f      g      h      i
OLD OPTIONS    s      t      u      v      w EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ IW pqr] 5 LN MSG:
SHORT INTERVAL      DM      SERS      ERS      US      SLIP
THRESHOLDS          n n n n n      p p p p p      q q q q q \
r r r r r      s s s s s
OPTIONS              e      f      g      h      i
OLD OPTIONS          s      t      u      v      w COMPL
```

Both Terminations

Nonhierarchical**For TH type NPCs:**

[O.38224]

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ IW pqr] 5 LN MSG:
DAILY      CRC      FRER      OFS      ES      SES      CSS      CV
THRESHOLDS aaaaaaaa bbbbbbbbbb ccccc ddddd eeeee fffff gggggggg
OPTIONS     a      b      c      d      e      f      g
OLD OPTIONS 'a      'b      'c      'd      'e      'f      'g \
EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ IW pqr] 5 LN MSG:
DAILY      UAS      UATC MER      FEBE      FES      FSES      FUAS
THRESHOLDS hhhhhh iiii jjjjj kkkkkkkk lllll mmmm nnnnn
OPTIONS     h      i      j      k      l      m      n
OLD OPTIONS 'h      'i      'j      k      'l      'm      'n      EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ IW pqr] 5 LN MSG:
15MIN      CRC      FRER      OFS      ES      SES      CSS      CV
THRESHOLDS a a a a a a  b b b b b b  c c c  d d d  e e e \
f f f  g g g g g g
OPTIONS     a      b      c      d      e      f      g
OLD OPTIONS 'a      'b      'c      'd      'e      'f      'g
EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ IW pqr] 5 LN MSG:
15MIN      UAS      UATC MER      FEBE      FES      FSES      FUAS
THRESHOLDS h h h  i i  j j j  k k k k k k  l l l  m m m  n n n
OPTIONS     h      i      j      k      l      m      n
OLD OPTIONS 'h      'i      'j      'k      'l      'm      'n      COMPL
```


Note that CV, FEBE, FES, FSES and FUAS are not applicable for TH type NPCs.
Dashes appear in the output for those parameters.

Hierarchical

For TH type NPCs:

[O.38224]

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ IW pqr] 5 LN MSG:
DAILY      CRC      FRER      OFS  ES    SES    CSS    CV
THRESHOLDS aaaaaaaa bbbbbbbbb ccccc ddddd eeeee fffff gggggggg
OPTIONS     a        b        c    d    e    f    g
OLD OPTIONS 'a      'b      'c    'd    'e    'f    'g
EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ IW pqr] 5 LN MSG:
DAILY      UAS      UATC MER    FEBE    FES    FSES    FUAS
THRESHOLDS hhhhh iiii jjjjj kkkkkkkk llll  mmmm  nnnnn
OPTIONS     h        i        j    k        l        m        n
OLD OPTIONS 'h      'i      'j      'k        'l      'm      'n      EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ IW pqr] 5 LN MSG:
15MIN      CRC      FRER      OFS  ES    SES    CSS    CV
THRESHOLDS a a a a a a  b b b b b b b  c c c  d d d  e e e \
f f f  g g g g g g g
OPTIONS     a        b        c    d    e    f    g
OLD OPTIONS 'a      'b      'c    'd    'e    'f    'g \
EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ IW pqr] 5 LN MSG:
15MIN      UAS      UATC MER    FEBE    FES    FSES    FUAS
THRESHOLDS h h h  i i  j j j  k k k k k k  l l l  m m m  n n n
OPTIONS     h        i        j    k        l        m        n
OLD OPTIONS 'h      'i      'j      'k        'l      'm      'n      COMPL
```

Note that CV, FEBE, FES, FSES and FUAS are not applicable for TH type NPCs.
Dashes appear in the output for those parameters.

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.38221.01]

```
M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[ ss/n] \
COND cc DNY
```

Hierarchical

[O.38221.01]

M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[ss/n] \\
COND cc DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.38221.01]

M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[{ss/n| \\
THMODE hhh}] COND cc DNY

Hierarchical

[O.38221.01]

M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[{ss/n| \\
THMODE hhh}] COND cc DNY

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number
uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
rr	Facility performance parameter number
	Variable rr specifies the parameter whose alarm threshold is being selected.

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m Facility performance parameter threshold index (0 through 3)

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<m> Facility performance parameter threshold index (0 through X'10')

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Variable m is used to select threshold values previously programmed for rr. The default threshold value, the value selected by m=0, for each parameter is shown in the following table under the column heading "Default Threshold Value". Threshold values selected by m=1 through m=3 must exist; that is, must have been programmed prior to being selected. The nondefault thresholds can be set by using the CHG::SETOP (I.38201) command.

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Clear-DS1 ANSI NPCs (DAxy9/TAXy9) provide the same set of path and line performance monitoring parameters that are provided by terminated ANSI NPC types. ANSI NPCs in DS3 Units (TAXyz) do not provide near-end DS1 line performance monitoring parameters.

Variable <m> is used to select threshold values and threshold crossing alarm levels previously programmed for rr. The default threshold value for each parameter is shown in the following table under the column heading "Default Threshold Value". Default threshold values are selected by setting m = 0, 1, 2 or d. Each of these m values corresponds to the default threshold but a different alarm level. The default threshold value and alarm level is given by m = 0. Threshold values selected from Set1 (m=3,4,5,e), Set2 (m=6,7,8,f), and Set3 (m=9,a,b,X'10') must exist, that is, they must have been programmed, prior to being selected.

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These other thresholds can be set by using the CHG::SETOP command.

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For DE, TE, SE or DS type NPCs:

For DE type NPCs, parameters with values rr = 1 through 8 are valid.

For DS type NPCs, parameters with values rr = 1 through 10 are valid.

For TE type NPCs, parameters with values rr = 1 through 8 are valid.

For SE type NPCs, parameters with values rr = 1 through 8 are valid.

For Clear-DS1 DE type NPCs, parameters with values rr = 1 through 4 are valid.

For Clear-DS1 TE type NPCs, parameters with values rr = 1 through 2 are valid.

For Clear-DS1 SE type NPCs, parameters with values rr = 1 through 2 are valid.

rr	Parameter	Threshold Value Range	Default Threshold Value
01	Slip major	000 to 255	255
02	Slip minor	000 to 255	4
03	Bit Error Rate major	1E-3* to 1E-6†	1E-3*
04	Bit Error Rate minor	1E-3* to 1E-6†	1E-6
05	Errored Seconds‡	00001 to 65535	864
06	Severely Errored Seconds‡	001 to 255	225
07	Change of Frame Alignment major	001 to 511	511
08	Change of Frame Alignment minor	001 to 255	17
09	Shelf Alarm Near End (SANE)§	00001 to 65535	00000
10	Shelf Alarm Far End (SAFE)§	00001 to 65535	00000

* 4 for clear-DS1 NPCs or DS type NPCs (default).

† 7 on DE or TE type NPCs using T1DM (x = 4) or on DE, TE, SE type NPCs using ESF (x=2 or 3) framing.

‡ Only applicable to DE or TE type NPCs using T1DM (x = 4) or DE, TE, SE type NPCs using ESF (x = 2 or 3) framing.

§ Applicable only to DS type NPCs.

Major thresholds must be greater than minor thresholds.

For Bit Error Rates, enter only the power of 10 (DACS assumes its sign is negative). For example, for a BER of 10^{-3} (.001), enter 3.

Slip major and Slip minor threshold crossing alarms may be disabled by programming threshold values of zero for the respective parameters.

Only parameters 01 through 04 are allowed for DE type clear DS1.

Only 01 through 02 are allowed for TE or SE type clear DS1

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For DA, TA and SA type NPCs:

For Channelized and Clear-DS1 DA type NPCs with ESF framing, all of the following Near-end and Far-end parameters are valid.

For Channelized and Clear-DS1 DA type NPCs with D4 or T1DM framing, all of the following Near-end parameters are valid, but the only valid Far-end parameter is Unavailable Seconds (rr = 55,71).

For Channelized and Clear-DS1 TA and SA type NPCs with ESF framing, all of the following Near-end Path parameters are valid, but the Near-End Line parameters (rr = 47-49, 63-65) are invalid. All of the following Far-end parameters are valid.

For Channelized and Clear-DS1 TA and SA type NPCs with D4 or T1DM framing, the following Near-end Path parameters are valid, but the Near-End Line parameters (rr = 47-49, 63-65) are invalid. The only valid Far-end parameter is Unavailable Seconds (rr = 55,71).

rr	Parameter	Threshold Value Range	Default Threshold Value
41	Daily Near-end Path Coding Violations	000000000 to 134217727	132960†
42	Daily Near-end Path Errored Seconds	00000 to 86400	648
43	Daily Near-end Path Severely Errored Seconds	00000 to 86400	100
44	Daily Near-end Severely Errored Framing Seconds	00000 to 86400	17
45	Daily Near-end Controlled Slip Seconds	00000 to 86400	4
46	Daily Near-end Unavailable Seconds	00000 to 86400	10

rr	Parameter	Threshold Value Range	Default Threshold Value
47	Daily Near-end Line Coding Violations	000000000 to 134217727	133400
48	Daily Near-end Line Errored Seconds	00000 to 86400	648
49	Daily Near-end Line Severely Errored Seconds	00000 to 86400	100
50	Daily Far-end Path Coding Violations	000000000 to 134217727	132960†
51	Daily Far-end Path Errored Seconds	00000 to 86400	648
52	Daily Far-end Path Severely Errored Seconds	00000 to 86400	100
53	Daily Far-end Severely Errored Framing Seconds	00000 to 86400	17
54	Daily Far-end Controlled Slip Seconds	00000 to 86400	4
55	Daily Far-end Unavailable Seconds	00000 to 86400	10
56	Daily Far-end Line Errored Seconds	00000 to 86400	648
57	15-Minute Near-end Path Coding Violations	0000000 to 2097151	13296‡
58	15-Minute Near-end Path Errored Seconds	000 to 900	65
59	15-Minute Near-end Path Severely Errored Seconds	000 to 900	10
60	15-Minute Near-end Severely Errored Framing Seconds	000 to 900	2

rr	Parameter	Threshold Value Range	Default Threshold Value
61	15-Minute Near-end Controlled Slip Seconds	000 to 900	1
62	15-Minute Near-end Unavailable Seconds	000 to 900	10
63	15-Minute Near-end Line Coding Violations	0000000 to 2097151	13340
64	15-Minute Near-end Line Errored Seconds	000 to 900	65
65	15-Minute Near-end Line Severely Errored Seconds	000 to 900	10
66	15-Minute Far-end Path Coding Violations	0000000 to 2097151	13296±
67	15-Minute Far-end Path Errored Seconds	000 to 900	65
68	15-Minute Far-end Path Severely Errored Seconds	000 to 900	10
69	15-Minute Far-end Severely Errored Framing Seconds	000 to 900	2
70	15-Minute Far-end Controlled Slip Seconds	000 to 900	1
71	15-Minute Far-end Unavailable Seconds	000 to 900	10
72	15-Minute Far-end Line Errored Seconds	000 to 900	65

† The value shown applies to ESF framing and is a count of CRC errors. When the DS1 has D4 or T1DM framing, framing errors are counted and the default Daily value is 691.

‡ The value shown applies to ESF framing and is a count of CRC errors. When the DS1 has D4 or T1DM framing, framing errors are counted and the default 15-Minute value is 72.

For PB and PC type NPCs:

rr	Parameter	Threshold Value Range	Default Threshold Value
31	Degraded Minutes, 1 hour	1-60	60
32	Degraded Minutes, 24 hours	1-1440	1440
33	Severely Errored Seconds, 15 mins	1-900	900
34	Severely Errored Seconds, 24 hours	1-65535	65535
35	Errored Seconds, 15 minutes	1-900	900
36	Errored Seconds, 24 hours	1-65535	65535
37	Unavailable Seconds, 15 minutes	1-900	900
38	Unavailable Seconds, 24 hours	1-65535	65535
39	Slips, 15 minutes	1-900	900
40	Slips, 24 hours	1-65535	65535

 **NOTE:**
24-hour thresholds must be greater than their respective 15-minute or 1-hour threshold.

For PA type NPCs:

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For PA, PB, and PC type NPCs:

In the following table, these definitions apply:

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
11	CRC Block Errors	DAILY	1 - 79056000	176947
12	Framing Errors	DAILY	1 - 345600000	176947
13	Out of Frame Seconds	DAILY	1 - 86400	4
14	Errored Seconds	DAILY	1 - 86400	4320
15	Severely Errored Seconds	DAILY	1 - 86400	90
16	Controlled Slip Seconds	DAILY	1 - 86400	4
17	Coding Violations	DAILY	1 - 176947200	176947
18	Unavailable Seconds	DAILY	1 - 86400	90
19	Unavailable Time Count	DAILY	1 - 4320	9
20	Multiframe Errors	DAILY	1 - 86400	4095
21	Far End Block Errors	DAILY	1 - 79056000	176947
22	Far End Errored Seconds	DAILY	1 - 86400	4320
23	Far End Severely Errored Seconds	DAILY	1 - 86400	90
24	Far End Unavailable Seconds	DAILY	1 - 86400	90
81	CRC Block Errors	15MIN	1 - 823500	18432
82	Framing Errors	15MIN	1 - 3600000	18432
83	Out of Frame Seconds	15MIN	1 - 900	4
84	Errored Seconds	15MIN	1 - 900	300
85	Severely Errored Seconds	15MIN	1 - 900	30
86	Controlled Slip Seconds	15MIN	1 - 900	1

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
87	Coding Violations	15MIN	1 - 1843200	18432
88	Unavailable Seconds	15MIN	1 - 900	30
89	Unavailable Time Count	15MIN	1 - 45	3
90	Multiframe Errors	15MIN	1 - 900	255
91	Far End Block Errors	15MIN	1 - 823500	18432
92	Far End Errored Seconds	15MIN	1 - 900	300
93	Far End Severely Errored Seconds	15MIN	1 - 900	30
94	Far End Unavailable Seconds	15MIN	1 - 900	30

MI Maintenance Information
DMA Deferred Maintenance Action Minor Alarm
PMA Major Prompt Maintenance Action Major Alarm
PMA Critical Prompt Maintenance Action Critical Alarm

<m>	Threshold Value	Alarm Type
0	Default*	MI (Maintenance Information)
1	Default	DMA (Deferred Maintenance Minor Alarm)
2	Default	PMA (Prompt Maintenance Major Alarm)
3	Set 1	MI
4	Set 1	DMA
5	Set 1	PMA Major
6	Set 2	MI
7	Set 2	DMA
8	Set 2	PMA Major

<m>	Threshold Value	Alarm Type
9	Set 3	MI
a	Set 3	DMA
b	Set 3	PMA Major
c	Threshold disabled	no alarm
d	Default	PMA Critical
e	Set 1	PMA Critical
f	Set 2	PMA Critical
10	Set 3	PMA Critical

*m = 0 is the default.

Threshold values for Set 1, Set 2, and Set 3 must be set (programmed) by using the command mentioned in the explanation of m above before variable m can be used to select threshold levels and alarm types other than the defaults.

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For TH type NPCs:

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
11	CRC Block Errors	DAILY	1 - 79056000	176947
12	Framing Errors	DAILY	1 - 345600000	176947
13	Out of Frame Seconds	DAILY	1 - 86400	4
14	Errored Seconds	DAILY	1 - 86400	4320
15	Severely Errored Seconds	DAILY	1 - 86400	90
16	Controlled Slip Seconds	DAILY	1 - 86400	4
18	Unavailable Seconds	DAILY	1 - 86400	90
19	Unavailable Time Count	DAILY	1 - 4320	9
20	Multiframe Errors	DAILY	1 - 86400	4095

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
81	CRC Block Errors	15MIN	1 - 823500	18432
82	Framing Errors	15MIN	1 - 3600000	18432
83	Out of Frame Seconds	15MIN	1 - 900	4
84	Errored Seconds	15MIN	1 - 900	300
85	Severely Errored Seconds	15MIN	1 - 900	30
86	Controlled Slip Seconds	15MIN	1 - 900	1
88	Unavailable Seconds	15MIN	1 - 900	30
89	Unavailable Time Count	15MIN	1 - 45	3
90	Multiframe Errors	15MIN	1 - 900	255

TYPE	Type
mnxyz	NPC type
THxyz	HDS3U CEPT NPC type 1.544 Mbit/s Termination
DExyz	FTU DS1 NPC type
TExyz	DS3U or HDS3U DS1 NPC type
DSxyz	SLC Carrier digroup terminating NPC type
DAxyz	FTU DS1 ANSI NPC type
TAxyz	DS3U or HDS3U DS1 ANSI NPC type 2.048 Mbit/s Termination
PAxyz	CEPT NPC (120-ohm twisted pair or 75-ohm coaxial)
PBxyz	CEPT NPC (120-ohm twisted pair)
PCxyz	CEPT NPC (75-ohm coaxial)
For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."	

PB- and PC-type xyz field

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

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IW Insertion word

pq Insertion word value (hexadecimal)

The value entered for pq is used as the disconnect code (DCC) or idle code. This value is inserted in the transmit direction on unassigned channels. An insertion word is not allowed for clear-DS1 NPCs; the all ones signal is transmitted for an idle clear-DS1 NPC. Thus, information about the disconnect code does not appear for any message involving a clear-DS1 type NPC. Although any hexadecimal value may be assigned, the following are some commonly used values:

7F UAC (unassigned channel code), the default value

18 UMC (unassigned multiplex code), should only be used with type DE4yz, TE4yz, DA4yz, and TA4yz for a T1DM formatted facility.

The growth command does not enforce this restriction.

FF Per channel all ones code, needed for not connected channels in SLC carrier and CPI applications.

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IW Insertion word

pqr Insertion word value (hexadecimal)

The value entered for pqr is used as the disconnect code (DCC) or idle code. This value is inserted in the transmit direction on unassigned channels. An insertion word is not allowed for clear-2Mbit NPCs; the all ones signal is transmitted for an idle clear-2Mbit NPC. Thus, information about the disconnect code does not appear for any message involving a clear-2Mbit type NPC.

Variable r is used for circuits provisioned for channel associated signaling (CAS). A value may be entered for r for nonsignaling associated (NSA) NPCs but it has no significance.

pq Disconnect code (DCC) or idle code

D5 Default idle code

r Signaling option

D Default signaling

This sets signaling bits abcd to the binary value
1101

For DE, TE, SE or DS type NPCs:

SLIP	Timing Slip
BER	Bit Error Rate
ERS	Errored Seconds
SERS	Severely Errored Seconds
COFA	Change of Frame Alignment
SANE	Shelf Alarm Near End
SAFE	Shelf Alarm Far End

SLIP

mmm	Slip major alarm threshold (0 through 255)
nnn	Slip minor alarm threshold (0 through 255)
e	Slip major alarm option selection (0 through 3)
s	Slip major alarm option old selection (0 through 3)
f	Slip minor alarm option selection (0 through 3)
t	Slip minor alarm option old selection (0 through 3)

BER (Bit Error Rate)

p	BER major alarm threshold, ($1E-p$, $3^{\dagger} \leq p \leq 6^*$)
q	BER minor alarm threshold, ($1E-q$, $3^{\dagger} \leq q \leq 6^*$)

* 7 on T1DM and Fe framing

$\dagger$ 4 for DE type clear-DS1 or DS type NPCs

g	BER major alarm option selection (0 through 3)
u	BER major alarm option old selection (0 through 3)
h	BER minor alarm option selection (0 through 3)
v	BER minor alarm option old selection (0 through 3)

ERS (Errored Seconds)

rrrrr	ERS threshold (1 through 65535)
i	ERS option selection (0 through 3)
w	ERS option old selection (0 through 3)

SERS (Severely Errored Seconds)

sss	SERS threshold (1 through 255)

j	SERS option selection (0 through 3)
x	SERS option old selection (0 through 3)
	COFA (Change of Frame Alignment)
ttt	COFA major alarm threshold (1 through 511)
uuu	COFA minor alarm threshold (1 through 255)
k	COFA major alarm option selection (0 through 3)
y	COFA major alarm option old selection (0 through 3)
l	COFA minor alarm option selection (0 through 3)
z	COFA minor alarm option old selection (0 through 3)
	SANE (Shelf Alarm Near End)
xxxxx	SANE threshold (0 through 65535)
m	SANE option selection (0 through 3)
b	SANE option old selection (0 through 3)
	SAFE (Shelf Alarm Far End)
zzzzz	SAFE threshold (0 through 65535)
n	SAFE option selection (0 through 3)
c	SAFE option old selection (0 through 3)

**NOTE:**

Major thresholds must be greater than minor thresholds, except for the BER threshold of SLC[®] 96 carrier NPCs. For DE type clear-DS1 NPCs only SLIP and BER parameters are listed. For TE and SE type clear-DS1 NPCs only SLIP parameters are listed. Both SANE and SAFE are only applicable to SLC 96 carrier NPCs.

For ANSI (DA and TA) NPC types:

CVP	Path Coding Violations
ESP	Path Errored Seconds
SESP	Path Severely Errored Seconds
SEFS	Severely Errored Framing Seconds
CSSP	Path Controlled Slip Seconds
UASP	Path Unavailable Seconds
CVL	Line Coding Violations
ESL	Line Errored Seconds

SESL	Line Severely Errored Seconds
CVP (Path Coding Violations)	
aaaaaaaa	Path Coding Violation Daily NE threshold (0 to 134217727)
jjjjjjjj	Path Coding Violation Daily FE threshold (0 to 134217727)
aaaaaaa	Path Coding Violation 15Min NE threshold (0 to 2097151)
iiiiiii	Path Coding Violation 15Min FE threshold (0 to 2097151)
a	Path Coding Violation Daily NE option selection (0 to 3)
j	Path Coding Violation Daily FE option selection (0 to 3)
a	Path Coding Violation 15Min NE option selection (0 to 3)
j	Path Coding Violation 15Min FE option selection (0 to 3)
a'	Path Coding Violation Daily NE option old selection (0 to 3)
j'	Path Coding Violation Daily FE option old selection (0 to 3)
a'	Path Coding Violation 15Min NE option old selection (0 to 3)
j'	Path Coding Violation 15Min FE option old selection (0 to 3)
ESP (Path Errored Seconds)	
bbbbbb	Path Errored Seconds Daily NE threshold (0 to 86400)
kkkkkk	Path Errored Seconds Daily FE threshold (0 to 86400)
<u>b</u> <u>b</u> <u>b</u>	Path Errored Seconds 15Min NE threshold (0 to 900)
<u>k</u> <u>k</u> <u>k</u>	Path Errored Seconds 15Min FE threshold (0 to 900)
b	Path Errored Seconds Daily NE option selection (0 to 3)
k	Path Errored Seconds Daily FE option selection (0 to 3)
b	Path Errored Seconds 15Min NE option selection (0 to 3)
k	Path Errored Seconds 15Min FE option selection (0 to 3)
b'	Path Errored Seconds Daily NE option old selection (0 to 3)
k'	Path Errored Seconds Daily FE option old selection (0 to 3)
<u>b</u> '	Path Errored Seconds 15Min NE option old selection (0 to 3)
<u>k</u> '	Path Errored Seconds 15Min FE option old selection (0 to 3)
SESP (Path Severely Errored Seconds)	
cccccc	Path Severely Errored Seconds Daily NE threshold (0 to 86400)
llllll	Path Severely Errored Seconds Daily FE threshold (0 to 86400)
<u>c</u> <u>c</u> <u>c</u>	Path Severely Errored Seconds 15Min NE threshold (0 to 900)
<u>l</u> <u>l</u> <u>l</u>	Path Severely Errored Seconds 15Min FE threshold (0 to 900)

c	Path Severely Errored Seconds Daily NE option selection (0 to 3)
l	Path Severely Errored Seconds Daily FE option selection (0 to 3)
c	Path Severely Errored Seconds 15Min NE option selection (0 to 3)
l	Path Severely Errored Seconds 15Min FE option selection (0 to 3)
c'	Path Severely Errored Seconds Daily NE option old selection (0 to 3)
l'	Path Severely Errored Seconds Daily FE option old selection (0 to 3)
c'	Path Severely Errored Seconds 15Min NE option old selection (0 to 3)
l'	Path Severely Errored Seconds 15Min FE option old selection (0 to 3)
SEFS (Severely Errored Framing Seconds)	
dddddd	Severely Errored Framing Seconds Daily NE threshold (0 to 86400)
mmmmm	Severely Errored Framing Seconds Daily FE threshold (0 to 86400)
<u>d d d</u>	Severely Errored Framing Seconds 15Min NE threshold (0 to 900)
<u>m m m</u>	Severely Errored Framing Seconds 15Min FE threshold (0 to 900)
d	Severely Errored Framing Seconds Daily NE option selection (0 to 3)
m	Severely Errored Framing Seconds Daily FE option selection (0 to 3)
d	Severely Errored Framing Seconds 15Min NE option selection (0 to 3)
m	Severely Errored Framing Seconds 15Min FE option selection (0 to 3)
d'	Severely Errored Framing Seconds Daily NE option old selection (0 to 3)
m'	Severely Errored Framing Seconds Daily FE option old selection (0 to 3)

<u>d</u>'	Severely Errored Framing Seconds 15Min NE option old selection (0 to 3)
<u>m</u>'	Severely Errored Framing Seconds 15Min FE option old selection (0 to 3)
CSSP (Path Controlled Slip Seconds)	
eeeeee	Path Controlled Slip Seconds Daily NE threshold (0 to 86400)
nnnnnn	Path Controlled Slip Seconds Daily FE threshold (0 to 86400)
<u>e e e</u>	Path Controlled Slip Seconds 15Min NE threshold (0 to 900)
<u>n n n</u>	Path Controlled Slip Seconds 15Min FE threshold (0 to 900)
e	Path Controlled Slip Seconds Daily NE option selection (0 to 3)
n	Path Controlled Slip Seconds Daily FE option selection (0 to 3)
e	Path Controlled Slip Seconds 15Min NE option selection (0 to 3)
n	Path Controlled Slip Seconds 15Min FE option selection (0 to 3)
e'	Path Controlled Slip Seconds Daily NE option old selection (0 to 3)
n'	Path Controlled Slip Seconds Daily FE option old selection (0 to 3)
<u>e'</u>	Path Controlled Slip Seconds 15Min NE option old selection (0 to 3)
<u>n'</u>	Path Controlled Slip Seconds 15Min FE option old selection (0 to 3)
UASP (Path Unavailable Seconds)	
fffff	Path Unavailable Seconds Daily NE threshold (0 to 86400)
ooooo	Path Unavailable Seconds Daily FE threshold (0 to 86400)
<u>f f f</u>	Path Unavailable Seconds 15Min NE threshold (0 to 900)
<u>o o o</u>	Path Unavailable Seconds 15Min FE threshold (0 to 900)
f	Path Unavailable Seconds Daily NE option selection (0 to 3)
o	Path Unavailable Seconds Daily FE option selection (0 to 3)
f	Path Unavailable Seconds 15Min NE option selection (0 to 3)
o	Path Unavailable Seconds 15Min FE option selection (0 to 3)
f'	Path Unavailable Seconds Daily NE option old selection (0 to 3)
o'	Path Unavailable Seconds Daily FE option old selection (0 to 3)
<u>f'</u>	Path Unavailable Seconds 15Min NE option old selection (0 to 3)

g'	Path Unavailable Seconds 15Min FE option old selection (0 to 3)
	CVL (Line Coding Violations)
gggggggggg	Line Coding Violation Daily NE threshold (0 to 134217727)
g g g g g g g	Line Coding Violation 15Min NE threshold (0 to 2097151)
g	Line Coding Violation Daily NE option selection (0 to 3)
g	Line Coding Violation 15Min NE option selection (0 to 3)
g'	Line Coding Violation Daily NE option old selection (0 to 3)
g'	Line Coding Violation 15Min NE option old selection (0 to 3)
	ESL (Line Errored Seconds)
hhhhh	Line Errored Seconds Daily NE threshold (0 to 86400)
ppppp	Line Errored Seconds Daily FE threshold (0 to 86400)
h h h	Line Errored Seconds 15Min NE threshold (0 to 900)
p p p	Line Errored Seconds 15Min FE threshold (0 to 900)
h	Line Errored Seconds Daily NE option selection (0 to 3)
p	Line Errored Seconds Daily FE option selection (0 to 3)
h	Line Errored Seconds 15Min NE option selection (0 to 3)
p	Line Errored Seconds 15Min FE option selection (0 to 3)
h'	Line Errored Seconds Daily NE option old selection (0 to 3)
p'	Line Errored Seconds Daily FE option old selection (0 to 3)
h'	Line Errored Seconds 15Min NE option old selection (0 to 3)
p'	Line Errored Seconds 15Min FE option old selection (0 to 3)
	SESL (Line Severely Errored Seconds)
iiii	Line Severely Errored Seconds Daily NE threshold (0 to 86400)
i i i	Line Severely Errored Seconds 15Min NE threshold (0 to 900)
i	Line Severely Errored Seconds Daily NE option selection (0 to 3)
i	Line Severely Errored Seconds 15Min NE option selection (0 to 3)
i'	Line Severely Errored Seconds Daily NE option old selection (0 to 3)
i'	Line Severely Errored Seconds 15Min NE option old selection (0 to 3)

For PB and PC type NPCs:

DM	Degraded Minutes
SERS	Severely Errored Seconds
ERS	Errored Seconds
US	Unavailable Seconds
SLIP	Slip Events

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For SHORT INTERVAL, DM is calculated hourly and SERS, ERS, US and SLIP are calculated at 15-minute intervals.

nnnnn	24-hour Degraded Minutes (DM) threshold
ppppp	24-hour Severely Errored Seconds (SERS) threshold
qqqqq	24-hour Errored Seconds (ERS) threshold
rrrrr	24-hour Unavailable Seconds (US) threshold
sssss	24-hour Slip Events (SLIP) threshold
e	24-hour DM threshold/alarm selection
f	24-hour SERS threshold/alarm selection
g	24-hour ERS threshold/alarm selection
h	24-hour US threshold/alarm selection
i	24-hour SLIP threshold/alarm selection
s	Old 24-hour DM threshold/alarm selection
t	Old 24-hour SERS threshold/alarm selection
u	Old 24-hour ERS threshold/alarm selection
v	Old 24-hour US threshold/alarm selection
w	Old 24-hour SLIP threshold/alarm selection
n n n n n	1-hour DM threshold
p p p p p	15-minute SERS threshold
q q q q q	15-minute ERS threshold
r r r r r	15-minute US threshold
s s s s s	15-minute SLIP threshold
e	1-hour DM threshold/alarm selection
f	15-minute SERS threshold/alarm selection
g	15-minute ES threshold/alarm selection

h	15-minute US threshold/alarm selection
i	15-minute SLIP threshold/alarm selection
s	1-hour DM threshold/alarm selection
t	15-minute SERS threshold/alarm selection
u	15-minute ES threshold/alarm selection
v	15-minute US threshold/alarm selection
w	15-minute SLIP threshold/alarm selection

For PA type NPCs:

CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
CV	Coding Violations
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors
FEBE	Far End Block Errors
FES	Far End Errored Seconds
FSES	Far End Severely Errored Seconds
FUAS	Far End Unavailable Seconds
aaaaaaaa	Daily CRC block error threshold value
bbbbbbbb	Daily framing error threshold value
cccc	Daily out of frame seconds threshold value
dddd	Daily errored second threshold value
eeee	Daily severely errored second threshold value
ffff	Daily controlled slip second threshold value
gggggggg	Daily coding violation threshold value
hhhh	Daily unavailable second threshold value
iiii	Daily unavailable time count threshold value

jjjjj	Daily multiframe alignment error threshold value
kkkkkkkk	Daily far-end block error threshold value
lllll	Daily far-end errored second threshold value
mmmmm	Daily far-end severely errored second threshold value
nnnnn	Daily far-end unavailable second threshold value
a	Daily CRC block error threshold selection
b	Daily framing error threshold selection
c	Daily out of frame seconds threshold selection
d	Daily errored second threshold selection
e	Daily severely errored second threshold selection
f	Daily controlled slip second threshold selection
g	Daily coding violation threshold selection
h	Daily unavailable second threshold selection
i	Daily unavailable time count threshold selection
j	Daily multiframe alignment error threshold selection
k	Daily far-end path block error selection
l	Daily far-end path second threshold selection
m	Daily far-end severely errored second threshold selection
n	Daily far-end unavailable second threshold selection
a'	Old Daily CRC block error threshold selection
b'	Old Daily framing error threshold selection
c'	Old Daily out of frame seconds threshold selection
d'	Old Daily errored second threshold selection
e'	Old Daily severely errored second threshold selection
f'	Old Daily controlled slip second threshold selection
g'	Old Daily coding violation threshold selection
h'	Old Daily unavailable second threshold selection
i'	Old Daily unavailable time count threshold selection
j'	Old Daily multiframe alignment error threshold selection
k'	Old Daily far-end path block error selection
l'	Old Daily far-end path second threshold selection
m'	Old Daily far-end severely errored second threshold selection

n'	Old Daily far-end unavailable second threshold selection
The options can be a value from 0 to c as specified for the m of the rr/m field.	
<u>a a a a a</u>	15-minute CRC block error threshold value
<u>b b b b b b b</u>	15-minute framing error threshold value
<u>c c c</u>	15-minute out of frame seconds threshold value
<u>d d d</u>	15-minute errored second threshold value
<u>e e e</u>	15-minute severely errored second threshold value
<u>f f f</u>	15-minute controlled slip second threshold value
<u>g g g g g g g</u>	15-minute coding violation threshold value
<u>h h h</u>	15-minute unavailable second threshold value
<u>i i</u>	15-minute unavailable time count threshold value
<u>i i i</u>	15-minute multiframe alignment error threshold value
<u>k k k k k k</u>	15-minute far-end block error threshold value
<u>l l l</u>	15-minute far-end errored second threshold value
<u>m m m</u>	15-minute far-end severely errored second threshold value
<u>n n n</u>	15-minute far-end unavailable second threshold value
a	15-minute CRC block error threshold selection
b	15-minute framing error threshold selection
c	15-minute out of frame seconds threshold selection
d	15-minute errored second threshold selection
e	15-minute severely errored second threshold selection
f	15-minute controlled slip second threshold selection
g	15-minute coding violation threshold selection
h	15-minute unavailable second threshold selection
i	15-minute unavailable time count threshold selection
j	15-minute multiframe alignment error threshold selection
k	15-minute far-end path block error selection
l	15-minute far-end path second threshold selection
m	15-minute far-end severely errored second threshold selection
n	15-minute far-end unavailable second threshold selection
a'	Old 15-minute CRC block error threshold selection

b'	Old 15-minute framing error threshold selection
c'	Old 15-minute out of frame seconds threshold selection
d'	Old 15-minute errored second threshold selection
e'	Old 15-minute severely errored second threshold selection
f'	Old 15-minute controlled slip second threshold selection
g'	Old 15-minute coding violation threshold selection
h'	Old 15-minute unavailable second threshold selection
i'	Old 15-minute unavailable time count threshold selection
j'	Old 15-minute multiframe alignment error threshold selection
k'	Old 15-minute far-end path block error selection
l'	Old 15-minute far-end path second threshold selection
m'	Old 15-minute far-end severely errored second threshold selection
n'	Old 15-minute far-end unavailable second threshold selection

The options can be a value from 0 to c as specified for the m of the rr/m field.

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For PA type NPCs:

Depending on which interface functions are enabled by the provisioning values of xyz, some parameters may not be applicable. In this case the threshold value, the parameter count (if present in the message) and the selection value will appear as dashes (-). In the table below N/A indicates that a parameter is not applicable for the given value of x or y.

Also, if the selection value m=c has been chosen for a parameter, the threshold value and the parameter count (if present in the message) will appear as dashes.

Parameter	CRC-4 Mode Disabled (x=A,B,E,F)	Far-End PM Disabled (x=0,2,4,6,A,B ,E,F)	CAS Disabled (y=8,9,C,D)	Unframed Clear 2Mbit/s (y=D)
CRC	N/A			N/A
FRER				N/A
OFS				N/A
ES				N/A
SES				N/A

Parameter	CRC-4 Mode Disabled (x=A,B,E,F)	Far-End PM Disabled (x=0,2,4,6,A,B ,E,F)	CAS Disabled (y=8,9,C,D)	Unframed Clear 2Mbit/s (y=D)
CSS				
CV				
UAS				N/A
UATC				N/A
MER			N/A	N/A
FEBE		N/A		N/A
FES		N/A		N/A
FSES		N/A		N/A
FUAS		N/A		N/A

Both Terminations

For TH type NPCs:

CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors
aaaaaaaa	Daily CRC block error threshold value
bbbbbbbbbb	Daily framing error threshold value
cccccc	Daily out of frame seconds threshold value
dddddd	Daily errored second threshold value
eeeeee	Daily severely errored second threshold value
fffff	Daily controlled slip second threshold value

hhhhh	Daily unavailable second threshold value
iiii	Daily unavailable time count threshold value
jjjjj	Daily multiframe alignment error threshold value
a	Daily CRC block error threshold selection
b	Daily framing error threshold selection
c	Daily out of frame seconds threshold selection
d	Daily errored second threshold selection
e	Daily severely errored second threshold selection
f	Daily controlled slip second threshold selection
h	Daily unavailable second threshold selection
i	Daily unavailable time count threshold selection
j	Daily multiframe alignment error threshold selection
a'	Old Daily CRC block error threshold selection
b'	Old Daily framing error threshold selection
c'	Old Daily out of frame seconds threshold selection
d'	Old Daily errored second threshold selection
e'	Old Daily severely errored second threshold selection
f'	Old Daily controlled slip second threshold selection
h'	Old Daily unavailable second threshold selection
i'	Old Daily unavailable time count threshold selection
j'	Old Daily multiframe alignment error threshold selection

The options can be a value from 0 to c as specified for the m of the rr/m field.

<u>a a a a a a</u>	15-minute CRC block error threshold value
<u>b b b b b b b</u>	15-minute framing error threshold value
<u>c c c</u>	15-minute out of frame seconds threshold value
<u>d d d</u>	15-minute errored second threshold value
<u>e e e</u>	15-minute severely errored second threshold value
<u>f f f</u>	15-minute controlled slip second threshold value
<u>h h h</u>	15-minute unavailable second threshold value
<u>i i</u>	15-minute unavailable time count threshold value
<u>i i i</u>	15-minute multiframe alignment error threshold value

a	15-minute CRC block error threshold selection
b	15-minute framing error threshold selection
c	15-minute out of frame seconds threshold selection
d	15-minute errored second threshold selection
e	15-minute severely errored second threshold selection
f	15-minute controlled slip second threshold selection
h	15-minute unavailable second threshold selection
i	15-minute unavailable time count threshold selection
j	15-minute multiframe alignment error threshold selection
a'	Old 15-minute CRC block error threshold selection
b'	Old 15-minute framing error threshold selection
c'	Old 15-minute out of frame seconds threshold selection
d'	Old 15-minute errored second threshold selection
e'	Old 15-minute severely errored second threshold selection
f'	Old 15-minute controlled slip second threshold selection
h'	Old 15-minute unavailable second threshold selection
i'	Old 15-minute unavailable time count threshold selection
j'	Old 15-minute multiframe alignment error threshold selection

The options can be a value from 0 to c as specified for the m of the rr/m field.

Both Terminations

For TH type NPCs:

Depending on which interface functions are enabled by the provisioning values of xyz, some parameters may not be applicable. In this case, the threshold value, the parameter count (if present in the message) and the selection value will appear as dashes (-). In the table below N/A indicates that a parameter is not applicable for the given value of x or y.

Also, if the selection value m=c has been chosen for a parameter, the threshold value and the parameter count (if present in the message) will appear as dashes.

Parameter	CRC-4 Mode Disabled (x=B)	CAS Disabled (y=8,9,C,D)	Unframed Clear 2Mbit/s (y=D)
CRC	N/A		N/A
FRER			N/A
OFS			N/A
ES			N/A
SES			N/A
CSS			
UAS			N/A
UATC			N/A
MER		N/A	N/A

For PA type NPCs only:

THMODE	Thresholding mode
hhh	Thresholding mode option
INH	Inhibit thresholding
ALW	Allow thresholding

The INH option is used to temporarily inhibit thresholding for all parameters of a PA NPC. The ALW option is used to turn-off the INH option. The default thresholding mode is ALW.

When the INH mode is entered, all thresholds for the NPC are suspended; therefore, no threshold crossing messages are output after the inhibition. However, the previously programmed threshold values are still stored in the database and continue to be output for each parameter. Threshold value option changes are permitted while the NPC thresholding is inhibited.

When the ALW mode is entered, the previously programmed threshold values are re-applied unless they were changed while in the INH mode.

ss/n	First improper values of rr/m for which message is denied.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
20	Option rr/m has not been set up on 2nd database
21	Minor >= major for SLIP opt
22	Minor <= major for BER opt
23	Minor >= major for COFA opt
26	NPC type error
29	IW is UMUX (18) but NPC not type DE4yz
2A	DMI combined with T1DM
2B	Maj Min BER threshold is 7, but not in T1DM or Fe mode
4F	BER must not be less than 4 for Clear DS1
83	Option not programmable for this NPC type
B5	NPC is a test port
FF	Termination is in process of being rolled
44	Service MXR is not equipped
0A	Minor Slip threshold disabled before Major Slip threshold
32	Threshold value is out of range
93	PA NPC threshold already in inhibit mode
94	PA NPC threshold already in allow mode

CHANGE OPTIONS

**Explanation of
Command****NOTE:**

This command applies to the 1.544 Mbit/s Termination interface only.

This command changes facility threshold values for one or more Network Processing Circuits (NPCs) of a particular type or SLC[®] bank without disconnecting and reconnecting provisioned circuits.

Command**Nonhierarchical**

[I.38241]

CHG:[FRM xy][,SEQ ww]:{NPC [s]abc|RT ffff|DL ffff|TYPE mnxyz}, \
OPTS(rr/m[,rr/m,...])!

Hierarchical

[I.38241]

CHG:[FRM xy][,SEQ ww]:{NPC uvmpn|RT ffff|DL ffff|TYPE mnxyz}, \
OPTS(rr/m[,rr/m,...])!

**Completion
Message****Nonhierarchical**

[O.38241]

```
M hh:mm:ss xy,ww n[vv] CHG \
{NPC [s]abc|RT ffff|DL ffff|TYPE mnxyz}[ IW pq] 5 LN MSG:
      SLIP      BER  ERS      SERS COFA      [SANE]      [SAFE]
THRESHOLDS      mmm nnn  p q  rrrrr  sss  ttt  uuu  [xxxxx]  [zzzzz]
OPTIONS          e  f  g  h      i  j    k  l      [m]      [n]
[OLD OPTIONS    s  t  u  v      w  x    y  z      [b]      [c]] \
COMPL
```

For ANSI (DA, SA and TA type) NPCs:

[O.38242]

```
M hh:mm:ss xy,ww n[vv] CHG {NPC [s]abc|TYPE mnxyz}[ IW pq] 5 LN \
MSG:
```

```
DAILY NE      CVP      ESP      SESP      SEFS      CSS      UAS      CVL      ESL\
SESL
THRESHOLDS    aaaaaaaaa bbbbbb ccccc ddddd eeeee fffff gggggggg \
hhhhh iiiii
OPTIONS        a          b          c          d          e          f          g          h          i
OLD OPTIONS    'a          'b          'c          'd          'e          'f          'g \
'h          'i          EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG {NPC [s]abc|TYPE mnxyz}[ IW pq] 5 LN \
MSG:
DAILY FE      CVP      ESP      SESP      SEFS      CSS      UAS      ESL
THRESHOLDS    jjjjjjjjj kkkkk llll  mmmm  nnnnn ooooo ppppp
OPTIONS        j          k          l          m          n          o          p
OLD OPTIONS    'j          'k          'l          'm          'n          'o          'p          EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG {NPC [s]abc|TYPE mnxyz}[ IW pq] 5 LN \
MSG:
15MIN NE      CVP      ESP      SESP      SEFS      CSS      UAS      CVL      ESL \
SESL
THRESHOLDS    a a a a a a a b b b c c c d d d e e e \
f f f g g g g g g g h h h i i i
OPTIONS        a          b          c          d          e          f          g \
h          i
OLD OPTIONS    'a          'b          'c          'd          'e          'f          'g \
'h          'i          EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG {NPC [s]abc|TYPE mnxyz}[ IW pq] 5 \
LN MSG:
15MIN FE      CVP      ESP      SESP      SEFS      CSS      UAS      ESL
THRESHOLDS    j j j j j j j k k k l l l m m m n n n o o o \
p p p
OPTIONS        j          k          l          m          n          o          p
OLD OPTIONS    'j          'k          'l          'm          'n          'o          'p \
COMPL
```

Hierarchical

[O.38241]

```
M hh:mm:ss xy,ww n[vv] CHG {NPC uvmnp|RT ffff|DL ffff|TYPE mnxyz} \
[ IW pq] 5 LN MSG:
          SLIP      BER      ERS      SERS      COFA      [SANE]      [SAFE]
THRESHOLDS    mmm nnn p q rrrrr sss ttt uuu [xxxxx] [zzzzz]
OPTIONS        e f g h i j k l [m] [n]
[OLD OPTIONS    s t u v w x y z [b] \
[c]] COMPL
```

For ANSI (DA, SA and TA type) NPCs:

[O.38242]

M hh:mm:ss xy,ww n[vv] CHG {NPC uvmnp|TYPE mnxyz}[IW pq] 5 LN MSG:
DAILY NE CVP ESP SESP SEFS CSS UAS CVL ESL \
SESL
THRESHOLDS aaaaaaaaa bbbbbb ccccc dddddd eeeee fffff gggggggg \
hhhhh iiiii
OPTIONS a b c d e f g h i
OLD OPTIONS 'a 'b 'c 'd 'e 'f 'g \
'h 'i EOM

M hh:mm:ss xy,ww n[vv] CHG {NPC uvmnp|TYPE mnxyz}[IW pq] 5 LN MSG:
DAILY FE CVP ESP SESP SEFS CSS UAS ESL
THRESHOLDS jjjjjjjjj kkkkk lllll mmmmm nnnnn ooooo ppppp
OPTIONS j k l m n o p
OLD OPTIONS 'j 'k 'l 'm 'n 'o 'p EOM

M hh:mm:ss xy,ww n[vv] CHG {NPC uvmnp|TYPE mnxyz}[IW pq] 5 LN MSG:
15MIN NE CVP ESP SESP SEFS CSS UAS CVL ESL \
SESL
THRESHOLDS a a a a a a b b b c c c d d d e e e f f f \
g g g g g g h h h i i i
OPTIONS a b c d e f g h i
OLD OPTIONS 'a 'b 'c 'd 'e 'f 'g \
'h 'i EOM

M hh:mm:ss xy,ww n[vv] CHG {NPC uvmnp|TYPE mnxyz}[IW pq] 5 LN MSG:
15MIN FE CVP ESP SESP SEFS CSS UAS ESL
THRESHOLDS j j j j j j k k k l l l m m m n n n o o o \
p p p
OPTIONS j k l m n o p
OLD OPTIONS 'j 'k 'l 'm 'n 'o 'p COMPL

Denial Message

Nonhierarchical

[O.38241.01]

M hh:mm:ss xy,ww n[vv] CHG \
{NPC [s]abc|RT ffff|DL ffff|TYPE mnxyz}[ss/n] COND cc DNY

Hierarchical

[O.38241.01]

M hh:mm:ss xy,ww n[vv] CHG \
{NPC uvmnp|RT ffff|DL ffff|TYPE mnxyz}[ss/n] COND cc DNY

**Explanation of
Parameters**

Each facility performance parameter of an NPC may have up to three user-selectable threshold values stored in the DACS II data base. The CHG::SETOP command programs these values in the DACS II data base. Threshold values are provisioned on particular NPCs through the use of the indices rr and m following the options keyword of this command. Variable rr identifies the parameter, and m selects one of the four stored threshold values for that parameter from the DACS II data base. More than one parameter can be changed with a single command by following the first rr/m pair with a list of similarly formed parameter/index pairs for each additional parameter. Unspecified options in this command retain their previous values.

Note that if the option of RT(DL) ffff is specified in the input command, all of the digroups belonging to that RT(DL) is affected by the command.

For the MML format, the NPC-[s]abc keyword and argument may be omitted in the output response if any of the following are specified on input: TYPE-mnxyz, RT-ffff, or DL-ffff. The CHG function is then performed on all NPCs with the given TYPE, or from the same bank which had the same set of OLD options. The first (lowest numbered) NPC with the given TYPE determines the class of NPCs affected by the CHG command.

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
RT	Remote terminal
DL	Digital carrier line unit (DCLU)
ffff	Bank identification number (0000 through 9999)
TYPE	Type
mnxyz	NPC type DExyz Enhanced Digroup NPC DSxyz SLC [®] Carrier Digroup NPC TExyz DS3U or HDS3U DS1 NPC DAxyz FTU DS1 ANSI NPC type

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TAxyz DS3U DS1 ANSI NPC type

SExyz HSU DS1 NPC type

SAxyz HSU ANSI DS1 NPC type

Both Terminations

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

OPTS

Options

rr

Facility performance parameter number

Variable rr specifies the parameter whose alarm threshold is being selected.

m

Facility performance parameter threshold index (0 through 3)

Variable m is used to select threshold values previously programmed for rr. The default threshold value, the value selected by m=0, for each parameter is shown in the following table under the column heading "Default Threshold Value". Threshold values selected by m=1 through m=3 must exist; that is, must have been programmed prior to being selected. The nondefault thresholds can be set by using the CHG::SETOP (I.38201) command. Thresholds of all unspecified parameters is set to the default value associated with m=0. The options field must not be given without the NPC type field.

Clear-DS1 ANSI NPCs (DAxy9/TAxy9/SAxy9) provide the same set of path and line performance monitoring parameters that are provided by terminated ANSI NPC types. ANSI NPCs in DS3 Units (TAxyz) and in HSU (SAxyz) do not provide near-end DS1 line performance monitoring parameters.

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For DE, TE, SE or DS type NPCs:

For DE type NPCs, parameters with values rr = 1 through 8 are valid.

For DS type NPCs, parameters with values rr = 1 through 10 are valid.

For TE type NPCs, parameters with values rr = 1 through 8 are valid.

For SE type NPCs, parameters with values rr = 1 through 8 are valid.

For Clear-DS1 DE type NPCs, parameters with values rr = 1 through 4 are valid.

For Clear-DS1 TE type NPCs, parameters with values rr = 1 through 2 are valid.

For Clear-DS1 SE type NPCs, parameters with values rr = 1 through 2 are valid.

rr	Parameter	Threshold Value Range	Default Threshold Value
01	Slip major	000 to 255	255
02	Slip minor	000 to 255	4
03	Bit Error Rate major	1E-3* to 1E-6†	1E-3*
04	Bit Error Rate minor	1E-3* to 1E-6†	1E-6
05	Errored Seconds‡	00001 to 65535	864
06	Severely Errored Seconds‡	001 to 255	225
07	Change of Frame Alignment major	001 to 511	511
08	Change of Frame Alignment minor	001 to 255	17
09	Shelf Alarm Near End (SANE)§	00001 to 65535	00000
10	Shelf Alarm Far End (SAFE)§	00001 to 65535	00000

* 4 for clear-DS1 NPCs or DS type NPCs (default).

† 7 on DE or TE type NPCs using T1DM (x = 4) or on DE, TE, SE type NPCs using ESF (x=2 or 3) framing.

‡ Only applicable to DE or TE type NPCs using T1DM (x = 4) or DE, TE, SE type NPCs using ESF (x = 2 or 3) framing.

§ Applicable only to DS type NPCs.

Major thresholds must be greater than minor thresholds.

For Bit Error Rates, enter only the power of 10 (DACS assumes its sign is negative). For example, for a BER of 10^{-3} (.001), enter 3.

Slip major and Slip minor threshold crossing alarms may be disabled by programming threshold values of zero for the respective parameters.

1.544 Mbit/s Termination

For DA, TA and SA type NPCs:

For Channelized and Clear-DS1 DA type NPCs with ESF framing, all of the following Near-end and Far-end parameters are valid.

For Channelized and Clear-DS1 DA type NPCs with D4 or T1DM framing, all of the following Near-end parameters are valid, but the only valid Far-end parameter is Unavailable Seconds (rr = 55,71).

For Channelized and Clear-DS1 TA and SA type NPCs with ESF framing, all of the following Near-end Path parameters are valid, but the Near-End Line parameters (rr = 47-49, 63-65) are invalid. All of the following Far-end parameters are valid.

For Channelized and Clear-DS1 TA and SA type NPCs with D4 or T1DM framing, the following Near-end Path parameters are valid, but the Near-End Line parameters (rr = 47-49, 63-65) are invalid. The only valid Far-end parameter is Unavailable Seconds (rr = 55,71).

rr	Parameter	Threshold Value Range	Default Threshold Value
41	Daily Near-end Path Coding Violations	000000000 to 134217727	132960†
42	Daily Near-end Path Errored Seconds	00000 to 86400	648
43	Daily Near-end Path Severely Errored Seconds	00000 to 86400	100
44	Daily Near-end Severely Errored Framing Seconds	00000 to 86400	17
45	Daily Near-end Controlled Slip Seconds	00000 to 86400	4
46	Daily Near-end Unavailable Seconds	00000 to 86400	10

rr	Parameter	Threshold Value Range	Default Threshold Value
47	Daily Near-end Line Coding Violations	000000000 to 134217727	133400
48	Daily Near-end Line Errored Seconds	00000 to 86400	648
49	Daily Near-end Line Severely Errored Seconds	00000 to 86400	100
50	Daily Far-end Path Coding Violations	000000000 to 134217727	132960†
51	Daily Far-end Path Errored Seconds	00000 to 86400	648
52	Daily Far-end Path Severely Errored Seconds	00000 to 86400	100
53	Daily Far-end Severely Errored Framing Seconds	00000 to 86400	17
54	Daily Far-end Controlled Slip Seconds	00000 to 86400	4
55	Daily Far-end Unavailable Seconds	00000 to 86400	10
56	Daily Far-end Line Errored Seconds	00000 to 86400	648
57	15-Minute Near-end Path Coding Violations	0000000 to 2097151	13296‡
58	15-Minute Near-end Path Errored Seconds	000 to 900	65
59	15-Minute Near-end Path Severely Errored Seconds	000 to 900	10
60	15-Minute Near-end Severely Errored Framing Seconds	000 to 900	2

rr	Parameter	Threshold Value Range	Default Threshold Value
61	15-Minute Near-end Controlled Slip Seconds	000 to 900	1
62	15-Minute Near-end Unavailable Seconds	000 to 900	10
63	15-Minute Near-end Line Coding Violations	0000000 to 2097151	13340
64	15-Minute Near-end Line Errored Seconds	000 to 900	65
65	15-Minute Near-end Line Severely Errored Seconds	000 to 900	10
66	15-Minute Far-end Path Coding Violations	0000000 to 2097151	13296±
67	15-Minute Far-end Path Errored Seconds	000 to 900	65
68	15-Minute Far-end Path Severely Errored Seconds	000 to 900	10
69	15-Minute Far-end Severely Errored Framing Seconds	000 to 900	2
70	15-Minute Far-end Controlled Slip Seconds	000 to 900	1
71	15-Minute Far-end Unavailable Seconds	000 to 900	10
72	15-Minute Far-end Line Errored Seconds	000 to 900	65

† The value shown applies to ESF framing and is a count of CRC errors. When the DS1 has D4 or T1DM framing, framing errors are counted and the default Daily value is 691.

‡ The value shown applies to ESF framing and is a count of CRC errors. When the DS1 has D4 or T1DM framing, framing errors are counted and the default 15-Minute value is 72.

1.544 Mbit/s Termination Note that IW pq as well as the last line of the output message only appears if NPC ... is used in the input message. Also note that the actual data is printed only for those rrs that are entered on the input message. The rest of the columns is filled with dashes (----).

Both Terminations

pq	Hexadecimal value of the disconnect code (DCC) or idle code. This value is inserted in the transmit direction on unassigned channels. Insertion word is not allowed for Clear-DS1 NPCs; the all ones signal is transmitted for an idle Clear-DS1 NPC. Thus, information about the disconnect code does not appear for any message involving a Clear-DS1 type NPC. Although any hexadecimal value may be assigned, the following are some commonly used values: 7F UAC (unassigned channel code), the default value 18 UMC (unassigned multiplex code), should only be used with type DE4yz, TE4yz, DA4yz, TA4yz, SA4yz and SE4yz for a T1DM formatted facility. The growth command does not enforce this restriction. FF Per channel all ones code, needed for not connected channels in SLC carrier and CPI applications.
SLIP	Timing slip
BER	Bit error rate
ERS	Errored seconds
SERS	Severely errored seconds
COFA	Change of frame alignment
SANE	Shelf alarm near end
SAFE	Shelf alarm far end
	SLIP
mmm	Slip major alarm threshold (0 through 255)

nnn	Slip minor alarm threshold (0 through 255)
e	Slip major alarm option selection (0 through 3)
s	Slip major alarm option old selection (0 through 3)
f	Slip minor alarm option selection (0 through 3)
t	Slip minor alarm option old selection (0 through 3)
	BER (Bit Error Rate)
p	BER major alarm threshold, $(1E-p, 3u\uparrow d \leq p \leq 6^*)$
q	BER minor alarm threshold, $(1E-q, 3u\uparrow d \leq q \leq 6^*)$
	* 7 on T1DM and Fe framing
	u↑d 4 for DE type clear-DS1 or DS type NPCs
g	BER major alarm option selection (0 through 3)
u	BER major alarm option old selection (0 through 3)
h	BER minor alarm option selection (0 through 3)
v	BER minor alarm option old selection (0 through 3)
	ERS (Errored Seconds)
rrrrr	ERS threshold (1 through 65535)
i	ERS option selection (0 through 3)
w	ERS option old selection (0 through 3)
	SERS (Severely Errored Seconds)
sss	SERS threshold (1 through 255)
j	SERS option selection (0 through 3)
x	SERS option old selection (0 through 3)
	COFA (Change of Frame Alignment)
ttt	COFA major alarm threshold (1 through 511)
uuu	COFA minor alarm threshold (1 through 255)
k	COFA major alarm option selection (0 through 3)
y	COFA major alarm option old selection (0 through 3)
l	COFA minor alarm option selection (0 through 3)
z	COFA minor alarm option old selection (0 through 3)
	SANE (Shelf Alarm Near End)
xxxxx	SANE threshold (0 through 65535)
m	SANE option selection (0 through 3)

b	SANE option old selection (0 through 3) SAFE (Shelf Alarm Far End)
zzzzz	SAFE threshold (0 through 65535)
n	SAFE option selection (0 through 3)
c	SAFE option old selection (0 through 3)

⇒ NOTE:
Major thresholds cannot be equal to minor thresholds, except for the BER threshold of SLC[®] 96 carrier NPCs. For DE type clear-DS1 NPCs only SLIP and BER parameters are listed. For TE and SE type clear-DS1 NPCs only SLIP parameters are listed. Both SANE and SAFE are only applicable to SLC 96 carrier NPCs.

For ANSI NPC types:

CVP	Path coding violations
ESP	Path errored seconds
SESP	Path severely errored seconds
SEFS	Severely errored framing seconds
CSS	Controlled slip seconds
UAS	Unavailable seconds
CVL	Line coding violations
ESL	Line errored seconds
SESL	Line severely errored seconds
	CVP (Path Coding Violations)
aaaaaaaa	Path Coding Violation Daily NE threshold (0 to 134217727)
jjjjjjjj	Path Coding Violation Daily FE threshold (0 to 134217727)
a a a a a a a	Path Coding Violation 15Min NE threshold (0 to 2097151)
i i i i i i i	Path Coding Violation 15Min FE threshold (0 to 2097151)
a	Path Coding Violation Daily NE option selection (0 to 3)
j	Path Coding Violation Daily FE option selection (0 to 3)
a	Path Coding Violation 15Min NE option selection (0 to 3)
j	Path Coding Violation 15Min FE option selection (0 to 3)
a'	Path Coding Violation Daily NE option old selection (0 to 3)
j'	Path Coding Violation Daily FE option old selection (0 to 3)

a'	Path Coding Violation 15Min NE option old selection (0 to 3)
i'	Path Coding Violation 15Min FE option old selection (0 to 3)
	ESP (Path Errored Seconds)
bbbbbb	Path Errored Seconds Daily NE threshold (0 to 86400)
kkkkkk	Path Errored Seconds Daily FE threshold (0 to 86400)
<u>b</u> <u>b</u> <u>b</u>	Path Errored Seconds 15Min NE threshold (0 to 900)
<u>k</u> <u>k</u> <u>k</u>	Path Errored Seconds 15Min FE threshold (0 to 900)
b	Path Errored Seconds Daily NE option selection (0 to 3)
k	Path Errored Seconds Daily FE option selection (0 to 3)
b	Path Errored Seconds 15Min NE option selection (0 to 3)
k	Path Errored Seconds 15Min FE option selection (0 to 3)
b'	Path Errored Seconds Daily NE option old selection (0 to 3)
k'	Path Errored Seconds Daily FE option old selection (0 to 3)
<u>b'</u>	Path Errored Seconds 15Min NE option old selection (0 to 3)
<u>k'</u>	Path Errored Seconds 15Min FE option old selection (0 to 3)
	SESP (Path Severely Errored Seconds)
cccccc	Path Severely Errored Seconds Daily NE threshold (0 to 86400)
llllll	Path Severely Errored Seconds Daily FE threshold (0 to 86400)
<u>c</u> <u>c</u> <u>c</u>	Path Severely Errored Seconds 15Min NE threshold (0 to 900)
<u>l</u> <u>l</u> <u>l</u>	Path Severely Errored Seconds 15Min FE threshold (0 to 900)
c	Path Severely Errored Seconds Daily NE option selection (0 to 3)
l	Path Severely Errored Seconds Daily FE option selection (0 to 3)
c	Path Severely Errored Seconds 15Min NE option selection (0 to 3)
l	Path Severely Errored Seconds 15Min FE option selection (0 to 3)
c'	Path Severely Errored Seconds Daily NE option old selection (0 to 3)
l'	Path Severely Errored Seconds Daily FE option old selection (0 to 3)
<u>c'</u>	Path Severely Errored Seconds 15Min NE option old selection (0 to 3)

l'	Path Severely Errored Seconds 15Min FE option old selection (0 to 3)
	SEFS (Severely Errored Framing Seconds)
dddd	Severely Errored Framing Seconds Daily NE threshold (0 to 86400)
mmmm	Severely Errored Framing Seconds Daily FE threshold (0 to 86400)
<u>d d d</u>	Severely Errored Framing Seconds 15Min NE threshold (0 to 900)
<u>m m m</u>	Severely Errored Framing Seconds 15Min FE threshold (0 to 900)
d	Severely Errored Framing Seconds Daily NE option selection (0 to 3)
m	Severely Errored Framing Seconds Daily FE option selection (0 to 3)
d	Severely Errored Framing Seconds 15Min NE option selection (0 to 3)
m	Severely Errored Framing Seconds 15Min FE option selection (0 to 3)
d'	Severely Errored Framing Seconds Daily NE option old selection (0 to 3)
m'	Severely Errored Framing Seconds Daily FE option old selection (0 to 3)
<u>d'</u>	Severely Errored Framing Seconds 15Min NE option old selection (0 to 3)
<u>m'</u>	Severely Errored Framing Seconds 15Min FE option old selection (0 to 3)
	CSS (Controlled Slip Seconds)
eeee	Controlled Slip Seconds Daily NE threshold (0 to 86400)
nnnn	Controlled Slip Seconds Daily FE threshold (0 to 86400)
<u>e e e</u>	Controlled Slip Seconds 15Min NE threshold (0 to 900)
<u>n n n</u>	Controlled Slip Seconds 15Min FE threshold (0 to 900)
e	Controlled Slip Seconds Daily NE option selection (0 to 3)
n	Controlled Slip Seconds Daily FE option selection (0 to 3)
e	Controlled Slip Seconds 15Min NE option selection (0 to 3)
n	Controlled Slip Seconds 15Min FE option selection (0 to 3)

e'	Controlled Slip Seconds Daily NE option old selection (0 to 3)
n'	Controlled Slip Seconds Daily FE option old selection (0 to 3)
e'	Controlled Slip Seconds 15Min NE option old selection (0 to 3)
n'	Controlled Slip Seconds 15Min FE option old selection (0 to 3)
UAS (Unavailable Seconds)	
ffff	Unavailable Seconds Daily NE threshold (0 to 86400)
oooo	Unavailable Seconds Daily FE threshold (0 to 86400)
fff	Unavailable Seconds 15Min NE threshold (0 to 900)
ooo	Unavailable Seconds 15Min FE threshold (0 to 900)
f	Unavailable Seconds Daily NE option selection (0 to 3)
o	Unavailable Seconds Daily FE option selection (0 to 3)
f	Unavailable Seconds 15Min NE option selection (0 to 3)
o	Unavailable Seconds 15Min FE option selection (0 to 3)
f'	Unavailable Seconds Daily NE option old selection (0 to 3)
o'	Unavailable Seconds Daily FE option old selection (0 to 3)
f'	Unavailable Seconds 15Min NE option old selection (0 to 3)
o'	Unavailable Seconds 15Min FE option old selection (0 to 3)
CVL (Line Coding Violations)	
ggggggggg	Line Coding Violation Daily NE threshold (0 to 134217727)
g g g g g g g	Line Coding Violation 15Min NE threshold (0 to 2097151)
g	Line Coding Violation Daily NE option selection (0 to 3)
g	Line Coding Violation 15Min NE option selection (0 to 3)
g'	Line Coding Violation Daily NE option old selection (0 to 3)
g'	Line Coding Violation 15Min NE option old selection (0 to 3)
ESL (Line Errored Seconds)	
hhhhh	Line Errored Seconds Daily NE threshold (0 to 86400)
ppppp	Line Errored Seconds Daily FE threshold (0 to 86400)
h h h	Line Errored Seconds 15Min NE threshold (0 to 900)
p p p	Line Errored Seconds 15Min FE threshold (0 to 900)
h	Line Errored Seconds Daily NE option selection (0 to 3)
p	Line Errored Seconds Daily FE option selection (0 to 3)
h	Line Errored Seconds 15Min NE option selection (0 to 3)

p	Line Errored Seconds 15Min FE option selection (0 to 3)
h'	Line Errored Seconds Daily NE option old selection (0 to 3)
p'	Line Errored Seconds Daily FE option old selection (0 to 3)
h'	Line Errored Seconds 15Min NE option old selection (0 to 3)
p'	Line Errored Seconds 15Min FE option old selection (0 to 3)
	SESL (Line Severely Errored Seconds)
iiii	Line Severely Errored Seconds Daily NE threshold (0 to 86400)
iii	Line Severely Errored Seconds 15Min NE threshold (0 to 900)
i	Line Severely Errored Seconds Daily NE option selection (0 to 3)
i	Line Severely Errored Seconds 15Min NE option selection (0 to 3)
i'	Line Severely Errored Seconds Daily NE option old selection (0 to 3)
i'	Line Severely Errored Seconds 15Min NE option old selection (0 to 3)
ss/n	First improper values of rr/m for which message is denied.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
20	Option rr/m has not been set up on 2nd database
21	Minor >= major for SLIP opt
22	Minor <= major for BER opt
23	Minor >= major for COFA opt
26	NPC type error
29	IW is UMUX (18) but NPC not type DE4yz
2A	DMI combined with T1DM

cc	<i>Explanation</i>
2B	MajMin BER threshold is 7, but not in T1DM or Fe mode
7E	Bank id number not found
83	Option not programmable for this NPC type
1A	The facility parameter not programmable for specified x or z parameter
FF	Termination is in process of being rolled
0A	Minor Slip threshold disabled before Major Slip threshold
32	Threshold value is out of range

CHANGE NPC TIME SLOT ZERO

Explanation of Command

This message allows the changing of the spare national and international bits in TS0.

TS0 Variable

TS0-abcdefgh is the international and national bit in timeslot 0. Each variable may be set to one of the following: 0, 1, p or -. p indicates that the incoming bit will be passed through unchanged if cross-connected. A 0 and 1 set for any of the bits (except c) will override the cross-connected bits. This also applies to NPCs assigned as test NPCs. A hyphen (-) means that the bit is not affected by this command.

Floating Window Denial Message

When a range NPC is denied for successive NPCs in the range for the same reason, a summary denial message shall be output, giving the range of NPCs denied and the reason. The execution of the normal completions, or of denials for a reason other than diagnostic failures, then resumes at the next NPC, up to the end of the range.

Command

Nonhierarchical

[I.38321]

CHG:FRM xy,SEQ ww:NPC [s]abc[-[t]def],TS0 abcdefgh!

Hierarchical

[I.38321]

CHG:FRM xy,SEQ ww:NPC uvmnp[-uvkqr],TS0 abcdefgh!

Completion Message

Nonhierarchical

[O.38321]

M hh:mm:ss xy,ww n[vv] CHG NPC [s]jkl OLD abcdefgh \
NEW abcdefgh TS0 COMPL

Hierarchical

[O.38321]

M hh:mm:ss xy,ww n[vv] CHG NPC uvjkl OLD a b c d e f g h \
NEW abcdefgh TS0 COMPL

Denial Message

Nonhierarchical

[O.38321.01]

M hh:mm:ss [<xy>],ww n[vv] G NPC [s]jkl[-[t]mno] a b c d e f g h \
TS0 COND cc DNY

Hierarchical

[O.38321.01]

M hh:mm:ss xy,ww n[vv] G NPC uvjkl[-uvmno] a b c d e f g h TS0 \
COND cc DNY

Explanation of Parameters

[s]abc,[t]def-	The 3- or 4-digit nonhierarchical NPC number, must be in the same unit For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp-	Hierarchical NPC number
uvkqr-	Hierarchical NPC number
uv-	Unit number
m,k-	Module number
np,qr-	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
TS0-	Time slot zero (0)
abcdefgh-	Spare bits in TS0
ab	Spare international bits S_i
	If the NPC is not provisioned for the CRC multiframe format, bits a and b shall represent the S_i bits in the Frame Word (FW) and the Non Frame Word (NFW), respectively.

If the NPC is provisioned for the CRC multiframe format, a and b shall represent the S_i bits in frames 13 and 15 of the CRC multiframe in the NFW, respectively.

- c** Remote Alarm Indication must be - (hyphen).
- de** Two spare national bits S_4 through S_5 in the NFW.
- f** RPSFI (Remote Power Supply Failure Indicator) bit in the NFW if provisioned for RPSFI otherwise spare national bit.
- gh** Two spare national bits S_7 through S_8 in the NFW

Variable Input Value	Action on corresponding TS0 bit:
"0" or "1"	Set TS0 bit to this value
"P"	Received bit is passed through (cross-connected) unchanged.
"_"	Neither the variable nor the TS0 bit is changed by this command.

[s]jkl- The 3- or 4-digit nonhierarchical NPC number within the range of [s]abc and [t]def.

[t]mno- The 3- or 4-digit nonhierarchical NPC number within the range of [s]abc and [t]def.

uvjkl- Hierarchical NPC number (uvmnp through wxkqr)

uvmno- Hierarchical NPC number (uvmnp through wxkqr)

a b c d e f g h- Variables to corresponding TS0 bits.
The output parameters take on values dependent on the message language (PDS or MML) and position (OLD or NEW) as shown in the following table:

Input	Output Primary Line (MML)	OLD	NEW
0	0	previous	0
1	1	previous	1
P	P	previous	P

Input	Output Primary Line (MML)	OLD	NEW
V (PA only)	V	previous	V
-	-	previous	previous
Previous value may one of 0, 1, P, or V (for PA NPCs), for example:			
11----00	11----00	0011PPPP	1111PP00

cc Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
24	Unit type error
26	NPC type error
2B	Bit c not settable
38	Bit 6 provisioned for use as RPSFI
3C	Bits 3 through 8 are provisioned for Transmic 1G
3D	Alarm bits cannot be passed through or inverted
46	NPC Failed or Out of Service
B0	Combination of bit g (b7) and h (b8) is invalid
F1	Parameter only valid with PA, PB, or PC type NPCs
F2	Invalid NPC number specified
FF	Termination is in process of being rolled

cc	<i>Explanation</i>
8E	For RPSFI, TS0 bit 6 must be provisioned as 1
2C	not allowed for clear 2MB
2E	bit value not allowed for NPC type

CHANGE TIME SLOT ZERO MONITOR

Explanation of Command

This command is used to change the Network Processing Circuit provisioning either to monitor or to stop monitoring the National and International bits in CTS 0 without removing the NPC from service. The provisioning may be specified for one NPC or for a range of NPCs. Note that the NPC numbers, which are divisible by four with remainder zero are not a valid Hybrid DS3 Unit THxyz type NPCs. However, the range of THxyz type NPC numbers is still supported with the understanding that there may be gaps in the NPC number range.

Command

Nonhierarchical

[I.38323]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TS0M abcdefgh!

Hierarchical

[I.38323]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],TS0M abcdefgh!

Completion Message

Nonhierarchical

[O.38323]

M hh:mm:ss xy, ww n[vv] CHG NPC [s]abc OLDM abcdefgh \
NEWM abcdefgh TS0MBOFL v COMPL

Hierarchical

[O.38323]

M hh:mm:ss xy, ww n[vv] CHG NPC uvmnp OLDM abcdefgh \
NEWM abcdefgh TS0MBOFL v COMPL

Denial Message

Nonhierarchical

[O.38323.01]

M hh:mm:ss xy, ww n[vv] CHG NPC [v]ghi[-[u]jkl] \
TS0M abcdefgh COND cc DNY

Hierarchical

[O.38323.01]

M hh:mm:ss xy, ww n[vv] CHG NPC edhfg[-opjst] \
TS0M abcdefgh COND cc DNY

Explanation of Parameters

[s]abc

The 3- or 4-digit beginning NPC number

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

[t]def

The 3- or 4-digit ending NPC number. The valid values are identical to those for [s]abc

uvmnp

Beginning NPC number

wxkqr

Ending NPC number

uv,wx

Unit number

m,k

Module number

np,qr

NPC number

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

abcdefgh

Time slot 0 monitor bits

ab

Spare international bits S_i

If the NPC is not provisioned for the CRC multiframe format, bits a and b shall represent the S_i bits in the Frame Word (FW) and the Non Frame Word (NFW), respectively.

If the NPC is provisioned for the CRC multiframe format, a and b shall represent the S_i bits in frames 13 and 15 of the CRC multiframe in the NFW, respectively.

c

Remote Alarm Indication must be - (hyphen).

de

Two spare national bits S_4 through S_5 in the NFW.

f	RPSFI (Remote Power Supply Failure Indicator) bit in the NFW if provisioned for RPSFI otherwise spare national bit.
gh	Two spare national bits S_7 through S_8 in the NFW
Valid values for bits a through h are described below:	
0	Do not monitor and therefore do not send a message if this bit changes state
1	Monitor and therefore send a message if this bit changes state
Leave the setting of the monitor mask for that bit unchanged	
[v]ghi	The 3- or 4-digit nonhierarchical NPC number ([s]abc through [u]jkl)
[u]jkl	The 3- or 4-digit nonhierarchical NPC number ([s]ghi through [t]def)
edhfg	Hierarchical NPC number (uvmnp through opjst)
opjst	Hierarchical NPC number (edhfg through wxkqr)
OLDM	Old value of TS0M bits
NEWM	New value of TS0M bits
TS0MBOFL	TS0M buffer overflow keyword
v	TS0M buffer overflow condition indicator
0	NPC is not in TS0M buffer overflow condition
1	NPC is in TS0M buffer overflow condition
cc	Hexadecimal condition code
cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
15	NPC is unequipped
24	Unit type error
32	Bit 3 provisioned for use as RA13

cc	<i>Explanation</i>
33	Bit 4 provisioned for use as RAIS
38	Bit 6 provisioned for use as RPSFI
3A	Bit 4 provisioned for use as RBER
3B	Bit 5 provisioned for use as SFI
3C	Bits 3 through 8 are provisioned for Transmic 1G
EF	Software does not contain Enhanced CEPT feature
F1	Parameter only valid with PA, PB, or PC type NPCs
F2	Invalid NPC number specified
FF	Termination is in process of being rolled

CHANGE NPC TYPE

Explanation of Command

This command changes the type and, optionally, the insertion word of a specified network processing circuit (NPC) equipped in a facility terminating unit (IFTU2/IFTU/FTU). The insertion word field is used to change the NPC's disconnect code (DCC). These changes may be made without disconnecting and reconnecting the provisioned circuits, but the NPC must be out of service when this command is executed.

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Permissible type changes depend upon the digroup card in use. For NPCs provisioned on the DACS II Enhanced Dual Digroup Card (TG191-EDDC), the mn, x, and y values of the NPC TYPE may be changed if the NPC is out of service. This feature makes use of the flexibility of the TG191 circuit pack. The z value must not be changed from the value entered when the NPC was provisioned, because the channel numbering format cannot be changed if cross-connections exist on the NPC.

For NPCs provisioned on other DACS II Dual Digroup Cards, only the x and y values of the NPC TYPE may be changed with this command. The mn and z values must not be changed from the values entered in the NPC provisioning command.

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For PA, PB, and PC type NPCs, the y value of the type field may not be changed, because a change in the y value may change the channel numbering for cross-connections that are already provisioned.

Change Facility Provisioning

The NPC must be out of service to change the facility provisioning. It can be taken out of service using the RMV command. Changes to the parameters take effect when the NPC is restored (RST) to service. When the NPC facility provisioning is changed, all programmable alarm thresholds revert to their default values. These default thresholds are defined in the GRTH::NPC,TYPE message. If values other than the defaults are desired, a separate CHG::NPC,OPTS command must be given for each value.

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For NPCs on **DS3Us** and for TE type NPCs on Hybrid DS3Us, use I.38271 to request a change of the NPC type and/or insertion word.

Both Terminations

For TH type NPCs on Hybrid DS3Us, use I.38311 to request a change of the NPC type and/or insertion word.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.38211]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc,TYPE mnxyz[,IW X'pq[,INCL]]!

Hierarchical

[I.38211]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp,TYPE mnxyz[,IW X'pq[,INCL]]!

2.048 Mbit/s Termination

Nonhierarchical

[I.38211]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc,TYPE mnxyz[,IW X'pq[r]]!

Hierarchical

[I.38211]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp,TYPE mnxyz[,IW X'pq[r]]!

**Completion
Message**

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Nonhierarchical

[O.38211]

M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz \
[IW pq[INCL]] 2 LN MSG:
OLD TYPE ttuvw[OLD IW rs] COMPL

Hierarchical

[O.38211]

M hh:mm:ss xy,ww n[vv] CHG NPC uvmpn TYPE mnxyz \
[IW pq[INCL]] 2 LN MSG:
OLD TYPE ttuvw[OLD IW rs] COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.38211]

M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz \
[IW pq[r]] 2 LN MSG:
OLD TYPE ttuvw[OLD IW rs[t]] COMPL

Hierarchical

[O.38211]

M hh:mm:ss xy,ww n[vv] CHG NPC uvmpn TYPE mnxyz \
[IW pq[r]] 2 LN MSG:
OLD TYPE ttuvw[OLD IW rs[t]] COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.38211.01]

M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[IW pq[INCL]] \
COND cc DNY

Hierarchical

[O.38211.01]

M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[IW pq[INCL]] \

COND cc DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.38211.01]

M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[IW pq[r]] \

COND cc DNY

Hierarchical

[O.38211.01]

M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[IW pq[r]] \

COND cc DNY

Explanation of Parameters

[s]abc

The 3- or 4-digit nonhierarchical NPC number

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical NPC number

uv Unit number

m Module number in unit uv

np NPC number in module m

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

OLD

Old

TYPE

Type

mnxyz

NPC type

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DAxyz FTU2/IFTU/FTU ANSI DS1 NPC type

DExyz FTU2/IFTU/FTU DS1 NPC type

DSxyz SLC[®] Carrier Terminating NPC type

2.048 Mbit/s Termination

PAxyz CEPT NPC (120-ohm twisted pair or 75-ohm coaxial)

PBxyz CEPT NPC (120-ohm twisted pair)

PCxyz CEPT NPC (75-ohm coaxial)

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."



NOTE:

For 1.544 Mbit/s Termination, DS-type NPCs only, all cross-connects must be disconnected before the NPC's type can be changed because the NPC must be deleted from the RT in order to change the NPC's type.

ttuvw Previous value of mnxyz

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

IW Insertion word

pq Insertion word value (hexadecimal)

Hexadecimal value of the growth insertion word (GIW). Specifies the insertion word sent in the transmit direction on unassigned channels. If this value is not specified, it remains unchanged from its previous value.

An eight-bit code, called the growth insertion word, is transmitted by this NPC on unassigned 64kb/s channels. This code is specified by the optional keyword IW and its argument pq. This code was previously called the Disconnect Code (DCC), but that name is properly reserved for the cross-connect insertion word, which is transmitted when the disconnect message with DDC specified is used.

1.544 Mbit/s Termination

For Clear-DS1 NPCs, the insertion word option is **NOT** available and the message is denied if this option is entered. The alarm indication signal (AIS) is transmitted in the disconnect or idle state.

Although any 2-digit hexadecimal code may be used (see INCL following), some common GIWs are

7F Unassigned Channel Code (UAC). Default value for all NPC types with non T1DM framing.

18 Unassigned Multiplex Code (UMC). Default value for DE/DA type NPCs provisioned with T1DM framing. This value should only be provisioned with

		T1DM framing (DE4yz or DA4yz), so the change command enforces this restriction.
	FF	Per channel all ones code, needed for unconnected channels in SLC carrier (DS type NPCs) and computer-to-PBX interface (CPI) applications.
	D5	Unassigned Channel Code (UAC). Default value.
rs		Previous value of pq
r		Transmitted signaling information
		r is the portion of TS16 used for signaling when provisioned for CAS (four signaling bits in the associated CAS time slot 16 signaling). If r is not specified, it remains unchanged.
	D	Unassigned channel code (UAC). Default value.
t		Previous value of r

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INCL	Inclusive
	As a protection to users, this keyword must be added to provision an NPC with D4 framing and an Insertion Word with bit 2 equal to zero. NPCs grown in the D4 format (DE1yz/DA1yz) transmit a DS1 yellow alarm by setting bit 2 to zero in all 24 DS0 channels. If the Insertion Word "pq" is unknowingly provisioned in this manner, the NPC transmits a D4 yellow alarm signal when it is restored. The D4 yellow alarm is generated by any Insertion Word with the binary value a0cdefgh, where the letters a-h define the eight bits of the binary word. The D4 yellow alarm is not generated by an Insertion Word with a binary value a1cdefgh.
COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service

cc	<i>Explanation</i>
1F	FTMI is in service but failed
20	Option rr/m has not been set up on 2nd database
21	Minor >= major for SLIP opt
26	NPC type error
29	IW is UMUX (18) but NPC not type DE4yz
2A	DMI combined with T1DM
2B	MajjMin BER threshold is 7, but not in T1DM or Fe mode
34	NPC type option xyz is unassigned, or invalid for feature package
35	NPC has active circuit
4E	RTBC conference exists
86	NPC is NPCTG and chan 24 is used in a TG;Can't change to T1DM or DMI
19	Test ports must be on CAS
3D	Alarm bits cannot be passed through or inverted
42	Change not valid
4E	IW option is not allowed for new type of Clear-DS1 NPC
4F	BER must not be less than 4 for Clear DS1
5C	NPC providing timing to inservice SSP
7C	Different DSxyz types are used for DGA/DGP on same DDC for Mode I
83	Option not programmable for this NPC type
8A	x & z parameters on DSxyz are inconsistent
8F	NPC not deleted
BB	Timeslot channel numbering not allowed with CAS
C9	In-service NPC change not allowed
CD	NPC not designated as sync timing source
F2	Invalid NPC number specified

cc	<i>Explanation</i>
F6	T1DM or DMI mode and channel 24 is connected
FC	ZBTSI option is only valid with the ESF mode
FE	Change to non-ESF digroup with 16-state cross-connect
FF	Change to T1DM digroup with cross-connect that is not TRSP
05	This NPC type does not allow unframed Clear-DS1
87	NPC as 12th test port can not change to DMI nor T1DM
8D	RPSFI condition is active
8E	For RPSFI, TS0 bit 6 must be provisioned as 1
8F	For RPSFI, TS0 bit 6 cannot be monitored
AA	NPC is NPCTG, changing to CAS/NSA is not allowed
36	INCL keyword needed when restricted Insertion Word specified
7E	Framed/Unframed clear 2Mbit/s NPC invalid for Automatic CRC-4
7F	Unframed clear 2Mbit/s NPC invalid for TS0 processing
80	Framed/Unframed clear 2Mbit/s NPC invalid for Transmic 1G, 2G
81	Framed/Unframed clear 2Mbit/s NPC invalid for Firmware Timing
82	Unframed clear 2Mbit/s NPC invalid for Bit 4 used as RA IS/RBER
85	IW not allowed to be specified in Clear 2Mbit/s
A1	NPC has been designated as NPCTG
A7	NPC has been designated as NPCTP
E5	Invalid combination of "x" and "z" values
E7	Invalid combination of "x" and "y" values

CHG,NPC,TYPE,IW,INCL,X
38211

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365-359-212

CHANGE DS3U AND HSU NPC TYPE

Explanation of Command

For DACS II DS3 Units (DS3U) or Hybrid DS3 Units (HDS3U) , this command changes a single or range of TE, TA type (DS3U Only) Network Processing Circuits (NPCs) to the newly specified type without disconnecting and reconnecting provisioned circuits. The NPCs must be out of service.

The "mn" field, as well as the "xyz" field, of the NPC type parameter ("mnxyz") can be changed by this command. This feature is used to change between the different types (TE, TA, SE, SA) of NPCs supported by the DS3, Hybrid DS3 Unit.

A range is allowed for the NPCs within one DS3, Hybrid DS3 Unit or HSU. The optional insertion word field is used to change the disconnect code (DCC).

NPC TYPE

The new parameters take effect when the NPC is restored to service. When the NPC TYPE parameters are changed, all programmable alarm thresholds revert to the default values. If values other than defaults are desired, a separate CHG command must be given for each value. There is one output completion message for each NPC in the range.

Floating Window Denial Message

One output message is printed for each NPC which is successfully changed. This message also supports a floating window denial summary:

When a change command for a range of NPCs is denied for successive NPCs in the range for the same reason, a summary denial message shall be output, identifying the relevant range of NPCs and the reason. The generation of additional completion or denial responses resumes at the next NPC and continues to the end of the range.

Command

Nonhierarchical

[I.38271]

```
CHG: [FRM xy][, SEQ ww]:NPC [s]abc[-[t]def],TYPE mnxyz\
[, IW X'pq[, INCL]]!
```

Hierarchical

[I.38271]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],TYPE mnxyz\
[,IW X'pq[,INCL]]!

Completion Message

Nonhierarchical

[O.38271]

M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[IW pq[INCL]]\
2 LN MSG:
OLD TYPE ttuvw[OLD IW rs] COMPL

Hierarchical

[O.38271]

M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[IW pq[INCL]]\
2 LN MSG:
OLD TYPE ttuvw[OLD IW rs] COMPL

Denial Message

Nonhierarchical

[O.38271.01]

M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc[-[t]def] TYPE mnxyz\
[IW pq[INCL]] COND cc DNY

Hierarchical

[O.38271.01]

M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp[-uvkqr] TYPE mnxyz \
[IW pq[INCL]] COND cc DNY

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC Number
[t]def	The 3- or 4-digit nonhierarchical NPC number denoting the end of a range specification.
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp	Hierarchical NPC number
uvkqr	Hierarchical NPC number denoting the end of a range specification
uvghi	Hierarchical NPC number within the range of uvmnp and uvkqr
uvjyl	Hierarchical NPC number of the first NPC of the denied range
uvmno	Hierarchical NPC number of the last NPC of the denied range

uv Unit number
m,k,j,m,g Module number

np,qr,yl,
no,hi NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

TYPE

Type

TExyz DS3U or HDS3U Enhanced NPC

TAxyz DS3U ANSI NPC

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

IW

Insertion Word

Use the optional insertion word (IW X'pq) field to change the unassigned channel code.

pq

Hexadecimal value of the growth insertion word (GIW). Specifies the insertion word in the transmit direction on unassigned channels.

An eight-bit code, called the growth insertion word, is transmitted by this NPC on unassigned DS0 channels. This code is specified by the optional keyword IW and its argument pq. This code was previously called the Disconnect Code (DCC), but that name is properly reserved for the cross-connect insertion word, which is transmitted when the disconnect message with the DDC specified is used.

Although any 2-digit hexadecimal code may be used (see INCL below), the default GIWs are:

- 7F** Unassigned Channel Code (UAC), the default value for TE/TA/SE/SA type NPCs provisioned with D4 or ESF framing.
- 18** Unassigned Multiplex Code (UMC), the default value for TE/TA/SE/SA type NPCs provisioned with T1DM framing. This value should only be provisioned with T1DM framing (DA4yz/TA4yz). The change command does not enforce this restriction.

INCL

Inclusive

As a protection to users, this keyword must be added to provision an NPC with D4 framing and an Insertion Word with bit 2 equal to zero. NPCs grown in the D4 format (TE1yz/TA1yz) transmit a DS1 yellow alarm by setting bit 2 to zero in all 24 DS0 channels.

If the Insertion Word pq is unknowingly provisioned in this manner, the NPC transmits a D4 yellow alarm signal when it is restored. The D4 yellow alarm is generated by any Insertion Word with the binary value a0cdefgh, where the letters a-h define the eight bits of the binary word. The D4 yellow alarm is not generated by an Insertion Word with a binary value a1cdefgh.

For Clear-DS1 NPCs, the insertion word option is **NOT** available and the message will be denied if this option is entered. The alarm indication signal (AIS) is transmitted in the disconnect or idle state.

[s]ghi,

The 3- or 4-digit nonhierarchical NPC number within the range of [s]abc and [t]def

[s]jkl

The 3- or 4-digit nonhierarchical NPC number of the first NPC of a range that is being denied ($abc \leq jkl \leq mno$)

[t]mno

The 3- or 4-digit nonhierarchical NPC number of the last NPC of a range that is being denied ($jkl \leq mno \leq def$)

ttuvw

Previous value of mnxyz

rs

Previous value of pq

cc

Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
24	Unit type error
26	NPC type error
29	IW is UMUX (18) but NPC not type DE4yz
2A	DMI combined with T1DM
34	NPC type option xyz is unassigned, or invalid for feature package
35	NPC has active circuit
01	Invalid range for specified NPC type
11	NPC not equipped
4E	IW option is not allowed for new type of Clear-DS1 NPC
BF	MIU is not equipped
F6	T1DM or DMI mode and channel 24 is connected
FD	NPC range crosses unit boundary
05	This NPC type does not allow unframed Clear-DS1
87	NPC as 12th test port can not change to DMI nor T1DM
9B	The MXR is not grown
44	Service MXR is not equipped
07	Mismatch between MXR and NPC types
36	INCL keyword needed when restricted Insertion Word specified
A1	NPC has been designated as NPCTG

cc	<i>Explanation</i>
A7	NPC has been designated as NPCTP
E5	Invalid combination of "x" and "z" values
E7	Invalid combination of "x" and "y" values

CHANGE NPC TYPE FOR TH TYPE NPCS

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This command is used to change the type and, optionally, the insertion word of a specified TH type Network Processing Circuit (NPC) equipped in a Hybrid DS3 Unit. The insertion word field is used to change the NPC's Insertion Word for the NPC, which is transmitted in the direction of a channel that is unassigned. These changes may be made without disconnecting and reconnecting the provisioned circuits (channels), but the NPC must be out of service when this command is executed.

y Value

The y value in the type field may not be changed, because a change in the y value may change the channel numbering for cross-connections that are already provisioned.

TH Type NPC

TH type NPCs may not be changed to TE type NPCs with this command.

TH type NPCs embedded within a hybrid DS3 may only be changed to TE type NPCs, if all TH type NPCs within a particular DS2 within that DS3 are degrown and then new TE type NPCs are grown within that DS2.

Facility Provisioning

The NPC must be out of service to change the facility provisioning. It can be taken out of service using the RMV command. Changes to the parameters will take effect when the NPC is restored (RST) to service. When the NPC facility provisioning is changed, all programmable alarm thresholds revert to their default values. These default thresholds are defined in the GRTH::NPC,TYPE message. If values other than the defaults are desired, a separate CHG::NPC,OPTS command must be given for each value.

TE and TA Type NPC

For TE and TA type NPCs, use I.38271 and **for DA, DE, DS, PA, PB, or PC type NPCs**, use I.38211 to request a change of the NPC Type and insertion word.

Command

Nonhierarchical

[I.38311]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc,TYPE mnxyz[,IW X'pq[r]]!

Hierarchical

[I.38311]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp,TYPE mnxyz[,IW X'pq[r]]!

Completion Message

Nonhierarchical

[O.38311]

M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[IW pq[r]] \\
2 LN MSG:
OLD TYPE ttuvw[OLD IW rs[t]] COMPL

Hierarchical

[O.38311]

M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[IW pq[r]] \\
2 LN MSG:
OLD TYPE ttuvw[OLD IW rs[t]] COMPL

Denial Message

Nonhierarchical

[O.38311.01]

M hh:mm:ss xy,ww n[vv] CHG NPC [s]abc TYPE mnxyz[IW pq[r]] \\
COND cc DNY

Hierarchical

[O.38311.01]

M hh:mm:ss xy,ww n[vv] CHG NPC uvmnp TYPE mnxyz[IW pq[r]] \\
COND cc DNY

Explanation of Parameters

[s]abc

The 3- or 4-digit nonhierarchical NPC number

	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number
	uv Unit number
	m Module number in unit uv
	np NPC number in module m
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
OLD	Old
TYPE	Type
mnxyz	NPC type
THxyz	CEPT NPC embedded within a hybrid DS3
ttuvw	Previous value of mnxyz
	For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
IW	Insertion word
pq	Insertion word value (hexadecimal)
D5	Unassigned Channel Code (UAC). Default value. Hexadecimal value of the growth insertion word (GIW). Specifies the insertion word sent in the transmit direction on unassigned channels. If this value is not specified, it remains unchanged from its previous value. An eight-bit code, called the growth insertion word, is transmitted by this NPC on unassigned 64kb/s channels. This code is specified by the optional keyword IW and its argument pq. This code should not be confused with the insertion word provisioned optionally on the cross-connect command, which is used if and only if the DCC keyword is specified at disconnection time.
rs	Previous value of pq
r	Transmitted signaling information
D	Unassigned channel code (UAC). Default value. r is the portion of TS16 used for signaling when provisioned for CAS (four signaling bits in the associated CAS time slot 16 signaling). If r is not specified, it remains unchanged.

t	Previous value of r
COND	Condition
cc	Hexadecimal condition code
cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
26	NPC type error
2A	DMI combined with T1DM
34	NPC type option xyz is unassigned, or invalid for feature package
35	NPC has active circuit
42	Change not valid
83	Option not programmable for this NPC type
8F	NPC not deleted
BB	Timeslot channel numbering not allowed with CAS
C9	In-service NPC change not allowed
F2	Invalid NPC number specified
8D	RPSFI condition is active
8E	For RPSFI, TS0 bit 6 must be provisioned as 1
8F	For RPSFI, TS0 bit 6 cannot be monitored
AA	NPC is NPCTG, changing to CAS/NSA is not allowed
36	INCL keyword needed when restricted Insertion Word specified
7E	Framed/Unframed clear 2Mbit/s NPC invalid for Automatic CRC-4
7F	Unframed clear 2Mbit/s NPC invalid for TS0 processing

cc	<i>Explanation</i>
81	Framed/Unframed clear 2Mbit/s NPC invalid for Firmware Timing
82	Unframed clear 2Mbit/s NPC invalid for Bit 4 used as RA IS/RBER
85	IW not allowed to be specified in Clear 2Mbit/s
A1	NPC has been designated as NPCTG
A7	NPC has been designated as NPCTP
E5	Invalid combination of "x" and "z" values
E7	Invalid combination of "x" and "y" values

CHANGE USER PASSWORD

Explanation of Command

This command requests a change of a previously created password by any user of DACS II.

Links

For an X.25 link, the old pswd:new pswd option must be used. DACS II does not prompt the user for the old and new password.

For a TCP/IP link, DACS II prompts the user for the old and new password. For a Snider link, DACS II prompts the user for the old and new password. Neither new nor old password characters are echoed by DACS II.

Output from this command is sent only to the link on which the command was input.

Command

[I.38301]

```
CHG:[FRM xy][,SEQ ww]:PASSWD[,OLD <old password>, \
NEW <new password>]!
```

If the user is on a Snider protocol administrative link, or if the user is on a TCP/IP link, the message is entered as follows:

[I.38301]

```
CHG:[FRM xy][,SEQ ww]:PASSWD!
```

DACS II prompts the user for the old and new password:

```
OLD PASSWD: (user enters the old password)
```

```
NEW PASSWD: (user enters the new password)
```

```
PASSWD: (user re-enters the new password for verification)
```

Completion Message

[O.38301]

```
M hh:mm:ss xy,ww n[vv] CHG PASSWD COMPL
```

Denial Message

[O.38301.01]

M hh:mm:ss xy,ww n[vv] CHG PASSWD COND cc DNY

**Explanation of
Parameters**

PASSWD Password
OLD Old
old password Old password, where password is at least six alphanumeric characters
NEW New
new password New password where password is at least six alphanumeric characters
cc Hexadecimal condition code

cc	<i>Explanation</i>
D6	Incorrect or missing password
DA	User is not logged in

CHANGE BANK NUMBER

Explanation of Command

**NOTE:**

This command applies to the 1.544 Mb/s Termination Interface only.

This command can be used to change the bank identification number of a remote terminal (RT) or a digital carrier line unit (DCLU).

Command

[I.38351]

CHG: [FRM xy][, SEQ ww]: {RT|DL} ffff, TO gggg!

Completion Message

[O.38351]

M hh:mm:ss xy, ww n[vv] CHG {RT|DL} ffff TO gggg COMPL

Denial Message

[O.38351.01]

M hh:mm:ss xy, ww n[vv] CHG {RT|DL} ffff TO gggg COND cc DNY

Explanation of Parameters

RT	Remote Terminal
DL	Digital Carrier Line Unit (DCLU)
ffff	Old bank identification (0000 through 9999)
cc	Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
7E	Bank id number not found
85	New bank id is an assigned one

CHANGE PWR/MISC OPTION OR FPC RT RETROFIT STATUS

Explanation of Command

1.544 Mbit/s Termination Only

This command is used to change the PWR/MISC alarm options associated with a bank identification number without affecting service.

Command

[I.38361]
CHG: [FRM xy][,SEQ ww]:RT ffff, [{sss|RTF}][,SWMN x]!

Completion Message

Nonhierarchical

[O.38361]
M hh:mm:ss xy,ww n[vv] CHG RT ffff DGA [s]aaa 2 LN MSG:
[{OLD ttt NEW sss|RTF}][SWMN x] COMPL

Hierarchical

[O.38361]
M hh:mm:ss xy,ww n[vv] CHG RT ffff DGA uvmnp 2 LN MSG:
[{OLD ttt NEW sss|RTF}][SWMN x] COMPL

Denial Message

Nonhierarchical

[O.38361.01]
M hh:mm:ss xy,ww n[vv] CHG RT ffff DGA [s]aaa[{sss|RTF}] \\
[SWMN x] COND cc DNY

Hierarchical

[O.38361.01]

M hh:mm:ss xy,ww n[vv] CHG RT ffff DGA uvmnp[{sss|RTF}] \\
[SWMN x] COND cc DNY

Explanation of Parameters

RT	Remote Terminal
ffff	Bank identification number (0000 through 9999)
sss	PWR/MISC alarm option Valid values are listed below PMJ The PWR/MISC alarm from the data link is a power major alarm. PMN The PWR/MISC alarm from the data link is a power minor alarm. MMJ The PWR/MISC alarm from the data link is a miscellaneous major alarm. MMN The PWR/MISC alarm from the data link is a miscellaneous minor alarm.
RTF	SLC [®] Series 5 Carrier FPC RT Retrofit
SWMN	Protection switch related minor alarm
x	Protection switch related minor alarm handling setting R Declare the MN alarm locally and report it to the digital switch L Declare the MN alarm locally only
DGA	Digroup A of a SLC [®] 96 Carrier RT
[s]aaa	The 3- or 4-digit nonhierarchical Digroup A NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical Digroup A NPC number uv Unit number m Module number np NPC number For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

ttt The old PWR/MISC alarm option

cc Hexadecimal condition code

cc	<i>Explanation</i>
11	UC is out of service
2E	RTF keyword and the operation mode does not match
2F	The RT id entered is not a retrofit one
67	DGA is not added
76	Alarm option and bank mode don't match
7E	Bank id number not found
90	NDL option is specified for DGA
10	RT's alarm exists
97	option LOCAL already exists
98	option REMOTE already exists
99	can't change option, protection switch is active
9A	can't change option, inhibition is active

CHANGE SHELF ALARMS SEVERITY

Explanation of Command



NOTE:

This command applies to the 2.048 Mbit/s Termination Interface only.

This command is used to change the Alarm Severity of the system shelf alarms. The Alarm Severity must be turned ON via I.38355 to use this command.

Command

Nonhierarchical

[I.38365]

CHG: [FRM xy][, SEQ ww]:SALMS, sa lm, {PMACR|PMAMJ|DMAMN|MI|RESET}!

Completion Message

[O.38365]

M hh:mm:ss xy,ww n[vv] CHG SALMS sa lm \
{PMACR|PMAMJ|DMAMN|MI|RESET} COMPL

Denial Message

[O.38365.01]

M hh:mm:ss xy,ww n[vv] CHG SALMS sa lm \
{PMACR|PMAMJ|DMAMN|MI|RESET} COND cc DNY

Explanation of Parameters

salm	Shelf Alarms
PFF	Power Failure
SYNC	Failure of one SYNC
CCN	CCN autonomously removed
LTF	NPC Harware Failure

	TREF	Failure of one SSP
	STREF	Failure of last SSP
	TLI	TLI removed from service
	CRO	Failure of Clock Reference Oscillator
	SMEM	Failure of SMEM memory card
	MCE	MC removed from service
	CCNI	CCI/CCNI autonomously removed
	TSI	TSI/ETSI autonomously removed
	FC	FC autonomously removed
	TMI	FTMI autonomously removed
	SPI	DSPI autonomously removed
	TUC	FTU UC autonomously removed
	CCB	CCB autonomously removed
	DSPUC	DSP UC autonomously removed
	SDT	System date and time not set
	DSPC	DSP NPC autonomously removed
	ALL	All Shelf Alarms
PMACR		CRITICAL alarm severity
PMAMJ		MAJOR alarm severity
DMAMN		MINOR alarm severity
MI		MESSAGE INFORMATION alarm severity
RESET		Reset Alarm Severity to default value
cc		Hexadecimal condition code
	cc	<i>Explanation</i>
	F7	Alarm Severity Feature (already) OFF
	FA	Alarm Severity of Shelf Alarm not changed
	FB	Shelf escalation less than source severity

CHANGE SUBRATE CROSS-CONNECTION

Explanation of Command

This command changes the external facility termination associated with the MPTM (multipoint master) leg of a Subrate multipoint circuit from an existing digroup, channel, and (optional) customer number to a NEW digroup, channel, and (optional) customer number. Execution of this command causes the disconnection of the existing multipoint circuit's master leg (that is, the control leg of MJU 1) and its reconnection to a NEW external facility termination. All branches associated with the circuit are left with their existing external and internal connections. Also, the external facility termination associated with the original connection is left established to the Subrate feature with an Unassigned Multiplexer Channel (UMC) code inserted towards the OLD facility. In effect, this command combines the operations of multipoint SDIS and SCON commands that would be necessary to do the same change but with a minimum of service interruption.

Before using this command, the NEW channel must be established to the Subrate feature (SECH) and the NEW facility termination must not already be cross-connected (for example, with a previous SCON). The specified OLD facility termination must be the multipoint master termination of an existing Subrate multipoint circuit, and the specified NEW facility termination cannot be the same as the OLD. Also, neither the NEW termination nor any portion of the existing multipoint circuit can be under test access at the time this command is issued.

The user must ensure that a multipoint circuit using the secondary channel capability is assigned only to a NEW facility termination that is compatible with this capability. If the NEW termination is a DS0A or if its associated facility NPC was provisioned without zero suppression, any assignment of the NEW termination is compatible with the secondary channel capability. If the NEW termination is in a DS0B **and its associated facility NPC was grown with zero suppression, the user can only assign secondary channel services to a NEW termination with the following customer numbers within the given DS0B type:**

DS0B Type	Allowed Customer Numbers
20-channel	2, 3, 6, 8, 11, 12, 13, and 18
10-channel	2, 3, 6, and 8
5-channel	2 and 3

Once moved to the NEW facility termination, the multipoint circuit master leg and all of its associated branches are left in the same terminate and leave state that existed with the OLD channel. For example, if the master leg was terminated in the TO direction before the change command, it remains terminated in the same direction after the command. If desired, changes to the terminate and leave state can be done either before or after moving the channel by using the Subrate Test Access command (STST) or the Subrate Change Termination command (CHG).

Multipoint masters connected to an out-of-service facility NPC may also be moved with this command. Such changes require no special keyword in the input command, but the output message indicates that the facility is out-of-service. The user should note that the UMC code may not be inserted in the disconnected facility channel until the facility is restored to service under these conditions. If the facility NPC associated with the NEW channel is out-of-service, the command is denied.

Command**1.544 Mbit/s Termination****Nonhierarchical**

[I.19591]

CHG:[FRM xy][,SEQ ww]:SCON,OLD [s]abcddd[/ff],NEW [t]ghijjj[/ll], \ MPTM!

Hierarchical

[I.19591]

CHG:[FRM xy][,SEQ ww]:SCON,OLD uvmnpddd[/ff],NEW wxkqrjjj[/ll], \ MPTM!

**Completion
Message****1.544 Mbit/s Termination****Nonhierarchical**

[O.19591]

M hh:mm:ss xy,ww n[vv] CHG SCON OLD [s]abcddd/ff \
NEW [t]ghijjj/ll MPTM[OOS] COMPL

Hierarchical

[O.19591]

```
M hh:mm:ss xy,ww n[vv] CHG SCON OLD uvmnpddd/ff \
NEW wxkqrjjj/ll MPTM[ OOS] COMPL
```

Denial Message**1.544 Mbit/s Termination****Nonhierarchical**

[O.19591.01]

```
M hh:mm:ss xy,ww n[vv] CHG SCON OLD [s]abcddd/ff \
NEW [t]ghijjj/ll MPTM 2 LN MSG:
<reason> DNY
```

Hierarchical

[O.19591.01]

```
M hh:mm:ss xy,ww n[vv] CHG SCON OLD uvmnpddd/ff \
NEW wxkqrjjj/ll MPTM 2 LN MSG:
<reason> DNY
```

**Explanation of
Parameters**

OLD	Old
NEW	New
MPTM	Multipoint master

Execution of this command causes the disconnection of the existing multipoint circuit's master leg (that is, the control leg of MJU 1), and its reconnection to a NEW external facility termination. All branches associated with the circuit are left with their existing external and internal connections. Also, the external facility termination associated with the original connection is left established to the Subrate feature with an unassigned multiplexer channel (UMC) code inserted towards the OLD facility. In effect, this command combines the operations of multipoint SDIS and SCON commands that would be necessary to do the same change, but with a minimum of service interruption.

Before using this command, the NEW channel must be established to the Subrate feature (SECH), and the NEW facility termination must not already be cross-connected (for example, with a previous SCON). The specified OLD facility termination must be the multipoint master termination of an existing Subrate multipoint circuit, and the specified NEW facility termination cannot be the same

as the OLD. Also, neither the NEW termination nor any portion of the existing multipoint circuit can be under test access at the time this command is issued.

[s]abc	The 3- or 4-digit nonhierarchical OLD NPC number of the multipoint circuit master leg
[t]ghi	The 3- or 4-digit nonhierarchical NEW NPC number of the multipoint circuit master leg
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical OLD NPC number of the multipoint circuit master leg
wxkqr	Hierarchical NEW NPC number of the multipoint circuit master leg
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	OLD channel number of the multipoint circuit master leg
jjj	NEW channel number of the multipoint circuit master leg
ff	OLD customer number of the multipoint circuit master leg (1 through 20)
ll	NEW customer number of the multipoint circuit master leg (1 through 20)
	The customer numbers, ff and/or ll, are optional when the multipoint master termination is a DS0A channel. This is because there is only one customer in a DS0A channel. If specified for this type of channel, it must appear as 01. A customer number is required when specifying a multipoint master termination in a DS0B (subrate multiplexed) channel. The allowed customer numbers for the NEW termination field depend on the rate of the existing multipoint circuit and the type of DS0B channel associated with the NEW termination. If the circuit rate is equal to or lower than the maximum DS0B rate, the command is allowed, as shown in the following table.

[Multipoint] Circuit Rate	20-channel (max. customer rate 2.4 kb/s)	NEW DS0B Type	
		10-channel (max. customer rate 4.8 kb/s)	5-channel (max. customer rate 9.6 kb/s)
24	Customer No. 1-20 Allowed	Customer No. 1-10 Allowed	Customer No. 1-5 Allowed
48	Denied	Customer No. 1-10 Allowed	Customer No. 1-5 Allowed
96	Denied	Denied	Customer No. 1-5 Allowed
56	Denied	Denied	Denied
OOS	Out-of-service The OOS keyword appears in the output whenever the disconnection of the OLD facility has taken place with its facility terminating NPC out-of-service or failed. In this case, the user should note that the unassigned multiplexer channel (UMC) code may not be inserted towards the disconnected OLD facility until its NPC is restored to service.		
[s]abcddd/ff	OLD master leg external facility termination		
[t]ghijj/ll	NEW master leg external facility termination		

Nonhierarchical addresses are used for termination numbers in the reason for denial tables given below. Hierarchical addresses may be substituted where ever the Nonhierarchical form is shown. The address form received by the user is determined by the users' machine.

reason Reason for denial
reason

Input Errors

CHANNEL [s]abcddd IS A PARITY CHANNEL

CHANNEL [s]abcddd SR MULTIPLEXER RATE CANNOT
SUPPORT CIRCUIT RATE

CHANNEL [s]abcddd WITH SR ERROR CORRECTION AND
RATE 56 NOT ALLOWED

CHANNEL [s]abcddd/ff IS NOT CONNECTED IN A
MULTIPOINT CIRCUIT

CHANNEL [s]abcddd/ff IS SPECIFIED MORE THAN ONCE

CHANNEL [s]abcddd/ff NOT MULTIPOINT MASTER, MPTM
KEYWORD FORBIDDEN

CUSTOMER NUMBER MUST BE SPECIFIED FOR DS-0B
CHANNEL [s]abcddd

INVALID CHANNEL NUMBER FOR CHANNEL [s]abcddd

UNIT [q]q IS NOT FACILITY TERMINATING TYPE

CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS-0A
CHANNEL [s]abcddd

CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS-0B
CHANNEL [s]abcddd

CHANNEL [s]abcddd IS OUT OF RANGE [s]abcddd-ddd IS AN
INVALID RANGE OF CHANNELS

CHANNEL [s]abcddd/ff IS UNASSIGNED

CONNECTION EXCEEDS REMAINING EC CAPACITY

CONNECTION EXCEEDS REMAINING SRM CAPACITY

CONNECTION EXCEEDS REMAINING MJU CAPACITY

CHANNEL [s]abcddd/ff IS UNDER TEST

CHANNEL [s]abcddd IS NOT ESTABLISHED TO SR FEATURE
CIRCUIT IS UNDER TEST

NPC [s]abc IS IN LINE LOOPBACK STATE

NPC [s]abc IS NOT PROVISIONED AS DIGROUP-A OF AN RT

DIGROUP-B ASSOCIATED WITH VIRTUAL CHANNEL
[s]abcddd NOT PROVISIONED

DIGROUP-C ASSOCIATED WITH VIRTUAL CHANNEL
[s]abcddd NOT PROVISIONED

DIGROUP-D ASSOCIATED WITH VIRTUAL CHANNEL
[s]abcddd NOT PROVISIONED

NO DSPU IS EQUIPPED

NO SRM OR MJU TYPE NPC IS EQUIPPED

NO SRM TYPE NPC IS EQUIPPED

NO MJU TYPE NPC IS EQUIPPED

Maintenance Conditions

reason

Reason for denial

reason

ACTIVE CCN SIDE-s IS NOT EQUIPPED
CCB sf IS NOT EQUIPPED
DSPI IN UNIT [q]q IS NOT EQUIPPED
NPC [s]abc IS NOT EQUIPPED
TSI sft IS NOT EQUIPPED
UNIT [q]q IS NOT EQUIPPED
UNIT [q]q FTMI d IS NOT EQUIPPED
UNIT [q]q FLI k IS NOT EQUIPPED
UNIT [q]q MXR c IS NOT EQUIPPED
UNIT [q]q FMT s IS NOT EQUIPPED
CHANNEL [s]abcddd/ff IS INVOLVED IN A ROLL
ACTIVE CCN SIDE s IS OUT-OF-SERVICE
BOTH CCN SIDES ARE OUT-OF-SERVICE
CCB sf IS OUT-OF-SERVICE
DSPI IN UNIT [q]q IS OUT-OF-SERVICE
ETSI s[q]q IS OUT-OF-SERVICE
INACTIVE CCN SIDE IN-SERVICE AND NPC [s]abc ON
INACTIVE SIDE IS OOS
TSI sft IS OUT-OF-SERVICE
UNIT [q]q FC sb IS OUT-OF-SERVICE
UNIT [q]q FLI k IS OUT-OF-SERVICE
UNIT [q]q FMT s IS OUT-OF-SERVICE
UNIT [q]q MIU c IS OUT-OF-SERVICE
UNIT [q]q MXR c IS OUT-OF-SERVICE
UNIT [q]q FTMI d IS OUT-OF-SERVICE
UNIT [q]q IS OUT-OF-SERVICE
ACTIVE CCN SIDE s IS FAILED
ACTIVE CCN SIDE s IS PESTED
CCB sf IS FAILED
DSPI IN UNIT [q]q IS FAILED
ETSI s[q]q IS FAILED
NPC [s]abc IS FAILED

	NPC [s]abc SIDE s IS FAILED
	TSI sft IS FAILED
	UNIT [q]q FLI k IS FAILED
	UNIT [q]q FMT s IS FAILED
	UNIT [q]q FTMI d IS FAILED
	UNIT [q]q IS FAILED
	UNIT [q]q MIU c IS FAILED
	UNIT [q]q MXR c IS FAILED
SNVS	Status, not in valid state
cc	Hexadecimal condition code

CHANGE SUBRATE CROSS-CONNECTION

Explanation of Command

This command changes the external facility termination associated with a multipoint circuit branch from an existing digroup, channel, and (optional) customer number to a NEW digroup, channel, and (optional) customer number.

Execution of this command causes the disconnection of the existing facility and reconnection to a NEW external facility termination. The external facility termination associated with the original connection is left established to the Subrate feature with an unassigned multiplexer channel (UMC) code inserted towards the OLD facility.

Once moved to the NEW facility termination, the circuit or the multipoint circuit master leg and all of its associated branches is(are) left in the same terminate and leave state that existed with the OLD channel. For example, if the OLD channel was terminated in the TO direction before the change command, it remains terminated in the same direction after the command.

If desired, changes to the terminate and leave state can be done either before or after moving the channel by using the Subrate Test Access command or the Subrate Change Termination command.

In effect, this command combines the operations of SDIS and SCON commands that would be necessary to do the same change but with a minimum of service interruption.

Before using this command, the NEW channel must be established to the Subrate feature (SECH), and the NEW facility termination must not already be cross-connected (for example, with a previous SCON). The specified OLD facility termination must be cross-connected in an existing Subrate multipoint circuit and the specified NEW facility termination cannot be the same as the OLD. Also, neither the NEW termination nor any portion of the existing circuit can be under test access at the time this command is issued.

Circuits connected to an out-of-service facility NPC may also be moved with this command. Such changes require no special keyword in the input command, but the output message indicates that the facility is out-of-service. The user should note that the UMC code may not be inserted in the disconnected facility channel until the facility is restored to service under these conditions.

If the facility NPC associated with the NEW channel is out-of-service, the command is denied.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.19581]

CHG:[FRM xy][,SEQ ww]:SCON,OLD [s]abcddd[/ff],NEW [t]ghijjj[/ll]!

Hierarchical

[I.19581]

CHG:[FRM xy][,SEQ ww]:SCON,OLD uvmnpddd[/ff],NEW wxkqrjjj[/ll]!

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.19581]

M hh:mm:ss xy,ww n[vv] CHG SCON OLD [s]abcddd/ff \
NEW [t]ghijjj/ll [OOS] COMPL

Hierarchical

[O.19581]

M hh:mm:ss xy,ww n[vv] CHG SCON OLD uvmnpddd/ff \
NEW wxkqrjjj/ll[OOS] COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19581.01]

M hh:mm:ss xy,ww n[vv] CHG SCON OLD [s]abcddd/ff \
NEW [t]ghijjj/ll 2 LN MSG:
<reason> DNY

Hierarchical

[O.19581.01]

M hh:mm:ss xy,ww n[vv] CHG SCON OLD uvmnpddd/ff \
NEW wxkqrjjj/ll 2 LN MSG:
<reason> DNY

Explanation of Parameters

NEW	New
OLD	Old
[s]abc	The 3- or 4- digit OLD nonhierarchical NPC number
[t]ghi	The 3- or 4- digit NEW nonhierarchical NPC number
uvmnp	OLD hierarchical NPC number
wxkqr	NEW hierarchical NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number
jjj	Channel number
	The valid values are listed below:
	001-024
001-047	Odd only (SLC 96® Carrier, Mode 3, DGA)
049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)**ff** Customer number**ll** Customer number

The valid values are listed below:

Execution of this command causes the disconnection of the existing facility and reconnection to a NEW external facility termination. The external facility termination associated with the original connection is left established to the Subrate feature with an unassigned multiplexer channel (UMC) code inserted towards the OLD facility. In effect, this command combines the operations of SDIS and SCON commands that would be necessary to do the same change, but with a minimum of service interruption.

Before using this command, the NEW channel must be established to the Subrate feature (SECH), and the NEW facility termination must not already be cross-connected (e.g., with a previous SCON). The specified OLD facility termination must be cross-connected in an existing Subrate multipoint circuit and the specified NEW facility termination cannot be the same as the OLD. Also, neither the NEW termination nor any portion of the existing circuit can be under test access at the time this command is issued.

The customer numbers, ff and/or ll, are optional when the facility termination is a DS0A channel because there is only one customer in a DS0A channel. If specified for this type of channel, the customer number must appear as 01. A customer number is required when specifying a facility termination in a DS0B (subrate multiplexed) channel.

The allowed customer numbers for the NEW termination field depend on the rate of the existing circuit and the type of DS0B channel associated with the NEW termination. If the circuit rate is equal to or lower than the maximum DS0B rate, the command is allowed, as shown below:

[Multipoint] Circuit Rate	20-channel (max. customer rate 2.4 kb/s)	NEW DS0B Type	
		10-channel (max. customer rate 4.8 kb/s)	5-channel (max. customer rate 9.6 kb/s)
24	Customer No. 1-20 Allowed	Customer No. 1-10 Allowed	Customer No. 1-5 Allowed
48	Denied	Customer No. 1-10 Allowed	Customer No. 1-5 Allowed

[Multipoint] Circuit Rate	NEW DS0B Type		
	20-channel (max. customer rate 2.4 kb/s)	10-channel (max. customer rate 4.8 kb/s)	5-channel (max. customer rate 9.6 kb/s)
96	Denied	Denied	Customer No. 1-5 Allowed
56	Denied	Denied	Denied

The user must ensure that a circuit using the secondary channel capability is only assigned to a NEW facility termination that is compatible with this capability. If the NEW termination is a DS0A or if zero suppression was NOT specified when its associated facility NPC was equipped then any assignment of the NEW termination is compatible with the secondary channel capability. If the NEW termination is in a DS0B **and if zero suppression was specified when its associated facility NPC was equipped, the user can only assign secondary channel services to a NEW termination with the following customer numbers within the given DS0B type:**

DS0B Type	Allowed Customer Numbers
20-channel	2, 3, 6, 8, 11, 12, 13, and 18
10-channel	2, 3, 6, and 8
5-channel	2 and 3

Circuits connected to an out-of-service facility NPC may also be moved with this command. Such changes require no special keyword in the input command, but the output message indicates that the facility is out-of-service. The user should note that the UMC code may not be inserted in the disconnected facility channel until the facility is restored to service under these conditions. If the facility NPC associated with the NEW channel is out-of-service, the command is denied.

If the OLD facility is connected to a branch of a multipoint circuit, it is disconnected from the MJU and the NEW facility is connected to the same MJU and branch.

OOS

Out-of-service

The OOS keyword appears in the output whenever the disconnection of the OLD facility has taken place with its facility terminating NPC out-of-service or failed. In this case, the user should note that the Unassigned Multiplexer Channel (UMC) code may not be inserted towards the disconnected OLD facility

until its NPC is restored to service. external facility termination data (e.g., [s]abcddd/ff) is always set to 01 for DS0A channels.

[s]abcddd/ff OLD external facility termination

[t]ghijj/ll NEW external facility termination

explanation of error condition code

reason

Reason for denial

The reasons listed below contain variables represented in lower case letters. As shown the variables representing NPC numbers are in nonhierarchical format. These variables can also appear in hierarchical format. They take the form used in the input command where applicable.

Input Errors

reason

CHANNEL [s]abcddd IS NOT ESTABLISHED TO SR FEATURE

CHANNEL [s]abcddd IS A PARITY CHANNEL

CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS-OA CHANNEL [s]abcddd

CUSTOMER NUMBER MUST BE SPECIFIED FOR DS-OB CHANNEL [s]abcddd

CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS-0B CHANNEL [s]abcddd

CHANNEL [s]abcddd WITH SR ERROR CORRECTION AND RATE 56 NOT ALLOWED

CHANNEL [s]abcddd SR MULTIPLEXER RATE CANNOT SUPPORT CIRCUIT RATE

CHANNEL [s]abcddd/ff IS ASSIGNED

CHANNEL [s]abcddd/ff IS SPECIFIED MORE THAN ONCE

CHANNEL [s]abcddd/ff IS UNDER TEST

CHANNEL [s]abcddd/ff IS UNASSIGNED

CHANNEL [s]abcddd IS OUT OF RANGE

CHANNEL [s]abcddd/ff IS NOT CONNECTED IN A MULTIPOINT CIRCUIT

CHANNEL [s]abcddd/ff IS A MULTIPOINT MASTER, MPTM KEYWORD FORBIDDEN

NPC [s]abc IS NOT PROVISIONED AS DIGROUP-
A OF AN RT

DIGROUP-B ASSOCIATED WITH VIRTUAL
CHANNEL [s]abcddd IS NOT PROVISIONED

DIGROUP-C ASSOCIATED WITH VIRTUAL
CHANNEL [s]abcddd IS NOT PROVISIONED

DIGROUP-D ASSOCIATED WITH VIRTUAL
CHANNEL [s]abcddd IS NOT PROVISIONED

INVALID CHANNEL NUMBER FOR CHANNEL
[s]abcddd

NPC [s]abc IS IN LINE LOOPBACK STATE

SPECIFIED RATE DOES NOT MATCH EXISTING
CIRCUIT RATE

CIRCUIT IS UNDER TEST

Maintenance Conditions

reason

BOTH CCN SIDES ARE OUT-OF-SERVICE

ACTIVE CCN SIDE IS {OUT-OF-
SERVICE|FAILED|PESTED}

CCNI s IS {OUT-OR -SERVICE|FAILED}

TSI sft IS {NOT EQUIPPED|OUT-OF-
SERVICE|FAILED}

CCB sf IS {NOT EQUIPPED|OUT-OF-
SERVICE|FAILED}

CCI s IS {OUT-OR -SERVICE|FAILED}

ETSI sqq IS {NOT EQUIPPED|OUT-OF-
SERVICE|FAILED}

UNIT [q]q IS {NOT EQUIPPED|OUT-OF-
SERVICE|FAILED}

UNIT [q]q FTMI d IS {NOT EQUIPPED|OUT-OF-
SERVICE|FAILED}

UNIT [q]q FC sb IS {NOT EQUIPPED|OUT-OF-
SERVICE|FAILED}

DSPI IN UNIT [q]q IS {OUT-OF-SERVICE|FAILED}

NPC [s]abc IS {NOT EQUIPPED|OUT-OF-
SERVICE|FAILED}

NPC [s]abc SIDE s IS {OUT-OF-SERVICE|FAILED}
UNIT [q]q IS NOT FACILITY TERMINATING TYPE
MAINTENANCE CONDITION PREVENTS
COMPLETION OF THIS COMMAND
UNIT [q]q MXR c NOT EQUIPPED
UNIT [q]q FLI k IS OUT-OF-SERVICE
UNIT [q]q FMT s IS OUT-OF-SERVICE
UNIT [q]q MXR c IS OUT-OF-SERVICE
UNIT [q]q MIU c IS OUT-OF-SERVICE
UNIT [q]q FLI k IS FAILED
UNIT [q]q FMT s IS FAILED
UNIT [q]q MXR c IS FAILED
UNIT [q]q MIU c IS FAILED

cc Hexadecimal condition code

CHANGE SUBRATE ESTABLISHED CHANNEL

Explanation of Command

This command moves a subrate established channel (DS0A or DS0B) and all associated subrate cross-connections from an existing digroup and channel to a NEW digroup and channel. Once the command executes, the OLD channel is left disestablished and the NEW channel is established with exactly the same format (that is, rate, DS0A/DS0B format, number of subrate multiplexer channels, error correction, etc.) as the OLD. When present, any subrate circuits (that is, SCONs) that use the OLD channel for one or more ends are also moved to the NEW channel. In effect, this command combines the operations of the SDIS, SDCH, SECH, and SCON commands that would be necessary to do the same change.

Prior to this command, the NEW channel must not be established or used in any DACS cross-connection unless it is already established with exactly the same format as the OLD channel. However, in the latter case, no prior subrate cross-connections (e.g., SCONs) can be present on the NEW channel. Also, none of the OLD or NEW established channels nor any portion of the subrate circuits associated with them can be under test access at the time this command is issued. If no subrate cross-connections are present on the OLD channel and the NEW channel is already established in the same manner, the command is denied. In this case, the OLD channel can simply be disestablished (SDCH) to achieve the same effect as the CHG command would otherwise do.

Once moved to the NEW channel, the established channel and all associated subrate cross-connections are left in the same terminate and leave state that existed with the OLD channel. For example, if one of the subrate circuits in a moved DS0B was terminated in the TO direction before the change command, it remains terminated in the same direction after the command. If desired, changes to the terminate and leave state can be done either before or after moving the channel by using the SRDC Test Access command (STST,TLA,TLR,TP) or the subrate change termination command (CHG,TLA,TLR,TO)

A range of channels may be specified, provided that parity channel error correction is not used with any channels within the OLD or NEW channel ranges. If the OLD channel has an error correction parity channel associated with it, the NEW channel must be specified with the location of the new parity channel by use of the PCH ppp field. [Note that the location of the OLD channel's parity channel need not be specified since the system locates and moves it along with the data channel automatically.] When specified, the NEW parity channel must not be already established or cross-connected unless it is already established as the NEW channel's parity channel. If the OLD channel is not established with parity channel error correction, the NEW channel cannot be specified with the PCH field.

Use of the optional DCC keyword causes the DDS unassigned multiplexer channel (UMC) code to be inserted in the OLD channel(s) towards the digroup facility listed after OLD in the message text. If this keyword is not specified, the disconnection code specified in the GRTH NPC when the OLD digroup was provisioned is used.

OLD channels connected to an out-of-service facility NPC may also be moved with this command. Such changes require no special keyword in the input command, but the output message contains the OOS keyword to indicate that the facility is out-of-service. The user should note that the appropriate disconnection channel code may not be inserted in the OLD facility channels until the facility is restored to service under these conditions. If the facility NPC associated with the NEW channels is out-of-service, the command is denied.

Command**1.544 Mbit/s Termination****Nonhierarchical**

[I.19501]

CHG:[FRM xy][,SEQ ww]:SECH,OLD [s]abcddd[-eee],NEW [t]ghijjj \
[-kkk][,PCH ppp][,DCC]!

Hierarchical

[I.19501]

CHG:[FRM xy][,SEQ ww]:SECH,OLD uvmnpddd[-eee],NEW wxkqrjjj[-kkk] \
[,PCH ppp][,DCC]!

**Completion
Message****1.544 Mbit/s Termination****Nonhierarchical**

[O.19501]

M hh:mm:ss xy,ww n[vv] CHG SECH OLD [s]abcddd[-eee] \
NEW [t]ghijjj[-kkk][DCC][OOS] COMPL

Hierarchical

[O.19501]

M hh:mm:ss xy,ww n[vv] CHG SECH OLD uvmnpddd[-eee] \
NEW wxkqrjjj[-kkk][DCC][OOS] COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19501.01]

M hh:mm:ss xy,ww n[vv] CHG SECH OLD [s]abcddd[-eee] \
NEW [t]ghijjj[-kkk][DCC] e LN MSG:
<reason> DNY

Hierarchical

[O.19501.01]

M hh:mm:ss xy,ww n[vv] CHG SECH OLD uvmnpddd[-eee] \
NEW wxkqrjjj[-kkk][DCC] e LN MSG:
<reason> DNY

Explanation of Parameters

OLD	Old
[s]abc	The 3- or 4-digit nonhierarchical NPC number of OLD established channel
NEW	New
[t]ghi	The 3- or 4-digit nonhierarchical NPC number of NEW established channel
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical OLD NPC number
wxkqr	Hierarchical NEW NPC number
	uv,wx Unit number
	m,k Module number
	np,qr NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	OLD channel number
jjj	NEW channel number
eee	Channel number for end of OLD range specified
kkk	Channel number for end of NEW range specified

	001-024	
	001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
PCH		Parity channel
ppp		Channel number of NEW parity error correction channel
DCC		Disconnect code
		Appearance of the DCC keyword indicates that the DDS unassigned multiplexer channel (UMC) code is inserted towards the OLD channel's facilities when the command completes. If this keyword is not present, the disconnect code specified in the command used to provision digroup abc is used.
		The DCC keyword appears only if present in the input command.
e		Number of lines in the message.
OOS		Out-of-service
		The OOS keyword appears in the output whenever the established channel change has taken place with the OLD channel's facility terminating NPC out-of-service or failed. In this case, the user should note that the appropriate disconnect channel code may not be inserted in the disestablished channel until the facility is restored to service.
nnn		Channel number of OLD error correction parity channel
reason		Reason for denial
		reason

Input Errors

NEW DIGROUP DOES NOT SUPPORT SUBRATE CHANNELS

NEW CHANNEL IS A TEST PORT

NEW CHANNEL [s]abcddd IS A TEST GROUP CHANNEL

NEW PARITY CHANNEL [s]abcddd IS A TEST GROUP
CHANNEL

NEW PARITY CHANNEL [s]abcddd IS A TEST PORT
CHANNEL

NEW CHANNEL IS ALREADY ESTABLISHED DIFFERENTLY
THAN OLD

NEW CHANNEL [s]abcddd HAS ACTIVE SR CROSS-
CONNECTS

NEW CHANNEL IS ALREADY ASSIGNED

OLD AND NEW CHANNELS ARE THE SAME

OLD AND NEW CHANNELS PARTIALLY OVERLAP

NO CUSTOMERS ARE MOVED TO THE ALREADY
ESTABLISHED NEW CHANNEL

PARITY CHANNEL AND PCH KEYWORD IS REQUIRED

OLD CHANNEL NUMBER IS OUT OF RANGE FOR NPC
TYPE SPECIFIED

NEW CHANNEL NUMBER IS OUT OF RANGE FOR NPC
TYPE SPECIFIED

RANGE CHANGE OF OLD DATA CHANNEL [s]abcddd
HAVING PCH NOT ALLOWED

OLD CHANNEL IS A PARITY CHANNEL

OLD CHANNEL [s]abcddd OR A CUSTOMER IS UNDER TEST

OLD CHANNEL [s]abcddd IS NOT ESTABLISHED TO THE SR
FEATURE

NEW CHANNEL [s]abcddd OR A CUSTOMER IS UNDER
TEST

Maintenance Conditions

ACTIVE CROSS-CONNECT NETWORK SIDE IS FAILED

NEW NPC IS OUT-OF-SERVICE

NEW NPC IS FAILED

REQUIRED UNIT NOT EQUIPPED, NOT IN SERVICE, OR
FAILED

REQUIRED CCB NOT EQUIPPED, NOT IN SERVICE, OR
FAILED

REQUIRED FTMI NOT EQUIPPED, NOT IN SERVICE, OR
FAILED

REQUIRED FC NOT EQUIPPED, NOT IN SERVICE, OR
FAILED

REQUIRED TSI NOT EQUIPPED, NOT IN SERVICE, OR
FAILED

REQUIRED DSPI NOT EQUIPPED, NOT IN SERVICE, OR
FAILED

REQUIRED SRM NOT EQUIPPED, NOT IN SERVICE, OR
FAILED

REQUIRED SUBRATE PACK NOT EQUIPPED, NOT IN
SERVICE, OR FAILED

UNIT [q]q MXR c NOT EQUIPPED

UNIT [q]q FLI k IS OUT-OF-SERVICE

UNIT [q]q FMT s IS OUT-OF-SERVICE

UNIT [q]q MXR c IS OUT-OF-SERVICE

UNIT [q]q MIU c IS OUT-OF-SERVICE

UNIT [q]q FLI k IS FAILED

UNIT [q]q FMT s IS FAILED

UNIT [q]q MXR c IS FAILED

UNIT [q]q MIU c IS FAILED

cc Hexadecimal condition code

CHANGE CONNECTIVITY

Explanation of Command

This command requests a change of a unit's connectivity. Timeslot interchange (TSI) circuit packs will be automatically grown and/ or degrown (deprovisioned) as needed.

New or degrown TSIs are listed at the end of the output message. They are listed pairwise with up to six pairs listed per message line. At most there will be 10 of these pairs when the connectivity of a unit is changed.

Command

```
[I.38101]
CHG:[FRM xy][,SEQ ww]:UNIT q,CONN(a[,b[,c[,d[,e[,f]]]]])!
```

Completion Message

```
[O.38101]
M hh:mm:ss xy,ww n[vv] CHG UNIT q CONN a b c d e f 5 LN MSG:
TOTAL TSIS tt NEW TSIS nn DEGROWN TSIS dd
sft sft sft sft sft sft sft sft sft sft
sft sft sft sft sft sft sft sft sft sft
sft sft sft sft sft sft sft sft sft sft EOP

M hh:mm:ss xy,ww n[vv] CHG UNIT q CONN a b c d e f 5 LN MSG:
TOTAL TSIS tt NEW TSIS nn DEGROWN TSIS dd
sft sft sft sft sft sft sft sft sft sft
sft sft sft sft sft sft sft sft sft sft
sft sft sft sft sft sft sft sft sft sft EOP

M hh:mm:ss xy,ww n[vv] CHG UNIT q CONN a b c d e f 5 LN MSG:
TOTAL TSIS tt NEW TSIS nn DEGROWN TSIS dd
CHANGED TSIS sft sft ... sft sft
.
.
.
CHANGED TSIS sft sft ... sft sft COMPL
```

Denial Message

[O.38101.01]

M hh:mm:ss xy,ww n[vv] CHG UNIT q CONN a b c d e f COND cc DNY

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
TSI	Time slot interchange
CONN	Connectivity
a b c d e f	The new complement of the subject unit's TSIs is changed to (1 through 6)
tt	Total number of grown TSIs in frame (02 through 72)
nn	Number of TSIs grown by command (00 through 10)
dd	Number of TSIs degrown by command (00 through 10)
sft	TSI equipped status
s	Service side (0 or 1)
f	FROM unit number 1 through 6 if equipped (-) if not equipped
t	TO unit number 1 through 6 if equipped (-) if not equipped
cc	Hexadecimal condition code
cc	<i>Explanation</i>
02	Subject entity is not equipped
27	Illegal connectivity specified
28	Connectivity contains unequipped units
80	Some TSIs to degrow are in service
3E	Mapped slots exist on a tsi

CHANGE/SET OPTIONS

Explanation of Command

**NOTE:**

This command applies to the 1.544 Mbit/s Termination interface only.

This command initializes or changes the DACS II threshold data base, which contains the programmable set of selectable alarm thresholds for DS3 facility performance parameters accumulated by DACS II Hybrid MXR circuit packs.

Threshold values are entered in free format (1 to 10 digits) separated by commas. Enter a hyphen (-) for values that are *not* to be changed.

User-programmable Values

Following DACS II installation, the user-programmable (nondefault) values are empty until this CHG::SETOP command initializes them. A user-programmable threshold value must first be initialized by this command before it can be used as an argument to the OPTS keyword of the GRTH::UNIT,MXR (I.31511) command and CHG::UNIT,DS3 (I.38661) command.

SETOP <rr> designates the parameter to be changed.

DS3OP(set1,set2,set3) are the user-programmable threshold values for the designated parameter.

Command

[I.38203]

CHG: [FRM xy][,SEQ ww]:SETOP <rr>,TYPE mn,DS3OP(set1,set2,set3)!

Completion Message

[O.38203]

M hh:mm:ss xy,ww n[vv] CHG SETOP <rr> 4 LN MSG:
TYPE mn DS3OP(set1,set2,set3)
OPT <rr> OLD <ttttt> <aaaaa> <bbbbbb> <ccccc> <pname>
OPT <rr> NEW <ttttt> <xxxxx> <yyyyy> <zzzzz> <pname> COMPL

Denial Message [O.38203.01]

M hh:mm:ss xy,ww n[vv] CHG SETOP <rr> 2 LN MSG:
TYPE mn DS3OP(set1,set2,set3) COND cc DNY

**Explanation of
Parameters**

SETOP Set option

OPT Option (i.e., a particular facility performance parameter number follows)

<rr> Facility performance parameter number

Variable <rr> specifies the parameter whose alarm threshold is being set or changed. The parameters and their corresponding <rr> values are given in the following table.

For HX type (Hybrid) DS3 signals:

<rr>	Parameter	Interval	Threshold Value Range	Default Threshold Value
101	Code Violations Line	DAILY	0 - 1073700000	3867523
102	Errored Seconds Line	DAILY	0 - 86400	4320
103	Severely Errored Seconds Line	DAILY	0 - 86400	90
104	Code Violations Path	DAILY	0 - 353870000	3867523
105	F and M Bit Violations Path	DAILY	0 - 22096800	176947
106	Errored Seconds Path	DAILY	0 - 86400	4320

<rr>	Parameter	Interval	Threshold Value Range	Default Threshold Value
107	Severely Errored Seconds Path	DAILY	0 - 86400	90
108	Far End Severely Errored Sec. Path	DAILY	0 - 86400	90
109	Unavailable Seconds	DAILY	0 - 86400	0
111	Code Violations Line	15MIN	0 - 29490750	402867
112	Errored Seconds Line	15MIN	0 - 900	300
113	Severely Errored Seconds Line	15MIN	0 - 900	30
114	Code Violations Path	15MIN	0 - 3686175	402867
115	F and M Bit Violations Path	15MIN	0 - 230175	18432
116	Errored Seconds Path	15MIN	0 - 900	300
117	Severely Errored Seconds Path	15MIN	0 - 900	30

<rr>		Parameter	Interval	Threshold Value Range	Default Threshold Value
118		Far End Severely Errored Sec. Path	15MIN	0 - 900	30
119		Unavailable Seconds	15MIN	0 - 900	0
TYPE		Type of DS3 Circuit			
mn		NPC Type prefix			
HX		HDS3U DS3 facility			
DS3OP		Hybrid DS3 facility threshold options			
set1		Threshold setting 1 (m=1) for given parameter <rr>			
set2		Threshold setting 2 (m=2) for given parameter <rr>			
set3		Threshold setting 3 (m=3) for given parameter <rr>			

Thresholds are entered in free format (1 to 10 digits) separated by commas.

Enter a (-) (hyphen) for values that are not to be changed.

For DS3 Hybrid circuits a threshold value of zero can be programmed for any parameter to disable threshold crossing alert messages for that parameter.

DACS II provides a set of default threshold values (m=0) for Hybrid DS3 circuits. Only the default threshold value for each parameter exists in the DACS II database prior to using the CHG::SETOP command. Before any nondefault threshold value (m=1,2,3) can be provisioned, it must be entered in the DACS II database using this command. Otherwise, an error message occurs. When this command is executed for a particular performance parameter, all threshold values in the DACS II frame for that performance parameter are changed, including the ones previously set or in use. Performance monitoring thresholds are provisioned for Hybrid DS3 circuits using the "<rr>/m" argument of the GRTH::UNIT,MXR or CHG::UNIT,DS3 command.

The default values are accessed using threshold setting 0. Threshold settings 1, 2, and 3 are user-programmable. That is, set1, set2, and set3 do not have default values; they must be programmed by the user before they can be used.

<tttt>	Default threshold value for option <rr>
<aaaaa>	Old set1 threshold value
<bbbbb>	Old set2 threshold value
<ccccc>	Old set3 threshold value
pname	Parameter name
<xxxxx>	New set1 threshold value
<yyyyy>	New set2 threshold value
<zzzzz>	New set3 threshold value
CVL	Code Violation for the DS3 Line
ESL	Errored Seconds for the DS3 Line
SESL	Severely Errored Seconds for the DS3 Line
CVP	Code Violation for the DS3 Path
FMP	F- or M-bit errors for the DS3 Path
ESP	Errored Seconds for the DS3 Path
SESP	Severely Errored Seconds for the DS3 Path
FSESP	Far End Severely Errored Seconds for the DS3 Path
UASP	Unavailable Seconds for the DS3 Path

**NOTE:**

If a hyphen is entered for at least one of the thresholds to preserve its value, then the output response shows that the respective new threshold values are unchanged by outputting the same value for the new threshold that is output for the old threshold.

cc	Hexadecimal condition code
cc	<i>Explanation</i>
83	Option not programmable for this NPC type

CHANGE/SET OPTIONS

Explanation of Command

This message initializes or changes the DACS II threshold data base, which contains the programmable set of selectable alarm thresholds for facility performance parameters accumulated by DACS II NPCs.

This command is denied if an attempt is made to set the minor threshold greater than or equal to the major threshold of any parameter specified on *any* NPC currently in the frame.

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This command is also denied if an attempt is made to *disable* the minor slip threshold (by setting its value to zero) before disabling the major slip threshold on *any* in-service NPC on the frame.

Threshold values are entered in free format (1 to 9 digits) separated by commas. Enter a hyphen (-) for values that are *not* to be changed.

Initialize Values

Following DACS II installation, the user-programmable (nondefault) values are empty until this CHG::SETOP command initializes them. A user-programmable threshold value must first be initialized by this message before it can be used as an argument to the OPTS keyword of the GRTH::NPC (Message I.31352), CHG::NPC,OPTS (Message I.38221), and CHG::NPC message.

SETOP rr designates the parameter to be changed.

NPCOP(set1,set2,set3) are the user-programmable threshold values for the designated parameter.

If ALL is specified, the given thresholds are written to the threshold data base for all types of NPCs for which the associated parameter is valid.

Command

[I.38201]

CHG: [FRM xy] [, SEQ ww]:SETOP rr, {TYPE mn|ALL}, NPCOP(set1,set2,set3)!

**Completion
Message****Nonhierarchical**

[O.38201]

```
M hh:mm:ss xy,ww n[vv] CHG SETOP rr e LN MSG:
{TYPE mn|ALL} NPCOP(set1,set2,set3)
OPT rr OLD ttttt[tttt] aaaaa[aaaa] bbbbbb[bbbb] ccccc[cccc] \
[ <tal>] <pname>[ TYPE mn]
[OPT rr OLD ttttt[tttt] aaaaa[aaaa] bbbbbb[bbbb] ccccc[cccc] \
[ <tal>] <pname> TYPE mn]
[OPT rr OLD ttttt[tttt] aaaaa[aaaa] bbbbbb[bbbb] ccccc[cccc] \
[ <tal>] <pname> TYPE mn]
OPT rr NEW ttttt[tttt] xxxxx[xxxx] yyyyy[yyyy] zzzzz[zzzz] \
[ <tal>] <pname> COMPL
```

Denial Message**Nonhierarchical**

[O.38201.01]

```
M hh:mm:ss xy,ww n[vv] CHG SETOP rr 2 LN MSG:
{TYPE mn|ALL} NPCOP(set1,set2,set3)[ NPC [s]abc] COND cc DNY
```

Hierarchical

[O.38201.01]

```
M hh:mm:ss xy,ww n[vv] CHG SETOP rr 2 LN MSG:
{TYPE mn|ALL} NPCOP(set1,set2,set3)[ NPC uvmp] COND cc DNY
```

**Explanation of
Parameters**

E	Number of lines in message
SETOP	Set option
OPT	Option
rr	Facility performance parameter number
	Variable rr specifies the parameter whose alarm threshold is being set or changed. The parameters and their corresponding rr values are given in the table below.
	The Major and Minor <i>Slip</i> threshold crossing alarms can be disabled by programming a value of zero for the Slip Major and Slip Minor thresholds, respectively.
	To use this feature, the Slip Major threshold must be disabled before the Slip Minor threshold. This command is denied if an attempt is made to disable the Minor Slip threshold (by setting

its value to zero) before disabling the Major Slip threshold on *any* in-service NPC on the frame.

For DE, TE, SE or DS type NPCs:

For DE type NPCs, parameters with values rr = 1 through 8 are valid.

For DS type NPCs, parameters with values rr = 1 through 10 are valid.

For TE type NPCs, parameters with values rr = 1 through 8 are valid.

For SE type NPCs, parameters with values rr = 1 through 8 are valid.

For Clear-DS1 DE type NPCs, parameters with values rr = 1 through 4 are valid.

For Clear-DS1 TE type NPCs, parameters with values rr = 1 through 2 are valid.

For Clear-DS1 SE type NPCs, parameters with values rr = 1 through 2 are valid.

rr	Parameter	Threshold Value Range	Default Threshold Value
01	Slip major	000 to 255	255
02	Slip minor	000 to 255	4
03	Bit Error Rate major	1E-3* to 1E-6†	1E-3*
04	Bit Error Rate minor	1E-3* to 1E-6†	1E-6
05	Errored Seconds‡	00001 to 65535	864
06	Severely Errored Seconds‡	001 to 255	225
07	Change of Frame Alignment major	001 to 511	511
08	Change of Frame Alignment minor	001 to 255	17
09	Shelf Alarm Near End (SANE)§	00001 to 65535	00000
10	Shelf Alarm Far End (SAFE)§	00001 to 65535	00000

- * 4 for clear-DS1 NPCs or DS type NPCs (default).
- † 7 on DE or TE type NPCs using T1DM (x = 4) or on DE, TE, SE type NPCs using ESF (x=2 or 3) framing.
- ‡ Only applicable to DE or TE type NPCs using T1DM (x = 4) or DE, TE, SE type NPCs using ESF (x = 2 or 3) framing.
- § Applicable only to DS type NPCs.

Major thresholds must be greater than minor thresholds.

For Bit Error Rates, enter only the power of 10 (DACS assumes its sign is negative). For example, for a BER of 10^{-3} (.001), enter 3.

Slip major and Slip minor threshold crossing alarms may be disabled by programming threshold values of zero for the respective parameters.

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For DA, TA and SA type NPCs:

For Channelized and Clear-DS1 DA type NPCs with ESF framing, all of the following Near-end and Far-end parameters are valid.

For Channelized and Clear-DS1 DA type NPCs with D4 or T1DM framing, all of the following Near-end parameters are valid, but the only valid Far-end parameter is Unavailable Seconds (rr = 55,71).

For Channelized and Clear-DS1 TA and SA type NPCs with ESF framing, all of the following Near-end Path parameters are valid, but the Near-End Line parameters (rr = 47-49, 63-65) are invalid. All of the following Far-end parameters are valid.

For Channelized and Clear-DS1 TA and SA type NPCs with D4 or T1DM framing, the following Near-end Path parameters are valid, but the Near-End Line parameters (rr = 47-49, 63-65) are invalid. The only valid Far-end parameter is Unavailable Seconds (rr = 55,71).

† The value shown applies to ESF framing and is a count of CRC errors. When the DS1 has D4 or T1DM framing, framing errors are counted and the default Daily value is 691.

‡ The value shown applies to ESF framing and is a count of CRC errors. When the DS1 has D4 or T1DM framing, framing errors are counted and the default 15-Minute value is 72.

rr	Parameter	Threshold Value Range	Default Threshold Value
41	Daily Near-end Path Coding Violations	000000000 to 134217727	132960†
42	Daily Near-end Path Errored Seconds	00000 to 86400	648
43	Daily Near-end Path Severely Errored Seconds	00000 to 86400	100
44	Daily Near-end Severely Errored Framing Seconds	00000 to 86400	17
45	Daily Near-end Controlled Slip Seconds	00000 to 86400	4
46	Daily Near-end Unavailable Seconds	00000 to 86400	10
47	Daily Near-end Line Coding Violations	000000000 to 134217727	133400
48	Daily Near-end Line Errored Seconds	00000 to 86400	648
49	Daily Near-end Line Severely Errored Seconds	00000 to 86400	100
50	Daily Far-end Path Coding Violations	000000000 to 134217727	132960†
51	Daily Far-end Path Errored Seconds	00000 to 86400	648
52	Daily Far-end Path Severely Errored Seconds	00000 to 86400	100
53	Daily Far-end Severely Errored Framing Seconds	00000 to 86400	17
54	Daily Far-end Controlled Slip Seconds	00000 to 86400	4

rr	Parameter	Threshold Value Range	Default Threshold Value
55	Daily Far-end Unavailable Seconds	00000 to 86400	10
56	Daily Far-end Line Errored Seconds	00000 to 86400	648
57	15-Minute Near-end Path Coding Violations	0000000 to 2097151	13296±
58	15-Minute Near-end Path Errored Seconds	000 to 900	65
59	15-Minute Near-end Path Severely Errored Seconds	000 to 900	10
60	15-Minute Near-end Severely Errored Framing Seconds	000 to 900	2
61	15-Minute Near-end Controlled Slip Seconds	000 to 900	1
62	15-Minute Near-end Unavailable Seconds	000 to 900	10
63	15-Minute Near-end Line Coding Violations	0000000 to 2097151	13340
64	15-Minute Near-end Line Errored Seconds	000 to 900	65
65	15-Minute Near-end Line Severely Errored Seconds	000 to 900	10
66	15-Minute Far-end Path Coding Violations	0000000 to 2097151	13296±
67	15-Minute Far-end Path Errored Seconds	000 to 900	65

rr	Parameter	Threshold Value Range	Default Threshold Value
68	15-Minute Far-end Path Severely Errored Seconds	000 to 900	10
69	15-Minute Far-end Severely Errored Framing Seconds	000 to 900	2
70	15-Minute Far-end Controlled Slip Seconds	000 to 900	1
71	15-Minute Far-end Unavailable Seconds	000 to 900	10
72	15-Minute Far-end Line Errored Seconds	000 to 900	65

For PB and PC type NPCs:

rr	Parameter	Threshold Value Range	Default Threshold Value
31	Degraded Minutes, 1 hour	1-60	60
32	Degraded Minutes, 24 hours	1-1440	1440
33	Severely Errored Seconds, 15 mins	1-900	900
34	Severely Errored Seconds, 24 hours	1-65535	65535
35	Errored Seconds, 15 minutes	1-900	900
36	Errored Seconds, 24 hours	1-65535	65535
37	Unavailable Seconds, 15 minutes	1-900	900
38	Unavailable Seconds, 24 hours	1-65535	65535
39	Slips, 15 minutes	1-900	900
40	Slips, 24 hours	1-65535	65535

**NOTE:**

24-hour thresholds must be greater than their respective 15-minute or 1-hour threshold.

For PA type NPCs:

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
11	CRC Block Errors	DAILY	1 - 79056000	176947
12	Framing Errors	DAILY	1 - 345600000	176947
13	Out of Frame Seconds	DAILY	1 - 86400	4
14	Errored Seconds	DAILY	1 - 86400	4320
15	Severely Errored Seconds	DAILY	1 - 86400	90
16	Controlled Slip Seconds	DAILY	1 - 86400	4
17	Coding Violations	DAILY	1 - 176947200	176947
18	Unavailable Seconds	DAILY	1 - 86400	90
19	Unavailable Time Count	DAILY	1 - 4320	9
20	Multiframe Errors	DAILY	1 - 86400	4095
21	Far End Block Errors	DAILY	1 - 79056000	176947
22	Far End Errored Seconds	DAILY	1 - 86400	4320
23	Far End Severely Errored Seconds	DAILY	1 - 86400	90
24	Far End Unavailable Seconds	DAILY	1 - 86400	90
81	CRC Block Errors	15MIN	1 - 823500	18432
82	Framing Errors	15MIN	1 - 3600000	18432

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
83	Out of Frame Seconds	15MIN	1 - 900	4
84	Errored Seconds	15MIN	1 - 900	300
85	Severely Errored Seconds	15MIN	1 - 900	30
86	Controlled Slip Seconds	15MIN	1 - 900	1
87	Coding Violations	15MIN	1 - 1843200	18432
88	Unavailable Seconds	15MIN	1 - 900	30
89	Unavailable Time Count	15MIN	1 - 45	3
90	Multiframe Errors	15MIN	1 - 900	255
91	Far End Block Errors	15MIN	1 - 823500	18432
92	Far End Errored Seconds	15MIN	1 - 900	300
93	Far End Severely Errored Seconds	15MIN	1 - 900	30
94	Far End Unavailable Seconds	15MIN	1 - 900	30

Both Terminations

For TH type NPCs:

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
11	CRC Block Errors	DAILY	1 - 79056000	176947
12	Framing Errors	DAILY	1 - 345600000	176947
13	Out of Frame Seconds	DAILY	1 - 86400	4
14	Errored Seconds	DAILY	1 - 86400	4320

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
15	Severely Errored Seconds	DAILY	1 - 86400	90
16	Controlled Slip Seconds	DAILY	1 - 86400	4
18	Unavailable Seconds	DAILY	1 - 86400	90
19	Unavailable Time Count	DAILY	1 - 4320	9
20	Multiframe Errors	DAILY	1 - 86400	4095
81	CRC Block Errors	15MIN	1 - 823500	18432
82	Framing Errors	15MIN	1 - 3600000	18432
83	Out of Frame Seconds	15MIN	1 - 900	4
84	Errored Seconds	15MIN	1 - 900	300
85	Severely Errored Seconds	15MIN	1 - 900	30
86	Controlled Slip Seconds	15MIN	1 - 900	1
88	Unavailable Seconds	15MIN	1 - 900	30
89	Unavailable Time Count	15MIN	1 - 45	3
90	Multiframe Errors	15MIN	1 - 900	255

TYPE

Type

Type of NPC for which the options are being set. Note that not all parameter threshold options apply to all NPC types.

mn

NPC Type prefix

1.544 Mbit/s Termination Only

DA FTU ANSI NPC type**DE** FTU NPC type**DS** SLC carrier digroup circuit**TA** DS3U ANSI NPC type**TE** DS3U NPC type

2.048 Mbit/s Termination Only

	PA	EPT NPC type (120-ohm twisted pair or 75-ohm coaxial)
	PB	CEPT NPC type (120-ohm twisted pair)
	PC	CEPT NPC type (75-ohm coaxial)
	Both Terminations	
	TH	HDS3U CEPT NPC type
ALL	All	All NPC types. If specified, the given thresholds are written into the secondary data base for all types of NPCs for which the associated parameter is valid.
NPCOP	Network processing circuit option for 1.544 Mbit/s Termination Only	
set1	Threshold setting 1 (m=1) for given parameter rr	
set2	Threshold setting 2 (m=2) for given parameter rr	
set3	Threshold setting 3 (m=3) for given parameter rr	

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Thresholds are entered in free format (1 to 9 digits) separated by commas. Enter a "-" (hyphen) for values that are not to be changed.

For ANSI NPC types (DA, and TA type NPCs), a threshold value of zero can be programmed for any parameter to disable threshold crossing alert messages for that parameter.

Thresholds are entered in free format (1 to 9 digits) separated by commas. Enter a "-" (hyphen) for values that are not to be changed.

DACS II provides a set of default threshold values (m=0) for each NPC type. Only the default threshold value for each parameter exists in the DACS II database prior to user programming using the CHG::SETOP command. Before any nondefault threshold value (m=1,2,3) can be provisioned to be used by an NPC for performance monitoring, it must be entered in the DACS II database using this command. Otherwise, an error message occurs. When this command is executed, all threshold values in the DACS II frame are changed, including the ones previously set or in use. Performance monitoring thresholds are provisioned for NPCs using the rr/m argument of the GRTH::NPC or CHG::NPC command.

The default values are accessed using threshold setting 0. Threshold settings 1, 2, and 3 are user-programmable. That is, set1, set2, and set3 do not have default values; they must be programmed by the user before they can be used.

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DACS II provides a set of default threshold values and alarm levels (<m>=0,1,2,d) for each NPC type. Only the default threshold value for each parameter exists in the DACS II database prior to user programming using the CHG::SETOP command. Before any nondefault threshold value (m=3 to b) can be provisioned to be used by an NPC for performance monitoring, it must be entered in the DACS II database using this command. Otherwise, an error message occurs. When this command is executed, all threshold values in the DACS II frame are changed, including the ones previously set or in use. Performance monitoring thresholds are provisioned for NPCs using the rr/<m> argument of the GRTH::NPC or CHG::NPC command.

The default values are accessed using threshold setting 0 (<m>=0,1,2,d). Threshold settings 1 (<m>=3,4,5,e), 2 (<m>=6,7,8,f), and 3 (<m>=9,a,b,10) are user-programmable. That is, set1, set2, and set3 do not have default values; they must be programmed by the user before they can be used.

tttt[ttt]	Default threshold value for option rr
aaaaa[aaaa]	Old set1 threshold value
bbbbbb[bbbb]	Old set2 threshold value
cccc[cccc]	Old set3 threshold value
talm	Type of alarm for 1.544 Mbit/s Termination
MJ	Major
MN	Minor
pname	Parameter name
BER	Bit error rate
COFA	Change of frame alignment
DM, 1 hr.	Degraded minutes, 1 hour interval
DM, 24 hr.	Degraded minutes, 24 hour interval
ERS	Errored seconds
ERS, 15 min.	Errored seconds, 15 minute interval
ERS, 24 hr.	Errored seconds, 24 hour interval
SAFE	Shelf alarm far end
SANE	Shelf alarm near end
SERS	Severely errored seconds
SERS, 15 min.	Severely errored seconds, 15 minute interval

SERS, 24 hr.	Severely errored seconds, 24 hour interval
SLIP	Slip
SLIP, 15 min.	Slip, 15 minute interval
SLIP, 24 hr.	Slip, 24 hour interval
US, 15 min.	Unavailable seconds, 15 minute interval
US, 24 hr.	Unavailable seconds, 24 hour interval

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CSSP,{D Q}{N F}	Path Controlled Slip Seconds
CVL,{D Q}{N F}	Line Coding Violations
CVP,{D Q}{N F}	Path Coding Violations
ESL,{D Q}{N F}	Line Errored Seconds
ESP,{D Q}{N F}	Path Errored Seconds
SEFS,{D Q}{N F}	Severely Errored Framing Seconds
SESL,{D Q}{N F}	Line Severely Errored Seconds
SESP,{D Q}{N F}	Path Severely Errored Seconds
UASP,{D Q}{N F}	Path Unavailable Seconds
D Daily	
Q 15 minute	
N Near-end	
F Far-end	
CRC, 15MIN	CRC Block Errors, 15 minute interval
CRC, DAILY	CRC Block Errors, daily interval
CSS, 15MIN	Controlled Slip Seconds, 15 minute interval
CSS, DAILY	Controlled Slip Seconds, daily interval
CV, 15MIN	Coding Violations, 15 minute interval
CV, DAILY	Coding Violations, daily interval
ES, 15MIN	Errored Seconds, 15 minute interval
ES, DAILY	Errored Seconds, daily interval
FEBE, 15MIN	Far End Block Errors, 15 minute interval
FEBE, DAILY	Far End Block Errors, daily interval

FES, 15MIN	Far End Errored Seconds, 15 minute interval
FES, DAILY	Far End Errored Seconds, daily interval
FRER, 15MIN	Framing Errors, 15 minute interval
FRER, DAILY	Framing Errors, daily interval
FSES, 15MIN	Far End Severely Errored Seconds, 15 minute interval
FSES, DAILY	Far End Severely Errored Seconds, daily interval
FUAS, 15MIN	Far End Unavailable Seconds, 15 minute interval
FUAS, DAILY	Far End Unavailable Seconds, daily interval
MER, 15MIN	Multiframe Errors, 15 minute interval
MER, DAILY	Multiframe Errors, daily interval
OFS, 15MIN	Out of Frame Seconds, 15 minute interval
OFS, DAILY	Out of Frame Seconds, daily interval
SES, 15MIN	Severely Errored Seconds, 15 minute interval
SES, DAILY	Severely Errored Seconds, daily interval
UAS, 15MIN	Unavailable Seconds, 15 minute interval
UAS, DAILY	Unavailable Seconds, daily interval
UATC, 15MIN	Unavailable Time Count, 15 minute interval
UATC, DAILY	Unavailable Time Count, daily interval

xxxxx[xxxx] New set1 threshold value

yyyyy[yyyy] New set2 threshold value

zzzzz[zzzz] New set3 threshold value

If the TYPE mn option is used in the input command to change the thresholds for a single NPC type and a hyphen is entered for at least one of the thresholds to preserve its value, the output response shows that the respective new threshold values are unchanged by outputting the same value for the new threshold that is output for the old threshold.

If the ALL types option is used in the input command to change the thresholds for all NPC types and a hyphen is entered for at

least one set of thresholds to preserve their values, the output response shows that the respective threshold values are unchanged by outputting "----[----]" (a dash) for the new threshold value and the respective unchanged values in the old threshold fields for each NPC type.

NPC

Network processing circuit

[s]abc

The 3- or 4-digit nonhierarchical NPC number of problematic NPC

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical number of problematic NPC

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

COND

Condition

cc

Hexadecimal condition code

cc	<i>Explanation</i>
21	Minor $\geq$ major for SLIP opt
22	Minor $\leq$ major for BER opt
23	Minor $\geq$ major for COFA opt
2B	Maj Min BER threshold is 7, but not in T1DM or Fe mode
14	1 hr $\geq$ 24 hr for DM opt
15	15 min $\geq$ 24 hr for SERS opt
16	15 min $\geq$ 24 hr for ERS opt
17	15 min $\geq$ 24 hr for US opt
18	15 min $\geq$ 24 hr for SLIP opt
37	Major/Minor BER threshold value is invalid for SLC NPCs
4F	BER must not be less than 4 for Clear DS1
83	Option not programmable for this NPC type
FE	Change to non-ESF digroup with 16-state cross-connect

cc	<i>Explanation</i>
FF	Change to T1DM digroup with cross-connect that is not TRSP
0A	Minor Slip threshold disabled before Major Slip threshold
32	Threshold value is out of range

CHANGE CIRCUIT PARAMETERS

Explanation of Command

This message switches return paths to the digroups and ranges beginning with the initial channels given in the TO end argument list.

This message requests a change in a broadcast multipoint circuit, switching the full tributary circuit leg (one that can both receive and transmit to the multipoint source) to another leg. Up to eight multipoint circuits can be changed with this command. Arguments [s]abcd, [t]ghij, and [u]klmnn etc., represent TO terminations from different broadcast circuits (allowing multiple switches to be performed with a single message). That is, these arguments specify the new full tributaries in up to eight different broadcast circuits.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.18001]

```
CHG:[FRM xy][,SEQ ww]:SWCH,TOX([s]abcd,[t]ghij, \
[u]klmnn,...)[,INCL]!
```

Hierarchical

[I.18001]

```
CHG:[FRM xy][,SEQ ww]:SWCH,TOX(uvmpddd[,wxqrjjj,edhfgnnn,...]) \
[,INCL]!
```

2.048 Mbit/s Termination

Nonhierarchical

[I.18001]

```
CHG:[FRM xy][,SEQ ww]:SWCH,TOX([s]abcd,[t]ghij, \
[u]klmnn,...)[,INCL]!
```

Hierarchical

[I.18001]

CHG: [FRM xy][,SEQ ww]:SWCH,TOX(uvmnpddd[,wxkqrjjj,edhfgnnn,...]) \[,INCL]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.18001]

M hh:mm:ss xy,ww n[vv] CHG SWCH 3 LN MSG:
TOX [s]abcddd[, [t]ghijjj, [u]klmnnn, . . .]
[CUS][RDC] COMPL

Hierarchical

[O.18001]

M hh:mm:ss xy,ww n[vv] CHG SWCH 3 LN MSG:
TOX uvmnpddd[,wxkqrjjj,edhfgnnn, . . .])
[CUS][RDC] COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.18001]

M hh:mm:ss xy,ww n[vv] CHG SWCH 3 LN MSG:
TOX [s]abcddd[, [t]ghijjj, [u]klmnnn, . . .]
[CUS][RDC] COMPL

Hierarchical

[O.18001]

M hh:mm:ss xy,ww n[vv] CHG SWCH 3 LN MSG:
TOX uvmnpddd[,wxkqrjjj,edhfgnnn, . . .])
[CUS][RDC] COMPL

Denial Message 1.544 Mbit/s Termination

Nonhierarchical

[O.18001.01]

M hh:mm:ss xy,ww n[vv] CHG SWCH 3 LN MSG:
TOX [s]abcddd[, [t]ghijjj, [u]klmnnn, . . .]
[[t]wxyzzz] cc BCAST DNY

[O.18001.02]

M hh:mm:ss xy,ww n[vv] CHG SWCH 3 LN MSG:
TOX [s]abcddd[, [t]ghijjj, [u]klmnnn, . . .]
[[t]wxyzzz] COND cc DNY

Hierarchical

[O.18001.01]

M hh:mm:ss xy,ww n[vv] CHG SWCH 3 LN MSG:
TOX uvmnpddd[,wxkqrjjj,edhfgnnn, . . .])
[opjstzzz] cc BCAST DNY

[O.18001.02]

M hh:mm:ss xy,ww n[vv] CHG SWCH 3 LN MSG:
TOX uvmnpddd[,wxkqrjjj,edhfgnnn, . . .])
[opjstzzz] COND cc DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.18001.01]

M hh:mm:ss xy,ww n[vv] CHG SWCH 3 LN MSG:
TOX [s]abcddd[, [t]ghijjj, [u]klmnnn, . . .]
[[t]wxyzzz] cc BCAST DNY

[O.18001.02]

M hh:mm:ss xy,ww n[vv] CHG SWCH 3 LN MSG:
TOX [s]abcddd[, [t]ghijjj, [u]klmnnn, . . .]
[[t]wxyzzz] COND cc DNY

Hierarchical

[O.18001.01]

M hh:mm:ss xy,ww n[vv] CHG SWCH 3 LN MSG:
TOX uvmnpddd[,wxkqrjjj,edhfgnnn, . . .])
[opjstzzz] cc BCAST DNY

[O.18001.02]

M hh:mm:ss xy,ww n[vv] CHG SWCH 3 LN MSG:
TOX uvmnpddd[,wxkqrjjj,edhfgnnn, . . .])
[opjstzzz] COND cc DNY

Explanation of Parameters

[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
[u]klm	The 3- or 4-digit nonhierarchical TO NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
edhfg	Hierarchical TO NPC number uv,wx,ed Unit number m,k,h Module number np,qr,fg NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	FROM channel number
jjj	TO channel number
nnn	TO channel number
	001-024
	000-030 CEPT type NPCs grown as CAS
	000-031 CEPT type NPCs grown as NSA
	Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.
	001-047 Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)

- 073-096** Odd and Even (SLC 96 Carrier, Mode 1, DGD)
- 001-024** Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
- 025-048** Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
- 049-072** Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
- 073-096** Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

INCL Inclusive

To change a circuit or range of circuits including one or more circuits previously marked as a Red Circuit or under Customer Control, use the INCL (inclusive) option. If this option is not used, the message is denied if any circuits in the range are red circuits or customer controlled.

SWCH	Switch
TOX	TO Tributaries
[t]wxyz	Nonhierarchical number of circuit leg on which problem occurred
opjstzz	Hierarchical number of circuit leg on which problem occurred
BCAST	Broadcast
	Denial specific to a broadcast conference
CUS	Customer
	NPC is a customer-controlled circuit
RDC	Red circuit
	NPC is a Red circuit
cc	Hexadecimal condition code

cc	<i>Explanation</i>
01	Invalid range for specified NPC type
03	No RDLD or CUS circuits and INCL keyword used
04	No NPC's out of service and OOS keyword used
10	NPC out of service or failed
11	NPC not equipped

cc	<i>Explanation</i>
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
32	Termination is under test
33	Termination is a test port
34	Termination is under customer control (CUS)
35	Termination is protected (RDLD)
53	TO side of two-way to be converted is not an FTU NPC
5B	TO is not a leg of this/any conference
5D	TO is the backbone leg of a conference
5F	Conference is NTR
60	Conference is LPD
61	TO is already the return leg
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
D0	FROM NPC is not provisioned as DGA

cc	<i>Explanation</i>
D1	TO NPC is not provisioned as DGA
D3	Corresponding NPC for FROM virtual channel is not provisioned
D4	Corresponding NPC for TO virtual channel is not provisioned
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified

CHANGE SWITCH, TOX

Explanation of Command

This command changes a nonchannelized digital signal broadcast circuit by switching a specified tributary network processing circuit (NPC) to be the full tributary NPC. Up to eight broadcast circuits can be changed by specifying the respective full tributary NPCs, all of which are nonchannelized NPCs currently part of different broadcast circuits and may belong to different Units.

Command

Nonhierarchical

[I.18011]

CHG: [FRM xy][, SEQ ww]:SWCH,TOX([s]ghi[, [t]jkl][, [v]mno][...]) \[, INCL]!

Hierarchical

[I.18011]

CHG: [FRM xy][, SEQ ww]:SWCH,TOX(uvmnp[, wxkqr][, edhfg][...]) \[, INCL]!

Completion Message

Nonhierarchical

[O.18011]

M hh:mm:ss xy,ww n[vv] CHG SWCH 3 LN MSG:
TOX [s]ghi[, [t]jkl][, [v]mno][...]
[CUS][RDC]COMPL

Hierarchical

[O.18011]

M hh:mm:ss xy,ww n[vv] CHG SWCH 3 LN MSG:
TOX uvmnp[, wxkqr][, edhfg][...]
[CUS][RDC]COMPL

Denial Message**Nonhierarchical**

[O.18011.01]

M hh:mm:ss xy,ww n[vv] CHG SWCH 3 LN MSG:
TOX [s]ghi[, [t]jkl][, [v]mno][...]
[[t]qrs] cc <st> DNY

Hierarchical

[O.18011.01]

M hh:mm:ss xy,ww n[vv] CHG SWCH 3 LN MSG:
TOX uvmnp[,wxkqr][,edhfg][...]
[opqrs] cc <st> DNY

**Explanation of
Parameters**

[s]ghi	The 3- or 4-digit nonhierarchical NPC number of new full tributary
[t]jkl	The 3- or 4-digit nonhierarchical NPC number of new full tributary
[v]mno	The 3- or 4-digit nonhierarchical NPC number of new full tributary
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number of new full tributary
wxkqr	Hierarchical NPC number of new full tributary
edhfg	Hierarchical NPC number of new full tributary
uv,wx,ed	Unit number
m,k,h	Module number
np,qr,fg	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
INCL	Inclusive keyword, required for Red (RDC) or Customer-controlled circuit (CUS)
[t]qrs	The 3- or 4-digit nonhierarchical number of the NPC that caused the denial
opqrs	Hierarchical number of problematic NPC, same range as uvmnp
st	Status of denial
cc	Hexadecimal condition code

cc	<i>Explanation</i>
01	Invalid range for specified NPC type
03	No RDLD or CUS circuits and INCL keyword used
10	NPC out of service or failed
11	NPC not equipped
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
32	Termination is under test
34	Termination is under customer control (CUS)
35	Termination is protected (RDLD)
5B	TO is not a leg of this/any conference
5D	TO is the backbone leg of a conference
5E	TO is a part of the same conference as a previous TO
5F	Conference is NTR
60	Conference is LPD
61	TO is already the return leg
63	NPC is a channelized NPC
64	NPC is a non-channelized NPC
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed

cc	<i>Explanation</i>
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
4A	Red circuit, INCL not entered
4B	Customer controlled circuit, INCL not entered
70	NPC invalid type
E0	ETSI not equipped, not in service, or failed

CHANGE PRIORITIES AND/OR TYPE, SYNCHRONIZER OR NPC

Explanation of Command

1.544 Mbit/s Termination

This command changes priorities and type parameters of timing extractor type TLIs/SSPs that have been equipped. One of the following two fields must be given: type/synchronizer sync port or the source for priority (SRC). Only one type may be changed at a time; the output message shows both types after the change command is completed, if both are equipped, or it shows a - for unequipped SSPs.

2.048 Mbit/s Termination

This command changes priorities and network processing circuit (NPC) or type parameters of timing extractor type TLIs/SSPs that have been equipped. One of the following three fields must be given: type/synchronizer sync port, the NPC/SSP, or the source for priority (SRC). Only one type may be changed at a time; the output message shows both types after the change command is completed, if both are equipped, or it shows a - for unequipped SSPs.

Affected Databases

Only the type and priority databases are affected by this command. The SSP must be out of service for the command to complete. The RST::SYNC,TLI,[SSP]! command must be given to implement the changes for both side 0 and 1.

If the SSP-type is given, you must specify the timing link Interface (TLI-n), SSP-b, and the type.

The NPC parameter (valid only with a TU-type sync) indicates that the specified TLI is receiving its synchronizing signal from the given NPC location. The system allows only one of eight NPC locations per TLI SSP.

Command

1.544 Mbit/s Termination

[I.38011]

CHG: [FRM xy][,SEQ ww]:SYNC,TLI m,SSP b,TYPE texyz!

[I.38011]

CHG:FRM xy,SEQ ww:SYNC, TLI, SRC\
(i/(a,b)[,j/(c,d)[,k/(e,f)[,l/(g,h)]])!)

2.048 Mbit/s Termination

Nonhierarchical

[I.38011]

CHG:[FRM xy][,SEQ ww]:SYNC,TLI m,SSP b,{TYPE texyz|NPC [0]abc}!

[I.38011]

CHG:[FRM xy][,SEQ ww]:SYNC, TLI, SRC\
(i/(a,b)[,j/(c,d)[,k/(e,f)[,l/(g,h)]])!)

Hierarchical

[I.38011]

CHG:[FRM xy][,SEQ ww]:SYNC,TLI m,SSP b,{TYPE texyz|NPC uvmp}!

[I.38011]

CHG:[FRM xy][,SEQ ww]:SYNC,TLI, SRC\
(i/(a,b)[,j/(c,d)[,k/(e,f)[,l/(g,h)]])!)

Completion Message

1.544 Mbit/s Termination

[O.38011]

M hh:mm:ss xy,ww n[vv] CHG SYNC TLI m SSP b TYPE texyz,testu COMPL

[O.38011]

M hh:mm:ss xy,ww n[vv] CHG SYNC TLI SRC i,a,b j,c,d k,e,f l,g,h \
COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.38011]

M hh:mm:ss xy,ww n[vv] CHG SYNC \
TLI m SSP b {TYPE texyz,testu|NPC [0]abc} COMPL

[O.38011]

M hh:mm:ss xy,ww n[vv] CHG SYNC \
TLI SRC i,a,b j,c,d k,e,f l,g,h COMPL

Hierarchical

[O.38011]

M hh:mm:ss xy,ww n[vv] CHG SYNC \
TLI m SSP b {TYPE texyz,testu|NPC uvmnp} COMPL

[O.38011]

M hh:mm:ss xy,ww n[vv] CHG SYNC \
TLI SRC i,a,b j,c,d k,e,f l,g,h COMPL

Denial Message

1.544 Mbit/s Termination

[O.38011.01]

M hh:mm:ss xy,ww n[vv] CHG SYNC \
TLI m SSP b TYPE tepqr,testu COND cc DNY

[O.38011.01]

M hh:mm:ss xy,ww n[vv] CHG SYNC \
TLI SRC i,a,b j,c,d k,e,f l,g,h} COND cc DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.38011.01]

M hh:mm:ss xy,ww n[vv] CHG SYNC \
TLI m SSP b {TYPE tepqr,testu|NPC [0]abc} COND cc DNY

[O.38011.01]

M hh:mm:ss xy,ww n[vv] CHG SYNC \
TLI SRC i,a,b j,c,d k,e,f l,g,h COND cc DNY

Hierarchical

[O.38011.01]

M hh:mm:ss xy,ww n[vv] CHG SYNC \
TLI m SSP b {TYPE tepqr,testu|NPC uvmnp} COND cc DNY

[O.38011.01]

M hh:mm:ss xy,ww n[vv] CHG SYNC \
TLI SRC i,a,b j,c,d k,e,f l,g,h COND cc DNY

**Explanation of
Parameters**

SYNC	Synchronizer
TLI	Timing link interface
m	Timing link interface number (1 through 4)
SSP	Synchronizer sync port
b	SSP side (0 or 1)
TYPE	Type
texyz	Timing Extractor or Timing Distributor type The output message shows the type of SSP for both SSPs on the TLI card. If one SSP is not equipped, a "-" will appear for the unequipped SSP.
testu	The TLI type of the other SSP on the same TLI. If not equipped, this parameter will be output as "-----". TC Composite Clock Timing Extractor TE DS1 Timing Extractor TP Primary Block Timing Extractor TR Basic System Reference Frequency (BSRF) TU Unipolar Clock Timing Extractor TD Timing Distributor For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters." SRC Source
i	TLI slot number (1 through 4)
a	TLI i SSP 0 priority (1 through 8)
b	TLI i SSP 1 priority (1 through 8)
j	TLI slot number (1 through 4)
c	TLI j SSP 0 priority (1 through 8)
d	TLI j SSP 1 priority (1 through 8)
k	TLI slot number (1 through 4)

e	TLI k SSP 0 priority (1 through 8)
f	TLI k SSP 1 priority (1 through 8)
l	TLI slot number (1 through 4)
g	TLI l SSP 0 priority (1 through 8)
h	TLI l SSP 1 priority (1 through 8)
COND	Condition
NPC	Network processing circuit
[0]abc	The 3- or 4-digit nonhierarchical NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
16	SYNC TB is not equipped
B3	X option is illegal
B4	Y option is illegal
C2	SSP type(options) same
C3	Wrong SSP type(Timing Extractor type)
C4	Sync architecture different
C5	Some priority values required
C6	Some priority values not required
C7	Priority values are same
C8	Sync pack denied command
CA	New NPC same as existing one
CB	NPC parameter only valid with TU type TLI
CC	NPC is still provisioned to provide sync timing
CD	NPC not designated as sync timing source
CE	NPC already allocated as sync timing source
CF	NPC already grown as non-synchronization source

cc	<i>Explanation</i>
F1	Parameter only valid with PA, PB, or PC type NPCs
01	Assignment of single priority to multiple SSPs
E4	NPC already has Equipment Loopback

CHANGE SYSTEM START-UP

Explanation of Command

This command is used to change the system start-up time interval.

Command

[I.38371]
CHG:[FRM xy][,SEQ ww]:SYSINHTIM hr!

Completion Message

[O.38371]
M hh:mm:ss [xy,ww] n[vv] CHG SYSINHTIM hr!

Denial Message

[O.38371.01]
M hh:mm:ss [xy,ww] n[vv] CHG SYSINHTIM hr COND cc DNY

Explanation of Parameters

SYSINHTIM	System inhibit timer keyword
hr	Number of hours for system start-up timer
	The 2-digit hour (hr) field is mandatory and shall be in the range of 01 to 48
cc	Hexadecimal condition code

CHANGE TERMINATE AND LEAVE

**Explanation of
Command****NOTE:**

This command applies to 1.544 Mbit/s Termination only.

This command changes the terminate and leave state of the master leg or branch associated with a subrate multipoint circuit. This command defines the termination point in terms of a master leg external facility termination, MJU number, and optional branch number. If the termination point specified is under test or is not cross-connected, the command is denied.

The specified facility termination must be the external facility termination for the master leg of a multipoint circuit. Note that this is *not* the facility defined as the TO side of the circuit. The TO side is always facing towards an MJU defined by ssss.

If MJU 0001 is specified, the TO side faces towards the control leg of MJU 1 and the FROM side faces towards the master leg external facility termination. If an MJU number other than 0001 is specified and the optional BR field is absent, the TO side faces towards the control leg of the specified MJU, and the FROM side faces upstream towards the branch of a cascaded MJU. If the BR field is specified, the TO side faces upstream towards the branch of MJU ssss and the FROM side faces downstream either towards another MJU or towards an external facility termination. The unassigned multiplexer channel (UMC) code is inserted towards the direction that is terminated.

If the termination point specified is under test or is not cross-connected, the command is denied. The termination state resulting from the command depends on the state prior to the command as indicated by the following table:

PRIOR STATE	REQUESTED CHANGE	NEW STATE	PRIOR STATE	REQUESTED CHANGE	NEW STATE
R	TLA F	F	R	TLR F	DNY
R	TLA T	T	R	TLR T	DNY
R	TLA B	B	R	TLR B	DNY
F	TLA F	DNY	F	TLR F	R

PRIOR STATE	REQUESTED CHANGE	NEW STATE	PRIOR STATE	REQUESTED CHANGE	NEW STATE
F	TLA T	B	F	TLR T	DNY
F	TLA B	B	F	TLR B	R
B	TLA F	DNY	B	TLR F	T
B	TLA T	DNY	B	TLR T	F
B	TLA B	DNY	B	TLR B	R
T	TLA T	DNY	T	T	R
T	F	B	T	F	DNY
T	B	B	T	B	R

The customer number (ff) is optional when the master leg customer is in a DS0A channel. This is because there is only one customer in a DS0A channel. If specified for this type of channel, it must appear as 01. If the specified facility is a DS0B, a customer number must appear.

Command

Nonhierarchical

[l.19561]

```
CHG:[FRM xy][,SEQ ww]:{TLA|TLR} m,TO [s]abcddd[/ff],MJU ssss \  
[,BRi]!
```

Hierarchical

[l.19561]

```
CHG:[FRM xy][,SEQ ww]:{TLA|TLR} m,TO uvmnpddd[/ff],MJU ssss \  
[,BRi]!
```

Completion Message

Nonhierarchical

[O.19561]

M hh:mm:ss xy,ww n[vv] CHG {TLA|TLR} m MPTM [s]abcddd/ff \
MJU ssss[BRi] 2 LN MSG:
NEW STATE TLA s COMPL

Hierarchical

[O.19561]

M hh:mm:ss xy,ww n[vv] CHG {TLA|TLR} m MPTM uvmnpddd/ff \
MJU ssss[BRi] 2 LN MSG:
NEW STATE TLA s COMPL

Denial Message

Nonhierarchical

[O.19561.01]

M hh:mm:ss xy,ww n[vv] CHG {TLA|TLR} m MPTM [s]abcddd/ff \
MJU ssss[BRi] <reason 1> 2 LN MSG:
<reason 2> DNY

Hierarchical

[O.19561.01]

M hh:mm:ss xy,ww n[vv] CHG {TLA|TLR} m MPTM uvmnpddd/ff \
MJU ssss[BRi] <reason 1> 2 LN MSG:
<reason 2> DNY

Explanation of Parameters

NEW

New

STATE

State

NEW STATE indicates the new termination state of the circuit as a result of the command. The circuit can be left terminated in either or both directions, or left in the released state.

TLA

Terminate and leave activate

TLR

Terminate and leave release

The requested termination state change is indicated by TLA or TLR, where TLA activates and TLR releases the terminate and leave state.

s

Resulting termination state of the circuit:

	R	Neither side is terminated
	F	FROM side is terminated
	T	TO side is terminated
	B	BOTH sides are terminated
m		Circuit direction m specifies the circuit direction affected by the change.
	F	Terminate or release the FROM side
	T	Terminate or release the TO side
	B	Terminate or release BOTH sides
TO		To
MPTM		Multipoint mode
[s]abc		The 3- or 4-digit nonhierarchical NPC number of the master leg. For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp		Hierarchical NPC number of the master leg. uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd		Channel number The valid values are listed below: 001-024 001-047 Odd only (SLC 96 [®] Carrier, Mode 3, DGA) 049-095 Odd only (SLC 96 Carrier, Mode 3, DGC) 001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA) 025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB) 049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC) 073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD) 001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA) 025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)

	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
ff	Customer number	
	The valid values are listed below:	
	01	(DS0A at 2.4, 4.8, 9.6, or 56 kb/s)
	01-20	(DS0B at 2.4 kb/s)
	01-10	(DS0B at 4.8 kb/s)
	01-05	(DS0B at 9.6 kb/s)
MJU	Multipoint junction unit	
ssss	MJU addressed by this command (0001-9999)	
BR	Branch	
i	Branch number of MJU ssss addressed by this command (1-4)	
reason 1	Coded reason for denial	
reason 2	Explanation of reason 1	
	Input Errors	
	reason 1	reason 2
	CH NOT EST THE SPECIFIED ACCESS POINT IS NOT ESTABLISHED TO SR FEATURE	
	CN RATE	CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0A CHANNEL [s]abcd
	CN RATE	CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0B CHANNEL [s]abcd
	INERR	CHANNEL [s]abcd IS NOT A MULTIPOINT MASTER LEG
	INERR	THE SPECIFIED NPC [s]abc IS NOT FACILITY TERMINATING
	INERR	NPC xxx IS NOT PROVISIONED AS DIGROUP-A OF AN RT
	INERR	TLA CANNOT BE SPECIFIED FOR A LOOPED ACCESS POINT
	INERR	MJU ssss DOES NOT EXIST IN THE CIRCUIT
	MPTM	CUSTOMER IS NOT SPECIFIED FOR THE DS-0B CHANNEL

NTLR	THE SPECIFIED TEST ACCESS POINT IS ALREADY IN TLA MODE
PCH	THE SPECIFIED ACCESS POINT IS A PARITY CHANNEL
PTLA	THE SPECIFIED ACCESS POINT IS ALREADY IN TLA MODE
NTLA	THE SPECIFIED ACCESS POINT IS ALREADY IN TLR MODE
UASGN	TLA CANNOT BE SPECIFIED FOR AN UNMAPPED CIRCUIT
UASGN	TLR CANNOT BE SPECIFIED FOR AN UNMAPPED CIRCUIT
UTST	THE SPECIFIED ACCESS POINT IS UNDER TEST
RNGIE	CHANNEL NUMBER ddd OUT OF RANGE FOR NPC [s]abc

Maintenance Conditions

reason 1 reason 2

F UEQD	THE FROM SIDE NPC [s]abc IS NOT EQUIPPED
F OOS	THE FROM SIDE NPC [s]abc IS OUT-OF-SERVICE
F FAIL	THE FROM SIDE NPC [s]abc IS FAILED
MCOND	BOTH CCN SIDES ARE OUT-OF-SERVICE
MCOND	ACTIVE CCN SIDE s IS OUT-OF-SERVICE
MCOND	ACTIVE CCN SIDE s IS FAILED
MCOND	ACTIVE CCN SIDE s IS PESTED
MCOND	NO DSPU IS EQUIPPED
MCOND	NO SRM OR MJU TYPE NPC IS EQUIPPED
MCOND	INACTIVE CCN SIDE IN-SERVICE AND NPC [s]abc ON INACTIVE SIDE IS OOS
MCOND	CCNI s IS OUT-OF-SERVICE
MCOND	CCNI s IS FAILED
MCOND	TSI sft IS NOT EQUIPPED
MCOND	TSI sft IS OUT-OF-SERVICE
MCOND	TSI sft IS FAILED

MCOND	CCB sf IS NOT EQUIPPED
MCOND	CCB sf IS OUT-OF-SERVICE
MCOND	CCB sf IS FAILED
MCOND	CCI s IS OUT-OF-SERVICE
MCOND	CCI s IS FAILED
MCOND	ETSI sqq IS NOT EQUIPPED
MCOND	ETSI sqq IS OUT-OF-SERVICE
MCOND	ETSI sqq IS FAILED
MCOND	UNIT [q]q IS NOT FACILITY TERMINATING TYPE
MCOND	UNIT [q]q IS NOT EQUIPPED
MCOND	UNIT [q]q IS OUT-OF-SERVICE
MCOND	UNIT [q]q IS FAILED
MCOND	UNIT [q]q FTMI d IS NOT EQUIPPED
MCOND	UNIT [q]q FTMI d IS OUT-OF-SERVICE
MCOND	UNIT [q]q FTMI d IS FAILED
MCOND	UNIT [q]q FC sb IS NOT EQUIPPED
MCOND	UNIT [q]q FC sb IS OUT-OF-SERVICE
MCOND	UNIT [q]q FC sb IS FAILED
MCOND	DSPI IN UNIT [q]q IS OUT-OF-SERVICE
MCOND	DSPI IN UNIT [q]q IS FAILED
MCOND	NPC [s]abc SIDE s IS OUT-OF-SERVICE
MCOND	NPC [s]abc SIDE s IS FAILED
M OOS	THE MULTIPOINT MASTER (MPTM) NPC [s]abc IS OUT-OF-SERVICE
M UEQD	THE MULTIPOINT MASTER (MPTM) NPC [s]abc IS NOT EQUIPPED
M FAIL	THE MULTIPOINT MASTER (MPTM) NPC [s]abc IS FAILED
T UEQD	THE TO SIDE NPC [s]abc IS NOT EQUIPPED
T OOS	THE TO SIDE NPC [s]abc IS OUT-OF-SERVICE
T FAIL	THE TO SIDE NPC [s]abc IS FAILED
NA	REQUIRED DACS UNIT COULD NOT BE ACCESSED

cc Hexadecimal condition code

CHANGE SUBRATE TERMINATE AND LEAVE

Explanation of Command

This command changes the terminate and leave state of the cross-connection associated with a subrate two-point or multipoint circuit. The termination point is defined in terms of an external facility termination (that is, a digroup, channel, and customer number). If the termination point specified is under test or is not cross-connected, the command is denied.

The external facility termination given by the NPC, channel, and customer number can be one end of a two-point circuit, or the master leg or branch of a multipoint circuit.



NOTE:

If the termination is a DS0B customer and on an Out-Of-Service NPC, this command completes; however, the new state for that termination does NOT take effect until that NPC is restored to service.

The CHG command cannot be used to change the terminate and leave status of the entire DS0B channel (that is, all customers within the DS0B at once). Also, the CHG command cannot be used to change the terminate and leave status of an external facility termination that is looped on itself.

The termination state resulting from the command depends on the state prior to the command as indicated by the following table:

PRIOR STATE	REQUESTED CHANGE	NEW STATE	PRIOR STATE	REQUESTED CHANGE	NEW STATE
R	TLA F	F	R	TLR F	DNY
R	TLA T	T	R	TLR T	DNY
R	TLA B	B	R	TLR B	DNY
F	TLA F	DNY	F	TLR F	R
F	TLA T	B	F	TLR T	DNY
F	TLA B	B	F	TLR B	R

PRIOR STATE	REQUESTED CHANGE	NEW STATE	PRIOR STATE	REQUESTED CHANGE	NEW STATE
B	TLA F	DNY	B	TLR F	T
B	TLA T	DNY	B	TLR T	F
B	TLA B	DNY	B	TLR B	R
T	TLA T	DNY	T	T	R
T	F	B	T	F	DNY
T	B	B	T	B	R

Command**1.544 Mbit/s Termination****Nonhierarchical**

[I.19551]

CHG:[FRM xy][,SEQ ww]:{TLA|TLR} m,TO [s]abcddd[/ff]!

Hierarchical

[I.19551]

CHG:[FRM xy][,SEQ ww]:{TLA|TLR} m,TO uvmnpddd[/ff]!

**Completion
Message****1.544 Mbit/s Termination****Nonhierarchical**

[O.19551]

M hh:mm:ss xy,ww n[vv] CHG {TLA|TLR} m [s]abcddd/ff \
NEW STATE TLA s COMPL**Hierarchical**

[O.19551]

M hh:mm:ss xy,ww n[vv] CHG {TLA|TLR} m uvmnpddd/ff \
NEW STATE TLA s COMPL

Denial Message 1.544 Mbit/s Termination

Nonhierarchical

[O.19551.01]

M hh:mm:ss xy,ww n[vv] CHG {TLA|TLR} m [s]abcddd/ff \
<reason 1> 2 LN MSG:
<reason 2> DNY

Hierarchical

[O.19551.01]

M hh:mm:ss xy,ww n[vv] CHG {TLA|TLR} m uvmnpddd/ff \
<reason 1> 2 LN MSG:
<reason 2> DNY

Explanation of Parameters

NEW	New
STATE	State
	NEW STATE indicates the new termination state of the circuit as a result of the command. The circuit can be left terminated in either the FROM, TO or both directions, or left in the released state.
TLA	Terminate and leave activate
TLR	Terminate and leave release
	The requested termination state change is indicated by the TLA or TLR where TLA activates and TLR releases the terminate and leave state. The unassigned multiplex channel (UMC) code is inserted towards the direction that is terminated.
m	Requested termination side
F	FROM. Terminate or release the FROM side
T	TO. Terminate or release the TO side
B	BOTH. Terminate or release BOTH sides
	The TO direction is defined as facing towards the external facility termination indicated by the NPC, channel, and customer number. (The TO and FROM directions are the same sides that are connected to the even and odd test port channels, respectively, in the corresponding STST test access command.)

s	Resulting termination state of the circuit
R	Neither side is terminated
F	FROM side is terminated
T	TO side is terminated
B	BOTH sides are terminated
TO	To termination For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number
uv-m-np	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number 001-024 001-047 Odd only (SLC 96 [®] Carrier, Mode 3, DGA) 049-095 Odd only (SLC 96 Carrier, Mode 3, DGC) 001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA) 025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB) 049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC) 073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD) 001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA) 025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB) 049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC) 073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
ff	Customer number 01 (DS0A at 2.4, 4.8, 9.6, or 56 kb/s) 01-20 (DS0B at 2.4 kb/s)

	01-10	(DS0B at 4.8 kb/s)
	01-05	(DS0B at 9.6 kb/s)
		The customer number (ff) is optional when the customer is in a DS0A channel. This is because there is only one customer in a DS0A channel. If ff is specified for this type of channel, it must appear as 01. If the specified facility is a DS0B, a customer number must appear.
reason 1		Coded reason for denial
reason 2		Explanation of reason 1
		Reason 1 summarizes the denial reason with a single keyword while reason 2 gives a more detailed explanation.
F UEQD		THE FROM SIDE NPC [s]abc IS NOT EQUIPPED
T UEQD		THE TO SIDE NPC [s]abc IS NOT EQUIPPED
MCOND		TSI sft IS NOT EQUIPPED
MCOND		CCB sf IS NOT EQUIPPED
MCOND		ETSI sqq IS NOT EQUIPPED
MCOND		UNIT [q]q IS NOT EQUIPPED
MCOND		UNIT [q]q FTMI d IS NOT EQUIPPED
MCOND		UNIT [q]q FC sb IS NOT EQUIPPED
MCOND		NPC [s]abc IS NOT EQUIPPED
MCOND		UNIT [q]q MXR c NOT EQUIPPED
MCOND		NO DSPU IS EQUIPPED
MCOND		NO SRM OR MJU TYPE NPC IS EQUIPPED
RNGIE		CHANNEL NUMBER ddd IS OUT OF RANGE FOR NPC [s]abc
CN RATE		CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0B CHANNEL [s]abcddd
CN RATE		CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0A CHANNEL [s]abcddd
PCH		THE SPECIFIED ACCESS POINT IS A PARITY CHANNEL
INERR		THE TO SIDE NPC [s]abc IS NOT FACILITY TERMINATING TYPE
MCOND		UNIT [q]q IS NOT FACILITY TERMINATING TYPE
INERR		TLA CANNOT BE SPECIFIED FOR A LOOPED CHANNEL
INERR		TLA CANNOT BE SPECIFIED FOR DS-0B

INERR	TLR CANNOT BE SPECIFIED FOR DS-0B
UASGN	TLA CANNOT BE SPECIFIED FOR AN UNMAPPED CIRCUIT
UASGN	TLR CANNOT BE SPECIFIED FOR AN UNMAPPED CIRCUIT
NA	REQUIRED DACS UNIT COULD NOT BE ACCESSED
MCOND	BOTH CCN SIDES ARE OUT-OF-SERVICE
MCOND	ACTIVE CCN SIDE s IS OUT-OF -SERVICE
F OOS	THE FROM SIDE NPC [s]abc IS OUT-OF-SERVICE
T OOS	THE TO SIDE NPC [s]abc IS OUT-OF-SERVICE
MCOND	CCNI s IS OUT-OF-SERVICE
MCOND	TSI sft IS OUT-OF-SERVICE
MCOND	CCB sf IS OUT-OF-SERVICE
MCOND	CCI s IS OUT-OF-SERVICE
MCOND	ETSI sqq IS OUT-OF-SERVICE
NTLA	THE SPECIFIED ACCESS POINT IS ALREADY IN RLS MODE
PTLA	THE SPECIFIED ACCESS POINT IS ALREADY IN TERM MODE
MCOND	UNIT [q]q IS OUT-OF-SERVICE
MCOND	UNIT [q]q FTMI d IS OUT-OF-SERVICE
MCOND	UNIT [q]q FC sb IS OUT-OF-SERVICE
MCOND	DSPI IN UNIT [q]q IS OUT-OF-SERVICE
MCOND	NPC [s]abc SIDE s IS OUT-OF-SERVICE
MCOND	UNIT [q]q FLI k IS OUT-OF-SERVICE
MCOND	UNIT [q]q FMT s IS OUT-OF-SERVICE
MCOND	UNIT [q]q MXR c IS OUT-OF-SERVICE
MCOND	UNIT [q]q MIU c IS OUT-OF-SERVICE
MCOND	ACTIVE CCN SIDE s IS FAILED
MCOND	ACTIVE CCN SIDE s IS PESTED
F FAIL	THE FROM SIDE NPC [s]abc IS FAILED
T FAIL	THE TO SIDE NPC [s]abc IS FAILED
MCOND	CCNI s IS FAILED
MCOND	TSI sft IS FAILED
MCOND	CCB sf IS FAILED

MCOND	CCI s IS FAILED
MCOND	ETSI sqq IS FAILED
MCOND	UNIT [q]q IS FAILED
MCOND	UNIT [q]q FTMI d IS FAILED
MCOND	UNIT [q]q FC sb IS FAILED
MCOND	DSPI IN UNIT [q]q IS FAILED
MCOND	NPC [s]abc SIDE s IS FAILED
MCOND	UNIT [q]q FLI k IS FAILED
MCOND	UNIT [q]q FMT s IS FAILED
MCOND	UNIT [q]q MXR c IS FAILED
MCOND	UNIT [q]q MIU c IS FAILED
UTST	THE SPECIFIED ACCESS POINT IS UNDER TEST
CH NOT EST	THE SPECIFIED ACCESS POINT IS NOT ESTABLISHED TO SR FEATURE
NTLA	THE SPECIFIED ACCESS POINT IS ALREADY IN TLR MODE
PTLA	THE SPECIFIED ACCESS POINT IS ALREADY IN TLA MODE
cc	Hexadecimal condition code

CHANGE TYPE, OPTIONS

Explanation of Command

This command changes the threshold values for facility performance parameters on all NPCs of a particular type. The threshold values may be changed without disconnecting and reconnecting provisioned circuits.

One or more alarm or information threshold values may be set for all NPCs to a value previously stored in the DACS II threshold data base.

The values stored in the DACS II threshold data base are selected with the indices (rr/n).

Command

1.544 Mbit/s Termination

[I.38231]

```
CHG:[FRM xy][,SEQ ww]:TYPE mnxyz,OPTS(rr/<m>[,rr/<m>][...])!
```

2.048 Mbit/s Termination

[I.38231]

```
CHG:[FRM xy][,SEQ ww]:TYPE mnxyz,{OPTS(rr/<m>[,rr/<m>][...])| \
THMODE hhh}!
```

Completion Message

1.544 Mbit/s Termination

[O.38231]

```
M hh:mm:ss xy,ww n[vv] CHG TYPE mnxyz 4 LN MSG:
      SLIP      BER  ERS   SERS COFA[SANE] [SAFE]
THRESHOLDS mmm nnn  p q  rrrrr  sss  ttt uuu[xxxxx] [zzzzz]
OPTIONS     e   f   g h i      j   k   l      [m]      [n] COMPL
```

For ANSI (DA and TA type) NPCs:

[O.38232]

```
M hh:mm:ss xy,ww n[vv] CHG TYPE mnxyz 4 LN MSG:
DAILY NE    CVP      ESP   SESP  SEFS  CSSP  UASP  CVL      ESL  \
```

```

SESL
THRESHOLDS aaaaaaaaa bbbbbb ccccc ddddd eeeee fffff gggggggg \
hhhhh iiii
OPTIONS a b c d e f g h i
EOM

M hh:mm:ss xy,ww n[vv] CHG TYPE mnxyz 4 LN MSG:
DAILY FE CVP ESP SESP SEFS CSSP UASP ESL
THRESHOLDS jjjjjjjj kkkkk llll mmmm nnnn ooooo ppppp
OPTIONS j k l m n o p EOM

M hh:mm:ss xy,ww n[vv] CHG TYPE mnxyz 4 LN MSG:
15MIN NE CVP ESP SESP SEFS CSSP UASP CVL ESL \
SESL
THRESHOLDS a a a a a a b b b c c c d d d e e e f f f \
g g g g g g h h h i i i
OPTIONS a b c d e f g h \
i EOM

M hh:mm:ss xy,ww n[vv] CHG TYPE mnxyz 4 LN MSG:
15MIN FE CVP ESP SESP SEFS CSSP UASP ESL
THRESHOLDS j j j j j j k k k l l l m m m n n n o o o \
p p p
OPTIONS j k l m n o p COMPL

```

2.048 Mbit/s Termination

For PB and PC type NPCs:

[O.38231]

```

M hh:mm:ss xy,ww n CHG TYPE mnxyz 4 LN MSG:
24 HOURS DM SERS ERS US SLIP
THRESHOLDS nnnnn ppppp qqqqq rrrrr sssss
OPTIONS e f g h i
EOM

M hh:mm:ss xy,ww n CHG TYPE mnxyz 4 LN MSG:
SHORT INTERVAL DM SERS ERS US SLIP
THRESHOLDS nnnnn ppppp qqqqq rrrrr sssss
OPTIONS e f g h i
COMPL

```

For PA type NPCs:

[O.38232]

```

M hh:mm:ss xy,ww n[vv] CHG TYPE mnxyz 4 LN MSG:
DAILY CRC FRER OFS ES SES CSS CV
THRESHOLDS aaaaaaaaa bbbbbbbbbb ccccc ddddd eeeee fffff gggggggg
OPTIONS a b c d e f g EOM

```

```
M hh:mm:ss xy,ww n[vv] CHG TYPE mnxyz 4 LN MSG:
DAILY      UAS  UATC MER  FEBE      FES  FSES  FUAS
THRESHOLDS hhhh iiii jjjjj kkkkkkkk llll  mmmm  nnnnn
OPTIONS    h    i    j    k        l    m    n      EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG TYPE mnxyz 4 LN MSG:
15MIN      CRC      FRER      OFS  ES    SES    CSS    CV
THRESHOLDS a a a a a a  b b b b b b b  c c c  d d d  e e e \
f f f  g g g g g g g
OPTIONS    a          b          c    d    e    f    g      EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG TYPE mnxyz 4 LN MSG:
15MIN      UAS  UATC MER  FEBE      FES  FSES  FUAS
THRESHOLDS h h h  i i  j j j  k k k k k k k  l l l  m m m  n n n
OPTIONS    h    i    j    k        l    m    n      COMPL
```

[O.38233]

```
M hh:mm:ss xy,ww n[vv] CHG TYPE mnxyz THMODE hhh COMPL
```

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For TH type NPCs:

[O.38232]

```
M hh:mm:ss xy,ww n[vv] CHG TYPE mnxyz 4 LN MSG:
DAILY      CRC      FRER      OFS  ES    SES    CSS    CV
THRESHOLDS aaaaaaaaa bbbbbbbbbb ccccc ddddd eeeee fffff ggggggggg
OPTIONS    a          b          c    d    e    f    g      EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG TYPE mnxyz 4 LN MSG:
DAILY      UAS  UATC MER  FEBE      FES  FSES  FUAS
THRESHOLDS hhhh iiii jjjjj kkkkkkkk llll  mmmm  nnnnn
OPTIONS    h    i    j    k        l    m    n      EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG TYPE mnxyz 4 LN MSG:
15MIN      CRC      FRER      OFS  ES    SES    CSS    CV
THRESHOLDS a a a a a a  b b b b b b b  c c c  d d d  e e e \
f f f  g g g g g g g
OPTIONS    a          b          c    d    e    f    g      EOM
```

```
M hh:mm:ss xy,ww n[vv] CHG TYPE mnxyz 4 LN MSG:
15MIN      UAS  UATC MER  FEBE      FES  FSES  FUAS
THRESHOLDS h h h  i i  j j j  k k k k k k k  l l l  m m m \
n n n
OPTIONS    h    i    j    k        l    m    n      COMPL
```

Note that FEBE, FES, FSES and FUAS are not applicable for TH type NPCs. However, the positions for these parameters were retained in order to be compatible with the output generated for PA type NPCs.

Denial Message

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[O.38231.01]

M hh:mm:ss xy,ww n[vv] CHG TYPE mnxyz[vv/k] COND cc DNY

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[O.38231.01]

M hh:mm:ss xy,ww n[vv] CHG TYPE mnxyz[{vv/k|THMODE hhh}] COND cc \ DNY

Explanation of Parameters

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TYPE	Type
mnxyz	NPC type
DExyz	FTU DS1 NPC
TExyz	DS3U or HDS3U DS1 NPC
DSxyz	SLC [®] carrier digroup terminating NPC
DAxyz	FTU DS1 ANSI NPC type
TAxyz	DS3U DS1 ANSI NPC type

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THxyz HDS3U CEPT NPC

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mnxyz	NPC type
PAxyz	CEPT NPC (120-ohm twisted pair or 75-ohm coaxial)
PBxyz	CEPT NPC (120-ohm twisted pair)
PCxyz	CEPT NPC (75-ohm coaxial)
SHxyz	HSU CEPT NPC type

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

OPTS Options

Clear DS1 DE type FTU NPCs have a limited number of parameters for performance monitoring, 01 through 04 only. Clear DS1 TE type DS3U or HDS3U type NPCs have only parameters 01 and 02.

rr Facility performance parameter number

Variable rr specifies the parameter whose alarm threshold is being selected

<m> Facility performance parameter threshold index (0 through 10 hex)

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m Facility performance parameter threshold index (0 to 3)

Variable m is used to select threshold values previously programmed for rr. The default threshold value, the value selected by m=0, for each parameter is shown in the table below under the column heading "Default Threshold Value". Threshold values selected by m=1 through m=3 must exist; that is, must have been programmed prior to being selected. The nondefault thresholds can be set by using command I.38201.

Clear-DS1 ANSI NPCs (DAXy9/TAXy9) provide the same set of path and line performance monitoring parameters that are provided by terminated ANSI NPC types. ANSI NPCs in DS3 Units (TAXyz) do not provide near-end DS1 line performance monitoring parameters.

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Variable <m> is used to select threshold values previously programmed for rr. The default threshold value, the value selected by m=0, for each parameter is shown below for each NPC type under the column heading "Default Threshold Value". Threshold values selected by values of m other than 0 must exist, that is, must have been programmed, prior to being selected. These other thresholds can be set by using command 38201.

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For DE, TE, SE or DS type NPCs:

For DE type NPCs, parameters with values rr = 1 through 8 are valid.

For DS type NPCs, parameters with values rr = 1 through 10 are valid.

For TE type NPCs, parameters with values rr = 1 through 8 are valid.

For SE type NPCs, parameters with values rr = 1 through 8 are valid.

For Clear-DS1 DE type NPCs, parameters with values rr = 1 through 4 are valid.

For Clear-DS1 TE type NPCs, parameters with values rr = 1 through 2 are valid.

For Clear-DS1 SE type NPCs, parameters with values rr = 1 through 2 are valid.

rr	Parameter	Threshold Value Range	Default Threshold Value
01	Slip major	000 to 255	255
02	Slip minor	000 to 255	4
03	Bit Error Rate major	1E-3* to 1E-6†	1E-3*
04	Bit Error Rate minor	1E-3* to 1E-6†	1E-6
05	Errored Seconds‡	00001 to 65535	864
06	Severely Errored Seconds‡	001 to 255	225
07	Change of Frame Alignment major	001 to 511	511
08	Change of Frame Alignment minor	001 to 255	17
09	Shelf Alarm Near End (SANE)§	00001 to 65535	00000
10	Shelf Alarm Far End (SAFE)§	00001 to 65535	00000

* 4 for clear-DS1 NPCs or DS type NPCs (default).

† 7 on DE or TE type NPCs using T1DM (x = 4) or on DE, TE, SE type NPCs using ESF (x=2 or 3) framing.

‡ Only applicable to DE or TE type NPCs using T1DM (x = 4) or DE, TE, SE type NPCs using ESF (x = 2 or 3) framing.

§ Applicable only to DS type NPCs.

Major thresholds must be greater than minor thresholds.

For Bit Error Rates, enter only the power of 10 (DACS assumes its sign is negative). For example, for a BER of 10^{-3} (.001), enter 3.

Slip major and Slip minor threshold crossing alarms may be disabled by programming threshold values of zero for the respective parameters.

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For DA, TA and SA type NPCs:

For Channelized and Clear-DS1 DA type NPCs with ESF framing, all of the following Near-end and Far-end parameters are valid.

For Channelized and Clear-DS1 DA type NPCs with D4 or T1DM framing, all of the following Near-end parameters are valid, but the only valid Far-end parameter is Unavailable Seconds (rr = 55,71).

For Channelized and Clear-DS1 TA and SA type NPCs with ESF framing, all of the following Near-end Path parameters are valid, but the Near-End Line parameters (rr = 47-49, 63-65) are invalid. All of the following Far-end parameters are valid.

For Channelized and Clear-DS1 TA and SA type NPCs with D4 or T1DM framing, the following Near-end Path parameters are valid, but the Near-End Line parameters (rr = 47-49, 63-65) are invalid. The only valid Far-end parameter is Unavailable Seconds (rr = 55,71).

rr	Parameter	Threshold Value Range	Default Threshold Value
41	Daily Near-end Path Coding Violations	000000000 to 134217727	132960†
42	Daily Near-end Path Errored Seconds	00000 to 86400	648
43	Daily Near-end Path Severely Errored Seconds	00000 to 86400	100
44	Daily Near-end Severely Errored Framing Seconds	00000 to 86400	17
45	Daily Near-end Controlled Slip Seconds	00000 to 86400	4

rr	Parameter	Threshold Value Range	Default Threshold Value
46	Daily Near-end Unavailable Seconds	00000 to 86400	10
47	Daily Near-end Line Coding Violations	000000000 to 134217727	133400
48	Daily Near-end Line Errored Seconds	00000 to 86400	648
49	Daily Near-end Line Severely Errored Seconds	00000 to 86400	100
50	Daily Far-end Path Coding Violations	000000000 to 134217727	132960†
51	Daily Far-end Path Errored Seconds	00000 to 86400	648
52	Daily Far-end Path Severely Errored Seconds	00000 to 86400	100
53	Daily Far-end Severely Errored Framing Seconds	00000 to 86400	17
54	Daily Far-end Controlled Slip Seconds	00000 to 86400	4
55	Daily Far-end Unavailable Seconds	00000 to 86400	10
56	Daily Far-end Line Errored Seconds	00000 to 86400	648
57	15-Minute Near-end Path Coding Violations	0000000 to 2097151	13296‡
58	15-Minute Near-end Path Errored Seconds	000 to 900	65
59	15-Minute Near-end Path Severely Errored Seconds	000 to 900	10

rr	Parameter	Threshold Value Range	Default Threshold Value
60	15-Minute Near-end Severely Errored Framing Seconds	000 to 900	2
61	15-Minute Near-end Controlled Slip Seconds	000 to 900	1
62	15-Minute Near-end Unavailable Seconds	000 to 900	10
63	15-Minute Near-end Line Coding Violations	0000000 to 2097151	13340
64	15-Minute Near-end Line Errored Seconds	000 to 900	65
65	15-Minute Near-end Line Severely Errored Seconds	000 to 900	10
66	15-Minute Far-end Path Coding Violations	0000000 to 2097151	13296±
67	15-Minute Far-end Path Errored Seconds	000 to 900	65
68	15-Minute Far-end Path Severely Errored Seconds	000 to 900	10
69	15-Minute Far-end Severely Errored Framing Seconds	000 to 900	2

rr	Parameter	Threshold Value Range	Default Threshold Value
70	15-Minute Far-end Controlled Slip Seconds	000 to 900	1
71	15-Minute Far-end Unavailable Seconds	000 to 900	10
72	15-Minute Far-end Line Errored Seconds	000 to 900	65

† The value shown applies to ESF framing and is a count of CRC errors. When the DS1 has D4 or T1DM framing, framing errors are counted and the default Daily value is 691.

‡ The value shown applies to ESF framing and is a count of CRC errors. When the DS1 has D4 or T1DM framing, framing errors are counted and the default 15-Minute value is 72.

For PB and PC type NPCs:

rr	Parameter	Threshold Value Range	Default Threshold Value
31	Degraded Minutes, 1 hour	1-60	60
32	Degraded Minutes, 24 hours	1-1440	1440
33	Severely Errored Seconds, 15 mins	1-900	900
34	Severely Errored Seconds, 24 hours	1-65535	65535
35	Errored Seconds, 15 minutes	1-900	900
36	Errored Seconds, 24 hours	1-65535	65535
37	Unavailable Seconds, 15 minutes	1-900	900
38	Unavailable Seconds, 24 hours	1-65535	65535
39	Slips, 15 minutes	1-900	900
40	Slips, 24 hours	1-65535	65535

**NOTE:**

24-hour thresholds must be greater than their respective 15-minute or 1-hour threshold.

For PA type NPCs:

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
11	CRC Block Errors	DAILY	1 - 79056000	176947
12	Framing Errors	DAILY	1 - 345600000	176947
13	Out of Frame Seconds	DAILY	1 - 86400	4
14	Errored Seconds	DAILY	1 - 86400	4320
15	Severely Errored Seconds	DAILY	1 - 86400	90
16	Controlled Slip Seconds	DAILY	1 - 86400	4
17	Coding Violations	DAILY	1 - 176947200	176947
18	Unavailable Seconds	DAILY	1 - 86400	90
19	Unavailable Time Count	DAILY	1 - 4320	9
20	Multiframe Errors	DAILY	1 - 86400	4095
21	Far End Block Errors	DAILY	1 - 79056000	176947
22	Far End Errored Seconds	DAILY	1 - 86400	4320
23	Far End Severely Errored Seconds	DAILY	1 - 86400	90
24	Far End Unavailable Seconds	DAILY	1 - 86400	90
81	CRC Block Errors	15MIN	1 - 823500	18432
82	Framing Errors	15MIN	1 - 3600000	18432

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
83	Out of Frame Seconds	15MIN	1 - 900	4
84	Errored Seconds	15MIN	1 - 900	300
85	Severely Errored Seconds	15MIN	1 - 900	30
86	Controlled Slip Seconds	15MIN	1 - 900	1
87	Coding Violations	15MIN	1 - 1843200	18432
88	Unavailable Seconds	15MIN	1 - 900	30
89	Unavailable Time Count	15MIN	1 - 45	3
90	Multiframe Errors	15MIN	1 - 900	255
91	Far End Block Errors	15MIN	1 - 823500	18432
92	Far End Errored Seconds	15MIN	1 - 900	300
93	Far End Severely Errored Seconds	15MIN	1 - 900	30
94	Far End Unavailable Seconds	15MIN	1 - 900	30

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For TH type NPCs:

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
11	CRC Block Errors	DAILY	1 - 79056000	176947
12	Framing Errors	DAILY	1 - 345600000	176947
13	Out of Frame Seconds	DAILY	1 - 86400	4

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
14	Errored Seconds	DAILY	1 - 86400	4320
15	Severely Errored Seconds	DAILY	1 - 86400	90
16	Controlled Slip Seconds	DAILY	1 - 86400	4
18	Unavailable Seconds	DAILY	1 - 86400	90
19	Unavailable Time Count	DAILY	1 - 4320	9
20	Multiframe Errors	DAILY	1 - 86400	4095
81	CRC Block Errors	15MIN	1 - 823500	18432
82	Framing Errors	15MIN	1 - 3600000	18432
83	Out of Frame Seconds	15MIN	1 - 900	4
84	Errored Seconds	15MIN	1 - 900	300
85	Severely Errored Seconds	15MIN	1 - 900	30
86	Controlled Slip Seconds	15MIN	1 - 900	1
88	Unavailable Seconds	15MIN	1 - 900	30
89	Unavailable Time Count	15MIN	1 - 45	3
90	Multiframe Errors	15MIN	1 - 900	255

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For PA, PB, and PC type NPCs:

In the following table, these definitions apply:

MI	Maintenance Information
DMA	Deferred Maintenance Action Minor Alarm
PMA Major	Prompt Maintenance Action Major Alarm

PMA Critical Prompt Maintenance Action Critical Alarm

<m>	Threshold Value	Alarm Type
0	Default*	MI (Maintenance Information)
1	Default	DMA (Deferred Maintenance Minor Alarm)
2	Default	PMA (Prompt Maintenance Major Alarm)
3	Set 1	MI
4	Set 1	DMA
5	Set 1	PMA Major
6	Set 2	MI
7	Set 2	DMA
8	Set 2	PMA Major
9	Set 3	MI
a	Set 3	DMA
b	Set 3	PMA Major
c	Threshold disabled	no alarm
d	Default	PMA Critical
e	Set 1	PMA Critical
f	Set 2	PMA Critical
10	Set 3	PMA Critical

*m = 0 is the default.

Threshold values for Set 1, Set 2, and Set 3 must be set (programmed) by using the command mentioned in the explanation of m above before variable m can be used to select threshold levels and alarm types other than the defaults.

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SLIP Timing slip
BER Bit error rate
ERS Errored seconds

SERS	Severely errored seconds
COFA	Change of frame alignment
SANE	Shelf Alarm Near End
SAFE	Shelf Alarm Far End
SLIP	
mmm	Slip major alarm threshold (0 through 255)
nnn	Slip minor alarm threshold (0 through 255)
e	Slip major alarm option selection (0 through 3)
f	Slip minor alarm option selection (0 through 3)
BER (Bit Error Rate)	
p	BER major alarm threshold, (1E-p, 3* through 6†)
q	BER minor alarm threshold, (1E-q, 3* through 6†)
	* 4 for clear-DS1 FTU NPC or DS type NPC
	† 7 on T1DM and Fe framing
g	BER major alarm option selection (0 through 3)
h	BER minor alarm option selection (0 through 3)
ERS (Errored Seconds)	
rrrrr	ERS threshold (1 through 65535)
i	ERS option selection (0 through 3)
SERS (Severely Errored Seconds)	
sss	SERS threshold (1 through 255)
j	SERS option selection (0 through 3)
COFA (Change of Frame Alignment)	
ttt	COFA major alarm threshold (1 through 511)
uuu	COFA minor alarm threshold (1 through 255)
k	COFA major alarm option selection (0 through 3)
l	COFA minor alarm option selection (0 through 3)
SANE (Shelf Alarm Near End)	
xxxxx	SANE alarm threshold (00000 through 65535)
m	SANE alarm option selection (0 through 3)
SAFE (Shelf Alarm Far End)	
zzzzz	SAFE alarm threshold (00000 through 65535)

n SAFE alarm option selection (0 through 3)

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NOTE:

Major thresholds may not be equal to minor thresholds, except for the BER threshold of SLC[®] 96 carrier NPCs. For DE type clear-DS1 NPCs, only SLIP and BER parameters are listed. For TE type clear-DS1 DS3U or HDS3U and SE type NPCs, only SLIP parameters are listed. Both SANE and SAFE are applicable only to SLC 96 carrier NPCs.

For ANSI NPC types:

CVP	Path Coding Violations
ESP	Path Errored Seconds
SESP	Path Severely Errored Seconds
SEFS	Severely Errored Framing Seconds
CSSP	Path Controlled Slip Seconds
UASP	Path Unavailable Seconds
CVL	Line Coding Violations
ESL	Line Errored Seconds
SESL	Line Severely Errored Seconds

CVP (Path Coding Violations)

aaaaaaaa	Path Coding Violation Daily NE threshold (0 to 134217727)
jjjjjjjj	Path Coding Violation Daily FE threshold (0 to 134217727)
a a a a a a a	Path Coding Violation 15Min NE threshold (0 to 2097151)
i i i i i i i	Path Coding Violation 15Min FE threshold (0 to 2097151)
a	Path Coding Violation Daily NE option selection (0 to 3)
j	Path Coding Violation Daily FE option selection (0 to 3)
a	Path Coding Violation 15Min NE option selection (0 to 3)
j	Path Coding Violation 15Min FE option selection (0 to 3)

ESP (Path Errored Seconds)

bbbbbb	Path Errored Seconds Daily NE threshold (0 to 86400)
kkkkkk	Path Errored Seconds Daily FE threshold (0 to 86400)
b b b	Path Errored Seconds 15Min NE threshold (0 to 900)
k k k	Path Errored Seconds 15Min FE threshold (0 to 900)

b	Path Errored Seconds Daily NE option selection (0 to 3)
k	Path Errored Seconds Daily FE option selection (0 to 3)
b	Path Errored Seconds 15Min NE option selection (0 to 3)
k	Path Errored Seconds 15Min FE option selection (0 to 3)
SESP (Path Severely Errored Seconds)	
ccccc	Path Severely Errored Seconds Daily NE threshold (0 to 86400)
lllll	Path Severely Errored Seconds Daily FE threshold (0 to 86400)
c c c	Path Severely Errored Seconds 15Min NE threshold (0 to 900)
l l l	Path Severely Errored Seconds 15Min FE threshold (0 to 900)
c	Path Severely Errored Seconds Daily NE option selection (0 to 3)
l	Path Severely Errored Seconds Daily FE option selection (0 to 3)
c	Path Severely Errored Seconds 15Min NE option selection (0 to 3)
l	Path Severely Errored Seconds 15Min FE option selection (0 to 3)
SEFS (Severely Errored Framing Seconds)	
dddddd	Severely Errored Framing Seconds Daily NE threshold (0 to 86400)
mmmmm	Severely Errored Framing Seconds Daily FE threshold (0 to 86400)
d d d	Severely Errored Framing Seconds 15Min NE threshold (0 to 900)
m m m	Severely Errored Framing Seconds 15Min FE threshold (0 to 900)
d	Severely Errored Framing Seconds Daily NE option selection (0 to 3)
m	Severely Errored Framing Seconds Daily FE option selection (0 to 3)
d	Severely Errored Framing Seconds 15Min NE option selection (0 to 3)
m	Severely Errored Framing Seconds 15Min FE option selection (0 to 3)
CSSP (Path Controlled Slip Seconds)	
eeeeee	Path Controlled Slip Seconds Daily NE threshold (0 to 86400)

nnnnn	Path Controlled Slip Seconds Daily FE threshold (0 to 86400)
e e e	Path Controlled Slip Seconds 15Min NE threshold (0 to 900)
n n n	Path Controlled Slip Seconds 15Min FE threshold (0 to 900)
e	Path Controlled Slip Seconds Daily NE option selection (0 to 3)
n	Path Controlled Slip Seconds Daily FE option selection (0 to 3)
e	Path Controlled Slip Seconds 15Min NE option selection (0 to 3)
n	Path Controlled Slip Seconds 15Min FE option selection (0 to 3)
UASP (Path Unavailable Seconds)	
ffff	Path Unavailable Seconds Daily NE threshold (0 to 86400)
ooooo	Path Unavailable Seconds Daily FE threshold (0 to 86400)
f f f	Path Unavailable Seconds 15Min NE threshold (0 to 900)
o o o	Path Unavailable Seconds 15Min FE threshold (0 to 900)
f	Path Unavailable Seconds Daily NE option selection (0 to 3)
o	Path Unavailable Seconds Daily FE option selection (0 to 3)
f	Path Unavailable Seconds 15Min NE option selection (0 to 3)
o	Path Unavailable Seconds 15Min FE option selection (0 to 3)
CVL (Line Coding Violations)	
ggggggggg	Line Coding Violation Daily NE threshold (0 to 134217727)
g g g g g g g	Line Coding Violation 15Min NE threshold (0 to 2097151)
g	Line Coding Violation Daily NE option selection (0 to 3)
g	Line Coding Violation 15Min NE option selection (0 to 3)
ESL (Line Errored Seconds)	
hhhhh	Line Errored Seconds Daily NE threshold (0 to 86400)
ppppp	Line Errored Seconds Daily FE threshold (0 to 86400)
h h h	Line Errored Seconds 15Min NE threshold (0 to 900)
p p p	Line Errored Seconds 15Min FE threshold (0 to 900)
h	Line Errored Seconds Daily NE option selection (0 to 3)
p	Line Errored Seconds Daily FE option selection (0 to 3)
h	Line Errored Seconds 15Min NE option selection (0 to 3)
p	Line Errored Seconds 15Min FE option selection (0 to 3)
SESL (Line Severely Errored Seconds)	
iiii	Line Severely Errored Seconds Daily NE threshold (0 to 86400)

iii	Line Severely Errored Seconds 15Min NE threshold (0 to 900)
i	Line Severely Errored Seconds Daily NE option selection (0 to 3)
i	Line Severely Errored Seconds 15Min NE option selection (0 to 3)

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For PB and PC type NPCs:

DM	Degraded Minutes
SERS	Severely Errored Seconds
ERS	Errored Seconds
US	Unavailable Seconds
SLIP	Slip Events

For SHORT INTERVAL, DM is calculated hourly and SERS, ERS, US and SLIP are calculated at 15-minute intervals.

nnnnn	24-hour Degraded Minutes (DM) threshold
ppppp	24-hour Severely Errored Seconds (SERS) threshold
qqqqq	24-hour Errored Seconds (ERS) threshold
rrrrr	24-hour Unavailable Seconds (US) threshold
sssss	24-hour Slip Events (SLIP) threshold
e	24-hour DM threshold/alarm selection
f	24-hour SERS threshold/alarm selection
g	24-hour ERS threshold/alarm selection
h	24-hour US threshold/alarm selection
i	24-hour SLIP threshold/alarm selection
n n n n n	1-hour DM threshold
p p p p p	15-minute SERS threshold
q q q q q	15-minute ERS threshold
r r r r r	15-minute US threshold
s s s s s	15-minute SLIP threshold
e	1-hour DM threshold/alarm selection
f	15-minute SERS threshold/alarm selection
g	15-minute ES threshold/alarm selection

h	15-minute US threshold/alarm selection
i	15-minute SLIP threshold/alarm selection

For PA type NPCs:

CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
CV	Coding Violations
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors
FEBE	Far End Block Errors
FES	Far End Errored Seconds
FSES	Far End Severely Errored Seconds
FUAS	Far End Unavailable Seconds
aaaaaaaa	Daily CRC block error threshold value
bbbbbbbbbb	Daily framing error threshold value
cccccc	Daily out of frame seconds threshold value
dddddd	Daily errored second threshold value
eeeeee	Daily severely errored second threshold value
fffff	Daily controlled slip second threshold value
gggggggggg	Daily coding violation threshold value
hhhhh	Daily unavailable second threshold value
iiii	Daily unavailable time count threshold value
jjjjj	Daily multiframe alignment error threshold value
kkkkkkkk	Daily far-end block error threshold value
lllll	Daily far-end errored second threshold value
mmmmm	Daily far-end severely errored second threshold value
nnnnn	Daily far-end unavailable second threshold value

a	Daily CRC block error threshold selection
b	Daily framing error threshold selection
c	Daily out of frame seconds threshold selection
d	Daily errored second threshold selection
e	Daily severely errored second threshold selection
f	Daily controlled slip second threshold selection
g	Daily coding violation threshold selection
h	Daily unavailable second threshold selection
i	Daily unavailable time count threshold selection
j	Daily multiframe alignment error threshold selection
k	Daily far-end path block error selection
l	Daily far-end path second threshold selection
m	Daily far-end severely errored second threshold selection
n	Daily far-end unavailable second threshold selection

The options can be from "0" to "c" as specified for the "m" of the "rr/<m>" field.

<u>a a a a a</u>	15-minute CRC block error threshold value
<u>b b b b b b b</u>	15-minute framing error threshold value
<u>c c c</u>	15-minute out of frame seconds threshold value
<u>d d d</u>	15-minute errored second threshold value
<u>e e e</u>	15-minute severely errored second threshold value
<u>f f f</u>	15-minute controlled slip second threshold value
<u>g g g g g g g</u>	15-minute coding violation threshold value
<u>h h h</u>	15-minute unavailable second threshold value
<u>i i</u>	15-minute unavailable time count threshold value
<u>j j j</u>	15-minute multiframe alignment error threshold value
<u>k k k k k k</u>	15-minute far-end block error threshold value
<u>l l l</u>	15-minute far-end errored second threshold value
<u>m m m</u>	15-minute far-end severely errored second threshold value
<u>n n n</u>	15-minute far-end unavailable second threshold value
a	15-minute CRC block error threshold selection
b	15-minute framing error threshold selection

c	15-minute out of frame seconds threshold selection
d	15-minute errored second threshold selection
e	15-minute severely errored second threshold selection
f	15-minute controlled slip second threshold selection
g	15-minute coding violation threshold selection
h	15-minute unavailable second threshold selection
i	15-minute unavailable time count threshold selection
j	15-minute multiframe alignment error threshold selection
k	15-minute far-end path block error selection
l	15-minute far-end path second threshold selection
m	15-minute far-end severely errored second threshold selection
n	15-minute far-end unavailable second threshold selection

The options can be from 0 to c as specified for the m of the rr/<m> field.

2.048 Mbit/s Termination

For PA type NPCs:

Depending on which interface functions are enabled by the provisioning values of xyz, some parameters may not be applicable. In this case the threshold value, the parameter count (if present in the message) and the selection value will appear as dashes (-). In the table below N/A indicates that a parameter is not applicable for the given value of x or y.

Also, if the selection value m=c has been chosen for a parameter, the threshold value and the parameter count (if present in the message) will appear as dashes.

Parameter	CRC-4 Mode Disabled (x=A,B,E,F)	Far-End PM Disabled (x=0,2,4,6,A,B ,E,F)	CAS Disabled (y=8,9,C,D)	Unframed Clear 2Mbit/s (y=D)
CRC	N/A			N/A
FRER				N/A
OFS				N/A
ES				N/A
SES				N/A
CSS				

Parameter	CRC-4 Mode Disabled (x=A,B,E,F)	Far-End PM Disabled (x=0,2,4,6,A,B,E,F)	CAS Disabled (y=8,9,C,D)	Unframed Clear 2Mbit/s (y=D)
CV				
UAS				N/A
UATC				N/A
MER			N/A	N/A
FEBE		N/A		N/A
FES		N/A		N/A
FSES		N/A		N/A
FUAS		N/A		N/A

Both Terminations

For TH type NPCs:

Depending on which interface functions are enabled by the provisioning values of xyz, some parameters may not be applicable. In this case, the threshold value, the parameter count (if present in the message) and the selection value will appear as dashes (-). In the table below N/A indicates that a parameter is not applicable for the given value of x or y.

Also, if the selection value m=c has been chosen for a parameter, the threshold value and the parameter count (if present in the message) will appear as dashes.

Parameter	CRC-4 Mode Disabled (x=B)	CAS Disabled (y=8,9,C,D)	Unframed Clear 2Mbit/s (y=D)
CRC	N/A		N/A
FRER			N/A
OFS			N/A
ES			N/A

Parameter	CRC-4 Mode Disabled (x=B)	CAS Disabled (y=8,9,C,D)	Unframed Clear 2Mbit/s (y=D)
SES			N/A
CSS			
UAS			N/A
UATC			N/A
MER		N/A	N/A

THMODE Thresholding mode (for PA NPCs only)

hhh Thresholding mode option

INH Inhibit thresholding

ALW Allow thresholding

The INH option is used to temporarily inhibit thresholding for all parameters of all NPCs provisioned with TYPE mnxyz whether the thresholding for a specific NPC is already inhibited or not. When it is entered, all thresholds for those NPCs are suspended; therefore, no new threshold crossing messages are output after the inhibition.

The ALW option is the default option and can be used to turn-off the thresholding inhibition. Note that, this command with the "ALW" option can be used for TYPE mnxyz NPCs whose thresholding capability is inhibited due to the entry of command I.38221

When the "ALW" is entered, the thresholds applied before the inhibition is re-applied unless the thresholds were changed during the inhibition. Option change requests are permitted while the NPC thresholding is inhibited.

vv/k Parameter/option involved in denial

CHANGE TYPE AND THRESHOLD MODE

Explanation of Command



NOTE:

This command applies to the 2.048 Mbit/s Termination interface only.

This command inhibits or allows the threshold-crossing messages for all unequipped NPCs that are provisioned as the specified NPC type. After the execution of this command, any NPCs that are subsequently provisioned as the specified NPC type have their threshold-crossing messages inhibited or allowed.

The only NPC type that can be specified in this command is the PA type and no xyz options shall be specified in this command.

Command Rules

When this command is entered for inhibiting threshold-crossing messages, it shall not be denied even if the threshold-crossing messages are already inhibited; when this command is entered for allowing threshold-crossing messages, it shall not be denied even if the threshold-crossing messages are already allowed. In addition, if this command is never entered for a given NPC type, the threshold-crossing messages are allowed for all NPCs that are provisioned as that NPC type.

The execution of this command does not require any Unit or CCN/ECCN hardware entities to be in service, except for the Main Controller.

Contrasting Command

In contrast, the CHG,TYPE,OPTS,THMODE command (I.38231) can be used to inhibit or allow the threshold-crossing messages for all equipped NPCs that have been provisioned as PA type with the specified xyz option; the CHG,NPC,OPTS,THMODE command (I.38221) can be used to inhibit or allow the threshold-crossing messages for the specified NPC that has been provisioned as PA type.

Command

[I.38291]

CHG: [FRM xy][, SEQ ww]:TYPE mn, THMODE hhh!

**Completion
Message**

[O.38291]

M hh:mm:ss xy,ww n[vv] CHG TYPE mn THMODE hhh COMPL

Denial Message

[O.38291.01]

M hh:mm:ss xy,ww n[vv] CHG TYPE mn THMODE hhh COND cc DNY

**Explanation of
Parameters**

TYPE	Type
mn	NPC type
PA	CEPT NPC (120-ohm twisted pair or 75-ohm coaxial)
THMODE	Thresholding mode
hhh	Threshold-crossing message mode
INH	Inhibit threshold-crossing messages
ALW	Allow threshold-crossing messages
	The INH option is used to inhibit (turn off) the threshold-crossing messages for all NPCs that are provisioned as the specified NPC type. After this option is selected, no threshold-crossing messages are output for all NPCs that are provisioned as the specified NPC type.
	The ALW option can be used to allow (turn on) the threshold-crossing messages for all NPCs that are provisioned as the specified NPC type. After this option is selected, threshold-crossing messages are output for all NPCs that are provisioned as the specified NPC type.
cc	Hexadecimal condition code
cc	<i>Explanation</i>
26	NPC type error

CHANGE DS3 PARAMETERS

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination interface only.

For one or more DS3 facilities, including Hybrid DS3 (HDS3) facilities, this command requests and reports a change in any of the following parameters:

BERM	Bit error rate calculation method
BERT	Bit error rate threshold for declaring high BER condition
LBO	The line build-out setting
TYPE	The DS3 or HDS3 facility type and framing format

At least one of the optional parameters must be supplied.

Supported Type Changes

The following type changes are supported:

- If the DS3 is connected to a KCR-1 circuit pack, type changes between MX100 and MX200 are supported. MX100 supports the M13 framing format; MX200 supports the C-bit parity framing format.
- If the DS3 is connected to a KCR-5 circuit pack, type changes between EX100 and EX200 are supported. EX100 supports the M13 framing format; EX200 supports the C-bit parity framing format.
- If the DS3 is connected to a KCR-8 circuit pack, type changes between HX100 and HX110 are supported. For type HX100 the X-bits in the DS3 stream are interpreted according to ANSI standard T1.107. For type HX110 the X-bits are interpreted opposite to the ANSI standard T1.107; in this case an X-bit of 0 is interpreted as normal, while an X-bit of 1 is interpreted as a Remote Alarm Indication.

One output message is generated for each DS3 or HDS3 termination.

Command

[I.38601]

CHG: [FRM xy][, SEQ ww]:UNIT [q]q,DS3 c[-d][, BERM s][, BERT t] \
[, LBO][, TYPE mnxyz]!

Completion Message

[O.38601]
M hh:mm:ss xy,ww n[vv] CHG UNIT [q]q DS3 a 4 LN MSG:
TYPE BERM BERT LBO
PARAMETER mnxyz s t
OLD PARAMETER m'n'x'y'z' s' t' <b'> COMPL

Denial Message

[O.38601.01]
M hh:mm:ss xy,ww n[vv] CHG UNIT [q]q DS3 a 2 LN MSG:
[BERM s][BERT t][LBO][TYPE mnxyz]COND cc DNY

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
DS3	Digital signal 3 (44.736 Mb/s rate)
c	DS3 facility number within the unit (1 through 6)
d	DS3 facility number within the unit (1 through 6)
	Variable d is used to specify a range of facilities.
a	DS3 number within the range of c and d
BERM	Bit error rate calculation method
s	BERM specification
	B Bipolar violations
	P DS3 parity errors
	C Both Bipolar violations (BPV) and DS3 Parity Errors, supported by HMXR only
BERT	Bit error rate threshold
	For declaring high BER condition
t	BERT specification
	3 Corresponds to threshold of 10^{-3}
	6 Corresponds to threshold of 10^{-6}
LBO	Line buildout
b	LBO specification

ON Line build-out is turned on

OFF Line build-out is turned off

LBO is required as shown in the following table.

734A Cabling to DSX-3	KS-19224,L2 Cabling to DSX-3	LBO
0 to 225 feet	0 to 75 feet	ON
225 to 450 feet	75 to 150 feet	OFF



NOTE:

LBO may be used to change the LBO setting of an in-service, traffic-carrying Multiplexer-Multiplexer Interface Unit (MMFG).

TYPE Type

mnxyz The DS3 format processed by the MXR:

mn DS3 type

MX The original R4.0 DS3 facility type supported by the Multiplexer (MXR) circuit pack (KCR-1)

EX The enhanced R6.0 DS3 facility type supported by the Enhanced Multiplexer (EMXR) circuit pack (KCR-5)

HX The hybrid facility type supported by the Hybrid Multiplexer (HMXR) circuit pack (KCR-8)

If the unit is a regular DS3U of unit type DT100, then the default is the MX type for backward compatibility. If the unit is a Hybrid DS3U of unit type HT100, then the default is HX.

Allowed xyz values

MX100 KCR-1 circuit pack with M13 framing

MX200 KCR-1 circuit pack with C-bit parity framing

EX100 KCR-5 circuit pack with M13 framing

EX200 KCR-5 circuit pack with C-bit parity framing

HX100 KCR-8 Hybrid circuit pack with M13 framing

HX110 KCR-8 Hybrid circuit pack with M13 framing and reverse interpretation of X-bit values.

Type HX100 and HX110 set the X-bits (carried by the DS3 signal) in the transmit direction and interpret the value of the X-bits in the receive direction for the purpose of obtaining a

Remote Alarm Indication (RAI) for the DS3 signal. Type HX100 interprets X-bit values (there are two X-bits) of 1 as normal, while values of 0 indicate an RAI. Type HX110 interprets X-bit values of 0 as normal and X-bit values of 1 as RAI.

cc

Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
24	Unit type error
90	Invalid change parameter combinations
9B	The MXR is not grown
AE	MXR is failed
50	Invalid MIU/MXR type specified
51	The pair MXR is not equipped
56	The MXR is in service

CHANGE HYBRID DS3 PERFORMANCE MONITORING OPTIONS

Explanation of Command

**NOTE:**

This command applies to 1.544 Mbit/s Termination only.

This command changes the facility performance parameter threshold values on the specified Hybrid DS3 facility (or facilities) without disconnecting and reconnecting provisioned circuits.

Previously Stored Threshold Values

One or more performance parameter threshold values for the designated DS3 facility may be changed to values previously stored in the DACS II threshold data base. These previously stored values are selected through use of indices of the form <rr>/m. The value of <rr> refers to a specific performance parameter as tabulated in the Explanation of Parameter section. The value of m ranges between 0 and 3 and is used to select one of a total of four threshold values stored in the DACS II database for that parameter. If the value of m is set to 0, then the default threshold value is selected. If the value of m is set to 1, 2, or 3, then one of the user settable threshold values is selected. The user may set threshold values for individual performance parameters by using command CHG SETOP DS3OP (I.38203).

Threshold Alarm Mechanism

The user may turn off the threshold alarm mechanism for particular performance parameters by selecting threshold values that have been set to zero in a previous command execution of I.38203.

Command

[I.38661]

CHG:[FRM xy][,SEQ ww]:UNIT [q]q,DS3 c[-d],OPTS (rr/m[,rr/m][...])!

Completion Message

[O.38661]

M hh:mm:ss xy,ww n[vv] CHG UNIT [q]q DS3 c[-d] TYPE HXxyz 5 LN MSG:
DAILY CVL ESL SESL CVP
THRESHOLDS aaaaaaaaaa bbbbbb ccccc dddddddddd

```
OPTIONS      a          b          c          d
OLD OPTIONS  a'         b'         c'         d'         EOM

M hh:mm:ss xy,ww n[vv] CHG UNIT [q]q DS3 c[-d] TYPE HXxyz  5 LN MSG:
DAILY        FMP          ESP      SESP    FSESP  UASP
THRESHOLDS   jjjjjjjjj kkkkkk lllll mmmmm nnnnn
OPTIONS      j          k          l          m          n
OLD OPTIONS  j'         k'         l'         m'         n'         EOM

M hh:mm:ss xy,ww n[vv] CHG UNIT [q]q DS3 c[-d] TYPE HXxyz  5 LN MSG:
15MIN        CVL          ESL      SESL    CVP
THRESHOLDS   eeeeeeeee ffffff gggggg hhhhhhhh
OPTIONS      e          f          g          h
OLD OPTIONS  e'         f'         g'         h'         EOM

M hh:mm:ss xy,ww n[vv] CHG UNIT [q]q DS3 c[-d] TYPE HXxyz  5 LN MSG:
15MIN        FMP          ESP      SESP    FSESP  UASP
THRESHOLDS   pppppppp qqqqq rrrrr sssss ttttt
OPTIONS      p          q          r          s          t
OLD OPTIONS  p'         q'         r'         s'         t'         COMPL
```

Denial Message

[O.38661.01]

```
M hh:mm:ss xy,ww n[vv] CHG UNIT [q]q DS3 c[-d] TYPE HXxyz OPTS\
[ <ss>/n]  COND cc DNY
```

**Explanation of
Parameters**

UNIT	Unit
[q]q	Unit number (1 through 16)
DS3	Digital Signal 3 (44.736 Mb/s rate)
c	DS3 facility number within the unit (1 through 6)
d	DS3 facility number within the unit (1 through 6); variable d is used to specify a range of facilities
<rr>	Facility performance parameter number Variable <rr> specifies the parameter for which an alarm threshold is being selected. See the table below.
m	Facility performance parameter threshold index (0 through 3) Variable m is used to select threshold values previously programmed for <rr>. The default threshold value, the value selected by m=0, for each parameter is shown in the table below under the column heading "Default Threshold Value". Threshold values selected by m=1 through m=3 must exist; that is, they

must have been programmed prior to being selected. The non-default thresholds can be set by using the CHG::SETOP (I.38203)command.

For HX type (Hybrid) DS3 signals:

<rr>	Parameter	Interval	Threshold Value Range	Default Threshold Value
101	Code Violations Line	DAILY	0 - 1073700000	3867523
102	Errored Seconds Line	DAILY	0 - 86400	4320
103	Severely Errored Seconds Line	DAILY	0 - 86400	90
104	Code Violations Path	DAILY	0 - 353870000	3867523
105	F and M Bit Violations Path	DAILY	0 - 22096800	176947
106	Errored Seconds Path	DAILY	0 - 86400	4320
107	Severely Errored Seconds Path	DAILY	0 - 86400	90
108	Far End Severely Errored Sec. Path	DAILY	0 - 86400	90
109	Unavailable Seconds	DAILY	0 - 86400	0

<rr>		Parameter	Interval	Threshold Value Range	Default Threshold Value
111		Code Violations Line	15MIN	0 - 29490750	402867
112		Errored Seconds Line	15MIN	0 - 900	300
113		Severely Errored Seconds Line	15MIN	0 - 900	30
114		Code Violations Path	15MIN	0 - 3686175	402867
115		F and M Bit Violations Path	15MIN	0 - 230175	18432
116		Errored Seconds Path	15MIN	0 - 900	300
117		Severely Errored Seconds Path	15MIN	0 - 900	30
118		Far End Severely Errored Sec. Path	15MIN	0 - 900	30
119		Unavailable Seconds	15MIN	0 - 900	0
TYPE		Type			
HXxyz		Hybrid DS3 Unit type			
HX100		Hybrid DS3 Unit type, X-bits = 1 for RAI			

HX110 Hybrid DS3 Unit type, X-bits = 0 for RAI (ANSI standard)

Hybrid DS3 Performance Parameters:

CVL	Code Violation for the DS3 Line
ESL	Errored Seconds for the DS3 Line
SESL	Severely Errored Seconds for the DS3 Line
CVP	Code Violation for the DS3 Path
FMP	F- or M-bit errors for the DS3 Path
ESP	Errored Seconds for the DS3 Path
SESP	Severely Errored Seconds for the DS3 Path
FSESP	Far End Severely Errored Seconds for the DS3 Path
UASP	Unavailable Seconds for the DS3 Path

The following is a more detailed description for each parameter:

The **CVL** parameter keeps a count of Bipolar Violations (BPV) and Excessive Zero (EXC) counts. This count may get quite large. If one assumes an error rate of 1 bit per thousand, then a daily count may get as large as 100 million.

The **ESL** parameter counts the number of seconds that have one or more BPVs, one or more EXZs, or one or more LOS defect. This parameter is limited to the number of seconds in the measurement interval, which is 900 in 15 minutes and 86,400 in 24 hours.

The **SESL** parameter counts the number of seconds that have more than 44 BPVs and EXZs, or one or more LOS defects. This parameter is limited to the number of seconds in the measurement interval.

The **CVP** parameter keeps a count of P-bit parity errors. This count may get quite large. If one assumes an error rate of 1 bit per thousand, then a daily count may get as large as 100 million.

The **FMP** parameters keeps a count of F- and M-bit errors. This count may get quite large. If one assumes an error rate of 1 bit per thousand, then a daily count may get as large as 100 million.

The **ESP** parameter counts the number of seconds containing one or more F- and/or M-bit errors, one or more OOF (Out-of-Frame) defects, or one or more AIS defects. This parameter is limited to the number of seconds in the measurement interval.

The **SESP** parameters counts the number of seconds containing more than 44 F- and M-bit errors, one or more OOF defects, or one or more AIS defects. This parameter is limited to the number of seconds in the measurement interval.

The **FSESP** parameter counts the number of seconds that have a Remote Alarm Indication (RAI), i.e., the X-bits transmitted from the Far-End indicate RAI. This parameter is not counted if the DS3 facility has an LOS or OOF defect. This parameter is limited to the number of seconds in the measurement interval.

The **UASP** parameter counts the number of seconds that the DS3 facility is unavailable. The DS3 is declared unavailable, if the DS3 path experiences 10 consecutive seconds of SESP. The DS3 is also declared unavailable, if the DS3 line experiences 10 consecutive seconds of SESL. This parameter is limited to the number of seconds in the measurement interval.

None of the other parameters accumulate counts if the Hybrid DS3 facility is unavailable.

CVL (Line Coding Violations)

aaaaaaaa	Line Coding Violation Daily threshold (0 to 1073700000)
eeeeeeee	Line Coding Violation 15Min threshold (0 to 29490750)
a	Line Coding Violation new Daily option selection (0 to 3)
a'	Line Coding Violation old Daily option selection (0 to 3)
e	Line Coding Violation new 15Min option selection (0 to 3)
e'	Line Coding Violation old 15Min option selection (0 to 3)

ESL (Line Errored Seconds)

bbbbbb	Line Errored Seconds Daily threshold (0 to 86400)
ffff	Line Errored Seconds 15Min threshold (0 to 900)
b	Line Errored Seconds new Daily option selection (0 to 3)
b'	Line Errored Seconds old Daily option selection (0 to 3)
f	Line Errored Seconds new 15Min option selection (0 to 3)
f'	Line Errored Seconds old 15Min option selection (0 to 3)

SESL (Line Severely Errored Seconds)

cccccc	Line Severely Errored Seconds Daily threshold (0 to 86400)

ggggg	Line Severely Errored Seconds 15Min threshold (0 to 900)
c	Line Severely Errored Seconds new Daily option selection (0 to 3)
c'	Line Severely Errored Seconds old Daily option selection (0 to 3)
g	Line Severely Errored Seconds new 15Min option selection (0 to 3)
g'	Line Severely Errored Seconds old 15Min option selection (0 to 3)

CVP (Path Coding Violations)

ddddddddd	Path Coding Violations Daily threshold (0 to 353870000)
hhhhhhhhh	Path Coding Violations 15Min threshold (0 to 3686175)
d	Path Coding Violations new Daily option selection (0 to 3)
d'	Path Coding Violations old Daily option selection (0 to 3)
h	Path Coding Violations new 15Min option selection (0 to 3)
h'	Path Coding Violations old 15Min option selection (0 to 3)

FMP (Path F and M Bit Framing Errors)

jjjjjjj	Path F and M Bit Framing Errors Daily threshold (0 to 22096800)
pppppppp	Path F and M Bit Framing Errors 15Min threshold (0 to 230175)
j	Path F and M Bit Framing Errors new Daily option selection (0 to 3)
j'	Path F and M Bit Framing Errors old Daily option selection (0 to 3)
p	Path F and M Bit Framing Errors new 15Min option selection (0 to 3)
p'	Path F and M Bit Framing Errors old 15Min option selection (0 to 3)

ESP (Path Errored Seconds)

kkkkk	Path Errored Seconds Daily threshold (0 to 86400)

qqqqq	Path Errored Seconds 15Min threshold (0 to 900)
k	Path Errored Seconds new Daily option selection (0 to 3)
k'	Path Errored Seconds old Daily option selection (0 to 3)
q	Path Errored Seconds new 15Min option selection (0 to 3)
q'	Path Errored Seconds old 15Min option selection (0 to 3)

SESP (Path Severely Errored Seconds)

lllll	Path Severely Errored Seconds Daily threshold (0 to 86400)
rrrrr	Path Severely Errored Seconds 15Min threshold (0 to 900)
l	Path Severely Errored Seconds new Daily option selection (0 to 3)
l'	Path Severely Errored Seconds old Daily option selection (0 to 3)
r	Path Severely Errored Seconds new 15Min option selection (0 to 3)
r'	Path Severely Errored Seconds old 15Min option selection (0 to 3)

FSESP (Path Far End Severely Errored Seconds)

mmmmm	Path Far End Severely Errored Seconds Daily threshold (0 to 86400)
sssss	Path Far End Severely Errored Seconds 15Min threshold (0 to 900)
m	Path Far End Severely Errored Seconds new Daily option selection (0 to 3)
m'	Path Far End Severely Errored Seconds old Daily option selection (0 to 3)
s	Path Far End Severely Errored Seconds new 15Min option selection (0 to 3)
s'	Path Far End Severely Errored Seconds old 15Min option selection (0 to 3)

UASP (Path Unavailable Seconds)

nnnnn	Path Unavailable Seconds Daily threshold (0 to 86400)

tttti	Path Unavailable Seconds 15Min threshold (0 to 900)
n	Path Unavailable Seconds new Daily option selection (0 to 3)
n'	Path Unavailable Seconds old 15Min option selection (0 to 3)
t	Path Unavailable Seconds new Daily option old selection (0 to 3)
t'	Path Unavailable Seconds old 15Min option old selection (0 to 3)

<ss>/n First improper values of <rr>/m for which message is denied.

cc Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
20	Option rr/m has not been set up on 2nd database
24	Unit type error
AE	MXR is failed
50	Invalid MIU/MXR type specified
51	The pair MXR is not equipped

CHANGE FTMI EQUALIZATION

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This command changes the equalization of a half or a whole facility terminating module (FTM) and its associated interface, the FTMI.

Command

[I.38111]

CHG: [FRM xy][, SEQ ww]:UNIT [q]q, FTMI d, EQL(l, r)!

Completion Message

[O.38111]

M hh:mm:ss xy, ww n[vv] CHG UNIT [q]q FTMI d 2 LN MSG:
EQL k p NEW STATE EQL m s COMPL

Denial Message

[O.38111.01]

M hh:mm:ss xy, ww n[vv] CHG UNIT [q]q FTMI d EQL l r COND cc DNY

Explanation of Parameters

UNIT

Unit

[q]q

Unit number (1 through 16)

FTMI

Facility terminating module interface

d

FTMI number in the DACS II unit (1 through 4)

1.544 Mbit/s Termination

EQL

Equalization

l

Left half shelf equalization value (first 10 Dual Digroup Circuits)

r Right half shelf equalization value (second 10 Dual Digroup Circuits)

Enter a dash for an equalization value if that value is not to be changed.

Equalization option values for 255AS/24 gauge cable

1	000 to 100 feet
2	100 to 200 feet
3	200 to 300 feet
4	300 to 400 feet
5	400 to 500 feet
-	Do not change equalization

Equalization option values for 600 series/22 gauge cable

1	000 to 050 feet
2	051 to 267 feet
3	268 to 400 feet
4	401 to 533 feet
5	534 to 655 feet
-	Do not change equalization

Equalization option values for 1249/26 gauge cable

1	000 to 090 feet
2	090 to 180 feet
3	180 to 270 feet
4	270 to 360 feet
5	360 to 450 feet
-	Do not change equalization

If a number is entered for l and/or r, the equalization option of each half will be changed to the value associated with that number whether the option was previously specified or not. If a dash (-) is entered for l or r the existing equalization option used for the corresponding half continues to be applied; that is, the option will be unchanged. However, the command is denied if dashes (-) are entered for both l and r.

k,p Equalization options before change

m,s Equalization options after change

k and m apply to the left half of shelf, that is, the first 10 DDCs in the shelf.

p and s apply to the right half of shelf, that is, the second 10 DDCs in the shelf.

cc Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
0E	No equalization for CEPT FTMI

CHANGE USER/LINK SCREENING

Explanation of Message

This command assigns the output message screening for a user or administrative link, including all virtual circuits in a X.25 link, on the DACS II system.

The command can also assign default values to the link options.

The function is denied if the user identification does not exist.

TCP/IP Links

For TCP/IP links, the SCR option can only be set for a USER, not a LINK.

Output from this command is sent only to the link on which the command was input.

Message Logging

With the Message Logging feature, a request to retrieve logged messages is sent to the link on which the retrieval command was input and the links with screening option 5 that are running MML.

Command

[I.38401]

```
CHG: [FRM xy][,SEQ ww]:{USER <user id>|LINK j[mm][,INCL]} \
[,SCR n[,GR(a,b,c,d,e,f)]][, {MCON|MCOFF}][,INIT]!
```

Completion Message

[O.38401]

```
M hh:mm:ss xy,ww n[vv] CHG {USER <user id>|LINK j[mm][,INCL]} \
[ SCR n[ GR(a,b,c,d,e,f)]] [ {MCON|MCOFF}][ INIT] COMPL
```

Denial Message

[O.38401.01]

```
M hh:mm:ss xy,ww n[vv] CHG {USER <user id>|LINK j[mm][,INCL]} \
[ SCR n[ GR(a,b,c,d,e,f)]] [ {MCON|MCOFF}][ INIT] COND cc DNY
```

**Explanation of
Parameters**

USER	User
user id	User identifier (two to eight alphabetic characters) User login identification The USER option must be used to set screening with TCP/IP links.
LINK	Link
j[mm]	Administrative link number
j	Physical link number (1 through 7)
mm	Virtual link number (01 through 16, for j = 5,6 or 7)
INCL	Include Include all virtual links of link 5, 6 or sessions of link 7. The INCL keyword can only be entered with TCP/IP link 7 and X.25 links 5 and 6, and no virtual link number is allowed when this keyword is used. That is, mm and INCL are mutually exclusive. In addition, the INCL keyword is also mutually exclusive with the <user id>. When the INCL keyword is entered, it means that all provisioning data specified in this command, for example, SCR n, GR(a,b,c,d,e,f), and MCON/MCOFF, are applied to all virtual links of the link 5, 6 or 7.
SCR	Screening
n	Screening option number (1 through 5) The screening option is used to limit responses on a given administrative link to one of the sets given in the table below. The set to be received is selected by the use of variable n.
1	Responses to input at the same link.
2	Responses to input at the same link and autonomous messages. This is the default value.
3	Responses to messages input at the same link and some specified sets of action verbs.
4	Responses to messages input at the same link and some specified sets of action verbs including autonomous messages.
5	Responses to input messages on all links and autonomous messages

If screening is set to 5 and user DAX logs in, DAX will not see the responses to input messages on all links and autonomous messages.

GR

Group

a,b,c,d,e,f

Screening groups a through f (0 or 1)

The entry of the screening group option is allowed only if n = 3 or 4 was entered for the screening option number. The screening group option does not apply for n = 2; the default screening option. The restricted commands are not categorized by group and are always assigned the screening group value 1.

0 Messages in the message group represented by variable a are not sent to the link or user specified in this command.

1 Messages in the message group represented by variable a are also sent to the link or user specified in this command.

Do not change the screening group option for variable a.

DACS II has six groups of action verbs represented in this message by variables a, b, c, d, e, and f.

a Circuit Provisioning. This variable can have the following values:

TCON	SW
TDIS	CONF
TCNT	SECH
BCON	SDCH
BDIS	SCON
OCON	SCNT
ODIS	SDIS
PCNT	

b Equipment Provisioning. This variable can have the following values:

GRTH	ADD
DGRTH	DLT

c Maintenance. This variable can have the following values:

		RMV	DGN
		RST	CFR
d	Test Access. This variable can have the following values:		
		TTST	STST
e	Monitoring. This variable can have the following values:		
		AUD	UTL
f	Common. This variable can have the following values:		
		CHG	ADD
		ED	DELETE
		EXC	LIST
		ACT	TOTAL
MCON	Macro on Macro completion message screening ON. MCON is the default value.		
MCOFF	Macro off Macro completion message screening OFF The MCON/MCOFF options are used to turn on or off the completion messages of the component commands inside a macro during its execution.		
INIT	Initialize Initialize the link or user options; all parameters are set to their default values except those specified in the command.		
cc	Hexadecimal condition code		

cc	<i>Explanation</i>
D3	User does not exist
D7	Cannot execute privileged command
DF	Command and protocol are inconsistent
E1	Virtual circuit is not specified for X.25 link
E2	Invalid link number specified
E3	Invalid keyword(s) combination specified
41	Language "F" provisioned for this channel
83	Language is not allowed

INPUT DENIAL

Explanation of Message

This autonomous message indicates that processing of the input message is **STOPPED** because the main controller is either out of service, in maintenance condition, in service, or the main processor data base is not loaded.

Output from this command is sent only to the link on which the command was input.

Autonomous Message

[O.01111]
M hh:mm:ss xy,ww n[vv] CMD MC {OOS|MCOND|INSERVICE|MPDBASE} \
e LN MSG:
<First 70 characters of input message.>
<Remaining text of input message> STOPPED

Explanation of Parameters

e	Number of lines in message
OOS	Out-of-service
MCOND	Maintenance condition
INSERVICE	In-service
MPDBASE	MP data base
	The main processor data base is not loaded
STOPPED	Stopped

CONFERENCE::ADD ON CONFERENCE,CONFERENCE IDENTIFIER

Explanation of Command

**NOTE:**

This command applies to the 1.544 Mbit/s Termination Interface only.

This command adds (connects) one or more receiving conference ports to an established conference circuit in the switched teleconferencing application. Transmitting conference ports can be indirectly added to a conference circuit using a two-step procedure. Each of the conference ports is a single or a contiguous range of DS0 channels of an enhanced digroup (DE type) Network Processing Circuit (NPC) equipped in a Facility Terminating Unit (FTU).

A maximum of 30 receiving ports may be specified in this command; however, the maximum length of the command must not exceed 120 characters. Any input command longer than 120 characters is denied by DACS II.

A two-step procedure can be used to add a transmitting port indirectly:

1. Add the conference port to the conference circuit as a receiving port using this message.
2. Then switch the receiving port to become a transmitting port using Message No. I.18211 or I.18121.

Command

[I.18621]

CONF:[FRM xy][,SEQ ww]:AOC{ ccc|(ccc,..,fff)},ID iii!

[I.18621]

CONF:[FRM xy][,SEQ ww]:AOC([ccc,..,fff];[ggg,..,jjj]),ID iii!

Completion Message

[O.18621]

M hh:mm:ss xy,ww n[vv] CONF AOC{ ccc|(ccc,..,fff)} ID iii \
COMPL

[O.18621]

M hh:mm:ss xy,ww n[vv] CONF 3 LN MSG:
AOC{ ccc|(ccc,...,fff)}
ID iii COMPL

[O.18621]

M hh:mm:ss xy,ww n[vv] CONF AOC([ccc,...,fff];[ggg,...,jjj]) \
ID iii COMPL

[O.18621]

M hh:mm:ss xy,ww n[vv] CONF 3 LN MSG:
AOC([ccc,...,fff];[ggg,...,jjj])
ID iii COMPL

Denial Message

[O.18621.01]

M hh:mm:ss xy,ww n[vv] CONF AOC{ ccc|(ccc,...,fff)} ID iii \
[xxx] COND cc DNY

[O.18621.01]

M hh:mm:ss xy,ww n[vv] CONF 3 LN MSG:
AOC{ ccc|(ccc,...,fff)}
ID iii [xxx] COND cc DNY

[O.18621.01]

M hh:mm:ss xy,ww n[vv] CONF AOC(ccc,...,fff;ggg,...,jjj) \
ID iii [xxx] COND cc DNY

[O.18621.01]

M hh:mm:ss xy,ww n[vv] CONF 3 LN MSG:
AOC(ccc,...,fff;ggg,...,jjj)
ID iii [xxx] COND cc DNY

Explanation of Parameters

AOC	Add on conference
ccc,fff	Receiving port number ($001 \leq \text{ccc}, \text{fff}, \text{ggg}, \text{jjj} \leq 500$) ggg, jjj
iii	Conference circuit identifier ($001 \leq \text{iii} \leq 150$)
INCL	Inclusive
	The keyword is specified when the conference port was marked as customer controlled, and the existing conference circuit, to which the conference port is added, is not marked as customer

controlled. This keyword has been removed from this message;
currently its implementation is not required.

**NOTE:**

The leading zero can be omitted in the port number(s).

xxx Conference port at which denial occurs

cc Hexadecimal condition code

cc	<i>Explanation</i>
26	NPC type error
10	NPC out of service or failed
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
30	Termination is already assigned
32	Termination is under test
33	Termination is a test port
80	Inconsistent channel range width
88	Conference port is not registered
89	Conference port is currently connected
8E	Attempt to add to a null transmitting port
8F	Number of transmitting ports does not match existing conference
90	The total number of receiving ports specified exceeds the max.
91	Duplicate ports specified

cc	<i>Explanation</i>
93	The conference does not exist
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed

CONFERENCE DROP CONFERENCE IDENTIFIER

Explanation of Command

This command drops (disconnects) one or more receiving ports from a conference circuit in the switched teleconferencing application. Transmitting ports can be indirectly deleted using a two-step procedure. This command is used to delete one or more receiving ports from a conference circuit. If a single receiver port is deleted, ccc must be specified. If a group of receiving ports are deleted, ccc,...,fff must be specified.

There is a maximum number of 30 receiving ports specified in the command; however, the maximum length of the command must not exceed 120 characters. Any input command longer than 120 characters is denied by DACS II.

If the DCC keyword is not specified, the disconnect code, specified when growing the NPC, is inserted toward the facility side of disconnected channel. Otherwise, the insertion word, as part of trunk conditioning code specification used when connecting the conference port to the conference circuit, is used.

A transmitting port can be deleted using a two-step procedure:

1. Switch the transmitting port to be a receiving port using Message No. 18211 or 18121.
2. Then use this message to delete the conference port.

In the multiline output message format, the second output data line is limited up to 80 characters in length. Some conference port numbers are deleted in the data line to keep the line length within the limit.

Command

[I.18431]
CONF:[FRM xy][,SEQ ww]:DROP{ ccc|(ccc,...,fff)},ID iii[,OOS] \
[,DCC][,INCL]!

Completion Message

[O.18431]
M hh:mm:ss xy,ww n[vv] CONF DROP{ ccc|(ccc,...,fff)} \
ID iii[OOS][DCC][RDC][CUS] COMPL

If output message is longer than 80 characters:

[O.18431]

M hh:mm:ss xy,ww n[vv] CONF 3 LN MSG:
DROP{ ccc|(ccc,...,fff)}
ID iii[OOS][DCC][RDC][CUS] COMPL

Denial Message

[O.18431.01]

M hh:mm:ss xy,ww n[vv] CONF DROP{ ccc|(ccc,...,fff)}, \
ID iii[xxx] COND cc DNY

If output message is longer than 80 characters:

[O.18431.01]

M hh:mm:ss xy,ww n[vv] CONF 3 LN MSG:
DROP{ ccc|(ccc,...,fff)}
ID iii[xxx] COND cc DNY

Explanation of Parameters

iii	Conference circuit identifier ($001 \leq iii \leq 150$)
DROP	Dropping conference port(s) from conference circuit
ccc,fff	Receiving port number ($001 \leq ccc,fff \leq 500$)
OOS	Out-of-service
DCC	Disconnect code
	When the DCC keyword is specified, the insertion word, which is part of the trunk conditioning code, in the Message No. I.18611 is transmitted by the Network Processing Circuit (NPC) toward the facility side of the DACSII after the conference ports are disconnected. If the keyword is not specified, the insertion word specified when the NPC was grown is transmitted instead.
INCL	Inclusive
	NOTE: The leading zero can be omitted in the conference port number(s) and conference circuit identifier.
RDC	Red circuit
CUS	Customer Customer-controlled Circuit.
xxx	Conference port number at which the denial occurs.

cc	Hexadecimal condition code
cc	<i>Explanation</i>
10	NPC out of service or failed
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
32	Termination is under test
4A	Red circuit, INCL not entered
4B	Customer controlled circuit, INCL not entered
90	The total number of receiving ports specified exceeds the max.
92	Transmitting port cannot be dropped
93	The conference does not exist
94	Conference port is not in conference circuit
E0	ETSI not equipped, not in service, or failed

CONFERENCE::FROM, TO, CONFERENCE IDENTIFIER

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This command connects (establishes) a conference circuit consisting of one or two transmitting conference ports and one or two groups of receiving conference ports in the switched teleconferencing application. Format 1 is used to connect a conference circuit with only one transmitting port. Format 2 is used if the conference circuit has more than one transmitting port.

A maximum number of 30 receiving ports may be specified in the message.

A cross-connection designated as customer controlled and/or red circuit cannot be disconnected or modified without using the inclusive keyword. The red circuit and/or customer controlled keyword can be specified in the command. The inclusive keyword can be used alone or with red circuit keyword. When it is used alone, it disables all customer-controlled marking associated with the ports specified. If it is used together with red circuit, all customer-controlled specified ports are disabled, and the cross-connections in specified conference circuit are marked red circuit.

In the multiline PDS output message format, the second output data line is limited to 80 characters in length. Some conference port numbers are deleted in the data line to keep the line length within the limit.

Command

[I.18611]

```
CONF:[FRM xy][,SEQ ww]:FROM aaa[,TO{ ccc|(ccc,...,fff)}],ID iii, \
<tc>[,RDC][,{CUS|INCL}]!
```

[I.18611]

```
CONF:[FRM xy][,SEQ ww]:FROM(aaa;bbb)[,TO([ccc,...,fff]; \
[ggg,...,jjj])],ID iii, <tc>[,RDC][,{CUS|INCL}]!
```

**Completion
Message**

[O.18611]
M hh:mm:ss xy,ww n[vv] CONF aaa[, { ccc|(ccc,...,fff)}] \\
ID iii <tc>[RDC][CUS] COMPL

[O.18611]
M hh:mm:ss xy,ww n[vv] CONF aaa e LN MSG:
[{ ccc|(ccc,...,jjj)}]
ID iii <tc>[RDC][CUS] COMPL

[O.18611]
M hh:mm:ss xy,ww n[vv] CONF (aaa;bbb)[, ([ccc,...,fff]; \\
[ggg,...,jjj])] ID iii <tc>[RDC][CUS] COMPL

[O.18611]
M hh:mm:ss xy,ww n[vv] CONF (aaa;bbb) e LN MSG:
[([ccc,...,fff];[ggg,...,jjj])]
ID iii <tc>[RDC][CUS] COMPL

Denial Message

Nonhierarchical

[O.18611.01]
M hh:mm:ss xy,ww n[vv] CONF aaa[, { ccc|(ccc,...,fff)}] \\
ID iii [xxx] COND cc DNY

[O.18611.01]
M hh:mm:ss xy,ww n[vv] CONF aaa e LN MSG:
[{ccc|(ccc,...,jjj)}]
ID iii [xxx] COND cc DNY

[O.18611.01]
M hh:mm:ss xy,ww n[vv] CONF (aaa;bbb)[, ([ccc,...,fff]; \\
[ggg,...,jjj])] ID iii [xxx] COND cc DNY

[O.18611.01]
M hh:mm:ss xy,ww n[vv] CONF (aaa;bbb) e LN MSG:
[([ccc,...,fff];[ggg,...,jjj])]
ID iii [xxx] COND cc DNY

**Explanation of
Parameters**

aaa,bbb	Transmitting port number ($000 \leq \text{aaa,bbb} \leq 500$) 000 is used to a null transmitting port; when it is used the corresponding receiving port must be either null (000) or empty
ccc, fff, ggg, jjj	Receiving port number ($001 \leq \text{ccc,fff,ggg,jjj} \leq 500$). ccc,...,fff are ports receiving from transmitting port aaa. ggg,...,jjj are ports receiving from transmitting port bbb. The transmitting port number 000 can only be used with Format 2. 000 is used to specify a null transmitting port; when it is used, it must have no corresponding receiving port.
iii	Conference circuit identifier ($001 \leq \text{iii} \leq 150$)
tc	Trunk conditioning code

4-state signaling

TC(ijkl,mnop),TRB

TC(ijkl,mnop),IW X'nn

16-state signalingTC(efghijkl,mnopqrst),TRB
TC(X'uv,X'yz),TRBTC(efghijkl,mnopqrst),IW X'nn
TC(X'uv,X'yz),IW X'nn**Transparent signaling**

TRSP,IW X'nn

TRSP,MUX

TRSP,TRB

TRSP

RDC Red circuit**CUS** Customer

Customer-controlled circuit

INCL Inclusive**NOTE:**

The leading zero can be omitted in the port number(s) and conference circuit identifier.

tc Trunk conditioning code**Transparent signaling**

TRSP IW nn

4-state signaling		16-state signaling	
TC(ijkl,mnop) TRB		TC(efghijkl,mnopqrst) TRB TC(uv,yz) TRB	
TC(ijkl,mnop) IW nn		TC(efghijkl,mnopqrst) IW nn TC(uv,yz) IW nn	
		TRSP MUX	
		TRSP TRB	
		TRSP	
e	Total number of lines in PDS output message (1 through 3, inclusive)		
cc	Hexadecimal condition code		
cc	Explanation		
26	NPC type error		
10	NPC out of service or failed		
12	Active CCN side not IS or failed or pested or hardware OOS		
13	UNIT not equipped, not in service, or failed		
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS		
15	FTMI not equipped, not in service, or failed		
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS		
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS		
30	Termination is already assigned		
32	Termination is under test		
33	Termination is a test port		
34	Termination is under customer control (CUS)		
7E	Insufficient data for setting up a conference		
80	Inconsistent channel range width		
88	Conference port is not registered		
89	Conference port is currently connected		

cc	<i>Explanation</i>
90	The total number of receiving ports specified exceeds the max.
91	Duplicate ports specified
96	Conference already exists
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed

CONFERENCE::QUERY,CONFERENCE CIRCUIT IDENTIFIER

Explanation of Command

**NOTE:**

This command applies to 1.544 Mbit/s Termination only.

This command queries one or more conference circuits for their associated conference ports in the switched teleconferencing application. The transmitting conference port transmits to the receiving ports following its data output line.

Each conference circuit which is not connected is skipped so that there is no information output for the conference circuit.

Command

[I.18511]

CONF:[FRM xy][,SEQ ww]:QRY,{ID iii[-jjj]}|ALL}!

Completion Message

Nonhierarchical

[O.18511]

M hh:mm:ss xy,ww n[vv] CONF QRY ID iii TOTAL ttt rrr \
e LN MSG:

[TR nnn [s]abcbbb[-eee]]

RC nnn [s]abcbbb[-eee] RC nnn [s]abcbbb[-eee]

.

.

.

RC nnn [s]abcbbb[-eee] RC nnn [s]abcbbb[-eee] EOM

.

.

.

M hh:mm:ss xy,ww n[vv] CONF QRY ID iii TOTAL ttt rrr \
e LN MSG:

[TR nnn [s]abcbbb[-eee]]

RC nnn [s]abcbbb[-eee] RC nnn [s]abcbbb[-eee]

.

.

.

RC nnn [s]abcbbb[-eee] RC nnn [s]abcbbb[-eee] EOM

M hh:mm:ss xy,ww n[vv] CONF QRY ALL ID iii TOTAL ttt rrr \
e LN MSG:

[TR nnn [s]abcbbb[-eee]]

RC nnn [s]abcbbb[-eee] RC nnn [s]abcbbb[-eee]

.

.

.

RC nnn [s]abcbbb[-eee] RC nnn [s]abcbbb[-eee] EOM

.

.

.

.

.

M hh:mm:ss xy,ww n[vv] CONF QRY ALL ID jjj TOTAL ttt rrr \
e LN MSG:

[TR nnn [s]abcbbb[-eee]]

TR nnn [s]abcbbb[-eee]

RC nnn [s]abcbbb[-eee] RC nnn [s]abcbbb[-eee]

.

.

.

RC nnn [s]abcbbb[-eee] RC nnn [s]abcbbb[-eee] EOM

M hh:mm:ss xy,ww n[vv] CONF QRY {ID iii[-jjj]}|ALL} COMPL

[O.18512]

M hh:mm:ss xy,ww n[vv] CONF QRY {ID iii[-jjj]}|ALL} NONE COMPL

Hierarchical

[O.18511]

M hh:mm:ss xy,ww n[vv] CONF QRY ID iii TOTAL ttt rrr \
e LN MSG:

[TR nnn uvmnpbbb[-eee]]

RC nnn uvmnpbbb[-eee] RC nnn uvmnpbbb[-eee]

.

.

.

RC nnn uvmnpbbb[-eee] RC nnn uvmnpbbb[-eee]

.

.

.

M hh:mm:ss xy,ww n[vv] CONF QRY ID iii TOTAL ttt rrr \
e LN MSG:

[TR nnn uvmnpbbb[-eee]]


```
RC nnn uvmnpbbb[-eee]   RC nnn uvmnpbbb[-eee]
.
.
.
RC nnn uvmnpbbb[-eee]   RC nnn uvmnpbbb[-eee]   EOM

M hh:mm:ss xy,ww n[vv] CONF QRY ID iii TOTAL ttt rrr \
e LN MSG:
[TR nnn uvmnpbbb[-eee]]
RC nnn uvmnpbbb[-eee]   RC nnn uvmnpbbb[-eee]
.
.
.
RC nnn uvmnpbbb[-eee]   RC nnn uvmnpbbb[-eee]
.
.
.
M hh:mm:ss xy,ww n[vv] CONF QRY ID iii TOTAL ttt rrr \
e LN MSG:
[TR nnn uvmnpbbb[-eee]]
RC nnn uvmnpbbb[-eee]   RC nnn uvmnpbbb[-eee]
.
.
.
RC nnn uvmnpbbb[-eee]   RC nnn uvmnpbbb[-eee]   EOM

M hh:mm:ss xy,ww n[vv] CONF QRY {ID iii[-jjj]|ALL}   COMPL

[O.18512]

M hh:mm:ss xy,ww n[vv] CONF QRY {ID iii[-jjj]|ALL} NONE   COMPL
```

**Explanation of
Parameters**

iii,jjj	Conference circuit identifier ($001 \leq \text{iii,jjj} \leq 150$)
ALL	All conference circuits
iii,jjj	Conference circuit identifier ($001 \leq \text{iii,jjj} \leq 150$)
TR	Transmitting port
ttt	Total of transmitting ports per message part ($001 \leq \text{ttt} \leq 500$)
RC	Receiving port
rrr	Total of receiving ports per message part ($001 \leq \text{rrr} \leq 500$)
nnn	Conference port number ($000 \leq \text{nnn} \leq 500$)
	000 is the null conference port number which can be used for a transmitting port. When conference port number 000 is used, the corresponding channel number will be a string of hyphens;

	e.g. it can be -----[----] in place of abcbbb[-eee] or -----[----] in place of uvmnpbbb[-eee].
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
bbb,eee	Channel number ($001 \leq \text{bbb,eee} \leq 024$)
NONE	None of specified conference circuits is connected (established)

CONFERENCE::QUERY,REGISTRATION,PORT

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This command queries the DS0 channel registration information of one or more conference ports in the switched teleconferencing application. Each conference port which is not registered is skipped so that there is no information output for the port.

If a registered conference port is not connected to a conference circuit, the conference circuit identifier iii is output as triple hyphens "---".

Command

[I.18521]

CONF:[FRM xy][,SEQ ww]:QRY,REG,{PORT nnn[-qqq]|ALL}!

Completion Message

Nonhierarchical

[O.18521]

M hh:mm:ss xy,ww n[vv] CONF QRY REG PORT nnn [s]abcbbb[-eee] \
iii COMPL

[O.18521]

M hh:mm:ss xy,ww n[vv] CONF QRY REG PORT nnn-qqq TOTAL ttt \
e LN MSG:

rrr [s]abcbbb[-eee] iii rrr [s]abcbbb[-eee] iii

.
.
 .

rrr [s]abcbbb[-eee] iii rrr [s]abcbbb[-eee] iii EOM

.
.
 .

```
M hh:mm:ss xy,ww n[vv] CONF QRY REG PORT nnn-qqq TOTAL ttt \  
e LN MSG:  
rrr [s]abcbbbb[-eee] iii   rrr [s]abcbbbb[-eee] iii  
.  
.  
.  
rrr [s]abcbbbb[-eee] iii   rrr [s]abcbbbb[-eee] iii EOM  
M hh:mm:ss xy,ww n[vv] CONF QRY REG PORT nnn-qqq] COMPL
```

[O.18521]

```
M hh:mm:ss xy,ww n[vv] CONF QRY REG ALL TOTAL ttt   e LN MSG:  
rrr [s]abcbbbb[-eee] iii   rrr [s]abcbbbb[-eee] iii  
.  
.  
.  
rrr [s]abcbbbb[-eee] iii   rrr [s]abcbbbb[-eee] iii EOM  
.  
.  
.  
M hh:mm:ss xy,ww n[vv] CONF QRY REG ALL TOTAL ttt   e LN MSG:  
rrr [s]abcbbbb[-eee] iii   rrr [s]abcbbbb[-eee] iii  
.  
.  
.  
rrr [s]abcbbbb[-eee] iii   rrr [s]abcbbbb[-eee] iii EOM  
M hh:mm:ss xy,ww n[vv] CONF QRY REG ALL COMPL
```

Hierarchical

[O.18521]

```
M hh:mm:ss xy,ww n[vv] CONF QRY REG PORT nnn uvmnpbbb[-eee] \  
iii COMPL
```

[O.18521]

```
M hh:mm:ss xy,ww n[vv] CONF QRY REG PORT nnn-qqq TOTAL ttt \  
e LN MSG:  
rrr uvmnpbbb[-eee] iii   rrr uvmnpbbb[-eee] iii  
.  
.  
.  
rrr uvmnpbbb[-eee] iii   rrr uvmnpbbb[-eee] iii EOM  
.  
.  
.  
M hh:mm:ss xy,ww n[vv] CONF QRY REG PORT nnn-qqq TOTAL ttt \  
e LN MSG:  
rrr uvmnpbbb[-eee] iii   rrr uvmnpbbb[-eee] iii  
.  
.  
.
```

```
rrr uvmnpbbb[-eee] iii   rrr uvmnpbbb[-eee] iii EOM
M hh:mm:ss xy,ww n[vv] CONF QRY REG PORT nnn[-qqq] COMPL
```

[O.18521]

```
M hh:mm:ss xy,ww n[vv] CONF QRY REG ALL TOTAL ttt  e LN MSG:
rrr uvmnpbbb[-eee] iii   rrr uvmnpbbb[-eee] iii
.
.
.
rrr uvmnpbbb[-eee] iii   rrr uvmnpbbb[-eee] iii EOM
.
.
.
M hh:mm:ss xy,ww n[vv] CONF QRY REG ALL TOTAL ttt  e LN MSG:
rrr uvmnpbbb[-eee] iii   rrr uvmnpbbb[-eee] iii
.
.
.
rrr uvmnpbbb[-eee] iii   rrr uvmnpbbb[-eee] iii EOM
M hh:mm:ss xy,ww n[vv] CONF QRY REG ALL COMPL
```

Common

[O.18522]

```
M hh:mm:ss xy,ww n[vv] CONF QRY REG {PORT nnn[-qqq]|ALL} \
NONE  COMPL
```

Explanation of Parameters

REG	Registered DS0 channels
ALL	All conference ports
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
bbb, eee	Channel number ($001 \leq \text{bbb, eee} \leq 024$)
nnn, qqg, rrr	Conference port number ($001 \leq \text{nnn, qqg, rrr} \leq 500$)

iii	Conference circuit identifier ($001 \leq iii \leq 150$, or $iii = ---$)
ttt	Total of registered conference ports per message part ($001 \leq ttt \leq 500$)
NONE	None of the specified conference ports is registered

CONFERENCE::REGISTER,PORT

Explanation of Command

This command registers a single DS0 channel or a range (contiguous) of DS0 channels of a network processing circuit (NPC) equipped in a facility terminating unit (FTU) to a conference port in the switched teleconferencing application.

Command

Nonhierarchical

[I.18411]

CONF:[FRM xy][,SEQ ww]:REG [s]abcbbb[-eee],PORT nnn!

Hierarchical

[I.18411]

CONF:[FRM xy][,SEQ ww]:REG uvmnpbbb[-eee],PORT nnn!

Completion Message

Nonhierarchical

[O.18411]

M hh:mm:ss xy,ww n[vv] CONF REG [s]abcbbb[-eee] PORT nnn \
COMPL

Hierarchical

[O.18411]

M hh:mm:ss xy,ww n[vv] CONF REG uvmnpbbb[-eee] PORT nnn \
COMPL

Denial Message

Nonhierarchical

[O.18411.01]

M hh:mm:ss xy,ww n[vv] CONF REG [s]abcbbb[-eee] PORT nnn \
COND cc DNY

Hierarchical

[O.18411.01]

M hh:mm:ss xy,ww n[vv] CONF REG uvmnpbbb[-eee] PORT nnn \
COND cc DNY

**Explanation of
Parameters**

REG	Register This keyword is used to register a DS0 channel(s) to a conference port.
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
bbb,eee	Channel numbers (001 through 024)
PORT	Conference port
nnn	Conference port number (001 through 500)

**NOTE:**

The leading zero can be omitted in the conference port and channel numbers.

cc	Hexadecimal condition code
cc	<i>Explanation</i>
26	NPC type error
01	Invalid range for specified NPC type
11	NPC not equipped
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed

cc	<i>Explanation</i>
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
30	Termination is already assigned
81	Conference Port is currently registered to a different channel
83	Conference Port is already registered to the same group of channels
84	Channel(s) is already registered
85	Using the 24th channel of a T1DM NPC
86	Using the 24th channel of a DMI NPC
E0	ETSI not equipped, not in service, or failed

CONFERENCE::RELEASE,PORT

Explanation of Command

This command releases a single or a contiguous range of registered DSO channels of a network processing circuit (NPC) equipped in a facility terminating unit (FTU) from a conference port in the switched teleconferencing application.

Command

Nonhierarchical

[I.18421]

```
CONF:[FRM xy][,SEQ ww]:RLS [s]abcbbb[-eee],PORT nnn!
```

Hierarchical

[I.18421]

```
CONF:[FRM xy][,SEQ ww]:RLS uvmnpbbb[-eee],PORT nnn!
```

Completion Message

Nonhierarchical

[O.18421]

```
M hh:mm:ss xy,ww n[vv] CONF RLS [s]abcbbb[-eee] \  
PORT nnn COMPL
```

Hierarchical

[O.18421]

```
M hh:mm:ss xy,ww n[vv] CONF RLS uvmnpbbb[-eee] \  
PORT nnn COMPL
```

Denial Message**1.544 Mbit/s Termination****Nonhierarchical**

[O.18421.01]

```
M hh:mm:ss xy,ww n[vv] CONF RLS [s]abcbbb[-eee] \  
PORT nnn COND cc DNY
```

Hierarchical

[O.18421.01]

```
M hh:mm:ss xy,ww n[vv] CONF RLS uvmnpbbb[-eee] \  
PORT nnn COND cc DNY
```

**Explanation of
Parameters**

RLS	Releasing DS0 channel(s) from conference port
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
bbb, eee	Channel number ($001 \leq \text{bbb, eee} \leq 024$)
PORT	Conference port
nnn	Conference port number ($001 \leq \text{nnn} \leq 500$)
 NOTE:	The leading zero can be omitted in the conference port and channel numbers.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
01	Invalid range for specified NPC type
88	Conference port is not registered
89	Conference port is currently connected
8B	Channels and conference port do not match

CONFERENCE::SWITCH,FROM,TO,CONFERENCE IDENTIFIER

Explanation of Command

This command switches a conference circuit. This is the normal format of the command, and the condensed format is shown in Message No. I.18121. This command can switch transmitting and/or receiving ports. Format 1 is used to connect a conference circuit with only one transmitting port. (The transmitting port is not required to be specified if it is not switched.) Format 2 is used if the conference circuit has more than one transmitting port. (There can be zero, one, or two transmitting ports specified.)

A maximum of 30 receiving ports may be specified in this command. In addition, the maximum length of the command must not exceed 120 characters. Any input command longer than 120 characters is denied by DACS II.

Transmitting and/or receiving ports do not have to be specified if they are not switched. However, the user is allowed to specify conference ports which are not switched, although the command does not alter the cross-connections associated with these conference ports.

The ALL keyword specifies all conference ports (that is, including all transmitting and receiving ports); It is not limited to 30 receiving ports. Only one ALL can be used in the command at a time. If the conference circuit has only one transmitting port (in Format 1), the ALL keyword specifies that all conference ports in the conference circuit are switched to receive from the new transmitting port.

If the conference circuit has two transmitting ports (in Format 2), the ALL in the first port group means that all conference ports, except those specified in the second port group, receive from the first transmitting port. On the other hand, the ALL in the second port group means that all conference ports, except those specified in the first port group, receive from the second transmitting port.

Command

[I.18211]

```
CONF:FRM xy,SEQ ww:SW[,FROM aaa[/TR]] \  
[,TO{ ccc|(ccc,.,fff)| ALL}],ID iii[,OOS][,INCL]!
```

[I.18211]

CONF:FRM xy,SEQ ww:SW[,FROM([aaa[/TR]];[bbb[/TR]])] \\
[,TO([ccc,..,fff|ALL]);[ggg,..,jjj|ALL])], \\
ID iii[,OOS][,INCL]!

Completion Message

[O.18211]

M hh:mm:ss xy,ww n[vv] CONF SW[aaa[/TR]] \\
[, {ccc|(ccc,..,fff)| ALL}] ID iii[OOS] \\
[RDC][CUS] COMPL

[O.18211]

M hh:mm:ss xy,ww n[vv] CONF SW[aaa[/TR]] \\
e LN MSG:
[{ccc|(ccc,..,fff)|ALL}] \\
ID iii[OOS][RDC][CUS] COMPL

[O.18211]

M hh:mm:ss xy,ww n[vv] CONF SW[([aaa[/TR]];[bbb[/TR]])] \\
[, ([{ccc,..,fff|ALL});[ggg,..,jjj|ALL])])ID iii \\
[OOS][RDC][CUS] COMPL

[O.18211]

M hh:mm:ss xy,ww n[vv] CONF SW[([aaa[/TR]];[bbb[/TR]])] \\
e LN MSG:
([[{ccc,..,fff|ALL}];[ggg,..,jjj|ALL])) \\
ID iii[OOS][RDC][CUS] COMPL

Denial Message

[O.18211.01]

M hh:mm:ss xy,ww n[vv] CONF SW[aaa/TR][,{ccc|(ccc,..,fff)| \\
ALL}] ID iii [xxx] COND cc DNY

[O.18211.01]

M hh:mm:ss xy,ww n[vv] CONF SW[aaa[/TR]] e LN MSG:
[{ccc|(ccc,..,fff)| ALL}] \\
ID iii [xxx] COND cc DNY

[O.18211.01]

M hh:mm:ss xy,ww n[vv] CONF SW[([aaa[/TR]];[bbb[/TR]])] \\
[, ([{ccc,..,fff|ALL});[ggg,..,jjj|ALL])])ID iii [xxx] \\
COND cc DNY

[O.18211.01]

M hh:mm:ss xy,ww n[vv] CONF SW[([aaa[/TR]);[bbb[/TR]])] \
e LN MSG:
[[{ccc,...,fff|ALL}];[{ggg,...,jjj|ALL}]] \
ID iii [xxx] COND cc DNY

Explanation of Parameters

SW	Switch
aaa,bbb	Transmitting port number ($000 \leq \text{aaa,bbb} \leq 500$) The null transmitting port number 000 can only be used in Format 2. 000 is used to specify a null transmitting port; when it is used, it must have no corresponding receiving ports.
TR	Transmitting-only port
ccc,fff,ggg,jjj	Receiving port number ($000 \leq \text{ccc,ddd,fff,ggg,jjj} \leq 500$) ccc,...,fff are ports receiving from transmitting port aaa. ggg,...,jjj are ports receiving from transmitting port bbb.
ALL	All conference ports (i.e., including all transmitting and receiving ports) switched to a new transmitting port. Only one ALL can be used at a time.
iii	Conference circuit identifier ($001 \leq \text{iii} \leq 150$)
 NOTE:	The leading zero can be omitted in the port number(s) and conference circuit identifier.
OOS	Out of service
INCL	Inclusive
RDLD	Red lined
CUS	Customer Customer-controlled circuit.
xxx	Conference port number at which the denial occurs.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
04	No NPC's out of service and OOS keyword used
10	NPC out of service or failed
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
4A	Red circuit, INCL not entered
4B	Customer controlled circuit, INCL not entered
7E	Insufficient data for setting up a conference
7F	No OOS keyword is given for out-of-service NPC
8F	Number of transmitting ports does not match existing conference
90	The total number of receiving ports specified exceeds the max.
91	Duplicate ports specified
93	The conference does not exist
94	Conference port is not in conference circuit
97	Conference port cannot be dropped out of conference by switch command
98	Error in input
E0	ETSI not equipped, not in service, or failed

TERMINATE CONFERENCE

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This command terminates (disconnects) a conference circuit. It disconnects all cross-connections in the conference circuit. After the conference circuit is terminated, the conference ports and conference circuit identifier can be used in other conference circuits.

Command

[I.18311]

CONF:[FRM xy][,SEQ ww]:TERM,ID iii[,OOS][,DCC][,INCL]!

Completion Message

[O.18311]

M hh:mm:ss xy,ww n[vv] CONF TERM ID iii[OOS] \
[DCC][RDC][CUS] COMPL

Denial Message

[O.18311.01]

M hh:mm:ss xy,ww n[vv] CONF TERM ID iii[xx] COND cc DNY

Explanation of Parameters

TERM	Terminating conference circuit
iii	Conference circuit identifier ($001 \leq iii \leq 150$)
OOS	Out-of-service
INCL	Inclusive
DCC	Disconnect code

When the DCC keyword is specified, the insertion word, which is part of the trunk conditioning code in Message No. I.18611, is transmitted by the Network Processing Circuit (NPC) toward the facility side of the DACS II after the conference ports are disconnected. If the keyword is not specified, the insertion word specified when the NPC was grown is transmitted instead.

**NOTE:**

The leading zero can be omitted in the conference circuit identifier.

RDC	Red Circuit
RDLD	Red Lined
CUS	Customer-controlled Circuit
xxx	Conference port number at which the denial occurs
cc	Hexadecimal condition code

cc	<i>Explanation</i>
04	No NPC's out of service and OOS keyword used
10	NPC out of service or failed
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
15	FTMI not equipped, not in service, or failed
32	Termination is under test
4A	Red circuit, INCL not entered
4B	Customer controlled circuit, INCL not entered
93	The conference does not exist
E0	ETSI not equipped, not in service, or failed

COPY NPC

Explanation of Command

This command is used to copy provisioning information from a previously provisioned network processing circuit (NPC) to an NPC to be provisioned (the destination NPC).

1.544 Mbit/s Termination

It is used for domestic NPC types DE, TE, DA, TA, and DS. Copying is limited to the combinations given below:

- DE to DE or TE
- TE to TE or DE
- DA to DA or TA
- TA to TA or DA
- DS to DS

When the parameters of the source (previously provisioned) NPC type do not apply to the destination NPC type, such parameters and their values are not be copied to the destination NPC type; the destination NPC ignores them. When there are no parameters of the source NPC type that apply to the destination NPC type, the destination NPC type assumes its default values for those parameters.

2.048 Mbit/s Termination

It is used for international NPC types PA, PB, PC and TH. Intervention Level data for the NPC is also copied. Copying is limited to the combinations given below:

- PA to PA
- PB to PB
- PC to PC
- PB to PC
- PC to PB
- TH to TH

One output message is printed for each NPC successfully copied and provisioned.

When a range address crosses a Unit boundary, the command is denied. The NPC numbers which are divisible by four with a remainder of zero are not a valid Hybrid DS3 Unit THxyz type NPC. However, the range of TH type NPC numbers is still supported with the understanding that there may be gaps in the NPC number range.

When an NPC range specified within a Unit crosses a Facility Terminating Module (FTM) boundary and the FTM type differs from that specified in this command then that FTM is skipped and a summary denial message is output. This message gives the range of NPCs for which the denial is effective and the reason for the denial. The NPC range covers successive NPCs in the range that are denied for the same reason.

Execution of the command then resumes at the NPC following the last one in the summary denial message and continues to the end of the specified range.

1.544 Mbit/s Termination

No insertion word appears in the output message if the NPC is a clear DS1 type (types DE9y9, DA9y9, TE9y9 and TA9y9).

2.048 Mbit/s Termination

This command is very similar to the GRTH command. The input parameters that can be specified on the GRTH command are copied from the source NPC to the destination NPC. The performance monitoring threshold parameters are also copied. Others that are defaulted by the GRTH command are defaulted.

Command

Nonhierarchical

[I.31521]

COPY:[FRM xy][,SEQ ww]:NPC [s]abc,TO [t]def[-[u]ghi]!

Hierarchical

[I.31521]

COPY:[FRM xy][,SEQ ww]:NPC uvmnp,TO wxkqr[-ghikl]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

If the destination NPC is DE or TE type, the output format is:

[O.31521]

```
M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz [IW pq] AIS \
{INFO|MJ|MN|CR} 4 LN MSG:
      SLIP      BER      ERS      SERS      COFA
THRESHOLDS mmm nnn  p  q      rrrrr  sss      ttt  uuu
OPTIONS     e   f    g  h      i      j      k    l \
COMPL
```

If the destination NPC is DA or TA type, the output format is:

[O.31521]

```
M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz [IW pq] \
AIS {INFO|MJ|MN|CR} PL {ENA|DSA} 4 LN MSG:
DAILY NE    CVP      ESP  SESP  SEFS  CSSP  UASP  CVL      ESL \
SESL
THRESHOLDS  aaaaaaaaa bbbbbb ccccc ddddd eeeee fffff ggggggggg \
hhhhh iiii
OPTIONS     a          b    c    d    e    f    g          h \
i          EOM
```

```
M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz [IW pq] \
AIS {INFO|MJ|MN|CR} PL {ENA|DSA} 4 LN MSG:
DAILY FE    CVP      ESP  SESP  SEFS  CSSP  UASP  ESL
THRESHOLDS  jjjjjjjjj kkkkk lllll mmmm  nnnnn ooooo ppppp
OPTIONS     j          k    l    m    n    o    p          EOM
```

```
M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz [IW pq] \
AIS {INFO|MJ|MN|CR} PL {ENA|DSA} 4 LN MSG:
15MIN NE    CVP      ESP  SESP  SEFS  CSSP  UASP  CVL      ESL \
SESL
THRESHOLDS  aaaaaaa  bbb  ccc  ddd  eee \ fff  ggggggg \
hhh  iii
OPTIONS     a          b    c    d    e    f    g \
h          i  EOM
```

```
M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz [IW pq] \
AIS {INFO|MJ|MN|CR} PL {ENA|DSA} 4 LN MSG:
15MIN FE    CVP      ESP  SESP  SEFS  CSSP  UASP  ESL
THRESHOLDS  i i i i i i i k k k  l l l  m m m  n n n  o o o \
p p p
OPTIONS     i          k    l    m    n    o    p  COMPL
```

If the segment header exceeds 80 characters, the output format is:

[O.31521]

```
M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz 5 LN MSG:
[IW pq] AIS {INFO|MJ|MN|CR} PL {ENA|DSA}
DAILY NE CVP ESP SESP SEFS CSSP UASP CVL ESL \
SESL
THRESHOLDS aaaaaaaaa bbbbbb ccccc dddddd eeeee fffff ggggggggg \
hhhhh iiiii
OPTIONS a b c d e f g h \
i EOM
```

```
M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz 5 LN MSG:
[IW pq] AIS {INFO|MJ|MN|CR} PL {ENA|DSA}
DAILY FE CVP ESP SESP SEFS CSSP UASP ESL
THRESHOLDS jjjjjjjjj kkkkk lllll mmmmm nnnnn ooooo ppppp
OPTIONS j k l m n o p EOM
```

```
M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz 5 LN MSG:
[IW pq] AIS {INFO|MJ|MN|CR} PL {ENA|DSA}
15MIN NE CVP ESP SESP SEFS CSSP UASP CVL ESL \
SESL
THRESHOLDS a a a a a a b b b c c c d d d e e e f f f \
g g g g g g h h h i i i
OPTIONS a b c d e f g h \
i EOM
```

```
M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz 5 LN MSG:
[IW pq] AIS {INFO|MJ|MN|CR} PL {ENA|DSA}
15MIN FE CVP ESP SESP SEFS CSSP UASP ESL
THRESHOLDS j j j j j j k k k l l l m m m n n n o o o \
p p p
OPTIONS j k l m n o p COMPL
```

If the destination NPC is DS type, the output format is:

[O.31521]

```
M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE DSxyz [IW pq] \
4 N MSG:
SLIP BER ERS SERS COFA SANE SAFE
THRESHOLDS mmm nnn p q rrrrr sss ttt uuu xxxxx \
zzzzz
OPTIONS e f g h i j k l v \
w COMPL
```

Hierarchical

If the destination NPC is DE or TE type, the output format is:

[O.31521]

```
M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz [IW pq] AIS \
{INFO|MJ|MN|CR} \
  4 LN MSG:
      SLIP      BER      ERS      SERS      COFA
THRESHOLDS mmm nnn  p  q      rrrrr  sss      ttt  uuu
OPTIONS     e   f      g  h      i      j      k    l
COMPL
```

If the destination NPC is DA or TA type, the output format is:

[O.31521]

```
M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz [IW pq] \
AIS {INFO|MJ|MN|CR} PL {ENA|DSA} 4 LN MSG:
DAILY NE  CVP      ESP  SESP  SEFS  CSSP  UASP  CVL      ESL \
SESL
THRESHOLDS aaaaaaaaa bbbbbb ccccc ddddd eeeee fffff ggggggggg \
hhhhh iiiii
OPTIONS     a          b      c      d      e      f      g          h \
i      EOM
```

```
M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz [IW pq] \
AIS {INFO|MJ|MN|CR} PL {ENA|DSA} 4 LN MSG:
DAILY FE  CVP      ESP  SESP  SEFS  CSSP  UASP  ESL
THRESHOLDS jjjjjjjjj kkkkk lllll mmmmm nnnnn ooooo ppppp
OPTIONS     j          k      l      m      n      o      p      EOM
```

```
M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz [IW pq] \
AIS {INFO|MJ|MN|CR} PL {ENA|DSA} 4 LN MSG:
15MIN NE  CVP      ESP  SESP  SEFS  CSSP  UASP  CVL      ESL \
SESL
THRESHOLDS a a a a a a  b b b  c c c  d d d  e e e  f f f \
g g g g g g  h h h  i i i
OPTIONS     a          b      c      d      e      f      g \
h      i      EOM
```

```
M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz [IW pq] \
AIS {INFO|MJ|MN|CR} PL {ENA|DSA} 4 LN MSG:
15MIN FE  CVP      ESP  SESP  SEFS  CSSP  UASP  ESL
THRESHOLDS i i i i i i  k k k  l l l  m m m  n n n  o o o \
p p p
OPTIONS     i          k      l      m      n      o      p      COMPL
```

If the segment header exceeds 80 characters, the output format is:

[O.31342]

```
M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz 5 LN MSG:
[IW pq] AIS {INFO|MJ|MN|CR} PL {ENA|DSA}
```

```

DAILY NE    CVP      ESP   SESP  SEFS  CSSP  UASP  CVL      ESL \
SESL
THRESHOLDS  aaaaaaaaa bbbbbb ccccc ddddd eeeee fffff gggggggg \
hhhhh iiii
OPTIONS     a          b     c     d     e     f     g     h \
i          EOM

M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz  5 LN MSG:
[IW pq] AIS {INFO|MJ|MN|CR} PL {ENA|DSA}
DAILY FE    CVP      ESP   SESP  SEFS  CSSP  UASP  ESL
THRESHOLDS  jjjjjjjjj kkkkk lllll mmmmm nnnnn ooooo ppppp
OPTIONS      j          k     l     m     n     o     p     EOM

M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz  5 LN MSG:
[IW pq] AIS {INFO|MJ|MN|CR} PL {ENA|DSA}
15MIN NE    CVP      ESP   SESP  SEFS  CSSP  UASP  CVL      ESL \
SESL
THRESHOLDS  a a a a a a a  b b b  c c c  d d d  e e e  f f f \
g g g g g g g  h h h  i i i
OPTIONS      a          b     c     d     e     f     g  h  i  EOM

M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz  5 LN MSG:
[IW pq] AIS {INFO|MJ|MN|CR} PL {ENA|DSA}
15MIN FE    CVP      ESP   SESP  SEFS  CSSP  UASP  ESL
THRESHOLDS  i i i i i i i  k k k  l l l  m m m  n n n  o o o \
p p p
OPTIONS      j          k     l     m     n     o     p     COMPL

```

If the destination NPC is DS type, the output format is:

[O.31521]

```

M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE DSxyz [IW pq] \
4 LN MSG:
          SLIP      BER      ERS      SERS      COFA      SANE      SAFE
THRESHOLDS  mmm  nnn  p  q  rrrrr  sss      ttt  uuu  xxxxx \
zzzzz
OPTIONS      e    f    g    h    i          j    k    l    v \
w          COMPL

```

2.048 Mbit/s Termination

Nonhierarchical

If the destination NPC is PB or PC type, the output format is:

[O.31521]

```

M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz [IW pqr] \
AIS {MI|PMA|DMA|PMC} 4 LN MSG:
24 HOUR              DM          SERS          ERS          US \

```



```

SLIP
THRESHOLDS      nnnnn      ppppp      qqqqq      rrrrr \
SSSSS
OPTIONS          e          f          g          h \
i      EOM

M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz [IW pqr] \
AIS {MI|PMA|DMA|PMC} 4 LN MSG:
SHORT INTERVAL   DM          SERS          ERS          US
SLIP
THRESHOLDS      n n n n n      p p p p p      q q q q q \
r r r r r s s s s s
OPTIONS          e          f          g          h      i      EOM

```

```

M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz TS0 abcdefgh \
TS0M abcdefgh COMPL

```

If the destination NPC is PA or TH type, the output format is:

[O.31521]

```

M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz [IW pqr] \
AIS {MI|DMA|PMA|PMC} 4 LN MSG:
DAILY          CRC          FRER          OFS      ES      SES      CSS      CV
THRESHOLDS     aaaaaaaaaa bbbbbbbbbb ccccc dddd eeeee fffff ggggggggg
OPTIONS         a          b          c          d          e          f          g          EOM

```

```

M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz [IW pqr] \
AIS {MI|DMA|PMA|PMC} 4 LN MSG:
DAILY          UAS      UATC MER      FEBE          FES      FSES      FUAS
THRESHOLDS     hhhhh iiii jjjjj kkkkkkkk llll mmmm nnnnn
OPTIONS         h          i          j          k          l          m          n      EOM

```

```

M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz [IW pqr] \
AIS {MI|DMA|PMA|PMC} 4 LN MSG:
15MIN          CRC          FRER          OFS      ES      SES      CSS      CV
THRESHOLDS     a a a a a a b b b b b b b c c c d d d \
e e e f f f g g g g g g
OPTIONS         a          b          c          d          e \
f      g      EOM

```

```

M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz [IW pqr] \
AIS {MI|DMA|PMA|PMC} 4 LN MSG:
15MIN          UAS      UATC MER      FEBE          FES      FSES      FUAS
THRESHOLDS     h h h i i i j j j k k k k k k l l l \
m m m n n n
OPTIONS         h          i          j          k          l          m          n      EOM

```

```

M hh:mm:ss xy,ww n[vv] COPY [s]jkl TYPE mnxyz TS0 abcdefgh \
TS0M abcdefgh COMPL

```

Note that FEBE, FES, FSES and FUAS are not applicable for TH type NPCs.

Hierarchical

If the destination NPC is PB or PC type, the output format is:

[O.31521]

```
M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz [IW pqr] \
AIS {MI|PMA|DMA|PMC} 4 LN MSG:
24 HOUR          DM          SERS          ERS          US \
SLIP
THRESHOLDS       nnnnnn     ppppp     qqqqq     rrrrr \
SSSS
OPTIONS          e          f          g          h \
i    EOM
```

```
M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz [IW pq] \
AIS {MI|PMA|DMA|PMC} 4 LN MSG:
SHORT INTERVAL   DM          SERS          ERS          US \
SLIP
THRESHOLDS       n n n n n     p p p p p     q q q q q \
r r r r r     s s s s s
OPTIONS          e          f          g          h \
i    EOM
```

```
M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz TS0 abcdefgh \
TS0M abcdefgh COMPL
```

If the destination NPC is PA or TH type, the output format is:

[O.31521]

```
M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz [IW pqr] \
AIS {MI|DMA|PMA|PMC} 4 LN MSG:
DAILY          CRC          FRER          OFS          ES          SES          CSS          CV
THRESHOLDS     aaaaaaaaaa bbbbbbbbbb ccccc dddd eeeee fffff gggggggggg
OPTIONS        a          b          c          d          e          f          g          EOM
```

```
M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz [IW pqr] \
AIS {MI|DMA|PMA|PMC} 4 LN MSG:
DAILY          UAS          UATC          MER          FEBE          FES          FSES          FUAS
THRESHOLDS     hhhhh iiii jjjjj kkkkkkkk llll mmmm nnnnn
OPTIONS        h          i          j          k          l          m          n          EOM
```

```
M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz [IW pqr] \
AIS {MI|DMA|PMA|PMC} 4 LN MSG:
15MIN          CRC          FRER          OFS          ES          SES          CSS          CV
THRESHOLDS     a a a a a a  b b b b b b  c c c  d d d  e e e \ f
f f  g g g g g g g
OPTIONS        a          b          c          d          e          f \
g    EOM
```

```
M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz [IW pqr] \
AIS {MI|DMA|PMA|PMC} 4 LN MSG:
15MIN      UAS  UATC MER  FEBE  FES  FSES  FUAS
THRESHOLDS  h h h  i i i  j j j  k k k  k k k  l l l  m m m  n n n
OPTIONS      h      i      j      k      l      m      n      EOM
```

```
M hh:mm:ss xy,ww n[vv] COPY uvjkl TYPE mnxyz TS0 abcdefgh
TS0M abcdefgh COMPL
```

Note that FEBE, FES, FSES and FUAS are not applicable for TH types NPCs.

Denial Message

Nonhierarchical

[O.31521.01]

```
M hh:mm:ss xy,ww n[vv] COPY NPC [s]abc TO [t]mno[-[u]vwx] COND cc \
DNY
```

Hierarchical

[O.31521.01]

```
M hh:mm:ss xy,ww n[vv] COPY NPC uvmnp TO bcdfe[-efhed] COND cc DNY
```

Explanation of Parameters

NPC	Network processing circuit
TO	to
TYPE	type
mnxyz	NPC type identifier
DA	Dual digroup ANSI NPC
DE	Dual digroup NPC
DS	SLC [®] carrier NPC
TA	DS3U ANSI NPC
TE	DS3U or HDS3U Noninterface unit NPC
TH	Hybrid DS3U CEPT NPC
PA	CEPT NPC (75- or 120-ohm)
PB	CEPT NPC (120-ohm twisted pair)
PC	CEPT NPC (75-ohm coaxial)

	[s]abc	The 3- or 4-digit nonhierarchical NPC number, denoting the source of the provisioning information.
	[t]def	The 3- or 4-digit nonhierarchical NPC number, denoting the start of a range.
	[u]ghi	The 3- or 4-digit nonhierarchical NPC number, denoting the end of a range.
	[s]jkl	The 3- or 4-digit nonhierarchical NPC number of the NPC that was successfully equipped.
	[t]mno	The 3- or 4-digit nonhierarchical NPC number of the first NPC in a range to be denied.
	[u]vwx	The 3- or 4-digit nonhierarchical NPC number of the last NPC in a range to be denied.
	bcdfe	Hierarchical NPC number of the first NPC in a range to be denied.
	efhed	Hierarchical NPC number of the last NPC in a range to be denied.
	ghikl	Hierarchical NPC number of the last NPC in a range to be equipped.
	uvjkl	Hierarchical NPC number of the NPC that was successfully equipped.
	uvmnp	Hierarchical NPC number denoting the source of the provisioning information to be copied.
	wxkqr	Hierarchical NPC number of the NPC to be equipped or the first NPC in a range to be equipped.

bc,ef,gh,uv,wx

Unit number

d,h,i,j,k,m

Module number

fe,ed,kl,np,qr

NPC number within the module

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

If NPC numbers are expressed in hierarchical form, the valid values are:

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

IW Insertion word

pq	Hexadecimal value of the insertion word. An eight-bit code, called the growth insertion word, is transmitted by this NPC on unassigned DS0 channels. This code is specified by the optional keyword IW and its argument pq. This code was previously called the Disconnect Code (DCC), but that name is properly reserved for the cross-connect insertion word, which is transmitted when the disconnect message with the DDC specified is used. Although any 2-digit hexadecimal code may be used, the default values are 7F Unassigned Channel Code (UAC), the default value for DE/TE type, DA/TA type, and DS type NPCs provisioned with D4 or ESF framing. 18 Unassigned Multiplex Code (UMC), the default value for DA/TA type NPCs provisioned with T1DM framing. This value should only be provisioned with T1DM framing (DE4yz/TE4yz, DA4yz/TA4yz), so the growth command enforces this restriction. FF This is recommended for unconnected channels in the SLC[®] interface and CPI applications. For Clear-DS1 NPCs, the insertion word option is NOT available and the message is denied if this option is entered. The alarm indication signal (AIS) is transmitted in the disconnect or idle state.
AIS	Alarm indication signal
INFO	Information
	Information message (not an alarm).
MJ	Major (alarm)
MN	Minor (alarm)
BER	Bit Error Rate
ERS	Errored seconds
SERS	Severe errored seconds
COFA	Change of frame alignment
mmm	SLIP major alarm threshold (0 through 255)
nnn	SLIP minor alarm threshold (0 through 255)
e	SLIP major option selection (0 through 3)
f	SLIP minor option selection (0 through 3)

p	BER major alarm threshold (4 through 6)
q	BER minor alarm threshold (4 through 6)
g	BER major option selection (0 through 3)
h	BER minor option selection (0 through 3)
rrrrr	ERS threshold (1 through 65535)
i	ERS option selection (0 through 3)
sss	SERS threshold (1 through 255)
j	SERS option selection (0 through 3)
ttt	COFA major alarm threshold (1 through 511)
uuu	COFA minor alarm threshold (1 through 255)
k	COFA major option selection (0 through 3)
l	COFA minor option selection (0 through 3)
xxxxx	SANE threshold (0 through 65535)
v	SANE option selection (0 through 3)
zzzzz	SAFE threshold (0 through 65535)
w	SAFE option selection (0 through 3)

**NOTE:**

For clear-DS1 FTU NPC only SLIP and BER parameters are listed. For clear-DS1 DS3U NPC only SLIP parameters are listed.

The SANE and SAFE parameters are not applicable to DS1yz and DS7yz type NPCs.

Except for BER, major thresholds may not be equal to or less than the minor thresholds. The BER major threshold can be equal to the BER minor threshold.

PL Payload loopback

ENA Enabled

Payload loopback commands received from far-end equipment on the ESF data link are recognized and performed by the ANSI NPC. This is the default option.

DSA Disabled

Payload loopback commands received from far-end equipment on the ESF data link are ignored by the ANSI NPC. This prevents customer equipment from controlling network configurations.

	CVP	Path Coding Violations
	ESP	Path Errored Seconds
	SESP	Path Severely Errored Seconds
	SEFS	Severely Errored Framing Seconds
	CSSP	Path Controlled Slip Seconds
	UASP	Path Unavailable Seconds
	CVL	Line Coding Violations
	ESL	Line Errored Seconds
	SESL	Line Severely Errored Seconds
aaaaaaaa		Daily near-end path coding violation threshold (000000000 through 134217727)
a		Daily near-end path coding violation threshold selection (0 through 3)
bbbbbb		Daily near-end path errored second threshold (00000 through 86400)
b		Daily near-end path errored second threshold selection (0 through 3)
cccccc		Daily near-end path severely errored second threshold (00000 through 86400)
c		Daily near-end path severely errored second threshold selection (0 through 3)
dddddd		Daily near-end severely errored framing second threshold (00000 through 86400)
d		Daily near-end severely errored framing second threshold selection (0 through 3)
eeeeee		Daily near-end controlled slip second threshold (00000 through 86400)
e		Daily near-end controlled slip second threshold selection (0 through 3)
fffff		Daily near-end unavailable second threshold (00000 through 86400)
f		Daily near-end unavailable second threshold selection (0 through 3)
ggggggggg		Daily near-end line coding violation threshold (000000000 through 134217727, or ----- if not applicable)

g	Daily near-end line coding violation threshold selection (0 through 3)
hhhhh	Daily near-end line errored second threshold (00000 through 86400, or ----- if not applicable)
h	Daily near-end line errored second threshold selection (0 through 3)
iiii	Daily near-end line severely errored second threshold (00000 through 86400, or ----- if not applicable)
i	Daily near-end line severely errored second threshold selection (0 through 3)
jjjjjjj	Daily far-end path coding violation threshold (000000000 through 134217727, or ----- if not applicable)
j	Daily far-end path coding violation threshold selection (0 through 3)
kkkkk	Daily far-end path errored second threshold (00000 through 86400, or ----- if not applicable)
k	Daily far-end path errored second threshold selection (0 through 3)
lllll	Daily far-end path severely errored second threshold (00000 through 86400, or ----- if not applicable)
l	Daily far-end path severely errored second threshold selection (0 through 3)
mmmmm	Daily far-end severely errored framing second threshold (00000 through 86400, or ----- if not applicable)
m	Daily far-end severely errored framing second threshold selection (0 through 3)
nnnnn	Daily far-end controlled slip second threshold (00000 through 86400, or ----- if not applicable)
n	Daily far-end controlled slip second threshold selection (0 through 3)
ooooo	Daily far-end unavailable second threshold (00000 through 86400)
o	Daily far-end unavailable second threshold selection (0 through 3)
ppppp	Daily far-end line errored second threshold (00000 through 86400, or ----- if not applicable)
p	Daily far-end line errored second threshold selection (0 through 3)

a a a a a a a	15-Minute near-end path coding violation threshold (0000000 through 2097151)
a	15-Minute near-end path coding violation threshold selection (0 through 3)
b b b	15-Minute near-end path errored second threshold (000 through 900)
b	15-Minute near-end path errored second threshold selection (0 through 3)
c c c	15-Minute near-end path severely errored second threshold (000 through 900)
c	15-Minute near-end path severely errored second threshold selection (0 through 3)
d d d	15-Minute near-end severely errored framing second threshold (000 through 900)
d	15-Minute near-end severely errored framing second threshold selection (0 through 3)
e e e	15-Minute near-end controlled slip second threshold (000 through 900)
e	15-Minute near-end controlled slip second threshold selection (0 through 3)
f f f	15-Minute near-end unavailable second threshold (000 through 900)
f	15-Minute near-end unavailable second threshold selection (0 through 3)
g g g g g g g	15-Minute near-end line coding violation threshold (0000000 through 2097151, or ----- if not applicable)
g	15-Minute near-end line coding violation threshold selection (0 through 3)
h h h	15-Minute near-end line errored second threshold (000 through 900, or --- if not applicable)
h	15-Minute near-end line errored second threshold selection (0 through 3)
i i i	15-Minute near-end line severely errored second threshold (000 through 900, or --- if not applicable)
i	15-Minute near-end line severely errored second threshold selection (0 through 3)
i i i i i i i	15-Minute far-end path coding violation threshold (0000000 through 2097151, or ----- if not applicable)

i	15-Minute far-end path coding violation threshold selection (0 through 3)
k k k	15-Minute far-end path errored second threshold (000 through 900, or --- if not applicable)
k	15-Minute far-end path errored second threshold selection (0 through 3)
l l l	15-Minute far-end path severely errored second threshold (000 through 900, or --- if not applicable)
l	15-Minute far-end path severely errored second threshold selection (0 through 3)
m m m	15-Minute far-end severely errored framing second threshold (000 through 900, or --- if not applicable)
m	15-Minute far-end severely errored framing second threshold selection (0 through 3)
n n n	15-Minute far-end controlled slip second threshold (000 through 900, or --- if not applicable)
n	15-Minute far-end controlled slip second threshold selection (0 through 3)
o o o	15-Minute far-end unavailable second threshold (000 through 900)
o	15-Minute far-end unavailable second threshold selection (0 through 3)
p p p	15-Minute far-end line errored second threshold (000 through 900, or --- if not applicable)
p	15-Minute far-end line errored second threshold selection (0 through 3)



NOTE:

A threshold of zero for any parameter inhibits threshold crossing monitoring for that parameter.

For PB/PC type:

- If the NPC is not located in a sync NPC location, bit b set to 1 is denied.
- For telephone channel numbering, channels 16 to 30 occupy time slots 17 to 31.
- For time slot channel numbering, channels 16 to 30 occupy time slots 16 to 30.
- For NSA NPCs (bit d = 0), bits "f" and "g" are don't cares: any values are accepted.

- If bit d is set to 1 (that is, a CAS NPC) and jkl is 110 (that is, Transmic 1G), the command is denied.
 - If bit d is set to 1 (that is, a CAS NPC) and bit e is 1 for time slot channel numbering, the command is denied.
- m** Facility performance parameter threshold index (0 through 10 hexadecimal)

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Variable m is used to select threshold values previously programmed for rr. The default threshold value for each parameter is shown in the table below under the column heading Default Threshold Value. This is the value selected by m = 0, 1, or 2 in the table of m values following the parameter table. A given value of m selects both the performance monitoring threshold level and the alarm type associated with it as shown in that table. Threshold values selected by values of m greater than 2 must exist, that is, must have been programmed, prior to being selected. These other thresholds can be set by using the CHG,SETOP, TYPE,ALL,NPCOP command. Thresholds of all unspecified parameters are set to the default value associated with m=0. Although the NPC type field is optional for PB and PC types, the options field must not be given without the NPC type field.

Both Terminations

For PB and PC type NPCs:

rr	Parameter	Threshold Value Range	Default Threshold Value
31	Degraded Minutes, 1 hour	1-60	60
32	Degraded Minutes, 24 hours	1-1440	1440
33	Severely Errored Seconds, 15 mins	1-900	900
34	Severely Errored Seconds, 24 hours	1-65535	65535
35	Errored Seconds, 15 minutes	1-900	900
36	Errored Seconds, 24 hours	1-65535	65535
37	Unavailable Seconds, 15 minutes	1-900	900

rr	Parameter	Threshold Value Range	Default Threshold Value
38	Unavailable Seconds, 24 hours	1-65535	65535
39	Slips, 15 minutes	1-900	900
40	Slips, 24 hours	1-65535	65535

⇒ NOTE:
24-hour thresholds must be greater than their respective 15-minute or 1-hour threshold.

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For PA, PB, and PC type NPCs:

In the following table, these definitions apply:

MI	Maintenance Information
DMA	Deferred Maintenance Action Minor Alarm
PMA Major	Prompt Maintenance Action Major Alarm
PMA Critical	Prompt Maintenance Action Critical Alarm

<m>	Threshold Value	Alarm Type
0	Default*	MI (Maintenance Information)
1	Default	DMA (Deferred Maintenance Minor Alarm)
2	Default	PMA (Prompt Maintenance Major Alarm)
3	Set 1	MI
4	Set 1	DMA
5	Set 1	PMA Major
6	Set 2	MI
7	Set 2	DMA
8	Set 2	PMA Major
9	Set 3	MI

<m>	Threshold Value	Alarm Type
a	Set 3	DMA
b	Set 3	PMA Major
c	Threshold disabled	no alarm
d	Default	PMA Critical
e	Set 1	PMA Critical
f	Set 2	PMA Critical
10	Set 3	PMA Critical

*m = 0 is the default.

Threshold values for Set 1, Set 2, and Set 3 must be set (programmed) by using the command mentioned in the explanation of m above before variable m can be used to select threshold levels and alarm types other than the defaults.

If the queried NPC can not be accessed for some reason, for example, because the Facility Terminating Module is not equipped or the FTMI or Unit Controller is out of service, then the NPC's parameter count fields are printed as a string of dashes to indicate that the counts are not available. The parameter thresholds and options are still correctly output.

In addition, certain parameters do not apply. In the cases where specific parameters do not apply to the queried NPC, the respective parameter count fields, threshold values and threshold options are all displayed as a string of dashes.

IW Insertion Word

pq[r] Hexadecimal value of the Growth Insertion Word (GIW)

Used in the transmit direction on unassigned channels for CEPT NPCs.

pq transmitted data information

r transmitted signaling information

A special code, called the Growth Insertion Word (GIW), is transmitted by this NPC on unassigned channels. This code is specified by the optional keyword IW and its argument pq.

This code was previously called the Disconnect Code (DCC), but that name is properly reserved for the TCON Insertion Word, which is transmitted when the "TDIS::FROM,TO,...,DCC" command is used.

IW

Insertion word

pqr

Hexadecimal value of the insertion word.

For PB and PC type NPCs, the IW argument is X'pq[r], and the default GIW code is X'D5D (Binary: 11010101 1101). Hexadecimal digits "pq" represent the CEPT insertion word for cross-connected time slots and hexadecimal digit "r" represents the CEPT signaling option. The "r" digit is needed to accommodate the cross-connected CEPT time slot and its associated portion of TS16 used for signaling when provisioned for channel associated signaling (CAS).

Although the "r" digit is accepted on input, for NSA NPCs, it has no significance.

AIS

Alarm indication signal

AIS is not detected by unframed clear (unchannelized) 2Mbit/s PAXDz type NPCs. Therefore, specifying AIS with one of the alarm level types MI, DMA, or PMA, is unnecessary. However, the command is not denied if AIS is specified with an alarm level for unframed clear PAXDz NPCs. AIS with its alarm level is simply never reported for unframed clear PAXDz NPCs.

MI

Maintenance information

This is the default option.

PMA

Prompt Maintenance Action Major Alarm

PMC

Prompt Maintenance Action Critical Alarm

DMA

Deferred Maintenance Action Minor Alarm

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For each NPC listed, this message prints out values of the states, counts, thresholds and options of the following facility performance parameters and the spare international and national bits in time slot 0 for CEPT NPCs.

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For PB and PC type NPCs:

DM

Degraded Minutes

nnnnn	24-hour Degraded Minutes threshold
<u>n n n n n</u>	1-hour DM threshold
e	24-hour Degraded Minutes threshold/alarm selection
<u>e</u>	1-hour DM threshold/alarm selection
SERS	Severely Errored Seconds
ppppp	24-hour Severely Errored Seconds threshold
<u>p p p p p</u>	15-minute SERS threshold
f	24-hour Severely Errored Seconds threshold/alarm selection
<u>f</u>	15-minute SERS threshold/alarm selection
ERS	Errored Seconds
qqqqq	24-hour Errored Seconds threshold
<u>q q q q q</u>	15-minute ERS threshold
g	24-hour Errored Seconds threshold/alarm selection
<u>g</u>	15-minute ES threshold/alarm selection
US	Unavailable Seconds
rrrrr	24-hour Unavailable Seconds threshold
<u>r r r r r</u>	15-minute US threshold
h	24-hour Unavailable Seconds threshold/alarm selection
<u>h</u>	15-minute US threshold/alarm selection
SLIP	Slip Events
sssss	24-hour Slip Events threshold
<u>s s s s s</u>	15-minute SLIP threshold
i	24-hour Slip threshold/alarm selection
<u>i</u>	15-minute SLIP threshold/alarm selection

For SHORT INTERVAL, DM is calculated hourly and SERS, ERS, US, and SLIP are calculated at 15 minute intervals.

The TS0 abcdefgh variables represent international and national bits in time slot 0, as defined by:

ab Spare international bits S_i

If the NPC is not provisioned for the CRC multiframe format, bits a and b shall represent the S_i bits in the Frame Word (FW) and the Non Frame Word (NFW), respectively.

If the NPC is provisioned for the CRC multiframe format, a and b shall represent the S_i bits in frames 13 and 15 of the CRC multiframe in the NFW, respectively.

- c** Remote Alarm Indication must be - (hyphen).
- de** Two spare national bits S_4 through S_5 in the NFW.
- f** RPSFI (Remote Power Supply Failure Indicator) bit in the NFW if provisioned for RPSFI otherwise spare national bit.
- gh** Two spare national bits S_7 through S_8 in the NFW

These variables are set to their default values "11011111" by this command, except for the Transmic 1G option, where the default is "11000000."

The variables may later be changed by setting the abcdefgh parameters in the TS0 field of the CHG::NPC command.

Each of the variables may then be set to "0", "1", or "P." "P" indicates that the incoming bit is cross-connected unchanged.

When TS0 is cross-connected, the TS0 bits are either passed or set to "0" or "1" as indicated by the "abcdefgh" variable values. Note that bits which are used for alarms (bit 3 always; bits 4 and 5 if provisioned by the mnxyz values) may not be set to "P."

This is also true for NPCs assigned as test port NPCs.

The TS0M abcdefgh field allows monitoring of state changes in the received spare international bits, where the "abcdefgh" variables refer to the same TS0 bits as defined above for the TS0 "abcdefgh" variables.

The TS0M variables are specified for monitoring in the command as:

The default values for TS0M variables are abcdefgh=00000000, unless the xyz parameters set them differently, that is, for Transmic 1G the abcdefgh=00111111. The TS0M variables may later be provisioned by the CHG::TS0M abcdefgh or the ED-PRMTR-EQPT TS0M-abcdefgh (38323) command.

For PA type:

- If the NPC is not located in a sync NPC location, the value of "x" must be in the range 0 - 3 or 8 - B. Otherwise the command is denied.
- For telephone channel numbering, channels 16 to 30 occupy time slots 17 to 31.
- For time slot channel numbering, channels 16 to 30 occupy time slots 16 to 30.

- If the value of "y" is 0, 2, 4 or 6 (i.e., a CAS NPC) and the value of "z" is C (i.e. Transmic 1G), the command is denied.

For TH type:

- For telephone channel numbering, channels 16 to 30 occupy time slots 17 to 31.
- For time slot channel numbering, channels 16 to 30 occupy time slots 16 to 30.

<m> Facility performance parameter threshold index (0 through 10 hexadecimal)

Variable <m> is used to select the threshold value and alarm type previously programmed for parameter rr. There are four possible alarm thresholds and 4 different alarm levels. A given value of <m> selects one combination of threshold value and alarm level. The combinations of these two result in 16 possible values of m. There is a 17th <m> value which is used to disable the alarm threshold and the alarm. The values of <m> that produce the default values of the thresholds and alarms are shown in the table below under the column heading "Threshold Value". Threshold and alarm combinations selected by m = 3 through b and d-10 must exist, that is, must have been programmed, prior to being selected. The thresholds are programmed by using the ED-OPT-T1 command. Thresholds of all unspecified parameters are set to the default value associated with m=0. Setting <m> = c disables thresholding for a given parameter.

For PA type NPCs:

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
11	CRC Block Errors	DAILY	1 - 79056000	176947
12	Framing Errors	DAILY	1 - 345600000	176947
13	Out of Frame Seconds	DAILY	1 - 86400	4
14	Errored Seconds	DAILY	1 - 86400	4320
15	Severely Errored Seconds	DAILY	1 - 86400	90
16	Controlled Slip Seconds	DAILY	1 - 86400	4

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
17	Coding Violations	DAILY	1 - 176947200	176947
18	Unavailable Seconds	DAILY	1 - 86400	90
19	Unavailable Time Count	DAILY	1 - 4320	9
20	Multiframe Errors	DAILY	1 - 86400	4095
21	Far End Block Errors	DAILY	1 - 79056000	176947
22	Far End Errored Seconds	DAILY	1 - 86400	4320
23	Far End Severely Errored Seconds	DAILY	1 - 86400	90
24	Far End Unavailable Seconds	DAILY	1 - 86400	90
81	CRC Block Errors	15MIN	1 - 823500	18432
82	Framing Errors	15MIN	1 - 3600000	18432
83	Out of Frame Seconds	15MIN	1 - 900	4
84	Errored Seconds	15MIN	1 - 900	300
85	Severely Errored Seconds	15MIN	1 - 900	30
86	Controlled Slip Seconds	15MIN	1 - 900	1
87	Coding Violations	15MIN	1 - 1843200	18432
88	Unavailable Seconds	15MIN	1 - 900	30
89	Unavailable Time Count	15MIN	1 - 45	3
90	Multiframe Errors	15MIN	1 - 900	255
91	Far End Block Errors	15MIN	1 - 823500	18432

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
92	Far End Errored Seconds	15MIN	1 - 900	300
93	Far End Severely Errored Seconds	15MIN	1 - 900	30
94	Far End Unavailable Seconds	15MIN	1 - 900	30

For TH type NPCs:

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
11	CRC Block Errors	DAILY	1 - 79056000	176947
12	Framing Errors	DAILY	1 - 345600000	176947
13	Out of Frame Seconds	DAILY	1 - 86400	4
14	Errored Seconds	DAILY	1 - 86400	4320
15	Severely Errored Seconds	DAILY	1 - 86400	90
16	Controlled Slip Seconds	DAILY	1 - 86400	4
18	Unavailable Seconds	DAILY	1 - 86400	90
19	Unavailable Time Count	DAILY	1 - 4320	9
20	Multiframe Errors	DAILY	1 - 86400	4095
81	CRC Block Errors	15MIN	1 - 823500	18432
82	Framing Errors	15MIN	1 - 3600000	18432
83	Out of Frame Seconds	15MIN	1 - 900	4
84	Errored Seconds	15MIN	1 - 900	300
85	Severely Errored Seconds	15MIN	1 - 900	30
86	Controlled Slip Seconds	15MIN	1 - 900	1

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
88	Unavailable Seconds	15MIN	1 - 900	30
89	Unavailable Time Count	15MIN	1 - 45	3
90	Multiframe Errors	15MIN	1 - 900	255

Both Terminations

IW

Insertion Word

pq[r]

Hexadecimal value of the Growth Insertion Word (GIW)

Used in the transmit direction on unassigned channels for CEPT NPCs.

pq transmitted data information

r transmitted signaling information

A special code, called the Growth Insertion Word (GIW), is transmitted by this NPC on unassigned channels. This code is specified by the optional keyword IW and its argument pq.

This code was previously called the Disconnect Code (DCC), but that name is properly reserved for the TCON Insertion Word, which is transmitted when the "TDIS::FROM,TO,...,DCC" command is used.

IW

Insertion word

pqr

Hexadecimal value of the insertion word.

For PA type NPCs, the IW argument is X'pq[r]', and the default GIW code is X'D5D (Binary: 11010101 1101). The "pq" hex digits represent the CEPT insertion word for cross-connected time slots and the "r" hex digit represents the CEPT signaling options. The "r" digit is needed to accommodate the cross-connected CEPT time slot and its associated portion of TS16 used for signaling when provisioned for CAS.

Although the "r" digit is accepted on input, for NSA NPCs, it has no significance.

For each NPC listed, this message prints out values of the states, counts, thresholds and options of the following facility performance parameters and the spare international and national bits in time slot 0 for CEPT DPCs.

CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
CV	Coding Violations
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors
FEBE	Far End Block Errors
FES	Far End Errored Seconds
FSES	Far End Severely Errored Seconds
FUAS	Far End Unavailable Seconds

Two sets of thresholds are kept for each parameter: One for DAILY intervals and one for 15 MINUTE intervals.

2.048 Mbit/s Termination

For PA type NPCs:

Depending on which interface functions are enabled by the provisioning values of xyz, some parameters may not be applicable. In this case the threshold value, the parameter count (if present in the message) and the selection value will appear as dashes (-). In the table below N/A indicates that a parameter is not applicable for the given value of x or y.

Also, if the selection value m=c has been chosen for a parameter, the threshold value and the parameter count (if present in the message) will appear as dashes.

Parameter	CRC-4 Mode Disabled (x=A,B,E,F)	Far-End PM Disabled (x=0,2,4,6,A,B ,E,F)	CAS Disabled (y=8,9,C,D)	Unframed Clear 2Mbit/s (y=D)
CRC	N/A			N/A
FRER				N/A
OFS				N/A

Parameter	CRC-4 Mode Disabled (x=A,B,E,F)	Far-End PM Disabled (x=0,2,4,6,A,B ,E,F)	CAS Disabled (y=8,9,C,D)	Unframed Clear 2Mbit/s (y=D)
ES				N/A
SES				N/A
CSS				
CV				
UAS				N/A
UATC				N/A
MER			N/A	N/A
FEBE		N/A		N/A
FES		N/A		N/A
FSES		N/A		N/A
FUAS		N/A		N/A

aaaaaaaa	Daily CRC block error threshold value
a	Daily CRC block error threshold selection (0 through 3)
bbbbbbbbbb	Daily framing error threshold value
b	Daily framing error threshold selection (0 through 3)
cccccc	Daily out of frame seconds threshold value
c	Daily out of frame seconds threshold selection (0 through 3)
dddddd	Daily errored second threshold value
d	Daily errored second threshold selection (0 through 3)
eeeeee	Daily severely errored second threshold value
e	Daily severely errored second threshold selection (0 through 3)
fffff	Daily controlled slip second threshold value
f	Daily controlled slip second threshold selection (0 through 3)
gggggggggg	Daily coding violation threshold value
g	Daily coding violation threshold selection (0 through 3)
hhhhh	Daily unavailable second threshold value
h	Daily unavailable second threshold selection (0 through 3)

iiii	Daily unavailable time count threshold value
i	Daily unavailable time count threshold selection (0 through 3)
jjjjj	Daily multiframe alignment error threshold value
j	Daily multiframe alignment error threshold selection (0 through 3)
kkkkkkkk	Daily far-end block error threshold value
k	Daily far-end path block error selection (0 through 3)
lllll	Daily far-end errored second threshold value
l	Daily far-end path second threshold selection (0 through 3)
mmmmm	Daily far-end severely errored second threshold value
m	Daily far-end severely errored second threshold selection (0 through 3)
nnnnn	Daily far-end unavailable second threshold value
n	Daily far-end unavailable second threshold selection (0 through 3)
a a a a a a	15-Minute CRC block error threshold value
a	15-Minute CRC block error threshold selection (0 through 3)
b b b b b b b	15-Minute framing error threshold value
b	15-Minute framing error threshold selection (0 through 3)
c c c	15-Minute out of frame seconds threshold value
c	15-Minute out of frame seconds threshold selection (0 through 3)
d d d	15-Minute errored second threshold value
d	15-Minute errored second threshold selection (0 through 3)
e e e	15-Minute severely errored second threshold value
e	15-Minute severely errored second threshold selection (0 through 3)
f f f	15-Minute controlled slip second threshold value
f	15-Minute controlled slip second threshold selection (0 through 3)
g g g g g g g	15-Minute coding violation threshold value
g	15-Minute coding violation threshold selection (0 through 3)
h h h	15-Minute unavailable second threshold value
h	15-Minute unavailable second threshold selection (0 through 3)

i i	15-Minute unavailable time count threshold value
i	15-Minute unavailable time count threshold selection (0 through 3)
i i i	15-Minute multiframe alignment error threshold value
i	15-Minute multiframe alignment error threshold selection (0 through 3)
k k k k k k	15-Minute far-end block error threshold value
k	15-Minute far-end path block error selection (0 through 3)
l l l	15-Minute far-end errored second threshold value
l	15-Minute far-end path second threshold selection (0 through 3)
m m m	15-Minute far-end severely errored second threshold value
m	15-Minute far-end severely errored second threshold selection (0 through 3)
n n n	15-Minute far-end unavailable second threshold value
n	15-Minute far-end unavailable second threshold selection (0 through 3)

The options {a,b,c,d,e,f,g,h,i,j,k,l,m,n} and {a, b, c, d, e, f, g, h, i, j, k, l, m, n} are **m values** as previously shown and specify the threshold sets of the performance parameters listed.

The TS0 abcdefgh variables represent international and national bits in time slot`0, as defined by:

ab	Spare international bits S_i If the NPC is not provisioned for the CRC multiframe format, bits a and b shall represent the S_i bits in the Frame Word (FW) and the Non Frame Word (NFW), respectively. If the NPC is provisioned for the CRC multiframe format, a and b shall represent the S_i bits in frames 13 and 15 of the CRC multiframe in the NFW, respectively.
c	Remote Alarm Indication must be - (hyphen).
de	Two spare national bits S_4 through S_5 in the NFW.
f	RPSFI (Remote Power Supply Failure Indicator) bit in the NFW if provisioned for RPSFI otherwise spare national bit.
gh	Two spare national bits S_7 through S_8 in the NFW

These variables are set to their default values "11011111" by this command, except for the Transmic 1G option, where the default is "11000000."

The variables may later be changed by setting the abcdefgh parameters in the TS0 field of the ED-PRMTR-EQPT::NPC or CHG::NPC (38321) command. Each of the variables may then be set to "0", "1", "P" or "V." "P" indicates that the incoming bit is cross-connected unchanged; "V" indicates that the bit received is inverted.

When TS0 is cross-connected, the TS0 bits are either passed, inverted or set to "0" or "1" as indicated by the "abcdefgh" variable values. Note that bits which are used for alarms (bit 3 always; bits 4 and 5 if provisioned by the mnxyz values) may not be set to "P."

This is also true for NPCs assigned as test port NPCs.

The TS0M abcdefgh field allows monitoring of state changes in the received spare international bits, where the "abcdefgh" variables refer to the same TS0 bits as defined above for the TS0 "abcdefgh" variables.

The TS0M variables are specified for monitoring in the command as:

The default values for TS0M variables are abcdefgh=00000000, unless the xyz parameters set them differently, i.e., for Transmic 1G the abcdefgh=00111111. The TS0M variables may later be provisioned by the CHG::TS0M abcdefgh or the ED-PRMTR-EQPT TS0M-abcdefgh (38323) command.

cc Hexadecimal condition code

cc	<i>Explanation</i>
01	Subject entity is equipped
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
24	Unit type error
26	NPC type error
83	NPC type is inconsistent with FTMI type
BF	MIU is not equipped
FD	NPC range crosses unit boundary

cc	<i>Explanation</i>
9B	The MXR is not grown
07	Mismatch between MXR and NPC types
87	Copy source NPC is not equipped

NONCHANNELIZED TEST, MONITOR,SPLIT,LOOP

Explanation of Command

This command changes the mode of a previously assigned FAD.

For a one-way circuit under test, the test mode can only be MONE or SPLTA. The FROM and TO NPCs must be entered as the E- and F-end NPCs, respectively.

AIS Keyword

The AIS keyword is required for test modes SPLTE, SPLTF, SPLTEF, LOOPE and LOOPEF, to indicate the idle signal for any idle output port that resulted from the interruption.

INCL Keyword

The INCL keyword is required if one or more of the NPC(s) under test is marked Red or Customer-controlled, except when changing to a monitor mode.

Once a test connection is set up, this command can be entered with either one or both FADs, in any order. The original order of FAD assignment is used until test access is released.

E- and F-end NPCs

The E- and F-end NPCs for nonchannelized test access correspond to the FROM and TO NPCs of a cross-connection, respectively. The test session is the circuit connection under test.

Test Sessions

During a test session, if a hard-reset or link failure occurs, the test session is released automatically. However, if the failure is such that it prevents release at the time of logoff or if the FAD fails, the test session is NOT automatically released and can be released by manual disconnection.

Command

Nonhierarchical

[I.20101]

CTST:[FRM xy][,SEQ ww]:<tmode>,FAD ([s]abc[, [t]def])[,AIS][,INCL]!

	Hierarchical	
	[I.20101]	
	CTST:[FRM xy][,SEQ ww]:<tmode>,FAD (uvmnp[,wxkqr])[,AIS][,INCL]!	
Completion Message	Nonhierarchical	
	[O.20101]	
	M hh:mm:ss xy,ww n[vv] CTST <tmode> FAD ([s]abc[, [t]def]) \	
	[u]ghi[, [v]jkl] 2 LN MSG:	
	[AIS][RDC][CUS][ONEWAY]{UMPD [EMODE <emode>] FMODE <fmode>} \	
	COMPL	
	Hierarchical	
	[O.20101]	
	M hh:mm:ss xy,ww n[vv] CTST <tmode> FAD (uvmnp[,wxkqr]) \	
	eghij[,jklmn] 2 LN MSG:	
	[AIS][RDC][CUS][ONEWAY]{UMPD [EMODE <emode>] FMODE <fmode>} \	
	COMPL	
Denial Message	Nonhierarchical	
	[O.20101.01]	
	M hh:mm:ss xy,ww n[vv] CTST <tmode> FAD ([s]abc[, [t]def]) \	
	2 LN MSG:	
	[[t]klm][COND]cc[<st>] DNY	
	Hierarchical	
	[O.20101.01]	
	M hh:mm:ss xy,ww n[vv] CTST <tmode> FAD (uvmnp[,wxkqr]) \	
	2 LN MSG:	
	[ghklm][COND]cc[<st>] DNY	
Explanation of Parameters	FAD	Facility access digroup The test NPC.

tmode	Test mode
MONE	Monitor signal from equipment end (E-end) NPC to facility end (F-end) NPC of unmapped or one-/two-way mapped test session
MONF	Monitor signal from F-end NPC to E-end NPC of a two-way mapped test session
MONEF	Monitor a two-way mapped connection in both directions; two FADs are connected for the test session, and test mode can only be changed to another mode using two FADs
SPLTA	Split the A signal from the equipment E-end NPC to the facility F-end NPC of one-/two-way mapped test session
SPLTB	Split the B signal from the F-end NPC to the E-end NPC of a mapped two-way test session
SPLTAB	Split both A and B signals of a two-way test session; two FADs are connected for the test session, and test mode can only be changed to another mode using two FADs
SPLTE	Split the input and output ports of E-end NPC of an unmapped or two-way mapped test session
SPLTF	Split the input and output ports of F-end NPC of a two-way mapped test session
SPLTEF	Split a two-way mapped test session in both directions; two FADs are connected for the test session, and test mode can only be changed to another mode using two FADs
LOOPE	Loop the E-end input port to the output port, and connect the looped signal to the FAD; the test session may include an unmapped or two-way mapped connection
LOOPF	Loop the F-end input port to the output port, and connect the looped signal to the FAD; only for a two-y mapped test session; not allowed for one-way broadcast tributaries
[s]abc	The 3- or 4-digit nonhierarchical number of test NPC or FAD For MONEF, SPLTAB and SPLTEF modes this is one of two test NPCs; the message is denied if this NPC is currently not a FAD
[t]def	Nonhierarchical number of second test NPC or FAD For MONEF, SPLTAB and SPLTEF modes this number can be entered or omitted; either and/or both of [s]abc and [t]def can be

	entered, in any order, the original order of FAD assignment is used; the message is denied if this NPC is currently not a FAD
[u]ghi	Nonhierarchical number of E-end NPC, this is the reference NPC for the test session; it is a mapped or unmapped NPC, or the backbone of a broadcast circuit, depending on the test session specified
[v]jkl	Nonhierarchical number of current F-end NPC of the test session. It is defined only if it is mapped to the E-end NPC; if it is omitted, the NPC mapped to the E-end NPC becomes the F-end NPC, or if the test session involves a broadcast circuit, the full tributary becomes the F-end NPC, if one does not exist, the parameter must be given to specify the tributary being tested; it must be omitted if the E-end NPC is unmapped.
[t]klm	Nonhierarchical number of problematic NPC. For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number for FAD
wxkqr	Hierarchical NPC number of second FAD
eghij	Hierarchical E-end NPC number of test session
jklmn	Hierarchical F-end NPC number of a mapped test session
ghklm	Hierarchical number of problematic NPC uv,wx,eg,jk,gh Unit number m,k,h,l Module number np,qr,ij,mn,lm NPC number For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
AIS	Alarm indication signal. AIS must be entered for all test modes resulting in idle output port(s): SPLTE, SPLTF, SPLTEF, LOOPE, and LOOPF. AIS input shall be denied for test access of an unmapped NPC, and all other test modes.
INCL	Inclusive Required for test session with red or customer-controlled NPC(s), except for MONE, MONF and MONEF modes.
RDC	Red circuit Test session has red NPC(s).
CUS	Customer

	Customer-controlled circuit; Test session has Customer-controlled NPC(s).
ONEWAY	One way cross-connection Test session has one-way cross-connection.
UMPD	Unmapped Test session has unmapped NPC.
EMODE	E-end termination status
FMODE	F-end termination status
NORM	The circuit under test is not terminated in this direction
TERM	The circuit under test terminated in this direction The emode output is omitted for one-way circuits Both emode and fmode are omitted for unmapped circuits
COND	Condition
cc	Condition code
st	Status of denial
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
1E	Customer control or red circuit exists
10	NPC out of service or failed
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
34	Termination is under customer control (CUS)

cc	<i>Explanation</i>
35	Termination is protected (RDLD)
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
46	NPC Failed or Out of Service
70	NPC invalid type
72	Invalid test mode for an unmapped test session
73	Invalid test mode for a one-way test session
75	Test session already exists
76	AIS not entered for SPLTE/SPLTF/SPLTEF/ LOOPE/LOOPF
79	NPC is not a Facility Access Digroup
7A	NPC is not an E-end
7B	Invalid change from previous mode
7C	NPC is not a F-end
FF	Termination is in process of being rolled
FE	AIS entered for MONE/MONF/MONEF/ SPLTA/SPLTB/SPLTAB
8C	The two FADS entered are not associated with one another.

NONCHANNELIZED TEST FAD, EMODE, FMODE

Explanation of Command

This message changes the output mode (also known as termination status) of a nonchannelized circuit under test. The status can be normal data transmission (NORM), or terminate (TERM) and send idle signal(s) to output port(s). The change can be selectively specified for the circuit's E-end and/or F-end NPCs. At least one of the two <e/fmode> fields must be entered, or the message is denied.

If the cross-connected circuit is terminated before a test session is set up, this command can be used to change the state from TERM to NORM. When the test session is released, the most recent state remains until a change (CHG) termination command is entered.

During a test session, if a hard-reset or link failure occurs, the test session is released automatically. However, if the failure is such that it prevents release at the time of logout or if the FAD fails, the test session is NOT automatically released and can be released by manual disconnection.

The E- and F-end NPCs for nonchannelized test access correspond to the FROM and TO NPCs of a cross connection, respectively. A test session is the circuit connection under test.

Command

Nonhierarchical

[I.20111]

```
CTST:[FRM xy][,SEQ ww]:FAD ([s]abc[, [t]def]) \
{[,EMODE <emode>][,FMODE <fmode>]}[,INCL];
```

Hierarchical

[I.20111]

```
CTST:[FRM xy][,SEQ ww]:FAD (uvmnp[,wxkqr]) \
{[,EMODE <emode>][,FMODE <fmode>]}[,INCL];
```

**Completion
Message****Nonhierarchical**

[O.20111]

```
M hh:mm:ss xy,ww n[vv] CTST FAD ([s]abc[, [t]def) \
[u]ghi, [v]jkl 2 LN MSG:
[RDC ][CUS ][ONEWAY ][EMODE <emode> ]FMODE <fmode> COMPL
```

Hierarchical

[O.20111]

```
M hh:mm:ss xy,ww n[vv] CTST FAD (uvmnp[,wxkqr]) \
eghij, jklmn 2 LN MSG:
[RDC ][CUS ][ONEWAY ][EMODE <emode> ]FMODE <fmode> COMPL
```

Denial Message**Nonhierarchical**

[O.20111.01]

```
M hh:mm:ss xy,ww n[vv] CTST FAD ([s]abc[, [t]def) 2 LN MSG:
[[t]klm ][COND ]cc[ <st>] DNY
```

Hierarchical

[O.20111.01]

```
M hh:mm:ss xy,ww n[vv] CTST FAD (uvmnp[,wxkqr]) 2 LN MSG:
[ghklm ][COND ]cc[ <st>] DNY
```

**Explanation of
Parameters**

FAD	Facility access digroup
[s]abc	The 3- or 4-digit nonhierarchical number of test NPC or FAD For MONEF, SPLTAB and SPLTEF modes this is one of two test NPCs; the message is denied if this NPC is currently not a FAD
[t]def	Nonhierarchical number of second test NPC or FAD For MONEF, SPLTAB and SPLTEF modes this number can be entered or omitted; either and/or both of [s]abc and [t]def can be entered, in any order, the original order of FAD assignment is used; the message is denied if this NPC is currently not a FAD
[u]ghi	Nonhierarchical number of E-end NPC of circuit under test
[v]jkl	Nonhierarchical number of current F-end NPC
[t]klm	Nonhierarchical number of problematic NPC

	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number for FAD
wxkqr	Hierarchical NPC number of second FAD
eghij	Hierarchical E-end NPC number of test session
jklmn	Hierarchical F-end NPC number of a mapped test session
ghklm	Hierarchical number of problematic NPC
uv,wx,eg,jk,gh	Unit number
m,k,h,l	Module number
np,qr,ij,mn,lm	NPC number
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
EMODE	Equipment-end mode
emode	Equipment-end termination status
FMODE	Facility-end mode
fmode	Facility-end termination status
NORM	The circuit under test is not terminated in this direction
TERM	The circuit under test is terminated in this direction The emode cannot be changed and is omitted for one-way circuits. The fmode cannot be changed for modes SPLTE, SPLTEF and LOOPE. For an unmapped circuit, neither the EMODE or FMODE can be changed. If emode or fmode is omitted, the parameter retains its current value. If either the E- or F-end NPC is out of service or failed, then is subsequently restored to service, the output modes remain as they were before the failure.
RDC	Red circuit Test session has NPC(s) designated as red circuits
CUS	Customer Test session has Customer-controlled NPC(s)

INCL	Inclusive Required for circuits with customer-controlled or red NPC(s)
ONEWAY	One-way Test session has a one-way cross-connection
COND	Condition
st	Status of denial
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
1E	Customer control or red circuit exists
10	NPC out of service or failed
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
30	Termination is already assigned
34	Termination is under customer control (CUS)
35	Termination is protected (RDLD)
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
46	NPC Failed or Out of Service
70	NPC invalid type

cc	<i>Explanation</i>
71	NPC is a Facility Access Digroup
72	Invalid test mode for an unmapped test session
73	Invalid test mode for a one-way test session
75	Test session already exists
79	NPC is not a Facility Access Digroup
7A	NPC is not an E-end
7B	Invalid change from previous mode
7C	NPC is not a F-end
FF	Termination is in process of being rolled
8C	The two FADS entered are not associated with one another.
8E	No mapped circuit under test; emode/fmode can't be changed.
8F	One-way circuit under test; emode can't be changed.
90	emode/fmode can't be changed under current test mode.

NONCHANNELIZED TEST ACCESS (MONITOR, SPLIT, OR LOOP)

Explanation of Command

This message sets up nonchannelized test access in the monitor modes MONE, MONF, MONEF; the split modes SPLTA, SPLTB, SPLTAB, SPLTE, SPLTF, SPLTEF; and the loop modes LOOPE or LOOPF. The circuit under test can be one unmapped Network Processing Circuit (NPC), or a pair of mapped NPCs. The mapped circuit may be a one-way, two-way or broadcast circuit. A one-way circuit can only be tested in modes MONE and SPLTA. Only one test connection can exist at a time for any circuit.

Facility Access Digroups (FADs)

For test modes MONEF, SPLTAB and SPLTEF, two Facility Access Digroups (FADs), or test NPCs, are connected. The first FAD number is required; the second FAD can be user specified, or assigned by default to be the NPC numbered $n+1$, where n is the NPC number of the first FAD. If n is the highest NPC number on the DACS II frame, the first NPC on the frame is used as default for the second FAD. Whether a FAD is user specified or assigned by DACS II, the command is denied if the FAD is assigned or has invalid type. One FAD is connected for all other modes.

Test Sessions

During a test session, if a hard-reset or link failure occurs, the test session is released automatically. However, if the failure is such that it prevents release at the time of logoff, or if the FAD fails, the test session is NOT automatically released and can be released by manual disconnection.

The E- and F-end NPCs for nonchannelized test access correspond to the FROM and TO NPCs of a cross-connection, respectively. For a broadcast circuit, the full tributary is considered to be a two-way connection, and all other tributaries are one-way connections. Only one test session can exist for a circuit at a time. The FAD or test NPC corresponds to test ports for DS0 test access.

For modes SPLTE and LOOPE, the idle output port of the F-end NPC, and any other output ports the E-end is transmitting to, must be set to AIS.

For modes SPLTF and LOOPF, the idle output port of the E-end NPC, and any other output ports the F-end is transmitting to, must be set to AIS.

The output signal on all idle output ports related to a test session are restored to their previous values when the test modes are changed or test access is released. The OUTPUT modes can be overwritten when the NPC is test accessed.

Command**Nonhierarchical**

[I.20001]

CTST:[FRM xy][,SEQ ww]:<tmode>,FAD ([s]abc[, [t]def]),FROM [u]ghi \
[,TO [v]jkl][,AIS][,INCL]!

Hierarchical

[I.20001]

CTST:[FRM xy][,SEQ ww]:<tmode>,FAD (uvmnp[,wxkqr]),FROM eghij \
[,TO jklmn][,AIS][,INCL]!

**Completion
Message****Nonhierarchical**

[O.20001]

M hh:mm:ss xy,ww n[vv] CTST <tmode> FAD ([s]abc[, [t]def]) \
[u]ghi[, [v]jkl] 2 LN MSG:
[AIS][RDC][CUS][ONEWAY] \
{UMPD|[EMODE <emode>] FMODE <fmode>} COMPL

Hierarchical

[O.20001]

M hh:mm:ss xy,ww n[vv] CTST <tmode> FAD (uvmnp[,wxkqr]) \
eghij[, jklmn] 2 LN MSG:
[AIS][RDC][CUS][ONEWAY]{UMPD|[EMODE <emode>] FMODE <fmode>} \
COMPL

Denial Message**Nonhierarchical**

[O.20001.01]

M hh:mm:ss xy,ww n[vv] CTST <tmode> FAD ([s]abc[, [t]def]) \
[u]ghi[, [v]jkl] 2 LN MSG:
[[t]klm][COND]cc[<st>] DNY

Hierarchical

[O.20001.01]

```
M hh:mm:ss xy,ww n[vv] CTST <tmode> FAD (uvmnp[,wxkqr]) \
eghij[,jklmn] 2 LN MSG:
[ghklm ][COND ]cc[ <st>] DNY
```

**Explanation of
Parameters**

FAD	Facility access digroup
FROM	FROM termination
TO	TO termination
tmode	Test mode
MONE	Monitor signal from equipment E-end NPC to facility F-end NPC of unmapped or one-/two-way mapped test session
MONF	Monitor signal from F-end NPC to E-end NPC of a two-way mapped test session
MONEF	Monitor a two-way mapped connection in both directions; two FADs are connected for the test session, and test mode can only be changed to another mode using two FADs
SPLTA	Split the A signal from the equipment E-end NPC to the facility F-end NPC of one-/two-way mapped test session
SPLTB	Split the B signal from the F-end NPC to the E-end NPC of a mapped two-way test session
SPLTAB	Split both A and B signals of a two-way test session; two FADs are connected for the test session, and test mode can only be changed to another mode using two FADs
SPLTE	Split the input and output ports of E-end NPC of an unmapped or two-way mapped test session
SPLTF	Split the input and output ports of F-end NPC of a two-way mapped test session
SPLTEF	Split a two-way mapped test session in both directions; two FADs are connected for the test session, and test mode can only be changed to another mode using two FADs

	LOOPE	Loop the E-end input port to the output port, and connect the looped signal to the FAD; the test session may include an unmapped or two-way mapped connection
	LOOPF	Loop the F-end input port to the output port, and connect the looped signal to the FAD; only for a two-way mapped test session; not allowed for one-way broadcast tributaries
[s]abc		The 3- or 4-digit nonhierarchical number of test NPC or FAD For MONEF, SPLTAB and SPLTEF modes, this is the first of two test NPCs; the message is denied if this NPC is assigned
[t]def		The 3- or 4-digit nonhierarchical number of second test NPC or FAD For MONEF, SPLTAB and SPLTEF modes, this number can be user specified. If none is entered, the next higher NPC number to [s]abc is used; the message is denied if it is assigned.
[u]ghi		Nonhierarchical number of E-end NPC This is the reference NPC for the test session; it is a mapped or unmapped NPC, or the backbone of a clear-DS1 broadcast circuit, depending on the test session specified.
[v]jkl		Nonhierarchical number of current F-end NPC of the test session This NPC is defined only if it is mapped to the E-end NPC. If this NPC is omitted from the input command, the NPC mapped to the E-end NPC becomes the F-end NPC or if the test session involves a broadcast circuit, the full tributary becomes the F-end NPC. If a full tributary does not exist, the NPC must be given to specify the tributary being tested. Omit this NPC if the E-end NPC is unmapped.
[t]klm		The 3- or 4-digit nonhierarchical number of problematic NPC For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp		Hierarchical number of test NPC or FAD
wxkqr		Hierarchical number of second FAD
eghij		Hierarchical number of E-end NPC
jklmn		Hierarchical number of F-end NPC of the test session
ghklm		Hierarchical number of problematic NPC For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

AIS	Alarm indication signal May be specified to be idle signal. AIS must be entered for all test modes resulting in idle output port(s): SPLTE, SPLTF, SPLTEF, LOOPE, and LOOPF. AIS input is denied for test access of an unmapped NPC, and all other test modes.
INCL	Inclusive Required for test session with red or customer-controlled NPC(s), except for MONE, MONF and MONEF modes. INCL is ignored if the circuit is NOT RDC or CUS.
RDC	Red circuit Test session has red NPC(s).
CUS	Customer Customer-controlled circuit. Test session has Customer-controlled NPC(s).
ONEWAY	One way cross-connection Test session has one-way cross-connection.
UMPD	Unmapped Test session has unmapped NPC.
EMODE	E-end termination status
FMODE	F-end termination status
	NORM The circuit under test is not terminated in this direction
	TERM The circuit under test is terminated in this direction
	The emode output is omitted for one-way circuits. Both emode and fmode are omitted for unmapped circuits.
COND	Condition
st	Status of denial
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
1E	Customer control or red circuit exists
10	NPC out of service or failed

cc	<i>Explanation</i>
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
30	Termination is already assigned
34	Termination is under customer control (CUS)
35	Termination is protected (RDLD)
36	Termination is not connected as indicated
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
46	NPC Failed or Out of Service
70	NPC invalid type
71	NPC is a Facility Access Digroup
72	Invalid test mode for an unmapped test session
73	Invalid test mode for a one-way test session
75	Test session already exists
76	AIS not entered for SPLTE/SPLTF/SPLTEF/ LOOPE/LOOPF
7A	NPC is not an E-end
7C	NPC is not a F-end
BD	Looped Circuit Access not allowed

cc	<i>Explanation</i>
FF	Termination is in process of being rolled
FE	AIS entered for MONE/MONF/MONEF/ SPLTA/SPLTB/SPLTAB
8D	Clear gateway test access disallowed.

NON-CANNELIZED TEST HUB

Explanation of Command

This command sets up a nonchannelized hub connection between a facility access digroup (FAD), or test network processing circuit (NPC) and a remote FAD. The FAD is connected to an NPC which is connected to a remote test NPC. The NPCs cannot be part of an existing mapped circuit or test connection.

During a hub test session, if a hard-reset or link failure occurs, the hub test session is released automatically. However, if the failure is such that it prevents release at the time of logout, or if the FAD fails, the hub test session is NOT automatically released and can be released by manual disconnection.

Command

Nonhierarchical

[I.20031]

CTST:[FRM xy][,SEQ ww]:HUB,FAD [s]abc,TO [t]jkl[,INCL]!

Hierarchical

[I.20031]

CTST:[FRM xy][,SEQ ww]:HUB,FAD uvmnp,TO wxkqr[,INCL]!

Completion Message

Nonhierarchical

[O.20031]

M hh:mm:ss xy,ww n[vv] CTST HUB FAD [s]abc,TO [t]jkl[CUS] COMPL

Hierarchical

[O.20031]

M hh:mm:ss xy,ww n[vv] CTST HUB FAD uvmnp,TO wxkqr[CUS] COMPL

Denial Message

Nonhierarchical

[O.20031.01]

M hh:mm:ss xy,ww n[vv] CTST HUB FAD [s]abc,TO [t]jkl [[t]klm] \\
COND cc DNY

Hierarchical

[O.20031.01]

M hh:mm:ss xy,ww n[vv] CTST HUB FAD uvmnp,TO wxkqr [ghklm] \\
COND cc DNY

Explanation of Parameters

HUB	HUB connection
FAD	Facility access digroup
[s]abc	The 3- or 4-digit nonhierarchical number of test NPC or Facility Access Digroup (FAD).
[t]jkl	The 3- or 4-digit nonhierarchical number of TO NPC connected to the remote FAD
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number of test NPC or FAD
wxkqr	Hierarchical NPC number of TO NPC connected to the remote FAD
ghklm	Hierarchical number of problematic NPC
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
[t]klm	Hierarchical number of the NPC that caused the denial
INCL	Inclusive
	Inclusive keyword may be entered for customer-controlled TO NPC
CUS	Customer-controlled Circuit
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
1E	Customer control or red circuit exists
10	NPC out of service or failed
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
30	Termination is already assigned
32	Termination is under test
34	Termination is under customer control (CUS)
35	Termination is protected (RDLD)
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
46	NPC Failed or Out of Service
70	NPC invalid type
71	NPC is a Facility Access Digroup
73	Invalid test mode for a one-way test session
75	Test session already exists
FF	Termination is in process of being rolled
8D	Clear gateway test access disallowed.

NONCHANNELIZED LOOP TEST ACCESS FACILITY

Explanation of Command

This command terminally loops back a nonchannelized Facility Access Digroup (FAD) or test network processing circuit (NPC).

Terminal looping is defined as looping of a terminated signal; it is done in the cross-connect network.

Command

Nonhierarchical

[I.20301]

CTST:FRM xy,SEQ ww:LPBKT,FAD [s]abc[,INCL]!

Hierarchical

[I.20301]

CTST:FRM xy,SEQ ww:LPBKT,FAD uvmnp[,INCL]!

Completion Message

Nonhierarchical

[O.20301]

M hh:ss:mm xy,ww n[vv] CTST LPBKT FAD [s]abc[CUS] COMPL

Hierarchical

[O.20301]

M hh:ss:mm xy,ww n[vv] CTST LPBKT FAD uvmnp[CUS] COMPL

Denial Message

Nonhierarchical

[O.20301.01]

M hh:ss:mm xy,ww n[vv] CTST LPBKT FAD [s]abc COND cc DNY

Hierarchical

[O.20301.01]

M hh:ss:mm xy,ww n[vv] CTST LPBKT FAD uvmnp COND cc DNY

**Explanation of
Parameters**

FAD	Facility access digroup
[s]abc	The 3- or 4-digit nonhierarchical FAD NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number of FAD
uv	Unit number
m	Module number
np	NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
LPBKT	Test NPC terminal loopback.
INCL	Inclusive May be entered for customer-controlled NPC; not required.
CUS	Customer NPC is marked as Customer-controlled.
cc	Hexadecimal condition code
cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS

cc	<i>Explanation</i>
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
30	Termination is already assigned
32	Termination is under test
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
70	NPC invalid type
71	NPC is a Facility Access Digroup
73	Invalid test mode for a one-way test session
75	Test session already exists
FF	Termination is in process of being rolled

NONCHANNELIZED TEST NPC RELEASE

Explanation of Command

This command releases ALL nonchannelized facility access digroups (FADs), or test network processing circuits (NPCs) activated by the user, and restores the test session to its original mapped or unmapped state.

It is preceded by individual CTST,TNR,FAD,OOS messages printed for each test session which is in progress.

If the circuit under test was a mapped circuit before the test session started, upon release of the FAD, the original cross-connection is restored. If the circuit was unmapped, it is restored to the unmapped or idle state that existed prior to testing.

Command

[I.20202]

CTST:[FRM xy][,SEQ ww]:TNR,ALL[,OOS]!

Completion Message

[O.20202]

M hh:mm:ss xy,ww n[vv] CTST TNR ALL COND cc COMPL

Explanation of Parameters

TNR	Test NPC release
ALL	All
	Release all test NPCs
OOS	Out-of-service
	The OOS keyword must be entered to release one or more NPC(s) that are OOS. Mapped NPC(s) that are OOS are not restored to original cross-connection until NPC(s) are returned to service.
COND	Condition code
cc	Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
01	No FADs were activated by link n
02	One or more FADs could not be released

NONCHANNELIZED TEST NPC RELEASE

Explanation of Command

This command releases a nonchannelized facility access digroup (FAD) or test Network Processing Circuit (NPC) and restores the test session to its original mapped or unmapped state and releases ALL test NPCs activated by the user from the current link.

For test modes using two FADs, if one of the two FADs is entered, both FADs are released from testing. If both FADs are entered, they must be associated with one another in the same test connection. Both FADs can be entered in any order and are still released.

If the circuit under test was a mapped circuit before the test session start, upon release of FAD(s), the circuit is restored to cross-connection. If the circuit was unmapped, it is restored to the unmapped or idle state that existed prior to testing.

If the OOS keyword is input, NPC(s) that are out-of-service (OOS) should not be a reason for denial; NPC unequipped, failed, or not a test NPC is a denial condition only for the case of one NPC.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.20201]

There are two alternate formats depending upon the number of FADs specified.

CTST:[FRM xy][,SEQ ww]:TNR,FAD [s]abc[,OOS]!

CTST:[FRM xy][,SEQ ww]:TNR,FAD ([s]abc[, [t]def)][,OOS]!

Hierarchical

[I.20201]

There are two alternate formats depending upon the number of FADs specified.

CTST:[FRM xy][,SEQ ww]:TNR,FAD uvmpn[,OOS]!

CTST:[FRM xy][,SEQ ww]:TNR,FAD (uvmpn[,wxkqr)][,OOS]!

2.048 Mbit/s Termination

Nonhierarchical

[I.20201]

There are two alternate formats depending upon the number of FADs specified.

CTST:[FRM xy][,SEQ ww]:TNR,FAD [s]abc[,OOS]!

CTST:[FRM xy][,SEQ ww]:TNR,FAD ([s]abc[, [t]def))[,OOS]!

Hierarchical

[I.20201]

There are two alternate formats depending upon the number of FADs specified.

CTST:[FRM xy][,SEQ ww]:TNR,FAD uvmnp[,OOS]!

CTST:[FRM xy][,SEQ ww]:TNR,FAD (uvmnp[,wxkqr))[,OOS]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.20201]

M hh:mm:ss xy,ww n[vv] CTST TNR FAD [s]abc[OOS] \
[[u]ghi[, [v]jkl]] 2 LN MSG:
[RDC][CUS][{UMPD|EMODE <emode> }FMODE <fmode>}][OOS]COMPL

M hh:mm:ss xy,ww n[vv] CTST TNR FAD [s]abc[, [t]def][OOS] \
[[u]ghi[, [v]jkl]] 2 LN MSG:
[RDC][CUS][{UMPD|EMODE <emode> }FMODE <fmode>}][OOS]COMPL

Hierarchical

[O.20201]

M hh:mm:ss xy,ww n[vv] CTST TNR FAD uvmnp[,wxkqr][OOS] \
[eghij[, jklmn]] 2 LN MSG:
[RDC][CUS][{UMPD|EMODE <emode> }FMODE <fmode>}][OOS]COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.20201]

M hh:mm:ss xy,ww n[vv] CTST TNR FAD [s]abc[00S] \
[[u]ghi[, [v]jkl]] 2 LN MSG:
[RDC][CUS][{UMPD}[EMODE <emode>]FMODE <fmode>}][OOS]COMPL

M hh:mm:ss xy,ww n[vv] CTST TNR FAD [s]abc[, [t]def][00S] \
[[u]ghi[, [v]jkl]] 2 LN MSG: \
[RDC][CUS][{UMPD}[EMODE <emode>]FMODE <fmode>}][OOS]COMPL

Hierarchical

[O.20201]

M hh:mm:ss xy,ww n[vv] CTST TNR FAD uvmnp[,wxkqr][00S] \
[eghij[, jklmn]] 2 LN MSG:
[RDC][CUS][{UMPD}[EMODE <emode>]FMODE <fmode>}][OOS]COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.20201.01]

M hh:mm:ss xy,ww n[vv] CTST TNR FAD [s]abc[, [t]def][00S] \
[COND] cc[<st>] DNY

Hierarchical

[O.20201.01]

M hh:mm:ss xy,ww n[vv] CTST TNR FAD uvmnp[,wxkqr][00S] \
[COND] cc[<st>] DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.20201.01]

M hh:mm:ss xy,ww n[vv] CTST TNR FAD [s]abc[, [t]def][00S] \
[COND] cc[<st>] DNY

Hierarchical

[O.20201.01]

M hh:mm:ss xy,ww n[vv] CTST TNR FAD uvmnp[,wxkqr][OOS] \
[COND] cc[<st>] DNY

Autonomous Message

1.544 Mbit/s Termination

Nonhierarchical

[O.20201]

I hh:mm:ss xy,ww n[vv] CTST TNR FAD [s]abc[, [t]def] \
[[u]ghi[, [v]jkl]][OOS] 2 LN MSG:
[RDC][CUS][{UMPD|EMODE <emode> }FMODE <fmode>}][OOS]COMPL

[O.20201.01]

I hh:mm:ss xy,ww n[vv] CTST TNR FAD [s]abc[, [t]def][OOS] \
[COND] cc[<st>] DNY

Hierarchical

[O.20201]

I hh:mm:ss xy,ww n[vv] CTST TNR FAD uvmnp[,wxkqr][eghij[,jklmn]] \
[OOS] 2 LN MSG:
[RDC][CUS][{UNMAP|EMODE <emode> }FMODE <fmode>}][OOS]COMPL

[O.20201.01]

I hh:mm:ss xy,ww n[vv] CTST TNR FAD uvmnp[,wxkqr][OOS] \
[COND] cc[<st>] DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.20201]

I hh:mm:ss xy,ww n[vv] CTST TNR FAD [s]abc[, [t]def] \
[[u]ghi[, [v]jkl]][OOS] 2 LN MSG:
[RDC][CUS][{UMPD|EMODE <emode> }FMODE <fmode>}][OOS]COMPL

[O.20201.01]

I hh:mm:ss xy,ww n[vv] CTST TNR FAD [s]abc[, [t]def][OOS] \
[COND] cc[<st>] DNY

Hierarchical

[O.20201]

I hh:mm:ss xy,ww n[vv] CTST TNR FAD uvmnp[,wxkqr][eghij[,jklmn]] \
[OOS] 2 LN MSG:
[RDC][CUS][{UNMAP|[EMODE <emode>]FMODE <fmode>}][OOS]COMPL

[O.20201.01]

I hh:mm:ss xy,ww n[vv] CTST TNR FAD uvmnp[,wxkqr][OOS] \
[COND] cc[<st>] DNY

Explanation of Parameters

TNR	Test NPC release
FAD	Facility access digroup
[s]abc	The 3- or 4-digit nonhierarchical test NPC or Facility Access Digroup (FAD) number
[t]def	The second 3- or 4-digit nonhierarchical FAD number, if applicable
[u]ghi	The 3- or 4-digit nonhierarchical E-end NPC number of test session. Not applicable to loopback FAD
[v]jkl	The 3- or 4-digit nonhierarchical F-end NPC number of a mapped test session. Not applicable to loopback FAD
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number for FAD
wxkqr	Hierarchical NPC number of second FAD, if applicable
eghij	Hierarchical E-end NPC number of test session. Not applicable to loopback FAD
jklmn	Hierarchical F-end NPC number of a mapped test session. Not applicable to loopback FAD
uv,wx,eg,jk	Unit number
m,k,h,l	Module number
np,qr,ij,mn	NPC number
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
UMPD	Unmapped
	Test session has unmapped NPC

EMODE	E-end termination status
FMODE	F-end termination status
NORM	The circuit under test is not terminated in this direction
TERM	The circuit under test terminated in this direction The emode output is omitted for one-way circuits. Both emode and fmode are omitted for unmapped circuits.
OOS	Out-of-service The OOS keyword must be entered to release one or more NPC(s) that are OOS. Mapped NPC(s) that are OOS are not restored to original cross-connection until NPC(s) are returned to service. If the OOS keyword is entered in the input command, it appears in the first line of the output message. A second OOS keyword appears in the last line of the output message if at least one NPC is out-of-service at the time the command is issued.
RDC	Red circuit Test session has red circuit.
CUS	Customer Test session has customer-controlled Circuit.
COND	Condition
st	Status of denial
cc	Hexadecimal condition code
cc	<i>Explanation</i>
00	No conditions
02	Subject entity is not equipped
04	Subject entity is out of service
10	NPC out of service or failed
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed

cc	<i>Explanation</i>
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
46	NPC Failed or Out of Service
70	NPC invalid type
79	NPC is not a Facility Access Digroup
8C	The two FADS entered are not associated with one another.

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Command and Message Manual
(Release 9.1.3 PDS)

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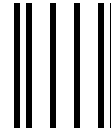
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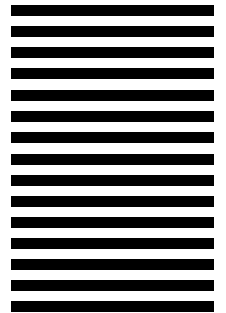
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GL

Glossary

V4



Contents

About This Manual

Background

Purpose

The *DACS II Release 9.1.3 Command and Message Manual* describes the input commands and output messages of Release 9.1.3 of the Digital Access and Cross-Connect System II (DACS II). In addition, it provides full support for previous product releases.



NOTE:

Those customers using this manual with Releases 3 through 7.0.3 software should be aware that all features of a particular message shown for Release 9.1.3 may or may not apply to previous releases.

Reason for Issue

The *DACS II Release 9.1.3 Command and Message Manual* has been issued to include updated and new commands applicable to Release 9.1.3.

Background (Continued)

Intended Audiences

This manual is a catalog of messages intended for reference by a technician or craftperson who needs additional details about a message. It provides the user with supplemental information for the Digital Access and Cross-Connect System II (DACS II) that is programmed in the HuMan-Machine Language (MML) Program Documentation Standards (PDS) language. An example of a user is someone performing a task from an operation and maintenance manual who needs the definition of a specific keyword to complete the task.

Manual Contents

Volume Breakdown

This manual consists of four volumes as follows:

- **Volume I** - This volume contains general information about the document, a detailed introduction that defines DACS II messages, relates how to communicate with DACS II, introduces the administrative links, and discusses in detail NPC addressing, on-line help feature, system configuration and features a listing of related documentation. Message listings in this volume include alphabetical and numerical, summary list of input commands and a list of autonomous messages. A comprehensive presentation of input commands and output messages (ABT through CTST) concludes this volume.
 - **Volume II, III, and IV** - These three volumes contain input commands and output messages in the following order:
 - **Volume II** - DCH through OPR
 - **Volume III** - REPT through TTST
 - **Volume IV** - UTL and the Glossary
-

Manual Conventions

Special Font Used This manual uses special fonts to differentiate computer input/output. The constant width font indicates message formats and messages as they would appear on a DACS II terminal screen.

Notes Notes inform users of special considerations, situations, or items to remember. An example of a Note is shown below:



NOTE:

Terminated connection for DMB concatenation is not allowed.

Safety Label

Cautions indicate the presence of a hazard that will or can cause a frame alarm or property damage if hazard is not avoided. An example of a Caution is shown below:



CAUTION:

The UMC is inserted towards the direction that is terminated, potentially causing a loss of service.

Related Documentation

Related DACS II Documents

The following documents support the DACS II:

- DACS II Installation Manual
 - IPH903 (DACS II CEF)
 - IPH903I (DACS II ESBF).

Audience: Customers planning to install the equipment

Content: Customer installation instructions.

- DACS II Release 7.0 Product Description Manuals:
 - 365-353-085 (24 Channel)
 - 365-353-086 (30 Channel).

Audience: Network planners, engineers, and others that need to know how the DACS II works and fits into the network

Content: Features, applications, and description and other reference information.

- DACS II Release 9.0 Operations and Maintenance:
 - 365-353-261(1.544 PDS)
 - 365-353-271 (1.544 MML)
 - 365-353-281(2.048 PDS)
 - 365-353-291 (2.048 MML)

Audience: End-user maintenance personnel

Contents: Procedures to operate and maintain the DACS II.

- DACS II Release 9.1.3 Feature Guide:
 - 365-353-298 (PDS)
 - 365-353-297 (MML)

Audience: End-user maintenance personnel

Content: Information and procedures for this new feature.

(Continued on next page)

Related Documentation (Continued)

Related DACS II Documents, Continued

- DACS II Release 9.1.3 Command and Message Manuals:

- 365-359-212 (PDS)
- 365-359-211 (MML)

Audience: End-user maintenance personnel

Content: Description of each software input message and its response along with a description of each system output report.

- X.50/X.57 Subrate Application
Release 1.0.3 for DACS II/Release 1.0.4 for DACS II ISX
MML 2.048 Mbit/s Interface User's Manual

- 365-350-101 (MML).

Audience: End-user maintenance personnel

Content: Complete manual describing how to install and operate the X.50/X.57 Subrate application on the DACS II or DACS II ISX. Commands and messages describing how to perform subrate cross-connects and subrate test access are included.

- DDS Subrate and MJU Application
Release 1.0.4 for DACS II/Release 1.0.5 for DACS II ISX
User's Manual

- 365-350-110 (PDS)
- 365-350-111 (MML).

Audience: End-user maintenance personnel

Content: Complete manual describing how to install and operate the DDS Subrate and MJU application on the DACS II or DACS II ISX. Commands and messages describing how to perform DDS subrate cross-connects, subrate test access, and subrate MJU operations are included.

(Continued on next page)

Related Documentation (Continued)

Related DACS II Documents, Continued

- Digital Multipoint Bridge (DMB)
DSP Platform Application
Release 1.0.2 for DACS II/Release 1.0.3 for DACS II ISX
User's Manual
 - 365-353-144 (PDS)
 - 365-353-154 (MML).

Audience: End-user maintenance personnel

Content: Complete manual describing how to install and operate the DMB application on the DACS II or DACS II ISX. Commands and messages describing how to perform DMB cross-connects and DMB test access operations are included.

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Overview

Documentation for DACS II and DACS II ISX is now available in electronic form, on CD-ROM (compact disk, read-only memory). CD-ROM has many advantages over traditional paper documentation, including cost savings, search and retrieve capability, and the assurance of the most current documentation.

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For technical information, call the DACS II Documentation Coordinator: (1-732-949-5989).

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SUBRATE DISESTABLISH CHANNEL

Explanation of Command

**NOTE:**

This command applies to the 1.544 Mbit/s Termination Interface only.

This command disconnects a channel (or a range of channels) in a digroup from use by the subrate feature. If an error correction parity channel is associated with the named channel and is *not* named in the input command, the system automatically finds and disestablishes it as well. However, one should not take this to imply that the parity channel may be disconnected in a range, since this is not the case.

Command

Nonhierarchical

[I.19151]

SDCH:FRM xy,SEQ ww:TO [s]abcddd[-eee][,PCH[ppp]][,DCC]!

Hierarchical

[I.19151]

SDCH:FRM xy,SEQ ww:TO uvmnpddd[-eee][,PCH[ppp]][,DCC]!

Completion Message

Nonhierarchical

[O.19151]

M hh:mm:ss xy,ww n[vv] SDCH [s]abcddd[-eee] [PCH ppp][DCC] \
[OOS] COMPL

Hierarchical

[O.19151]

M hh:mm:ss xy,ww n[vv] SDCH uvmnpddd[-eee] [PCH ppp][DCC] \
[OOS] COMPL

Denial Message**Nonhierarchical**

[O.19151.01]

M hh:mm:ss xy,ww n[vv] SDCH [s]abcddd[-eee][PCH[ppp]][DCC]
2 LN MSG:
<reason> DNY

Hierarchical

[O.19151.01]

M hh:mm:ss xy,ww n[vv] SDCH uvmnpddd[-eee][PCH[ppp]][DCC]
2 LN MSG:
<reason> DNY

**Explanation of
Parameters****[s]abc**

The 3- or 4-digit nonhierarchical NPC number

For a listing of the nonhierarchical numbering scheme, refer to
Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical NPC number

uv Unit number**m** Module number**np** NPC number within the module

For a listing of the hierarchical numbering scheme, refer
to Chapter 2, "NPC Numbering and XYZ Parameters."

ddd

Channel number

eee

Channel number for end of range specified

001-024**001-047** Odd only (SLC 96[®] Carrier, Mode 3, DGA)**049-095** Odd only (SLC 96 Carrier, Mode 3, DGC)**001-024** Odd and Even (SLC 96 Carrier, Mode 1, DGA)**025-048** Odd and Even (SLC 96 Carrier, Mode 1, DGB)**049-072** Odd and Even (SLC 96 Carrier, Mode 1, DGC)**073-096** Odd and Even (SLC 96 Carrier, Mode 1, DGD)**001-024** Odd and Even (SLC Series 5 Carrier, Feature
Package C, DGA)

	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
PCH	Parity Channel	
ppp	Parity error correction channel number	
	Included only for downward compatibility with the equivalent DACS/Subrate command. The PCH field indicates that a parity channel associated with channel ddd is to be disestablished as well.	
	If the PCH field is not used and a parity channel is present, the system automatically finds and disestablishes the parity channel associated with channel ddd.	
	ppp must agree with the parity channel assignment associated with channel ddd or the command will be denied. Channel ranges are not allowed if the range includes any channel associated with parity channel error correction.	
	NOTE:	Disestablishment can only be done after all Subrate cross-connections are disconnected.
DCC	Disconnect Code	
	Causes the Digital Data System (DDS) Unassigned Multiplexer Channel (UMC) control code to be inserted in the disestablished channel(s) towards the digroup facility. If DDC is not specified, the disconnect code specified in the growth NPC command associated with the specified digroup is used.	
OOS	Out of service	
	Channels connected with an out-of-service facility NPC may be disestablished with this command. Such disestablishments require no special keyword in the input command, but the output message will contain the OOS keyword to indicate that the facility is out-of-service. The user should note that the appropriate disconnect channel code may not be inserted in the disestablished channel until the facility is restored to service under these conditions.	
CUS	Customer-controlled circuit	

This disestablish command returns the customer control marking of channels that were previously marked as CUS prior to being established to the Subrate feature.

The optional **PCH ppp** field appears whenever an associated error correction parity channel is also disestablished. It is not necessary for this field to be included in the input command, as the system automatically locates and disestablishes the parity channel whenever the associated data channel is disestablished.

If a problem is found within a range of channels, then no channel is completed. Also, the user should note that the first problem found within a range of channels stops the search for additional problems within that range, thus subsequent channels may or may not have additional problems.

reason Reason for denial

INPUT ERRORS

CHANNEL NUMBER IS OUT OF RANGE FOR NPC TYPE SPECIFIED

SPECIFIED CHANNEL IS NOT ESTABLISHED TO THE SUBRATE

SPECIFIED CHANNEL HAS NO ASSOCIATED PARITY CHANNEL

SPECIFIED DATA AND PARITY CHANNEL NUMBERS ARE INCONSISTENT

RANGE DISCONNECT OF CHANNEL WITH PCH IS NOT ALLOWED

CHANNEL [s]abcddd OR A CUSTOMER IS UNDER TEST

RANGE DISESTABLISH OF DATA CH [s]abcddd HAVING PCH IS NOT ALLOWED

ACTIVE SUBRATE CROSS-CONNECTS ARE PRESENT ON THE CHANNEL

MAINTENANCE CONDITIONS

ACTIVE CROSS-CONNECT NETWORK SIDE IS FAILED

SPECIFIED NPC IS UNEQUIPPED

REQUIRED UNIT NOT EQUIPPED, NOT IN SERVICE, OR FAILED

REQUIRED CCB NOT EQUIPPED, NOT IN SERVICE, OR FAILED

REQUIRED TSI NOT EQUIPPED, NOT IN SERVICE, OR
FAILED

REQUIRED ETSI NOT EQUIPPED, NOT IN SERVICE, OR
FAILED

REQUIRED FTMI NOT EQUIPPED, NOT IN SERVICE, OR
FAILED

REQUIRED FC NOT EQUIPPED, NOT IN SERVICE, OR
FAILED

REQUIRED DSPI NOT EQUIPPED, NOT IN SERVICE, OR
FAILED

REQUIRED SUBRATE PACK NOT EQUIPPED, NOT IN
SERVICE, OR FAILED

REQUIRED SRM NOT EQUIPPED, NOT IN SERVICE, OR
FAILED

DS3U reasons for denial

DISCONNECTION OF CIRCUITS FROM/TO DSP APPLICATION CARD

Explanation of Command

This command disconnects a circuit (or a range of circuits) between an NPC that is not a DSP application and an NPC that **is** a DSP application NPC. The circuit may be a two-way or a one-way circuit. This command is also used to disconnect a circuit between two application cards.

This command should only be used for clean-up purposes if the cross-connect cannot be disconnected by commands to the application itself.

Before issuing the command, the user should try to remove and restore the application and to issue the disconnect command through the application; keeping in mind, however, that a remove and subsequent restore results in a momentary service loss.

This command is restricted to only the users who have the RMON (Restricted Maintenance privilege ON) privilege. Also, this command is not available via the on-line help feature.

This command works if the facility terminating NPC and/or the application NPC are/is out-of-service. This command also works for Red circuits.

This command should also be used if a test port connection to an application has been released using the FRC keyword in the TTST::TPR, TP, FRC command (I.27001), but the cross-connection that was used for the test port connection, which is a cross-connection between two of the application channels, still needs to be disconnected. The user should use the command UTL::QRY, CMAP (I.52011) to find the channel pair used by the application for the test port before executing this command.

Command

Nonhierarchical

[I.15061]

DDIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [v]ghijjj[-kkk]!

Hierarchical

[I.15061]

DDIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk]!

**Completion
Message****Nonhierarchical**

[O.15061]

M hh:mm:ss xy,ww n[vv] DDIS [s]abcddd[-eee],[v]ghijjj[-kkk][00S] \
[RDC] COMPL

Hierarchical

[O.15061]

M hh:mm:ss xy,ww n[vv] DDIS uvmnpddd[-eee],wxkqrjjj[-kkk][00S] \
[RDC] COMPL

Denial Message**Nonhierarchical**

[O.15061.01]

M hh:mm:ss xy,ww n[vv] DDIS [s]abcddd[-eee],[v]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.15061.02]

M hh:mm:ss xy,ww n[vv] DDIS [s]abcddd[-eee],[v]ghijjj[-kkk] \
[mmm,nnn] <d> <st> DNY

Hierarchical

[O.15061.01]

M hh:mm:ss xy,ww n[vv] DDIS uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.15061.02]

M hh:mm:ss xy,ww n[vv] DDIS uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] <d> <st> DNY

**Explanation of
Parameters**

[s]abc	The From termination NPC number (3- or 4-digit)
uvmnp	The From termination NPC number (hierarchical)
[v]ghi	The To termination NPC number (3- or 4-digit)
wxkqr	The To termination NPC number (hierarchical)

ddd,jjj	Channel numbers
eee,kkk	Channel numbers, denoting the end of a range.
001-024	DE, DA, TE and TA type NPCs
000-031	PA, PB, PC and TH type NPCs
001-064	SDxyz type application; see your application manual for details
OOS	At least one of the NPCs was out-of-service
RDC	The disconnected circuit was a Red circuit
mmm,nnn	Channel number involved in the denial; otherwise the same as ddd
d	Direction
F	From
T	To
B	Both
st	Status of denial
cc	Hexadecimal condition code

cc	<i>Explanation</i>
04	No NPC's out of service and OOS keyword used
06	Invalid range for specified FROM NPC type
07	Invalid range for specified TO NPC type
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
1A	Required FLI not equipped, not in service, or failed

cc	<i>Explanation</i>
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
DD	A loopback is active on the TO termination
DF	Unmatched channel range
E0	Unmatched channel range involving SLC Mode III termination
E4	RT-DCLU cross-connect with different ids
E5	RT-DCLU cross-connect with different channel number
E6	Cross-connect a non Mode I channel to DCLU
E7	Cross-connect a non SLC channel to DCLU
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed

st	d	Explanation
FAIL	{F T B}	Failed
NOMTH	{F T B}	No Match
TP	{F T B}	NPC is used for test access
UEQD	{F T B}	Unequipped
UNPAS GN	{F T B}	Unassigned or Not Properly Assigned
UTST	{F T B}	Under Test

DELETE LINES FROM MACRO

Explanation of Command

This command deletes one or more commands from an existing macro while in a macro session. If neither a range of line numbers nor END is specified, the line pointed to by the line pointer (the current line) is deleted.

Command

1.544 Mbit/s Termination

[I.19051]

```
DELETE[:FRM xy,SEQ ww:{<starting line>|END}[-{<ending line> \
|END}]]!
```

2.048 Mbit/s Termination

[I.19051]

```
DELETE[:FRM xy,SEQ ww:{<starting line>|END}[-{<ending line> \
|END}]]!
```

Completion Message

1.544 Mbit/s Termination

[O.19051]

```
M hh:mm:ss xy,ww n[vv] DELETE[ {<starting line> \
|END}[-{<ending line>|END}]] COMPL
```

2.048 Mbit/s Termination

[O.19051]

```
M hh:mm:ss xy,ww n[vv] DELETE[ {<starting line> \
|END}[-{<ending line>|END}]] COMPL
```

Denial Message 1.544 Mbit/s Termination

[O.19051.01]

M hh:mm:ss xy,ww n[vv] DELETE[{<starting line>| \
END}[-{<ending line>|END}]] COND cc DNY

2.048 Mbit/s Termination

[O.19051.01]

M hh:mm:ss xy,ww n[vv] DELETE[{<starting line>| \
END}[-{<ending line>|END}]] COND cc DNY

**Explanation of
Parameters**

starting line	Beginning line number of a line range (1, 2, ..., n) Starting line indicates the line number of the first line of a range of lines to be deleted from a macro.						
ending line	Ending line number of a line range (2, 3, ..., n+1) Ending line indicates the line number of the last line of a range of lines to be deleted from a macro.						
END	End Line number of the line at the end of the macro.						
COND	Condition						
cc	Hexadecimal condition code						
	<table><tr><td>cc</td><td><i>Explanation</i></td></tr><tr><td>6B</td><td>Invalid line number</td></tr><tr><td>6E</td><td>No edit session active</td></tr></table>	cc	<i>Explanation</i>	6B	Invalid line number	6E	No edit session active
cc	<i>Explanation</i>						
6B	Invalid line number						
6E	No edit session active						

DIAGNOSTICS, CCI AND BT PACKS

Explanation of Command

This command requests diagnostics to be run on the clock and control interface (CCI) and the bus terminator (BT) packs.

Command

```
[I.41251]
DGN:[FRM xy][,SEQ ww]:CCI s[,CFT X'vwxy']!
```

Completion Message

```
[O.41251]
M hh:mm:ss xy,ww n[vv] DGN CCI s ATP COMPL

[O.41252]
M hh:mm:ss xy,ww n[vv] DGN CCI s CATP c'c' COMPL

[O.41253]
M hh:mm:ss xy,ww n[vv] DGN CCI s[ BT sf] STF ppqq 3 LN MSG:
wd21 wd20 wd19 wd18 wd17 wd16 wd15 wd14 wd13 wd12 wd11
wd10 wd09 wd08 wd07 wd06 wd05 wd04 wd03 wd02 wd01 wd00 COMPL
```

Denial Message

```
[O.41251.01]
M hh:mm:ss xy,ww n[vv] DGN CCI s[ BT sf] COND cc DNY
```

Autonomous Message

```
[O.41251]
I hh:mm:ss xy,ww n[vv] DGN CCI s ATP COMPL

[O.41251.01]
I hh:mm:ss xy,ww n[vv] DGN CCI s[ BT sf] COND cc DNY
```

Explanation of Parameters

CCI Clock and control interface

s	Cross-connect side number (0 or 1)
CFT	Craft code
vwxy	Diagnostic test number (hexadecimal)
0001	Address and Data Parity Exercise
0002	CCI Sync and Clock Exercise
0004	ETSI alarm exercise
0008	Sync summary alarm exercise
0010	Unit Summary Alarm Exercise
0020*	CCI Power Alarm Exercise
0040	Bus Status Register Parity Test
0080	Logic Cell Array (LCA) readback Test
0100	Bus Termination (BT) Pack Alarm Exercise
	Out-of-service Bus Status Register
0200*	Diagnostics
0400	CCI reset register check
0800	ETSI reset register check

* Can be run only when the Expanded Cross-Connect Network (ECCN) side is out-of-service

The optional craft diagnostic code field indicates which test(s) of the diagnostic is to be run under craft control. If this field is omitted, all tests of this diagnostic are run.

BT	Bus termination
sf	BT identifier
s	Cross-connect side number (0 or 1)
f	Failed BT indicator

1	BT 1
2	BT 2
B	Both BTs

ATP	All tests passed
CATP	Conditional all tests passed
c'c'	Completion condition code (hexadecimal) (see cc for explanation)

STF	Some tests failed
ppqq	Trouble number for the craft (hexadecimal)
pp	Failing diagnostic number
qq	Test number
0001	Address and Data Parity Exercise failed
0002	CCI Sync and Clock Exercise failed
0004	ETSI alarm exercise failed
0008	Sync summary alarm exercise failed
0010	Unit Summary Alarm Exercise failed
0020*	CCI Power Alarm Exercise failed
0040	Bus Status Register Parity Test failed
0080	Logic Cell Arrays (LCA) readback Test failed
0100	Bus Terminator (BT) Pack Alarm Exercise failed
0200*	Out-of-service Bus Status Register Diagnostics failed
0400*	CCI reset register check failed
0800*	ETSI reset register check failed
8000	CCI failed hardware initialization
	* ECCN out-of-service test *
wd21, ..., wd00	Raw data words
	These words are related to the diagnostic failure. Each word contains two bytes, and each byte is shown as a 2-digit hexadecimal number.
cc	Hexadecimal condition code
cc	<i>Explanation</i>
02	Subject entity is not equipped
55	Invalid CFT code
56	Unrunnable CFT code
03	Subject entity is in service

DIAGNOSE CCNI

Explanation of Command

This message requests diagnostics to be run on the cross-connect network interface (CCNI).

Command

[I.41201]
DGN:[FRM xy][,SEQ ww]:CCNI s[,CFT X'vwxy]!

Completion Message

[O.41201]
M hh:mm:ss xy,ww n[vv] DGN CCNI s ATP COMPL

[O.41202]
M hh:mm:ss xy,ww n[vv] DGN CCNI s CATP cc COMPL

[O.41203]
M hh:mm:ss xy,ww n[vv] DGN CCNI s STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

Denial Message

[O.41201.01]
M hh:mm:ss xy,ww n[vv] DGN CCNI COND cc DNY

Autonomous Message

[O.41201]
I hh:mm:ss xy,ww DGN CCNI s ATP COMPL

[O.41202]
I hh:mm:ss xy,ww DGN CCNI s CATP cc COMPL

[O.41203]
I hh:mm:ss xy,ww DGN CCNI s STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41201.01]

I hh:mm:ss xy,ww DGN CCNI COND cc DNY

**Explanation of
Parameters**

CCNI	Cross-connect network interface
s	Cross-connect side number (0 or 1)
CFT	Craft
	The optional craft diagnostic code field indicates which test(s) of the diagnostic is to be run under craft control. If this field is omitted, all tests of this diagnostic will be run. All diagnostic tests can be run in or out of service.
vwxy	Diagnostic test number
0001	Unmask test
0002	Lowbyte/highbyte parity test
0004	ESR/EMR test
0008	Bus status register test
0010	Autonomous switch test
0020	Address bus parity test
ATP	All tests passed
STF	Some tests failed
ppqq	Trouble number for the craft
pp	Failing diagnostic number in hexadecimal form
qq	Test number in hexadecimal form
0110	Autonomous switch enable test: error bit not set
0120	Error bit returns after clear
01f0	Software error
0210	Bus status register test: error bit not set
0220	Error bit returns after clear
02f0	Software error
0311	Low/high byte parity test: low byte parity error not set
0312	High byte parity error not set
0313	Low and high byte errors not set

	0320	Errors return after clear
	03f0	Software error
	0520	Unmask test: unmask failed
	05f0	Software error
	0620	Mask test: error bits set on entry
	06c0	Mask bits failed to set
	06f0	Software error
	071R	Error bit not set
	074R	Overall error summary bit does not set (this may involve a problem with the BX board, so if replacing this pack doesn't solve the problem, replace the BX)
	07bR	Overall summary bit returns after clear (this may involve a problem with the BX board, so if replacing this pack doesn't solve the problem, replace the BX)
	07cR	ESR/EMR tests: mask bit does not set: R is EMR or ESR number--[1,5] B is bit number--[0,f]
	07dR	Mask bit does not clear
	07f0	Software error
	0810	Address bus parity test: error bit not set
	0820	Error bit returns after clear
	08a0	Error bit not cleared
	08f0	Software error
	0b00	Could not initialize pack
CATP		Conditional all tests passed
cc		Hexadecimal condition code
d5-d0		Hexadecimal raw data bytes relating to the failed diagnostic detected.
d5		CCNI Error Source Register 5
		Each data field contains sixteen bits. The significance of each data field and its individual bits is as follows:
	15-8	Don't care
	7	Error on autonomous switch enable circuit
	6	Error on BSR parity
	5	Parity error on high byte of data

	4	Parity error on low byte of data
	3	Address bus parity error
	2	Synchronizer error
	1	Error on CCB 6
	0	Error on CCB 5
d4	CCNI Error Source Register 4. Each bit indicates an error on a pack connected to this CCNI.	
	15	Error on CCB 4
	14	Error on CCB 3
	13	Error on CCB 2
	12	Error on CCB 1
	11	Error on FTM 4, Unit 6
	10	Error on FTM 3, Unit 6
	09	Error on FTM 2, Unit 6
	08	Error on FTM 1, Unit 6
	07	Error on FTM 4, Unit 5
	06	Error on FTM 3, Unit 5
	05	Error on FTM 2, Unit 5
	04	Error on FTM 1, Unit 5
	03	Error on FTM 4, Unit 4
	02	Error on FTM 3, Unit 4
	01	Error on FTM 2, Unit 4
	00	Error on FTM 1, Unit 4
d3	CCNI Error Source Register 3. Each bit indicates an error on a pack connected to this CCNI.	
	15	Error on FTM 4, Unit 3
	14	Error on FTM 3, Unit 3
	13	Error on FTM 2, Unit 3
	12	Error on FTM 1, Unit 3
	11	Error on FTM 4, Unit 2
	10	Error on FTM 3, Unit 2
	09	Error on FTM 2, Unit 2

	08	Error on FTM 1, Unit 2
	07	Error on FTM 4, Unit 1
	06	Error on FTM 3, Unit 1
	05	Error on FTM 2, Unit 1
	04	Error on FTM 1, Unit 1
	03	Error on TSI 66
	02	Error on TSI 56
	01	Error on TSI 46
	00	Error on TSI 36
d2	CCNI Error Source Register 2. Each bit indicates an error on a pack connected to this CCNI.	
	15	Error on TSI 26
	14	Error on TSI 16
	13	Error on TSI 65
	12	Error on TSI 55
	11	Error on TSI 45
	10	Error on TSI 35
	09	Error on TSI 25
	08	Error on TSI 15
	07	Error on TSI 64
	06	Error on TSI 54
	05	Error on TSI 44
	04	Error on TSI 34
	03	Error on TSI 24
	02	Error on TSI 14
	01	Error on TSI 63
	00	Error on TSI 53
d1	CCNI Error Source Register 1. Each bit indicates an error on a pack connected to this CCNI.	
	15	Error on TSI 43
	14	Error on TSI 33
	13	Error on TSI 23

	12	Error on TSI 13
	11	Error on TSI 62
	10	Error on TSI 52
	09	Error on TSI 42
	08	Error on TSI 32
	07	Error on TSI 22
	06	Error on TSI 12
	05	Error on TSI 61
	04	Error on TSI 51
	03	Error on TSI 41
	02	Error on TSI 31
	01	Error on TSI 21
	00	Error on TSI 11
d0	Contents of Bus Status Register on CCNI	
	15-04	Not used.
	03	Indicates what side of the network is active. This bit is read by the unit controllers.
	02	Indicates what side of the network is active. This bit is written by the MP.
	01	ASE (Autonomous Switch Enable) bit 1 = ASE circuit controls the value of Bit 02 0 = MP controls the value of Bit 02 This bit is read by the units.
	00	Odd parity over bits 02-00 of this register.
cc	Hexadecimal condition code	
	cc	<i>Explanation</i>
	55	Invalid CFT code
	56	Unrunnable CFT code

DIAGNOSE ETSI

Explanation of Command

This command diagnosis an expanded time slot interchanger (ETSI).

Command

[I.41261]
DGN: [FRM xy][, SEQ ww]:ETSI sqq[, CFT X'vwxy]!

Completion Message

[O.41261]
M hh:mm:ss xy,ww n[vv] DGN ETSI sqq ATP COMPL

[O.41262]
M hh:mm:ss xy,ww n[vv] DGN ETSI sqq CATP kk COMPL

[O.41263]
M hh:mm:ss xy,ww n[vv] DGN ETSI sqq[ETSI snn] STF ppqq \
3 LN MSG:
wd15 wd14 wd13 wd12 wd11 wd10 wd09 wd08
wd07 wd06 wd05 wd04 wd03 wd02 wd01 wd00 COMPL

Denial Message

[O.41261.01]
M hh:mm:ss xy,ww n[vv] DGN ETSI sqq COND cc DNY

Autonomous Message

Explanation of Parameters

ETSI	Expanded Time Slot Interchanger
s	Side number (0 or 1)
qq	Unit number (01 through 16)
CFT	Craft code

vwxy	Diagnostic test number (hexadecimal)
vwxy	Test
0001	Clock and Sync exercise
0002*	Control RAM and data RAM memory test
0004	Address and data parity exercise
0008	Power monitor exercise
0010	Data source time slot exercise
0020	In-service port alarm exercise
0040*	Out-of-service port alarm exercise
0080	Data source and access test
0100	Receive multiplexer port alarm
0200	Transmit demultiplexer port alarm test
0400	Control RAM parity exercise
0800	Unmapped code test
1000*	Data RAM unmapped test
	* Can only be tested if the ETSI is out of service
	The optional craft diagnostic test code field indicates which test(s) of the diagnostic is to be run under craft control. If this field is not entered, all tests of this diagnostic are run.
nn	Unit number of the questionable in-service ETSI pack (01 through 16)
ATP	All tests passed This applies to the diagnostic of the ETSI pack, its connection with other in-service ETSIs and its cable.
STF	Some tests failed This applies to the diagnostic of the ETSI pack, its connection with other in-service ETSIs and its cable.
ppqq	Trouble number for the craft (hexadecimal)
pp	Failing diagnostic number
qq	Test number
0001	Clock and sync exercise failed
0002	Control RAM and data RAM memory test failed
0004	Address and data parity exercise failed

	0008	Power monitor exercise failed
	0010	Data source time slot exercise failed
	0020	In-service port alarm exercise failed
	0040	Out-of-service port alarm test failed
	0080	Data source and access test failed
	0100	Receive multiplexer port alarm test failed
	0200	Transmit demultiplexer port alarm test failed
	0400	Control RAM parity exercise failed
	0800	Unmapped code test failed
	1000	Data RAM unmapped test failed
	8000	ETSI Hardware initialization failed
wd15, ..., wd00	Raw data	
	Sixteen raw data words relating to the failed diagnostic detected. Each data word contains two bytes, and each byte is presented as a two-digit hexadecimal number. The interpretation of raw data values cannot be done by a craftsman.	
wd15	Low-level Diagnostic Actual Data	
wd14	Low-level Diagnostic Expected Data	
wd13	Low-level Diagnostic Return Code	
wd12	CCI ETSI Mask Register	
wd11	CCI ETSI ESR4	
wd10	CCI ETSI ESR3	
wd09	CCI ETSI ESR2	
wd08	CCI ETSI ESR1	
wd07	ETSI Receive Demultiplexer Mask Register	
wd06	ETSI Receive Multiplexer Mask Register	
wd05	ETSI Data Ram Alarm Register	
wd04	ETSI Control Ram Port Alarm Register	
wd03	ETSI Control Ram Exercise-Status Register	
wd02	ETSI Transmit Demultiplexer Status	
wd01	ETSI Receive Multiplexer Status	
wd00	ETSI Circuit Pack Summary Register	
CATP	Conditional all tests passed	

kk	Hexadecimal completion condition code To interpret the values of kk see cc below.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
10	Unit is not equipped
55	Invalid CFT code
56	Unrunnable CFT code
A9	No unmapped time slot
CE	CCI is out of service
00	No conditions
03	Subject entity is in service

DIAGNOSTICS

Explanation of Command

This command requests diagnostic tests to be run on ALL expanded time slot interchangers (ETISs) on an expanded cross-connect network (ECCN) side.

Command

```
[I.41271]
DGN:[FRM xy][,SEQ ww]:ETIS,ECCN s,ALL!
```

Completion Message

```
[O.41271]
M hh:mm:ss xy,ww n[vv] DGN ETIS ECCN s ALL 5 LN MSG:
TOTAL ETIS tt
s01 r nn s02 r nn s03 r nn s04 r nn s05 r nn \
s06 r nn
s07 r nn s08 r nn s09 r nn s10 r nn s11 r nn \
s12 r nn
s13 r nn s14 r nn s15 r nn s16 r nn COND kk COMPL
```

 **NOTE:**
For each ETIS pack that failed diagnostics, a separate STF message is output.

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

```
[O.41271.01]
M hh:mm:ss xy,ww n[vv] DGN ETIS ECCN s ALL COND cc DNY
```

Explanation of Parameters

ETIS	Expanded time slot interchangers
ECCN	Expanded cross-connect network

s	Side number (0 or 1)
pa	Priority of action
M^	Manual response
I^	Information from an autonomous activity (The "^" represents a blank space)
r	Diagnostic status for an individual ETSI
A	All tests passed (ATP)
C	Conditional all tests passed (CATP)
S	Some tests failed (STF)
-	Unequipped ETSI
nn	Condition code (hexadecimal) for an individual ETSI
--	Unequipped ETSI
	To interpret other values of nn see cc
tt	Total number of ETSIs equipped in the ECCN side (01 through 16)
kk	Completion condition code (hexadecimal) for the whole message
	To interpret values of kk see cc
cc	Hexadecimal condition code
cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
16	SYNC TB is not equipped
17	SYNC is out of service
55	Invalid CFT code
56	Unrunnable CFT code
A9	No unmapped time slot
CE	CCI is out of service
CF	SYNC is inservice but failed
D1	CCI is not present
D4	CCI is inservice but failed

DIAGNOSE COMMUNICATIONS INTERFACE

Explanation of Command

This message requests diagnostics to be run on the intelligent communications interface (ICI) or communication interface (CI). The optional craft (CFT) field specifies which test(s) vwxy is to be run on the ICI or CI. The remainder of the ICI or CI diagnostics will then not be run.

An in progress message (O.41004) is output every 20 seconds while ICI or CI is being diagnosed until the command response or the autonomous report is output.

Command

[I.41031]
DGN:[FRM xy][,SEQ ww]:CI[,CFT X'vwxy']!

Completion Message

[O.41031]
M hh:mm:ss xy,ww n[vv] DGN CI ATP COMPL

[O.41032]
M hh:mm:ss xy,ww n[vv] DGN CI CATP c'c' COMPL

[O.41033]
M hh:mm:ss xy,ww n[vv] DGN CI STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

Denial Message

[O.41031.01]
M hh:mm:ss xy,ww n[vv] DGN CI COND cc DNY

**Autonomous
Message**

[O.41031]

I hh:mm:ss xy,ww DGN CI ATP COMPL

[O.41032]

I hh:mm:ss xy,ww DGN CI CATP cc COMPL

[O.41033]

I hh:mm:ss xy,ww DGN CI STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41031.01]

I hh:mm:ss xy,ww DGN CI COND cc DNY

**Explanation of
Parameters****CI** [Intelligent] Communications Interface**CFT** Craft**vwxy** Diagnostic test number (hexadecimal)

CI RAM Test 0001*

CI ROM Test 0002

CI DMA Controller Test 0004*

CI LAN Controller Test 0008*

CI Acknowledge Test 0010

CI Timer Test. 0020

CI Debug Port Test 0040*

CI Additional Memory Enable Test 0080*

*Out-of-service test.

ATP All Tests Passed**CATP** Conditional All Tests Passed**STF** Some Tests Failed**ppqq** Trouble number for the craft (hexadecimal)**pp** Failing diagnostic number**qq** Test number**0101** RAM Data Fail**0102** RAM Address Fail

0103	RAM Access Fault
0104	RAM Refresh Fail
0105	RAM Parity Fail
0200	ROM Fail
0400	Timer Fail
0500	Input Port Fail
0600	DMA Controller Fail
0700	LAN Controller Fail
0900	Acknowledge Fail
0831	The input port is unstable
0832	The timer failed to generate an interrupt in time
0840	Timeout occurred during loopback
0841	Character overrun occurred during loopback
0842	Framing error occurred during loopback
0843	Looped character had a parity error
0844	Received break during loopback test
0845	Transmit and Receive buffers don't match
0846	Too many characters looped back
0847	An unknown condition occurred
0301	Additional memory IS enabled when it should not be
0302	Additional memory IS NOT enabled when it should be

d5-d0

Hexadecimal raw data bytes relating to the failed diagnostic detected.

Data Byte	Value
d5	Unused
d4	Unused
d3	Unused
d2	Unused
d1	Unused
d0	Unused

An in progress message (O.41004) is output every 20 seconds while ICI or CI is being diagnosed until the command response or the autonomous report is output.

cc

Hexadecimal condition code

cc	<i>Explanation</i>
55	Invalid CFT code
56	Unrunnable CFT code

DIAGNOSTIC IN PROGRESS

Explanation of Command

This message indicates that the diagnosis of the specified entity is in progress. This message is output every 20 seconds while waiting for the response to the diagnostic command or the autonomous diagnostic report to be output.

Completion Message

[O.41004]
M hh:mm:ss xy,ww n[vv] DGN <entity> IN PROGRESS

Autonomous Message

[O.41005]
A hh:mm:ss xy,ww DGN <entity> IN PROGRESS

Explanation of Parameters

entity	The name of the entity being diagnosed
CCB	Cross-connect buffer
CCI	Clock and control interface
CI	Communications interface
DSPI	Digital signal processing interface
FC	Format converter
FLI	Facility line interface
FMT	Formatter
FTMI	Facility terminating module interface
LINK	Link
MC	Main controller
MIU	Multiplexer interface unit
MP	Main processor
MXR	Multiplexer
NPC	Network processing circuit

PMEM	Primary memory
SMEM	Secondary memory
SSC	Secondary storage controller
SYNC	Synchronizer
TLI	Timing link interface
TSI	Time slot interchange
ETSI	Expanded time slot interchanger
XC	Cross-connect
UC	Unit controller

DIAGNOSE LINK

Explanation of Command

This message requests that diagnostic tests be run on an administrative link.

Command

[I.41011]
DGN: [FRM xy][, SEQ ww]: LINK a[, CFT X'vwxy]!

Completion Message

[O.41011]
M hh:mm:ss xy, ww n[vv] DGN LINK a ATP COMPL

[O.41011]
M hh:mm:ss xy, ww n[vv] DGN LINK a STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

Denial Message

[O.41011.01]
M hh:mm:ss xy, ww n[vv] DGN LINK a COND cc DNY

Autonomous Message

[O.41011]
I hh:mm:ss xy, ww DGN LINK a ATP COMPL

[O.41011]
I hh:mm:ss xy, ww DGN LINK a STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41011.01]
I hh:mm:ss xy, ww DGN LINK a COND cc DNY

Explanation of Parameters	CFT	Craft
	vwxy	Diagnostic test number
		Link Loopback Test 0001
	LINK	Link
	a	Administrative link number (1 through 7)
	ATP	All tests passed
	STF	Some tests failed
	ppqq	Diagnostic trouble number
		0100 Link fail
		0300 DUART test fail
		0400 Timer test fail
		0500 Input/output port test fail
	pp	Failing diagnostic number (hexadecimal)
	qq	Test number (hexadecimal)
	d5, d4, ..., d0	Hexadecimal raw data bytes relating to the failed diagnostic detected
		These data bytes can only be interpreted by a Lucent Technologies design engineer.
	cc	Hexadecimal condition code
		cc Explanation
		03 Subject entity is in service
		BE Hardware mismatch or not present
		F0 Clock absent for XPC to loop back
	55 Invalid CFT code	
	56 Unrunnable CFT code	

DIAGNOSE MAIN CONTROLLER

Explanation of Command

This command runs diagnostics on the main controller (MC). The optional CFT field specifies which test(s) is to be run on the MC.

The DGN <entity> IN PROGRESS message (O.41004) is output every 20 seconds while the MC is being diagnosed until the command response or the autonomous report is output.

Command

[I.41001]
DGN:[FRM xy][,SEQ ww]:MC[,CFT X'vwxy']!

Completion Message

[O.41001]
M hh:mm:ss xy,ww n[vv] DGN MC ATP COMPL

[O.41002]
M hh:mm:ss xy,ww n[vv] DGN MC CATP c'c' COMPL

[O.41003]
M hh:mm:ss xy,ww n[vv] DGN MC STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

Denial Message

[O.41001.01]
M hh:mm:ss xy,ww n[vv] DGN MC COND cc DNY

Autonomous Message

[O.41001]
I hh:mm:ss xy,ww DGN MC ATP COMPL

[O.41002]
I hh:mm:ss xy,ww DGN MC CATP cc COMPL

[O.41003]

I hh:mm:ss xy,ww DGN MC STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41001.01]

I hh:mm:ss xy,ww DGN MC COND cc DNY

Explanation of Parameters

MC	Main controller
CFT	Craft
vwxy	Diagnostic test number (hexadecimal)
0001	MP TEST
0004†	PMEM Test
0008†	SMEM Test
0010	CI Test
0020	EMTC/MTC Acknowledge Test
0040*	EMTC/MTC Interrupt Test
0080*	EMTC/MTC Sanity Reg. Test
0100*	EMTC/MTC LAN Disable Test
0200*	EMTC/MTC Autonomous Alarm Test
0400*	EBX/BX Interrupt Test
0800	EBX/BX Acknowledge Test
1000*	EBX/BX Data/Address Parity Test
	*Out-of-service test (not performed if MC is in-service)
	†In-service test (not performed if MC is out-of-service or in maintenance condition (MCOND))
ATP	All tests passed
CATP	Conditional all tests passed
STF	Some tests failed
ppqq	Trouble number for the craft (hexadecimal)
pp	Failing diagnostic number
qq	Test number
0100	P Fail

0200	CI Fail
0400	PMEM Fail
0500	SMEM Fail
0600	EMTC/MTC Interrupt Fail
0700	MTC/MTC Acknowledge Fail
0800	MTC/MTC Sanity Reg. Fail
0900	MTC/MTC LAN Disable Fail
0E00	MTC/MTC Autonomous Alarm Failed
0A01	EBX/BX RAM Data Fail
0A02	EBX/BX RAM Address Fail
0A03	EBX/BX RAM Access Fail
0A04	BX/BX RAM Refresh Fail
0A05	BX/BX RAM Parity Fail
0Bxx	BX/BX Interrupt Fail
0C00	EBX/BX Acknowledge Fail
0D00	EBX/BX Data/Address Parity Fail
0D01	EBX/BX Data Parity Write Failed
0D02	EBX/BX Data Parity Read Failed
0D03	EBX/BX Address Parity Failed

xx indicates a low level test failure point which can only be interpreted by a Lucent Technologies design engineer.

d5-d0

Hexadecimal raw data bytes relating to the failed diagnostic detected.

These data bytes can only be interpreted by a Lucent Technologies design engineer.

An in-progress message (O.41004) is output every 20 seconds while the MP is being diagnosed until the command response or the autonomous report is output.

cc

Hexadecimal condition code

cc	<i>Explanation</i>
BE	Hardware mismatch or not present
55	Invalid CFT code
56	Unrunnable CFT code

cc	<i>Explanation</i>
84	Problem occurred while accessing SMEM or unformatted SMEM
85	Problem occurred while accessing PMEM
93	SMEM is not present
94	SMEM unit is not restored
03	Subject entity is in service
04	Subject entity is out of service

DIAGNOSE MAIN PROCESSOR

Explanation of Command

This message requests diagnostics to be run on the main processor (MP). If the craft (CFT) option is used, the value supplied for *vwxy* will determine the diagnostic run. The remainder of the diagnostics will then not be run. If the CFT option is not used, all the diagnostics listed under *vwxy* will be run.

An in-progress message (O.41004) is output every 20 seconds while the MP is being diagnosed until the command response or the autonomous report is output.

Command

[I.41021]
DGN:[FRM xy][,SEQ ww]:MP[,CFT X'vwxy']!

Completion Message

[O.41021]
M hh:mm:ss xy,ww n[vv] DGN MP ATP COMPL

[O.41022]
M hh:mm:ss xy,ww n[vv] DGN MP CATP c'c' COMPL

[O.41023]
M hh:mm:ss xy,ww n[vv] DGN MP STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

Denial Message

[O.41021.01]
M hh:mm:ss xy,ww n[vv] DGN MP COND cc DNY

Autonomous Message

[O.41021]
I hh:mm:ss xy,ww DGN MP ATP COMPL

[O.41022]

I hh:mm:ss xy,ww DGN MP CATP c'c' COMPL

[O.41023]

I hh:mm:ss xy,ww DGN MP STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41021.01]

I hh:mm:ss xy,ww DGN MP COND cc DNY

Explanation of Parameters

MP	Main Processor
CFT	Craft
vwxy	Diagnostic test number
	MP RAM Test 0001*
	MP ROM Test 0002
	MP DMA Controller Test 0010*
	MP LAN Controller Test 0020*
	MP Acknowledge Test 0080
	*Out-of-service test
ATP	All tests passed
CATP	Conditional all tests passed
STF	Some tests failed
ppqq	Trouble number
pp	Failing diagnostic number (hexadecimal)
qq	Test number (hexadecimal)
01xx	RAM Tests Fail
0101	RAM Data Fail
0102	RAM Address Fail
0103	RAM Access Fail
0104	RAM Refresh Fail
02xx	ROM Fail
0500	Input Port Fail

	06xx	DMA Controller Fail
	07xx	LAN Controller Fail
	0900	Acknowledge Fail
	xx indicates a low level test failure point which can only be interpreted by a Lucent Technologies design engineer.	
d5-d0	Hexadecimal raw data bytes relating to the failed diagnostic detected.	
	These data bytes can only be interpreted by a Lucent Technologies design engineer	
	An in-progress message (O.41004) is output every 20 seconds while the MP is being diagnosed until the command response or the autonomous report is output	
cc	Hexadecimal condition code	
	cc	<i>Explanation</i>
	55	Invalid CFT code
	56	Unrunnable CFT code
	03	Subject entity is in service

DIAGNOSE NPC

Explanation of Command

This command requests diagnostics to be run on a single network processing circuit (NPC) in a facility terminating unit (FTU) or a digital signal processing unit (DSPU).

If the NPC is in a DSPU (that is, NPC types MB, SR, or MJ), this command also initiates the continuity test for the cable between the NPC and its corresponding expanded time slot interchanger (ETSI). However, the continuity test is not run if the optional craft code is entered.

This command is not valid for NPCs in a DS3 unit (DS3U) or Hybrid DS3 unit (HDS3U).

Command

Nonhierarchical

[I.41351]

DGN:[FRM xy][,SEQ ww]:NPC [s]abc[,SIDE s][,CFT X'vwxy]!

Hierarchical

[I.41351]

DGN:[FRM xy][,SEQ ww]:NPC uvmnp[,SIDE s][,CFT X'vwxy]!

Completion Message

Nonhierarchical

[O.41351]

M hh:mm:ss xy,ww n[vv] DGN NPC [s]abc[-[t]def][SIDE s] \
TYPE mnxyz ATP COMPL

[O.41352]

M hh:mm:ss xy,ww n[vv] DGN NPC [s]abc[-[t]def][SIDE s] \
TYPE mnxyz CATP cc COMPL

[O.41353]

M hh:mm:ss xy,ww n[vv] DGN NPC [s]abc[-[t]def][SIDE s] \
TYPE mnxyz e LN MSG:
[UNIT qq UPN=<upn> XPN=<xpn>[BIT={TD|RD}bb]]
STF ppqq <d5> <d4> <d3> <d2> <d1> <d0> COMPL

Hierarchical

[O.41351]

M hh:mm:ss xy,ww n[vv] DGN NPC uvmnp[-uvmqr][SIDE s] TYPE mnxyz \
ATP COMPL

[O.41352]

M hh:mm:ss xy,ww n[vv] DGN NPC uvmnp[-uvmqr][SIDE s] TYPE mnxyz \
CATP cc COMPL

[O.41353]

M hh:mm:ss xy,ww n[vv] DGN NPC uvmnp[-uvmqr][SIDE s] TYPE mnxyz \
e LN MSG:
[UNIT qq UPN=<upn> XPN=<xpn>[BIT={TD|RD}bb]]
STF ppqq <d5> <d4> <d3> <d2> <d1> <d0> COMPL

Denial Message

Nonhierarchical

[O.41351.01]

M hh:mm:ss xy,ww n[vv] DGN NPC [s]abc[-[t]def][SIDE s] \
TYPE mnxyz COND cc DNY

Hierarchical

[O.41351.01]

M hh:mm:ss xy,ww n[vv] DGN NPC uvmnp[-uvmqr][SIDE s] TYPE mnxyz \
COND cc DNY

Autonomous Message

Nonhierarchical

[O.41351]

I hh:mm:ss xy,ww DGN NPC [s]abc[-[t]def][SIDE s] TYPE mnxyz \
ATP COMPL

[O.41352]

I hh:mm:ss xy,ww DGN NPC [s]abc[-[t]def][SIDE s] TYPE mnxyz \
CATP cc COMPL

[O.41353]

I hh:mm:ss xy,ww DGN NPC [s]abc[-[t]def][SIDE s] TYPE mnxyz \
e LN MSG:
[UNIT qq UPN=<upn> XPN=<xpn>[BIT={TD|RD}bb]]
STF ppqq <d5> <d4> <d3> <d2> <d1> <d0> COMPL

Hierarchical

[O.41351]

I hh:mm:ss xy,ww DGN NPC uvmnp[-uvmqr][SIDE s] TYPE mnxyz \
ATP COMPL

[O.41352]

I hh:mm:ss xy,ww DGN NPC uvmnp[-uvmqr][SIDE s] \
TYPE mnxyz CATP cc COMPL

[O.41353]

I hh:mm:ss xy,ww DGN NPC uvmnp[-uvmqr][SIDE s] TYPE mnxyz \
e LN MSG:
[UNIT qq UPN=<upn> XPN=<xpn>[BIT={TD|RD}bb]]
STF ppqq <d5> <d4> <d3> <d2> <d1> <d0> COMPL

Explanation of Parameters

[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
SIDE	Side
s	Side number (s = 0 or 1) Side of the duplicated NPC circuit pack in a DSPU that is to be diagnosed.

CFT	Craft
vwxy	Diagnostic test number

The optional craft code field indicates the diagnostic test(s) to be run. If this field is omitted, all tests of this diagnostic are run. If the NPC is in-service, only in-service diagnostics are run.

2.048 Mbit/s Termination

Craft codes for the CB type NPC are listed below:

0001*	Out of service LCA device initialization
0002*	Interrupt and mask register test
0004*	Out of service RAM test
0008	Status and mask register test
0010	Parity checker test
0020	State machine exercise
0040	Receive CCN exercise
0080	Loss of clock exercise
0100	C-bit interface test
0200	In-service RAM test

* Out-of-service only test

1.544 Mbit/s Termination

Craft codes for the DA type NPC are listed below:

0001*	CI stuck bit test
0002	CI sanity timer test
0004*	CI serial link test
0008	CC configuration register test
0010	CC IRAM stuck bit test
0020*	Miscellaneous CC tests
0040	CC data parity test
0080	Transceiver alarm text
0100*	EDCC memory test
0200	BPV and ZCS tests
0400	CC receive stuff and CC->TX timeslot test
0800	Slip detector test

- 1000** Mode dependent system tests
- 2000** Continuity tests
- 4000** Miscellaneous register tests
- 8000** Transceiver BIST

* In-service tests

1.544 Mbit/s Termination

Craft codes for the DE or DS type NPC are listed below:

- 0001** Communication Interface (CI) stuck bit test
- 0002** CI sanity timer test
- 0004** CI serial link test
- 0008** Channel Controller (CC) config stuck bit test
- 0010*** CC data RAM stuck bit test
- 0020*** CC data parity test
- 0040** Memory test
- 0080*** Bipolar violation test
- 0100*** Stuff channel test
- 0200*** Slip detector test
- 0400*** Zero code suppression test
- 0800*** Mode dependent system test
- 1000*** CC tests
- 2000*** Transceiver tests
- 4000*** HSCC tests Data Link Controller (DLC) circuit pack level tests (DS NPC only)
- 8000*** DLC digroup level tests (DS NPC only)

Only tests 1000 and 4000 can be run when the NPC is in service.

If both the requested NPC and its mate are out-of-service, any test may be run.

*If the requested NPC is out-of-service and its mate is in service, only the tests marked with * can be run.

Craft codes for the MB type NPC are listed below:

- 0001*** RAM test
- 0002** Interrupt and mask register test

0004	Data processing error test
0008	Clock error test
0010	Serial interface error test
0020	Control memory 0 test
0040	Control memory 1 test
0080	Conference 0 test
0100	Conference 1 test

* Out-of-service only test

1.544 Mbit/s Termination

Craft codes for the MJ type NPC are listed below:

0001	Exercise the clock circuitry
0002	Exercise the Processor Interface Device
0040	Exercise the input data parity checker and ECD data input
0080	Exercise the ECD, the MJU control memory parity checker and data path to output
0100	Exercise the MJU control prom
0200	Exercise the MJU output block
0400	Exercise the control code and overwrite state machine
0800	Exercise the FTU PROM and secondary channel state machine
2000	Verify propagation of alarms to the DSPI circuit pack
8000	Run all out-of-service tests



NOTE:

Test 8000 may only be run on out-of-service circuit packs.

2.048 Mbit/s Termination

Craft codes for the PA type NPC are listed below:

0001	CI stuck bit test
0002	CI sanity test
0004	CI serial link test

0008	TG192 RAM test
0010*	Channel controller tests
0020	Transceiver tests
0040	Miscellaneous register tests
0080	Real-time clock test
0100	CC to format converter continuity test

* In-service test

2.048 Mbit/s Termination

Craft codes for the PB and PC type NPCs are listed below:

0001	CI stuck bit and device alarm tests
0002	CI sanity timer test
0004	CI serial link test
0008	CC stuck bit test on read and write registers
0010	CC Instruction RAM stuck bit test
0020	CC receive data parity alarm test
0040	Memory test
0080*	DSILFV exercise and transceiver LFV counter test
0100	Data path, CC monitor, and DSI loopback tests AND CC PCM conversion and signaling mode test AND CC conditional substitution and transceiver EFG source test
0200*	SLIP/SKIP tests
0400*	Line coding format test
0800*	Diframe framing, NSA signaling mode tests AND CRC framing mode tests AND CAS signaling mode tests
1000	CC device alarm exercises
2000*	Transceiver r/w reg. stuck bit test and device alarm exercises
4000	Miscellaneous register stuck bit test
8000*	Time slot 0/16 source test

Only tests 0001 and 1000 can be run when the NPC is in service.

If the requested NPC is Out-of-Service and its mate is In Service, only the tests marked with "*" can be run:

If both the requested NPC and its mate are Out-of-Service, any test may be run.

1.544 Mbit/s Termination

Craft codes for the SR type NPC are listed below:

0001	Exercise the clock circuitry
0002	Exercise the Processor Interface Device
0040	Exercise the input data interface
0080	Exercise the data path internal to the SRM pack
0200	Exercise the output block of the SRM pack
0800	Exercise the bus feeding the output block
8000	Run all out-of-service tests



NOTE:

Test 8000 may only be run on out-of-service circuit packs.

Craft codes for the SD and ST type NPCs are listed below:

0001	CI stuck bit test
0002	CI sanity test
0004	CI serial link test
0008	TG193 CC Config. Reg. test
0010	TG193 CC IRAM etc. tests
0020*	TG193 clock & synch error tests
0040	TG193 RAM tests
0080	Miscellaneous register test

* This test can be run while the NPC is In Service.

[t]def	The 3- or 4-digit nonhierarchical MB type NPC number ([t]def=[s]abc + 1)
uvmnp	Hierarchical MB type NPC number
uvmqr	Hierarchical MB type NPC number
qr	MB type NPC number within module "m" (qr = np +1)
TYPE	Type
mnxyz	NPC type identifier

	2.048 Mbit/s Termination
CB10z	C-bit processor
	1.544 Mbit/s Termination
DAxyz	FTU ANSI DS1 NPC type
DExyz	Facility Terminating Unit NPC
DSxyz	SLC Carrier Type NPC
MB100	Digital Multipoint Bridge
MJ100	Multipoint Junction Unit
	2.048 Mbit/s Termination
PAxyz	CEPT Type NPC (120-ohm twisted pair or 75-ohm coaxial)
PBxyz	CEPT Type NPC
PCxyz	CEPT Type NPC
	1.544 Mbit/s Termination
SR100	Subrate Multiplexer Unit
SDxyz	DSP Platform Applications
ST1yz	Integrated Test Set
e	Number of lines in the message (2 or 3)
qq	Unit number (01 through 16)
UPN	Unit plug number
upn	The value of the UPN
XPN	ECCN plug number
xpn	The value of the XPN
BIT	Bit number of the data bus
TD	Transmit data
RD	Receive data
bb	Bit number (00 through 15)

The optional line which contains the unit, port, and pin information is only output if the NPC is in a DSPU and if the continuity check between the NPC and the ECCN is failed. In addition, the completion condition must always be STF. The valid values and the associated information of the UPN and XPN are shown below. Note that the numbers shown in the output are exactly the same as the numbers on the backplane.

Unit Plug No.	ECCN Plug No.	Side	Direction	Associated DSP Packs
P1	PqqA*	0	Receive	1st and 2nd DSP Packs
P2	PqqE	0	Transmit	1st and 2nd DSP Packs
P3	PqqB	0	Receive	3rd and 4th DSP Packs
P4	PqqF	0	Transmit	3rd and 4th DSP Packs
P5	PqqC	0	Receive	5th and 6th DSP Packs
P6	PqqG	0	Transmit	5th and 6th DSP Packs
P7	PqqD	0	Receive	7th and 8th DSP Packs
P8	PqqH	0	Transmit	7th and 8th DSP Packs
P10	PqqA	1	Receive	1st and 2nd DSP Packs
P11	PqqE	1	Transmit	1st and 2nd DSP Packs
P12	PqqB	1	Receive	3rd and 4th DSP Packs
P13	PqqF	1	Transmit	3rd and 4th DSP Packs
P14	PqqC	1	Receive	5th and 6th DSP Packs
P15	PqqG	1	Transmit	5th and 6th DSP Packs
P16	PqqD	1	Receive	7th and 2nd DSP Packs

Unit Plug No.	ECCN Plug No.	Side	Direction	Associated DSP Packs
P17	PqqH	1	Transmit	7th and 8th DSP Packs

* qq is the unit number

The bit number (that is, BIT = {TD|RD} bb) is shown if the software identifies the bit of the data bus as the failed one.

ATP	All tests passed All tests passed on the diagnostic of NPC
CATP	Conditional all tests passed The reason for the conditional completion is indicated by cc.
STF	Some tests failed Some tests failed on the diagnostic of NPC.
ppqq	Trouble number for the craft pp Failing diagnostic number (hexadecimal) qq Test number (hexadecimal)

1.544 Mbit/s Termination

Trouble numbers for the DA type NPC are listed below:

The TG191 circuit pack can be grown as either a DA or DE type. As a consequence the trouble numbers for the DE type apply in addition to those shown below.

0001	TG191 Initialization - Phase 1
0002	TG191 Initialization - Phase 2
0003	Digroup physical type verification
0004	Devices/registers on the FC could not be accessed
0005	Devices/registers on the FTMI could not be accessed
01--	TG191 initialization test
02--	CI stuck bit test
03--	CI sanity test
04--	CI serial link test
05--	CC configuration register stuck bit test

06--	CC IRAM stuck bit test
07--	CC loss of clock test
08--	CC sync error detector test
09--	CC sync and loss of clock error detector test
0A--	CC configuration register parity checker test
0B--	CC IRAM parity checker test
0C--	CC transmit data parity error detector test
0D--	CC receive data parity error detector test
0E--	CC receiver data checker test
0F--	TG191 memory test

1.544 Mbit/s Termination

10--	Bipolar violations test
11--	Zero code suppression test
12--	CC receive stuff register test
13--	CC to transceiver stuff test
14--	Receive slip detection test
15--	Mode dependent system tests
16--	Transceiver provisioning test
17--	AIS test
18--	RFA test
19--	CFA test
1A--	LMA test
1B--	RMA test
1C--	CRC test
1D--	PRISM stuck bit test
1E--	PRISM internal loopback test
1F--	PRISM external loopback test
20--	Signaling insertion and extraction test
21--	Transparent mode test
22--	D4 framing mode initialization test
23--	CC to format converter continuity test

24--	ESF framing mode initialization test
25--	PRISM loopback initialization test
26--	CC to transceiver continuity test
27--	Miscellaneous register test
28--	Receive framer alarm test
29--	Transceiver receive synchronizer alarm test
2A--	Transceiver transmit alarm test
2B--	PRISM initialization test
2C--	Transceiver BST
2D--	Downloadable diagnostic interface test

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**NOTE:**

-- indicates a two-digit hexadecimal value indicating a decision point within the source program. This value can only be interpreted by a programmer with access to the source program.

2.048 Mbit/s Termination

Trouble numbers for the PA type NPC are listed below:

The TG192 circuit pack can be grown as either a PA or PB/PC type. As a consequence the trouble numbers for the PB type apply in addition to those shown below.

0001	TG192 Initialization - Phase 1
0002	TG192 Initialization - Phase 2
0003	Digroup physical type verification
0004	Devices/registers on the FC could not be accessed
0005	Devices/registers on the FTMI could not be accessed
01--	CI stuck bit test
02--	CI sanity timer test
03--	CI serial link test
04--	TG192 ram test
05--	Channel controller driver
06--	Transceiver driver

07--	Miscellaneous register tests
08--	Read-time clock test
09--	CC alarm test
0A--	CC stuck bit test
0B--	CC conditional substitution and SCVR EFG SRC test
0C--	CC device initialization test
0D--	CC IRAM stuck bit test
0E--	CC PCM conversion and signaling mode test
0F--	CC receive data parity alarm test

2.048 Mbit/s Termination

10--	CI initialization test
11--	Miscellaneous register R/W test
12--	CC and XCVR initialization test
13--	XCVR initialization test
14--	CC read channel data ABCDEFG bits verification
15--	CC read channel data verification
16--	XCVR write verification
17--	CC IRAM R/W verification
18--	XCVR BIST
19--	CC to SCVR to DSI data transmission test
1A--	LOS and LFV tests
1B--	XCVR R/W register test
1C--	CC to XCVR to DSI signaling test
1D--	CC to FC continuity test



NOTE:

-- indicates a two-digit hexadecimal value indicating a decision point within the source program. This value can only be interpreted by a programmer with access to the source program.

1.544 Mbit/s Termination

Trouble numbers for DE and DS type NPCs are listed below:

The TG191 circuit pack can be grown as a DA or DE type. As a consequence the trouble numbers for the DA type apply in addition to those shown below.

0001	DDC initialization failure
0002	DDC initialization failure - second attempt
0003	Unable to read DDC circuit pack type or unknown DDC type
0004	Unable to read/pest DDC via the FC
0005	Unable to read/pest DDC via the FTMI
0009	Facility Processor on In-service NPC is insane
0100	Communication Interface Stuck Bit failure
0200	Communication Interface Sanity Timer failure
0300	Communication Interface Serial Link failure
0400	Channel Controller Configuration Register Stuck Bit failure
0500	Channel Controller Instruction Ram Stuck Bit failure
0600	DDC Memory failure
0700	Bipolar Violations failure
0800	Stuff Channel Programmability failure
0900	Slip Detector failure

1.544 Mbit/s Termination

0A00	Zero Code Suppression failure
0B00	Mode Dependent System failure
0C00	Channel Controller Loss of Clock Exercise failure
0D00	Channel Controller Sync Error Detector failure
0E00	Channel Controller Clock & Sync Error Detector failure
0F00	Channel Controller Configuration Register Parity Checker failure
1000	Channel Controller Configuration Register Parity Checker failure
2000	Channel Controller Instruction RAM Parity Checker failure
3000	Channel Controller Receive Data Parity failure

4000	Channel Controller Transmit Data Parity failure
5000	Transceiver Memory failure
6000	Transceiver Alarm failure
A000	SLC96 DLC Stuck Bit failure
B000	SLC96 DLC Update Mask failure
C000	SLC96 DLC Framer failure
D000	SLC96 DLC Alarm failure
E000	SLC96 Loss of Data Link failure
F000	SLC96 XMT/RCV failure

2.048 Mbit/s Termination

Trouble numbers for PB and PC type NPCs are listed below:

The TG192 circuit pack can be grown as either a PA or PB/PC type. As a consequence the trouble numbers for the PA type apply in addition to those shown below.

0B01	DPC NSA Signaling Mode failure
0B02	DPC CRC Signaling Mode failure
0B03	DPC CAS Signaling Mode failure
1100	DPC Channel Controller/PCM Conversion failure
1200	DPC CC Conditional Substitution failure
1300	DPC Channel Controller Alarm failure
1700	DPC Line Format Violation failure
1A00	DPC Line Coding Format (AMI/HDB3) failure
1C00	DPC Misc. Register Stuck Bit failure
1D00	DPC Timeslot 0/16 Spare Bit failure
1E00	DPC CI Device Alarm failure
1F00	DPC Channel Controller Data Path failure

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Trouble numbers for MB, SR, and MJ type NPCs are listed below:

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Trouble numbers for MB and CB type NPCs are listed below:

0F00	Error Summary Failure
0F01	Hardware Fail on ECCI pack
0F02	Hardware Fail on ETSI pack
0F03	RCV Network Data Bus Failure badbit, baddirection & badport
0F04	RCV Network Data Bus Failure baddirection & badport
0F05	XMIT Network Data Bus Failure badbit, baddirection & badport
0F06	XMIT Network Data Bus Failure baddirection & badport
0F07	Pack hardware failure
0F0A	Parent pack failed, for DSP packs
0F0C	Network Parity or Frame Sync. or Network Data Bus error

Trouble numbers for only the MB type NPCs are listed below:

0F08	Pack Failed to Initialize for CT
0F0B	DMB clock problem during initialization

1.544 Mbit/s Termination

Trouble numbers for the MJ type NPCs are listed below (xx indicates ignore the value):

01xx	Failure occurred while exercising the clock circuitry
02xx	Failure occurred while exercising the Processor Interface Device
03xx	Failure occurred while exercising the RAM test
05xx	Multipoint Junction Unit (MJU) circuit pack initialization failed
06xx	Failure occurred while exercising the control RAM parity checker test
07xx	Failure occurred while exercising the input data parity checker and ECD data input
08xx	Failure occurred while exercising the ECD, the MJU control memory parity checker and data path to output

09xx	Failure occurred while exercising the MJU control PROM
0Axx	Failure occurred while exercising the MJU output block
0Bxx	Failure occurred while exercising the control code and over-write state machine
0Cxx	Failure occurred while exercising the Facility Terminating Unit (FTU) PROM and secondary channel state machine
0Dxx	Failure occurred while exercising the CCM control memory parity checker and data path to output
0Exx	Unable to verify propagation of alarms to Digital Signal Processing Interface (DSPI) interrupt register

Trouble numbers for the SD and ST type NPCs are listed below:

0001	TG193 Initialization - Phase 1
0002	TG193 Initializaiton - Phase 2
0003	Circuit pack physical type verification
0004	Devices/registers on the SXC could not be accessed
0005	Devices/registers on the MC could not be accessed
01--	Happened during initialization of TG193 circuit pack
02--	CI stuck bit test
03--	CI sanity timer test
04--	CI serial link test
05--	CC configuration register test
06--	CC instruction RAM test
07--	Loss of clock detector test
08--	Synch error detector test
09--	Synch & loss of clock error detector test
0A--	Configuration register parity checker test
0B--	Instruction RAM parity checker test
0C--	Transmit data parity error detector test
0D--	Receive data parity error detector test

OE--	Shared RAM test
10--	Miscellaneous and page register tests
11--	Happened during download
12--	No file to download
13--	Happened during identification of circuit pack

**NOTE:**

"--" indicates a two-digit hexadecimal value indicating a decision point within the source program. This value can only be interpreted by a Lucent Technologies design engineer.

d5-d0 Hexadecimal raw data bytes relating to the failed diagnostic detected. These fields can only be interpreted by a Lucent Technologies design engineer.

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Trouble numbers for SR type NPCs are listed below (xx indicates ignore the value):

01xx	Failure occurred while exercising the clock circuitry
02xx	Failure occurred while exercising the Processor Interface Device (PID)
03xx	Failure occurred while exercising the RAM test
05xx	Failure occurred while running circuit pack initialization
06xx	Failure occurred while exercising the control RAM parity checker test
07xx	Failure occurred while exercising the input data interface
08xx	Failure occurred while exercising the data path internal to the substrate multiplexer
09xx	Failure occurred while exercising the multiplexer state machine
0Axx	Failure occurred while exercising the output block of the SRM pack
0Bxx	Failure occurred while exercising the internal data RAMS
0Cxx	Failure occurred while exercising the bus feeding the output block

	0Dxx	Unable to verify propagation of alarms to DSPI interrupt register
d5-d0		Hexadecimal raw data bytes relating to the failed diagnostic detected. 1.544 M/bit Termination For DMB, MJU, and SRM circuit packs, the values of d5-d0 are the same. 2.048 M/bit Termination For CPR and DMB circuit packs, the values of d5-d0 are the same.
	d5	Unused
	d4	Unused
	d3	Unused
	d2	Unused
	d1	Unused
	d0	Unused
cc		Hexadecimal condition code

cc	<i>Explanation</i>
03	Subject entity is in service
10	Unit is not equipped
11	UC is out of service
13	FTMI is not equipped
14	FTMI is out of service
15	NPC is unequipped
17	SYNC is out of service
36	DSPI not equipped
37	DSPI out-of-service
38	FC not equipped
40	FC out of service
43	(NPC) Hardware mismatch
0B	Invalid CEPT NPC

cc	<i>Explanation</i>
55	Invalid CFT code
56	Unrunnable CFT code
FD	NPC range crosses unit boundary
C2	ETSI cannot be initialized when ECCN side is OOS or IS but pested
C3	XMIT continuity test won't be run
C4	XMIT continuity test won't be run
C7	RCV continuity test won't be run
C8	RCV continuity test won't be run
CB	Skip error summary since adjacent pack not in service or pested
CE	CCI is out of service
E0	ETSI not equipped, not in service, or failed

DIAGNOSE NETWORK PROCESSING CIRCUITS

Explanation of Command

This command requests the diagnosis of a range of network processing circuits (NPCs) in a Facility Terminating Unit (FTU). It cannot be used to request the diagnosis of NPCs in a digital signal processing unit.

This command is denied if the requested NPC range crosses a unit boundary. This command cannot be used to request the diagnosis of NPCs in a DS3 unit (DS3U) or a Hybrid DS3 unit (HDS3U) or an HSU. If this command is specified for a range of NPCs and the first or last NPC in the range request is in a CEPT GAP, the entire command is denied. If the CEPT GAP is contained within the range requested, the gap NPCs are ignored and all equipped NPCs are diagnosed.

Command

Nonhierarchical

[I.41361]

DGN:[FRM xy][,SEQ ww]:NPC [s]abc-[t]def!

Hierarchical

[I.41361]

DGN:[FRM xy][,SEQ ww]:NPC uvmnp-uvkqr!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.41361]

M hh:mm:ss xy,ww n[vv] DGN NPC [s]ghi-[t]jkl TOT ttt \
5 LN MSG:
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk {EOM|COMPL}

Hierarchical

[O.41361]

M hh:mm:ss xy,ww n[vv] DGN NPC abcde-abcfg TOT ttt 5 LN MSG:
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk {EOM|COMPL}

2.048 Mbit/s Termination

Nonhierarchical

[O.41361]

M hh:mm:ss xy,ww n[vv] DGN NPC [s]ghi-[t]jkl TOT ttt \
5 LN MSG:
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk {EOM|COMPL}

Hierarchical

[O.41361]

M hh:mm:ss xy,ww n[vv] DGN NPC abcde-abcfg TOT ttt 5 LN MSG:
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk {EOM|COMPL}

Denial Message

Nonhierarchical

[O.41361.01]

M hh:mm:ss xy,ww n[vv] DGN NPC [s]abc-[t]def COND cc DNY

Hierarchical

[O.41361.01]

M hh:mm:ss xy,ww n[vv] DGN NPC uvmnp-uvkqr COND cc DNY

Autonomous Message

1.544 Mbit/s Termination

Nonhierarchical

[O.41361]

```
I hh:mm:ss xy,ww n[vv] DGN NPC [s]ghi-[t]jkl TOT ttt \
5 LN MSG:
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk {EOM|COMPL}
```

Hierarchical

[O.41361]

```
I hh:mm:ss xy,ww n[vv] DGN NPC abcde-abcfg TOT ttt 5 LN MSG:
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk {EOM|COMPL}
```

2.048 Mbit/s Termination

Nonhierarchical

[O.41361]

```
I hh:mm:ss xy,ww n[vv] DGN NPC [s]ghi-[t]jkl TOT ttt \
5 LN MSG:
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk {EOM|COMPL}
```

Hierarchical

[O.41361]

```
I hh:mm:ss xy,ww n[vv] DGN NPC abcde-abcfg TOT ttt 5 LN MSG:
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk
r kk r kk r kk r kk r kk r kk r kk r kk r kk r kk {EOM|COMPL}
```

Explanation of Parameters

NPC

Network processing circuit

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

[s]abc	The 3- or 4-digit nonhierarchical NPC number, denoting the beginning of a range.
[t]def	The 3- or 4-digit nonhierarchical NPC number, denoting the end of a range. [s]abc and [t]def must be in the same unit.
[s]ghi	Lowest NPC number in the FTM being reported ([s]abc through [s]def)
[t]jkl	Highest NPC number in the FTM being reported ([s]abc through [s]def) The command may specify an NPC range that spans more than one facility terminating module (FTM) in the facility terminating unit or it may specify all or a subset of the NPCs in a given FTM. Hence the NPC numbers reported in a message segment for a given FTM are, in general, numbers within the range given in the input command and may include the end points of the specified range. For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number, denoting the beginning of a range
uvkqr	Hierarchical NPC number, denoting the end of a range
abcde	Lowest NPC number in the FTM being reported (uvmnp through uvkqr)
abcfg	Highest NPC number in the FTM being reported (uvmnp through uvkqr) The command may specify an NPC range that spans more than one facility terminating module (FTM) in the facility terminating unit or it may specify all or a subset of the NPCs in a given FTM. Hence the NPC numbers reported in a message segment for a given FTM are, in general, numbers within the range given in the input command and may include the end points of the specified range.

1.544 Mbit/s Termination

TOT	Total
ttt	Total number of equipped NPCs in a domestic FTM (001 through 040)

2.048 Mbit/s Termination

TOT	Total

ttt	Total number of equipped NPCs in a CEPT FTM (001 through 032)
pa	Priority of action
**	Major
M	Manual
r	Result of diagnostic
A	All tests passed
C	Conditional all tests passed
S	Some tests failed
D	Diagnostics denied
N	NPC is not in the range
-	NPC is not equipped
	If the diagnostic result is Some Test Failed, one output message is generated for each NPC.
kk	Completion condition code for each NPC diagnostic (hexadecimal)
	To interpret values of kk see cc in the condition code table. One special value is given below.
--	Not applicable
	To interpret values of nn see cc in the condition code table.
cc	Hexadecimal condition code
cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
13	FTMI is not equipped
14	FTMI is out of service
15	NPC is unequipped
36	DSPI not equipped
37	DSPI out-of-service
40	FC out of service
43	(NPC) Hardware mismatch
0B	Invalid CEPT NPC

cc	<i>Explanation</i>
FD	NPC range crosses unit boundary
00	No conditions
02	Subject entity is not equipped
03	Subject entity is in service
04	Subject entity is out of service

DIAGNOSE MEMORY CARD

Explanation of Command

This command diagnoses the specified nonvolatile memory card: either the primary memory card (PMEM) or the secondary memory card (SMEM).

Diagnostic Test

The diagnostics test the operation of the underlying hardware of the specified memory card. By default, the entire set of in-service or out-of-service diagnostics are run except for the database and executable tests. If the craft option is used, the value supplied for *vwxy* determines the diagnostics run and can include database and executable tests.

Keywords

Using the optional keywords EXCT or DBASE allows the user to test the system's ability to correctly read either the executable program or the database stored on a memory card. When a single or multiple diagnostic test is specified via the CFT parameter, only those tests specified by the CFT parameter are run, all other possible tests are not run.

IN PROGRESS Message

The DGN IN PROGRESS message is output every 20 seconds while the diagnostics are being executed until the command response or the autonomous report is output.

Command

```
[I.41051]  
DGN:[FRM xy][,SEQ ww]:{PMEM|SMEM}\  
[, {CFT X'vwxy|EXCT|DBASE}][,VERIFY]!
```

Completion Message

```
[O.41051]  
M hh:mm:ss xy,ww n[vv] DGN {PMEM|SMEM}[ {EXCT|DBASE}] [VERIFY] \  
ATP COMPL
```

[O.41052]

M hh:mm:ss xy,ww n[vv] DGN {PMEM|SMEM}[{EXCT|DBASE}][VERIFY] \
STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41053]

M hh:mm:ss xy,ww n[vv] DGN {PMEM|SMEM}[{EXCT|DBASE}][VERIFY] \
CATP COMPL

Denial Message

[O.41051.01]

M hh:mm:ss xy,ww n[vv] DGN {PMEM|SMEM}[{EXCT|DBASE}][VERIFY]\
COND cc DNY

Autonomous Message

[O.41051]

I hh:mm:ss xy,ww DGN {PMEM|SMEM}[{EXCT|DBASE}] ATP COMPL

[O.41052]

I hh:mm:ss xy,ww DGN {PMEM|SMEM}[{EXCT|DBASE}] STF ppqq \
2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41053]

I hh:mm:ss xy,ww DGN {PMEM|SMEM}[{EXCT|DBASE}] CATP COMPL

[O.41051.01]

I hh:mm:ss xy,ww DGN {PMEM|SMEM}[EXCT|DBASE}] COND cc DNY

Explanation of Parameters

PMEM	Primary memory card
SMEM	Secondary memory card
CFT	Craft
X	Hexidecimal
vwxy	Diagnostic test number
	The optional craft code field specifies which test is to be run on the PMEM/SMEM. The card status test is always performed. The remainder of the PMEM/SMEM diagnostics are not run.

0001	Card Status Test
0002	Wear Level Test
0004*	Card Diagnostic Test
0010*+	Validate Data Base Test
0020*%	Validate Boot Block Test
0022	Get Card Test and Wear Level Test and Validate Boot Block
0040*%	Validate Executable Header Test
0080*%	Validate Executable Test
0100*	Read/Write DGN Volume Test
0200*	Mount/Unmount All Volumes Test

* out-of-service tests (not performed if PMEM/SMEM card is in the in-service state and the main controller is also in the in-service state).

+ Database tests (performed when DBASE keyword is specified).

% Executable tests (performed when EXCT keyword is specified).

DBASE

Database

This keyword is used to test the ability to correctly read the data base files stored on the PMEM/SMEM. This diagnostic is run only if the DBASE keyword is entered or if the specific test CFT field is specified.

PMEM/SMEM must be out-of-service (OOS) or the main controller must be in maintenance condition (MCOND) when using this keyword.

EXCT

Executables

This keyword is used to test the ability to correctly read the executables stored on the PMEM/SMEM. This diagnostic is run only if the EXCT keyword is entered or if the specific test CFT field is specified.

PMEM/SMEM must be out-of-service (OOS) or the main controller must be in maintenance condition (MCOND) when using this keyword.

ATP

All tests passed

CATP

Conditional all tests passed

STF	Some tests failed
ppqq	Trouble number for the craft
pp	Failing Diagnostic Number (hexadecimal)
qq	Test number (hexadecimal)
01xx	PMEM/SMEM Tests Failed
0103	Wear Level Failed
0104	Card Diagnostic Failed
0108	Validate Database Failed (both database volumes marked bad)
0109	Validate Database Failed (cannot mount database volume)
0110	Validate Database Failed (MP & CI database not present)
0111	Validate Database Failed (database present but failed)
0114	Validate Boot Block Failed
0116	Validate Executable Header Failed
0118	Validate Executable Failed (cannot mount executable volume)
0119	Validate Executable Failed (validate executables failed)
0121	Read/Write DGN Volume Failed (read/write dgn volume failed)
0121	Read/Write DGN Volume Failed (cannot mount DGN volume)
0121	Read/Write DGN Volume Failed (failed to close or remove file or failed to unmount DGN volume)
0123	Mount/Unmount All Volumes Failed
0124,0126	Keyword=VERIFY Test Failed
d5-d0	Hexadecimal raw data bytes relating to the failed diagnostic detected.

These data bytes can only be interpreted by a Lucent engineer.

An in-progress message (O.41004) is output every 20 seconds while the device is being diagnosed until the command response or autonomous report is output.

VERIFY

Verify

This option causes block checking to be performed.

cc

Hexadecimal condition code

cc	<i>Explanation</i>
03	Subject entity is in service
04	Subject entity is out of service
55	Invalid CFT code
56	Unrunnable CFT code
83	DGN this type of memory card not supported.
84	Problem occurred while accessing SMEM or unformatted SMEM
85	Problem occurred while accessing PMEM

DIAGNOSE SYNCHRONIZER

Explanation of Command

This message command runs on the synchronizer's timing link interface 3 when it is provisioned as a clock reference oscillator. The command is denied if a clock reference oscillator is not provisioned.

Command

[I.41111]
DGN:[FRM xy][,SEQ ww]:SYNC,TLI 3,CRO!

Completion Message

[O.41111]
M hh:mm:ss xy,ww n[vv] DGN SYNC TLI 3 CRO ATP COMPL

[O.41111]
M hh:mm:ss xy,ww n[vv] DGN SYNC TLI 3 CRO CATP cc COMPL

[O.41112]
M hh:mm:ss xy,ww n[vv] DGN SYNC TLI 3 CRO STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

Denial Message

[O.41111.01]
M hh:mm:ss xy,ww n[vv] DGN SYNC TLI 3 CRO COND cc DNY

Autonomous Message

[O.41111]
I hh:mm:ss xy,ww DGN SYNC TLI 3 CRO ATP COMPL

[O.41111]
I hh:mm:ss xy,ww DGN SYNC TLI 3 CRO CATP cc COMPL

[O.41112]
I hh:mm:ss xy,ww DGN SYNC TLI 3 CRO STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41111.01]
I hh:mm:ss xy,ww DGN SYNC TLI 3 CRO COND cc DNY

**Explanation of
Parameters**

SYNC	Synchronizer
TLI	Timing link interface
3	TLI number 3
CRO	Clock reference oscillator
ATP	All Tests Pass
CATP	Conditional All Tests Pass
STF	Some Tests Failed
ppqq	Trouble number for the craft
	0300 TLI status query showed error
	0400 TLI status query showed error
	0500 CRO status query showed error
	0600 CRO frequency offset flag
d5, d4, ..., d0	Hexadecimal data bytes
	d5 Unused
	d4 Unused
	d3 Unused
	d2 Unused
	d1 Unused
	d0 Unused
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
8F	Can't lock or unlock ram database
AB	Bad sync mode
CD	CRO frequency is off with TB

DIAGNOSE SYNCHRONIZER TIMING LINK INTERFACE

Explanation of Command

This command requests the diagnosis of a timing link interface on the synchronizer side. If the optional synchronizer sync port parameter is specified, only that single SSP is diagnosed. For autonomous diagnostics of a TD-type TLI circuit pack, the SSP field does not appear in the output message. Both arguments appear for autonomous removal of a timing extractor type TLI.

Command

[I.41121]
DGN:[FRM xy][,SEQ ww]:SYNC a,TLI m[,SSP b]!

Completion Message

[O.41121]
M hh:mm:ss xy,ww n[vv] DGN SYNC a TLI m[SSP b[1]] ATP \ COMPL

[O.41122]
M hh:mm:ss xy,ww n[vv] DGN SYNC a TLI m[SSP b[1]] STF ppqq \ 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

Denial Message

[O.41121.01]
M hh:mm:ss xy,ww n[vv] DGN SYNC a TLI m[SSP b[1]] \ COND cc DNY

Autonomous Message

[O.41121]
I hh:mm:ss xy,ww DGN SYNC a TLI m[SSP b[1]] ATP COMPL

[O.41122]
I hh:mm:ss xy,ww DGN SYNC a TLI m[SSP b[1]] STF ppqq \ 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41121.01]

I hh:mm:ss xy,ww DGN SYNC a TLI m[SSP b[1]] COND cc DNY

**Explanation of
Parameters**

SYNC	Synchronizer
a	Synchronizer side number (0 or 1)
TLI	Timing link interface
m	Timing link interface number (1 through 4)
SSP	Synchronizer synchronization port
b	Synchronizer Synchronization Port number (0 or 1) SSP must be specified if the TLI is a timing extractor type NPC. If the SSP parameter is supplied, only that SSP is diagnosed. Otherwise both SSPs are diagnosed.
ATP	All tests passed
STF	Some tests failed
ppqq	Trouble number for the craft Valid values are listed below: 0300 TLI status query showed error 0400 TLI status query showed error
d5-d0	Hexadecimal raw data bytes relating to the failed diagnostic detected. These data bytes can only be interpreted by a Lucent Technologies design engineer.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
33	Wrong TLI type
8F	Can't lock or unlock ram database
AB	Bad sync mode

DIAGNOSE SYNCHRONIZER

**Explanation of
Command**

This message runs diagnostics on the digital phase-locked loop (DPLL) and the time base (TB) of the specified synchronizer side.

Command

[I.41101]
DGN:[FRM xy][,SEQ ww]:SYNC a!

**Completion
Message**

[O.41101]
M hh:mm:ss xy,ww n[vv] DGN SYNC a ATP COMPL

[O.41101]
M hh:mm:ss xy,ww n[vv] DGN SYNC a CATP cc COMPL

[O.41102]
M hh:mm:ss xy,ww n[vv] DGN SYNC a STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

Denial Message

[O.41101.01]
M hh:mm:ss xy,ww n[vv] DGN SYNC a COND cc DNY

**Autonomous
Message**

[O.41101]
I hh:mm:ss xy,ww DGN SYNC a ATP COMPL

[O.41101]
I hh:mm:ss xy,ww DGN SYNC a CATP cc COMPL

[O.41102]
I hh:mm:ss xy,ww DGN SYNC a STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41101.01]

I hh:mm:ss xy,ww DGN SYNC a COND cc DNY

**Explanation of
Parameters**

SYNC	Synchronizer
a	Synchronizer side (0 or 1)
ATP	All tests passed
CATP	Conditional all tests passed
STF	Some tests failed
ppqq	Trouble number for the craft
	0100 Sync diagnostic command returned error
	0200 Hardware status query showed error
d5-d0	Hexadecimal raw data bytes relating to the failed diagnostic detected. These data bytes can only be interpreted by a Lucent Technologies design engineer.
cc	Hexadecimal condition code
	cc <i>Explanation</i>
	02 Subject entity is not equipped
	8F Can't lock or unlock ram database
	AB Bad sync mode

DIAGNOSE TIME SLOT INTERCHANGE

Explanation of Command

This command requests diagnostics to be run on a specific time slot interchange.

The optional **CFT** field indicates which test(s) of the diagnostic is to be run under craft control. If this field is omitted, all tests of this diagnostic are run.

If there are no mapped TSI slots, DACS II responds with some tests failed (STF).

Command

[I.41221]

DGN:[FRM xy][,SEQ ww]:TSI sft[,CFT X'vwxy']!

Completion Message

[O.41221]

M hh:mm:ss xy,ww n[vv] DGN TSI sft ATP COMPL

[O.41222]

M hh:mm:ss xy,ww n[vv] DGN TSI sft CATP cc COMPL

[O.41223]

M hh:mm:ss xy,ww n[vv] DGN TSI sft STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

Denial Message

[O.41221.01]

M hh:mm:ss xy,ww n[vv] DGN TSI sft COND cc DNY

Autonomous Message

[O.41221]

I hh:mm:ss xy,ww DGN TSI sft ATP COMPL

[O.41222]

I hh:mm:ss xy,ww DGN TSI sft CATP cc COMPL

[O.41223]

M hh:mm:ss xy,ww DGN TSI sft STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41221.01]

I hh:mm:ss xy,ww DGN TSI sft COND cc DNY

Explanation of Parameters

TSI	Time slot interchange
s	Cross-connect network side number (0 or 1)
f	FROM unit number (1 through 6)
t	TO unit number (1 through 6)
CFT	Craft
vwxy	Diagnostic test number
0001	Output data checker exercise
0002	Memory test
0004	Memory diagnostic
0008	Address bus parity test
0010	Loss of clock exercise 2
0020	Loss of clock exercise 1
0040	Memory diagnostic exercise
0080	Control RAM checker exercise
0100	Communication test
0200	Memory and Alarms diagnostic(s)

NOTE 1: If the CFT field is omitted, all tests of this diagnostic are run.

NOTE 2: Tests 0200, 0040, 0020, 0010, 0004, and 0002 can only be run when the TSI is out-of-service. All other tests can be run when the TSI is in service.

ATP	All tests passed
CATP	Conditional all tests passed
STF	Some tests failed
ppqq	Trouble number for the craft
pp	Failing diagnostic number in hexadecimal form
qq	Test number in hexadecimal form.

011N	Address Bus Parity test: error bit not set. N is the circuit number where failure occurred: [0,f]
012N	Address Bus Parity test: error returns after clear. N is the circuit number where the failure occurred: [0,f]
013N	Status bit BUSERR not set
014N	CCNI error summary bit not set (involves CCNI register, could be a CCNI problem)
01B0	CCNI error summary not clear (involves CCNI register, could be a CCNI problem)
01F0	Software error
021N	LOTDEX2 test: error bit not set
0220	Error returns after clear
023N	Status bit not set
02F0	Software error
031N	LOTDEX1 test: error bit not set
0320	Error returns after clear
032N	LOTDEX1 test: error returns after clear. N is the circuit number where the failure occurred: [0,f]
033N	Status bit not set
03F0	Software error
041N	Error bit not set
0420	Software error
043N	Status bit not set
047N	ODEX test: exercise bit not set
051N	CREX test: error bit not set
0520	Error returns after clear
053N	Status bit not set
0540	Summary register on CCNI not set (this could be a CCNI problem)
05B0	Summary register on CCNI not cleared (this could be a CCNI problem)
05F0	Software error

	064N	Memory test: overall error summary not set
	066N	Value stored incorrectly in memory
	06F0	Software error
	072N	MEMDGN test: memory diagnostic failed
	07F0	Software error
	081N	Error bit not set
	0820	Error returns after clear
	084N	Overall summary bit not set
	0850	MEMDGN/DGNEX test: Busy bit not set
	08F0	Software error
	0980	Communication test: Circuit pack ID is wrong
	099N	Circuit ID is wrong
	09F0	Software error
	0A2N	RAM test: status register bit was set on RAM test
	0A6N	Value stored incorrectly in memory
	0ABN	Error summary bit set during test
	0AFN	Software error
	0B00	Could not initialize pack
d5-d0	Raw data relating to the failed diagnostic detected. Four hex digits each. Each data field contains sixteen bits. The significance of each data field and its individual bits is as follows:	
d5	CCNI Error Source Register 5	
	15-8	Don't care
	7	Error on autonomous switch enable circuit
	6	Error on BSR parity
	5	Parity error on high byte of data
	4	Parity error on low byte of data
	3	Address bus parity error
	2	Synchronizer error
	1	Error on CCB 6
	0	Error on CCB 5
d4	CCNI Error Source Register 4	

Each bit indicates an error on a pack connected to this CCNI

15	Error on CCB 4
14	Error on CCB 3
13	Error on CCB 2
12	Error on CCB 1
11	Error on FTM 4, Unit 6
10	Error on FTM 3, Unit 6
09	Error on FTM 2, Unit 6
08	Error on FTM 1, Unit 6
07	Error on FTM 4, Unit 5
06	Error on FTM 3, Unit 5
05	Error on FTM 2, Unit 5
04	Error on FTM 1, Unit 5
03	Error on FTM 4, Unit 4
02	Error on FTM 3, Unit 4
01	Error on FTM 2, Unit 4
00	Error on FTM 1, Unit 4

d3

CCNI Error Source Register 3

Each bit indicates an error on a pack connected to this CCNI.

15	Error on FTM 4, Unit 3
14	Error on FTM 3, Unit 3
13	Error on FTM 2, Unit 3
12	Error on FTM 1, Unit 3
11	Error on FTM 4, Unit 2
10	Error on FTM 3, Unit 2
09	Error on FTM 2, Unit 2
08	Error on FTM 1, Unit 2
07	Error on FTM 4, Unit 1
06	Error on FTM 3, Unit 1
05	Error on FTM 2, Unit 1
04	Error on FTM 1, Unit 1
03	Error on TSI 66

	02	Error on TSI 56
	01	Error on TSI 46
	00	Error on TSI 36
d2	CCNI Error Source Register 2	
	Each bit indicates an error on a pack connected to this CCNI.	
	15	Error on TSI 26
	14	Error on TSI 16
	13	Error on TSI 65
	12	Error on TSI 55
	11	Error on TSI 45
	10	Error on TSI 35
	09	Error on TSI 25
	08	Error on TSI 15
	07	Error on TSI 64
	06	Error on TSI 54
	05	Error on TSI 44
	04	Error on TSI 34
	03	Error on TSI 24
	02	Error on TSI 14
	01	Error on TSI 63
	00	Error on TSI 53
d1	CCNI Error Source Register 1	
	Each bit indicates an error on a pack connected to this CCNI.	
	15	Error on TSI 43
	14	Error on TSI 33
	13	Error on TSI 23
	12	Error on TSI 13
	11	Error on TSI 62
	10	Error on TSI 52
	09	Error on TSI 42
	08	Error on TSI 32
	07	Error on TSI 22

	06	Error on TSI 12
	05	Error on TSI 61
	04	Error on TSI 51
	03	Error on TSI 41
	02	Error on TSI 31
	01	Error on TSI 21
	00	Error on TSI 11
d0	Contents of Bus Status Register on CCNI	
	15-04	Not used.
	03	Indicates what side of the network is active. This bit is read by the unit controllers.
	02	Indicates what side of the network is active. This bit is written by the MP.
	01	SE (Autonomous Switch Enable) bit 1 = ASE circuit controls the value of Bit 02 0 = MP controls the value of Bit 02 This bit is read by the units.
	00	Odd parity over bits 02-00 of this register.
cc	Hexadecimal condition code	
	cc	<i>Explanation</i>
	02	Subject entity is not equipped
	03	Subject entity is in service
	1B	CCN side s is in service
	3D	No mapped slots on a tsi
	45	A DMB on the UNIT is OOS
	50	Can't run test on active side
	55	Invalid CFT code
	56	Unrunnable CFT code

DIAGNOSE TIME SLOT INTERCHANGES

Explanation of Command

This command requests diagnostics to be run on all time slot interchangers (TSIs) between **UNIT-q** and the specified units. If the optional connectivity field is omitted, then all TSIs connected to **UNIT-q** will be diagnosed.

Command

```
[I.41232]
DGN:[FRM] xy[,SEQ] ww:TSIS,CCN s,UNIT q, \
[,CONN(a[,b[,c[,d[,e[,f]]]]]])]!
```

Completion Message

```
[O.41232]
M hh:mm:ss xy,ww n[vv] DGN TSIS CCN s UNIT q[ CONN \
[ a[ b[ c[ d[ e[ f]]]]]]] e LN MSG
sft r nn    sft r nn    sft r nn    sft r nn    sft r nn    \
sft r nn
.
.
.
sft r nn    sft r nn    sft r nn    sft r nn    sft r nn    \
sft r nn    COND cc COMPL
```

⇒ NOTE:
There are up to six sets of data on each line and up to six data lines.

⇒ NOTE:

Denial Message

```
[O.41232.01]
M hh:mm:ss xy,ww n[vv] DGN TSIS CCN s UNIT q
[ CONN [ a[ b[ c[ d[ e[ f]]]]]]] COND cc DNY
```

**Autonomous
Message**

[O.41232]

```
I hh:mm:ss xy,ww n[vv] DGN TSIS CCN s UNIT q[ CONN \
[ a[ b[ c[ d[ e[ f]]]]]] e LN MSG:
sft r nn sft r nn sft r nn sft r nn sft r nn \
sft r nn
.
.
.
sft r nn sft r nn sft r nn sft r nn sft r nn \
sft r nn COND cc COMPL
```

**NOTE:**

There are up to six sets of data on each line and up to six data lines.

[O.41232.01]

```
M hh:mm:ss xy,ww n[vv] DGN TSIS CCN s UNIT q[ CONN
[ a[ b[ c[ d[ e[ f]]]]]] COND cc DNY
```

**Explanation of
Parameters**

TSIS	Time slot interchangers
CCN	Cross-connect network
s	Cross-Connect Network side number (0 or 1)
UNIT	Unit
[q]q	Unit number (1 through 16)
CONN	Unit connection
a,b,c,d,e,f	Connected unit number If the connected unit field is omitted, then all TSIs connected to the specified unit will be diagnosed
sft	TSI identifier
s	See s under CNN
f	FROM Unit
t	TO Unit
e	Number of lines in the message
r	Diagnostic status for an individual TSI
nn	Condition code for each TSI addressed (-- for unequipped TSIs) See cc below to interpret values of nn.
cc	Hexadecimal condition code

AATP COMPL	(All Tests Passed)
CCATP COMPL	(Conditional All Tests Passed)
SSTF COMPL	(Some Tests Failed)
DDNY	(Deny)
-	unequipped TSIs

cc	<i>Explanation</i>
02	Subject entity is not equipped
45	A DMB on the UNIT is OOS

DIAGNOSE DSPU

Explanation of Command This command diagnoses the specified unit's digital signal processing interface.

Command [I.41341]
DGN:[FRM xy][,SEQ ww]:UNIT [q]q,DSPI[,CFT X'vwxy]!

Completion Message [O.41341]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q DSPI ATP COMPL

[O.41342]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q DSPI CATP cc COMPL

[O.41343]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q DSPI STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

Denial Message [O.41341.01]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q DSPI COND cc DNY

Autonomous Message [O.41341]
I hh:mm:ss xy,ww DGN UNIT [q]q DSPI ATP COMPL)

[O.41342]
I hh:mm:ss xy,ww DGN UNIT [q]q DSPI CATP cc COMPL

[O.41343]
I hh:mm:ss xy,ww DGN UNIT [q]q DSPI STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41341.01]

I hh:mm:ss xy,ww DGN UNIT [q]q DSPI COND cc DNY

**Explanation of
Parameters**

DSPI	Digital Signal Processing Interface
CFT	Craft
vwxy	Diagnostic test number
0001	Processor bus parity checker test
0002	Interrupt and mask register test
0004-	Serial interface
0008*	Serial interface
	-In service test
	*Out-of-service only test
The optional CFT field is used to indicate which diagnostic test(s) is to be run. If this field is omitted, all DSPI diagnostic tests are run.	
ATP	All tests passed
CATP	Conditional all tests passed
cc	Hexadecimal completion condition code for CATP
03	Subject entity is in-service
37	DSPI out-of-service
44	DSPI is out-of-service; Digital Signaling Processing Circuit (DSPC) is in-service.
STF	Some tests failed
ppqq	Trouble number for the craft
pp	Failing diagnostic number in hexadecimal form
qq	Test number in hexadecimal form
0100	MP Fail
0600	EMTC/MTC Interrupt Fail
0A01	EBX/BX RAM Data Fail
0B00	EBX/BX Interrupt Fail
0C00	EBX/BX Acknowledge Fail
d5-d0	Hexadecimal raw data bytes relating to the failed diagnostic detected

d5	Upper byte of interrupt register 0
d4	Lower byte of interrupt register 0
d3	Interrupt register 1
d2	Upper byte of side 0 service register 0
d1	Lower byte of side 0 service register 0
d0	Unused

ccHexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
36	DSPI not equipped
4D	DSPI is in service
55	Invalid CFT code
56	Unrunnable CFT code

DIAGNOSE FORMAT CONVERTER

Explanation of Command

This command diagnoses the specified format converter UNIT-q.

Command

[I.41331]
DGN:[FRM xy] [,SEQ ww]:UNIT [q]q,FC sb[,CFT X'vwxy]!

Completion Message

[O.41331]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q FC sb ATP COMPL

[O.41332]
M hh:mm:ss xy,ww n[vv] DGN UNIT qq FC sb e LN MSG:
[UPN=<upn> XPN=<xpn>[BIT={TD|RD}bb]] \\
STF ppqq d5 d4 d3 d2 d1 d0 COMPL

[O.41333]
M hh:mm:ss xy,ww n[vv] DGN UNIT qq FC sb CATP COND kk COMPL

Denial Message

[O.41331.01]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q FC sb COND cc DNY

Autonomous Message

[O.41331]
I hh:mm:ss xy,ww DGN UNIT [q]q FC sb ATP COMPL

[O.41332]
I hh:mm:ss xy,ww DGN UNIT qq FC sb e LN MSG:
[UPN=<upn> XPN=<xpn>[BIT={TD|RD}bb]] \\
STF ppqq d5 d4 d3 d2 d1 d0 COMPL

[O.41333]

I hh:mm:ss xy,ww DGN UNIT qq FC sb CATP COND kk COMPL

[O.41331.01]

I hh:mm:ss xy,ww DGN UNIT [q]q FC sb COND cc DNY

**Explanation of
Parameters**

UNIT	Unit
[q]q	Unit number (1 through 16)
FC	Format converter
s	Side number (0 or 1)
b	FC number (1 through 4)
CFT	Craft
vwxy	Diagnostic test number
	The test numbers and types are as follows:
0001	CI device test
0002	Receiver test
0004	Transmitter test
	The optional craft diagnostic test number indicates which test(s) of the diagnostic is to be run under craft control. If this number is omitted, all tests including the continuity check are run.
ATP	All tests passed
STF	Some tests failed
e	Number of lines in the segment (2 or 3)
UPN	Unit plug number
upn	The value of UPN
XPN	ECCN plug number
xpn	The value of XPN
BIT	Bit number of the data bus
TD	Transmit data
RD	Receive data
bb	Bit number (00 through 15)
	The optional line which contains the unit, plug, and bit information is only output if continuity checks between the NPC

and the ECCN failed. The bit number (i.e., BIT={TD|RD}bb) is shown if software identifies the bit of the data bus as the failed one. The optional line is always output with the STF keyword. Valid values of the UPN and XPN are shown in the following table. Note that the numbers shown in the output are exactly the same as the numbers on the backplane.

* qq is the unit number

Unit Plug Number (FIB†)	Unit Plug Number (OIB‡)	ECCN Plug Number	Direction	Corresponding FC
P01	P02	PqqA*	Receive	FC 01
P02	P01	PqqE	Transmit	FC 01
P03	P07	PqqB	Receive	FC 02
P04	P06	PqqF	Transmit	FC 02
P05	P12	PqqC	Receive	FC 03
P06	P11	PqqG	Transmit	FC 03
P07	P17	PqqD	Receive	FC 04
P08	P16	PqqH	Transmit	FC 04
P10	P05	PqqA	Receive	FC 11
P11	P04	PqqE	Transmit	FC 11
P12	P10	PqqB	Receive	FC 12
P13	P09	PqqF	Transmit	FC 12
P14	P15	PqqC	Receive	FC 13
P15	P14	PqqG	Transmit	FC 13
P16	P20	PqqD	Receive	FC 14
P17	P19	PqqH	Transmit	FC 14

† FIB - Flexible Interface Bay

‡ OIB - Original Interface Bay

ppqq Trouble number for the craft (STF code)

	pp	Failing diagnostic number in hexadecimal form
	qq	Test number in hexadecimal form
	The values for ppqq are:	
	0100	CI device test fail
	0200	Receiver test fail
	0300	Transmitter test fail
	0F00	Error Summary Failure
	0F01	Hardware Fail on ECCI pack
	0F02	Hardware Fail on ETSI pack
	0F03	RCV Network Data Bus Failure badbit, baddirection & badport
	0F04	RCV Network Data Bus Failure baddirection & badport
	0F05	XMIT Network Data Bus Failure badbit, baddirection & badport
	0F06	XMIT Network Data Bus Failure baddirection & badport
	0F07	Pack hardware failure
	0F08	Pack Failed to Initialize for CT
	0F09	NPC failed when sourcing
	0F0A	Parent pack failed. For DSP packs DSPI. For FC, FTMI. For FMT, UA.
	0F0D	FC RCV Port alarms before RCV continuity Test
	0F0E	FC RCV Port alarms after sourcing from MXR/DDC pack
d5-d0	Hexadecimal raw data bytes relating to the failed diagnostic detected	
	d5	Communication interface error source register 0 (ESR0)
	d4	Receive formatter (RF) ESR0
	d3	RF ESR1
	d2	RF ESR2
	d1	RF STATUS
	d0	Transmit formatter (TF) STATUS

CATP	Conditional all test passed on the diagnostic of FC
kk	Hexadecimal completion condition code To interpret values of kk see cc following.
cc	Hexadecimal condition code
cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
13	FTMI is not equipped
14	FTMI is out of service
55	Invalid CFT code
56	Unrunnable CFT code
C3	XMIT continuity test won't be run
C4	XMIT continuity test won't be run
C5	RCV continuity test won't be run
C6	No available timeslots on any inservice NPCS associated with FC/FMT
C7	RCV continuity test won't be run
CC	RCV continuity test won't be run

DIAGNOSE FLI

**Explanation of
Command**

This command diagnoses one facility line interface (FLI) in a DS3 Unit (DS3U) or a Hybrid DS3 Unit (HDS3U). This message can be autonomously invoked by error recovery and restoration routines.

Command

[I.41401]
DGN:[FRM xy][,SEQ ww]:UNIT [q]q,FLI k[,CFT X'vwxy']!

**Completion
Message****1.544 Mbit/s Termination
Nonhierarchical**

[O.41401]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q FLI k ATP COMPL

[O.41402]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q FLI k CATP cc COMPL

[O.41403]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q FLI k STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

Denial Message

[O.41401.01]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q FLI k COND cc DNY

**Autonomous
Message**

[O.41401]
I hh:mm:ss xy,ww DGN UNIT [q]q FLI k ATP COMPL

[O.41402]

I hh:mm:ss xy,ww DGN UNIT [q]q FLI k CATP cc COMPL

[O.41403]

I hh:mm:ss xy,ww DGN UNIT [q]q FLI k STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41401.01]

I hh:mm:ss xy,ww DGN UNIT [q]q FLI k COND cc DNY

Explanation of Parameters

FLI	Facility line interface
k	FLI identifier
	S Service FLI
	P Protection FLI
CFT	Craft
vwxy	Diagnostic test number
	0001 CI device tests
	0002 FLI ESR test
	0008 Loss of Signal and Loss of Clock tests
	0010 LBO control test
	0020* FSM test
	0040† FLI/MXR Bent Pin/Continuity Test

Unless otherwise designated, the above tests can only be executed when the entity is out of service. If no craft code is specified, all tests are executed.

*This test can be executed at any time.

†This test is an inservice-only test that requires the other FLI and at least one MXR to be inservice.

ATP	All tests passed
CATP	Conditional all tests passed
STF	Some tests failed
ppqq	Some tests failed
	0001 FLI not physically present
	0002 FLI initialization Failed

	0003	FLI CI device is not in-service
	1000	FLI CI device Tests Failed
	2000	FLI ESR Test Failed
	3000	FLI Lock and Key Error Detector Test Failed
	4000	FLI LOS/LOC Test Failed
	5000	FLI LBO Test Failed
	6000	FLI FSM Test Failed
	7000	FLI/MXR Bent Pin/Continuity Test Failed
d5-d0		Hexadecimal raw data fields relating to the failed diagnostic detected.
cc		Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
55	Invalid CFT code
56	Unrunnable CFT code
40	The service FLI is out of service or pested (TOSRVC option)
41	The protection FLI is out of service or pested (TOPRTN option)
E8	Other FLI is OOS
E9	There are no INS MXRs to run test on
37	Selected FLI has LOC with at least one inservice MXR
38	Unselected FLI has LOS with at least one inservice MXR
39	MXR LOS with unselected FLI

DIAGNOSE FMT

Explanation of Command

This message requests the diagnostic of one formatter (FMT) in a DS3 unit or one hybrid formatter (HFMT) in a Hybrid DS3 unit (HDS3U). This message can also be autonomously invoked by error recovery and restoration routines.

Command

[I.41411]
DGN:[FRM xy][,SEQ ww]:UNIT [q]q,FMT s[,CFT X'vwxy']!

Completion Message

[O.41411]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q FMT s ATP COMPL

[O.41412]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q FMT s CATP cc \
{COMPL|3 LN MSG:
[upn xpn nn upn xpn nn upn xpn nn upn xpn nn]
[upn xpn nn upn xpn nn upn xpn nn upn xpn nn COMPL]

[O.41413]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q FMT s STF ppqq e LN MSG:
[UPN=<upn> XPN=<xpn>[BIT={TD|RD}bb]]
d5 d4 d3 d2 d1 d0 COMPL

Denial Message

[O.41411.01]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q FMT s COND cc DNY

Autonomous Message

[O.41411]
I hh:mm:ss xy,ww DGN UNIT [q]q FMT s ATP COMPL

[O.41412]

```
I hh:mm:ss xy,ww  DGN UNIT [q]q FMT s CATP cc \
{COMPL|3 LN MSG:}
[upn xpn nn  upn xpn nn  upn xpn nn  upn xpn nn]
[upn xpn nn  upn xpn nn  upn xpn nn  upn xpn nn COMPL]
```

[O.41413]

```
I hh:mm:ss xy,ww  DGN UNIT [q]q FMT s STF ppqq e LN MSG:
[UPN=<upn> XPN=<xpn>[ BIT={TD|RD}bb]]
d5 d4 d3 d2 d1 d0 COMPL
```

[O.41411.01]

```
I hh:mm:ss xy,ww  DGN UNIT [q]q FMT s COND cc DNY
```

Explanation of Parameters

FMT	Format converter or Hybrid Format converter
s	FMT or HFMT side identifier
0	CCN side 0
1	CCN side 1
CFT	Craft(not valid for HSU UC)
vwxy	Diagnostic test number
0001*	FMT Communication Interface device Test
0002	FMT MXR MPR Protection Switch Test
0004	FMT Receive Formatter device Test
0008	FMT Transmit Formatter device Test
0010***	HFMT T1/E1 Provisioning register Test
0020***	HFMT Control FPGA device Test
0040**	HFMT T1 Cable and State Machine Test
0080**	HFMT E1 Cable and State Machine Test
0100**	HFMT Hybrid Formatter Exercise register Test
*This test can only be executed when the entity is out of service	
** These craft codes can only be used for Hybrid Formatters	
*** This craft code can only be used for Hybrid Formatters and only if that Formatter is out-of-service.	

If no craft code is specified, all tests including the continuity check are executed. The E1 tests apply only to hybrid formatters.

ATP All tests passed

CATP Conditional all tests passed

nn Hexadecimal condition code shown in the CATP output to indicate continuity test condition on each individual port.

STF Some tests failed.

ppqq Failed test number in hexadecimal form.

The E1 tests are only valid for hybrid formatters.

0001 FMT is not physically present

0002 FMT initialization failed

0003 Unable to read FMT RAM Mask

0004 Unable to restore FMT RAM Mask

0005 Invalid Circuit Pack ID

0100 FMT CI Test Failed

0200 FMT MPS Test Failed

0300 FMT Receive Formatter Test Failed

0400 FMT Transmit Formatter Test Failed

0800* HFMT Control FPGA Test Failed

0801* HFMT Exercise Register Test Failed

0802* HFMT T1/E1 Provisioning Test Failed

0F00 Cable Test Error Summary Failure

0F01 Hardware Fail on ECCI pack

0F02 Hardware Fail on ETSI pack

0F03 RCV Network Data Bus Failure badbit, baddirection & badport

0F04 RCV Network Data Bus Failure baddirection & badport

0F05 XMIT Network Data Bus Failure badbit, baddirection & badport

0F06 XMIT Network Data Bus Failure baddirection & badport

0F07 Pack hardware failure

0F08 Pack Failed to Initialize for CT
0F09 NPC failed when sourcing
0F0A Parent pack failed. UA or UH pack
0F0D FMT RCV Port alarms before RCV Continuity Test
0F0E FMT RCV Port alarms after sourcing from MXR or MPR pack

*These values apply to the Hybrid Formatter only.

d5-d0

Raw data

Hexadecimal raw data fields relating to the failed diagnostic detected. The assignment of these data bytes is not fixed but varies with the failure detected. Interpretation of the information requires access to the software and to the programmer who wrote it.

e

Number of lines in the segment (2 or 3)

UPN

Unit plug number

upn Value of the UPN

XPN

ECCN Plug Number

xpn Value of the XPN

BIT

Bit

TD

Transmit data

RD

Receive data

bb

Bit number (00 through 15)

For the STF output, the optional line which contains the unit, port, and pin information will only be output if the continuity check between the format converter and its corresponding ETSI is failed. Valid values of the UPN and XPN are shown below. Note that the numbers shown in the output are exactly the same as the numbers on the backplane.

Unit Plug Number	ECCN Plug Number	FMT Number	Direction
P01	PqqA*	FMT 0	Receive
P02	PqqE	FMT 0	Transmit
P03	PqqB	FMT 0	Receive

Unit Plug Number	ECCN Plug Number	FMT Number	Direction
P04	PqqF	FMT 0	Transmit
P05	PqqC	FMT 0	Receive
P06	PqqG	FMT 0	Transmit
P07	PqqD	FMT 0	Receive
P08	PqqH	FMT 0	Transmit
P10	PqqA	FMT 1	Receive
P11	PqqE	FMT 1	Transmit
P12	PqqB	FMT 1	Receive
P13	PqqF	FMT 1	Transmit
P14	PqqC	FMT 1	Receive
P15	PqqG	FMT 1	Transmit
P16	PqqD	FMT 1	Receive
P17	PqqH	FMT 1	Transmit

* qq is the unit number

The bit number (that is, BIT={TD|RD}bb) will be shown if software identifies the bit of the data bus as the failed one.

For the CATP output, the optional output line related to continuity test are shown only if there is at least one port that cannot be diagnosed. The UPN and XPN numbers of the port(s) that is (are) not diagnosed are output, while those that passed the diagnostic are represented by dashes (--). The port number is output in ascending order by UPN number. That is, for side 0, the output is from P1 to P8, and for side 1 it is from P10 to P17.

The STF output supersedes the CATP output. That is, as long as there is one port that failed the diagnostic, DACS II must output the STF message without concern about a port that cannot be diagnosed.

cc

Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
55	Invalid CFT code
56	Unrunnable CFT code
C3	XMIT continuity test won't be run
C4	XMIT continuity test won't be run
C5	RCV continuity test won't be run
C9	CATP due to skipping continuity test for FMT
CC	RCV continuity test won't be run
57	Specified CFT code only valid on CEF Frame

DIAGNOSE FACILITY TERMINATING MODULE INTERFACE

Explanation of Command

This message requests diagnostics to be run on the unit's facility terminating module interface.

Command

[I.41321]
DGN: [FRM xy][, SEQ ww]:UNIT [q]q, FTMI d[, CFT X'vwxy]!

Completion Message

[O.41321]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q FTMI d ATP COMPL

[O.41322]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q FTMI d STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

Denial Message

[O.41321.01]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q FTMI d COND cc DNY

Autonomous Message

[O.41321]
I hh:mm:ss xy,ww DGN UNIT [q]q FTMI d ATP COMPL

[O.41322]
I hh:mm:ss xy,ww DGN UNIT [q]q FTMI d STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41321.01]
I hh:mm:ss xy,ww DGN UNIT [q]q FTMI d COND cc DNY

Explanation of Parameters	FTMI	Facility Terminating Module Interface
	d	FTMI number (1 through 4)
	CFT	Craft
	vwxxy	Diagnostic test number
	0001	Register test
	0002	High data parity test
	0004	High data parity test
	0008	Low data parity test
	0010	CI A data strobe test
	0020	CI A pack id test
	0040	CI B data strobe test
	0080	CI B pack id test
	0100	CI C data strobe test
	0200	CI C pack id test
All tests listed above can be run in-service.		

**NOTE:**

The optional **CFT** field indicates which test(s) of the diagnostic is to be run under craft control. If this field is omitted, all tests of this diagnostic are run.

ATP	All tests passed
STF	Some tests failed
ppqq	Trouble number for the craft
pp	Failing diagnostic number in hexadecimal form
qq	Test number in hexadecimal form
0100	Register Test Fail
0200	Address Parity Test Fail
0300	High Data Parity Test Fail
0400	Low Data Parity Test Fail
0500	Data Strobe A Test Fail
0600	Pack ID A Test Fail
0700	Data Strobe B Test Fail
0800	Pack ID B Test Fail

	0900	Data Strobe C Test Fail
	0A00	Pack ID C Test Fail
d5-d0		Raw data

Hexadecimal raw data bytes relating to the failed diagnostic detected. These data bytes are only used for system development.

d5 CCNI Error Source Register 5

15-8	Don't care
7	Error on autonomous switch enable circuit
6	Error on BSR parity
5	Parity error on high byte of data
4	Parity error on low byte of data
3	Address bus parity error
2	Synchronizer error
1	Error on CCB 6
0	Error on CCB 5

d4 CCNI Error Source Register 4

Each bit indicates an error on a pack connected to this CCNI

15	Error on CCB 4
14	Error on CCB 3
13	Error on CCB 2
12	Error on CCB 1
11	Error on FTM 4, Unit 6
10	Error on FTM 3, Unit 6
09	Error on FTM 2, Unit 6
08	Error on FTM 1, Unit 6
07	Error on FTM 4, Unit 5
06	Error on FTM 3, Unit 5
05	Error on FTM 2, Unit 5
04	Error on FTM 1, Unit 5
03	Error on FTM 4, Unit 4
02	Error on FTM 3, Unit 4
01	Error on FTM 2, Unit 4

d3	00	Error on FTM 1, Unit 4
	CCNI Error Source Register 3	
	Each bit indicates an error on a pack connected to this CCNI	
	15	Error on FTM 4, Unit 3
	14	Error on FTM 3, Unit 3
	13	Error on FTM 2, Unit 3
	12	Error on FTM 1, Unit 3
	11	Error on FTM 4, Unit 2
	10	Error on FTM 3, Unit 2
	09	Error on FTM 2, Unit 2
	08	Error on FTM 1, Unit 2
	07	Error on FTM 4, Unit 1
	06	Error on FTM 3, Unit 1
	05	Error on FTM 2, Unit 1
	04	Error on FTM 1, Unit 1
	03	Error on TSI 66
	02	Error on TSI 56
	01	Error on TSI 46
	00	Error on TSI 36
d2	CCNI Error Source Register 2	
	Each bit indicates an error on a pack connected to this CCNI	
	15	Error on TSI 26
	14	Error on TSI 16
	13	Error on TSI 65
	12	Error on TSI 55
	11	Error on TSI 45
	10	Error on TSI 35
	09	Error on TSI 25
	08	Error on TSI 15
	07	Error on TSI 64
	06	Error on TSI 54
	05	Error on TSI 44

	04	Error on TSI 34
	03	Error on TSI 24
	02	Error on TSI 14
	01	Error on TSI 63
	00	Error on TSI 53
d1	CCNI Error Source Register 1	
	Each bit indicates an error on a pack connected to this CCNI	
	15	Error on TSI 43
	14	Error on TSI 33
	13	Error on TSI 23
	12	Error on TSI 13
	11	Error on TSI 62
	10	Error on TSI 53
	09	Error on TSI 42
	08	Error on TSI 32
	07	Error on TSI 22
	06	Error on TSI 12
	05	Error on TSI 61
	04	Error on TSI 51
	03	Error on TSI 41
	02	Error on TSI 31
	01	Error on TSI 21
	00	Error on TSI 113
d0	Contents of Bus Status Register on CCNI	
	15-04	Not used
	03	Indicates what side of the network is active. This bit is read by the unit controllers
	02	Indicates what side of the network is active. This bit is written by the MP
	01	ASE (Autonomous Switch Enable) bit 1 = ASE circuit controls the value of Bit 02 0 = MP controls the value of Bit 02 This bit is read by the units

	00	Odd parity over bits 02-00 of this register
cc		Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
13	FTMI is not equipped
55	Invalid CFT code
56	Unrunnable CFT code

DIAGNOSE MIU

Explanation of Command

**NOTE:**

This command applies to 1.544 Mbit/s Termination only.

This command diagnoses one Multiplexer Interface Unit (MIU) in a DS3 Unit. This message can also be autonomously invoked by error recovery and restoration routines.

Command

[I.41431]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,MIU c[,CFT X'vwxy]!

Completion Message

[O.41431]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q MIU c ATP COMPL

[O.41432]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q MIU c CATP cc COMPL

[O.41433]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q MIU c STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

Denial Message

[O.41431.01]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q MIU c COND cc DNY

Autonomous Message

[O.41431]

I hh:mm:ss xy,ww DGN UNIT [q]q MIU c ATP COMPL

[O.41432]

I hh:mm:ss xy,ww DGN UNIT [q]q MIU c CATP cc COMPL

[O.41433]

I hh:mm:ss xy,ww DGN UNIT [q]q MIU c STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41431.01]

I hh:mm:ss xy,ww DGN UNIT [q]q MIU c COND cc DNY

Explanation of Parameters

MIU	Multiplexer interface unit
c	The number of the MIU within the unit ($P, 1 \leq c \leq 6$)
CFT	Craft
vwxy	Diagnostic test number (hexadecimal) 0001* MIU Sanity test 0002* Facility (NPC level) 0004 MXR Interface test 0008 MIU timer test *This test can only be executed if the entity is out of service. If no craft code is specified, all tests are executed.
ATP	All tests passed
pa	Priority of action M^ Manual I^ Information ^ represents a blank character
CATP	Conditional all tests passed
STF	Some tests failed
ppqq	Failed test number in hexadecimal form 0001 MIU not physically present 0002 MIU pack type not readable 0003 MIU software download failed 0004 MIU initialization of MXR TX devices failed 0005 MIU provisioning of MXR TX devices failed 0006 MIU initialization #1 of MXR failed 0007 MIU initialization #2 of MXR failed

	0008	MIU initialization of MXR CC devices failed
	0100	MIU Sanity test failed
	0200	MIU Facility data link test failed (OOS)
	0300	MIU/MXR HSCC test failed (OOS)
	0301	MIU/MXR HSCC test failed (IS)
	0400	MIU Timer test failed (OOS)
	0401	MIU Timer test failed (IS)
d5-d0	Hexadecimal raw data fields relating to the failed diagnostic detected	
cc	Hexadecimal condition code	
	cc	<i>Explanation</i>
	10	Unit is not equipped
	11	UC is out of service
	12	UC is in service but failed
	1B	Required MXR not equipped, not in service, or failed
	55	Invalid CFT code
	56	Unrunnable CFT code
	B3	MIU is already in service
	BF	MIU is not equipped
	9B	The MXR is not grown
	B0	FLI is out of service
	B1	FMT is out of service
	B2	MXR is out of service
	06	Mismatch between MXR and MIU HDW types

DIAGNOSE MPR

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This command requests the diagnostic of an individual mapper (MPR) in an HSU unit. This message can also be autonomously invoked by error recovery and restoration routines.

Command

[I.41821]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,MPR c!

Completion Message

[O.41821]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q MPR c ATP COMPL

[O.41823]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q MPR c 2 LN MSG:
STF ppqq d5 d4 d3 d2 d1 d0 COMPL

Denial Message

[O.41821.01]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q MPR c COND cc DNY

Autonomous Message

[O.41821]

I hh:mm:ss xy,ww DGN UNIT [q]q MPR c ATP COMPL

[O.41823]

I hh:mm:ss xy,ww DGN UNIT [q]q MPR c 2 LN MSG:
STF ppqq <d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41821.01]

I hh:mm:ss xy,ww DGN UNIT [q]q MPR c COND cc DNY

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
MPR	Mapper
c	MPR number within the HSU unit (P, 1 through 6)
ATP	All tests passed
STF	Some tests failed
ppqq	Failed test number
d5-d0	Raw data
	Hexadecimal raw data fields relating to the failed diagnostic detected

DIAGNOSE MXR

Explanation of Command



NOTE:

This command applies to 1.544 Mbit/s Terminations only.

This command requests the diagnostic of an individual multiplexer (MXR/EMXR) in a DS3 or hybrid DS3 unit, or an individual hybrid multiplexer (HMXR) in a hybrid DS3 unit. This message can also be autonomously invoked by error recovery and restoration routines.

Command

[I.41421]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,MXR c[,DEV devc[,CFT X'vwxy]]!

Completion Message

[O.41421]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q MXR c[DEV devc \
[CFT X'vwxy]] ATP COMPL

[O.41422]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q MXR c[DEV devc \
[CFT X'vwxy]] CATP cc COMPL

[O.41423]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q MXR c[DEV devc \
[CFT X'vwxy]] 2 LN MSG:
STF ppqq d5 d4 d3 d2 d1 d0 COMPL

Denial Message

Nonhierarchical

[O.41421.01]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q MXR c COND cc DNY

**Autonomous
Message****Explanation of
Parameters**

MXR	Multiplexer
c	MXR number within the unit (P, 1 through 6)
DEV	Device
devc	Designation for a particular device on the MXR, EMXR, or HMXR circuit pack
CFT	Craft
vwxy	Diagnostic test number (Hexadecimal)
devc	Device Description
DS3	General devices
vwxy	Test
0001	UA interface Address Parity Test
0002	Error Source/Mask Register
0004	PLL Out of Lock (MXR/EMXR only)/DS3 LOC test
0008	UA Sanity - Shared RAM
M13	M12 and M13 devices
0001	M13 Muldem Tests
0002†	MXR/HMXR/FLI Bent Pin/Continuity Test
PIF	Processor Interface
0001	PIF Bus Parity Detector (MXR only)
HSC	High-level Serial Communication Controller
0001	HSC Stuck Bit/Internal Loopback Test
CCxx	DS1 Channel Controllers (xx = 00 (all); xx = 01 through 14)
0001	DS1 CC Address Parity Test
0002	DS1 CC Stuck Bit of Config.Register Test
0004	DS1 CC IR Stuck Bit and Parity Check
0008*	DS1 CC Loss of Clock/Sync ErrorTest
0010*	DS1 CC Configuration Register Parity
0020	DS1 CC Transmit/Receive Data Parity
0040	DS1 CC Data Parity Exercise
ECxx	E1 Channel Controllers (xx = 00 (all); xx = 01 through 14)

	0001	E1 CC Address Parity Test
	0002	E1 CC IR Stuck Bit and Parity Check
	0004	E1 CC Loss of Clock/Sync Error Test
	0008	E1 CC Transmit/Receive Data Parity
	0010	E1 CC Data Parity Exercise
TXyy	DS1 Transceiver devices (yy = 00 (all); yy = 01 through 28)	
	0001	DS1 Mode Independent System Tests
	0002	DS1 Mode Dependent System Tests
EXyy	E1 Transceiver devices (yy = 00 (all); yy = 01 through 27) (E1 Transceivers 4, 8, 12, 16, 20, 24, and 28 do not exist)	
	0001	E1 Transceiver System Tests
	Unless otherwise designated, the previous tests can only be executed when the entity is out of service.	
	*These tests can be executed at any time when diagnosing an MXR or EMXR. However, for a Hybrid MXR these tests can only be executed when the Hybrid MXR is out-of-service.	
	†This test is an in-service-only test that requires this entity and both FLIs to be in-service.	
	If no device (devc) is specified, all tests on the MXR are executed.	
	If a test number (vwxy) is not specified, all tests related to devc are executed.	
ATP	All tests passed	
CATP	Conditional all tests passed	
cc	Hexadecimal condition code	
STF	Some tests failed	
ppqq	Failed test number	
	0001	MXR is not plugged in
	0002	MXR Initialization failure
	0003	Hardware not ready after reset
	0004	Hardware reset failed
	0009	MXR/Unit Database failure
	000A	Failure to read MXR HDW type
	000B	MXR Database failure
	0010	HDW/SW mismatch of FLI selection

	0011	Failure to clear alarms
	0012	Failure to mask MXR on FLI
	0013	Unable to loopback MXR on FLI
	0020	NPC database failure
	0100	UC Interface/Address parity failure
	0200	Error Source/Mask failure
	0300	PLL Out-of-Lock (MXR/EMXR only)/DS3 LOC failure
	0400	UA Sanity/Shared RAM failure
	0500	MXR/EMXR M13 Muldem failure
	0600	DS1 CC Address Parity failure
	0700	DS1 CC Stuck Bit in CNFR Register failure
	0800	DS1 CC IR Stuck Bit/Parity Check failure
	0900	DS1 CC LOC/Sync Error failure
	1000	DS1 CC Receive Data Parity failure
	1100	DS1 CC Transmit Data Parity failure
	1200	DS1 CC Data Parity Exercise failure
	1300	HSCC Stuck Bit/Internal Loopback failure
	1400	DS1 Mode Independent Tests failure
	1500	DS1 Mode Dependent Tests failure
	1600	PIF Bus Parity Detector failure (MXR only)
	1700	FLI/MXR BENT PIN Test failure
	1800	Downloadable Diagnostic failure
	1900	HMXR M13 failure
	2000	E1 CC Address Parity failure
	2200	E1 CC IR Stuck Bit/Parity Check failure
	2300	E1 CC LOC/Sync Error failure
	2400	E1 CC Receive Data Parity failure
	2500	E1 CC Transmit Data Parity failure
	2600	E1 CC Data Parity Exercise failure
	2700	E1 Transceiver System Tests failure
d5-d0		Raw data

Hexadecimal raw data fields relating to the failed diagnostic detected.

cc

Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
43	(NPC) Hardware mismatch
1A	Required FLI not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
55	Invalid CFT code
56	Unrunnable CFT code
99	No FLI is In Service
9B	The MXR is not grown
B0	FLI is out of service
B1	FMT is out of service
37	Selected FLI has LOC with at least one inservice MXR
38	Unselected FLI has LOS with at least one inservice MXR
39	MXR LOS with unselected FLI

DIAGNOSE OI

Explanation of Command

This message requests the diagnostic of one optical interface circuit (OI) in a HSU unit. This message can also be autonomously invoked by error recovery and restoration routines.

Command

1.544 Mbit/s Termination

[I.41801]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,OI kk!

2.048 Mbit/s Termination

[I.41801]

DGN:[FRM xy][,SEQ ww]:UNIT [q]q,OI kk!

Completion Message

1.544 Mbit/s Termination

[O.41801]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q OI kk ATP COMPL

[O.41803]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q OI k STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

2.048 Mbit/s Termination

[O.41801]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q OI kk ATP COMPL

[O.41803]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q OI k STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

Denial Message**1.544 Mbit/s Termination**

[O.41801.01]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q OI kk COND cc DNY

2.048 Mbit/s Termination

[O.41801.01]

M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q OI kk COND cc DNY

**Autonomous
Message****1.544 Mbit/s Termination**

[O.41801]

I hh:mm:ss xy,ww DGN UNIT [q]q OI kk ATP COMPL

[O.41803]

I hh:mm:ss xy,ww DGN UNIT [q]q OI kk STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41801.01]

I hh:mm:ss xy,ww DGN UNIT [q]q OI kk COND cc DNY

2.048 Mbit/s Termination

[O.41801]

I hh:mm:ss xy,ww DGN UNIT [q]q OI kk ATP COMPL

[O.41803]

I hh:mm:ss xy,ww DGN UNIT [q]q OI kk STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41801.01]

I hh:mm:ss xy,ww DGN UNIT [q]q OI kk COND cc DNY

**Explanation of
Parameters**

UNIT	Unit
[q]q	Unit number (1 through 16)
OI	Facility line interface
kk	OI identifier

	1S	Facility 1 on the service OI
	2S	Facility 2 on the service OI
	1P	Facility 1 on the protection OI
	2P	Facility 2 on the protection OI
ATP		All tests passed
STF		Some tests failed
ppqq		Failed test number in hexadecimal form
	0001	
	0002	
	0003	
	1000	
	2000	
	3000	
	4000	
	6000	
	7000	
d5-d0		Hexadecimal raw data fields relating to the failed diagnostic detected.
cc		Hexadecimal condition code

DIAGNOSE UNIT CONTROLLER

Explanation of Command This command requests diagnostics to be run on the specified unit controller. For an HSU UC no Craft diagnostic codes (CFT) are valid.

Command [I.41311]
DGN:[FRM xy][,SEQ ww]:UNIT [q]q,UC[,CFT X'vwxy]!

Completion Message **1.544 Mbit/s Termination**
Nonhierarchical
[O.41311]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q UC ATP COMPL
[O.41312]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q UC CATP cc COMPL
[O.41313]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q UC STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

Denial Message [O.41311.01]
M hh:mm:ss xy,ww n[vv] DGN UNIT [q]q UC COND cc DNY

Autonomous Message [O.41311]
I hh:mm:ss xy,ww DGN UNIT [q]q UC ATP COMPL
[O.41312]
I hh:mm:ss xy,ww DGN UNIT [q]q UC CATP cc COMPL

[O.41313]

I hh:mm:ss xy,ww DGN UNIT [q]q UC STF ppqq 2 LN MSG:
<d5> <d4> <d3> <d2> <d1> <d0> COMPL

[O.41311.01]

I hh:mm:ss xy,ww DGN UNIT [q]q UC COND cc DNY

Explanation of Parameters

UC	Unit controller
CFT	Craft diagnostic test code(not valid for HSU UC)
vwxy	Diagnostic test number (hexadecimal)
0001	UC RAM test (out-of-service test)
0002	UC ROM test (in-service test)
0004	UC timer test (in-service test)
0008	UC DMA test (out-of-service test)
0010	UC LAN test (out-of-service test)
0020	UC bus error test (in-service test)
0040	UBX register test (out-of-service test)
0080	UBX sanity test (out-of-service test)

The optional **CFT** field indicates which test(s) of the diagnostic is to be run under craft control. If this field is omitted, all tests of this diagnostic are run.

Out-of-service diagnostics on the UC run successfully only if the UC circuit pack is present in the frame and the diagnostic program can communicate with the unit. Otherwise, this message is denied.

The UC DMA test cannot be run on the KER6 Unit Controller which is used on Hybrid DS3Us and DS3Us that are shipped with Release 8.0 and later Releases.

The UBX tests are only valid on FTUs and IFTUs.

ATP	All tests passed
CATP	Conditional all tests passed
	The reason for the conditional completion is indicated by cc.
STF	Some tests failed
ppqq	Trouble number for the craft (hexadecimal)
pp	Failing diagnostic number

	qq	Test number
	0101	RAM Test Failed - Data Error
	0102	RAM Test Failed - Data Error
	0103	RAM Test Failed - Access Error
	0104	RAM Test Failed - Refresh Error
	0105	RAM Test Failed - Parity Error
	0200	ROM Test Failed
	0400	Timer Test Failed - Timer Error
	0500	Timer Test Failed - Input Port Error
	0600	DMA Test Failed
	0700	LAN Test Failed
	0900	Bus Error Test Failed
	0A00	UBX Register Test Failed
	0B00	UBX Sanity Test Failed
d5-d0	Hexadecimal raw data bytes relating to the failed diagnostic detected.	
	Data	ByteValue
	d5	Unused
	d4	Unused
	d3	Unused
	d2	Unused
	d1	Unused
	d0	Unused

For in-service UC:

- In-service tests return ATP (All Tests Passed)
- Out-of-service tests return CATP (Conditional All Tests Passed)

For out-of-service UC:

- In-service tests return ATP
- Out-of-service tests return ATP

cc Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
42	RST failed to boot program
55	Invalid CFT code
56	Unrunnable CFT code
03	Subject entity is in service

DEGROWTH TEST-ACCESS GROUP NPC

Explanation of Command

This command is used to request the removal of the test-access group (TG) designation from a network processing circuit for test-access groups. All TGs associated with this NPCTG must be released before the NPCTG can be deprovisioned. If TGR is specified in the command, all active TGs will be released and deprovisioned before the NPCTG is deprovisioned. Any out-of-serve (OOS) condition is bypassed.

A TG may be supported by one or two NPCTGs. Deprovisioning of an NPCTG that supports half (one bundle) of an active TG results in the release and deprovisioning of the entire TG, provided TGR was specified.

Command

Nonhierarchical

[I.32401]

DGRTH:[FRM xy][,SEQ ww]:NPC [s]abc,NPCTG rrr[,TGR]!

Hierarchical

[I.32401]

DGRTH:[FRM xy][,SEQ ww]:NPC uvmnp,NPCTG rrr[,TGR]!

Completion Message



NOTE:

If any TG(s) exists, the multi-line output is used. If active TG(s) exists and 'TGR' was entered, a TG Release output response (O.27021) will be printed for each active TG released, in the order of bandwidth assignment.

1.544 Mbit/s Termination

Nonhierarchical

[O.32401]

M hh:mm:ss xy,ww n[vv] DGRTH NPC [s]abc NPCTG rrr COMPL

or

[O.32402]

M hh:mm:ss xy,ww n[vv] DGRTH NPC [s]abc NPCTG rrr[TGR] p LN MSG:
TGS mmm[, mmm][, mmm][, mmm][, mmm][, mmm][, mmm][, mmm]
[TGS mmm[, mmm][, mmm][, mmm][, mmm][, mmm][, mmm][, mmm]
[TGS mmm[, mmm][, mmm][, mmm][, mmm][, mmm][, mmm][, mmm] COMPL

Hierarchical

[O.32401]

M hh:mm:ss xy,ww n[vv] DGRTH NPC uvmp NPCTG rrr COMPL

or

[O.32402]

M hh:mm:ss xy,ww n[vv] DGRTH NPC uvmp NPCTG rrr[TGR] p LN MSG:
TGS mmm[, mmm][, mmm][, mmm][, mmm][, mmm][, mmm][, mmm]
[TGS mmm[, mmm][, mmm][, mmm][, mmm][, mmm][, mmm][, mmm]
[TGS mmm[, mmm][, mmm][, mmm][, mmm][, mmm][, mmm][, mmm] COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.32401]

M hh:mm:ss xy,ww n[vv] DGRTH NPC [s]abc NPCTG rrr COMPL

or

[O.32402]

M hh:mm:ss xy,ww n[vv] DGRTH NPC [s]abc NPCTG rrr[TGR] p LN MSG:
TGS mmm[, mmm][, mmm][, mmm][, mmm][, mmm][, mmm][, mmm]
[TGS mmm[, mmm][, mmm][, mmm][, mmm][, mmm][, mmm][, mmm]
[TGS mmm[, mmm][, mmm][, mmm][, mmm][, mmm][, mmm][, mmm]
[TGS mmm[, mmm][, mmm][, mmm][, mmm][, mmm][, mmm][, mmm] COMPL

Hierarchical

[O.32401]

M hh:mm:ss xy,ww n[vv] DGRTH NPC uvmp NPCTG rrr COMPL

or

[O.32402]

M hh:mm:ss xy,ww n[vv] DGRTH NPC uvmp NPCTG rrr[TGR] p LN MSG:
TGS mmm[, mmm][, mmm][, mmm][, mmm][, mmm][, mmm][, mmm]
[TGS mmm[, mmm][, mmm][, mmm][, mmm][, mmm][, mmm][, mmm]

[TGS mmm[,mmm][,mmm][,mmm][,mmm][,mmm][,mmm][,mmm]]
[TGS mmm[,mmm][,mmm][,mmm][,mmm][,mmm][,mmm]] COMPL

Denial Message

Nonhierarchical

[O.32401.01]

M hh:mm:ss xy,ww n[vv] DGRTH NPC [s]abc NPCTG rrr[TGR][TG mmm]\
COND cc DNY

Hierarchical

[O.32401.01]

M hh:mm:ss xy,ww n[vv] DGRTH NPC uvmp NPCTG rrr[TGR][TG mmm]\
COND cc DNY

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
NPCTG	NPC (for) test group
rrr	NPCTG number (1 through 400)
TGR	TG release This keyword causes any active TGs supported by this NPCTG to be released from testing and degrown before the NPCTG is degrown. It is required if the NPCTG has active TGs.
TGS	TGs supported by the NPCTG
mmm	TG number (1 through 400) Lowest TG number supported by the NPCTG. This number is 000 if all TGs have been degrown.

COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
15	NPC is unequipped
89	NPC is not designated for this NPCTP/ NPCTG
A4	NPC is not a NPCTG
A5	Test group is not idle or frame is not In Service
A6	Test group release failed
A8	NPCTG not grown
AA	Integrated Test Set is currently active on TG

DEGROWTH TEST PORT NPC

Explanation of Command

This message requests removal of the specified test port designation from the network processing circuit. It deprovisions all test ports in all four test access digroups.

Command

Nonhierarchical

[I.32381]

DGRTH:FRM xy,SEQ ww:NPC [s]abc,NPCTP n[,TPR]!

Hierarchical

[I.32381]

DGRTH:FRM xy,SEQ ww:NPC uvmnp,NPCTP n[,TPR]!

Completion Message

Nonhierarchical

[O.32381]

M hh:mm:ss xy,ww n[vv] DGRTH NPC [s]abc NPCTP n TPS kk-nn [TPR]
COMPL

Hierarchical

[O.32381]

M hh:mm:ss xy,ww n[vv] DGRTH NPC uvmnp NPCTP n TPS kk-nn
[TPR] COMPL

Denial Message

Nonhierarchical

[O.32381.01]

M hh:mm:ss xy,ww n[vv] DGRTH NPC [s]abc NPCTP n[TPR]
COND cc DNY

Hierarchical

[O.32381.01]

M hh:mm:ss xy,ww n[vv] DGRTH NPC uvmnp NPCTP n[TPR]
COND cc DNY

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
NPCTP	NPC test port
n	NPCTP number (1 through 8)
TPR	Test port release This keyword causes any active test ports to be released from service before the test port NPC is degrown. Without the TPR keyword, the test ports must all be idle or the command is denied.
TPS	Test ports
kk	Beginning test port number
nn	Ending test port number kk and nn indicate the range of test port numbers which the named NPC included

hkknn

10112

21324

32536

43748

54960

66172

77384

88596

cc Hexadecimal condition code

cc	<i>Explanation</i>
15	NPC is unequipped
88	NPC is not a NPCTP
89	NPC is not designated for this NPCTP/ NPCTG
8A	NPCTP is not grown
8B	Test port is not idle or frame is not inservice
98	Test Port release failed

DEGROWTH NPC

Explanation of Command

This command unequips network processing circuits (NPCs) in DACS II Facility Terminating Units (FTU/IFTU/IFTU2), DS3 Units (DS3U), Hybrid DS3 Units (HDS3U), and Digital Signal Processing Units (DSPU).

It may be used to unequip a single NPC or a range of NPCs in an FTU (IFTU or IFTU2), a DS3U or an HDS3U. The HDS3U supports type TExyz and THxyz NPCs. The NPC numbers which are divisible by four with remainder zero are not valid TH NPCs. However, the range of TH type NPC numbers is still supported with the understanding that there may be gaps in the NPC number range.

C-bit processing DSPU circuit packs (**CB**-type NPCs) as well as other DSPU circuit packs must be individually unequipped.

When ranges of NPCs are addressed, the DGRTH command shows a completion indication after the last NPC in the range that has been unequipped or the highest numbered NPC that has been successfully unequipped. **Before** the completion indication is output, individual denial messages are output for each **NPC that is denied unequipage**.

One output message is printed for each NPC that is successfully unequipped.

Degrowth commands where the range address crosses a unit boundary are completely denied.

Within an NPC range, the degrowth command is denied for specific NPCs or sets of NPCs for any one of the following reasons:

- A Facility Terminating Module (FTM) within the range is unequipped.
- The NPC is unequipped.
- The NPC is in-service.
- The NPC is a testport or testgroup NPC.
- The NPC has active terminations or circuits under test.

The denial for two or more successive NPCs that need to be denied for the same reason is formatted in a summary message using the **Floating Window Denial Message** format. In that format a summary denial message is output, giving the range of NPCs denied and the reason. The execution of normal completions or of

denials for other reasons then resumes at the next NPC, up to the end of the range.

Command**Nonhierarchical**

[I.32341]

DGRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def]!

Hierarchical

[I.32341]

DGRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr]!

**Completion
Message****Nonhierarchical**

[O.32341]

M hh:mm:ss xy,ww n[vv] DGRTH NPC [s]ghi TYPE mnxyz COMPL

Hierarchical

[O.32341]

M hh:mm:ss xy,ww n[vv] DGRTH NPC uvghi TYPE mnxyz COMPL

Denial Message**Nonhierarchical**

[O.32341.01]

M hh:mm:ss xy,ww n[vv] DGRTH NPC [s]abc{[-[t]def]| TYPE -----} \
UEQD DNY

[O.32341.02]

M hh:mm:ss xy,ww n[vv] DGRTH NPC [s]abc{[-[t]def]| TYPE mnxyz} IS \
DNY

[O.32341.03]

M hh:mm:ss xy,ww n[vv] DGRTH NPC [s]abc{[-[t]def]| TYPE mnxyz} \
{NPCTP|NPCTG} DNY

[O.32341.04]

M hh:mm:ss xy,ww n[vv] DGRTH NPC [s]abc{[-[t]def]| TYPE mnxyz} \
TERM ASGN DNY

[O.32341.05]

M hh:mm:ss xy,ww n[vv] DGRTH NPC [s]abc{[-[t]def]| TYPE mnxyz} \
COND cc DNY

Hierarchical

[O.32341.01]

M hh:mm:ss xy,ww n[vv] DGRTH NPC uvmnp{[-uvkqr]| TYPE -----} UEQD \
DNY

[O.32341.02]

M hh:mm:ss xy,ww n[vv] DGRTH NPC uvmnp{[-uvkqr]| TYPE mnxyz} IS DNY

[O.32341.03]

M hh:mm:ss xy,ww n[vv] DGRTH NPC uvmnp{[-uvkqr]| TYPE mnxyz} \
{NPCTP|NPCTG} DNY

[O.32341.04]

M hh:mm:ss xy,ww n[vv] DGRTH NPC uvmnp{[-uvkqr]| TYPE mnxyz} TERM \
ASGN DNY

[O.32341.05]

M hh:mm:ss xy,ww n[vv] DGRTH NPC uvmnp{[-uvkqr]| TYPE mnxyz} COND \
cc DNY

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number, denoting the beginning of the range.
[t]def	The 3- or 4-digit nonhierarchical NPC number, denoting the end of the range. For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp, uvkqr	Hierarchical NPC numbers
uv	Unit number
m,k	Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

Range is not allowed for DSPU NPC degrowth.

With exceptions, an NPC must first be removed from service with the RMV,NPC,SIDE,INCL command before it can be degrown.

The exceptions are DSPU NPCs. However, if a cross-connected channel or a channel under test is present on the NPC, the command is denied.

Degrowth of DMB NPCs results in degrowth of both duplicated NPCs in the DMB circuit packs in the DSPU. For other DSPU NPCs, there is only one NPC per circuit pack. One of the duplicated NPCs may first be removed from service with the RMV,NPC,SIDE,INCL message.

If both NPCs are in service, both are automatically removed during the degrowth of NPC operation. If a cross-connected channel is present on the NPC, the message is denied.

SLC carrier terminated digroups must be deleted from the SLC carrier bank by executing the DLT,RT,DL,DGA,DGB,DGC,DGD,DGP command.

[s]ghi The 3- or 4-digit nonhierarchical NPC number ([s]abc through [t]def)

[s]jkl The 3- or 4-digit nonhierarchical NPC number ([s]abc through [t]mno)

[t]mno The 3- or 4-digit nonhierarchical NPC number ([s]ghi through [t]def)

uvghi Hierarchical NPC number within the range of uvmnp and uvkqr

uvjkl Hierarchical NPC number within the range of uvmnp and uvmno

uvmno Hierarchical NPC number within the range of uvjkl and uvkqr

TYPE Type

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

mn Explanation

DA Dual digroup ANSI NPC

DE Dual digroup NPC

DS SLC[®] carrier NPC

TA DS3U ANSI NPC

TE	DS3U or HDS3U Noninterface unit NPC
TH	Hybrid DS3U CEPT NPC
MB	Digital multipoint bridge NPC
MJ	Multipoint junction unit NPC
SR	Subrate multiplexer unit NPC
CB	C-bit processor (CPR) NPC
PA	CEPT NPC (75- or 120-ohm)
PB	CEPT NPC (120-ohm twisted pair)
PC	CEPT NPC (75-ohm coaxial)

The mn value is identified for the SDxyz application type NPCs.

SD Digital Signal Processing Application Circuit Pack

ST

Digital Signal Processing Circuit Pack
(2 NPCs per card)

UEQD Unequipped

The specified NPC is already unequipped.

IS In-service

The specified NPC is in service.

NPCTP NPC (for) test port

The specified NPC is designated for DS0 test ports.

NPCTG NPC (for) test group

The specified NPC is designated for Nx64Kbit/s test groups.

TERM Termination

ASGN Assigned

The specified NPC has active or under-test assigned termination.

COND Condition

The specified NPC is denied due to condition given by cc.

cc Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
15	NPC is unequipped
24	Unit type error
35	NPC has active circuit
3F	Conference exists in a DMB
8F	NPC not deleted
9C	SRDC timeslots are allocated on this NPC
F2	Invalid NPC number specified
FD	NPC range crosses unit boundary
69	Use of this NPC is RESERVED for SLC 96 MD 1
6A	Pseudochannels exist which reference this NPC

DEGROWTH SYNCHRONIZER TIME BASE

Explanation of Command

This command deprovisions of the synchronizer time base.

Command

[I.32101]
DGRTH: [FRM xy][, SEQ ww]:SYNC, TB!

Completion Message

[O.32101]
M hh:mm:ss xy,ww n[vv] DGRTH SYNC TB TYPE TBpqr COMPL

Denial Message

[O.32101.01]
M hh:mm:ss xy,ww n[vv] DGRTH SYNC TB TYPE TBpqr COND cc DNY

Explanation of Parameters

SYNC	Synchronizer
TYPE	Type
TB	Time base
p	Time base identifier
qr	Unassigned
	q and r can take any value from 0 through 9
p	Time base
0	Stratum 3
1	CEPT Local (2.048 Mbit/s Termination only)
2	CEPT Toll (2.048 Mbit/s Termination only)
3	Stratum 2

 **NOTE:**
pqr is shown as "---" if the synchronizer is not equipped.

cc Hexadecimal condition code

cc	<i>Explanation</i>
16	SYNC TB is not equipped
A4	Both syncs are in-service

DEPROVISION SYNCHRONIZER TIMING LINK INTERFACE

Explanation of Command

This command deprovisions of the synchronizer's timing link interface.

If the timing link interface was configured as a timing extractor (TYPE-texyz), the synchronizer sync port must be specified as well.

On output, note that the NPC option can be a source of synchronization for a timing link interface. When a TU type TLI receiving its input from an NPC is degrown, the NPC must be marked as no longer being a synchronizer source.

Command

[I.32121]

DGRTH:[FRM xy][,SEQ ww]:SYNC,TLI m[,SSP a]!

Completion Message

1.544 Mbit/s Termination

[O.32121]

M hh:mm:ss xy,ww n[vv] DGRTH SYNC TLI m 2 LN MSG:
{SSP a SRC p TYPE texyz|TYPE TDpqr|TYPE TBpqr} COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.32121]

M hh:mm:ss xy,ww n[vv] DGRTH SYNC TLI m 2 LN MSG:
{SSP a SRC p TYPE texyz[NPC [s]abc]|TYPE TDpqr|TYPE TBpqr} \
COMPL

Hierarchical

[O.32121]

M hh:mm:ss xy,ww n[vv] DGRTH SYNC TLI m 2 LN MSG:
{SSP a SRC p TYPE texyz[NPC uvmnp]|TYPE TDpqr|TBpqr} COMPL

Denial Message**1.544 Mbit/s Termination**

[O.32121.01]

```
M hh:mm:ss xy,ww n[vv] DGRTH SYNC TLI m 2 LN MSG:
{SSP a SRC p TYPE texyz|TYPE TDpqr|TYPE TBpqr} COND cc DNY
```

2.048 Mbit/s Termination**Nonhierarchical**

[O.32121.01]

```
M hh:mm:ss xy,ww n[vv] DGRTH SYNC TLI m 2 LN MSG:
{SSP a SRC p TYPE texyz[ NPC [s]abc]|TYPE TDpqr|TYPE TBpqr} \
COND cc DNY
```

Hierarchical

[O.32121.01]

```
M hh:mm:ss xy,ww n[vv] DGRTH SYNC TLI m 2 LN MSG:
{SSP a SRC p TYPE tepgr[ NPC uvmnp]|TYPE TDpqr|TBpqr} \
COND cc DNY
```

**Explanation of
Parameters**

SYNC	Synchronizer
TLI	Timing link interface
m	TLI number (1 through 4)
SSP	Synchronizer synchronization port
a	SSP number (0 or 1)
	If the TLI was configured as a timing extractor (TYPE texyz), the synchronizer synchronization port must be specified as well.
SRC	Source
p	Synchronization port priority (1 through 8)
1	HIGHEST priority
8	LOWEST priority

2.048 Mbit/s Termination

NPC	Network processing circuit

[s]abc The 3- or 4-digit nonhierarchical NPC number, PB/PC type
The valid values are
NPC type NPC number
PB,PC [0]030, [0]032, [0]070, [0]072, [0]190, [0]192,
[0]230, [0]232
uvmnp Hierarchical NPC number, PB/PC type

NPC type	Unit No.	Module No.	NPC No.
PB,PC	01	1,2	30,32
	02	1,2	30,32

Option NPC ([s]abc or uvmnp) is only used with the SSP variable and TLI type TUxyz.

TYPE Type
texyz Timing extractor type
TCxyz Composite Clock Timing Extractor
TExyz DS1 Timing extractor
TPxyz Primary Block Timing Extractor (xyz values are listed below)
TRxyz Basic System Reference Frequency
TUxyz Unipolar Clock Timing Extractor
----- Not Equipped

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

TD Timing distributor
p Timing distributor identification
Variable TDpqr equals ----- if the timing distributor is not equipped.
1 Composite clock timing distribution
2 Sinusoidal 2.048 MHz timing distribution
qr Unassigned

TB Time base
p Time base identifier

qr	Unassigned
	q and r can take any value from 0 through 9
p	Time base
0	Stratum 3
1	CEPT Local (2.048 Mbit/s Termination only)
2	CEPT Toll (2.048 Mbit/s Termination only)
3	Stratum 2

 **NOTE:**
pqr will be shown as "---" if the synchronizer is not equipped.

cc Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
A1	CRO type TLI (SSP portion not required)
A2	SSP number is illegal
A3	SSP number required
B8	CRO is still equipped
BE	Hardware mismatch or not present
CC	NPC is still provisioned to provide sync timing

DEGROWTH TEST-ACCESS GROUP

Explanation of Command

This command requests the deprovisioning of one or more idle test-access groups.

Command

1.544 Mbit/s Termination

[I.32421]

DGRTH:FRM xy,SEQ ww:TG mmm[-nnn]!

Completion Message

1.544 Mbit/s Termination

[O.32421]

M hh:mm:ss xy,ww n[vv] DGRTH TG mmm[-nnn] p LN MSG:
TG mmm,rrr,sss[TG mmm,rrr,sss][TG mmm,rrr,sss][TG mmm,rrr,sss]
[TG mmm,rrr,sss][TG mmm,rrr,sss][TG mmm,rrr,sss][TG mmm,rrr,sss]
[TG mmm,rrr,sss][TG mmm,rrr,sss][TG mmm,rrr,sss][TG mmm,rrr,sss]
[TG mmm,rrr,sss][TG mmm,rrr,sss][TG mmm,rrr,sss]\

or

M hh:mm:ss xy,ww n[vv] DGRTH TG ppp[-qqq] UEQD {EOM|COMPL}

Denial Message

1.544 Mbit/s Termination

[O.32421.01]

M hh:mm:ss xy,ww n[vv] DGRTH TG mmm[-nnn] [TGS ttt[-uuu]] COND cc \

DNY

2.048 Mbit/s Termination

[O.32421.01]

M hh:mm:ss xy,ww n[vv] DGRTH TG mmm[-nnn] [TGS ttt[-uuu]] COND cc \ DNY

Explanation of Parameters

TG	Test-access Group
mmm	TG number (1 through 400)
nnn	End of TG range number (1 through 400)
rrr	East-bundle NPCTG number (1 through 400)
sss	West-bundle NPCTG number (1 through 400)
UEQD	Unequipped
ppp,qqq	Unequipped TGs in specified range
ttt,uuu	Active TGs in specified range
cc	Hexadecimal condition code
cc <i>Explanation</i>	
63	None of the designated TG(s) are equipped
A5	Test group is not idle or frame is not In Service

DEGROWTH

Explanation of Command

**NOTE:**

This command applies to the 1.544 Mbit/s Termination Interface only.

This command requests the unequipage of a specified test port. Any subsequent test access requests for this test port are denied. Also, if the specified test port is in use, the command is denied.

When degrowth of the specified test port is completed, the channel units associated with this test port are no longer assumed in place, and no test ports with numbers greater than the one specified remain equipped.

Command

[I.32411]

DGRTH: [FRM xy][, SEQ ww]:TP kk!

Completion Message

[O.32411]

M hh:mm:ss xy,ww n[vv] DGRTH TP kk COMPL

Denial Message

[O.32411.01]

M hh:mm:ss xy,ww n[vv] DGRTH TP kk NPCTP UEQD DNY

[O.32411.02]

M hh:mm:ss xy,ww n[vv] DGRTH TP kk NOT IDLE DNY

[O.32411.03]

M hh:mm:ss xy,ww n[vv] DGRTH TP kk TPMAX nn TP NSO DNY

**Explanation of
Parameters**

TP	Test port
kk	Test port number (01 through 96)
NPCTP	NPC for test ports
UEQD	Unequipped
TPMAX	Test port maximum
nn	Test port number (01 through 96)
NSO	Not in sequence order

Degrowth of test port kk can be denied under the following conditions:

- The NPCTP (network processing circuit for test ports) has not been designated or UEQD.
 - The requested test port is not idle. The test port is currently assigned to a cross-connected channel for test access (NOT-IDLE).
 - The requested test port is NSO (not in sequence order) (TPMAX=nn, TP, NSO). That is, kk is not equal to the highest existing test port number nn in the NPCTP.
-

DEPROVISION FACILITY TERMINATING MODULE INTERFACE

Explanation of Command

This command unequips a DACS II facility terminating module and its associated facility terminating module interface.

Command

[I.32321]
DGRTH:[FRM xy][,SEQ ww]:UNIT [q]q,FTMI d!

Completion Message

[O.32321]
M hh:mm:ss xy,ww n[vv] DGRTH UNIT [q]q FTMI d FC 0d 1d COMPL

Denial Message

[O.32321.01]
M hh:mm:ss xy,ww n[vv] DGRTH UNIT [q]q FTMI d
[FC sd][NPC n] {UEQD|EQD|IS} DNY

[O.32321.02]
M hh:mm:ss xy,ww n[vv] DGRTH UNIT [q]q FTMI d FC 0d 1d
COND cc DNY

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
FTMI	Facility terminating module interface
d	FTMI number in the DACS II unit (1 through 4)
FC	Format converter
s	Side of in-service FC
0	Side 0 FC in-service

	1	Side 1 FC in-service
	2	Both sides in-service
NPC		Network processing circuit
n		Number of the NPC in the FTM that are still equipped (1 through 40)
UEQD		The FTMI is unequipped
EQD		Equipped
IS		In service
		Format converter side (FC sd) is still in-service
cc		Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
03	Subject entity is in service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
30	Unit is not FTU type

DEPROVISION MULTIPLEXER INTERFACE UNIT

**Explanation of
Message****NOTE:**

This command applies to the 1.544 Mb/s Termination Interface only.

This command requests and reports the degrowth of one or more Multiplexer Interface Units (MIUs) in a DS3 unit.

Command

[I.32511]

DGRTH:[FRM xy][,SEQ ww]:UNIT [q]q,MIU c[-d]!

**Completion
Message**

There is one output message (either completion or denial) per MIU.

[O.32511]

M hh:mm:ss xy,ww n[vv] DGRTH UNIT [q]q MIU a TYPE mnxyz COMPL

Denial Message

[O.32511.01]

M hh:mm:ss xy,ww n[vv] DGRTH UNIT [q]q MIU a[TYPE mnxyz] \
COND cc DNY

**Explanation of
Parameters**

UNIT	Unit
[q]q	Unit number (1 through 16)
MIU	Multiplexer interface unit
c,d	The number of the MIU within the unit (P, 1 through 6)
TYPE	Type
mnxyz	Type identifier
	MI100 MIU type. This is the only MIU type available.
a	MIU number within the range of c and d.

cc		Hexadecimal condition code
cc	<i>Explanation</i>	
10	Unit is not equipped	
11	UC is out of service	
12	UC is in service but failed	
B3	MIU is already in service	
BF	MIU is not equipped	
52	The MMFG is protected	
53	The associated MMFG is under protection (for Service MIUs)	
55	Some associated NPCs are equipped	

DEGROWTH MULTIPLEXER

**Explanation of
Command**

This command requests and reports the degrowth of one or more Multiplexers (MXRs) and associated DS3 facilities in the service slots of a DS3 unit. It is also used to request and report the degrowth of one or more Hybrid Multiplexers (HMXRs) and associated DS3 facilities in the service slots of a Hybrid DS3 unit.

Command

[I.32501]
DGRTH:[FRM xy][,SEQ ww]:UNIT [q]q,MXR c[-d]!

**Completion
Message**

⇒ **NOTE:**
There is one output message (either completion or denial) per MXR.

[O.32501]
M hh:mm:ss xy,ww n[vv] DGRTH UNIT [q]q MXR a TYPE mnxyz COMPL

Denial Message

[O.32501.01]
M hh:mm:ss xy,ww n[vv] DGRTH UNIT [q]q MXR a[TYPE mnxyz] \
COND cc DNY

**Explanation of
Parameters**

UNIT	Unit
[q]q	Unit number (1 through 16)
MXR	Multiplexer
c,d	The number of the MXR within the unit ($1 \leq c,d \leq 6$)

⇒ **NOTE:**
The Protection MXR is degrown along with the UNIT.

a MXR number within the range of c and d

TYPE	The requested DS3 format to be processed by the MXR.
mnxyz	The DS3 format processed by the MXR:
mn	The type of DS3 facility
MX	The original R4.0 DS3 facility type supported by the Multiplexer (MXR) circuit pack (KCR-1).
EX	The enhanced R6.0 DS3 facility type supported by the Enhanced Multiplexer (EMXR) circuit pack (KCR-5).
HX	The hybrid facility type supported by the Hybrid Multiplexer (HMXR) circuit pack (KCR-8).
	If the unit is a regular DS3U of unit type DT100, then the default is the MX type for backward compatibility.
	If the unit is a Hybrid DS3U of unit type HT100, then the default is HX.
	Allowed xyz values:
MX100	KCR-1 circuit pack with M13 framing
MX200	KCR-1 circuit pack with C-bit parity framing
EX100	KCR-5 circuit pack with M13 framing
EX200	KCR-5 circuit pack with C-bit parity framing
HX100	KCR-8 Hybrid circuit pack with M13 framing
HX110	KCR-8 Hybrid circuit pack with M13 framing and reverse interpretation of X-bit values.
cc	Hexadecimal condition code
cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
9B	The MXR is not grown
52	The MMFG is protected
53	The associated MMFG is under protection (for Service MIUs)
54	The MIU is already equipped
55	Some associated NPCs are equipped
56	The MXR is in service

DEGROW UNIT

Explanation of Message

This message requests the degrowth of a DACS II unit.

When this request is completed, the two ETSI circuit packs required by the subject unit to cross-connect to other grown units are degrown.

Command

[I.32211]

DGRTH: [FRM xy][,SEQ ww]:UNIT [q]q!

Completion Message

1.544 Mbit/s Termination

[O.32212]

```
M hh:mm:ss xy,ww n[vv] DGRTH UNIT qq 4 LN MSG:
TOTAL ETSIS kk DEGROWN ETSI 0qq 1qq
0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr \
0rr 1rr
0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr \
0rr 1rr {EOM|COMPL}
```

If the unit is a DS3 or a Hybrid DS3 Unit, the preceding message is followed by this segment:

[O.32211]

```
M hh:mm:ss xy,ww n[vv] DGRTH UNIT qq e LN MSG:
[REMOVED FMT[ 0][ 1]]
DEGROWN FMT 0 1 FLI S P MXR P COMPL
```

If the unit is a High Speed Unit (HSU), the preceding message is followed by this segment:

[O.32211]

```
M hh:mm:ss xy,ww n[vv] DGRTH UNIT qq e LN MSG:
[REMOVED FMT[ 0][ 1]]
DEGROWN FMT 0 1 UC S MPR P COMPL
```



NOTE:

The line corresponding to FMT removal is only output if one or both FMTs have been removed.

2.048 Mbit/s Termination

[O.32212]

M hh:mm:ss xy,ww n[vv] DGRTH UNIT qq 4 LN MSG:
TOTAL ETSIS kk DEGROWN ETSI 0qq 1qq
0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr \\
0rr 1rr
0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr \\
0rr 1rr {EOM|COMPL}

Denial Message

1.544 Mbit/s Termination

[O.32211.01]

M hh:mm:ss xy,ww n[vv] DGRTH UNIT [q]q UEQD DNY

[O.32211.02]

M hh:mm:ss xy,ww n[vv] DGRTH UNIT [q]q \\
[{FTMI m EQD|NPC l EQD|[MXR k][MIU P][EQD]]}[FLI c IS] \\
DNY

[O.32211.03]

M hh:mm:ss xy,ww n[vv] DGRTH UNIT [q]q COND cc DNY

2.048 Mbit/s Termination

[O.32211.01]

M hh:mm:ss xy,ww n[vv] DGRTH UNIT [q]q UEQD DNY

[O.32211.02]

M hh:mm:ss xy,ww n[vv] DGRTH UNIT [q]q {FTMI m|NPC l} EQD DNY

[O.32211.03]

M hh:mm:ss xy,ww n[vv] DGRTH UNIT [q]q COND cc DNY

Explanation of Parameters	UNIT	Unit
	[q]q	Unit number (1 through 16)
	e	Number of lines in the output message segment (2 through 4)
	DEGROWN	Degrown
		Degrowth of UNIT q (1 through 6) can be denied because
		■ The unit is already degrown (UEQD) ■ The FTU is still equipped with m FTMIs (facility terminating module interfaces) ■ The DSPU is supporting one NPC ■ The UC (unit controller) is IS (in service) ■ The DS3U is still equipped with k multiplexers (MXRs) or Hybrid multiplexers (HMXR) and/or the protection multiple interface unit (MIU P) ■ The DS3U or Hybrid DS3U is supporting at least one in-service facility line interface (FLI)
	kk	Total number of equipped ETSIs in the frame after the unit is degrown (00 through 30)
	ETSI	Expanded time slot interchangers
	ETSI	Expanded time slot interchanger
	0qq	ETSI number side 0
	1qq	ETSI number side 1
		0qq and 1qq identify the ETSI packs deprovisioned by this command. qq is the unit number (see UNIT above).
		Three dashes "---" are shown if an ETSI pack is not provisioned.
	0rr	ETSI number side 0
	1rr	ETSI number side 1
		0rr and 1rr give the ETSIs equipage status. rr is the unit number (see UNIT above)
		Three dashes "---" are shown if an ETSI pack is not provisioned.
		Hybrid DS3U does not support MIU.
	FLI	Facility line interface
	S	Service
	P	Protection
	FMT	Formatter or Hybrid Formatter

0	Side number 0
1	Side number 1
MIU	Multiple interface unit
MXR	Multiplexer or Hybrid Multiplexer
P	Protection
FTMI	Facility terminating module interface
m	Number of FTMIs (1 through 4). Appears if the unit is equipped as an FTU.
NPC	Network processing circuit
I	Number of NPCs in DSP unit (1 through 8). Appears if the unit is equipped as a DSPU.
k	Number of MXRs or HMXRs (1 through 6). Appears if the unit is equipped as a DS3U or a HDS3U.
c	Number of FLIs that are in service (1 or 2). Appears if the unit is equipped as a DS3U or a HDS3U.
EQD	Equipped
cc	Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
01	Subject entity is equipped
03	Subject entity is in service
4D	DSPI is in service

DELETE FEATURE PACKAGE IDENTIFICATION

Explanation of Command

The frame administrator enters this command to change the feature package identification code. This command is used to reduce the feature package set by a single feature at a time.

Because of the impact of this command on the available features, the following dialogue will be displayed by DACS II.

ARE YOU SURE?

The user must respond with an affirmative Y for the command to be executed.



NOTE:

The execution of this command requires DACS II superuser privileges. The frame must be in the **MCOND** (maintenance condition) state at execution.



WARNING:

A manual backup from RAM to MEM (PMEM & SMEM together) must be invoked prior to entering Maintenance Condition, else the command may not complete.

Command

[I.37301]

DLT:[FRM xy][,SEQ ww]:FPKG nnnnnnnn!

Completion Message

[O.37301]

M hh:mm:ss xy,ww n[vv] DLT FPKG nnnnnnnn NEW aabbccdd \
OLD kkttuuvv COMPL

Denial Message

[O.37301.01]

M hh:mm:ss xy,ww n[vv] DLT FPKG nnnnnnnn COND cc DNY

**Explanation of
Parameters**

FPKG	Feature package
nnnnnnnn	Feature Package number (hexadecimal)
00000001	DS1
00000002	CEPT
00000004	Subrate
00000008	Direct SLC [®] 96 and Series 5 Carrier Interface
00000010	DS3 Terminations
00000020	Enhanced CEPT
	C-bit
	C-bit filtering
	RPSFI
00000040	Switched Teleconferencing
00000080	CEF
00000100	Enhanced DS1 Performance Monitoring
00000200	DS0/DS1 Roll
00000400	AT&T Security Warning Message
00000800	Nx64kbit Test Access
00001000	Clear 2MB/s Interface
00002000	TS0 to Non TS0 Cross-connection
00004000	2MB/S Roll
00008000	SPARE
00010000	TRT/FT Features
	Intervention Level
00020000	DS3 Hybrid
NEW	New
aabbccdd	New feature package identification code (hexadecimal)
OLD	Old
kkttuuvv	Old feature package identification code (hexadecimal)
00000001	DS1
00000002	CEPT

00000004	Subrate
00000008	Direct SLC [®] 96 and Series 5 Carrier Interface
00000010	DS3 Terminations
00000020	Enhanced CEPT
	C-bit
	C-bit filtering
	RPSFI
00000040	Switched Teleconferencing
00000080	CEF
00000100	Enhanced DS1 Performance Monitoring
00000200	DS0/DS1 Roll
00000400	AT&T Security Warning Message
00000800	Nx64kbit Test Access
00001000	Clear 2MB/s Interface
00002000	TS0 to Non TS0 Cross-connection
00004000	2MB/S Roll
00008000	SPARE
00010000	TRT/FT Features
	Intervention Level
00020000	DS3 Hybrid

In general, a feature package identification code is a combination of several individual feature package numbers. To determine the individual features that make up a feature package, decode the feature package identification code. This code is an eight digit hexadecimal number. Each hexadecimal number represents a four-bit binary number. Within this binary number each feature is associated with one particular bit. Consequently to determine the feature list from a feature package identification code it is necessary to convert each hexadecimal digit to its binary equivalent and look up the features in the preceding list. For example, the feature package identification code 0000000F can be converted to the following binary number working from left to right one hex digit at a time.

0000 0000 0000 0000 0000 0000 0000 1111

This number contains eight binary numbers each representing one of the hexadecimal numbers in the feature package identification code 0000000F. The rightmost number of the code

contains four features since there are four bits set to one. This would be decoded as follows using the preceding table of features.

Binary	Hex	Feature
0001	1	DS1
0010	2	CEPT
0100	4	Subrate
1000	8	Direct SLC
Total:		
1111	F	DS1 + CEPT + Subrate + SLC

cc

Hexadecimal condition code

cc	Explanation
96	Unit(s) OOS, and additional backup required
25	Invalid FPI value
26	Feature deactivation would leave system with core software
27	Disable not allowed - supports another feature
28	Feature is active
29	Feature not enabled
2A	Database not loaded
2B	Reading Feature Package Id from PMEM failed
2C	Writing Feature Package Id to PMEM failed
01	Backup required before executing this command

DELETE MACRO

Explanation of Command

This command requests the deletion of a macro or alternate map from the DACS II system.



NOTE:

Only the DACS II frame administrator can remove a public macro or another user's macros and maps. The names of public macros begin with the letter P.

Command

[I.37201]

```
DLT:[FRM xy][,SEQ ww]:{MACRO <macro name>|MAP <map name>} \
[,USER <user id>]!
```

Completion Message

[O.37201]

```
M hh:mm:ss xy,ww n[vv] DLT {MACRO <macro name>|MAP <map name>} \
[ USER <user id>] COMPL
```

Denial Message

[O.37201.01]

```
M hh:mm:ss xy,ww n[vv] DLT {MACRO <macro name>|MAP <map name>} \
[ USER <user id>] COND cc DNY
```

Explanation of Parameters

macro name Macro name (seven characters maximum length)

The name of a collection of DACS II commands executed as a group.

A macro name is a string of capitalized alphanumeric characters. There are two type of macros; public and private. A private macros is created by a user in space allocated to the user by the system administrator. Only the user that created it can execute or read (LIST) a private macro. A public macro

is created by the system administrator and is executable and readable by all users. A public macro name must start with the letter P. A private macro name must not start with the letter P.

map name	Map name (7 characters maximum length) The name of a collection of DACS II cross-connect commands that can be activated as a group to produce a new set of cross-connections (a new cross-connect map). A map name is a string of capitalized alphanumeric characters.
user id	User identifier (2 to 8 alphabetic characters) The user field is the user's login identifier. It is used only by the frame administrator to delete a private macro or map owned by the user specified. A user does not need to specify this information in order to delete a personally owned (private) macro or map.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
62	File is being accessed
64	File doesn't exist/can't be accessed
D0	Command is Frame administrator (DAX) only.
D3	User does not exist
D5	No user is logged in on the link/vc

EDIT DELETE MAP

Explanation of Command

This command is only used in the open and create session of the alternate map feature. It is not intended to be used as a regular command under any circumstances.

This message is used to *delete* a single NPC, a range of NPCs, or a list of NPCs, from an alternate map.

To delete circuits from an alternate map, enter the **TCON::FRM,TO** command (I.11001) with the DLT keyword at the end.

The only system response to this command is:

OK

Denials in response to this command are sent only to the link on which the command was input.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.37001]

```
DLT:[FRM xy][,SEQ ww]:NPC {[s]abc-[t]def|[s]abc[, [s]ghi]...  
[, [t]def]]!
```

Hierarchical

[I.37001]

```
DLT:[FRM xy][,SEQ ww]:NPC {uvmnp-wxkqr|uvmnp[, abcde]...[, wxkqr]]!
```

2.048 Mbit/s Termination

Nonhierarchical

[I.37001]

```
DLT:[FRM xy][,SEQ ww]:NPC {[s]abc-[t]def|[s]abc[, [s]ghi]...  
[, [t]def]]!
```

Hierarchical

[I.37001]

DLT: [FRM xy][,SEQ ww]:NPC {uvmnp-wxkqr|uvmnp[,abcde]...[,wxkqr]}!

Completion Message

1.544 Mbit/s Termination

If the command is accepted by DACS II, the following input acknowledgement is output.

OK

2.048 Mbit/s Termination

If the command is accepted by DACS II, the following input acknowledgement is output.

OK

Explanation of Parameters

[s]abc,[t]def,[s]ghi

The 3- or 4-digit non-hierarchical NPC numbers

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp,wxkqr,abcde

Hierarchical NPC number

uv,wk,ab Unit number

m,x,c Module number

np,qr,de NPC number

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

cc

Hexadecimal condition code

cc	Explanation

7A	The NPC to delete has not been previously added to map

DELETE {RT|DL}

Explanation of Command

**NOTE:**

This command applies to the 1.544 Mbit/s Termination Interface only.

This command is used to delete the association of a network processing circuit (NPC) number with a SLC[®] carrier remote terminal (RT) or digital carrier line unit (DCLU) bank's digroup name. Once all of digroups of a specific bank are deleted, the bank's identification number and its mode of operation are also deleted.

Note that at least one digroup name and NPC number must be specified on input.

For the denial message, the optional A, B, C, D, or P character is shown to indicate the digroup that causes the denial.

Command

Nonhierarchical

[I.37211]

```
DLT:[FRM xy][,SEQ ww]:{RT|DL} ffff[,DGA [s]aaa][,DGB [s]bbb] \
[,DGC [s]ccc][,DGD [s]ddd][,DGP [s]ppp]!
```

Hierarchical

[I.37211]

```
DLT:[FRM xy][,SEQ ww]:{RT|DL} ffff \
[,DGA uvjab][,DGB uvkcd][,DGC uvlef][,DGD uvmgh] \
[,DGP uvjpr]!
```

Completion Message

Nonhierarchical

[O.37211]

```
M hh:mm:ss xy,ww DLT {RT|DL} ffff 2 LN MSG:
[DGA [s]aaa][ DGB [s]bbb][ DGC [s]ccc][ DGD [s]ddd] \
[ DGP [s]ppp] COMPL
```

Hierarchical

[O.37211]

M hh:mm:ss xy,ww DLT {RT|DL} ffff 2 LN MSG:
[DGA uvjab][DGB uvkcd][DGC uvlef][DGD uvmgh] \
[DGP uvjpr] COMPL

Denial Message**Nonhierarchical**

[O.37211.01]

M hh:mm:ss xy,ww DLT {RT|DL} ffff 2 LN MSG:
[DGA [s]aaa][DGB [s]bbb][DGC [s]ccc][DGD [s]ddd] \
[DGP [s]ppp][{A|B|C|D|P}] COND cc DNY

Hierarchical

[O.37211.01]

M hh:mm:ss xy,ww DLT {RT|DL} ffff 2 LN MSG:
[DGA uvjab][DGB uvkcd][DGC uvlef][DGD uvmgh][DGP uvjpr] \
[{A|B|C|D|P}] COND cc DNY

**Explanation of
Parameters**

RT	SLC [®] Carrier Remote Terminal
DL	Digital Carrier Line Unit
ffff	Bank identification number (0000 to 9999 inclusive)
DGA	SLC Carrier digroup A
DGB	SLC Carrier digroup B
DGC	SLC Carrier digroup C
DGD	SLC Carrier digroup D
DGP	SLC Carrier digroup P
[s]aaa	The 3- or 4-digit nonhierarchical DGA NPC number
[s]bbb	The 3- or 4-digit nonhierarchical DGB NPC number
[s]ccc	The 3- or 4-digit nonhierarchical DGC NPC number
[s]ddd	The 3- or 4-digit nonhierarchical DGD NPC number
[s]ppp	The 3- or 4-digit nonhierarchical DGP NPC number
For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."	

uv	Unit number
j,k,l,m	Module number within the unit
ab	Digroup A (DGA) NPC number within the module
cd	Digroup B (DGB) NPC number within the module
ef	Digroup C (DGC) NPC number within the module
gh	Digroup D (DGD) NPC number within the module
pr	Digroup P (DGP) NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

A,B,C,D,P

Digroup A, B, C, D, or P.

This indicates the digroup that caused the denial.

cc Hexadecimal condition code

cc	<i>Explanation</i>
03	Subject entity is in service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
15	NPC is unequipped
35	NPC has active circuit
6A	NPC type is not DS type
78	Protection switch process failed
7E	Bank id number not found
7F	NPC is not added
80	NPC number and bank id don't match
81	NPC number and digroup name don't match
87	DGP is protecting a primary digroup
89	Can't delete because not all associated NPCs of the RT are entered
8B	Digroup name and bank id don't match
8C	Digroup is protected
93	All digroups not out of service

cc	<i>Explanation</i>
BC	DGA and DGB must be specified together in the command
BD	DGC and DGD must be specified together in the command
F9	Mate NPC (DGA/DGP) is in service
59	Number of DGPs on each unit is limited to 32
69	Use of this NPC is RESERVED for SLC 96 MD 1
02	Manual Pending is Active

DELETE USER

Explanation of Command

This command requests the deletion of user id from the DACS II system.

Output from this command is sent only to the link on which the command was input.

**NOTE:**

This command may be used only by the DACS II frame administrator. It may be executed on any administrative link.

Command

[I.37101]

DLT:[FRM xy][,SEQ ww]:USER <user id>!

Completion Message

[O.37101]

M hh:mm:ss xy,ww n[vv] DLT USER <user id> COMPL

Denial Message

[O.37101.01]

M hh:mm:ss xy,ww n[vv] DLT USER <user id> COND cc DNY

Explanation of Parameters

USER	User
user id	User identifier
	User login identification (two to eight alphabetic characters)
cc	Hexadecimal condition code

cc	<i>Explanation</i>
D0	Command is Frame administrator (DAX) only.
D3	User does not exist
D8	Cannot remove Frame administrator
D9	User has logged in somewhere
DB	User still owns files

DIGITAL SIGNAL PROCESSING PLATFORM APPLICATION COMMAND

Explanation of Command

This command explains the command syntax from the DACS II point of view for all applications that run on the Digital Signal Processing Platform (DSPP) circuit pack (TG193). All applications use a prefix system for both input commands and output messages of all types for communication between the user and the application. This prefix system is defined in the subsequent commands and messages. The prefix system permits DACS II to send a command to an application without parsing and/or examining that command. Any return message from the application uses a prefix also, which is simply prepended to the return message from the application by DACS II. Similarly, an autonomous message from an application is prepended with a prefix that identifies the NPC number of the particular DSPP circuit pack on which the message was issued.

The commands for a particular application are given in detailed form in the documentation package for that application. In that documentation, the prefix notation that is explained here is also given, so that the user sees a complete command structure. Depending on the individual command, that command may be sent to an individual DSPP circuit pack running that application, a range of circuit packs running that application, or all circuit packs running that application restored in the frame.

Command

Nonhierarchical

[I.14901]

```
DSPC:[FRM xy][,SEQ ww]: \
{[s]aaa|[s]aaa-[v]bbb|SDxyz}:<pds_application command>
```

Hierarchical

[I.14901]

```
DSPC:[FRM xy][,SEQ ww]:{uvnmp|uvnmp-wxkqr|SDxyz}: \
<pds_application command>
```

Completion Message

Nonhierarchical

Command using single NPC

[O.14901]

```
M hh:mm:ss xy,ww n[vv] DSPC [s]aaa \  
<pds_application_response for NPC [s]aaa>
```

Command using range of NPCs

[O.14901]

```
M hh:mm:ss xy,ww n[vv] DSPC [s]aaa \  
<pds_application_response for NPC [s]aaa>  
.  
.  
.  
M hh:mm:ss xy,ww n[vv] DSPC [v]bbb \  
<pds_application_response for NPC [v]bbb>  
M hh:mm:ss xy,ww n[vv] DSPC [s]aaa-[v]bbb \  
<pds_input_command - truncated>....COMPL
```

Command using NPC type

[O.14901]

```
M hh:mm:ss xy,ww n[vv] DSPC [s]aaa \  
<pds_application_response for NPC [s]aaa>  
.  
.  
.  
M hh:mm:ss xy,ww n[vv] DSPC [v]bbb \  
<pds_application_response for NPC [v]bbb>  
M hh:mm:ss xy,ww n[vv] DSPC SDxyz \  
<pds_input_command - truncated>....COMPL
```

Hierarchical

Command using single NPC

[O.14901]

```
M hh:mm:ss xy,ww n[vv] DSPC uvnmp \  
<pds_application_response for NPC uvnmp>
```

Command using range of NPCs

[O.14901]

```
M hh:mm:ss xy,ww n[vv] DSPC uvnmp \  
<pds_application_response for NPC uvnmp>
```

Command using range of NPCs

[O.14901]

```
M hh:mm:ss xy,ww n[vv] DSPC uvnmp \
<pds_application_response for NPC uvnmp>
.
.
.
M hh:mm:ss xy,ww n[vv] DSPC wxkqr \
<pds_application_response for NPC wxkqr>
M hh:mm:ss xy,ww n[vv] DSPC uvnmp-wxkqr \
<pds_input_command - truncated>....COMPL
```

Command using NPC type

[O.14901]

```
M hh:mm:ss xy,ww n[vv] DSPC uvnmp \
<pds_application_response for NPC uvnmp>
.
.
.
M hh:mm:ss xy,ww n[vv] DSPC wxkqr \
<pds_application_response for NPC wxkqr>
M hh:mm:ss xy,ww n[vv] DSPC SDxyz \
<pds_input_command - truncated>....COMPL
```

Denial Message

Nonhierarchical

Command using single NPC

[O.14901.01]

```
M hh:mm:ss xy,ww n[vv] DSPC [s]aaa \
<pds_application_error_response for NPC [s]aaa>
```

Command using range of NPCs

[O.14901.01]

```
M hh:mm:ss xy,ww n[vv] DSPC [s]aaa \
<pds_application_error_response for NPC [s]aaa>
.
.
.
M hh:mm:ss xy,ww n[vv] DSPC [v]bbb \
<pds_application_error_response for NPC [v]bbb>
M hh:mm:ss xy,ww n[vv] DSPC [s]aaa-[v]bbb \
<pds_input_command - truncated>....COND cc DNY
```

Command using NPC type

[O.14901.01]

```
M hh:mm:ss xy,ww n[vv] DSPC [s]aaa \
<pds_application_error_response for NPC [s]aaa>
.
.
.
M hh:mm:ss xy,ww n[vv] DSPC [v]bbb \
<pds_application_error_response for NPC [v]bbb>
M hh:mm:ss xy,ww n[vv] DSPC SDxyz \
<pds_input_command - truncated>....COND cc DNY
```

Command of any type when no DSPP circuit pack with application is responding

[O.14901.01]

```
M hh:mm:ss xy,ww n[vv] DSPC {[s]aaa|[s]aaa-[v]bbb|SDxyz} \
<pds_input_command - truncated>.... COND cc DNY
```

Hierarchical

Command using single NPC

[O.14901.01]

```
M hh:mm:ss xy,ww n[vv] DSPC uvnmp <pds_application_error_response \
for NPC uvnmp>
```

Command using range of NPCs

[O.14901.01]

```
M hh:mm:ss xy,ww n[vv] DSPC uvnmp <pds_application_error_response \
for NPC uvnmp>
.
.
.
M hh:mm:ss xy,ww n[vv] DSPC wxkqr <pds_application_error_response \
for NPC wxkqr>
M hh:mm:ss xy,ww n[vv] DSPC uvnmp-wxkqr \
<pds_input_command - truncated>....COND cc DNY
```

Command using NPC type

[O.14901.01]

```
M hh:mm:ss xy,ww n[vv] DSPC uvnmp <pds_application_error_response \
for NPC uvnmp>
.
.
```



```
.
M hh:mm:ss xy,ww n[vv] DSPC wxkqr <pds_application_error_response \
for NPC wxkqr>
M hh:mm:ss xy,ww n[vv] DSPC SDxyz \
<pds_input_command - truncated>....COND cc DNY
```

Command of any type when no DSPP circuit pack with application is responding

[O.14901.01]

```
M hh:mm:ss xy,ww n[vv] DSPC {uvnmp|uvnmp-wxkqr|SDxyz} \
<pds_input_command - truncated>.... COND cc DNY
```

Autonomous Message

Nonhierarchical

[O.14901]

```
I hh:mm:ss xy,ww ALM DSPC [s]aaa \
<pds_application_autonomous_message>
```

Hierarchical

[O.14901]

```
I hh:mm:ss xy,ww ALM DSPC uvnmp \
<pds_application_autonomous_message>
```

Explanation of Parameters

DSPC	Execute <pds_application_command> on Digital Signal Processing Platform (DSPP)
[s]aaa	NPC number of DSPP Platform running application that will receive command or NPC number at beginning of range (3- or 4-digit)
uvnmp	NPC number of DSPP Platform running application that will receive command or NPC number at beginning of range (hierarchical)
[v]bbb	NPC number for end of range specified or last NPC number in frame of type SDxyz (3- or 4-digit)
wxkqr	NPC number for end of range specified or last NPC number in frame of type SDxyz (hierarchical)
SDxyz	Type designation for DSPP Platform running application x. This addresses all DSPP circuit packs that run application x, where x is a hexadecimal number that identifies the application.

Values y and z are ignored, because they are possibly used internally by the application at the time the application is restored. Please note that SDxyz is also used at the time a DSPP circuit pack is grown to run a particular application.

<pds_application_command>

This is a PDS command string that is sent to the application.

<pds_application_response for NPC hhh>

This is an application command response in PDS for the particular NPC designated by the number hhh

<pds_application_error_response for NPC hhh>

This is a PDS error message generated when the application running on NPC hhh found an error in a command

<pds_application_autonomous_message>

This is an application autonomous message in PDS

Beyond the prefix notation that is explained here, no specific conventions for an application are documented here. Instead, the exact command structure for commands that are handled by an application is given by the documentation for that application. This includes such items as terminating "!" for PDS strings and terminating ";" for MML strings. All error messages and condition codes generated by the application are given in the application documentation.

cc Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
14	FTMI is out of service
26	NPC type error
07	Application circuit pack is out of service
F2	Invalid NPC number specified
E9	Platform Communication Error
EA	The (last) destination NPC denies the DSPC command
EB	The (last) destination NPC failed, and was rebooted
B3	Initialization of application in progress, retry command later

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EXPANDED BUS EXTENDER STARTUP

Explanation of Message

This message reports that the expanded bus extender has initialized itself and has performed self-diagnostics. The results of these diagnostics are reported. For all tests passed, no action is required.

Autonomous Message

[O.01272]
EBX STARTUP {STF|ATP}

Explanation of Parameters

EBX	Expanded bus extender
STARTUP	Startup
	Indicates initialization
STF	Some tests failed
ATP	All tests passed

CREATE PICTURE ALTERNATE MAP

Explanation of Command

This command takes a PIC (picture) of currently-implemented cross-connections and stores them in the new map name. reference map name is the name of the map that contains the desired list of cross-connections.

Output from this command is sent only to the link on which the command was input.

Command

[I.19031]

ED:[FRM xy][,SEQ ww]:CRET,MAP <new map name> ,PIC <reference map \
name>!

Completion Message

Nonhierarchical

[O.19031]

M hh:mm:ss xy,ww n[vv] ED CRET MAP <new map name> \
PIC <reference map name>
[NPC [s]abc] COND kk COMPL

Hierarchical

[O.19031]

M hh:mm:ss xy,ww n[vv] ED CRET MAP <new map name> \
PIC <reference map name> [NPC uvmpn] COND kk COMPL

Denial Message

[O.19301.01]

M hh:mm:ss xy,ww n[vv] ED CRET MAP <new map name> \
PIC <reference map name> COND cc DNY

Explanation of Parameters	CRET	Create
	MAP	Map
	new map name	The new alternate map "new map name" is a string of capitalized alphanumeric characters. The first character must be an alphabetic character. The maximum length of a map name is seven characters.
	PIC	Picture
	reference map name	The existing alternate map "reference map name" is a string of capitalized alphanumeric characters. The first character must be an alphabetic character. The maximum length of a map name is seven characters.
	NPC	Network processing circuit
	[s]abc	The 3- or 4-digit nonhierarchical NPC number This number identifies the first NPC that contains either a nontwo-way, two-point cross-connection, or a cross-connection with a termination on an NPC not found in the reference alternate map. For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	uvmnp	Hierarchical NPC number This number identifies the first NPC that contains either a non-two-way, two-point cross-connection, or a cross-connection with a termination on an NPC not found in reference alternate map.
	uv	Unit number
	m	Module number
	np	NPC number For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	cc	Hexadecimal condition code

cc	<i>Explanation</i>
60	User macro/map space is full
61	System macro/map space is full
62	File is being accessed
63	File already exists

cc	<i>Explanation</i>
71	The reference map does not exist
D5	No user is logged in on the link/vc
00	No conditions
70	Some circuits not activated, cleared or pictured

CREATE OR EDIT A MACRO OR MAP

Explanation of Command

This command is dual purpose. It can create a new macro or alternate map or edit an existing macro or map. A macro is a collection of DACS II commands that can be executed as a group by a single command. A map is a collection of DACS II cross-connect commands that can be activated as a group by a single command to create a new cross-connect map.

Once a macro has been created, and is free of errors, it can be executed repeatedly. For commonly used command sequences, this saves a lot of typing, speeds execution, and assures the user of repeatability. Similarly a map, once created, can be repeatedly activated. However, prior to each activation of a map, the information specified in the map must be edited to create a new map. On the other hand, the information in a macro can be changed, without editing, when the command is executed. The new information is inserted into the command line and replaces information within the macro at execution time.

The commands used in the macro, the macro commands, are always executed in the order they are listed in the macro. However, because the commands can use variables as well as constants, the information within the macro can vary with each execution. A command within the macro that addresses a given NPC can be made to address a different NPC the next time the macro is executed. This is done by replacing the constant, representing the NPC number, listed in the macro command with a variable. Many other command parameters can be changed from execution to execution by the use of variables in the macro commands.

Consider the private macro named DEMO below. Some elements of these macro commands have been omitted in order to focus on the use of variables.

```
TDIS::FROM 00101,TO 00301,STOP!OK
TCON::FROM 00101,TO 00501!OK
TCON::FROM 00102,TO 00502!OK
TCON::FROM 00103,TO 00503!OK
UTL::QRY,CMAP 001!OK
```

This macro always disconnects, connects, and queries the same NPCs. If DEMO were written as follows, using variables, the NPCs affected could be specified each time the macro was executed without having to reenter the macro. A macro written in this manner is referred to as a universal macro. This particular macro

would be even more universal if the channel numbers were represented by variables.

```
TDIS::FROM #0101,TO 00301,STOP!OK
TCON::FROM #0101,TO #0201!OK
TCON::FROM #0102,TO #0202!OK
TCON::FROM #0103,TO #0203!OK
UTL::QRY,CMAP #01!OK
```

Variables have replaced some of the constants in macro DEMO. NPC number 001 has been replaced with variable #01 and NPC number 005 has been replaced with variable #02. The numbers in these variable names refer to the position of the replacement in the command used to execute the macro. To execute this macro replacing #01 with 020 and #02 with 040 we would enter the following command.

```
EXC::MACRO DEMO,(020,040)!
```

The variables used in the macro commands of macro DEMO are replaced, upon execution of this command, by parameters included in the command. The first parameter replaces variable #01 and the second parameter replaces #02. After variable replacement macro DEMO would look as follows.

```
TDIS::FROM 02001,TO 00301,STOP!OK
TCON::FROM 02001,TO 04001!OK
TCON::FROM 02002,TO 04002!OK
TCON::FROM 02003,TO 04003!OK
UTL::QRY,CMAP 020!OK
```

Variables may be used for any macro command parameter except action verbs and punctuation. The number of variables used in a macro is limited to 10. A variable may be used wherever its value is needed, that is, it is not restricted to an NPC number just because it was used for that purpose at some other point in the macro. If the user wished to address NPC number 003 and channel 003 the variable #01 with value 003 could be used for both the NPC number and the channel number. The macro command would look as follows.

```
TCON::FROM #01#01,...!
```

At execution time, this would translate to the following:

```
TCON::FROM 003003,...!
```

**NOTE:**

To represent hierarchical NPC numbers, a variable must be used for each part (unit, module, NPC) of the NPC number. A macro expecting a

hierarchical format parameter should not be executed with a nonhierarchical format parameter.

NPC 01101 would be represented in a macro command with variables #01, #02, and #03 as follows.

UTL::QRY,CMAP #01#02#03!

**WARNING:**

Any command prompting "Are You Sure?" which is accepted as a macro command always has the "No" answer to the question.

The system responds with "OK" when the ED::MAP command is entered.

The system responds with LINE and SAVE messages, as shown below, when the ED-MACRO command is entered.

[O.19071]

... LINE <line pointer> TOTAL <line total> COMPL

[O.19081]

... SAVE <macro name> SPACE sss USED uuu COMPL

A macro session is the period between entering the command to create a macro and entering the command to exit the macro. A line pointer is maintained by the system during the session to mark the position of the current line within the macro. As a line is added to the macro the line pointer moves down a line; tracking the position of the current line. The LINE command is used to determine the current line pointer value and the total number of lines currently in the macro.

The SAVE command is used during a macro session to save the current set of macro commands in the macro represented in the message by macro name. The macro name is chosen by the user.

The completion messages correspond to the frame response when END or QTEND is entered after completion of editing or creating a macro. The END command saves all the changes before ending (exiting) a macro session. The QTEND command ends the macro session without saving the changes.

Output from this command is sent only to the link on which the command was input.

Command

[I.19001]

ED:[FRM xy][,SEQ ww]:{MACRO <macro name>|MAP <map name>}!

**Completion
Message**

[O.19001]

```
M hh:mm:ss xy,ww n[vv] ED {MACRO <macro name>|MAP <map name>}
[ COND cc] COMPL
```

[O.19002]

```
M hh:mm:ss xy,ww n[vv] ED {MACRO <macro name>|MAP <map name>}
QTEND[ COND cc] COMPL
```

Denial Message

[O.19001.01]

```
M hh:mm:ss xy,ww n[vv] ED {MACRO <macro name>|MAP <map name>}
COND cc DNY
```

**Autonomous
Message**

[O.19002]

```
I hh:mm:ss xy,ww n[vv] ED {MACRO <macro name>|MAP <map name>}
QTEND[ COND cc] COMPL
```

**Explanation of
Parameters****MACRO** Macro**macro name** Macro name (seven characters maximum length)

The name of a collection of DACS II commands executed as a group.

A macro name is a string of capitalized alphanumeric characters. There are two type of macros; public and private. A private macros is created by a user in space allocated to the user by the system administrator. Only the user that created it can execute or read (LIST) a private macro. A public macro is created by the system administrator and is executable and readable by all users. A public macro name must start with the letter "P". A private macro name must not start with the letter "P".

MAP Map**map name** Map name (seven characters maximum length)

The name of a collection of DACS II cross-connect commands that can be activated as a group to produce a new set of cross-connections (a new cross-connect map).

A map name is a string of capitalized alphanumeric characters.

QTEND	Quit end Quit to end a macro or map session without saving any changes to the macro or map.
COND	Condition

CHANGE C-BIT CBTIMER VALUE

**Explanation of
Command****NOTE:**

This command applies to the 2.048 Mbit/s Termination Interface only.

This command is used to change the C-bit Message Filter Timer value for an NPC or range of NPCs. Only cept NPCs cross-connected to NPCs with the type CB10z can be specified.

Command**Nonhierarchical**

[I.38001]

CHG:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],CBTIMER [t]v!

Hierarchical

[I.38001]

CHG:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],CBTIMER [t]v!

**Completion
Message****Nonhierarchical**

[O.38001]

M hh:mm:ss xy,ww CHG NPC [s]abc CBTIMER [t]v COMPL

.

.

.

M hh:mm:ss xy,ww CHG NPC [s]abc CBTIMER [t]v COMPL

Hierarchical

[O.38001]

M hh:mm:ss xy,ww CHG NPC uvmnp CBTIMER [t]v COMPL

.

.

.

M hh:mm:ss xy,ww CHG NPC uvmnp CBTIMER [t]v COMPL

Denial Message**Nonhierarchical**

[O.38001.01]

M hh:mm:ss xy,ww CHG NPC [s]abc[-[t]def] CBTIMER [t]v COND cc DNY

Hierarchical

[O.38001.01]

M hh:mm:ss xy,ww CHG NPC uvmnp[-uvkqr] CBTIMER [t]v COND cc DNY

**Explanation of
Parameters**

NPC	Network Processing Number
[s]abc	Nonhierarchical NPC Number
[t]def	Nonhierarchical NPC Number
uvkqr	Hierarchical NPC Number
uvmnp	Hierarchical NPC Number
CBTIMER	C-Bit Message Filter Timer
[t]v	Values (0-10)
cc	Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
15	NPC is unequipped
36	DSPI not equipped
37	DSPI out-of-service
3E	DSPI failed
52	CPR is not equipped
54	Cross-connect to CPR is required
58	DSPU is not equipped

cc	<i>Explanation</i>
59	DSPU unit controller is out of service
5A	DSPU unit controller is failed
F1	Parameter only valid with PA, PB, or PC type NPCs
F2	Invalid NPC number specified

EXPANDED MAINTENANCE STARTUP

Explanation of Message

This message reports that the expanded maintenance circuit has initialized itself and has performed self-diagnostics. The results of these diagnostics are reported. For all tests passed, no action is required.

Autonomous Message

[O.01282]
EMTC STARTUP {STF|ATP}

Explanation of Parameters

EMTC	Expanded maintenance circuit
STF	Some tests failed
ATP	All tests passed

ABORTED END OF RETRIEVED LOGGED MESSAGES

Explanation of Command

This is an autonomous message marking the end of a block of retrieved logged messages that was aborted prior to completion due to system problems. The messages are output as a result of the command I.57011 not outputting the entire log that was requested.

Autonomous Message

[O.83012]
A hh:mm:ss xy,ww END LOG MSG ABORTED COMPL

Explanation of Parameters

END LOG MSG ABORTED Aborted End of a block of logged messages

END OF RETRIEVED LOGGED MESSAGES

Explanation of Command

This is an autonomous message marking the end of a block of retrieved logged messages. The messages are output as a result of the command I.57011.

Autonomous Message

[O.83001]
A hh:mm:ss xy,ww END LOG MSG COMPL

Explanation of Parameters

END LOG MSG End of a block of logged messages

INPUT DENIAL

Explanation of Message

This message is output by DACS II when a task indicated by the transaction number has been autonomously aborted.

Autonomous Message

[O.01121]
A hh:mm:ss xy,ww ERR CMD ABT [TN abcd] e LN MSG:
<First 70 characters of input message.>
<Remaining text of input message> STOPPED

Explanation of Parameters

ERR	Error recovery
CMD	Command
ABT	Abort
TN	Transaction
abcd	Transaction number
e	Number of lines in the message

ERROR RECOVERY

Explanation of Message

This message indicates that error recovery was called to handle an error occurring in the cross-connect buffer.

Autonomous Message

[O.01351]

I hh:mm:ss xy,ww ERR [ESR] CCB sf TN dddd EVENT eeee 2 LN MSG:
<error analysis data bytes> COND cc COMPL

Explanation of Parameters

ERR	Error recovery
ESR	Error Source Register
	The ESR keyword is not output if the register contents cannot be read.
CCB	Cross-connect Buffer
s	Cross-connect side (0 or 1)
f	Unit (1 through 6)
TN	Transaction
dddd	Transaction number
EVENT	Event
eeee	Event number
error analysis data bytes	
	Data used to analyze the cause of an error. Eight bytes are output. These bytes are labeled "byte 0", "byte 1", etc, below.
byte 0	ESR0 (Error Source Register 0) in the CCB
byte 1	ESR1 (Error Source Register 1) in the CCB
byte 2	ESR2 (Error Source Register 2) in the CCB
cc	Hexadecimal condition code

cc	<i>Explanation</i>
A0	CCB packid error, wrong pack, can't read pack
A1	CCB sync pulse error
A2	CCB clock error
A3	CCB input port alarm error
A4	CCB zero bit is stuck at 1
A5	Corresponding CCNI bit is stuck

ERROR RECOVERY CCI

Explanation of Command

This message indicates that DACS II detected an alarm occurring in the clock and control interface.

Autonomous Message

[O.01354]
I hh:mm:ss xy,ww ERR[ESR] CCI s \
TN dddd EVENT eeee 2 LN MSG
wd01 wd02 wd03 wd04 wd05 wd06 wd07 wd08 wd09 wd10 wd11 \
wd12 COND cc COMPL

Explanation of Parameters

I	Information
ERR	Error recovery
ESR	Error source register
	The ESR keyword is not output if the register contents cannot be read.
CCI	Clock control interface
s	Cross-connect side number (0 or 1)
TN	Transaction
dddd	Transaction number
	The TN number can be specified in UTL::QRY,ERR to retrieve the content of the DACS II error recovery log file which contains the past history of all error recovery events related to this output report.
EVENT	Event
eeee	Event number
	The event number can be specified in UTL::QRY, ERR to retrieve the content of the DACS II error recovery log file which contains the data of this error recovery event.
wd01, wd02, ..., wd12	

Word 1 through 12

0 to 12 words of hexadecimal raw error data for internal use.
Each word is four hexadecimal digits.

wd01	System Status Register
wd02	Clock Control Interface (CCI) Status Register
wd03	CCI Extended Time Slot Interchange (ETSI) ESR0 Register
wd04	CCI ETSI ESR1 Register
wd05	CCI ETSI ESR2 Register
wd06	CCI ETSI ESR3 Register
wd07	CCI Status Bus Register
wd08	CCI Exercise Register
wd09	CCI System Mask Register
wd10	CCI Mask Register
wd11	CCI ETSI Mask Register
wd12	CI Not used (= 0000)

COND

Condition

cc

Hexadecimal condition code

cc	<i>Explanation</i>
01	CCI pack is not present
02	Can't communicate to CCI pack(incorrect version number)
03	CCI pack's summary is set but has no errors
04	CCIERR bit is stuck in system status reg
05	TSIERR bit is stuck in system status reg
06	PUERR bit is stuck in system status reg
07	Bus Terminator pack is not present
08	The 32 MHz clock is out of lock
09	CCI 240 sync is misaligned with frame sync
0A	CCI loss of 240 Frame Sync
0B	CCI loss of 8 KHz Frame Sync
0C	CCI detected Address Parity error

cc	<i>Explanation</i>
0D	CCI detected low byte data parity error
0E	CCI detected high byte data parity error
0F	CCI -5.2 power supply has failed
10	CCI detected Bus Status Parity error
11	CCI Peripheral Unit Alarm
12	SYNC summary is set on CCI circuit pack

ERROR RECOVERY

Explanation of Message This message indicates that DACS II detected an alarm occurring in the cross-connect network interface.

Autonomous Message **1.544 Mbit/s Termination**

[O.01352]
I hh:mm:ss xy,ww ERR [ESR] CCNI s TN dddd EVENT eeee 2 LN MSG:
<reg0> <reg1> <reg2> <reg3> <reg4>
<emr0> <emr1> <emr2> <emr3> <emr4> COND cc COMPL

2.048 Mbit/s Termination

[O.01352]
I hh:mm:ss xy,ww ERR [ESR] CCNI s TN dddd EVENT eeee 2 LN MSG:
<reg0> <reg1> <reg2> <reg3> <reg4>
<emr0> <emr1> <emr2> <emr3> <emr4> COND cc COMPL

Explanation of Parameters	I	Information
	ERR	Error recovery
	ESR	Error Status Register. The ESR keyword is not output if the register contents cannot be read.
	CCNI	Cross-connect network interface
	s	Cross-connect side (0 or 1)
	TN	Transaction
	dddd	Transaction number
	EVENT	Event
	eeee	Event number
	regn	Device register n (n = 0 through 4)

A bit set to "1" in these registers indicates the alarming circuit pack or a parity error.

CCNI s Error Source Register Bit Definitions

reg0

Error Source Register 0

Bit	Condition
15	Time Slot Interchange (TSI) 43 is alarming
14	TSI 33 is alarming
13	TSI 23 is alarming
12	TSI 13 is alarming
11	TSI 62 is alarming
10	TSI 52 is alarming
09	TSI 42 is alarming
08	TSI 32 is alarming
07	TSI 22 is alarming
06	TSI 12 is alarming
05	TSI 61 is alarming
04	TSI 51 is alarming
03	TSI 41 is alarming
02	TSI 31 is alarming
01	TSI 21 is alarming
00	TSI 11 is alarming

reg1

Error Source Register 1

Bit	Condition
15	TSI 26 is alarming
14	TSI 16 is alarming
13	TSI 65 is alarming
12	TSI 55 is alarming
11	TSI 45 is alarming
10	TSI 35 is alarming
09	TSI 25 is alarming
08	TSI 15 is alarming
07	TSI 64 is alarming

	06	TSI 54 is alarming
	05	TSI 44 is alarming
	04	TSI 34 is alarming
	03	TSI 24 is alarming
	02	TSI 14 is alarming
	01	TSI 63 is alarming
	00	TSI 53 is alarming
reg2	Error Source Register 2	
	Bit	Condition
	15	Facility Terminating Module (FTM) 4 of Unit 3 is alarming
	14	FTM 3 of Unit 3 is alarming
	13	FTM 2 of Unit 3 is alarming
	12	FTM 1 of Unit 3 is alarming
	11	FTM 4 of Unit 2 is alarming
	10	FTM 3 of Unit 2 is alarming
	09	FTM 2 of Unit 2 is alarming
	08	FTM 1 of Unit 2 is alarming
	07	FTM 4 of Unit 1 is alarming
	06	FTM 3 of Unit 1 is alarming
	05	FTM 2 of Unit 1 is alarming
	04	FTM 1 of Unit 1 is alarming
	03	TSI 66 is alarming
	02	TSI 56 is alarming
	01	TSI 46 is alarming
	00	TSI 36 is alarming
reg3	Error Source Register 3	
	Bit	Condition
	15	Cross-Connect Buffer (CCB) 4 is alarming
	14	CCB 3 is alarming
	13	CCB 2 is alarming
	12	CCB 1 is alarming

	11	FTM 4 of Unit 6 is alarming
	10	FTM 3 of Unit 6 is alarming
	09	FTM 2 of Unit 6 is alarming
	08	FTM 1 of Unit 6 is alarming
	07	FTM 4 of Unit 5 is alarming
	06	FTM 3 of Unit 5 is alarming
	05	FTM 2 of Unit 5 is alarming
	04	FTM 1 of Unit 5 is alarming
	03	FTM 4 of Unit 4 is alarming
	02	FTM 3 of Unit 4 is alarming
	01	FTM 2 of Unit 4 is alarming
	00	FTM 1 of Unit 4 is alarming
reg4	Error Source Register 4	
	Bit	Condition
	15-08	Not used
	07	Cross-Connect Network Interface (CCNI) autonomous switch enable error
	06	CCNI high byte data parity error
	05	CCNI low byte data parity error
	04	CCNI address bus parity error
	03	Synchronizer (SYNC) is alarming
	02	Cross-Connect Buffer (CCB) 6 is alarming
	01	CCB 5 is alarming
emrn	Error Mask Register n	
	A bit set to "1" in these registers indicates the alarming circuit pack or a parity error.	
CCNI s Error Mask Register Bit Definitions		
emr0	Error Mask Register 0	
	Bit	Condition
	15	Errors from Time Slot Interchange (TSI) 43 are masked
	14	Errors from TSI 33 are masked
	13	Errors from TSI 23 are masked

	12	Errors from TSI 13 are masked
	11	Errors from TSI 62 are masked
	10	Errors from TSI 52 are masked
	09	Errors from TSI 42 are masked
	08	Errors from TSI 32 are masked
	07	Errors from TSI 22 are masked
	06	Errors from TSI 12 are masked
	05	Errors from TSI 61 are masked
	04	Errors from TSI 51 are masked
	03	Errors from TSI 41 are masked
	02	Errors from TSI 31 are masked
	01	Errors from TSI 21 are masked
	00	Errors from TSI 11 are masked
emr1	Error Mask Register 1	
	Bit	Condition
	15	Errors from TSI 26 are masked
	14	Errors from TSI 16 are masked
	13	Errors from TSI 65 are masked
	12	Errors from TSI 55 are masked
	11	Errors from TSI 45 are masked
	10	Errors from TSI 35 are masked
	09	Errors from TSI 25 are masked
	08	Errors from TSI 15 are masked
	07	Errors from TSI 64 are masked
	06	Errors from TSI 54 are masked
	05	Errors from TSI 44 are masked
	04	Errors from TSI 34 are masked
	03	Errors from TSI 24 are masked
	02	Errors from TSI 14 are masked
	01	Errors from TSI 63 are masked
	00	Errors from TSI 53 are masked
emr2	Error Mask Register 2	

		Bit	Condition
		15	Errors from Facility Terminating Module (FTM) 4 of Unit 3 are masked
		14	Errors from FTM 3 of Unit 3 are masked
		13	Errors from FTM 2 of Unit 3 are masked
		12	Errors from FTM 1 of Unit 3 are masked
		11	Errors from FTM 4 of Unit 2 are masked
		10	Errors from FTM 3 of Unit 2 are masked
		09	Errors from FTM 2 of Unit 2 are masked
		08	Errors from FTM 1 of Unit 2 are masked
		07	Errors from FTM 4 of Unit 1 are masked
		06	Errors from FTM 3 of Unit 1 are masked
		05	Errors from FTM 2 of Unit 1 are masked
		04	Errors from FTM 1 of Unit 1 are masked
		03	Errors from TSI 66 are masked
		02	Errors from TSI 56 are masked
		01	Errors from TSI 46 are masked
		00	Errors from TSI 36 are masked
emr3		Error Mask Register 3	
		Bit	Condition
		15	Errors from Cross-Connect Buffer (CCB) 04 are masked
		14	Errors from CCB 03 are masked
		13	Errors from CCB 02 are masked
		12	Errors from CCB 01 are masked
		11	Errors from FTM 4 of Unit 6 are masked
		10	Errors from FTM 3 of Unit 6 are masked
		09	Errors from FTM 2 of Unit 6 are masked
		08	Errors from FTM 1 of Unit 6 are masked
		07	Errors from FTM 4 of Unit 5 are masked
		06	Errors from FTM 3 of Unit 5 are masked
		05	Errors from FTM 2 of Unit 5 are masked

	04	Errors from FTM 1 of Unit 5 are masked
	03	Errors from FTM 4 of Unit 4 are masked
	02	Errors from FTM 3 of Unit 4 are masked
	01	Errors from FTM 2 of Unit 4 are masked
	00	Errors from FTM 1 of Unit 4 are masked
emr4	Error Mask Register 4	
	Bit	Condition
	15-08	Not used
	07	Address parity errors are masked (ASEM)
	06	Parity error in the BSR register is masked
	05	High data byte parity error is masked
	04	Low data byte parity error is masked
	03	Address parity error (ADEM) is masked
	02	Synchronizer error summary bit is masked
	01	Errors from Cross-Connect Buffer (CCB) 6 are masked
	00	Errors from CCB 5 are masked
COND	Condition	
cc	Hexadecimal condition code	
	cc	<i>Explanation</i>
	90	CCNI access error (cannot access pack)
	91	High data byte bus parity error
	92	Low data byte bus parity error
	93	Address bus parity error
	94	Autonomous switch enable error
	95	Bus status register parity error
	96	CCNI stuck register bit, summary set, no other alarms

ERROR RECOVERY ERROR SOURCE REGISTER MAIN CONTROLLER

Explanation of Message

This message is a main controller error recovery output message. In addition to providing information for main controller error recovery, this message may also provide information for the following:

- Main Processor
- Intelligent Communications Interface

Autonomous Message

[O.01312]

I hh:mm:ss xy,ww ERR [ESR] MC [, {MP|ICI}] TN dddd COMPL

Explanation of Parameters

MC	Main controller
MP	Main processor
ICI	Intelligent Communications interface
ESR	Error source register
	The ESR is not output if the register content cannot be read.
ERR	Error recovery
TN	Transaction
dddd	Transaction number

ERROR RECOVERY MC

Explanation of Message

This message is a main controller error recovery output message reporting circuit pack alarms. It also provides information for the:

- Main Processor
- Communications Interface
- Extended Communications Interface
- Secondary Storage Controller
- Bus Extender or Expanded Bus Extender Pack for MP
- Maintenance Pack or Expanded Maintenance Pack

Autonomous Message

[O.01311]

I hh:mm:ss xy,ww ERR[ESR] MC[MP] TN dddd EVENT eeee 2 LN MSG:
abab bbbb cccc dddd eeee ffff COND cc COMPL

[O.01311]

I hh:mm:ss xy,ww ERR[ESR] MC[CI] TN dddd EVENT eeee 2 LN MSG:
COND cc COMPL

[O.01311]

I hh:mm:ss xy,ww ERR[ESR] MC[{BX|EBX}] TN dddd EVENT eeee \
2 LN MSG:
abab bbbb cccc dddd eeee ffff COND cc COMPL

[O.01311]

I hh:mm:ss xy,ww ERR[ESR] MC[{MTC|EMTC}] TN dddd \
EVENT eeee 2 LN MSG:
abab bbbb cccc dddd eeee ffff gggg hhhh iiii jjjj COND cc COMPL

Explanation of Parameters

MC	Main controller
MP	Main processor
CI	Communications interface

BX	Bus extender pack for MP
MTC	Maintenance pack
EBX	Expanded bus extender pack for MP
EMTC	Expanded maintenance pack
ESR	Error source register
	This keyword is not output if the register content cannot be read.
ERR	Error recovery
TN	Transaction
dddd	Transaction number
	The TN number can be specified in UTL::QRY,ERR to retrieve the contents of the DACS II error recovery log file which contains the past history of all error recovery events related to this output report.
EVENT	Event
eeee	Event number
	The event number can be specified in UTL::QRY, ERR to retrieve the contents of the DACS II error recovery log file which contains the data for this error recovery event.
abab, bbbb, ..., jjjj	Raw data
	0 to 10 words of hexadecimal raw error data for internal use.
	The number of words output is dependent upon the error event.
	Each word consists of four hexadecimal digits.

ERR ESR MC MP data words:

abab bbbb cccc dddd eeee ffff

abab	CPU Interrupt Holding Register contents
bbbb	CPU Interrupt Mask Register contents
cccc	Version
dddd	Type
eeee	CPU RAM checksum word 1
ffff	CPU RAM checksum word 2

ERR ESR MC {BX|EBX} data words:

abab bbbb cccc dddd eeee ffff

abab	CPU Interrupt Holding Register contents
bbbb	CPU Interrupt Mask Register contents
cccc	BX/EBX Interrupt Holding Register contents
dddd	BX/EBX Interrupt Mask Register contents
eeee	BX/EBX type
ffff	BX/EBX version

ERR ESR MC {MTC|EMTC} data words:

abab bbbb cccc dddd eeee ffff gggg hhhh iiii jjjj

abab	CPU Interrupt Holding Register contents
bbbb	MTC/EMTC Error Source Register 0 contents
cccc	MTC/EMTC Error Source Register 1 contents
dddd	MTC/EMTC Error Source Register 2 contents
eeee	MTC/EMTC Error Source Register 3 contents
ffff	MTC/EMTC Error Mask Register 0 contents
gggg	MTC/EMTC Error Mask Register 1 contents
hhhh	MTC/EMTC Error Mask Register 2 contents
iiii	MTC/EMTC Error Mask Register 3 contents
jjjj	MTC/EMTC Interrupt Control/Sanity Register contents

ERROR RECOVERY FTU NPC

Explanation of Command

This message indicates that an alarm was detected in a facility terminating unit Network Processing Circuit. The specific alarm type is identified by the error condition code.

Autonomous Message

1.544 Mbit/s Termination

Nonhierarchical

[O.01372]

```
I hh:mm:ss xy,ww  ERR[ ESR] NPC [s]abc-[t]def TN dddd \  
EVENT eeee  2 LN MSG:  
<error analysis data bytes>[ COND cc] COMPL
```

Hierarchical

[O.01372]

```
I hh:mm:ss xy,ww  ERR[ ESR] NPC uvmnp-wxkqr TN dddd \  
2 LN MSG:  
EVENT eeee <error analysis data bytes>[ COND cc] COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

[O.01372]

```
I hh:mm:ss xy,ww  ERR[ ESR] NPC [s]abc-[t]def TN dddd \  
EVENT eeee  2 LN MSG:  
<error analysis data bytes>[ COND cc] COMPL
```

Hierarchical

[O.01372]

```
I hh:mm:ss xy,ww  ERR[ ESR] NPC uvmnp-wxkqr TN dddd \  
2 LN MSG:  
EVENT eeee <error analysis data bytes>[ COND cc] COMPL
```

Explanation of Parameters	ERR	Error recovery
	ESR	Error source register The ESR keyword is not output if the register content cannot be read.
	NPC	Network processing circuit
	[s]abc	The 3- or 4-digit nonhierarchical NPC number denoting beginning of range specification
	[t]def	The 3- or 4-digit nonhierarchical NPC number denoting end of range specification For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	uvmnp	Hierarchical NPC number for beginning of range
	wxkqr	Hierarchical NPC number for end of range
	uv,wx	Unit number
	m,k	Module number
	np,q	NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	TN	Transaction
	dddd	Transaction number The TN number can be specified in message I.55011 (UTL::QRY,ERR) to retrieve the content of the DACS II error recovery log file which contains the past history of all error recovery events related to this output report.
	EVENT	Event
	eeee	Event number The EVENT number can be specified in message I.55011 (UTL::QRY, ERR) to retrieve the content of the DACS II error recovery log file which contains the data of this error recovery event.
	error analysis data bytes	
		Troubleshooting data Six bytes of 4-digit hexadecimal troubleshooting data, labeled for explanatory purposes below, as aaaa, bbbb, cccc, dddd, eeee, and ffff.
	aaaa	Dual digroup card (DDC) ESR0 and ESR1

		The first two digits (left to right) report ESR0 and the second two digits report ESR1
	bbbb	Unused
	cccc	DDC hardware and channel controller
	dddd	DDC transceiver A Tferr & Rserr register
	eeee	DDC transceiver B Tferr & Rserr register
	ffff	DDC Transceiver transmit slip
COND		Condition
cc		Hexadecimal condition code

cc	<i>Explanation</i>
3D	DPC ROM error
3E	DPC loss of timing
3F	OOS RAM test ran while IS
53	NPC bus error
54	NPC can not be accessed
55	NPC is alarming on FC
56	Facility Processor Sanity Error
57	SYNC Error
58	Channel controller loss of clock
59	Channel controller frame sync error
5A	CC configuration register error
5B	CC instruction ram error
5C	CC parity error
5D	CC transmit data error
5E	CC receiver data error
5F	CC exercise error
60	CC summary bit error
61	Hard RAM error
62	Hard ROM check error
63	Hard Error stuck bit
64	Transceiver A stuck bit

cc	<i>Explanation</i>
65	Transceiver A transmit slip
66	Transceiver A Error
67	Transceiver B stuck bit
68	Transceiver B transmit slip
69	Transceiver B Error
6A	Circuit ID Error
6B	Facility errors
6C	NPC address parity error
D5	Illegal/unknown condition code
6E	Invalid DDC pack id

ERROR RECOVERY SYNC TLI SSP

Explanation of Message

This message indicates that error recovery was called to handle an error that occurred in the synchronizer timing link interface sync port. The message also indicates the nature of the error.

If the port on which the error has occurred receives clock information from a dual primary card, then a network processing circuit has been added.

Autonomous Message

1.544 Mbit/s Termination

Nonhierarchical

[O.01341]

```
I hh:mm:ss xy,ww  ERR[ ESR] SYNC a TLI m SSP b TN dddd EVENT eeee \  
2 LN MSG:  
<synchronizer status data bytes>[ COND cccc] COMPL
```

Hierarchical

[O.01341]

```
I hh:mm:ss xy,ww  ERR[ ESR] SYNC a TLI m SSP b TN dddd EVENT eeee \  
2 LN MSG:  
<synchronizer status data bytes>[ COND cccc] COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

[O.01341]

```
I hh:mm:ss xy,ww  ERR[ ESR] SYNC a TLI m SSP b TN dddd EVENT eeee \  
2 LN MSG:  
<synchronizer status data bytes>[ NPC [s]abc][ COND cccc] COMPL
```

Hierarchical

[O.01341]

```
I hh:mm:ss xy,ww  ERR[ ESR] SYNC a TLI m SSP b TN dddd EVENT eeee \  
2 LN MSG:  
<synchronizer status data bytes>[ NPC [s]abc][ COND cccc] COMPL
```

2 LN MSG:
<synchronizer status data bytes>[NPC uvmnp][COND cccc] COMPL

Explanation of Parameters

I Information

ERR Error recovery

ESR- Error source register

The ESR keyword is not output if the register contents cannot be read.

SYNC Synchronizer

a SYNC number (0 or 1)

TLI Timing link interface

m TLI number (1 through 4)

SSP Synchronizer sync port

b SSP number (0 or 1)

NPC Network processing circuit

[s]abc The 3- or 4-digit nonhierarchical NPC number

If NPC numbers are expressed in three digits, the valid values are:

PB and PC type NPC numbers listed by unit number

Unit Type FT (FTU)

Units 1	Units 2
NPC	NPC
030	190
032	192
070	230
072	232

If NPC numbers are expressed in four digits, the valid values are:

uvmnp Hierarchical NPC number

PB and PC type numbers listed by unit, module, and NPC No.

Unit Type FT (FTU)

Units 1	Units 2
NPC	NPC
0030	0190
0032	0192
0070	0230
0072	0232

Unit	Module	NPC No. (np.)
01-02	1-2	30, 32

TN

Transaction

dddd

Transaction number

The TN number can be specified in UTL::QRY,ERR to retrieve the contents of the DACS II error recovery log file which contains the past history of all error recovery events related to this output report.

EVENT

Event

eeee

Event number

The EVENT number can be specified in UTL::QRY, ERR to retrieve the contents of the DACS II error recovery log file which contains the data of this error recovery event.

synchronizer status data bytes

Synchronizer status data in binary form

From 0 to 5 bytes may be output, depending upon the synchronizer error condition. In the explanations below the bytes are named "byte 1", "byte 2, and so on. The eight bits of each byte are labeled abcdefgh and are explained below. These bytes appear in the message in numeric order from left to right with "byte 1" first.

Note that if communications between the MP and the SYNC have failed, Error Recovery may not get the correct status data from the SYNC. All bits in "synchronizer status data bytes" will then be set to 1 by default.

byte 1

Timing link status

a Timing link equipped by MC**b** Timing link declared out-of-service

	c	Timing link out-of-service due to error
	d	Associated Timing Extractor TLI error
	efgh	Not used
byte 2		Priority weighting of link, a number from 1 to 8
byte 3		Framing format, line format, and frequency
	abc	Framing format (valid only for TXB1 or TXB2 TLIs)
	TXB1	
	000	D4
	001	ESF
	010	DDS
	TXB2	
	000	CCS
	001	ERSM
	010	CAS0
	011	CAS1
	de	Line format (valid only for TXB1 or TXB2 TLIs)
	TXB1	
	00	Bipolar
	01	B8ZS
	TXB2	
	10	AMI
	11	HDB3
	fgh	Frequency (TXUC TLI)
	000	512 kHz
	001	1.000 MHz
	010	1.544 MHz
	011	2.048 MHz
	100	5.000 MHz
byte 4		Mixed status
	a	Carrier failure alarm/loss of signal (TXB1, TXB2, and TXCC)
	b	Timing signal loss of energy

	c	Autobaud failure
	d	Frequency offset flag
	e	Excessive jitter
	f	Phase step
	gh	Not used
byte 5		Framing status
	a	Out of frame
	b	Major framing error rate
	c	Minor framing error rate
	defgh	Not used
COND		Condition
cccc		Error recovery condition code

ERROR RECOVERY

Explanation of Message

This message indicates that error recovery was called to handle an error that occurred in a synchronizer timing link interface, and also the nature of the error.

Autonomous Message

1.544 Mbit/s Termination

[O.01342]

I hh:mm:ss xy,ww ERR [ESR] SYNC a TLI m TN dddd EVENT eeee 2 LN MSG:
<synchronizer status data bytes> COND cccc COMPL

2.048 Mbit/s Termination

[O.01342]

I hh:mm:ss xy,ww ERR [ESR] SYNC a TLI m TN dddd EVENT eeee 2 LN MSG:
<synchronizer status data bytes> COND cccc COMPL

Explanation of Parameters

I	Information
ERR	Error recovery
ESR	Error source register
	The ESR keyword is not output if the register contents cannot be read.
SYNC	Synchronizer
a	Synchronizer number (0 or 1)
TLI	Timing link interface
m	TLI number (1 through 4)
TN	Transaction
dddd	Transaction number
EVENT	Event
eeee	Event number
synchronizer status data bytes	

Synchronizer status data in binary form

Three bytes of synchronizer status data are output. These bytes are named "byte1", "byte2", and "byte3" in the explanations below. They would appear on output as "byte1 byte2 byte3" in place of "synchronizer status data bytes". The eight bits in each byte are labeled abcdefgh in left to right order. These bits are set to "1" for the listed conditions:

byte1

Overall status and configuration

bit	Condition
abcd	TLI type
0000	TXB1, 1.544 Mb/s DS1 Extractor
0001	TXB2, 2.048 Mb/s Primary Block (120 OHM) Extractor
0010	TXCC, Composite Clock Extractor
0011	TXUC, High Level Unipolar Clock Extractor
0100	TXRF, Basic System Reference Frequency
0101	TDCC, 64 kb/s Composite Clock Distributor
0110	TDS2, 2.048 MHz Sine Distributor
0111	TXCP, CEPT 2.048 MHz Sine (120 Ohm) Extractor
e	TLI is grown
f	TLI out-of-service
g	TLI hardware error
h	Unused bit

byte2

Hardware status and diagnostic results

bit	Condition
a	Hardware energy detector on the time base strobe signal has failed
b	Loss of time base strobe signal coming from the DPLL
c	Hardware energy detector on the CRO signal has failed
d	Loss of reference clock signal coming from the CRO



NOTE:

These bits have meaning only for TDCC and TDS2 TLIs and when the SYNC is a master timing source.

e Side 0

f Side 1



NOTE:

These bits have meaning only for TE TLIs.

For TXB1 or TXB2 TLIs:

Framer chip on side 0 (e) and/or side 1 (f) has failed.

For TXCC TLIs:

Out-of-lock detector on side 0 (e) and/or side 1 (f) has failed.

g, h

Unused bits

byte3

Hardware status and diagnostic results for timing distributor type TLI only

bit Condition

a Clock alignment detector failed diagnostic

b Clock generator energy detector failed diagnostic

c 30 ms sync pulse energy detector failed diagnostic

d Signal generating prom parity error detector failed diagnostic

e Output clock alignment error

f Loss of energy on the output clock generator ripple carry, indicating the distributed clock signals have died

g Loss of energy on the 30 ms sync pulse coming from the DPLL board

h Signal generating prom parity error detected

COND

Condition

ERROR RECOVERY

Explanation of Message

This message indicates that error recovery was called to handle an error that occurred in the specified synchronizer. The message also indicates the nature of the error.

Autonomous Message

1.544 Mbit/s Termination

[O.01331]

I hh:mm:ss xy,ww ERR [ESR] SYNC a TN dddd EVENT eeee 2 LN MSG:
<byte1> <byte2> <byte3> <byte4> <byte5> COND cccc COMPL

2.048 Mbit/s Termination

[O.01331]

I hh:mm:ss xy,ww ERR [ESR] SYNC a TN dddd EVENT eeee 2 LN MSG:
<byte1> <byte2> <byte3> <byte4> <byte5> COND cccc COMPL

Explanation of Parameters

I	Information
ERR	Error recovery
ESR	Error source register
	The ESR keyword is not output if the register contents cannot be read.
SYNC	Synchronizer
a	Synchronizer number (0 or 1)
TN	Transaction
dddd	Transaction number
EVENT	Event
eeee	Event number
byte1, byte2, ..., byte5	Synchronizer status data bytes

Synchronizer status data in binary form. The number of data bytes ranges from 1 to 5, depending upon the synchronizer error type. Each byte has eight bits labeled abcdefgh in left to right order.

If main processor to synchronizer communication has failed, Error Recovery may not get the correct status data from the Synchronizer. All bits in "synchronizer status data bytes" will then be set to 1 by default.

byte1

Synchronizer status data

- a** MC is down flag
- b** SYNC is down flag
- c** Mate SYNC is OOS
- d** Time Base is down
- efgh** Timing link inservice status

byte2

Timing link (SSP) inservice status

byte3

Synchronizer status data

- a** SYNC restart flag
- b** Hardware summary, error on DPLL
- c** PLL summary, any major cross-couple error
- d** Cross-couple summary, any major cross-couple error
- e** Clock Reference Oscillator summary error,any major CRO error
- fgh** unused

byte4

Synchronizer status data

- ab** Synchronizer architecture

ab	Explanation
00	Slave in master-slave configuration
01	Master in master-slave configuration

- cde** Operational stratum field
- fg** PLL locking mode field
- h** Hit timing holdover field

cde	Explanation
000	Domestic stratum 3
001	CEPT local
010	CEPT toll
011	Domestic stratum 2

fg	Explanation
00	Normal
01	Fast
10	Holdover

byte5

Synchronizer status data

ab Active timing link source field

ab	Explanation
00	Holdover
01	Timing link
10	Cross-couple
11	CRO

cde Active link field

cde	Explanation
000	TLI(Timing link interface) 1, SSP0(Synchronizer syncport 0)
001	TLI 1, SSP1
010	TLI 2, SSP0
011	TLI 2, SSP1
100	TLI 3, SSP0
101	TLI 3, SSP1
110	TLI 4, SSP0
111	TLI 4, SSP1

fgh unused

cccc Error recovery condition code

ERROR RECOVERY TIME SLOT INTERCHANGE

Explanation of Message

This error recovery message indicates that an error is occurring in the time slot interchange. This message reports an alarm on a timeme slot interchange circuit pack. The error type is contained in the error condition code.

Autonomous Message

1.544 Mbit/s Termination

[O.01353]

I hh:mm:ss xy,ww ERR [ESR] TSI sft TN dddd EVENT eeee 2 LN MSG:
<error analysis data> COND cc COMPL

2.048 Mbit/s Termination

[O.01353]

I hh:mm:ss xy,ww ERR [ESR] TSI sft TN dddd EVENT eeee 2 LN MSG:
<error analysis data> COND cc COMPL

Explanation of Parameters

I	Information
ERR	Error recovery
ESR	Error source register
	The ESR keyword is not output if the register contents can not be read.
TSI	Time slot interchanger
sft	TSI identifier
s	Cross-connect side (0 or 1)
f	FROM unit (1 through 6)
t	TO unit (1 through 6)
TN	Transaction
dddd	Transaction number
EVENT	Event

eeee Event number

error analysis data

The error analysis data consists of from 2 to 10 four-digit hexadecimal fields labeled regn below. The number of fields reported depends upon the error condition. The data is used for internal troubleshooting purposes only.

For pack id errors and TSI stuck bit errors the data include the pack id and the TSI number.

regn Device register n (n ranges from 2 through 10)

For the TSI identified by sft:

There are 16 TSI devices in a TSI circuit pack.

Each bit set in the summary status register indicates an alarming device on TSI sft.

For each alarming TSI device, the device status register is dumped in device fields <reg1> through <reg2>, one device per register. Up to four devices can dump their status register, per message. If less than four devices are alarming, the fields will have a 0000 value.

Register Bit Definitions

reg1 TSI summary status register

bit	Definition
15	Error on TSI sft device 15
14	Error on TSI sft device 14
13	Error on TSI sft device 13
12	Error on TSI sft device 12
11	Error on TSI sft device 11
10	Error on TSI sft device 10
09	Error on TSI sft device 09
08	Error on TSI sft device 08
07	Error on TSI sft device 07
06	Error on TSI sft device 06
05	Error on TSI sft device 05
04	Error on TSI sft device 04
03	Error on TSI sft device 03
02	Error on TSI sft device 02

01 Error on TSI sft device 01

00 Error on TSI sft device 00

reg2, reg3, reg4, reg5

TSI device summary status registers 2 through 5

For up to four TSI devices indicated by reg2 through reg5, each device will be represented by a summary status register indicating the following information:

bit(s)	Definition
15	Not used
14	Not used
13	Odd parity over data bits 12 through 00
12	TSI memory diagnostic in progress
11-08	4-bit TSI ID
07	Exercise in progress
06	Not used
05	Memory error overflow
04	Failure of memory diagnostic
03	Loss of 8 MHz clock
02	Output data error
01	Control RAM parity error
00	Microprocessor bus error

COND

Condition

cc

Hexadecimal condition code

cc	<i>Explanation</i>
B0	Pack id error, can't read pack
B1	TSI stuck bit, summary bit set, no devices alarming
B2	TSI device error
B3	TSI device id error, cannot read device
B4	Illegal exercise bits set
B5	Bus address error
B6	Device clock error

cc	<i>Explanation</i>
B7	Device control ram parity error
B8	Output data parity error (from an FTM)
B9	Corresponding CCNI bit is stuck

ERROR RECOVERY UNIT FC

Explanation of Command

This autonomous message reports that DACS II has detected an alarm on a given facility terminating unit's format converter.

Autonomous Message

1.544 Mbit/s Termination

[O.01364]

```
I hh:mm:ss xy,ww  ERR[ ESR] UNIT [q]q FC sb \
TN dddd EVENT eeee  2 LN MSG:
<error analysis data> COND cc COMPL
```

2.048 Mbit/s Termination

[O.01364]

```
I hh:mm:ss xy,ww  ERR[ ESR] UNIT [q]q FC sb \
TN dddd EVENT eeee  2 LN MSG:
<error analysis data> COND cc COMPL
```

Explanation of Parameters

I	Information
ERR	Error recovery
ESR	Error source register
	The ESR keyword is not output if the register contents cannot be read.
UNIT	Unit
[q]q	Unit number (1 through 16)
FC	Format converter
sb	FC identifier
	s FC side (0 or 1)
	b FC No. (1 through 4)
TN	Transaction

dddd	Transaction number
	The TN number can be specified in UTL::QRY,ERR to retrieve the contents of the DACS II error recovery log file which contains the past history of all error recovery events related to this output report.
EVENT	Event
eeee	Event number
	The event number can be specified in UTL::QRY, ERR to retrieve the contents of the DACS II error recovery log file which contains the data for this error recovery event.

error analysis data

Troubleshooting data (four-digit hexadecimal). Six words of troubleshooting data. They appear in the the following manner:

aaaa bbbb cccc dddd eeee ffff

aaaa	Board Level ESR0 & ESR1 content
bbbb	Board Level EMR0 & EMR1 content
cccc	RF Device ESR0 & EMR0 content
dddd	RF Device ESR1 & EMR1 content
eeee	RF Device ESR2 & EMR2 content
ffff	RF Device & TF Device Status Register content

COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
4C	FC can't be accessed
4D	Timer Error
4E	Circuit ID Error
4F	Transmit Formatter Error
50	Receiver Formatter Error

cc	<i>Explanation</i>
51	Sanity Timer Interrupt
52	RF bus error
D5	Illegal/unknown condition code

ERROR RECOVERY FMT

Explanation of Command

This message indicates that a failure was detected in a formatter of a DS3 unit.

Autonomous Message

1.544 Mbit/s Termination

[O.01402]

```
I hh:mm:ss xy,ww  ERR[ ESR] UNIT [q]q FMT s TN dddd \
EVENT eeee 2 LN MSG:
<error analysis data> COND cc COMPL
```

Explanation of Parameters

ERR	Error recovery
ESR	Error source register
	The ESR keyword is not output if the register contents cannot be read.
UNIT	Unit
[q]q	Unit number (1 through 16)
FMT	Formatter
s	Side identifier of the FMT (0 or 1)
TN	Transaction
dddd	Transaction number
	The TN number can be specified in UTL::QRY,ERR to retrieve the contents of the DACS II error recovery log file which contains the past history of all error recovery events related to this output report.
EVENT	Event
eeee	Event number
	The event number can be specified in UTL::QRY, ERR to retrieve the contents of the DACS II error recovery log file which contains the data for this error recovery event.
error analysis data	

Twelve words of troubleshooting data each consisting of four hexadecimal characters (two hexadecimal bytes). The form and ordering of these words, as they would appear in the output message, is shown below labeled for explanatory purposes.

abm1 e0e1 r0r1 r2r3 r4s0 s1s2 s3s4 t0t1 t2t3 t4u0 u1u2 u3u4

a	Circuit pack
b	Firmware version
m1	Maintenance ESR
e0	CI ESR 0
e1	CI ESR 1
r0	FMT 0RF ESR 0
r1	FMT 1RF ESR 0
r2	FMT 2RF ESR 0
r3	FMT 3RF ESR 0
r4	FMT 4RF ESR 0
s0	FMT 0RF ESR 1
s1	FMT 1RF ESR 1
s2	FMT 2RF ESR 1
s3	FMT 3RF ESR 1
s4	FMT 4RF ESR 1
t0	FMT 0RF ESR 2
t1	FMT 1RF ESR 2
t2	FMT 2RF ESR 2
t3	FMT 3RF ESR 2
t4	FMT 4RF ESR 2
u0	FMT 0TF status
u1	FMT 1TF status
u2	FMT 2TF status
u3	FMT 3TF status
u4	FMT 4TF status

COND

Condition

cc

Hexadecimal condition code

cc	<i>Explanation</i>
33	FMT TF control bus error
35	FMT multiple TF network data error
36	FMT single TF network data error
37	FMT TF device or clock receiver error
38	FMT multiple TF clock error
39	FMT single TF sync error
3A	FMT multiple TF sync error
D1	Source of error is unknown
D7	FMT communication link error
F0	FMT access error
F1	FMT timing error
F2	FMT link id error
F3	FMT bus timeout
F4	FMT serial address parity error
F5	FMT 0-4TF timing error
F6	FMT 0-4TF timing error
F7	FMT error summary 1 stuck bit
F8	FMT timing error, RF data parity
F9	FMT error summary 2 stuck bit
FA	FMT lock override, active select or kill parity
FB	FMT FIFO or control PROM error
FC	FMT RF control bus error
FD	FMT RF port and monitor alarms
FE	FMT RF port alarm; no monitor alarms

ERROR RECOVERY HMXR

Explanation of Command

This message indicates a failure was detected in a multiplexer of a DS3 Unit.

Autonomous Message

1.544 Mbit/s Termination

[O.01406]

I hh:mm:ss xy,ww ERR[ESR] UNIT [q]q HMXR c[DEV <devc>]
TN dddd EVENT eeee 2 LN MSG:
<error analysis data> COND cc COMPL

Explanation of Parameters

ERR	Error recovery
ESR	Error source register
	The ESR keyword is not output if the register contents cannot be read.
UNIT	Unit
[q]q	Unit number (1 through 16)
HMXR	Multiplexer
c	HMXR number (P, 1 through 6)
TN	Transaction
dddd	Transaction number
	The TN number can be specified in UTL::QRY,ERR to retrieve the contents of the DACS II error recovery log file which contains the past history of all error recovery events related to this output report.
EVENT	Event
eeee	Event number
	The event number can be specified in UTL::QRY, ERR to retrieve the contents of the DACS II error recovery log file which contains the data for this error recovery event.
DEV	Device

devc

Device identifier

The devices for the KCR8-HMXR circuit pack introduced in Release 8.0 are:

M13	M13 device
URT	Dual Universal Asynchronous Receiver and Transmitter
HSC	High-level Serial Communication Controller
CCxx	DS1 Channel Controller (xx = 01 through 14)
ECxx	E1 Channel Controller (xx = 01 through 14)
TXyy	DS1 Transceiver device (yy = 01 through 28)
EXyy	E1 Transceiver device (yy = 01 through 27) (E1 Transceivers 4, 8, 12, 16, 20, 24, and 28 do not exist)

error analysis data

For the KCR8-HMXR circuit pack introduced in Release 8.0, this data may be output with 0 to 12 fields depending upon the error condition. Each field contains a four-digit hexadecimal number representing troubleshooting data. For identification purposes these fields are labeled as shown below and would appear in the order shown within the message.

m1s1 m2s2 m3s3 m4s4 m5s5 h1h2 x1x2 x3x4 y1y2 z1z2 [d1d2 d3d4]

m1	HMXR mask register 1
s1	HMXR error source register 1
m2	HMXR mask register 2
s2	HMXR error source register 2
m3	HMXR mask register 3
s3	HMXR error source register 3
m4	HMXR mask register 4
s4	HMXR error source register 4
m5	HMXR mask register 5
s5	HMXR error source register 5
h1	Hardware error summary 1
h2	Hardware error summary 2
x1	Not used for DS1 -- E1 Transceiver device register 1

	x2	DS1/E1 Transceiver device register 2
	x3	DS1/E1 Transceiver device register 3
	x4	DS1/E1 Transceiver device register 4
	y1	M13 device Revision register
	y2	DS1/E1 Channel controller ESR register
	z1	Circuit ID & version
	z2	DS1/E1 select register
	d1	Byte 1 of devc data
	d2	Byte 2 of devc data (not used for device CC)
	d3	Byte 3 of devc data (not used for device CC)
	d4	Byte 4 of devc data (not used for devices CC and TX)
Data Fields		
	d1	Description
	d2	Description
	.	
	.	
	.	
	dn	Description
COND		Condition
cc		Hexadecimal condition code

cc	<i>Explanation</i>
14	FTMI is out of service
15	MXR unknown error
3D	DPC ROM error
3E	DPC loss of timing
3F	OOS RAM test ran while IS
97	MXR communication link error
A6	MXR channel controller transmit data error
A7	MXR channel controller receiver data error

cc	<i>Explanation</i>
A8	MXR channel controller exercise error
A9	MXR channel controller stuck bit error
AA	MXR transceiver framer error
AB	MXR transceiver receive sync error
AC	MXR transceiver transmitter error
D5	Illegal/unknown condition code
D8	MXR ROM error
DA	MXR queue overflow
DB	MXR channel controller loss of clock
DC	MXR channel controller frame sync error
DD	MXR channel controller configuration register error
DE	MXR channel controller instruction ram error
DF	MXR channel controller parity error
E0	HMXR Software Error
E1	MXR access error (can't access pack)
E2	MXR hard error stuck bit
E3	MXR facility error stuck bit
E4	MXR pack is in reset state
E6	MXR loss of clock from unselected FLI
E7	MXR 45MHz is not phase locked to system clock
E8	MXR firmware error
E9	MXR HSCC device error
EB	MXR M13 summary stuck bit error
EC	MXR transceiver summary stuck bit error
ED	MXR program error
EE	MXR external bus error
EF	MXR RAM error

cc	<i>Explanation</i>
FF	HMXR E1 transceiver summary error
01	MXR hardware and database mismatch
103C	MXR TS0 queue overflow

ERROR RECOVERY MIU

Explanation of Command

This message reports that a failure was detected in a multiple interface unit of a DS3 unit.

Autonomous Message

1.544 Mbit/s Termination

[O.01404]

```
I hh:mm:ss xy,ww  ERR[ ESR] UNIT [q]q MIU c TN dddd \
EVENT eeee 2 LN MSG:
<error analysis data> COND cc COMPL
```

Explanation of Parameters

ERR	Error recovery
ESR	Error source register
	The ESR keyword is not output if the register contents cannot be read.
UNIT	Unit
[q]q	Unit number (1 through 16)
MIU	Multiplexer interface unit
c	The number identifier of the MIU (P, 1 through 6)
TN	Transaction
dddd	Transaction number
	The TN number can be specified in UTL::QRY,ERR to retrieve the contents of the DACS II error recovery log file which contains the past history of all error recovery events related to this output report.
EVENT	Event
eeee	Event number
	The event number can be specified in UTL::QRY, ERR to retrieve the contents of the DACS II error recovery log file which contains the data for this error recovery event.

error analysis data

Two and one half words of troubleshooting data. The first two words consist of four hexadecimal digits each (two hexadecimal bytes). The half word is only two hexadecimal digits. The form and order of these words in the message text is shown below where, for explanatory purposes only, the words have been labeled.

e1 MIU error code
e2 MIU ESR register
f1 Firmware version
s1 Software version
c1 Circuit pack

COND

Condition

cc

Hexadecimal condition code

cc	<i>Explanation</i>
01	CEC bit on PRISM not cleared
02	Firmware error
03	Transmit underrun threshold exceeded
04	Bad EMXR Acknowledgement
05	Timeout while waiting for msg from EMXR
06	RAM data error
07	Invalid code checksum
08	Error in PRISM register
09	Error in HSCC register
0A	EPROM checksum error
0B	Timer 1 error
0C	Timer 2 error
0D	DUART error
0E	MIU access error
D6	MIU communication link error

cc	<i>Explanation</i>
F2	MIU got reset
F3	Timeout for Yellow Inhibit/Enable Request
F4	Queue overflow error

ERROR RECOVERY HARDWARE

Explanation of Command

This message is printed out when applications software attempted some operation on a circuit, but that operation failed. The type of failure is indicated in the condition code. The applications software may have requested some autonomous action on the circuit and that action will be reflected with an autonomous request for removal and/or diagnostics. Additional information can be gathered by querying the error recovery log file, but this will require technical assistance for interpretation.

Autonomous Message

1.544 Mbit/s Termination

[O.01392]

```
I hh:mm:ss xy,ww  ERR HARDWARE <entity> 4 LN MSG:
  TN=dddd COND=cc EVENT=xxxx ACTION=<action>
  SOURCE=<source> DP=<dp> PROC=<proc> <load>
  TSARGS=cn [<tsargs>]  COMPL
```

2.048 Mbit/s Termination

[O.01392]

```
I hh:mm:ss xy,ww  ERR HARDWARE <entity> 4 LN MSG:
  TN=dddd COND=cc EVENT=xxxx ACTION=<action>
  SOURCE=<source> DP=<dp> PROC=<proc> <load>
  TSARGS=cn [<tsargs>]  COMPL
```

Explanation of Parameters

ERR	Error recovery
HARDWARE	Hardware
TN	Transaction
dddd	Transaction number (hexadecimal)

The TN number can be specified in UTL::QRY,ERR to retrieve the contents of the DACS II error recovery log file which contains the past history of all error recovery events related to this output report.

COND	Condition
EVENT	Event
xxxx	Event number
SOURCE	Source
source	Source filename
	DACS II internal software filename (up to 12 characters)
DP	Decision point
dp	Decision point value
	Number associated with a particular location in the software file specified in the "source" field. Value is 0- to 8-digit positive decimal number.
ACTION	Action
action	Action to be taken
	REPORT Report only, no action
	REMOVE Remove processor from service
PROC	Process
proc	Process value
TSARGS	Trouble shooting arguments
cn	The number of trouble shooting arguments that follow (00 through 10)
tsargs	List of "count" trouble shooting arguments
load	Load number
	The load number is a ten digit number of the following form: abcdefghij
	ab software generic number
	cd software point issue number
	ef software release number
	gh year
	ij load number
entity	DACS II entity involved
	BTS s
	CCB sf
	CCI s

CCNI s s
ETSI sqq
LINK n
NPC [s]abc[-[t]def][SIDE s]
NPC uvmnp[-wxkqr][SIDE s]
SYNC s
SYNC s TLI m
TSI sft
UC [q]q
UNIT [q]q DSPi
UNIT [q]q FC sb
UNIT [q]q FTMI b
UNIT [q]q MXR n DEV devc
UNIT [q]q UBX
UNIT [q]q MIU I
UNIT [q]q FLI d
UNIT [q]q FMT k
UNIT [q]q MMFG y
cc Hexadecimal condition code

cc	<i>Explanation</i>
E0	Hardware database mismatch
E1	Hardware Failure
E2	Hardware Boot Failed
E3	Can't access link
E4	Transmit Time-out
E5	Receiver Time-out
E6	softerr failure which forces link removal
E7	Unit could not be reset
E8	Unit failed sanity check
E9	failure to insert TCC

cc	<i>Explanation</i>
EA	failure to remove TCC
EB	failed to switch CCN sides
EC	NPC's facility queue overflow condition
ED	Duplex entity failed diagnostics
EE	Lost Clear-To-Send signal on X.25 links
EF	Frame Audit reboot DDC failure
F5	Packet layer parameters are mismatched between DACS II and the network
F6	Failed to write XPC register
F7	Transmit time-out because Clear To Send lost
F8	R20 counter reaches limit
F9	T3 timer expires
FA	Too many interrupts or illegal interrupt from XPC

ERROR RECOVERY

Explanation of Message

This message reports that error recovery was called to handle an error occurring in an administrative link.

Autonomous Message

[O.01321]

I hh:mm:ss xy,ww ERR LINK a TN dddd STATUS a0 a1 a2 COMPL

Explanation of Parameters

ERR	Error recovery
LINK	Link
a	Link number (1 through 7)
TN	Transaction
dddd	Transaction number
STATUS	Status
a0, a1, a2	Status data

The following status data is for asynchronous links.

a0	Message code
00	Link has gone protocol in-service
01	Link has gone protocol out-of-service
a1	Link mode status
00	Idle
01	Input message in progress
02	Output message in progress
a2	Link interrupt register (hexadecimal) bit numbering 76543210
7	Received break
6	Parity error
5	Framingerror

4	Overrunerror
3	Transmitter empty
2	Transmitter ready
1	Receiver full
0	Receiver Ready

If bits 4, 5, and 6 are all set (equal to 1) simultaneously, it indicates a transmission error.

The following status data is for synchronous links.

a0	Session Status	
	00	Session established on virtual circuit
	01	Session closed on virtual circuit
a1	Explanation	
	00	always set to 00
a2	Virtual circuit number (hexadecimal)	
	01	1
	02	2
	03	3
	04	4
	05	5
	06	6
	07	7
	08	8
	09	9
	0A	10
	0B	11
	0C	12
	0D	13
	0E	14
	0F	15
	10	16

The following status data is for TCP/IP link.

a0	Session Status	
	00	Session established
	01	Session closed
a1	Explanation	
	00	Always set to 00
a2	Session number (hexadecimal)	
	01	1
	02	2
	03	3
	04	4
	05	5
	06	6
	07	7
	08	8
	09	9
	0A	10
	0B	11
	0C	12
	0D	13
	0E	14
	0F	15
	10	16

ERROR RECOVERY

Explanation of Message

This autonomous message reports that due to large numbers of error reports being passed through the system, not all transient error events were transferred to the disk. Logging resumes automatically when activity decreases to a manageable level.

Autonomous Message

[O.01337]
I hh:mm:ss xy,ww ERR MSGS TO LOG DISCARDED COMPL

Explanation of Parameters

ERR	Error recovery
MSG	Messages
TO	To
LOG	Log
DISCARDED	Discarded

REPORT MEMORY CARD ERROR

Explanation of Message

This autonomous message reports that a hardware error has been detected on the Primary Memory Card (PMEM) or the Secondary Memory Card (SMEM). The message identifies the source of the error by displaying error and status registers. Each bit in a register corresponds to a particular type of error. A specific error exists when its corresponding bit is set to one.

Autonomous Message

[O.01315]

I hh:mm:ss xy,ww ERR {PMEM|SMEM} TN dddd EVENT eeee COND cc COMPL

Explanation of Parameters

ERR	Error
PMEM	Primary memory card.
SMEM	Secondary memory card.
TN	Transaction Number
dddd	Four digit (hexadecimal) transaction number The transaction number is a unique tag used to identify a specific event that is recorded in the error recovery log. Specific events may be retrieved from the error log using message I.55011 if the user knows their transaction numbers.
EVENT	Event
eeee	Four digit (hexadecimal) event number The event number is a unique tag used to identify a specific event that is recorded in the error recovery log. Specific events may be retrieved from the error log using message I.55011 if the user knows their event numbers.

ERROR RECOVERY POWER

Explanation of Message

This message indicates that error recovery was called by DACS II because of a power failure on the frame.

This message also indicates which power supply failed. The 4-digit hexadecimal "fields" of the error status register indicate the failed power source(s). These hexadecimal values must be decoded into their individual bits. A bit set to 1 indicates an errored power source.

Autonomous Message

1.544 Mbit/s Termination

[O.01301]

```
pa <il> hh:mm:ss xy,ww  ERR PWR [PMC|PMA|DMA|MI|MJ|MN|CR|ONFO] \
aaaa bbbb cccc dddd TN dddd COMPL
```

2.048 Mbit/s Termination

[O.01301]

```
pa <il> hh:mm:ss xy,ww  ERR PWR [PMC|PMA|DMA|MI|MJ|MN|CR|ONFO] \
aaaa bbbb cccc dddd TN dddd COMPL
```

Explanation of Parameters

pa	Priority of action field
I	Information
*	Minor alarm
**	Major alarm
*C	Critical alarm
il	Intervention level
AMI	Immediate maintenance action
AMD	Deferred maintenance action
SI	No intervention
PMC	Prompt Maintenance Action Critical

PMA	Prompt Maintenance Action Major
DMA	Deferred Maintenance Action Minor
MI	Maintenance Information
PWR	Power
ERR	Error recovery
aaaa	EMTC ESR0

aaaa is a four-digit hexadecimal number representing the sixteen bits of ESR0. Each bit of this register contains the status of an individual power source. A power source has failed if the bit corresponding to it is set to 1.

15-12	Unused
11	ECCN 1 PWR failure
10	ECCN 0 PWR failure
9	SYNC 1 PWR failure
8	SYNC 0 PWR failure
7	Unit 7 PWR failure
6	Unused
5	Unit 6 PWR failure
4	Unit 5 PWR failure
3	Unit 4 PWR failure
2	Unit 3 PWR failure
1	Unit 2 PWR failure
0	Unit 1 PWR failure

bbbb	EMTC ESR1

bbbb is similar to aaaa above but represents the sixteen bits of ESR1.

15-14	Unused
13	The +12 V disk and tape power unit has failed (484GA, 484GB, or 484GC)
12	The +5 V main controller power unit has failed (411AA, 411AB, or 411AC) OR the +/-12 V main controller power unit for communication links has failed (SM565, SM624, or SM565B)

	11-00	Unused
cccc		EMTC ESR2 (Reserved for future use)
dddd		EMTC ESR3
		dddd is similar to aaaa above but represents the sixteen bits of ESR3.
	15-9	Unused
	8	Unit 16 PWR failure
	7	Unit 15 PWR failure
	6	Unit 14 PWR failure
	5	Unit 13 PWR failure
	4	Unit 12 PWR failure
	3	Unit 11 PWR failure
	2	Unit 10 PWR failure
	1	Unit 9 PWR failure
	0	Unit 8 PWR failure
TN		Transaction
dddd		Transaction number
		The TN number can be specified by the UTL::QRY,ERR message to retrieve the contents of the DACS II error recovery log file which contains the past history of all error recovery events related to this output report.

ERROR RECOVERY SOFTWARE

Explanation of Command

This output message reports that an error was detected by the software in the indicated processor. The report also gives the error type, the source of the error, and the action taken.

The action taken should be sufficient to recover from the problem, in which case no craft action is necessary. Or the action taken was to isolate the problem and prevent system inconsistencies. In this case, manual action is required to restore the appropriate entities.



NOTE:

All new or unknown occurrences of this error should be reported to the development organizations immediately.

The word SOFTWARE, in the message text, is replaced by MC when the error type is PMEM or SMEM.

Autonomous Message

[O.01362]

```
I hh:mm:ss xy,ww  ERR {SOFTWARE|MC} <error type> ERROR 4 LN MSG:
MID=<mid>  TN=dddd  RC=<rc> ACTION=<action> ENTITY=<entity>
SOURCE=<source> DP=<dp>  PROC=<proc>
TSARGS=<tsargs>  COMPL
```

Explanation of Parameters

ERR Error recovery

SOFTWARE Software

MC Main controller

TN Transaction

dddd Transaction number

The TN number can be specified in UTL::QRY,ERR to retrieve the content of the DACS II error recovery log file which contains the past history of all error recovery events related to this output report.

error type	Type of error
CHECKSUM	
	Text or data checksum error
COMMUNICATION	
	Difficulty talking to remote processes of processors
CPUDGN	CPU diagnostic failed
DATA BASE	
	Error in data base access
DBCHECKSUM	
	Data base checksum error
DISK	Trouble accessing disk
EXCESSIVE INT	
	Too many error recovery calls
HARDWARE	
	External hardware failure
JOURNAL	
	Trouble sending journal to disk
PROGRAM	
	Program error, bad internal data passed
RAMTEST	
	Internal RAM test failed
RECOVERY	
	Internal recovery error
REMOTE PROGRAM	
	Program error encountered on other processor local process report
TAPE	Trouble accessing tape
VMACHINE	
	Operating system or interface problem
ERROR	Error
SOURCE	Source
source	Internal DACS II software filename (12 characters)

DP	Decision point
dp	Decision point value (0- to 8-digit positive decimal number)
	Number associated with a specific point in the file specified in the source field.
RC	Return code
rc	Return code value (0- to 8-digit positive or negative number)
	Number returned by an internal function.
ACTION	Action
action	Action to be taken
	RSCOLDBT Super Cold Boot
	REPORT Report only, no action
	HWBOOT Hardware boot (boot of processor with existing data base)
	WMBOOT Warm boot (boot of processor with disk data base)
	CDBOOT Cold boot (boot of processor programs and data base)
	REMOVE Remove processor from service
	MCOND Put frame into MCOND
	PARK Stop processor immediately
ENTITY	Entity
entity	Entity identifier
	MP Action on Main Processor
	CI Action on Communication Interface
	MC Action on MC
	UNIT [q]q Action on specific unit (1 through 16)
	FRAME Frame wide action
MID	Mailbox identifier
mid	Identifier
PROC	Process
proc	Process value
TSARGS	Trouble shooting arguments
tsargs	Trouble shooting arguments value

ERROR RECOVERY

Explanation of Command

This message reports that the active sync has switched to a new operating mode. Additional autonomous actions may be reported (that is, side switch) based on the state of the mate synchronizer.

Autonomous Message

1.544 Mbit/s Termination

[O.01366]

```
I hh:mm:ss xy,ww  ERR SYNC a MODE {FAST|HOLDOVER|NORMAL} \
{MATE|CRO|TLI m SSP c} TN dddd 2 LN MSG:
<synchronizer status data bytes> COND cccc COMPL
```

2.048 Mbit/s Termination

[O.01366]

```
I hh:mm:ss xy,ww  ERR SYNC a MODE {FAST|HOLDOVER|NORMAL} \
{MATE|CRO|TLI m SSP c} TN dddd 2 LN MSG:
<synchronizer status data bytes> COND cccc COMPL
```

Explanation of Parameters

I	Information
ERR	Error recovery
SYNC	Synchronizer
a	Synchronizer number (0 or 1)
MODE	Mode
	New synchronizer operating mode
FAST	Fast
	Synchronizer is in fast phase locked loop mode
HOLDOVER	Holdover
	Synchronizer is in holdover mode, or has a timing source but has not locked to it
NORMAL	Normal

	Synchronizer is normal (locked to indicated reference)
MATE	Mate
	Synchronizer is receiving timing from the mate synchronizer (that is, the synchronizer is locked to cross couple)
CRO	Clock reference oscillator
	CRO synchronizer is receiving timing from a CRO
TLI	Timing link interface
m	TLI number (1 through 4)
SSP	Synchronizer sync port
c	SSP on TLI (0 or 1)
TN	Transaction
dddd	Transaction number
cccc	Error recovery condition code

synchronizer status data bytes

Synchronizer status information (hexadecimal)

Up to five bytes of synchronizer status data. The actual number of bytes output depends upon cccc. The bits of each byte are labeled abcdefgh in that order. The output appears in the following order:

byte 1, byte 2, byte 3, byte 4, and byte 5.

byte 1

a	MC is down flag
b	SYNC is down flag
c	Mate SYNC is out-of-service
d	Time Base is down

Timing link service status. A bit set to 1 indicates in-service.

e	TLI1
f	TLI2
g	TLI3
h	TLI4

byte 2 Timing link (SSP) in-service status

A bit set to 1 indicates the indicated entity is in-service

a	SSP 0 on TLI 1
b	SSP 1 on TLI 1
c	SSP 0 on TLI 2
d	SSP 1 on TLI 2
e	SSP 0 on TLI 3
f	SSP 1 on TLI 3
g	SSP 0 on TLI 4
h	SSP 1 on TLI 4
byte 3	
a	SYNC restart flag
b	Hardware summary, error on DPLL
c	PLL summary, any major cross-couple error
d	Cross-couple summary, any major cross-couple error
e	CRO summary error, any major CRO error
fgh	Not used
byte 4	
ab	Synchronizer architecture
00	Slave in master slave configuration
01	Master in master slave configuration
10	Mutual synchronization system
cde	Operational stratum field
000	Domestic stratum 3
011	Domestic stratum 2
2.048 Mbit/s Termination	
001	CEPT Local Exchange
010	CEPT Toll Exchange
Both Terminations	
fg	PLL locking mode field
00	Normal
01	Fast
10	Holdover

	h	Hit timing holdover field
	byte 5	
	ab	Active timing link source field
	00	Holdover
	01	Timing Link
	10	Cross couple
	11	CRO
	cde	Active link field
	000	TLI 1, SSP 0
	001	TLI 1, SSP 1
	010	TLI 2, SSP 0
	011	TLI 2, SSP 1
	100	TLI 3, SSP 0
	101	TLI 3, SSP 1
	110	TLI 4, SSP 0
	111	TLI 4, SSP 1
	fgh	Not used
COND		Condition
cc		Hexadecimal condition code
	cccc	<i>Explanation</i>
	EF00	Unknown what sync switched to
	EF01	SYNC switched to NORMAL mode
	EF02	SYNC switched to HOLDOVER
	EF03	SYNC switched to FAST mode
	EF04	SYNC switched TLIs/SSPs
	EF05	SYNC switched to cross couple

ERROR RECOVERY

Explanation of Message

This message reports the results of the error recovery process on the synchronizer with the alarms set.

The errors can be of the following types:

- Loss of signal
- Loss of energy
- Excessive jitter
- Phase step
- Out of frame
- Major framing error rate
- Minor framing error rate

Autonomous Message

1.544 Mbit/s Termination

Nonhierarchical

[O.01333]

```
pa <il> hh:mm:ss xy,ww  ERR SYNC a TLI m SSP b TN dddd 3 LN MSG: \  
ALM[ LOS][ LEN][ EXJ][ PHS][ OOF][ MAJ][ MIN] {PMC|PMA|DMA|MI} \  
SET <byte 1> <byte 2> <byte 3> <byte 4> <byte 5> COND cccc COMPL
```

Hierarchical

[O.01333]

```
pa <il> hh:mm:ss xy,ww  ERR SYNC a TLI m SSP b TN dddd 3 LN MSG: \  
ALM[ LOS][ LEN][ EXJ][ PHS][ OOF][ MAJ][ MIN] {PMC|PMA|DMA|MI} \  
SET <byte 1> <byte 2> <byte 3> <byte 4> <byte 5> COND cccc COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

[O.01333]

```
pa <il> hh:mm:ss xy,ww  ERR SYNC a TLI m SSP b [NPC abc] \
TN dddd  3 LN MSG:
ALM[ LOS][ LEN][ EXJ][ PHS][ OOF][ MAJ][ MIN] {PMC|PMA|DMA|MI} SET
<byte 1> <byte 2> <byte 3> <byte 4> <byte 5> COND cccc COMPL
```

Hierarchical

[O.01333]

```
pa <il> hh:mm:ss xy,ww ERR SYNC a TLI m SSP b [NPC uvmp] TN dddd \
3 LN MSG:
ALM[ LOS][ LEN][ EXJ][ PHS][ OOF][ MAJ][ MIN] {PMC|PMA|DMA|MI} SET
<byte 1> <byte 2> <byte 3> <byte 4> <byte 5> COND cccc COMPL
```

Explanation of Parameters

pa	Priority of action field.
I	Information
*	Minor alarm
**	Major alarm
*C	Critical alarm
il	Intervention Level
AMI	Immediate maintenance action
AMD	Deferred maintenance action
SI	No intervention
PMC	Prompt Maintenance Action Critical
PMA	Prompt Maintenance Action Major
DMA	Deferred Maintenance Action Minor
MI	Maintenance Information
ERR	Error recovery
SYNC	Synchronizer
a	SYNC number (0 or 1)
TLI	Timing link interface
m	TLI number (1 through 4)

SSP	Synchronizer sync port
b	SSP number (0 or 1)
NPC	Network processing circuit
abc	Nonhierarchical NPC number
uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module
TN	Transaction
dddd-	Transaction number
ALM	Alarm
LOS-	Loss of signal
LEN	Loss of energy
EXJ	Excessive jitter
PHS	Phase step
OOF	Out of frame
MAJ	Major
	Major framing error rate
MIN-	Minor
	Minor framing error rate
SET	Set
COND	Condition
cccc	Error recovery condition code

byte 1, byte 2, ..., byte 5

Synchronizer status data bytes

The letters a through h used below are the names given to the individual bits in a synchronizer status data byte. The eight bits in each byte are labeled abcdefgh in left to right order.

byte 1

a	Timing link equipped by MC
b	Timing link declared out-of-service
c	Timing link out-of-service due to error

- d** Associated Timing Extractor TLI error
- efgh** Not used
- byte 2** Priority weighting of link, a number from 1 through 8
- byte 3** Framing format, line format, and frequency
- abc** Framing format (valid only for TXB1 or TXB2 TLIs)

abc	Definition
000	D4 (TXB1)
001	ESF (TXB1)
010	DDS (TXB1)
000	CCS (TXB2)
001	ERSM (TXB2)
010	CAS0 (TXB2)
011	CAS1 (TXB2)

- de** Line format (valid only for TXB1 or TXB2 TLIs)

de	Definition
00	Bipolar (TXB1)
01	B8ZS (TXB1)
10	AMI (TXB2)
AA	HDB3 (TXB2)

- fgh** Frequency (TXUC TLI)

fgh	Definition
000	512 kHz
001	1.000 MHz
010	1.544 MHz
011	2.048 MHz
100	5.000 MHz

- byte 4** Mixed status
- a** Carrier failure alarm/loss of signal (TXB1, TXB2, and TXCC)
- b** Timing signal loss of energy

	c	Autobaud failure
	d	Frequency offset flag
	e	Excessive jitter
	f	Phase step
	gh	Not used
byte 5		Framing status
	a	Out of frame
	b	Major framing error rate
	c	Major framing error rate
	defgh	Not used

ERROR RECOVERY, SYNCHRONIZER

Explanation of Message

This message reports the results of the error recovery process on the synchronizer with the alarms cleared.

Autonomous Message

Nonhierarchical

[O.01335]
I hh:mm:ss xy,ww ERR SYNC a TLI m SSP b [NPC abc] \
TN dddd 3 LN MSG:
ALM[LOS][LEN][EXJ][PHS][OOF][MAJ][MIN] CLR
<byte 1> <byte 2> <byte 3> <byte 4> <byte 5> COND cccc COMPL

Hierarchical

[O.01335]
I hh:mm:ss xy,ww ERR SYNC a TLI m SSP b [NPC uvmp] TN dddd \
3 LN MSG:
ALM[LOS][LEN][EXJ][PHS][OOF][MAJ][MIN] CLR
<byte 1> <byte 2> <byte 3> <byte 4> <byte 5> COND cccc COMPL

Explanation of Parameters	ERR	Error recovery
	SYNC	Synchronizer
	a	SYNC number (0 or 1)
	TLI	Timing link interface
	m	TLI number (1 through 4)
	SSP	Synchronizer sync port
	b	SSP number (0 or 1)
	NPC	Network processing circuit
	abc	Nonhierarchical NPC number
	uvmp	Hierarchical NPC number
	uv	Unit number

	m	Module number
	np	NPC number within the module
TN		Transaction
dddd		Transaction number
ALM		Alarm
LOS		Loss of signal
LEN		Loss of energy
EXJ		Excessive jitter
PHS		Phase step
OOF		Out of frame
MAJ		Major framing error rate
MIN		Minor framing error rate
CLR		Clear
byte 1, byte 2, ..., byte 5		Synchronizer status bytes
		Synchronizer status data in binary form. The number of data bytes ranges from 1 to 5, depending upon the synchronizer error type. These bytes are a coded form of the information shown in "explanation of error condition code". Each byte has eight bits labeled abcdefgh.
		If Main Processor to Synchronizer communication has failed, Error Recovery may not get the correct status data from the Synchronizer. All bits in "synchronizer status data bytes" will then be set to 1 by default.
byte 1		
	a	Timing link equipped by MC
	b	Timing link declared out-of-service
	c	Timing link out-of-service due to error
	d	Associated Timing Extractor TLI error
	efgh	Not used
byte 2		Priority weighting of link, a number from 1 through 8
byte 3		Framing format, line format, and frequency
	abc	Framing format (valid only for TXB1 or TXB2 TLIs)
	TXB1	

Bit	Explanation
000	D4
001	ESF
010	DDS

TXB2

Bit	Explanation
000	CCS
001	ERSM
010	CAS0
011	CAS1

de Line format (valid only for TXB1 or TXB2 TLIs)

TXB1

Bit	Explanation
00	Bipolar
01	B8ZS

TXB2

Bit	Explanation
10	AMI
AA	HDB3

fgh Frequency (TXUC TLI)

Bit	Explanation
000	512 kHz
001	1.000 MHz
010	1.544 MHz
011	2.048 MHz
100	5.000 MHz

byte 4

Mixed status

	a	Carrier failure alarm/loss of signal (TXB1, TXB2, and TXCC)
	b	Timing signal loss of energy
	c	Autobaud failure
	d	Frequency offset flag
	e	Excessive jitter
	f	Phase step
	gh	Not used
byte 5		Framing status
	a	Out of frame
	b	Major framing error rate
	c	Major framing error rate
	defgh	Not used
COND		Condition
cccc		Error recovery condition code

EXECUTE MACRO

Explanation of Command

This message requests the execution of macro <name>. The optional fields p1, p2, etc., specify parameters used in the macro.

To list the contents of a macro, use the UTL QRY,LIST,MACRO command, Message I.54131.

The NULL keyword may be used as a parameter.

Command

[I.39301]

EXC:[FRM xy][,SEQ ww]:MACRO <macro name>[(<p1>[, <p2>[, <p3> \
[, ...[, <p10>]]]])]!

Completion Message

[O.39301]

M hh:mm:ss xy,ww n[vv] EXC MACRO <macro name> \
[(<p1>[, <p2>[, <p3>[, ...[, <p10>]]]])] COMPL

[O.39302]

M hh:mm:ss xy,ww n[vv] EXC MACRO <macro name> STOP \
COMPL

[O.39303]

M hh:mm:ss xy,ww n[vv] EXC MACRO IN PROGRESS

Denial Message

[O.39301.01]

M hh:mm:ss xy,ww n[vv] EXC MACRO <macro name> COND cc \
DNY

Explanation of Parameters

p1,
p2,

p3,

...,

p10

Macro parameter values (1 to 7 uppercase alphanumeric characters)

Within a macro a parameter is referred to by #nn. The # sign indicates a parameter reference follows and the nn indicates the position in the command line from which the parameter value is taken. That is, if the parameter reference #03 is contained in a line within a macro then the third parameter on the EXC::MACRO command line is substituted for each appearance of the parameter reference #03.

A maximum of 10 parameters can be specified.

MACRO

Macro

macro name

Macro name (seven characters maximum length)

The name of a collection of DACS II commands executed as a group.

A macro name is a string of capitalized alphanumeric characters. There are two type of macros; public and private. A private macros is created by a user in space allocated to the user by the system administrator. Only the user that created it can execute or read (LIST) a private macro. A public macro is created by the system administrator and is executable and readable by all users. A public macro name must start with the letter "P". A private macro name must not start with the letter "P".

STOP

Indicates that macro execution is stopped

cc

Hexadecimal condition code

cc	<i>Explanation</i>
62	File is being accessed
64	File doesn't exist/can't be accessed
68	Incorrect language/addressing mode
69	Incorrect number of parameters
D5	No user is logged in on the link/vc

Contents

- FRADTS,BMCMP,COMPL [12-2](#)
- FRADTS,DGN,DEV,COMPL [12-3](#)
- FRADTS,FRCMP,COMPL [12-7](#)
- FRADTS,MC,DGN [12-120](#)

FRAME AUDITS

Explanation of Command

This completed, autonomously generated action message from frame audits indicates that the data in Main Controller (MC) Random Access Memory (RAM) did not match the data on the PMEM PCMCIA card. A similar message may be used for mismatches between the Main Controller and individual Unit Controllers (UC) or between Main Controller and the Communications Interface (CI).

Autonomous Message

[O.82003]
I hh:mm:ss xy,ww FRADTS BMCMP <ttt> d8 d7 d6 d5 d4 d3 d2 d1 COMPL

Explanation of Parameters

ttt	Entity name
MP	Main processor
CI	Communications interface
U1-U16	Unit controller (1 through 16)
d8	Data base file number on PMEM card
d7	Invalid page number divided by 100 ($d7 / 100$)
d6	Invalid page number modulo by 100 ($d6 \% 100$)

If RAM page checksum is invalid, $d5 = d4 = d3 = d2 = d1 = FF$.

If DACS II cannot get the data base file on the PMEM card, $d7 = d5 = FF$.

FRAME AUDITS DIAGNOSTICS

Explanation of Command

This autonomously-generated action message from frame audits indicates that an in-service diagnostic was run on the entity **ttt** for the element **eee** and the diagnostic test is complete.

Autonomous Message

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[O.82001]

I hh:mm:ss xy,ww FRADTS DGN <ttt> <eee>[DEV <devc>] d0 COMPL

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[O.82001]

I hh:mm:ss xy,ww FRADTS DGN <ttt> <eee> d0 COMPL

Explanation of Parameters

ttt Diagnosed entity name
eee Element of diagnosed entity

ttt	eee	Explanation
CRO		Clock reference oscillator
	0smc	s - Side number (0 or 1)
		m - TLI number (1 through 4)
		c - TLR number (1 or 2)
DSPI		Digital signal processor interface
	0qqr	qq - Unit number (01 through 16)
		r - DSPI number (3 through 6)
FTMI		Facility terminating module interface
	0qqb	qq - Unit number (01 through 16)
		b - FTMI in the FTU (1 through 4)

ttt	eee	Explanation
NPC		Network processing circuit
	nnnn	NPC number (0001 through 2560) (Does not include NPCs equipped in DS3, HDS3 or HSU Units)
SYNC		Synchronizer
	000s	s - Side number (0 or 1)
TLI		Timing link interface
	00sm	s - Side number (0 or 1)
		m - TLI number (1 through 4)
TSI		Time slot interchanger
	0sft	s - Side number (0 or 1)
		f - CCB number (1 through 6). FROM Unit
		t - TSI number (1 through 6). TO Unit
ETSI		Expanded time slot interchanger
	0sqq	s - Side number (0 or 1)
		qq - Unit number (01 through 16)
UFC		Format Converter
	0qqb	qq - Unit number (01 through 16)
		b - Format Converter number (1 through 4)
UNIT		Unit
	00qq	qq - Unit number (01 through 16)
FMT		Formatter or Hybrid Formatter
	0qqq	qq - Unit number (01 through 16)
		s - Side number (0 or 1)
FLI		Facility line interface
	0qqk	qq - Unit number (01 through 16)
		k - Identifier (k = S or P)
1.544 Mbit/s Termination		
	0qqc	qq - Unit number (01 through 16)
		c - MXR/HMXR identifier (1 through 6,P)
MIU		Multiple interface unit

ttt	eee	Explanation
	0qqc	qq - Unit number (01 through 16)
		c - MIU number (1 through 6,P)
OI		Optical Interface
	0qqk	qq - Unit Number (01 through 16)
		k - Identifier (k=1 OI-1S,k=2 OI-2S,k=3 OI-1P, k=4 OI-2P)
MPR		Mapper
	0qqc	qq - Unit Number (01 through 16)
		c - Mapper number (1 through 6,P)
CCI		Clock and control interface
	000s	s - Side number (0 or 1)

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DEV Device

devc Device identifier

This optional field is shown only if the entity is MXR/HMXR.

DS3 General devices

M13 M12 and M13 devices

PIF Processor Interface

HSC High-level Serial Communication Controller

CCxx DS1 Channel Controller (xx = 1 through 14)

ECxx E1 Channel Controller (xx = 1 through 14)

TXyy DS1 Transceiver devices (yy = 1 through 28)

EXyy E1 Transceiver devices (yy = 1 through 27)
(E1 Transceivers 4, 8, 12, 16, 20, 24, 28 do not exist.)

1.544 Mbit/s Termination

DEV Device

devc Device identifier

This optional field is shown only if the entity is HSU

OC3 General devices

	MPR	Mapper devices
	PIF	Processor Interface
	HSC	High-level Serial Communication Controller
	CCxx	DS1 Channel Controller (xx = 1 through 4)
	TXyy	DS1 Transceiver devices (yy = 1 through 28)
d0	Return code from the diagnostic:	
	FC	Failed diagnostic

FRAME AUDITS

Explanation of Command

This autonomously-generated message indicates that test number ttt was run and that this frame audit found data in the incorrect state. The message also indicates that this frame audit has completed.

Autonomous Message

[O.82002]

I hh:mm:ss xy,ww FRADTS FRCMP ttt[d9 d8 d7 d6] \
d5 d4 d3 d2 d1 d0 COMPL

Explanation of Parameters

ttt	Test Number
d9-d0	Hexadecimal values of errored data bytes Data bytes d9 through d6 are used by some but not all tests.
002	FTU FTMI status flags are inconsistent The FTMI equipage flag in the MP data base does not match the equipage flag in the UC data base. d0 FTMI flag from MP data base d1 FTMI flag from UC data base d2 Not used d3 Not used d4 FTMI number d5 UNIT number
003	FTU FC status flags are inconsistent The FC equipage flag in the MP data base does not match the equipage flag in the UC data base. d0 FC flag from MP data base d1 FC flag from UC data base d2 Not used d3 FC side

	d4	FTMI number
	d5	UNIT number
004	FTU FTMI left side equalization values are inconsistent The FTMI left side equalization values in the MP data base do not match those in the UC data base.	
	d0	Second byte of the equalization value from MP data base
	d1	First byte of the equalization value from MP data base
	d2	Second byte of the equalization value from UC data base
	d3	First byte of the equalization value from UC data base
	d4	FTMI number
	d5	UNIT number
005	FTU FTMI right side equalization values are inconsistent The FTMI right side equalization values in the MP data base do not match those in the UC data base.	
	d0	Second byte of the equalization value from MP data base
	d1	First byte of the equalization value from MP data base
	d2	Second byte of the equalization value from UC data base
	d3	First byte of the equalization value from UC data base
	d4	FTMI number
	d5	UNIT number
006	FTU FTMI mode flags are inconsistent The mode of the FTMI in the MP data base does not match the mode of the FTMI in the UC data base.	
	d0	FTMI mode from MP data base
	d1	FTMI mode from UC data base
	d2	Not used
	d3	Not used

	d4	FTMI number
	d5	UNIT number
007	Unit flags are inconsistent	
	The UNIT equipage flag in the MP data base does not match the UNIT equipage flag in the unit data base.	
	d0	UNIT flag from MP data base
	d1	UNIT flag from UC data base
	d2	Not used
	d3	Not used
	d4	Not used
	d5	UNIT number
008	Unit Cross-Connect side status flag is inconsistent	
	The Cross-Connect side status flag in the MP data base does not match the CCN/ECCN side status flag in the unit data base.	
	d0	Cross-Connect side flag from MP data base
	d1	Cross-Connect side flag from UNIT data base
	d2	Not used
	d3	Not used
	d4	Cross-Connect side
	d5	UNIT number
009	DS3 FMT/HFMT equipage inconsistent	
	FMT/HFMT equipage in the MP data base is not consistent with that of the unit data base.	
	d0	MP equipage flag
	d1	UA equipage flag
	d2	Not used
	d3	Not used
	d4	FMT/HFMT Number
	d5	Unit Number
00A	DS3 MXR/HMXR equipage inconsistent	
	MXR/HMXR equipage in the MP data base is not consistent with that of the unit data base.	
	d0	MP data base equipage flag

	d1	UA data base equipage flag
	d2	Not used
	d3	Not used
	d4	MXR/HMXR Number
	d5	Unit Number
00B	DS3 MIU equipage inconsistent	
	MIU equipage in the MP data base is not consistent with that of the Unit data base.	
	d0	MP data base equipage flag
	d1	UA data base equipage flag
	d2	Not used
	d3	Not used
	d4	MIU Number
	d5	Unit Number
00C	DS3 FLI equipage inconsistent	
	FLI equipage in the MP data base is not consistent with that of the Unit data base.	
	d0	MP equipage flag
	d1	UA equipage flag
	d2	Not used
	d3	Not used
	d4	FLI Number
	d5	Unit Number
00D	NPC Transmit Pseudo Framing Word is out of range	
	The Transmit Pseudo Framing Word is out of range in the MP data base.	
	d0	The Transmit Pseudo Framing Word of NPC from MP data base
	d1	Not used
	d2	Not used
	d3	Not used
	d4	NPC number
	d5	UNIT number

00E	NPC Receive Pseudo Framing Word is out of range The Receive Pseudo Framing Word is out of range in the MP data base.
d0	The Receive Pseudo Framing Word of NPC from MP data base
d1	Not used
d2	Not used
d3	Not used
d4	NPC number
d5	UNIT number
00F	NPC AIS Alarm data are inconsistent The AIS Alarm data of the NPC in the MP data base does not match that in the unit data base.
d0	The AIS Alarm data of NPC from MP data base
d1	The AIS Alarm data of NPC from unit data base
d2	Not used
d3	Not used
d4	NPC number
d5	UNIT number
011	FTU NPC flags are inconsistent The FTU (or DSPU) NPC equipage flag in the MP data base does not match the FTU (or DSPU) NPC equipage flag in the Unit data base.
d0	NPC flag from MP data base
d1	NPC flag from UC data base
d2	Not used
d3	Not used
d4	NPC number
d5	UNIT number
012	FTU NPC insertion words are inconsistent The FTU NPC insertion word in the MP data base does not match the FTU NPC insertion word in the UC data base.
d0	NPC insertion word from MP data base
d1	NPC insertion word from UC data base

	d2	Not used
	d3	Not used
	d4	NPC number
	d5	UNIT number
013	FTU NPC types are inconsistent	
	The type of the FTU NPC in the MP data base does not match the type of the FTU NPC in the UC data base.	
	d0	NPC type from MP data base
	d1	NPC type from UC data base
	d2	Not used
	d3	Not used
	d4	NPC number
	d5	UNIT number
014	FTU NPC X option values are inconsistent	
	The X option of the FTU NPC in the MP data base does not match that in the UC data base.	
	d0	Second byte of the X option of NPC from MP data base
	d1	First byte of the X option of NPC from MP data base
	d2	Second byte of the X option of NPC from UC data base
	d3	First byte of the X option of NPC from UC data base
	d4	NPC number
	d5	UNIT number
015	FTU NPC Y option values are inconsistent	
	The Y option of the FTU NPC in the MP data base does not match that in the UC data base.	
	d0	Second byte of the Y option of NPC from MP data base
	d1	First byte of the Y option of NPC from MP data base
	d2	Second byte of the Y option of NPC from UC data base
	d3	First byte of the Y option of NPC from UC data base
	d4	NPC number

016	d5	UNIT number
	FTU NPC Z option values are inconsistent	
	The Z option of the FTU NPC in the MP data base does not match that in the UC data base.	
	d0	Second byte of the Z option of NPC from MP data base
	d1	First byte of the Z option of NPC from MP data base
	d2	Second byte of the Z option of NPC from UC data base
	d3	First byte of the Z option of NPC from UC data base
017	d4	NPC number
	d5	UNIT number
	FTU NPC threshold values are inconsistent	
	The threshold value of the FTU NPC in the MP data base does not match that in the UC data base.	
	d0	Second byte of the threshold value of NPC from MP data base
	d1	First byte of the threshold value of NPC from MP data base
	d2	Second byte of the threshold value of NPC from UC data base
018	d3	First byte of the threshold value of NPC from UC data base
	d4	NPC number
	d5	UNIT number
	FTU NPC Signaling field is inconsistent	
	The FTU NPC SIG field in the MP data base does not match the FTU NPC SIG field in the UC data base.	
	d0	NPC SIG field from MP data base
	d1	NPC SIG field from UC data base
019	d2	Not used
	d3	Not used
	d4	NPC number
	d5	UNIT number
	FTU NPC TS0 bit value is inconsistent	

	The FTU NPC TS0 bits in the MP data base do not match the FTU NPC TS0 bits in the UC data base.
	d0 NPC TS0 bits from MP data base
	d1 NPC TS0 bits from UC data base
	d2 Not used
	d3 Not used
	d4 NPC number
	d5 UNIT number
01A	FTU NPC loopback field is inconsistent
	The FTU NPC LPBK field in the MP data base does not match the FTU NPC LPBK field in the UC data base.
	d0 NPC LPBK field from MP data base
	d1 NPC LPBK field from UC data base
	d2 Not used
	d3 Not used
	d4 NPC number
	d5 UNIT number
01B	FTU NPC TS0M bit value is inconsistent
	The FTU NPC TS0M bits in the MP data base do not match the FTU NPC TS0M bits in the UC data base.
	d0 NPC TS0M bits from MP data base
	d1 NPC TS0M bits from UC data base
	d2 Not used
	d3 Not used
	d4 NPC number
	d5 UNIT number
01C	FTU syncmode value is inconsistent
	The FTU syncmode in the MP data base does not match the FTU syncmode in the UC data base.
	d0 syncmode from MP data base
	d1 syncmode from UC data base
	d2 Not used
	d3 Not used

	d4	Not used
	d5	UNIT number
01D	CPR channel modify activated information is inconsistent The CPR channel modify activated information stored in UC data base does not match that stored in the MP data base.	
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Not used
	d4	FTU NPC number
	d5	UNIT number
01E	NPC Insertion AIS values are inconsistent The Insertion AIS of the NPC in the MP data base does not match that in the unit data base.	
	d0	The AIS Insertion of NPC from MP data base
	d1	The AIS Insertion of NPC from MP data base
	d2	Not used
	d3	Not used
	d4	NPC number
	d5	UNIT number
01F	NPC alarm disable flag values are inconsistent The alarm disable flag of the NPC in the MP data base does not match that in the unit data base.	
	d0	Second byte of the alarm disable flag of NPC from MP data base
	d1	First byte of the alarm disable flag of NPC from MP data base
	d2	Second byte of the alarm disable flag of NPC from unit data base
	d3	First byte of the alarm disable flag of NPC from unit data base
	d4	NPC number
	d5	UNIT number
021	CCN side entity flags are inconsistent	

	The equipage flag of the CCN side entity in the MP data base does not match that in the CCN data base.
	d0 CCN side flag from MP data base
	d1 CCN side flag from CCN data base
	d2 Not used
	d3 Not used
	d4 Not used
	d5 CCN side
022	CCN CCNI entity flags are inconsistent
	The equipage flag of the CCN CCNI entity in the MP data base does not match that in the CCN data base.
	d0 CCNI flag from MP data base
	d1 CCNI flag from CCN data base
	d2 Not used
	d3 Not used
	d4 Not used
	d5 CCN side
023	CCN CCB entity flags are inconsistent
	The equipage flag of the CCN CCB entity in the MP data base does not match that in the CCN data base.
	d0 CCB flag from MP data base
	d1 CCB flag from CCN data base
	d2 Not used
	d3 Not used
	d4 CCB number
	d5 CCN side
024	CCN TSI entity flags are inconsistent
	The equipage flag of the CCN TSI entity in the MP data base does not match that in the CCN data base.
	d0 CCN TSI flag from MP data base
	d1 CCN TSI flag from CCN data base
	d2 Not used
	d3 CCB number - TO side

	d4	CCB number - FROM side
	d5	CCN side
025	CCN active side flags are inconsistent	
	The CCN active side reported by the MP data base does not match the CCN active side reported by the CCN data base.	
	d0	CCN active side flag MP data base
	d1	CCN active side from CCN data base
	d2	Not used
	d3	Not used
	d4	Not used
	d5	Not used
026	ECCN side entity flags are inconsistent	
	The equipage flag of the ECCN side entity in the MP data base does not match that in the ECCN data base.	
	d0	ECCN side flag from MP data base
	d1	ECCN side flag from ECCN data base
	d2	Not used
	d3	Not used
	d4	Not used
	d5	ECCN side
027	ECCN CCI entity flags are inconsistent	
	The equipage flag of the ECCN CCI entity in the MP data base does not match that in the ECCN data base.	
	d0	CCI flag from MP data base
	d1	CCI flag from ECCN data base
	d2	Not used
	d3	Not used
	d4	Not used
	d5	ECCN side
028	ECCN ETSI entity flags are inconsistent	
	The equipage flag of the ECCN ETSI entity in the MP data base does not match that in the ECCN data base.	
	d0	ECCN ETSI flag from MP data base

	d1	ECCN ETSI flag from ECCN data base
	d2	Not used
	d3	Not used
	d4	ETSI number
	d5	ECCN side
029	ECCN active side flags are inconsistent	
	The ECCN active side reported by the MP data base does not match the ECCN active side reported by the ECCN data base.	
	d0	ECCN active side flag MP data base
	d1	ECCN active side from ECCN data base
	d2	Not used
	d3	Not used
	d4	Not used
	d5	Not used
02A	NPC Transmit Pseudo Framing Words are inconsistent	
	The Transmit Pseudo Framing Word of the NPC in the MP data base does not match that in the unit data base.	
	d0	The Transmit Pseudo Framing word of NPC from MP data base
	d1	The Transmit Pseudo Framing word of NPC from unit data base
	d2	Not used
	d3	Not used
	d4	NPC number
	d5	UNIT number
02B	NPC Receive Pseudo Framing Word values are inconsistent	
	The Receive Pseudo Framing Word of the NPC in the MP data base does not match that in the unit data base.	
	d0	The Receive Pseudo Framing Word of NPC from MP data base
	d1	The Receive Pseudo Framing Word of NPC from unit data base
	d2	Not used
	d3	Not used

	d4	NPC number
	d5	UNIT number
02C	NPC Non Frame Word Setting values are inconsistent	
	The Non Frame Word Setting of the NPC in the MP data base does not match that in the unit data base.	
	d0	Fourth byte of the Non Frame Word Setting of NPC from MP data base
	d1	Third byte of the Non Frame Word Setting of NPC from MP data base
	d2	Fourth byte of the Non Frame Word Setting of NPC from unit data base
	d3	Third byte of the Non Frame Word Setting of NPC from unit data base
	d4	NPC number
	d5	UNIT number
02D	NPC Transmit and Receive Pseudo Framing word values are inconsistent	
	The Transmit Pseudo Framing Word of a NPC does not match the Receive Pseudo Framing Word in the MP data base when one of them is set to the Non-Framing Word	
	d0	The Transmit Pseudo Framing Word of NPC from MP data base
	d1	The Receive Pseudo Framing Word of NPC from MP data base
	d2	Not used
	d3	Not used
	d4	NPC number
	d5	UNIT number
02E	CCN and Sync are running on opposite sides	
	The CCN active side reported by the MP data base does not match the Sync active side reported by the frame data base.	
	d0	CCN active side from MP data base
	d1	Sync active side from frame data base
	d2	Not used
	d3	Not used

	d4	Not used
	d5	Not used
02F	ECCN and Sync are running on opposite sides	
	The ECCN active side reported by the MP data base does not match the Sync active side reported by the frame data base.	
	d0	ECCN active side from MP data base
	d1	Sync active side from frame data base
	d2	Not used
	d3	Not used
	d4	Not used
	d5	Not used
032	DSPI entity flags are inconsistent. The equipage flag of the DSPI entity in the MP data base does not match that in the DSPU data base.	
	d0	DSPI flag from MP data base
	d1	DSPI flag from UD data base
	d2	Not used
	d3	Not used
	d4	Not used
	d5	Unit number
033	HUB-ID value in data bases is inconsistent	
	The HUB-ID is inconsistent between the MP data base and the UD data base.	
	d0	HUB-ID value from MP data base
	d1	HUB-ID value from UD data base
	d2	Not used
	d3	Not used
	d4	Not used
	d5	Unit number
034	NPC connected to a time slot is inconsistent	
	The NPC connected to a time slot in the MP data base does not match with the UD data base.	
	d0	The connected NPC number from MP data base

	d1T	he connected NPC number from UD data base
	d2	Not used
	d3T	The time slot number
	d4	The NPC number
	d5	Unit number
035	Function block for a time slot is inconsistent	
	The function block connected to a time slot in the MP data base does not match with the UD data base.	
	d0	The connected function block number from MP data base
	d1	The connected function block number from UD data base
	d2	Not used
	d3	The time slot number
	d4	The NPC number
	d5	Unit number
036	SRM customer number or MJU branch number is inconsistent	
	The SRM customer number or MJU branch number in the MP data base does not match with the UD data base.	
	d0	The SRM customer number or MJU branch number from MP data base
	d1	The SRM customer number or MJU branch number from UD data base
	d2	Not used
	d3	The SRM number or the MJU number
	d4	The NPC number
	d5	Unit number
037	Time slot rate is inconsistent	
	The time slot rate in the MP data base does not match with that of the UD data base.	
	d0	The time slot rate from MP data base
	d1	The time slot rate from UD data base
	d2	Not used
	d3	The time slot number

	d4	The NPC number
	d5	Unit number
038	Time slot functional usage is inconsistent	
	The functional usage in the MP data base does not match with that of the UD data base.	
	d0	The functional usage from MP data base
	d1	The functional usage from UD data base
	d2	Not used
	d3	The time slot number
	d4	The NPC number
	d5	Unit number
039	SRDC unexpected errors	
	An unexpected error was encountered during Subrate Circuit audits.	
	d0	The Unit where the error is found
	d1	Not used
	d2	Not used
	d3	Not used
	d4	Not used
	d5	Not used
03B	DS3 FLI LBO data base inconsistent	
	FLI/Line Build Out in the MP data base is not consistent with that of the Unit data base.	
	d0	MP lbo
	d1	UA lbo
	d2	Not used
	d3	Not used
	d4	MXR/HMXR Number
	d5	Unit Number
03C	DS3 MXR/HMXR data base flag inconsistent	
	MXR/HMXR data base flag in the MP data base is not consistent with that of the Unit data base.	
	d0	MP data base flag

	d1	UA data base flag
	d2	Not used
	d3	Not used
	d4	MXR/HMXR Number
	d5	Unit Number
03D	DS3 MXR/HMXR data base type inconsistent MXR/HMXR type in the MP data base is not consistent with that of the Unit data base.	
	d0	MP data base type
	d1	UA data base type
	d2	Not used
	d3	Not used
	d4	MXR/HMXR Number
	d5	Unit Number
03E	DS3 MXR/HMXR data base xoption inconsistent MXR/HMXR 'x' option in the MP data base is not consistent with that of the Unit data base.	
	d0	MP data base xoption
	d1	UA data base xoption
	d2	Not used
	d3	Not used
	d4	MXR/HMXR Number
	d5	Unit Number
03F	DS3 MXR/HMXR data base yoption inconsistent MXR/HMXR 'y' option in the MP data base is not consistent with that of the Unit data base.	
	d0	MP data base yoption
	d1	UA data base yoption
	d2	Not used
	d3	Not used
	d4	MXR/HMXR Number
	d5	Unit Number
040	DS3 MXR/HMXR data base z option inconsistent	

	MXR/HMXR z option in the MP data base is not consistent with that of the Unit data base.
	d0 MP data base zoption
	d1 UA data base zoption
	d2 Not used
	d3 Not used
	d4 MXR/HMXR Number
	d5 Unit Number
041	DS3 MXR/HMXR data base BER threshold inconsistent MXR/HMXR 'BER' threshold in the MP data base is not consistent with that of the Unit data base.
	d0 MP data base ber threshold
	d1 UA data base ber threshold
	d2 Not used
	d3 Not used
	d4 Unit Number
	d5 MXR/HMXR Number
042	DS3 MXR/HMXR data base BER type inconsistent MXR/HMXR 'BER' type in the MP data base is not consistent with that of the Unit data base.
	d0 MP data base ber type
	d1 UA data base ber type
	d2 Not used
	d3 Not used
	d4 Unit Number
	d5 MXR/HMXR Number
043	DS3 MIU data base flag inconsistent MIU data base flag in the MP data base is not consistent with that of the Unit data base.
	d0 MP data base flag
	d1 UA data base flag
	d2 Not used
	d3 Not used

	d4	MIU Number
	d5	Unit Number
044	DS3 MIU data base type inconsistent	
	MIU data base type in the MP data base is not consistent with that of the Unit data base.	
	d0	MP data base type
	d1	UA data base type
	d2	Not used
	d3	Not used
	d4	MIU Number
	d5	Unit Number
045	DS3 MIU data base x option inconsistent	
	MIU x option in the MP data base is not consistent with that of the Unit data base.	
	d0	MP data base x option
	d1	UA data base x option
	d2	Not used
	d3	Not used
	d4	MIU Number
	d5	Unit Number
046	DS3 MIU data base y option inconsistent	
	MIU y option in the MP data base is not consistent with that of the Unit data base.	
	d0	MP data base y option
	d1	UA data base y option
	d2	Not used
	d3	Not used
	d4	MIU Number
	d5	Unit Number
047	DS3 MIU data base z option inconsistent	
	MIU z option in the MP data base is not consistent with that of the Unit data base.	
	d0	MP data base z option

	d1	UA data base z option
	d2	Not used
	d3	Not used
	d4	MIU Number
	d5	Unit Number
048	MMFG data base inhibit flag inconsistent	
	MMFG inhibit status in the MP data base is not consistent with that of the Unit data base.	
	d0	Protection switch data base flag
	d1	UA data base flag
	d2	Not used
	d3	Not used
	d4	Not used
	d5	Unit Number
049	MMFG data base protection status inconsistent	
	MMFG protected status in the MP data base is not consistent with that of the Unit data base.	
	d0	Protection switch data base status
	d1	UA data base status
	d2	Not used
	d3	Not used
	d4	Not used
	d5	Unit Number
04A	MMFG data base protection index inconsistent	
	MMFG protected index in the MP data base is not consistent with that of the Unit data base.	
	d0	Protection switch data base index
	d1	UA data base index
	d2	Not used
	d3	Not used
	d4	Not used
	d5	Unit Number
04B	MMFG data base protection mode inconsistent	

	MMFG protected mode in the MP data base is not consistent with that of the Unit data base.
	d0 Protection switch data base mode
	d1 UA data base mode
	d2 Not used
	d3 Not used
	d4 Not used
	d5 Unit Number
04C	MMFG data base service status of MXR P/HMXR P inconsistent MXR-P/HMXR-P service status in the MP data base is not consistent with that of the Unit data base.
	d0 Protection switch data base status
	d1 UA data base status
	d2 Not used
	d3 Not used
	d4 Not used
	d5 Unit Number
04D	MMFG data base service status of MIU P inconsistent MIU-P service status in the MP data base is not consistent with that of the Unit data base.
	d0 Protection switch data base status
	d1 UA data base status
	d2 Not used
	d3 Not used
	d4 Not used
	d5 Unit Number
050	Time slot partner is inconsistent The time slot's partner time slot in the MP data base does not match with that of the UC data base.
	d0 The partner time slot from MP data base
	d1 The partner time slot from UC data base
	d2 Not used
	d3 The time slot number

	d4	The NPC number
	d5	Unit number
052		Time slot TLA state is inconsistent
		The time slot's TLA state in the MP data base does not match with that of the UC data base.
	d0	The TLA state from MP data base
	d1	The TLA state from UC data base
	d2	Not used
	d3	The time slot number
	d4	The NPC number d5
	d5	Unit number
055		RTs external number is inconsistent
		An RTs external number in the MP data base does not match with that of the UC data base.
	d0	Left byte of the RT external number in MP data base
	d1	Right byte of the RT external number in MP data base
	d2	Left byte of the RT external number in UC data base
	d3	Right byte of the RT external number in UC data base
	d4	Not used
	d5	he Unit of the RT
056		RTs digroup NPC number is inconsistent
		An RTs digroup NPC number in the MP data base does not match with that of the UC data base (d3=2); An RTs digroup NPC number does not match with the associated DCLUs both in the MP data base (d3=1).
	d0	The RT digroup NPC number in MP data base
	d1	The RT digroup NPC number in UC data base
	d2	Index of the digroup (1,2,3,4,5 for DGA,DGB,DGC,DGD,DGP respectively)
	d3	Not used
	d4	The RT internal number

057	d5	The Unit of the RT
	RTs index of protected digroup is inconsistent	
	An RTs index of protected digroup in the MP data base does not match with that of the UC data base.	
	d0	The RT index of protected digroup in MP data base
	d1	The RT index of protected digroup in UC data base
	d2	Not used
	d3	Not used
058	d4	The RT internal number
	d5	The Unit of the RT
	RTs Z option is inconsistent	
	An RTs Z option in the MP data base does not match with that of the UC data base.	
	d0	The RT Z option in MP data base
	d1	The RT Z option in UC data base
	d2	Not used
059	d3	Not used
	d4	The RT internal number
	d5	The Unit of the RT
	RTs inhibit state is inconsistent	
	An RTs inhibit state in the MP data base does not match with that of the UC data base.	
	d0	The RT inhibit state in MP data base
	d1	The RT inhibit state in UC data base
05A	d2	Index of the digroup
	d3	Not used
	d4	The RT internal number
	d5	The Unit of the RT
	SLC [®] carrier unexpected errors	
	An unexpected error is encountered during SLC carrier RT audits.	
	d0	The Unit where the error is found
05A	d1	Not used

	d2	Not used
	d3	Not used
	d4	Not used
	d5	Not used
05B	This entity is expected to be inservice and equipped	
	This entity (indicated in d0) is expected to be inservice and equipped.	
	d0	1-frame; 2-Unit; 3-channel; 4-time slot;
	d1	The time slot number if applicable
	d2	The channel number if applicable
	d3	The NPC number if applicable
	d4	Unit number if applicable
	d5	Not used
05C	Data base is inconsistent with the configuration file	
	Data in the MP data base do not agree with those in the configuration file.	
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Not used
	d4	Not used
	d5	Not used
060	RTs loopback state is inconsistent	
	An RTs loopback state in the MP data base does not match with that of the UC data base.	
	d0	The RT loopback state in MP data base
	d1	The RT loopback state in UC data base
	d2	Index of the digroup
	d3	Not used
	d4	The RT internal number
	d5	The Unit of the RT
061	RTs protection status is inconsistent	

	An RTs protection status in the MP data base does not match with that of the UC data base.
	d0 The RT protection status in MP data base
	d1 The RT protection status in UC data base
	d2 Not used
	d3 Not used
	d4 The RT internal number
	d5 The Unit of the RT
062	RTs data link status is inconsistent
	An RTs data link status in the MP data base does not match with that of the UC data base.
	d0 The RT data link in MP data base
	d1 The RT data link in UC data base
	d2 Not used
	d3 Not used
	d4 The RT internal number
	d5 The Unit of the RT
063	RTs alarm class is inconsistent
	An RTs alarm class in the MP data base does not match with that of the UC data base.
	d0 The RT alarm class in MP data base
	d1 The RT alarm class in UC data base
	d2 Not used
	d3 Not used
	d4 The RT internal number
	d5 The Unit of the RT
064	RTs SLC carrier mode is inconsistent
	An RTs SLC carrier mode in the MP data base does not match with that of the UC data base.
	d0 The RT SLC carrier mode in MP data base
	d1 The RT SLC carrier mode in UC data base
	d2 Not used
	d3 Not used

	d4	The RT internal number
	d5	The Unit of the RT
065	Cannot find an RT internal number for the associate DCLU of an RT	
	Given an RT with SLC 96 carrier mode I or SLC series 5 carrier feature package B, it may have a DCLU with the external number being 10000 greater. However, that external number cannot be retrieved from the MP data base.	
	d0	Right byte of the DCLUs external number in MP data base
	d1	Left byte of the DCLUs external number in MP data base
	d2	Right byte of the RTs external number in MP data base
	d3	Left byte of the RTs external number in MP data base
	d4	The RT internal number
	d5	The Unit of the RT
066	Cannot find the associate DCLU of an RT	
	Given an RT with SLC 96 carrier mode I or SLC series 5 carrier feature package B, it may have a DCLU with the external number being 10000 greater. However, such DCLU is not found from the RT list in the MP data base.	
	d0	Right byte of the DCLUs external number
	d1	Left byte of the DCLUs external number
	d2	Not used
	d3	Not used
	d4	The DCLU internal number
	d5	The Unit of the RT
069	Invalid internal MJU number or internal NPC number	
	An NPC indicates there is an MJU allocated to it, after the MJU query returns a different internal MJU number or that MJU is marked to allocate to another NPC.	
	d0	The MJU number
	d1	The NPC number
	d2	The UNIT number

	d3	The MJU internal number from the query
	d4	The internal NPC number from the query
	d5	Not used
070		Inconsistent mapping between a facility channel and a time slot A channel is connected to a time slot but the time slot does not connect the channel in the MP data base.
	d0	The channel number
	d1	The NPC number
	d2	The UNIT number
	d3	The time slot
	d4	The time slot NPC
	d5	The time slot Unit
071		Inconsistent time slot mapping between a facility channel and a MVEC An MVEC is expected to connect to a facility channel but the MP data base shows the channel does not connect to the MVEC.
	d0	The channel number
	d1	The NPC number
	d2	The UNIT number
	d3	The MVEC time slot
	d4	The MVEC NPC
	d5	MVEC Unit
072		Inconsistent time slot mapping a channel to a PCHEC A PCHEC is expected to connect to a facility channel but the MP data base shows the channel does not connect to the PCHEC.
	d0	The channel number
	d1	The NPC number
	d2	The UNIT number
	d3	The PCHEC time slot
	d4	The PCHEC NPC
	d5	The PCHEC Unit
073		Inconsistent time slot mapping a channel to a PCHEC's parity leg

A PCHEC parity leg is expected to connect to a facility channel but the MP data base shows the channel does not connect to the leg.

d0 The channel number

d1 The NPC number

d2 The UNIT number

d3 The PCHEC time slot

d4 The PCHEC NPC

d5 The PCHEC Unit

074 Inconsistent time slot mapping a channel to a PCHEC's data leg

A PCHEC data leg is expected to connect to a facility channel but the MP data base shows the channel does not connect to the leg.

d0 The channel number

d1 The NPC number

d2 The UNIT number

d3 The PCHEC time slot

d4 The PCHEC NPC

d5 The PCHEC Unit

076 Invalid time slot assignment to an MJU's master leg

An MJU's master leg is expected to connect a time slot but the MP data base shows that the time slot does not connect to the master leg.

d0 The MJU number

d1 The NPC number

d2 The UNIT number

d3 The MJU master leg index

d4 Not used

d5 Not used

077 Invalid time slot assignment to an MJU's branch leg

An MJU's branch leg is expected to connect a time slot but the MP data base shows that the time slot does not connect to the branch leg.

d0 the MJU number

	d1	The NPC number
	d2	the UNIT number
	d3	the MJU branch leg
	d4	Not used
	d5	Not used
078	Inconsistent time slot mapping a channel to a PCHEC's customer leg	
	A PCHEC customer leg is expected to connect to a facility channel but the MP data base shows the channel does not connect to the leg.	
	d0	The channel number
	d1	The NPC number
	d2	The UNIT number
	d3	The PCHEC time slot
	d4	The PCHEC NPC
	d5	Tthe PCHEC Unit
079	Cascaded MJUs do not have same rate	
	An MJU is cascaded with MJU b, their rate must be the same.	
	d0	The MJU b number
	d1	The NPC number of MJU b
	d2	The UNIT number of MJU b
	d3	The MJU a number
	d4	The NPC number of MJU a
	d5	The UNIT number of MJU a
080	SRM rate is invalid	
	An SRM rate is invalid.	
	d0	The SRM number
	d1	The NPC number of SRM
	d2	The UNIT number of SRM
	d3	Not used
	d4	Not used
	d5	Not used
081	Invalid time slot assignment to an SRM's leg	

	An SRM's branch leg is expected to connect a time slot but the MP data base shows that the time slot does not connect to the branch leg.
	d0 The SRM number
	d1 The NPC number
	d2 The UNIT number
	d3 Index of SRM leg
	d4 Not used
	d5 Not used
084	A DS0A channel does not connect to an EC A DS0A channel is expected to connect to an error corrector through a time slot but the MP data base shows that the time slot does not connect to an error corrector.
	d0 The DS0A channel number
	d1 The NPC number of the channel
	d2 The UNIT number of the channel
	d3 The ECs time slot
	d4 The ECs NPC number
	d5 The ECs Unit number
086	RTs external number is inconsistent with DCLU An RTs external number in the MP data base does not match with that of the DCLU in the MP data base.
	d0 Left byte of the RT external number in MP data base
	d1 Right byte of the RT external number in MP data base
	d2 Left byte of the DCLU external number in MP data base
	d3 Right byte of the DCLU external number in MP data base
	d4 Not used
	d5 The Unit of the RT
089	RT's Z option is inconsistent with DCLU Z option An RT's Z option in the MP data base does not match with that of the DCLU in the MP data base.

	d0	The RT Z option in MP data base
	d1	The DCLU Z option in MP data base
	d2	Not used
	d3	Not used
	d4	The RT internal number
	d5	The Unit of the RT
090	RT's inhibit state is inconsistent with DCLU	
	An RT's inhibit state in the MP data base does not match with that of the DCLU in the MP data base.	
	d0	The RT inhibit state in MP data base
	d1	The DCLU inhibit state in MP data base
	d2	Index of the digroup
	d3	Not used
	d4	The RT internal number
	d5	The Unit of the RT
091	RT's loopback state is inconsistent with DCLU	
	An RT's loopback state in the MP data base does not match with that of the DCLU in the MP data base.	
	d0	The RT loopback state in MP data base
	d1	The DCLU loopback state in MP data base
	d2	Index of the digroup
	d3	Not used
	d4	The RT internal number
	d5	The Unit of the RT
093	RTs data link status is inconsistent with DCLU	
	An RT's data link status in the MP data base does not match with that of the DCLU in the MP data base.	
	d0	The RT data link in MP data base
	d1	The DCLU data link in MP data base
	d2	Not used
	d3	Not used
	d4	The RT internal number
	d5	The Unit of the RT

095	RT's SLC carrier mode is inconsistent with DCLU An RT's SLC carrier mode in the MP data base does not match with that of the DCLU in the MP data base. d0 The RT SLC carrier mode in MP data base d1 The DCLU SLC carrier mode in MP data base d2 Not used d3 Not used d4 The RT internal number d5 The Unit of the RT
102	MP two-way two-point connection types are inconsistent The two-way two-point connection types in the MP data base do not match between two sides. d0 Channel number of the TO side d1 NPC number of the TO side d2 UNIT number of the TO side d3 Channel number of the FROM side d4 NPC number of the FROM side d5 UNIT number of the FROM side
103	MP two-way two-point connection data are inconsistent The two-way two-point connection data in the MP data base do not match between two sides. d0 Channel number of the TO side d1 NPC number of the TO side d2 d2 UNIT number of the TO side d3 Channel number of the FROM side d4 NPC number of the FROM side d5 UNIT number of the FROM side
104	UC two-way two-point connection data are inconsistent The two-way two-point connection channel data in the UC data base do not match that from MP data base. d0 TCC audit result - equal 1 if inconsistency detected d1 Flag audit result - equal 1 if inconsistency detected

	d2	Connected NPC audit result - equal 1 if inconsistency detected
	d3	Channel number
	d4	NPC number
	d5	UNIT number
105	CCN two-way two-point connection map error detected The two-way two-point connection TSI map in the CCN does not match between two sides.	
	d0	Channel number of the TO side
	d1	NPC number of the TO side
	d2	UNIT number of the TO side
	d3	Channel number of the FROM side
	d4	NPC number of the FROM side
	d5	UNIT number of the FROM side
106	ECCN two-way two-point connection map error detected The two-way two-point connection ETSI map in the ECCN does not match between two sides.	
	d0	Channel number of the TO side
	d1	NPC number of the TO side
	d2	UNIT number of the TO side
	d3	Channel number of the FROM side
	d4	NPC number of the FROM side
	d5	UNIT number of the FROM side
112	MP one-way two-point connection types are inconsistent The one-way two-point connection types in the MP data base do not match between two sides.	
	d0	Channel number of the TO side
	d1	NPC number of the TO side
	d2	UNIT number of the TO side
	d3	Channel number of the FROM side
	d4	NPC number of the FROM side
	d5	UNIT number of the FROM side
113	MP one-way two-point connection data are inconsistent	

	The one-way two-point connection data in the MP data base does not match between two sides.
	d0 Channel number of the TO side
	d1 NPC number of the TO side
	d2 UNIT number of the TO side
	d3 Channel number of the FROM side
	d4 NPC number of the FROM side
	d5 UNIT number of the FROM side
114	UC one-way two-point connection data are inconsistent
	The one-way two-point connection channel data in the UC data base do not match that MP data base.
	d0 TCC audit result - equal 1 if inconsistency detected
	d1 Flag audit result - equal 1 if inconsistency detected
	d2 Connected NPC audit result - equal 1 if inconsistency detected
	d3 Channel number
	d4 NPC number
	d5 UNIT number
115	CCN one-way two-point connection map error detected
	The one-way two-point connection TSI map in the CCN does not match between two sides.
	d0 Channel number of the TO side
	d1 NPC number of the TO side
	d2 UNIT number of the TO side
	d3 Channel number of the FROM side
	d4 NPC number of the FROM side
	d5 UNIT number of the FROM side
116	CCN unmapped connection error detected
	The TSI map shows that there is a connection map to an NPC and channel in CCN data base while the NPC and channel are marked as unmapped in MP data base.
	d0 Channel number of the TO side
	d1 NPC number of the TO side
	d2 Unit number of the TO side

	d3	Not used
	d4	Not used
	d5	Not used
121	UC virtual conference leg channel alternate message store (AMS) value is inconsistent	
	The virtual conference leg channel AMS data in the UC data base does not match the TCC value in the MP data base.	
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Channel number
	d4	NPC number
	d5	UNIT number
122	UC virtual conference leg channel connected NPC is inconsistent	
	The connected NPC of the virtual conference leg channel in the UC data base does not match the BBL NPC number from the MP data base.	
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Channel number
	d4	NPC number
	d5	UNIT number
123	UC virtual conference leg channel flag is inconsistent	
	The virtual conference leg channel flag in the UC data base does not match the flag from the MP data base.	
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Channel number
	d4	NPC number
	d5	UNIT number

- 125** CCN virtual conference leg channel connection map error detected
- The two-point connection TSI map in the CCN does not match between the BBL channel and the leg channel.
- d0** Channel number of the BRD leg
 - d1** NPC number of the BRD leg
 - d2** UNIT number of the BRD leg
 - d3** Channel number of the BBL leg
 - d4** NPC number of the BBL leg
 - d5** UNIT number of the BBL leg
- 126** ECCN virtual conference leg channel connection map error detected
- The two-point connection ETSI map in the ECCN does not match between the BBL channel and the leg channel.
- d0** Channel number of the BRD leg
 - d1** NPC number of the BRD leg
 - d2** UNIT number of the BRD leg
 - d3** Channel number of the BBL leg
 - d4** NPC number of the BBL leg
 - d5** UNIT number of the BBL leg
- 127** ECCN one-way two-point connection map error detected
- The one-way two-point connection ETSI map in the ECCN does not match between two sides.
- d0** Channel number of the TO side
 - d1** NPC number of the TO side
 - d2** UNIT number of the TO side
 - d3** Channel number of the FROM side
 - d4** NPC number of the FROM side
 - d5** UNIT number of the FROM side
- 128** ECCN unmapped connection error detected
- The ETSI map shows that there is a connection map to an NPC and channel in ECCN data base while they are marked as unmapped in MP data base.
- d0** Channel number of the TO side

	d1	NPC number of the TO side
	d2	Unit number of the TO side
	d3	Not used
	d4	Not used
	d5	Not used
131	UC BCON leg channel alternate message store (AMS) value is inconsistent	
	The BCON leg channel AMS data in the UC data base does not match the TCC value from the MP data base.	
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Channel number
	d4	NPC number
	d5	UNIT number
132	UC BCON leg channel connected NPC is inconsistent	
	The connected NPC of the BCON leg channel in the UC data base does not match the BBL NPC number from the MP data base.	
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Channel number
	d4	NPC number
	d5	UNIT number
133	UC BCON leg channel flag is inconsistent	
	The BCON leg channel flag in the UC data base does not match the flag from the MP data base.	
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Channel number
	d4	NPC number

	d5	UNIT number
135	CCN BCON leg channel connection map error detected	
	The two-point connection TSI map in the CCN does not match between the BBL channel and the leg channel.	
	d0	Channel number of the BRD leg
	d1	NPC number of the BRD leg
	d2	UNIT number of the BRD leg
	d3	Channel number of the BBL leg
	d4	NPC number of the BBL leg
	d5	UNIT number of the BBL leg
136	ECCN BCON leg channel connection map error detected	
	The two-point connection ETSI map in the ECCN does not match between the BBL channel and the leg channel.	
	d0	Channel number of the BRD leg
	d1	NPC number of the BRD leg
	d2	UNIT number of the BRD leg
	d3	Channel number of the BBL leg
	d4	NPC number of the BBL leg
	d5	UNIT number of the BBL leg
150	UC DMB conference leg channel connected NPC is inconsistent	
	The connected NPC of the DMB conference leg channel in the UC data base does not match that from MP data base.	
	d0	Channel flag in the UC data base
	d1	Connected NPC number
	d2	Connected Unit number
	d3	Channel number
	d4	NPC number
	d5	UNIT number
151	UC DMB conference leg channel alternate message store (AMS) value is inconsistent	
	The DMB conference leg channel AMS data in the UC data base does not match the TCC value from the MP data base.	
	d0	Channel flag in the UC data base

	d1	Connected NPC number
	d2	Connected Unit number
	d3	Channel number
	d4	NPC number
	d5	UNIT number
152	UC DMB conference leg channel flag is inconsistent	
	The DMB conference leg channel flag in the UC data base does not match the flag from the MP data base.	
	d0	Channel flag in the UC data base
	d1	Connected NPC number
	d2	Connected Unit number
	d3	Channel number
	d4	NPC number
	d5	UNIT number
154	CCN one-way DMB conference connection map error detected	
	The one-way DMB conference connection TSI map in the CCN does not match between two legs.	
	d0	Channel number of the TO side
	d1	NPC number of the TO side
	d2	UNIT number of the TO side
	d3	Channel number of the FROM side
	d4	NPC number of the FROM side
	d5	UNIT number of the FROM side
155	CCN two-way DMB conference connection map error detected	
	The two-way DMB conference connection TSI map in the CCN does not match between two legs.	
	d0	Channel number of the TO side
	d1	NPC number of the TO side
	d2	UNIT number of the TO side
	d3	Channel number of the FROM side
	d4	NPC number of the FROM side
	d5	UNIT number of the FROM side
156	ECCN one-way DMB conference connection map error detected	

	The one-way DMB conference connection ETSI map in the ECCN does not match between two legs.
	d0 Channel number of the TO side
	d1 NPC number of the TO side
	d2 UNIT number of the TO side
	d3 Channel number of the FROM side
	d4 NPC number of the FROM side
	d5 UNIT number of the FROM side
157	ECCN two-way DMB conference connection map error detected
	The two-way DMB conference connection ETSI map in the ECCN does not match between two legs.
	d0 Channel number of the TO side
	d1 NPC number of the TO side
	d2 UNIT number of the TO side
	d3 Channel number of the FROM side
	d4 NPC number of the FROM side
	d5 UNIT number of the FROM side
160	UD DMB conference leg is inconsistent
	The DMB conference number of the leg channel in the UD data base does not match the number from the MP data base.
	d0 Connected NPC number of the leg
	d1 Connected UC Unit number of the leg
	d2 Conference number of the leg stored in the UD data base
	d3 Channel number of the leg
	d4 DMB NPC number of the leg
	d5 UNIT number
161	UD DMB conference leg channel connected NPC is inconsistent
	The connected NPC of the DMB conference leg channel in the UD data base does not match the NPC number from the MP data base.
	d0 Connected NPC number of the leg
	d1 Connected UC Unit number of the leg
	d2 Conference number of the leg

	d3	Channel number of the leg
	d4	DMB NPC number of the leg
	d5	UNIT number
162	UD DMB conference leg connected conference is inconsistent The connected conference number of the DMB conference leg channel in the UD data base does not match the number from the MP data base.	
	d0	Connected NPC number of the leg from UD data base
	d1	Connected UC Unit number of the leg
	d2	Conference number of the leg
	d3	Channel number of the leg
	d4	DMB NPC number of the leg
	d5	UNIT number
163	UD DMB conference leg type is inconsistent The type of the DMB conference leg channel in the UD data base does not match the type from the MP data base.	
	d0	Connected NPC number of the leg
	d1	Connected UC Unit number of the leg
	d2	Conference number of the leg
	d3	Channel number of the leg
	d4	DMB NPC number of the leg
	d5	UNIT number
164	UD DMB channel tlpin value is inconsistent The value of transmit level into bridge of the DMB conference leg channel from UD data base does not match that from the MP data base.	
	d0	Connected NPC number of the leg
	d1	Connected UC Unit number of the leg
	d2	Conference number of the leg
	d3	Channel number of the leg
	d4	DMB NPC number of the leg
	d5	UNIT number
165	UD DMB channel tlpout value is inconsistent	

	The value of transmit level out of bridge of the DMB conference leg channel from UD data base does not match that from the MP data base.
	d0 Connected NPC number of the leg
	d1 Connected UC Unit number of the leg
	d2 Conference number of the leg
	d3 Channel number of the leg
	d4 DMB NPC number of the leg
	d5 UNIT number
166	UD DMB channel noise guard value is inconsistent
	The value of noise guard of the DMB conference leg channel from UD data base does not match that from the MP data base.
	d0 Connected NPC number of the leg
	d1 Connected UC Unit number of the leg
	d2 Conference number of the leg
	d3 Channel number of the leg
	d4 DMB NPC number of the leg
	d5 UNIT number
167	UD DMB channel echo suppression value is inconsistent
	The value of echo suppression of the DMB conference leg channel from UD data base does not match that from the MP data base.
	d0 Connected NPC number of the leg
	d1 Connected UC Unit number of the leg
	d2 Conference number of the leg
	d3 Channel number of the leg
	d4 DMB NPC number of the leg
	d5 UNIT number
168	UD DMB channel NTR state is inconsistent
	The current NTR state of the DMB conference leg from UD data base does not match that from the MP data base.
	d0 Connected NPC number of the leg
	d1 Connected UC Unit number of the leg
	d2 Conference number of the leg

	d3	Channel number of the leg
	d4	DMB NPC number of the leg
	d5	UNIT number
171	DSPU CPR channel modify activated/monitor enabled information is inconsistent	
	The CPR channel modify activated/monitor enabled information stored in UD data base does not match that stored in the MP data base.	
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Channel number
	d4	CPR NPC number
	d5	UNIT number
172	DSPU CPR channel modify activated/monitor enabled information is inconsistent	
	The CPR channel modify activated/monitor enabled information stored in UD data base does not match that stored in the CPR hardware.	
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Channel number
	d4	CPR NPC number
	d5	UNIT number
173	DSPU CPR liaison C-Bit modify pattern information is inconsistent	
	The CPR liaison C-Bit modify pattern information stored in UD data base does not match that stored in the CPR hardware.	
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Channel number
	d4	CPR NPC number

	d5	UNIT number
174	DSPU CPR pack type is inconsistent	
	The CPR pack type stored in UD data base does not match with the CPR pack.	
	d0	Type on Uddb
	d1	CPR pack type
	d2	Not used
	d3	Channel number
	d4	CPR NPC number
	d5	UNIT number
205	FTU FTMI hardware not in service	
	The FTU FTMI hardware status is not in service but the equipage flag in the UC data base is in service.	
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Not used
	d4	FTMI number
	d5	UNIT number
207	FTU FC hardware not in service	
	The FTU FC hardware status is not in service but the equipage flag in the UC data base is in service.	
	d0	Not used
	d1	Not used
	d2	Not used
	d3	FC side
	d4	FTMI number
	d5	UNIT number
208	NPC hardware not in service	
	The Unit NPC hardware status is not in service but the equipage flag in the UC data base is in service.	
	d0	Not used
	d1	Not used

	d2	Not used
	d3	Not used
	d4	NPC number
	d5	UNIT number
209	UC NPC type not match with hardware	
	The Unit NPC type in the UC data base does not match with that indicated in the hardware.	
	d0	NPC type in hardware
	d1	NPC type in data base
	d2	Not used
	d3	Not used
	d4	NPC number
	d5	UNIT number
210	FTU FC hardware mode is inconsistent	
	The FTU FC hardware mode status does not match the FC mode stored in the UC data base.	
	d0	Not used
	d1	FC hardware mode
	d2	FC mode in the UC data base
	d3	FC side
	d4	FTMI number
	d5	UNIT number
211	FTU or DS3U/HDS3U NPC channel alternate message store (AMS) value is inconsistent	
	The FTU or DS3U/HDS3U NPC channel AMS value stored in the unit data base does not match the AMS value from the DDC hardware.	
	d0	Not used
	d1	Not used
	d2	Side
	d3	Channel number
	d4	NPC number
	d5	UNIT number

- 215** DPC NPC TS0M value is inconsistent
The TS0M value stored in UC data base does not match that stored in the DPC hardware.
- d0** NPC TS0M bits from DPC hardware
 - d1** NPC TS0M bits from UC data base
 - d2** Not used
 - d3** Not used
 - d4** NPC number
 - d5** UNIT number
- 216** DPC NPC loopback value is inconsistent
The LPBK value stored in UC data base does not match that stored in the DPC hardware.
- d0** NPC LPBK bits from DPC hardware
 - d1** NPC LPBK bits from UC data base
 - d2** Not used
 - d3** Not used
 - d4** NPC number
 - d5** UNIT number
- 217** FTU and DS3U/HDS3U NPC pgfbits in the channel are inconsistent
The pgfbits in the data base do not match the pgfbits stored in the transceiver loopback parity channel hardware. The F and G bits determine the signaling type (16-state, 4-state or transparent). This comparison is only done on domestic NPCs on the RECEIVE side.
- d0** Data base F and G bits
 - d1** Transceiver Hardware F and G bits
 - d2** CHANNEL side (Receive side)
 - d3** CHANNEL number
 - d4** NPC number
 - d5** UNIT number
- 218** FTU NPC Channel AIS flag is inconsistent
The AIS flag set in the DDC Digital Signal Interface (DSI) hardware register does not match with the associated flag saved in the UC data base.

	d0	AIS flag in the DSI register
	d1	AIS flag in the UC data base
	d2	Not used
	d3	Channel side
	d4	NPC number
	d5	Unit number
220	FTU and DS3U/HDS3U NPC COFAMAJ threshold value is inconsistent The Change Of Frame Alignment Major value of the FTU NPC threshold value stored in the FTU Unit data base does not match that stored in the DDC hardware.	
	d0	Second byte of the cofamaj value from DDC hardware
	d1	First byte of the cofamaj value from DDC hardware
	d2	Second byte of the cofamaj value from UC data base
	d3	First byte of the cofamaj value from UC data base
	d4	NPC number
	d5	UNIT number
221	FTU and DS3U/HDS3U NPC COFAMIN threshold value is inconsistent The Change Of Frame Alignment Minor value of the FTU NPC NPC threshold value stored in the FTU data base does not match that stored in the DDC hardware.	
	d0	Second byte of the cofamin value from DDC hardware
	d1	First byte of the cofamin value from DDC hardware
	d2	Second byte of the cofamin value from UC data base
	d3	First byte of the cofamin value from UC data base
	d4	NPC number
	d5	UNIT number
222	FTU NPC SLIPMAJ threshold value is inconsistent The Slip Major value stored in the UC data base does not match that stored in the DDC hardware	

	d0	Second byte of the slipmaj value from DDC hardware
	d1	First byte of the slipmaj value from DDC hardware
	d2	Second byte of the slipmaj value from UC data base
	d3	First byte of the slipmaj value from UC data base
	d4	NPC number
	d5	UNIT number
223	FTU and DS3U/HDS3U NPC SLIPMIN threshold value is inconsistent The Slip Minor threshold value stored in the UC data base does not match that stored in the DDC hardware	
	d0	Second byte of the slipmin value from DDC hardware
	d1	First byte of the slipmin value from DDC hardware
	d2	Second byte of the slipmin value from UC data base
	d3	First byte of the slipmin value from UC data base
	d4	NPC number
	d5	UNIT number
224	FTU and DS3U/HDS3U NPC SES threshold value is inconsistent The Severe Errored Seconds value stored in the UC data base does not match that stored in the DDC hardware.	
	d0	Second byte of the ses value from DDC hardware
	d1	First byte of the ses value from DDC hardware
	d2	Second byte of the ses value from UC data base
	d3	First byte of the ses value from UC data base
	d4	NPC number
	d5	UNIT number
225	FTU and DS3U/HDS3U NPC ES threshold value is inconsistent The Errored Seconds value stored in the UC data base does not match that stored in the DDC hardware.	
	d0	Second byte of the es value from DDC hardware
	d1	First byte of the es value from DDC hardware
	d2	Second byte of the es value from UC data base

	d3	First byte of the es value from UC data base
	d4	NPC number
	d5	UNIT number
226		FTU and DS3U/HDS3U NPC BERMAJ threshold value is inconsistent The Bit Error Rate Major value stored in the UC data base does not match that stored in the DDC hardware.
	d0	Second byte of the bermaj value from DDC hardware
	d1	First byte of the bermaj value from DDC hardware
	d2	Second byte of the bermaj value from UC data base
	d3	First byte of the bermaj value from UC data base
	d4	NPC number
	d5	UNIT number
227		FTU and DS3U/HDS3U NPC BERMIN threshold value is inconsistent The Bit Error Rate Minor value stored in the UC data base does not match that stored in the DDC hardware.
	d0	Second byte of the bermin value from DDC hardware
	d1	First byte of the bermin value from DDC hardware
	d2	Second byte of the bermin value from UC data base
	d3	First byte of the bermin value from UC data base
	d4	NPC number
	d5	UNIT number
228		NPC (DIU/DPC) Error Seconds 15 min. threshold value is inconsistent The Error Seconds 15 min. (ERS15) threshold value stored in UC data base does not match that stored in the NPC hardware.
	d0	Second byte of the ERS15 value of the NPC from hardware
	d1	First byte of the ERS15 value of the NPC from hardware
	d2	Second byte of the ERS15 value of the NPC from UC data base

	d3	First byte of the ERS15 value of the NPC from UC data base
	d4	NPC number
	d5	Unit number
229	DIU NPC Bursty Error Seconds 15 Min threshold value is inconsistent	
	The Bursty Error Seconds 15 min. threshold value of a DIU NPC stored in the UC data base does not match with that in the hardware.	
	d0	Second byte of the BERS15 value of the NPC from hardware
	d1	First byte of the BERS15 value of the NPC from hardware
	d2	Second byte of the BERS15 value of the NPC from UC data base
	d3	First byte of the BERS15 value of the NPC from UC data base
	d4	DIU NPC number
	d5	Unit number
230	NPC (DIU/DPC) Severely Error Seconds 15 min. threshold value is inconsistent	
	The Severely Error Seconds 15 min. (SERS15) threshold value stored in the UC data base does not match with that in the hardware.	
	d0	Second byte of the SERS15 value of the NPC from hardware
	d1	First byte of the SERS15 value of the NPC from hardware
	d2	Second byte of the SERS15 value of the NPC from UC data base
	d3	First byte of the SERS15 value of the NPC from UC data base
	d4	NPC number
	d5	Unit number
231	NPC (DIU/DPC) Unavailable Seconds 15 min. threshold value is inconsistent	

	The Unavailable Seconds 15 min. (US15) threshold value of an NPC stored in the UC data base does not match with that in the hardware.
	d0 Second byte of the US15 value of the NPC from hardware
	d1 First byte of the US15 value of the NPC from hardware
	d2 Second byte of the US15 value of the NPC from UC data base
	d3 First byte of the US15 value of the NPC from UC data base
	d4 NPC number
	d5 Unit number
232	NPC (DIU/DPC) Slips 15 min. threshold value is inconsistent The Slips Error Seconds 15 min. (SLP15) threshold value stored in the UC data base does not match with that in the hardware.
	d0 Second byte of the SLP15 value of the NPC from hardware
	d1 First byte of the SLP15 value of the NPC from hardware
	d2 Second byte of the SLP15 value of the NPC from UC data base
	d3 First byte of the SLP15 value of the NPC from UC data base
	d4 NPC number
	d5 Unit number
233	NPC (DIU/DPC) Error Seconds 24 hr. threshold value is inconsistent The Error Seconds 24 hr. (ESR24) threshold value stored in UC data base does not match that stored in the hardware.
	d0 Second byte of the ESR24 value of the NPC from hardware
	d1 First byte of the ESR24 value of the NPC from hardware
	d2 Second byte of the ESR24 value of the NPC from UC data base

	d3	First byte of the ERS24 value of the NPC from UC data base
	d4	NPC number
	d5	Unit number
234	DIU NPC Bursty Error Seconds 24 Min threshold value is inconsistent	
	The Bursty Error Seconds 24 min. threshold value of a DIU NPC stored in the UC data base does not match with that in the hardware.	
	d0	Second byte of the BERS24 value of the NPC from hardware
	d1	First byte of the BERS24 value of the NPC from hardware
	d2	Second byte of the BERS24 value of the NPC from UC data base
	d3	First byte of the BERS24 value of the NPC from UC data base
	d4	DIU NPC number
	d5	Unit number
235	NPC (DIU/DPC) Severely Error Seconds 24 hr. threshold value is inconsistent	
	The Severely Error Seconds 24 hr. (SERS24) threshold value stored in the UC data base does not match with that in the hardware.	
	d0	Second byte of the SERS24 value of the NPC from hardware
	d1	First byte of the SERS24 value of the NPC from hardware
	d2	Second byte of the SERS24 value of the NPC from UC data base
	d3	First byte of the SERS24 value of the NPC from UC data base
	d4	NPC number
	d5	Unit number
236	NPC (DIU/DPC) Unavailable Seconds 24 hr. threshold value is inconsistent	

		The Unavailable Seconds 24 hr. (US24) threshold value stored in the UC data base does not match with that in the hardware.
	d0	Second byte of the US24 value of the NPC from hardware
	d1	First byte of the US24 value of the NPC from hardware
	d2	Second byte of the US24 value of the NPC from UC data base
	d3	First byte of the US24 value of the NPC from UC data base
	d4	NPC number
	d5	Unit number
237		NPC (DIU/DPC) Slips Error Seconds 24 hr. threshold value is inconsistent
		The Slips Error Seconds 24 hr. (SLP24) threshold value stored in the UC data base does not match with that in the hardware.
	d0	Second byte of the SLP24 value of the NPC from hardware
	d1	First byte of the SLP24 value of the NPC from hardware
	d2	Second byte of the SLP24 value of the NPC from UC data base
	d3	First byte of the SLP24 value of the NPC from UC data base
	d4	NPC number
	d5	Unit number
238		DPC NPC Degraded Minute 1 hr (DM) threshold value is inconsistent
		The Degraded Minute 1 hr. threshold value stored in UC data base does not match that stored in the DPC hardware.
	d0	Second byte of the DM value from DPC hardware
	d1	First byte of the DM value from DPC hardware
	d2	Second byte of the DM value from UC data base
	d3	First byte of the DM value from UC data base
	d4	NPC number
	d5	UNIT number

- 239** DPC NPC Degraded Minute 24 hr (DM24) threshold value is inconsistent
- The Degraded Minute 24 hr. threshold value stored in UC data base does not match that stored in the DPC hardware.
- d0** Second byte of the DM24 value from DPC hardware
 - d1** First byte of the DM24 value from DPC hardware
 - d2** Second byte of the DM24 value from UC data base
 - d3** First byte of the DM24 value from UC data base
 - d4** NPC number
 - d5** UNIT number
- 240** SLC carrier NPC SANE threshold value is inconsistent
- The SLC carrier NPC SANE threshold value stored in the UC data base does not match with that stored in the DDC hardware
- d0** Second byte of the sane threshold value from DDC hardware
 - d1** First byte of the sane threshold value from DDC hardware
 - d2** Second byte of the sane threshold value from UC data base
 - d3** First byte of the sane threshold value from UC data base
 - d4** NPC number
 - d5** UNIT number
- 241** SLC carrier NPC SAFE threshold value is inconsistent
- The SLC carrier NPC SAFE threshold value stored in the UC data base does not match with that stored in the DDC hardware.
- d0** Second byte of the SAFE threshold value from DDC hardware
 - d1** First byte of the SAFE threshold value from DDC hardware
 - d2** Second byte of the SAFE threshold value from UC data base
 - d3** First byte of the SAFE threshold value from UC data base
 - d4** NPC number
 - d5** UNIT number

242	SLC carrier NPC SELF alarm threshold value is inconsistent The SLC carrier NPC SELF alarm threshold value stored in the UC data base does not match with that stored in the DDC hardware.
d0	Second byte of the SELF alarm threshold value from DDC hardware
d1	First byte of the SELF alarm threshold value from DDC hardware
d2	Second byte of the SELF alarm threshold value from UC data base
d3	First byte of the SELF alarm threshold value from UC data base
d4	NPC number
d5	UNIT number
250	HUB-ID value in hardware is inconsistent The HUB-ID is inconsistent between the MP data base and the hardware.
d0	HUB-ID value from MP data base
d1	HUB-ID value from the hardware
d2	Not used
d3	Not used
d4	NPC number
d5	Unit number
251	The time slot hardware image or control memory is inconsistent The EC Hardware Image/Control Memory is inconsistent between MP data base and the hardware.
d0	The EC image value from MP data base
d1	The EC image value from the hardware
d2	SRM hardware data
d3	The time slot number
d4	The NPC number of the time slot
d5	The Unit number of the time slot
252	E1/T1 hardware selection flag inconsistent
d0	UH hardware flag

	d1	UH database flag
	d2	Not used
	d3	DS2 Number (1 through 7)
	d4	HMXR Number
	d5	Unit Number
253	DS3 FLI LOG hardware inconsistent	
	d0	UA hardware
	d1	UA lbo
	d2	Not used
	d3	Not used
	d4	MXR/HMXR Number
	d5	Unit Number
254	DS3 MXR/HMXR hardware flag inconsistent	
	d0	UA hardware flag
	d1	UA data base flag
	d2	Not used
	d3	Not used
	d4	MXR/HMXR Number
	d5	Unit Number
255	DS3 MXR/HMXR hardware type inconsistent	
	d0	UA hardware type
	d1	UA data base type
	d2	Not used
	d3	Not used
	d4	MXR/HMXR Number
	d5	Unit Number
256	DS3 MXR/HMXR hardware x option inconsistent	
	d0	UA hardware x option
	d1	UA data base x option
	d2	Not used
	d3	Not used
	d4	MXR/HMXR Number

	d5	Unit Number
257	DS3 MXR/HMXR hardware y option inconsistent	
	d0	UA hardware y option
	d1	UA data base y option
	d2	Not used
	d3	Not used
	d4	MXR/HMXR Number
	d5	Unit Number
258	DS3 MXR/HMXR hardware z option inconsistent	
	d0	UA hardware z option
	d1	UA data base z option
	d2	Not used
	d3	Not used
	d4	MXR/HMXR Number
	d5	Unit Number
259	DS3 MXR/HMXR hardware BER threshold inconsistent	
	d0	UA hardware BER threshold
	d1	UA data base BER threshold
	d2	Not used
	d3	Not used
	d4	MXR/HMXR Number
	d5	Unit Number
25A	DS3 MXR/HMXR hardware BER type inconsistent	
	d0	UA hardware BER type
	d1	UA data base BER type
	d2	Not used
	d3	Not used
	d4	MXR/HMXR Number
	d5	Unit Number
25B	DS3 MIU hardware flag inconsistent	
	d0	UA hardware flag
	d1	UA data base flag

	d2	Not used
	d3	Not used
	d4	MIU Number
	d5	Unit Number
25C	DS3 MIU hardware type inconsistent	
	d0	UA hardware type
	d1	UA data base type
	d2	Not used
	d3	Not used
	d4	MIU Number
	d5	Unit Number
25D	DS3 MIU hardware x option inconsistent	
	d0	UA hardware x option
	d1	UA data base x option
	d2	Not used
	d3	Not used
	d4	MIU Number
	d5	Unit Number
25E	DS3 MIU hardware y option inconsistent	
	d0	UA hardware y option
	d1	UA data base y option
	d2	Not used
	d3	Not used
	d4	MIU Number
	d5	Unit Number
25F	DS3 MIU hardware z option inconsistent	
	d0	UA hardware z option
	d1	UA data base z option
	d2	Not used
	d3	Not used
	d4	MIU Number
	d5	Unit Number

260	MMFG data base inhibit flag inconsistent
d0	UA hardware flag
d1	UA data base flag
d2	Not used
d3	Not used
d4	Not used
d5	Unit Number
261	MMFG data base protection status inconsistent
d0	UA hardware status
d1	UA data base status
d2	Not used
d3	Not used
d4	Not used
d5	Unit Number
262	MMFG data base protection index inconsistent
d0	UA hardware index
d1	UA data base index
d2	Not used
d3	Not used
d4	Not used
d5	Unit Number
263	MMFG data base protection mode inconsistent
d0	UA hardware mode
d1	UA data base mode
d2	Not used
d3	Not used
d4	Not used
d5	Unit Number
264	MMFG data base service status of MXR P/HMXR P inconsistent
d0	UA hardware status
d1	UA data base status
d2	Not used

	d3	Not used
	d4	Not used
	d5	Unit Number
265	MMFG data base service status of MIU P inconsistent	
	d0	A hardware status
	d1	UA data base status
	d2	Not used
	d3	Not used
	d4	Not used
	d5	Unit Number
266	Invalid value of Receive Framer Mode A register	
	d0	Not used
	d1	Not used
	d2	Expected value
	d3	Actual value read back from the hardware
	d4	NPC number
	d5	Unit Number
267	Invalid value of Receive Framer Mode B register	
	d0	Not used
	d1	Not used
	d2	Expected value
	d3	Actual value read back from the hardware
	d4	NPC number
	d5	Unit Number
268	Invalid value of Receive Framer Exercise register	
	d0	Not used
	d1	Not used
	d2	Expected value
	d3	Actual value read back from the hardware
	d4	NPC number
	d5	Unit Number
269	Invalid value of Receive Synchronizer Mode A register	

	d0	Not used
	d1	Not used
	d2	Expected value
	d3	Actual value read back from the hardware
	d4	NPC number
	d5	Unit Number
26A	Invalid value of Receive Synchronizer Mode B register	
	d0	Not used
	d1	Not used
	d2	Expected value
	d3	Actual value read back from the hardware
	d4	NPC number
	d5	Unit Number
26B	Invalid value of Receive Exercise Mode register	
	d0	Not used
	d1	Not used
	d2	Expected value
	d3	Actual value read back from the hardware
	d4	NPC number
	d5	Unit Number
26C	Invalid value of Transmit Exercise Mode register	
	d0	Not used
	d1	Not used
	d2	Expected value
	d3	Actual value read back from the hardware
	d4	NPC number
	d5	Unit Number
26D	Invalid value of Transmit Framing Mode register	
	d0	Not used
	d1	Not used
	d2	Expected value
	d3	Actual value read back from the hardware

	d4	NPC number
	d5	Unit Number
26E	Invalid value of Transmit Signaling Mode register	
	d0	Not used
	d1	Not used
	d2	Expected value
	d3	Actual value read back from the hardware
	d4	NPC number
	d5	Unit Number
26F	Invalid value of Transmit System Mode register	
	d0	Not used
	d1	Not used
	d2	Expected value
	d3	Actual value read back from the hardware
	d4	NPC number
	d5	Unit Number
270	NPC Daily Near-end Path Coding Violations threshold values are inconsistent	
	The Daily Near-end Path Coding Violations of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
271	NPC Daily Near-end Path Errored Seconds threshold values are inconsistent	

The Daily Near-end Path Errored Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long ANSI threshold value in the hardware
- d1** Long ANSI threshold value in the hardware
- d2** Long ANSI threshold value in the hardware
- d3** Long ANSI threshold value in the hardware
- d4** Long ANSI threshold value in the data base
- d5** Long ANSI threshold value in the data base
- d6** Long ANSI threshold value in the data base
- d7** Long ANSI threshold value in the data base
- d8** NPC number
- d9** UNIT number

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NPC Daily Near-end Path Severely Errored Seconds threshold values are inconsistent

The Daily Near-end Path Severely Errored Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long ANSI threshold value in the hardware
- d1** Long ANSI threshold value in the hardware
- d2** Long ANSI threshold value in the hardware
- d3** Long ANSI threshold value in the hardware
- d4** Long ANSI threshold value in the data base
- d5** Long ANSI threshold value in the data base
- d6** Long ANSI threshold value in the data base
- d7** Long ANSI threshold value in the data base
- d8** NPC number
- d9** UNIT number

273

NPC Daily Near-end Severely Errored Framing Seconds threshold values are inconsistent

The Daily Near-end Severely Errored Framing Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long ANSI threshold value in the hardware

	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
274	NPC Daily Near-end Controlled Slip Seconds threshold values are inconsistent	
	The Daily Near-end Controlled Slip Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
275	NPC Daily Near-end Unavailable Seconds threshold values are inconsistent	
	The Daily Near-end Unavailable Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base

	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
276	NPC Daily Near-end Line Coding Violations threshold values are inconsistent	
	The Daily Near-end Line Coding Violations of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
277	NPC Daily Near-end Line Errored Seconds threshold values are inconsistent	
	The Daily Near-end Line Errored Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number

	d9	UNIT number
278	NPC Daily Near-end Line Severely Errored Seconds threshold are inconsistent	
	The Daily Near-end Line Severely Errored Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
279	NPC Daily Far-end Path Coding Violations threshold values are inconsistent	
	The Daily Far-end Path Coding Violations of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
27A	NPC Daily Far-end Path Errored Seconds threshold values are inconsistent	

The Daily Far-end Path Errored Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long ANSI threshold value in the hardware
- d1** Long ANSI threshold value in the hardware
- d2** Long ANSI threshold value in the hardware
- d3** Long ANSI threshold value in the hardware
- d4** Long ANSI threshold value in the data base
- d5** Long ANSI threshold value in the data base
- d6** Long ANSI threshold value in the data base
- d7** Long ANSI threshold value in the data base
- d8** NPC number
- d9** UNIT number

27B

NPC Daily Far-end Path Severely Errored Seconds threshold values are inconsistent

The Daily Far-end Path Severely Errored Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long ANSI threshold value in the hardware
- d1** Long ANSI threshold value in the hardware
- d2** Long ANSI threshold value in the hardware
- d3** Long ANSI threshold value in the hardware
- d4** Long ANSI threshold value in the data base
- d5** Long ANSI threshold value in the data base
- d6** Long ANSI threshold value in the data base
- d7** Long ANSI threshold value in the data base
- d8** NPC number
- d9** UNIT number

27C

NPC Daily Far-end Severely Errored Framing Seconds threshold values are inconsistent

The Daily Far-end Severely Errored Framing Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long ANSI threshold value in the hardware

	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
27D	NPC Daily Far-end Controlled Slip Seconds threshold values are inconsistent	
	The Daily Far-end Controlled Slip Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
27E	NPC Daily Far-end Unavailable Seconds threshold values are inconsistent	
	The Daily Far-end Unavailable Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base

	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
27F	NPC Daily Far-end Line Errored Seconds threshold values are inconsistent	
	The Daily Far-end Line Errored Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
280	NPC 15-Minute Near-end Path Coding Violations threshold values are inconsistent	
	The 15-Minute Near-end Path Coding Violations of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number

	d9	UNIT number
281	NPC 15-Minute Near-end Path Errored Seconds threshold values are inconsistent	
	The 15-Minute Near-end Path Errored Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
282	NPC 15-Minute Near-end Path Severely Errored Seconds threshold values are inconsistent	
	The 15-Minute Near-end Path Severely Errored Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
283	NPC 15-Minute Near-end Severely Errored Framing Seconds threshold values are inconsistent	

The 15-Minute Near-end Severely Errored Framing Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long ANSI threshold value in the hardware
- d1** Long ANSI threshold value in the hardware
- d2** Long ANSI threshold value in the hardware
- d3** Long ANSI threshold value in the hardware
- d4** Long ANSI threshold value in the data base
- d5** Long ANSI threshold value in the data base
- d6** Long ANSI threshold value in the data base
- d7** Long ANSI threshold value in the data base
- d8** NPC number
- d9** UNIT number

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NPC 15-Minute Near-end Controlled Slip Seconds threshold values are inconsistent

The 15-Minute Near-end Controlled Slip Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long ANSI threshold value in the hardware
- d1** Long ANSI threshold value in the hardware
- d2** Long ANSI threshold value in the hardware
- d3** Long ANSI threshold value in the hardware
- d4** Long ANSI threshold value in the data base
- d5** Long ANSI threshold value in the data base
- d6** Long ANSI threshold value in the data base
- d7** Long ANSI threshold value in the data base
- d8** NPC number
- d9** UNIT number

285

NPC 15-Minute Near-end Unavailable Seconds threshold values are inconsistent

The 15-Minute Near-end Unavailable Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long ANSI threshold value in the hardware

	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
286	NPC 15-Minute Near-end Line Coding Violations threshold values are inconsistent	
	The 15-Minute Near-end Line Coding Violations of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
287	NPC 15-Minute Near-end Line Errored Seconds threshold values are inconsistent	
	The 15-Minute Near-end Line Errored Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base

	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
288	NPC 15-Minute Near-end Line Severely Errored Seconds threshold values are inconsistent	
	The 15-Minute Near-end Line Severely Errored Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
289	NPC 15-Minute Far-end Path Coding Violations threshold values are inconsistent	
	The 15-Minute Far-end Path Coding Violations of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number

	d9	UNIT number
28A	NPC 15-Minute Far-end Path Errored Seconds threshold values are inconsistent	
	The 15-Minute Far-end Path Errored Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
28B	NPC 15-Minute Far-end Path Severely Errored Seconds threshold values are inconsistent	
	The 15-Minute Far-end Path Severely Errored Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
28C	NPC 15-Minute Far-end Severely Errored Framing Seconds threshold values are inconsistent	

The 15-Minute Far-end Severely Errored Framing Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long ANSI threshold value in the hardware
- d1** Long ANSI threshold value in the hardware
- d2** Long ANSI threshold value in the hardware
- d3** Long ANSI threshold value in the hardware
- d4** Long ANSI threshold value in the data base
- d5** Long ANSI threshold value in the data base
- d6** Long ANSI threshold value in the data base
- d7** Long ANSI threshold value in the data base
- d8** NPC number
- d9** UNIT number

28D

NPC 15-Minute Far-end Controlled Slip Seconds threshold values are inconsistent

The 15-Minute Far-end Controlled Slip Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long ANSI threshold value in the hardware
- d1** Long ANSI threshold value in the hardware
- d2** Long ANSI threshold value in the hardware
- d3** Long ANSI threshold value in the hardware
- d4** Long ANSI threshold value in the data base
- d5** Long ANSI threshold value in the data base
- d6** Long ANSI threshold value in the data base
- d7** Long ANSI threshold value in the data base
- d8** NPC number
- d9** UNIT number

28E

NPC 15-Minute Far-end Unavailable Seconds threshold values are inconsistent

The 15-Minute Far-end Unavailable Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long ANSI threshold value in the hardware

	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
28F	NPC 15-Minute Far-end Line Errored Seconds threshold values are inconsistent	
	The 15-Minute Far-end Line Errored Seconds of the ANSI NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long ANSI threshold value in the hardware
	d1	Long ANSI threshold value in the hardware
	d2	Long ANSI threshold value in the hardware
	d3	Long ANSI threshold value in the hardware
	d4	Long ANSI threshold value in the data base
	d5	Long ANSI threshold value in the data base
	d6	Long ANSI threshold value in the data base
	d7	Long ANSI threshold value in the data base
	d8	NPC number
	d9	UNIT number
290	NPC Daily CRC Block Error Count threshold values are inconsistent	
	The Daily CRC Block Error Count of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware

	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
291	NPC Daily Framing Error Count threshold values are inconsistent	
	The Daily Framing Error Count of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
292	NPC Daily Out of Frame Seconds threshold values are inconsistent	

The Daily Out of Frame Seconds of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long enhanced-30-channel threshold value in the hardware
- d1** Long enhanced-30-channel threshold value in the hardware
- d2** Long enhanced-30-channel threshold value in the hardware
- d3** Long enhanced-30-channel threshold value in the hardware
- d4** Long enhanced-30-channel threshold value in the data base
- d5** Long enhanced-30-channel threshold value in the data base
- d6** Long enhanced-30-channel threshold value in the data base
- d7** Long enhanced-30-channel threshold value in the data base
- d8** NPC number
- d9** UNIT number

293

NPC Errored Seconds threshold values are inconsistent

The Errored Seconds of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long enhanced-30-channel threshold value in the hardware
- d1** Long enhanced-30-channel threshold value in the hardware
- d2** Long enhanced-30-channel threshold value in the hardware
- d3** Long enhanced-30-channel threshold value in the hardware
- d4** Long enhanced-30-channel threshold value in the data base
- d5** Long enhanced-30-channel threshold value in the data base

	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
294	NPC Daily Severely Errored Seconds threshold values are inconsistent	
	The Daily Severely Errored Seconds of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
295	NPC Daily Controlled Slip Seconds threshold values are inconsistent	
	The Daily Controlled Slip Seconds of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware

	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
296	NPC Daily Code Violation Count threshold values are inconsistent	
	The Daily Code Violation Count of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number

297

NPC Daily Unavailable Seconds threshold values are inconsistent

The Daily Unavailable Seconds of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long enhanced-30-channel threshold value in the hardware
- d1** Long enhanced-30-channel threshold value in the hardware
- d2** Long enhanced-30-channel threshold value in the hardware
- d3** Long enhanced-30-channel threshold value in the hardware
- d4** Long enhanced-30-channel threshold value in the data base
- d5** Long enhanced-30-channel threshold value in the data base
- d6** Long enhanced-30-channel threshold value in the data base
- d7** Long enhanced-30-channel threshold value in the data base
- d8** NPC number
- d9** UNIT number

298

NPC Daily Unavailable Time Count threshold values are inconsistent

The Daily Unavailable Time Count of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long enhanced-30-channel threshold value in the hardware
- d1** Long enhanced-30-channel threshold value in the hardware
- d2** Long enhanced-30-channel threshold value in the hardware
- d3** Long enhanced-30-channel threshold value in the hardware
- d4** Long enhanced-30-channel threshold value in the data base

	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
299	NPC Daily Multiframe Alignment Error Count threshold values are inconsistent	
	The Daily Multiframe Alignment Error Count of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
29A	NPC Daily Far End Block Error Count threshold values are inconsistent	
	The Daily Far End Block Error Count of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware

	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
29B	NPC Daily Far End Errored Seconds threshold values are inconsistent	
	The Daily Far End Errored Seconds of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number

	d9	UNIT number
29C	NPC Daily Far End Severely Errored Seconds threshold values are inconsistent	
	The Daily Far End Severely Errored Seconds of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
29D	NPC Daily Far End Unavailable Seconds threshold values are inconsistent	
	The Daily Far End Unavailable Seconds of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware

	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
29E	NPC 15-Minute CRC Block Error Count threshold values are inconsistent	
	The 15-Minute CRC Block Error Count of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
29F	NPC 15-Minute Framing Error Count threshold values are inconsistent	
	The 15-Minute Framing Error Count of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	

	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number d9UNIT number
2A0	NPC 15-Minute Out of Frame Seconds threshold values are inconsistent The 15-Minute Out of Frame Seconds of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base

	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
2A1	NPC 15-Minute Errored Seconds threshold values are inconsistent	
	The 15-Minute Errored Seconds of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
2A2	NPC 15-Minute Severely Errored Seconds threshold values are inconsistent	
	The 15-Minute Severely Errored Seconds of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware

	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
2A3	NPC 15-Minute Controlled Slip Seconds threshold values are inconsistent	
	The 15-Minute Controlled Slip Seconds of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
2A4	NPC 15-Minute Code Violation Count threshold values are inconsistent	

The 15-Minute Code Violation Count of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long enhanced-30-channel threshold value in the hardware
- d1** Long enhanced-30-channel threshold value in the hardware
- d2** Long enhanced-30-channel threshold value in the hardware
- d3** Long enhanced-30-channel threshold value in the hardware
- d4** Long enhanced-30-channel threshold value in the data base
- d5** Long enhanced-30-channel threshold value in the data base
- d6** Long enhanced-30-channel threshold value in the data base
- d7** Long enhanced-30-channel threshold value in the data base
- d8** NPC number
- d9** UNIT number

2A5

NPC 15-Minute Unavailable Seconds threshold values are inconsistent

The 15-Minute Unavailable Seconds of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.

- d0** Long enhanced-30-channel threshold value in the hardware
- d1** Long enhanced-30-channel threshold value in the hardware
- d2** Long enhanced-30-channel threshold value in the hardware
- d3** Long enhanced-30-channel threshold value in the hardware
- d4** Long enhanced-30-channel threshold value in the data base
- d5** Long enhanced-30-channel threshold value in the data base

	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
2A6	NPC 15-Minute Unavailable Time Count threshold values are inconsistent	
	The 15-Minute Unavailable Time Count of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
2A7	NPC 15-Minute Multiframe Alignment Error Count threshold values are inconsistent	
	The 15-Minute Multiframe Alignment Error Count of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware

	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
2A8	NPC 15-Minute Far End Block Error Count threshold values are inconsistent	
	The 15-Minute Far End Block Error Count of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number

2A9

NPC 15-Minute Far End Errored Seconds threshold values are inconsistent

The 15-Minute Far End Errored Seconds of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.

d0 Long enhanced-30-channel threshold value in the hardware

d1 Long enhanced-30-channel threshold value in the hardware

d2 Long enhanced-30-channel threshold value in the hardware

d3 Long enhanced-30-channel threshold value in the hardware

d4 Long enhanced-30-channel threshold value in the data base

d5 Long enhanced-30-channel threshold value in the data base

d6 Long enhanced-30-channel threshold value in the data base

d7 Long enhanced-30-channel threshold value in the data base

d8 NPC number

d9 UNIT number

2AA

NPC 15-Minute Far End Severely Errored Seconds threshold values are inconsistent

The 15-Minute Far End Severely Errored Seconds of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.

d0 Long enhanced-30-channel threshold value in the hardware

d1 Long enhanced-30-channel threshold value in the hardware

d2 Long enhanced-30-channel threshold value in the hardware

d3 Long enhanced-30-channel threshold value in the hardware

d4 Long enhanced-30-channel threshold value in the data base

	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
2AB	NPC 15-Minute Far End Unavailable Seconds threshold values are inconsistent	
	The 15-Minute Far End Unavailable Seconds of the enhanced-30-channel NPC threshold value stored in the unit data base does not match that stored in the hardware.	
	d0	Long enhanced-30-channel threshold value in the hardware
	d1	Long enhanced-30-channel threshold value in the hardware
	d2	Long enhanced-30-channel threshold value in the hardware
	d3	Long enhanced-30-channel threshold value in the hardware
	d4	Long enhanced-30-channel threshold value in the data base
	d5	Long enhanced-30-channel threshold value in the data base
	d6	Long enhanced-30-channel threshold value in the data base
	d7	Long enhanced-30-channel threshold value in the data base
	d8	NPC number
	d9	UNIT number
2B1	NPC Transmit or Receive Pseudo Framing Word values are inconsistent	
	The Transmit or Receive Pseudo Framing Word of the NPC mismatch between unit data base and the hardware.	
	d0	The Receive Pseudo Framing Word of NPC from hardware

	d1	The Receive Pseudo Framing Word of NPC from unit data base
	d2	The Transmit Pseudo Framing Word of NPC from hardware
	d3	The Transmit Pseudo Framing Word of NPC from unit data base
	d4	NPC number
	d5	UNIT number
2B2	NPC Non Framing Setting values are inconsistent	
	The Non Framing Setting value the NPC mismatch between unit data base and the hardware.	
	d0	Fourth byte the Non Framing Setting of NPC from hardware
	d1	Third byte of the Non Framing Setting of NPC from hardware
	d2	Fourth byte of the Non Framing Setting of NPC from unit data base
	d3	Third byte of the Non Framing Setting of NPC from unit data base
	d4	NPC number
	d5	UNIT number
300	E1/T1 Select Registers are inconsistent	
	The various select registers are not consistently provisioned for either E1 or T1 within a DS2.	
	d0	NPC type
	d1	Not used
	d2	Not used
	d3	DS2 number
	d4	HMXR number
	d5	UNIT number
301	CCN sides is unpested (INS) in DB but pested in hardware (BXREG)	
	d0	Not used
	d1	Not used
	d2	Not used

	d3	Not used
	d4	Not used
	d5	CCN side
302	TSI entity is unpested (INS) in DB but pested in hardware (CCNI EMR)	
	d0	Not used
	d1	Not used
	d2	Not used
	d3	To UNIT
	d4	From UNIT
	d5	CCNI side
303	CCB entity is unpested (INS) in DB but pested in hardware (CCNI EMR)	
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Not used
	d4	CCB number
	d5	CCN side
305	SYNC entity is in-service in DB but cannot communicate with MP	
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Not used
	d4	Not used
	d5	SYNC side
306	TLI entity is in-service in DB but out-of-service in SYNC data	
	d0	Syncdata.arch
	d1	TLI data base flags
	d2	TLI hardware status
	d3	Number of times data mismatch verified
	d4	TLI number

	d5	SYNC side
307		TLR entity is in-service in DB but out-of-service in SYNC data TLR is the Timing Link Reference.
	d0	Not used
	d1	Not used
	d2	Not used
	d3	TLR number
	d4	TLI number
	d5	SYNC side
308		CI links is in-service in DB but out of service in CI hardware data
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Not used
	d4	Not used
	d5	link number
310		TLR entity priority is different between DB and SYNC data (TE and TP) TLR is the Timing Link Reference.
	d0	Not used
	d1	SYNC hardware TLR priority
	d2	Data base priority
	d3	TLR number
	d4	TLI number
	d5	SYNC side
311		TLR entity x and y value is different between DB and SYNC data TLR is the Timing Link Reference.
	d0	SYNC hardware y value
	d1	Data base y value
	d2	SYNC hardware x value
	d3	Data base x value
	d4	A = TLI number; B = TLR number

312	d5	SYNC side
	SYNC entity architect or stratum value is different between DB and SYNC	
	d0	SYNC hardware stratum value 0 - domestic stratum 3 1 - CEPT local exchange 2 - CEPT toll exchange 3 - domestic stratum 2
	d1	Data base stratum value 0 - no type defined 1 - stratum 2 sync 2 - stratum 3 sync 3 - CEPT local 4 - CEPT toll
	d2	SYNC hardware architect value 0 - slaved in master-slave system 1 - master in master-slave system 2 - mutual synchronization system
	d3	Data base architect value 0 - no type defined 1 - master in master-slave system 2 - slaved in master-slave system 3 - mutual synchronization system
	d4	Not used
	d5	SYNC side
	SYNC entity mode is different between DB and SYNC data	
	d0	Not used
313	d1	Not used
	d2	SYNC hardware mode value 0 - normal 1 - fast 2 - holdover
	d3	Data base sync mode value 1 - normal 2 - fast 3 - holdover
	d4	Not used
	d5	SYNC side
314	SYNC timing source or active link is different between DB and hardware	

	d0	SYNC hardware active link This field is only valid when the source is timing link and the architecture field is slave in the master-slave system 0 - TLI #1, Link #0 1 - TLI #1, Link #1 2 - TLI #2, Link #0 3 - TLI #2, Link #1 4 - TLI #3, Link #0 5 - TLI #3, Link #1 6 - TLI #4, Link #0 7 - TLI #4, Link #1
	d1	Data base sync active link This field is only valid when the source is timing link and the architecture field is slave in the master-slave system 0 - TLI #1, Link #0 1 - TLI #1, Link #1 2 - TLI #2, Link #0 3 - TLI #2, Link #1 4 - TLI #3, Link #0 5 - TLI #3, Link #1 6 - TLI #4, Link #0 7 - TLI #4, Link #1
	d2	SYNC hardware timing source 0 - holdover 1 - timing link 2 - cross couples 3 - CRO
	d3	Data base sync timing source 1 - holdover 2 - timing link 3 - cross couples 4 - CRO
	d4	Not used
	d5	SYNC side
315		SYNC TLI type is different between DB and SYNC hardware
	d0	Not used
	d1	Data base TLIs x option if TLI type is TDTYPE
	d2	SYNC hardware type
	d3	Data base TLI type
	d4	TLI number

	d5	SYNC side
316		ECCN sides is unpested (INS) in DB but pested in hardware (BXREG)
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Not used
	d4	Not used
	d5	ECCN side
317		ETSI entity is unpested (INS) in DB but pested in hardware (CCI EMR)
	d0	Not used
	d1	Not used
	d2	Not used
	d3	Not used
	d4	ETSI number
	d5	ECCN side
320		Receive sync upper address different between UA DB and PS DB
	d0	Not used
	d1	UA value
	d2	PS value
	d3	Channel
	d4	NPC number
	d5	Unit number
321		Receive sync lower address different between UA DB and PS DB
	d0	Not used
	d1	UA value
	d2	PS value
	d3	Channel
	d4	NPC number
	d5	Unit number

322	Receive sync data between UA DB and PS DB
d0	Not used
d1	UA value
d2	PS value
d3	Channel
d4	NPC number
d5	Unit number
323	PIF data differs between UA DB and PS DB
d0	Not used
d1	UA value
d2	PS value
d3	Not used
d4	MXR/HMXR number
d5	Unit number
324	Receive frame mode A differs between UA DB and PS DB
d0	Not used
d1	UA value
d2	PS value
d3	NPC
d4	MXR/HMXR number
d5	Unit number
325	Receive frame mode B differs between UA DB and PS DB
d0	Not used
d1	UA value
d2	PS value
d3	NPC
d4	MXR/HMXR number
d5	Unit number
326	Receive sync mode A differs between UA DB and PS DB
d0	Not used
d1	UA value
d2	PS value

	d3	NPC
	d4	MXR/HMXR number
	d5	Unit number
327	Receive sync mode B differs between UA DB and PS DB	
	d0	Not used
	d1	UA value
	d2	PS value
	d3	NPC
	d4	MXR/HMXR number
	d5	Unit number
328	Transmit framing mode differs between UA DB and PS DB	
	d0	Not used
	d1	UA value
	d2	PS value
	d3	NPC
	d4	MXR/HMXR number
	d5	Unit number
329	Transmit signaling mode differs between UA DB and PS DB	
	d0	Not used
	d1	UA value
	d2	PS value
	d3	NPC
	d4	MXR/HMXR number
	d5	Unit number
32A	Transmit system mode differs between UA DB and PS DB	
	d0	Not used
	d1	UA value
	d2	PS value
	d3	NPC
	d4	MXR/HMXR number
	d5	Unit number

32B	Even NPC receive ams 0 value differs between UA DB and PS DB	
	d0	Not used
	d1	UA value
	d2	PS value
	d3	Channel
	d4	NPC number
	d5	Unit number
32C	Even NPC receive ams 1 value differs between UA DB and PS DB	
	d0	Not used
	d1	UA value
	d2	PS value
	d3	Channel
	d4	NPC number
	d5	Unit number
32D	Even NPC receive ams 2 value differs between UA DB and PS DB	
	d0	Not used
	d1	UA value
	d2	PS value
	d3	Channel
	d4	NPC number
	d5	Unit number
32E	Even NPC transmit ams 0 value differs between UA DB and PS DB	
	d0	Not used
	d1	UA value
	d2	PS value
	d3	Channel
	d4	NPC number
	d5	Unit number

32F	Even NPC transmit ams 1 value differs between UA DB and PS DB
d0	Not used
d1	UA value
d2	PS value
d3	Channel
d4	NPC number
d5	Unit number
330	Even NPC transmit ams 2 value differs between UA DB and PS DB
d0	Not used
d1	UA value
d2	PS value
d3	Channel
d4	NPC number
d5	Unit number
331	Odd NPC receive ams 0 value differs between UA DB and PS DB
d0	Not used
d1	UA value
d2	PS value
d3	Channel
d4	NPC number
d5	Unit number
332	Odd NPC receive ams 1 value differs between UA DB and PS DB
d0	Not used
d1	UA value
d2	PS value
d3	Channel
d4	NPC number
d5	Unit number

333	Odd NPC receive ams 2 value differs between UA DB and PS DB
d0	Not used
d1	UA value
d2	PS value
d3	Channel
d4	NPC number
d5	Unit number
334	Odd NPC transmit ams 0 value differs between UA DB and PS DB
d0	Not used
d1	UA value
d2	PS value
d3	Channel
d4	NPC number
d5	Unit number
335	Odd NPC transmit ams 1 value differs between UA DB and PS DB
d0	Not used
d1	UA value
d2	PS value
d3	Channel
d4	NPC number
d5	Unit number
336	Odd NPC transmit ams 2 value differs between UA DB and PS DB
d0	Not used
d1	UA value
d2	PS value
d3	Channel
d4	NPC number
d5	Unit number
351	E1 Channel Controller Data - Special Function A

	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	NPC number
	d4	HMXR number
	d5	Unit number
352	E1 Channel Controller Data - Special Function B	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	NPC number
	d4	HMXR number
	d5	Unit number
353	E1 Channel Controller Data - AMS[512] Array Mismatch	
	d0	Index to instruction RAM arrays
	d1	HMXR register value
	d2	PSWDB value
	d3	NPC number
	d4	HMXR number
	d5	Unit number
358	E1 Transceiver Data - Spare Bit Provisioning	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number
	d5	Unit number
359	E1 Transceiver Data - Link Option 1	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number

	d4	HMXR number
	d5	Unit number
360	E1 Transceiver Data - Transmit TS16 Spare Bits	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number
	d5	Unit number
361	E1 Transceiver Data - TS0 Cross-Connect Transmit 0	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number
	d5	Unit number
362	E1 Transceiver Data - TS0 Cross-Connect Transmit 1	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number
	d5	Unit number
363	E1 Transceiver Data - TS0 Cross-Connect Transmit 2	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number
	d5	Unit number
364	E1 Transceiver Data - TS0 Cross-Connect Transmit 3	
	d0	Not used

	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number
	d5	Unit number
365	E1 Transceiver Data - Link Action-FP Control	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number
	d5	Unit number
366	E1 Transceiver Data - Consequent Action Option	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number
	d5	Unit number
367	E1 Transceiver Data - System RCV Data Option	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number
	d5	Unit number
368	E1 Transceiver Data - TS0 Receive 0	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number

	d5	Unit number
369	E1 Transceiver Data - TS0 Receive 1	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number
	d5	Unit number
370	E1 Transceiver Data - TS0 Receive 2	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number
	d5	Unit number
371	E1 Transceiver Data - TS0 Receive 3	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number
	d5	Unit number
372	E1 Transceiver Data - Link Option 3	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number
	d5	Unit number
373	E1 Transceiver Data - Link Option 2	
	d0	Not used
	d1	HMXR register value

	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number
	d5	Unit number
374	E1 Transceiver Data - Force Reframe	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number
	d5	Unit number
375	E1 Transceiver Data - Parity Block Fail Options	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Transceiver number
	d4	HMXR number
	d5	Unit number
376	M13 Data - DS3 Framer Configuration	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Not used
	d4	HMXR number
	d5	Unit number
377	M13 Data - MX23 Configuration	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Not used
	d4	HMXR number
	d5	Unit number

378	M13 Data - Master Loopback Configuration	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Not used
	d4	HMXR number
	d5	Unit number
379	M13 Data - DS2 Framer Configuration	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	DS2 number
	d4	HMXR number
	d5	Unit number
380	M13 Data - DS2 MX12 Configuration and Control	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	DS2 number
	d4	HMXR number
	d5	Unit number
381	M13 Data - DS2 MX12 AIS Insert	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	DS2 number
	d4	HMXR number
	d5	Unit number
382	M13 Data - DS2 MX12 Loopback Activate	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value

	d3	DS2 number
	d4	HMXR number
	d5	Unit number
383	M13 Data - MX23 Demux AIS Insert	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Not used
	d4	HMXR number
	d5	Unit number
384	M13 Data - DS3 TRAN Configuration	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	Not used
	d4	HMXR number
	d5	Unit number
390	MXR Protection Switch Database does not match Shared RAM	
	d0	Not used
	d1	HMXR register value
	d2	PSWDB value
	d3	NPC number
	d4	HMXR number
	d5	Unit number
3A7	E1 Opaque Data - E1 Opaque Data Array	
	d0	Index to opaque data
	d1	HMXR register value
	d2	PSWDB value
	d3	NPC number
	d4	HMXR number
	d5	Unit number
3B0	Fully-connected pseudo-channels not actually cross-connected	

Two channels are in a fully-connected pseudo-channel entry, but are not actually cross-connected to each other.

d0	Unused
d1	Unused
d2	Pseudo-channel number Low Byte
d3	Pseudo-channel number High Byte
d4	Channel number on NPC 2
d5	NPC number 2 Low Byte
d6	NPC number 2 High Byte
d7	Channel number on NPC 1
d8	NPC number 1 Low Byte
d9	NPC number 1 High Byte

3B1

Duplicate NPC/channel number in pseudo-channel connection

Two pseudo-channel entries contain the same NPC number and channel number.

d0	Unused
d1	Unused
d2	Unused
d3	Pseudo-channel 2 Low Byte
d4	Pseudo-channel 2 High byte
d5	Pseudo-channel 1 Low Byte
d6	Pseudo-channel 1 High byte
d7	Channel number
d8	NPC number Low Byte
d9	NPC number High Byte

3B2

Reserved pseudo-channel already involved in a cross-connect

A pseudo-channel entry is in the reserved state and the NPC and channel present are already involved in an actual cross-connect.

d0	Unused
d1	Unused
d2	Pseudo-channel number Low Byte
d3	Pseudo-channel number High byte

	d4	Channel number cross-connected to
	d5	NPC number cross-connected to Low Byte
	d6	NPC number cross-connected to High Byte
	d7	Channel number in pseudo-channel entry
	d8	NPC number in pseudo-channel entry Low Byte
	d9	NPC number in pseudo-channel entry High Byte
3B3		The DSP Platform software version is inconsistent
		The DSP Platform software version stored in the main controller does not match that stored in the hardware.
	d0	Not used
	d1	Data stored in the database
	d2	Data stored in the hardware
	d3	Index - the reason of failure 1 - DSPP software generic is inconsistent 2 - DSPP software issue is inconsistent 3 - DSPP software release is inconsistent 4 - DSPP software year load is inconsistent 5 - CP code version is inconsistent 6 - DSP code version is inconsistent
	d4	NPC number
	d5	UNIT number
3B4		The DSP Platform application database does not match that stored in hardware
	d0	Not used
	d2	Not used
	d3	Not used
	d4	NPC number of circuit pack that is running the application
	d5	UNIT number

FRAME AUDITS MAIN CONTROLLER

Explanation of Command

This autonomous output message from frame audits indicates that a diagnostic test was run on the main controller (MC) but failed.

Autonomous Message

[O.82004]
I hh:mm:ss xy,ww FRADTS MC DGN <tt> COMPL

Explanation of Parameters

MC	Main controller
DGN	Diagnose
tt	Entity identifier
BX	Bus Extender RAM
CI	Communications Interface
EBX	Expanded Bus Extender RAM
EMTC	Expanded Maintenance Circuit
MP	Main Processor
MTC	Maintenance Circuit
PMEM	Primary Memory Device
SMEM	Secondary Memory Device

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GROWTH FRAME

Explanation of Command

This command sets the optional frame identifier and unique frame identifier.

Until this command is used, the frame identifier defaults to 00.

**NOTE:**

If the frame identifier is protected (hard wired), it cannot be changed by this command.

The CHAR field determines the number of characters in the frame identifier (2 is the default).

This command also results in the provisioning of virtual NPCs [9]961, [9]962, [9]963, [9]964, [9]965, and [9]966 (99101, 99102, 99103, 99104, 99105, and 99106 in the hierarchical NPC numbering format), default type VI100.

This NPC type may be changed if necessary by the CHG::NPC,TYPE command (Message 38211).

Command

[I.30101]

GRTH:[FRM xy][,SEQ ww]:FRAME fg[,CHAR m][,UID <uid>]!

Completion Message

[O.30101]

M hh:mm:ss fg,ww n[vv] GRTH FRAME fg CHAR m UID [<uid>] COMPL

Denial Message

[O.30101.01]

M hh:mm:ss xy,ww n[vv] GRTH FRAME fg CHAR m UID [<uid>] \
COND cc DNY

Explanation of Parameters	FRAME	Frame
	fg	Frame identifier (alphanumeric, 01 through ZZ) The frame identifier is required. If the disk-stored frame identifier is 00, then this command sets the frame identifier to fg. Until the GRTH::FRAME command is used, the frame number defaults to 00. The frame identifier is used in input and output messages.
	CHAR	Character
	m	The number of characters in the frame identifier (2 or 3)
	UID	Unique identifier
	uid	Unique frame identifier (1 to 20 alphanumeric characters) If the UID field is entered, the unique frame identifier is assigned the value of uid.
	cc	Hexadecimal condition code
	cc	<i>Explanation</i>
	81	Frame ID is protected

GROWTH TEST-ACCESS GROUP NPC

Explanation of Command

This command designates a network processing circuit (NPC) as a test-access group NPC (NPCTG).

To provision an individual test-access group (TG), use the GRTH::TG,NPCTG command.

Command

Nonhierarchical

[I.31401]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc,NPCTG rrr!

Hierarchical

[I.31401]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp,NPCTG rrr!

Completion Message

Nonhierarchical

[O.31401]

M hh:mm:ss xy,ww n[vv] GRTH NPC [s]abc NPCTG rrr COMPL

Hierarchical

[O.31401]

M hh:mm:ss xy,ww n[vv] GRTH NPC uvmnp NPCTG rrr COMPL

Denial Message

Nonhierarchical

[O.31401.01]

M hh:mm:ss xy,ww n[vv] GRTH NPC [s]abc NPCTG rrr COND cc DNY

Hierarchical

[O.31401.01]

M hh:mm:ss xy,ww n[vv] GRTH NPC uvmnp NPCTG rrr COND cc DNY

**Explanation of
Parameters**

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the non-hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
NPCTG	NPC (for) test group
rrr	Test-access Group NPC number (1 through 400) NPC used as a test-access group NPC.
COND	Condition
cc	Hexadecimal condition code
cc	<i>Explanation</i>
01	Subject entity is equipped
15	NPC is unequipped
26	NPC type error
85	NPC has been designated as NPCTP
10	NPC out of service or failed
57	Designated TG or circuit to be tested in process of being rolled
A1	NPC has been designated as NPCTG
A2	All channels assigned, cannot be grown as NPCTG

GROWTH TEST PORT NPC

Explanation of Command

This command designates an Network Processing Circuit as a test port NPC.
The growth of an individual test port is described in GRTH,TP.

Command

Nonhierarchical

[I.31381]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc,NPCTP n!

Hierarchical

[I.31381]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp,NPCTP n!

Completion Message

Nonhierarchical

[O.31381]

M hh:mm:ss xy,ww n[vv] GRTH NPC [s]abc NPCTP n TPS kk-mm
COMPL

Hierarchical

[O.31381]

M hh:mm:ss xy,ww n[vv] GRTH NPC uvmnp NPCTP n TPS kk-mm
COMPL

Denial Message

Nonhierarchical

[O.31381.01]

M hh:mm:ss xy,ww n[vv] GRTH NPC [s]abc NPCTP n COND cc DNY

Hierarchical

[O.31381.01]

M hh:mm:ss xy,ww n[vv] GRTH NPC uvmnp NPCTP n COND cc DNY

**Explanation of
Parameters**

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the non-hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
NPCTP	NPC (for) test ports
n	Test Port NPC number (must be in the range from 1 to 8).
TPS	Test Ports
kk,mm	Test port numbers

n	kk	mm
1	0	12
2	13	24
3	25	36
4	37	48
5	49	60
6	61	72
7	73	84
8	85	96

2.048 Mbit/s Termination



NOTE:

When a CEPT NPC is grown as a test NPC, it must be grown for CAS-type primaries using Message Number 31362, otherwise a denial message occurs.

cc Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
01	Subject entity is equipped
15	NPC is unequipped
26	NPC type error
2F	Channels assigned, cannot be grown as test port
85	NPC has been designated as NPCTP
19	Test ports must be on CAS
FF	Termination is in process of being rolled
A1	NPC has been designated as NPCTG

PROVISION DIGITAL SIGNAL PROCESSING UNIT NPC

Explanation of Command

2.048 Mbit/s Termination

This command requests the provisioning of a digital signal processing unit type (non-FTU) network processing circuit (NPC). This DSPU type NPC can be either type MB (digital multipoint bridge) or type CB (c-bit processor).

1.544 Mbit/s Termination

This command requests the provisioning of a non-FTU (facility terminating unit) type network processing circuit (NPC). There are two NPCs in a non-FTU circuit pack. Although only one network processing circuit is specified in the command, two NPCs are provisioned; NPCs [s]abc and [s]abc+1. Provisioning of both NPCs is reported in the output message.

For the Subrate Feature, there is only one network processing circuit per circuit pack.

The growth command results in the provisioning of all NPCs in the circuit pack on both duplicated sides. For subrate circuit packs, there is only one NPC per circuit pack.

2.048 Mbit/s Termination

The growth command results in the provisioning of all NPCs in the circuit pack on both duplicated sides. For CEPT circuit packs, there is only one NPC per circuit pack.

Command

Nonhierarchical

[l.31351]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc,TYPE mnxyz[,CBTIMER [t]v]!

Hierarchical

[l.31351]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp,TYPE mnxyz[,CBTIMER [t]v]!

Completion Message

Nonhierarchical

[O.31351]

M hh:mm:ss xy,ww n[vv] GRTH NPC [s]abc TYPE mnxyz [CBTIMER [t]v] \
COMPL

Hierarchical

[O.31351]

M hh:mm:ss xy,ww n[vv] GRTH NPC uvmnp TYPE mnxyz [CBTIMER [t]v] \
COMPL

Denial Message

Nonhierarchical

[O.31351.01]

M hh:mm:ss xy,ww n[vv] GRTH NPC [s]abc TYPE mnxyz [CBTIMER [t]v] \
EQD DNY

[O.31351.02]

M hh:mm:ss xy,ww n[vv] GRTH NPC [s]abc TYPE mnxyz COND cc \
[CBTIMER [t]v] DNY

Hierarchical

[O.31351.01]

M hh:mm:ss xy,ww n[vv] GRTH NPC uvmnp TYPE mnxyz [CBTIMER [t]v] \
EQD DNY

[O.31351.02]

M hh:mm:ss xy,ww n[vv] GRTH NPC uvmnp TYPE mnxyz [CBTIMER [t]v] \
COND cc DNY

Explanation of Parameters

[s]abc

The 3- or 4-digit nonhierarchical NPC number.

For a listing of the nonhierarchical numbering scheme, refer to
Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical NPC number

uv

Unit number

	m	Module number
	np	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."	
mnxyz	NPC type	
	2.048 Mbit/s Termination	
	CB10z	C-bit processor
	z	Network alarm timeout
	0	600 to 750
	1	1500 to 1650
	2	2400 to 2550
	3	4650 to 4800
	MB100	Digital Multipoint Bridge
	1.544 Mbit/s Termination	
	MJ100	Multipoint Junction Unit
	SR100	Subrate Multiplexer
[t]def	Nonhierarchical NPC numbers applicable only to MBxyz type NPCs.	
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."	
uvmqr	Hierarchical NPC numbers applicable only to MBxyz type NPCs.	
CBTIMER	C-bit timer; can only be used with CB10z NPC types.	
[t]v	A timer value 1-10	
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."	
EQD	Equipped	
cc	Hexadecimal condition code	

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service

cc	<i>Explanation</i>
12	UC is in service but failed
9A	hub id not set when MJU pack grown
F3	Maximum number of CPRs have already been grown for this unit

GROWTH ANSI NPC- DA, andTA Type

Explanation of Command

This command provisions type DAXyz Network Processing Circuits (NPCs) in DACS II Facility Terminating Units and type TAYyz (NPCs) in DACS II DS3 Units. A single NPC or a range of NPCs may be provisioned with one input command.

This command also provisions the alert thresholds for DS1 facility performance parameters on the NPC. Default threshold values will be programmed if the optional parameter threshold selection arguments are not specified. The parameter threshold selection arguments are indices into the DACS II threshold database, which must be preconfigured by the user.

Maximum Length of Input Command

The maximum length of this input command must not exceed 208 characters. Any input command longer than 208 characters is treated as a syntax error by DACS II. Options that do not fit into this GRTH command can be specified in additional commands.

Idle Code

An idle code is transmitted on the NPC's unassigned DS0 channels. The idle code is specified by pq in the optional field IW X'pq (in this application pq is called the growth insertion word). The growth insertion word may be assigned a 2-digit hexadecimal value. If pq is not specified, it will default to the hexadecimal value 7F if the NPC is provisioned with D4 or ESF framing, and to the hexadecimal value 18 if the NPC is provisioned with T1DM framing.

INCL Keyword

As a protection to users, the INCL keyword must be added to provision an NPC with D4 framing and an Insertion Word with bit 2 equal to zero. NPCs provisioned in the D4 format (DA1yz/TA1yz) transmit a DS1 yellow alarm by setting bit 2 to zero in all 24 DS0 channels. If the Insertion Word is unknowingly provisioned in this manner, the NPC will transmit a D4 yellow alarm signal when it is restored. The D4 yellow alarm is generated by any Insertion Word with the binary value a0cdefgh, where the letters a-h represent the eight bits of the binary word. The D4 yellow alarm is not generated by an Insertion Word with a binary value a1cdefgh.

Clear DS1 NPCs

For clear DS1 NPCs, the insertion word option is NOT available and the message is denied if this option is entered. The alarm indication signal is transmitted in the disconnected or idle state.

ABT Command

Since a growth command which addresses a range of NPCs can take considerable time to complete, the ABT command is allowed with this message. If the ABT command is entered, DACS II stops execution on the current NPC growth and reports what has been completed.

One output message is printed for each NPC requested and successfully provisioned.

Provisioning Commands

Provisioning commands where the specified NPC range crosses a Unit boundary are denied.

When a provisioning command addressing a range of NPCs is denied for successive NPCs in the range for the same reason, a summary denial message is output, giving the range of NPC numbers denied and the reason for the denial.

When a provisioning command addressing a range of NPCs within a unit crosses a facility terminating module (FTM) boundary, if the FTM is unequipped or provisioned as a CEPT module, then the FTM is skipped as a whole, with a summary denial message, as noted below.

- If the type field is specified, and it is inconsistent with the first FTM specified, or if the first FTM specified is unequipped, the entire command is denied. Otherwise, the specified type field is applied to the entire NPC range.
- If the type field is omitted, the NPC type defaults to the type of the first FTM, either domestic or CEPT.

Whether or not the type field is specified, if an FTM, beyond the first one addressed, is of a different type, that entire FTM will be denied.

The execution of the normal completions, or of denials for a reason other than diagnostic failures, then resumes at the next NPC and continues until the end of the range.

A summary denial message is not issued for denial of range NPC RESTORE commands if the reason is an NPC diagnostic failure. In this case, there is one output message for each NPC in the range.

Command

Nonhierarchical

[I.31341]

```
GRTH:[FRM xy,SEQ ww]:NPC [s]abc[-[t]def],TYPE mnxyz[,OPTS(rr/m \
[,rr/m][...])][,IW X'pq[,INCL]][,AIS {INFO|MJ|MN}][,PL {ENA|DSA}]!
```

Hierarchical

[I.31341]

```
GRTH:[FRM xy,SEQ ww]:NPC uvmnp[-uvkqr],TYPE mnxyz[,OPTS(rr/m \
[,rr/m][...])][,IW X'pq[,INCL]][,AIS {INFO|MJ|MN}][,PL {ENA|DSA}]!
```

**Completion
Message**

Nonhierarchical

[O.31341]

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz IW pq[ INCL] \
[ AIS {INFO|MJ|MN}][ PL {ENA|DSA}] 4 LN MSG:
DAILY NE      CVP      ESP      SESP      SEFS      CSSP      UASP      CVL      ESL      SESL
THRESHOLDS    aaaaaaaaa bbbbbb ccccc dddddd eeeee fffff gggggggg \
hhhhh iiiii \
OPTIONS      a          b          c          d          e          f          g          h          i \
EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz IW pq[ INCL] \
[ AIS {INFO|MJ|MN}][ PL {ENA|DSA}] 4 LN MSG:
DAILY FE      CVP      ESP      SESP      SEFS      CSSP      UASP      ESL
THRESHOLDS    jjjjjjjj kkkkk lllll mmmmm nnnnn ooooo ppppp
OPTIONS      j          k          l          m          n          o          p          EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz IW pq[ INCL] \
[ AIS {INFO|MJ|MN}][ PL {ENA|DSA}] 4 LN MSG:
15MIN NE      CVP      ESP      SESP      SEFS      CSSP      UASP      CVL      ESL      SESL
THRESHOLDS    aaaaaaa bbb ccc ddd eee fff gggggg hhh iii
OPTIONS a b c d e f g h i      EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz IW pq[ INCL] \
[ AIS {INFO|MJ|MN}][ PL {ENA|DSA}] 4 LN MSG:
15MIN FE      CVP      ESP      SESP      SEFS      CSSP      UASP      ESL
THRESHOLDS    jjjjjjj kkk lll mmm nnn ooo ppp
OPTIONS j k l m n o p      COMPL
```

If the segment header exceeds 80 characters, the output format is

[O.31342]

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz 5 LN MSG:
IW pq [INCL ][AIS {INFO|MJ|MN} ][PL {ENA|DSA}]
DAILY NE CVP ESP SESP SEFS CSSP UASP CVL ESL \
SESL
THRESHOLDS aaaaaaaaa bbbbbb ccccc ddddd eeeee fffff ggggggggg \
hhhhh iiii
OPTIONS a b c d e f g h i \
EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz 5 LN MSG:
IW pq [INCL ][AIS {INFO|MJ|MN} ][PL {ENA|DSA}]
DAILY FE CVP ESP SESP SEFS CSSP UASP ESL
THRESHOLDS jjjjjjjj kkkkk lllll mmmmm nnnnn ooooo ppppp
OPTIONS j k l m n o p EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz 5 LN MSG:
IW pq [INCL ][AIS {INFO|MJ|MN} ][PL {ENA|DSA}]
15MIN NE CVP ESP SESP SEFS CSSP UASP CVL ESL \
SESL
THRESHOLDS aaaaaaa bbb ccc ddd eee fff ggggggg hhh iiii
OPTIONS a b c d e f g h i EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz 5 LN MSG:
IW pq [INCL ][AIS {INFO|MJ|MN} ][PL {ENA|DSA}]
15MIN FE CVP ESP SESP SEFS CSSP UASP ESL \
THRESHOLDS jjjjjjj kkk lll mmm nnn ooo ppp
OPTIONS j k l m n o p COMPL
```

Hierarchical

[O.31341]

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz IW pq[ INCL] \
[ AIS {INFO|MJ|MN}][ PL {ENA|DSA}] 4 LN MSG:
DAILY NE CVP ESP SESP SEFS CSSP UASP CVL ESL \
SESL
THRESHOLDS aaaaaaaaa bbbbbb ccccc ddddd eeeee fffff ggggggggg \
hhhhh iiii
OPTIONS a b c d e f g h i \
EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz IW pq[ INCL] \
[ AIS {INFO|MJ|MN}][ PL {ENA|DSA}] 4 LN MSG:
DAILY FE CVP ESP SESP SEFS CSSP UASP ESL \
THRESHOLDS jjjjjjjj kkkkk lllll mmmmm nnnnn ooooo ppppp
OPTIONS j k l m n o p EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz IW pq[ INCL] \
[ AIS {INFO|MJ|MN}][ PL {ENA|DSA}] 4 LN MSG:
15MIN NE    CVP      ESP   SESP  SEFS  CSSP  UASP  CVL      ESL \
SESL
THRESHOLDS aaaaaaa bbb ccc ddd eee fff ggggggg hhh iii
OPTIONS a b c d e f g h i    EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz IW pq[ INCL] \
[ AIS {INFO|MJ|MN}][ PL {ENA|DSA}] 4 LN MSG:
15MIN FE    CVP      ESP   SESP  SEFS  CSSP  UASP  ESL
THRESHOLDS jjjjjjj kkk lll mmm nnn ooo ppp
OPTIONS j k l m n o p    COMPL
If the segment header exceeds 80 characters, the output format is
```

[O.31342]

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz 5 LN MSG:
IW pq [INCL ][AIS {INFO|MJ|MN} ][PL {ENA|DSA}]
DAILY NE    CVP      ESP   SESP  SEFS  CSSP  UASP  CVL      ESL \
SESL
THRESHOLDS aaaaaaaaa bbbbbb ccccc ddddd eeeee fffff ggggggggg \
hhhhh iiiii
OPTIONS      a          b          c          d          e          f          g          h          i \
EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz 5 LN MSG:
IW pq [INCL ][AIS {INFO|MJ|MN} ][PL {ENA|DSA}]
DAILY FE    CVP      ESP   SESP  SEFS  CSSP  UASP  ESL
THRESHOLDS jjjjjjjjj kkkkk lllll mmmm nnnnn ooooo ppppp
OPTIONS      j          k          l          m          n          o          p          EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz 5 LN MSG:
IW pq [INCL ][AIS {INFO|MJ|MN} ][PL {ENA|DSA}]
15MIN NE    CVP      ESP   SESP  SEFS  CSSP  UASP  CVL      ESL \
SESL
THRESHOLDS aaaaaaa bbb ccc ddd eee fff ggggggg hhh iii
OPTIONS a b c d e f g h i    EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz 5 LN MSG:
IW pq [INCL ][AIS {INFO|MJ|MN} ][PL {ENA|DSA}]
15MIN FE    CVP      ESP   SESP  SEFS  CSSP  UASP  ESL
THRESHOLDS jjjjjjj kkk lll mmm nnn ooo ppp
OPTIONS j k l m n o p    COMPL
```

Denial Message

Nonhierarchical

[O.31341.01]

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl[-[t]mno] TYPE mnxyz 2 LN \
MSG:
```

[ss/n][IW pq[INCL]][AIS {INFO|MJ|MN}][PL {ENA|DSA}] COND cc \ DNY

[O.31341.02]

M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl[-[t]mno] TYPE mnxyz 2 LN \ MSG:
 [ss/n][IW pq[INCL]][AIS {INFO|MJ|MN}][PL {ENA|DSA}] EQD DNY

Hierarchical

[O.31341.01]

M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl[-uvmno] TYPE mnxyz 2 LN MSG:
 [ss/n][IW pq[INCL]][AIS {INFO|MJ|MN}][PL {ENA|DSA}] COND cc \ DNY

[O.31341.02]

M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl[-uvmno] TYPE mnxyz 2 LN MSG:
 [ss/n][IW pq[INCL]][AIS {INFO|MJ|MN}][PL {ENA|DSA}] EQD DNY

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number, denoting the beginning of a range specification
[t]def	The 3- or 4-digit nonhierarchical NPC number, denoting the end of a range specification
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number
uvkqr	Specific Hierarchical NPC number
uv	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
TYPE	Type
	For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
DA	FTU DS1 ANSI NPC type
TA	DS3U DS1 ANSI NPC type
SA	HSU DS1 ANSI NPC type

	If the NPC type field is omitted in the input command, the NPC defaults to a nonANSI DE100 NPC type in an FTU and a nonANSI TE100 NPC type in a DS3U.
OPTS	Options 1.544 Mbit/s Termination only:
rr	Facility performance parameter number Variable rr specifies the parameter whose alarm threshold is being selected.
m	Facility performance parameter threshold index (0 through 3) Variable m is used to select threshold values previously programmed for rr. The default threshold value, the value selected by m=0, for each parameter is shown in the following table under the column heading "Default Threshold Value". Threshold values selected by m=1 through m=3 must exist; that is, must have been programmed prior to being selected. The nondefault thresholds can be set by using the CHG::SETOP (I.38201) command. Thresholds of all unspecified parameters will be set to the default value associated with m=0. The options field must not be given without the NPC type field. Clear-DS1 ANSI NPCs (DAXy9/TAXy9) provide the same set of path and line performance monitoring parameters that are provided by channelized DS1 ANSI NPC types. ANSI NPCs in DS3 Units (TAXyz) do not provide near-end DS1 line performance monitoring parameters. 1.544 Mbit/s Termination only: For DA, TA and SA type NPCs: For Channelized and Clear-DS1 DA type NPCs with ESF framing, all of the following Near-end and Far-end parameters are valid. For Channelized and Clear-DS1 DA type NPCs with D4 or T1DM framing, all of the following Near-end parameters are valid, but the only valid Far-end parameter is Unavailable Seconds (rr = 55,71). For Channelized and Clear-DS1 TA and SA type NPCs with ESF framing, all of the following Near-end Path parameters are valid, but the Near-End Line parameters (rr = 47-49, 63-65) are invalid. All of the following Far-end parameters are valid. For Channelized and Clear-DS1 TA type NPCs with D4 or T1DM framing, the following Near-end Path parameters are valid, but the Near-End Line parameters (rr = 47-49, 63-65) are invalid.

The only valid Far-end parameter is Unavailable Seconds
 (rr = 55,71).

rr	Parameter	Threshold Value Range	Default Threshold Value
41	Daily Near-end Path Coding Violations	000000000 to 134217727	132960†
42	Daily Near-end Path Errored Seconds	00000 to 86400	648
43	Daily Near-end Path Severely Errored Seconds	00000 to 86400	100
44	Daily Near-end Severely Errored Framing Seconds	00000 to 86400	17
45	Daily Near-end Controlled Slip Seconds	00000 to 86400	4
46	Daily Near-end Unavailable Seconds	00000 to 86400	10
47	Daily Near-end Line Coding Violations	000000000 to 134217727	133400
48	Daily Near-end Line Errored Seconds	00000 to 86400	648
49	Daily Near-end Line Severely Errored Seconds	00000 to 86400	100
50	Daily Far-end Path Coding Violations	000000000 to 134217727	132960†

51	Daily Far-end Path Errored Seconds	00000 to 86400	648
52	Daily Far-end Path Severely Errored Seconds	00000 to 86400	100
53	Daily Far-end Severely Errored Framing Seconds	00000 to 86400	17
54	Daily Far-end Controlled Slip Seconds	00000 to 86400	4
55	Daily Far-end Unavailable Seconds	00000 to 86400	10
56	Daily Far-end Line Errored Seconds	00000 to 86400	648
57	15-Minute Near- end Path Coding Violations	00000000 to 2097151	13296±
58	15-Minute Near-end Path Errored Seconds	000 to 900	65
59	15-Minute Near- end Path Severely Errored Seconds	000 to 900	10
60	15-Minute Near- end Severely Errored Framing Seconds	000 to 900	2
61	15-Minute Near- end Controlled Slip Seconds	000 to 900	1
62	15-Minute Near- end Unavailable Seconds	000 to 900	10

63	15-Minute Near-end Line Coding Violations	0000000 to 2097151	13340
64	15-Minute Near-end Line Errored Seconds	000 to 900	65
65	15-Minute Near- end Line Severely Errored Seconds	000 to 900	10
66	15-Minute Far-end Path Coding Violations	0000000 to 2097151	13296†
67	15-Minute Far-end Path Errored Seconds	000 to 900	65
68	15-Minute Far-end Path Severely Errored Seconds	000 to 900	10
69	15-Minute Far-end Severely Errored Framing Seconds	000 to 900	2
70	15-Minute Far-end Controlled Slip Seconds	000 to 900	1
71	15-Minute Far-end Unavailable Seconds	000 to 900	10
72	15-Minute Far-end Line Errored Seconds	000 to 900	65

† The value shown applies to ESF framing and is a count of CRC errors. When the DS1 has D4 or T1DM framing, framing errors are counted and the default Daily value is 691.

‡ The value shown applies to ESF framing and is a count of CRC errors. When the DS1 has D4 or T1DM framing, framing errors are counted and the default 15-Minute value is 72.



NOTE:

If the queried NPC cannot be accessed for some reason, for example because the Facility Terminating Module is not equipped or the FTMI or Unit Controller is out of service, then the NPC's parameter count fields are printed as a string of dashes to indicate that the counts are not available. The parameter thresholds and options are still correctly output.

In addition, certain parameters do not apply to ANSI NPCs depending on whether the NPC is equipped in a Facility Terminating Unit (DA type NPCs) or a DS3 Unit (TA type NPCs) or a HSU (SA type NPC) and whether the NPC is using ESF framing or not. In the cases where specific parameters do not apply to the queried NPC, the respective parameter count fields, threshold values and threshold options are all displayed as a string of dashes.

IW-

Insertion word

pq

Hexadecimal value of the growth insertion word (GIW). Specifies the insertion word in the transmit direction on unassigned channels.

An eight-bit code, called the growth insertion word, is transmitted by this NPC on unassigned DS0 channels. This code is specified by the optional keyword IW and its argument pq. This code was previously called the Disconnect Code (DCC), but that name is properly reserved for the cross-connect insertion word, which is transmitted when the disconnect message with the DCC option is used.

Although any 2-digit hexadecimal code may be used, the default GIWs are:

7F Unassigned Channel Code (UAC), the default value for DA/TA type NPCs provisioned with D4 or ESF framing.

18 Unassigned Multiplex Code (UMC), the default value for DA/TA type NPCs provisioned with T1DM framing. This value should only be provisioned with T1DM framing (DA4yz, TA4yz), so the growth command enforces this restriction.

For Clear-DS1 NPCs, the insertion word option is **NOT** available and the message will be denied if this option is entered. The alarm indication signal (AIS) is transmitted in the disconnect or idle state.

INCL

Inclusive

As a protection to users, this keyword must be added to provision an NPC with D4 framing and an Insertion Word with bit 2 equal to zero. NPCs grown in the D4 format (DA1yz/TA1yz/SA1yz) transmit a DS1 yellow alarm by setting bit 2 to zero in all 24 DS0 channels. If the Insertion Word "pq" is unknowingly provisioned in this manner, the NPC will transmit a D4 yellow alarm signal when it is restored. The D4 yellow alarm is generated by any Insertion Word with the binary value a0cdefgh, where the letters a-h define the eight bits of the binary word. The D4 yellow alarm is not generated by an Insertion Word with a binary value a1cdefgh.

AIS	Alarm indication signal
INFO	Information Information message (not an alarm). This is the default option.
MJ	Major
MN	Minor
PL	Payload loopback
ENA	Enabled Payload loopback commands received from far-end equipment on the ESF data link are recognized and performed by the ANSI NPC. This is the default option.
DSA	Disabled Payload loopback commands received from far-end equipment on the ESF data link are ignored by the ANSI NPC. This prevents customer equipment from controlling network configurations.
CVP	Path Coding Violations
ESP	Path Errored Seconds
SESP	Path Severely Errored Seconds
SEFS	Severely Errored Framing Seconds
CSSP	Path Controlled Slip Seconds
UASP	Path Unavailable Seconds
CVL	Line Coding Violations
ESL	Line Errored Seconds
SESL	Line Severely Errored Seconds
ss/n	First improper value of rr/m for which the message is denied.

aaaaaaaa	Daily near-end path coding violation threshold (000000000 through 134217727)
a	Daily near-end path coding violation threshold selection (0 through 3)
bbbbbb	Daily near-end path errored second threshold (00000 through 86400)
b	Daily near-end path errored second threshold selection (0 through 3)
ccccc	Daily near-end path severely errored second threshold (00000 through 86400)
c	Daily near-end path severely errored second threshold selection (0 through 3)
dddddd	Daily near-end severely errored framing second threshold (00000 through 86400)
d	Daily near-end severely errored framing second threshold selection (0 through 3)
eeeeee	Daily near-end path controlled slip second threshold (00000 through 86400)
e	Daily near-end path controlled slip second threshold selection (0 through 3)
fffff	Daily near-end path unavailable second threshold (00000 through 86400)
f	Daily near-end path unavailable second threshold selection (0 through 3)
ggggggggg	Daily near-end line coding violation threshold (000000000 through 134217727, or ----- if not applicable)
g	Daily near-end line coding violation threshold selection (0 through 3)
hhhhh	Daily near-end line errored second threshold (00000 through 86400, or ----- if not applicable)
h	Daily near-end line errored second threshold selection (0 through 3)
iiiiii	Daily near-end line severely errored second threshold (00000 through 86400, or ----- if not applicable)
i	Daily near-end line severely errored second threshold selection (0 through 3)
jjjjjjjj	Daily far-end path coding violation threshold (000000000 through 134217727, or ----- if not applicable)

j	Daily far-end path coding violation threshold selection (0 through 3)
kkkkk	Daily far-end path errored second threshold,
k	Daily far-end path errored second threshold selection (0 through 3)
lllll	Daily far-end path severely errored second threshold (00000 through 86400, or ----- if not applicable)
l	Daily far-end path severely errored second threshold selection (0 through 3)
mmmmm	Daily far-end severely errored framing second threshold (00000 through 86400, or ----- if not applicable)
m	Daily far-end severely errored framing second threshold selection (0 through 3)
nnnnn	Daily far-end path controlled slip second threshold (00000 through 86400, or ----- if not applicable)
n	Daily far-end path controlled slip second threshold selection (0 through 3)
ooooo	Daily far-end path unavailable second threshold (00000 through 86400)
o	Daily far-end path unavailable second threshold selection (0 through 3)
ppppp	Daily far-end line errored second threshold (00000 through 86400, or ----- if not applicable)
p	Daily far-end line errored second threshold selection (0 through 3)
<u>aaaaaaa</u>	15-Minute near-end path coding violation threshold, (0000000 through 2097151)
<u>a</u>	15-Minute near-end path coding violation threshold selection (0 through 3)
<u>bbb</u>	15-Minute near-end path errored second threshold (000 through 900)
<u>b</u>	15-Minute near-end path errored second threshold selection (0 through 3)
<u>ccc</u>	15-Minute near-end path severely errored second threshold (000 through 900)
<u>c</u>	15-Minute near-end path severely errored second threshold selection (0 through 3)

<u>ddd</u>	15-Minute near-end severely errored framing second threshold (000 through 900)
<u>d</u>	15-Minute near-end severely errored framing second threshold selection (0 through 3)
<u>eee</u>	15-Minute near-end path controlled slip second threshold (000 through 900)
<u>e</u>	15-Minute near-end path controlled slip second threshold selection (0 through 3)
<u>fff</u>	15-Minute near-end path unavailable second threshold (000 through 900)
<u>f</u>	15-Minute near-end path unavailable second threshold selection (0 through 3)
<u>ggggggg</u>	15-Minute near-end line coding violation threshold (0000000 through 2097151, or ----- if not applicable)
<u>g</u>	15-Minute near-end line coding violation threshold selection (0 through 3)
<u>hhh</u>	15-Minute near-end line errored second threshold (000 through 900, or --- if not applicable)
<u>h</u>	15-Minute near-end line errored second threshold selection (0 through 3)
<u>iii</u>	15-Minute near-end line severely errored second threshold,
<u>i</u>	15-Minute near-end line severely errored second threshold selection (0 through 3)
<u>iii</u>	15-Minute far-end path coding violation threshold (0000000 through 2097151, or ----- if not applicable)
<u>i</u>	15-Minute far-end path coding violation threshold selection (0 through 3)
<u>kkk</u>	15-Minute far-end path errored second threshold (000 through 900, or --- if not applicable)
<u>k</u>	15-Minute far-end path errored second threshold selection (0 through 3)
<u>lll</u>	15-Minute far-end path severely errored second threshold (000 through 900, or --- if not applicable)
<u>l</u>	15-Minute far-end path severely errored second threshold selection (0 through 3)
<u>mmm</u>	15-Minute far-end severely errored framing second threshold (000 through 900, or --- if not applicable)

m	15-Minute far-end severely errored framing second threshold selection (0 through 3)
nnn	15-Minute far-end path controlled slip second threshold (000 through 900, or --- if not applicable)
n	15-Minute far-end path controlled slip second threshold selection (0 through 3)
ooo	15-Minute far-end path unavailable second threshold (000 through 900)
o	15-Minute far-end path unavailable second threshold selection (0 through 3)
ppp	15-Minute far-end line errored second threshold (000 through 900, or --- if not applicable)
p	15-Minute far-end line errored second threshold selection (0 through 3)

 **NOTE:**
 A threshold of zero for any parameter inhibits threshold crossing monitoring for that parameter.

cc Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
01	Subject entity is equipped
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
20	Option rr/m has not been set up on 2nd database
24	Unit type error
29	IW is UMUX (18) but NPC not type DE4yz
2A	DMI combined with T1DM
34	NPC type option xyz is unassigned, or invalid for feature package
83	NPC type is inconsistent with FTMI type

cc	<i>Explanation</i>
84	Incompatible types of NPCs on a circuit pack
25	Invalid FPI value
4E	IW option is not allowed for new type of Clear-DS1 NPC
F1	Parameter only valid with PA, PB, or PC type NPCs
FC	ZBTSI option is only valid with the ESF mode
FD	NPC range crosses unit boundary
05	This NPC type does not allow unframed Clear-DS1
9B	The MXR is not grown
A5	AIS keyword incompatible with NPC type
04	This NPC type does not allow Payload
07	Mismatch between MXR and NPC types
35	Invalid use of INCL keyword
36	INCL keyword needed when restricted Insertion Word specified
E5	Invalid combination of "x" and "z" values
E7	Invalid combination of "x" and "y" values
30	The MPR is not grown
88	TA-type not supported

GROWTH NPC - DE, TE and SE Types

Explanation of Command

This message requests the equipage of the facility terminating unit network processing circuit, type DExyz/TExyz/SExyz. It may also be used to request the equipage of a range of NPCs.

The optional alarm threshold arguments are indices used to select prestored values for facility performance parameter alarm thresholds from a secondary data base.

A special code, called the idle code, is transmitted by this NPC on unassigned channels. The idle code is specified by pq in the optional field IW X'pq (generally called the growth insertion word) or it defaults to the hexadecimal value 7F (unassigned channel code) for DE/TE/SE type NPCs. The growth insertion word may be assigned any 2-digit hexadecimal value.

As a protection to users, the INCL keyword must be added to provision an NPC with D4 framing and an Insertion Word with bit 2 equal to zero. NPCs grown in the D4 format (DE1yz/TE1yz/SE1yz) transmit a DS1 yellow alarm by setting bit 2 to zero in all 24 DS0 channels. If the Insertion Word is unknowingly provisioned in this manner, the NPC transmits a D4 yellow alarm signal when it is restored. The D4 yellow alarm is generated by any Insertion Word with the binary value a0cdefgh, where the letters a-h represent the eight bits of the binary word. The D4 yellow alarm is not generated by an Insertion Word with a binary value a1cdefgh.

For clear DS1 NPCs, the insertion word option is NOT available and the message is denied if this option is entered. The alarm indication signal is transmitted in the disconnect or idle state.

Since range provisioning commands could take considerable time to complete, the ABT command is allowed with this message. If the ABT command is entered, DACS II quits on execution of the current NPC growth and reports what has been finished.

One output message is printed for each NPC requested and successfully provisioned.

Provisioning commands where the specified NPC range crosses a Unit boundary are denied.

When a provisioning command addressing a range of NPCs is denied for successive NPCs in the range for the same reason, a summary denial message is output, giving the range of NPC numbers denied and the reason for the denial.

When a provisioning command addressing a range of NPCs within a unit crosses a facility terminating module (FTM) boundary, if the FTM is unequipped or provisioned as a CEPT module, then the FTM is skipped as a whole, with a summary denial message, as noted below.

- If the type field is specified, and it is inconsistent with the first FTM specified or the first FTM specified is unequipped, the entire command is denied. Otherwise, the specified type field is applied to the entire NPC range.
- If the type field is omitted, the NPC type defaults to the type of the first FTM, either domestic or CEPT.

Whether or not the type field is specified, if an FTM, beyond the first one addressed, is of a different type, that entire FTM is denied.

The execution of the normal completions, or of denials for a reason other than diagnostic failures, then resumes at the next NPC and continues until the end of the range.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.31352]

```
GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def][,TYPE mnxyz] \
[,OPTS(rr/m[,rr/m][,...])][,IW X'pq[,INCL]][,AIS {INFO|MJ|MN}]!
```

Hierarchical

[I.31352]

```
GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr][,TYPE mnxyz] \
[,OPTS(rr/m[,rr/m][,...])][,IW X'pq[,INCL]][,AIS {INFO|MJ|MN}]!
```

**Completion
Message****1.544 Mbit/s Termination****Nonhierarchical**

[O.31352]

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz IW pq[ INCL] \  
[ AIS {INFO|MJ|MN}] 4 LN MSG:  
                SLIP      BER      ERS      SERS      COFA  
THRESHOLDS mmm  nnn    p  q    rrrrr  sss    ttt  uuu  
OPTIONS     e    f     g  h     i      j      k    l    COMPL
```

Hierarchical

[O.31352]

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz IW pq[ INCL] \  
[ AIS {INFO|MJ|MN}] 4 LN MSG:  
                SLIP      BER      ERS      SERS      COFA  
THRESHOLDS mmm  nnn    p  q    rrrrr  sss    ttt  uuu  
OPTIONS     e    f     g  h     i      j      k    l    COMPL
```

Denial Message**1.544 Mbit/s Termination****Nonhierarchical**

[O.31352.01]

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl[-[t]mno][ mnxyz] \  
[ rr/m][ IW pq[ INCL]][ AIS {INFO|MJ|MN}] COND cc DNY
```

If the output message requires more than 80 characters:

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl[-[t]mno][ mnxyz] \  
2 LN MSG:  
[rr/m ][IW pq [INCL ]][AIS {INFO|MJ|MN} ]COND cc DNY
```

[O.31352.02]

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl[-[t]mno][ mnxyz] \  
[ rr/m][ IW pq[ INCL]][ AIS {INFO|MJ|MN}] EQD DNY
```

Hierarchical

[O.31352.01]

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl[-uvmno][ mnxyz][ rr/m] \  
[ IW pq[ INCL]][ AIS {INFO|MJ|MN}] COND cc DNY
```

If the output message requires more than 80 characters:

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl[-uvmno][ mnxyz] \  
2 LN MSG:  
[rr/m ][IW pq [INCL ]][AIS {INFO|MJ|MN} ]COND cc DNY  
  
[O.31352.02]  
  
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl[-uvmno][ mnxyz][ rr/m] \  
[ IW pq[ INCL]][ AIS {INFO|MJ|MN}] EQD DNY
```

**Explanation of
Parameters**

[s]abc	The 3- or 4-digit nonhierarchical NPC number, denoting the beginning of a range specification
[t]def	The 3- or 4-digit nonhierarchical NPC number, denoting the end of a range specification For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number
uvkqr	Specific Hierarchical NPC number uv Unit number m,k Module number np,q,r NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
TYPE	Type If the NPC type field is omitted, the NPC type is set to the default type. For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters." DE FTU DS1 NPC; default type is DE100 TE DS3U or HDS3U DS1 NPC; default type is TE100 SE HSU DS1 NPC; default type is SE100 xyz Format specification For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
OPTS	Options

1.544 Mbit/s Termination

rr	Facility performance parameter number

- Variable rr specifies the parameter whose alarm threshold is being selected
- m** Facility performance parameter threshold index (0 through 3)
- Variable m is used to select threshold values previously programmed for rr. The default threshold value, the value selected by m=0, for each parameter is shown in the following table under the column heading "Default Threshold Value". Threshold values selected by m=1 through m=3 must exist; that is, must have been programmed prior to being selected. These other thresholds can be set by using the CHG::SETOP (I.38201) command. Thresholds of all unspecified parameters are set to the default value associated with m=0. The options field must not be given without the NPC type field.
- Clear-DS1 FTU NPCs have a limited number of parameters for performance monitoring, 01 through 04 only. Clear-DS1 DS3U or HDS3U or HSU NPCs have only parameters 01 and 02.
- For DE type NPCs, parameters with values rr = 1 through 8 are valid.
- For TE and SE type NPCs, parameters with values rr = 1 through 8 are valid.
- For Clear-DS1 DE type NPCs, parameters with values rr = 1 through 4 are valid.
- For Clear-DS1 TE and SE type NPCs, parameters with values rr = 1 through 2 are valid.

rr	Parameter	Threshold Value Range	Default Threshold Value
01	Slip major	000 to 255	255
02	Slip minor	000 to 255	4
03	Bit Error Rate major	10u-3d* to 10u-6du+d	10u-3d*
04	Bit Error Rate minor	10u-3d* to 10u-6du+d	10u-6d
05	Errored Secondsu+d	00001 to 65535	864

06	Severely Errored Seconds ^u d	001 to 255	225
07	Change of Frame Alignment major	001 to 511	511
08	Change of Frame Alignment minor	001 to 255	17

- * 4 for clear-DS1 NPCs or DS type NPCs
- † 7 on DE or TE type NPCs using T1DM (x = 4) or ESF (x = 2 or 3) framing
- ‡ Only applicable to DE or TE type NPCs using T1DM (x = 4) or ESF (x = 2 or 3) framing

NOTE 1: Major thresholds must be greater than minor thresholds.

NOTE 2: For Bit Error Rates, enter only the power of 10 (DACS assumes its sign is negative). For example, for a BER of 10^{-3} (.001), enter 3.

NOTE 3: Slip major and Slip minor threshold crossing alarms may be disabled by programming threshold values of zero for the respective parameters.

For TG80B circuit packs, the bit error rate parameters 03 and 04 are valid for clear DS1 NPCs with a threshold value of 10^{-4} . In that case the BER is calculated from the BPV rate. In all other cases, clear-DS1 NPCs can only have rr parameter values of 01 and 02.

1.544 Mbit/s Termination



NOTE:

If the queried NPC cannot be accessed for some reason, for example because the Facility Terminating Module is not equipped or the FTMI or Unit Controller is out of service, then the NPC's parameter count fields are printed as a string of dashes to indicate that the counts are not available. The parameter thresholds and options are still correctly output in this case.

In addition, some parameters are not applicable to all NPCs. Certain parameters may or may not be collected based on NPC type, whether the NPC is equipped in a Facility Terminating Unit (DE type NPC) or a DS3 or a HDS3 Unit (TE type NPC) or a HSU (SE type NPC) and whether the NPC carries a Clear or Channelized facility. In the cases where specific parameters do not apply to the queried NPC, the respective parameter count fields, threshold values and threshold options are all displayed as a string of dashes.

IW	Insertion word
pq	Hexadecimal value of the growth insertion word (GIW). Specifies the insertion word in the transmit direction on unassigned channels. An eight-bit code, called the growth insertion word, is transmitted by this NPC on unassigned DS0 channels. This code is specified by the optional keyword IW and its argument pq. This code was previously called the Disconnect Code (DCC), but that name is properly reserved for the cross-connect insertion word, which is transmitted when the disconnect message with the DCC specified is used. Although any 2-digit hexadecimal code may be used, the default GIWs are: 7F Unassigned Channel Code (UAC), the default value for DE/TE/SE type NPCs provisioned with D4 or ESF framing. 18 Unassigned Multiplex Code (UMC), the default value for DE/TE/SE type NPCs provisioned with T1DM framing. This value should only be provisioned with T1DM framing (DE4yz or TE4yz or SE4xz), so the growth command enforces this restriction. For Clear-DS1 NPCs, the insertion word option is NOT available and the message is denied if this option is entered. The alarm indication signal (AIS) is transmitted in the disconnect or idle state.
INCL	Inclusive As a protection to users, this keyword must be added to provision an NPC with D4 framing and an Insertion Word with bit 2 equal to zero. NPCs grown in the D4 format (DE1yz/TE1yz/SE1yz) transmit a DS1 yellow alarm by setting bit 2 to zero in all 24 DS0 channels. If the Insertion Word "pq" is unknowingly provisioned in this manner, the NPC transmits a D4 yellow alarm signal when it is restored. The D4 yellow alarm is generated by any Insertion Word with the binary value a0cdefgh, where the letters a-h define the eight bits of the binary word. The D4 yellow alarm is not generated by an Insertion Word with a binary value a1cdefgh.
AIS	Alarm indication signal
INFO	Information Information message (not an alarm). This is the default option.

MJ	Major
MN	Minor
ss/n	First improper value of "rr/m" for which the message is denied.
mmm	Slip major alarm threshold (0 through 255)
nnn	Slip minor alarm threshold (0 through 255)
e	Slip major alarm threshold selection (0 through 3)
f	Slip minor alarm threshold selection (0 through 3)
p	BER major alarm threshold, (1.0(10 ⁻⁵), 3 [†] through 6*)
q	BER minor alarm threshold, (1.0 ^q , 3 [†] through 6*)
	* 7 on T1DM and Fe framing
	† 4 for clear-DS1 FTU NPC
g	BER major alarm threshold selection (0 through 3)
h	BER minor alarm threshold selection (0 through 3)
rrrrr	ERS threshold (1 through 65535, or ----- if not applicable)
i	ERS threshold selection (0 through 3)
sss	SERS threshold (1 through 255, or --- if not applicable)
j	SERS threshold selection (0 through 3)
ttt	COFA major alarm threshold (1 through 511)
uuu	COFA minor alarm threshold (1 through 255)
k	COFA major alarm threshold selection (0 through 3)
l	COFA minor alarm threshold selection (0 through 3)

**NOTE:**

Major thresholds must be greater than minor thresholds. For clear-DS1 FTU NPC only SLIP and BER parameters are listed. For clear-DS1 DS3U or HDS3U or HSU NPC only SLIP parameters are listed.

cc	Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
01	Subject entity is equipped
10	Unit is not equipped

cc	<i>Explanation</i>
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
20	Option rr/m has not been set up on 2nd database
21	Minor >= major for SLIP opt
22	Minor <= major for BER opt
23	Minor >= major for COFA opt
24	Unit type error
26	NPC type error
29	IW is UMUX (18) but NPC not type DE4yz
2A	DMI combined with T1DM
2B	Maj Min BER threshold is 7, but not in T1DM or Fe mode
34	NPC type option xyz is unassigned, or invalid for feature package
83	NPC type is inconsistent with FTMI type
84	Incompatible types of NPCs on a circuit pack
25	Invalid FPI value
37	Major/Minor BER threshold value is invalid for SLC NPCs
4E	IW option is not allowed for new type of Clear-DS1 NPC
4F	BER must not be less than 4 for Clear DS1
BF	MIU is not equipped
F1	Parameter only valid with PA, PB, or PC type NPCs
FC	ZBTSI option is only valid with the ESF mode
FD	NPC range crosses unit boundary
05	This NPC type does not allow unframed Clear-DS1
1A	The facility parameter not programmable for specified x or z parameter

cc	<i>Explanation</i>
9B	The MXR is not grown
A5	AIS keyword incompatible with NPC type
04	This NPC type does not allow Payload
07	Mismatch between MXR and NPC types
0A	Minor Slip threshold disabled before Major Slip threshold
35	Invalid use of INCL keyword
36	INCL keyword needed when restricted Insertion Word specified
91	Option not programmable for this NPC type
E5	Invalid combination of "x" and "z" values
E7	Invalid combination of "x" and "y" values
30	The MPR is not grown

GROWTH NPC for PA and TH TYPES

Explanation of Command

This command is used to request the provisioning of one or more PA type or TH type network processing circuits (NPCs). (See command I.31362 for PB and PC type NPCs.) PA type NPCs are provisioned in a facility terminating unit (FTU, IFTU, or IFTU2). TH type NPCs are provisioned in a Hybrid DS3 Unit (HDS3U). It is also used to enable the minor bit error rate (MBER) and Signaling Freeze Delay Time Features. For the MBER feature, CTS0 NFW`bit`4 is used as RBER. CTS0 NFW`bit`4 use as REER is not supported.

One output message is printed for each NPC requested and successfully provisioned.

Provisioning commands where the specified NPC range crosses a Unit boundary will be denied.

For TH and SH type NPCs, the NPC numbers which are divisible by four with a remainder of zero are not valid NPCs. However, the range of TH type NPC numbers is still supported with the understanding that there may be gaps in the NPC number range.

When a provisioning command addressing a range of NPCs is denied for successive NPCs in the range for the same reason, a summary denial message will be output, giving the range of NPC numbers denied and the reason for the denial.

If the type field is inconsistent with the first FTM specified or the first FTM specified is unequipped, the entire command is denied. Otherwise, the specified type field is applied to the entire NPC range.

When a provisioning command addressing a range of NPCs within a unit crosses a facility terminating module (FTM) boundary, and if that subsequent FTM is unequipped or provisioned inconsistently with respect to the first FTM, then that FTM will be skipped as a whole, with a summary denial message.

The execution of normal completions, or of denials for reasons other than diagnostic failures, then resumes at the next NPC and continues until the end of the range.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.31363]

```
GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TYPE mnxyz[,OPTS (rr/
<m>[,rr/<m>...])]
[,IW X'pq[r]][,AIS {MI|PMA|DMA|PMC}][,LEV g]!
```

Hierarchical

[I.31363]

```
GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],TYPE mnxyz[,OPTS (rr/
<m>[,rr/<m>...])]
[,IW X'pq[r]][,AIS {MI|PMA|DMA|PMC}][,LEV g]!
```

2.048 Mbit/s Termination

Nonhierarchical

[I.31363]

```
GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TYPE mnxyz[,OPTS (rr/
<m>[,rr/<m>...])]
[,IW X'pq[r]][,AIS {MI|PMA|DMA|PMC}][,LEV g]!
```

Hierarchical

[I.31363]

```
GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr],TYPE mnxyz[,OPTS (rr/
<m>[,rr/<m>...])]
[,IW X'pq[r]][,AIS {MI|PMA|DMA|PMC}][,LEV g]!
```

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.31363]

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz[ IW pqr]
[ AIS {MI|DMA|PMA|PMC}][ LEV g] 4 LN MSG:
DAILY      CRC      FRER      OFS  ES      SES      CSS      CV
THRESHOLDS aaaaaaaa bbbbbbbbbb ccccc ddddd eeeee fffff gggggggggg
OPTIONS    a        b        c        d        e        f        g        EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz[ IW pqr]
[ AIS {MI|DMA|PMA|PMC}][ LEV g] 4 LN MSG:
```

```
DAILY      UAS  UATC MER  FEBE      FES  FSES  FUAS
THRESHOLDS hhhhh iiii jjjjj kkkkkkkk lllll mmmm nnnnn
OPTIONS    h   i   j   k       l   m   n   EOM
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz[ IW pqr]
[ AIS {MI|DMA|PMA|PMC}[ LEV g] 4 LN MSG:
15MIN      CRC      FRER      OFS  ES   SES   CSS   CV
THRESHOLDS _a_a_a_a_a_a _b_b_b_b_b_b _c_c_c _d_d_d _e_e_e
_f_f_f _g_g_g_g_g_g_g
OPTIONS    _a      _b      _c      _d      _e      _f      _g      EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz[ IW pqr]
[ AIS {MI|DMA|PMA|PMC}[ LEV g] 4 LN MSG:
15MIN      UAS  UATC MER  FEBE      FES  FSES  FUAS
THRESHOLDS _h_h_h _i_i _j_j_j _k_k_k_k_k_k _l_l_l _m_m_m
_n_n_n
OPTIONS    _h      _i      _j      _k      _l      _m      _n      EOM
```

```
M hh:mm:ss xy,ww n GRTH NPC [s]jkl TYPE mnxyz TS0 abcdefgh
TS0M abcdefgh COMPL
```

Note that CV, FEBE, FES, FSES and FUAS are not applicable for TH type NPCs.

Hierarchical

[O.31363]

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz[ IW pqr]
[ AIS {MI|DMA|PMA|PMC}[ LEV g] 4 LN MSG:
DAILY      CRC      FRER      OFS  ES   SES   CSS   CV
THRESHOLDS aaaaaaaaa bbbbbbbbbb ccccc ddddd eeeee fffff ggggggggg
OPTIONS    a      b      c      d      e      f      g      EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz[ IW pqr]
[ AIS {MI|DMA|PMA|PMC}[ LEV g] 4 LN MSG:
DAILY      UAS  UATC MER  FEBE      FES  FSES  FUAS
THRESHOLDS hhhhh iiii jjjjj kkkkkkkk lllll mmmm nnnnn
OPTIONS    h   i   j   k       l   m   n   EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz[ IW pqr]
[ AIS {MI|DMA|PMA|PMC}[ LEV g] 4 LN MSG:
15MIN      CRC      FRER      OFS  ES   SES   CSS   CV
THRESHOLDS _a_a_a_a_a_a _b_b_b_b_b_b _c_c_c _d_d_d _e_e_e
_f_f_f _g_g_g_g_g_g_g
OPTIONS    _a      _b      _c      _d      _e      _f      _g      EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz[ IW pqr]
[ AIS {MI|DMA|PMA|PMC}[ LEV g] 4 LN MSG:
15MIN      UAS  UATC MER  FEBE      FES  FSES  FUAS
THRESHOLDS _h_h_h _i_i _j_j_j _k_k_k_k_k_k _l_l_l _m_m_m
_n_n_n
OPTIONS    _h      _i      _j      _k      _l      _m      _n      EOM
```

M hh:mm:ss xy,ww n GRTH NPC uvjkl TYPE mnxyz TS0 abcdefgh
TS0M abcdefgh COMPL

Note that CV, FEBE, FES, FSES and FUAS are not applicable for TH type NPCs.

2.048 Mbit/s Termination

Nonhierarchical

[O.31363]

M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz[IW pqr]
[AIS {MI|DMA|PMA|PMC}][LEV g] 4 LN MSG:
DAILY CRC FRER OFS ES SES CSS CV
THRESHOLDS aaaaaaaa bbbbbbbbbb ccccc ddddd eeeee fffff gggggggggg
OPTIONS a b c d e f g EOM

M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz[IW pqr]
[AIS {MI|DMA|PMA|PMC}][LEV g] 4 LN MSG:
DAILY UAS UATC MER FEBE FES FSES FUAS
THRESHOLDS hhhhh iiii jjjjj kkkkkkkk lllll mmmm nnnnn
OPTIONS h i j k l m n EOM
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz[IW pqr]
[AIS {MI|DMA|PMA|PMC|PMC}][LEV g] 4 LN MSG:
15MIN CRC FRER OFS ES SES CSS CV
THRESHOLDS _a_a_a_a_a_a _b_b_b_b_b_b _c_c_c _d_d_d _e_e_e
_f_f_f _g_g_g_g_g_g_g
OPTIONS _a _b _c _d _e _f _g EOM

M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE mnxyz[IW pqr]
[AIS {MI|DMA|PMA|PMC}][LEV g] 4 LN MSG:
15MIN UAS UATC MER FEBE FES FSES FUAS
THRESHOLDS _h_h_h _i_i _j_j_j _k_k_k_k_k_k _l_l_l _m_m_m
_n_n_n
OPTIONS _h _i _j _k _l _m _n EOM

M hh:mm:ss xy,ww n GRTH NPC [s]jkl TYPE mnxyz TS0 abcdefgh
TS0M abcdefgh COMPL

Note that CV, FEBE, FES, FSES and FUAS are not applicable for TH type NPCs.

Hierarchical

[O.31363]

M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz[IW pqr]
[AIS {MI|DMA|PMA|PMC}][LEV g] 4 LN MSG:
DAILY CRC FRER OFS ES SES CSS CV
THRESHOLDS aaaaaaaa bbbbbbbbbb ccccc ddddd eeeee fffff gggggggggg
OPTIONS a b c d e f g EOM

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz[ IW pqr]
[ AIS {MI|DMA|PMA|PMC}}[ LEV g] 4 LN MSG:
DAILY      UAS  UATC MER  FEBE  FES  FSES  FUAS
THRESHOLDS hhhhh iiii jjjjj kkkkkkkk lllll mmmmm nnnnn
OPTIONS     h    i    j    k    l    m    n    EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz[ IW pqr]
[ AIS {MI|DMA|PMA|PMC}}[ LEV g] 4 LN MSG:
15MIN      CRC  FRER  OFS  ES  SES  CSS  CV
THRESHOLDS _a_a_a_a_a_a _b_b_b_b_b_b _c_c_c _d_d_d _e_e_e
_f_f_f _g_g_g_g_g_g_g
OPTIONS     _a      _b      _c      _d      _e      _f      _g      EOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE mnxyz[ IW pqr]
[ AIS {MI|DMA|PMA|PMC}}[ LEV g] 4 LN MSG:
15MIN      UAS  UATC MER  FEBE  FES  FSES  FUAS
THRESHOLDS _h_h_h _i_i _j_j_j _k_k_k_k_k_k _l_l_l _m_m_m
_n_n_n
OPTIONS     _h      _i      _j      _k      _l      _m      _n      EOM
```

```
M hh:mm:ss xy,ww n GRTH NPC uvjkl TYPE mnxyz TS0 abcdefgh
TS0M abcdefgh COMPL
```

Note that CV, FEBE, FES, FSES and FUAS are not applicable for TH type NPCs.

Denial Message

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Nonhierarchical

[O.31363.01]

```
M hh:mm:ss xy,ww n GRTH NPC [s]jkl[-[t]mno] TYPE mnxyz
[ ss/n][ IW pq[r]][ AIS {MI|PMA|PMC|DMA}}[ LEV g] COND cc DNY
```

If the output message requires more than 80 characters:

```
M hh:mm:ss xy,ww n GRTH NPC [s]jkl[-[t]mno] TYPE mnxyz 2 LN MSG:
[ ss/n][ IW pq[r]][ AIS {MI|PMA|PMC|DMA}}[ LEV g] COND cc DNY
```

[O.31363.02]

```
M hh:mm:ss xy,ww n GRTH NPC [s]jkl[-[t]mno] TYPE mnxyz EQD DNY
```

Hierarchical

[O.31363.01]

```
M hh:mm:ss xy,ww n GRTH NPC uvjkl[-uvmno] TYPE mnxyz[ ss/n]
[ IW pq[r]][ AIS {MI|PMA|PMC|DMA}}[ LEV g] COND cc DNY
```

If the output message requires more than 80 characters:

```
M hh:mm:ss xy,ww n GRTH NPC uvjkl[-uvmno] TYPE mnxyz 2 LN MSG:
[ ss/n][ IW pq[r]][ AIS {MI|PMA|PMC|DMA}][ LEV g] COND cc DNY
```

[O.31363.02]

```
M hh:mm:ss xy,ww n GRTH NPC uvjkl[-uvmno] TYPE mnxyz EQD DNY
```

2.048 Mbit/s Termination

Nonhierarchical

[O.31363.01]

```
M hh:mm:ss xy,ww n GRTH NPC [s]jkl[-[t]mno] TYPE mnxyz
[ ss/n][ IW pq[r]][ AIS {MI|PMA|PMC|DMA}][ LEV g] COND cc DNY
```

If the output message requires more than 80 characters:

```
M hh:mm:ss xy,ww n GRTH NPC [s]jkl[-[t]mno] TYPE mnxyz 2 LN MSG:
[ ss/n][ IW pq[r]][ AIS {MI|PMA|PMC|DMA}][ LEV g] COND cc DNY
```

[O.31363.02]

```
M hh:mm:ss xy,ww n GRTH NPC [s]jkl[-[t]mno] TYPE mnxyz EQD DNY
```

Hierarchical

[O.31363.01]

```
M hh:mm:ss xy,ww n GRTH NPC uvjkl[-uvmno] TYPE mnxyz[ ss/n]
[ IW pq[r]][ AIS {MI|PMA|PMC|DMA}][ LEV g] COND cc DNY
```

If the output message requires more than 80 characters:

```
M hh:mm:ss xy,ww n GRTH NPC uvjkl[-uvmno] TYPE mnxyz 2 LN MSG:
[ ss/n][ IW pq[r]][ AIS {MI|PMA|PMC|DMA}][ LEV g] COND cc DNY
```

[O.31363.02]

```
M hh:mm:ss xy,ww n GRTH NPC uvjkl[-uvmno] TYPE mnxyz EQD DNY
```

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number, the first NPC of a range specification.
[t]def	The 3- or 4-digit nonhierarchical NPC number, the last NPC of a range specification.

	For a listing of the non-hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number, the first NPC of a range specification.
uvkqr	Hierarchical NPC number, the last NPC of a range specification.
uv	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
TYPE	Type
	For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
mn	NPC Type
PA	2Mbit/s Interface NPC
TH	2Mbit/s HDS3U NPC
SH	2Mbit/s HSU NPC
	For PA type NPCs the impedance will automatically be set according to the configuration of the FTMI. If the NPC type field is omitted, the NPC type will default to PB100 or PC100 depending on how the FTMI is grown (75- or 120-ohm NPCs) (see command 31362).
	The argument xyz is to be interpreted as a 3-digit hexadecimal number. The 3 digits in xyz indicate the selection of provisioning options for the NPC. A detailed discussion of these provisioning options for both the PA, SH and TH type NPCs is given below.
	For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

Additionally:

- If the NPC is not located in a sync NPC location, the value of "x" must be in the range 0 - 3 or 8 - B. Otherwise the command will be denied.
- For telephone channel numbering, channels 16 to 30 occupy time slots 17 to 31.
- For time slot channel numbering, channels 16 to 30 occupy time slots 16 to 30.
- If the value of "y" is 0, 2, 4 or 6 (i.e., a CAS NPC) and the value of "z" is C (i.e. Transmic 1G), the command will be denied.

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

OPTS

Options

rr

Facility performance parameter number

Variable rr specifies the parameter whose alarm threshold is being selected.

<m>

Facility performance parameter threshold index (0 through X'10')

Variable <m> is used to select the threshold value and alarm type previously programmed for parameter rr. There are four possible alarm thresholds and 4 different alarm levels. A given value of <m> selects one combination of threshold value and alarm level. The combinations of these two result in 16 possible values of <m>. There is a 17th <m> value which is used to disable the alarm threshold and the alarm. The values of <m> that produce the default values of the thresholds and alarms are shown in the table below under the column heading "Threshold Value". Threshold and alarm combinations selected by m = 3 through b or d-X'10 must exist, that is, must have been programmed, prior to being selected. The thresholds are programmed by using the ED-OPT-T1 command. Thresholds of all unspecified parameters will be set to the default value associated with m=0. Setting m = c disables thresholding for a given parameter.

For PA type NPCs:

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
11	CRC Block Errors	DAILY	1 - 79056000	176947
12	Framing Errors	DAILY	1 - 345600000	176947
13	Out of Frame Seconds	DAILY	1 - 86400	4
14	Errored Seconds	DAILY	1 - 86400	4320
15	Severely Errored Seconds	DAILY	1 - 86400	90
16	Controlled Slip Seconds	DAILY	1 - 86400	4
17	Coding Violations	DAILY	1 - 176947200	176947

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
18	Unavailable Seconds	DAILY	1 - 86400	90
19	Unavailable Time Count	DAILY	1 - 4320	9
20	Multiframe Errors	DAILY	1 - 86400	4095
21	Far End Block Errors	DAILY	1 - 79056000	176947
22	Far End Errored Seconds	DAILY	1 - 86400	4320
23	Far End Severely Errored Seconds	DAILY	1 - 86400	90
24	Far End Unavailable Seconds	DAILY	1 - 86400	90
81	CRC Block Errors	15MIN	1 - 823500	18432
82	Framing Errors	15MIN	1 - 3600000	18432
83	Out of Frame Seconds	15MIN	1 - 900	4
84	Errored Seconds	15MIN	1 - 900	300
85	Severely Errored Seconds	15MIN	1 - 900	30
86	Controlled Slip Seconds	15MIN	1 - 900	1
87	Coding Violations	15MIN	1 - 1843200	18432
88	Unavailable Seconds	15MIN	1 - 900	30
89	Unavailable Time Count	15MIN	1 - 45	3
90	Multiframe Errors	15MIN	1 - 900	255
91	Far End Block Errors	15MIN	1 - 823500	18432

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
92	Far End Errored Seconds	15MIN	1 - 900	300
93	Far End Severely Errored Seconds	15MIN	1 - 900	30
94	Far End Unavailable Seconds	15MIN	1 - 900	30

For TH type NPCs:

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
11	CRC Block Errors	DAILY	1 - 79056000	176947
12	Framing Errors	DAILY	1 - 345600000	176947
13	Out of Frame Seconds	DAILY	1 - 86400	4
14	Errored Seconds	DAILY	1 - 86400	4320
15	Severely Errored Seconds	DAILY	1 - 86400	90
16	Controlled Slip Seconds	DAILY	1 - 86400	4
18	Unavailable Seconds	DAILY	1 - 86400	90
19	Unavailable Time Count	DAILY	1 - 4320	9
20	Multiframe Errors	DAILY	1 - 86400	4095
81	CRC Block Errors	15MIN	1 - 823500	18432
82	Framing Errors	15MIN	1 - 3600000	18432
83	Out of Frame Seconds	15MIN	1 - 900	4
84	Errored Seconds	15MIN	1 - 900	300
85	Severely Errored Seconds	15MIN	1 - 900	30
86	Controlled Slip Seconds	15MIN	1 - 900	1

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
88	Unavailable Seconds	15MIN	1 - 900	30
89	Unavailable Time Count	15MIN	1 - 45	3
90	Multiframe Errors	15MIN	1 - 900	255

For SH type NPCs:

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
11	CRC Block Errors	DAILY	1 - 79056000	176947
12	Framing Errors	DAILY	1 - 345600000	176947
13	Out of Frame Seconds	DAILY	1 - 86400	4
14	Errored Seconds	DAILY	1 - 86400	4320
15	Severely Errored Seconds	DAILY	1 - 86400	90
16	Controlled Slip Seconds	DAILY	1 - 86400	4
17	Coding Violations	DAILY	1 - 176947200	176947
18	Unavailable Seconds	DAILY	1 - 86400	90
19	Unavailable Time Count	DAILY	1 - 4320	9
20	Multiframe Errors	DAILY	1 - 86400	4095
21	Far End Block Errors	DAILY	1 - 79056000	176947
22	Far End Errored Seconds	DAILY	1 - 86400	4320
23	Far End Severely Errored Seconds	DAILY	1 - 86400	90
24	Far End Unavailable Seconds	DAILY	1 - 86400	90
81	CRC Block Errors	15MIN	1 - 823500	18432
82	Framing Errors	15MIN	1 - 3600000	18432

rr	Parameter	Interval	Threshold Value Range	Default Threshold Value
83	Out of Frame Seconds	15MIN	1 - 900	4
84	Errored Seconds	15MIN	1 - 900	300
85	Severely Errored Seconds	15MIN	1 - 900	30
86	Controlled Slip Seconds	15MIN	1 - 900	1
87	Coding Violations	15MIN	1 - 1843200	18432
88	Unavailable Seconds	15MIN	1 - 900	30
89	Unavailable Time Count	15MIN	1 - 45	3
90	Multiframe Errors	15MIN	1 - 900	255
91	Far End Block Errors	15MIN	1 - 823500	18432
92	Far End Errored Seconds	15MIN	1 - 900	300
93	Far End Severely Errored Seconds	15MIN	1 - 900	30
94	Far End Unavailable Seconds	15MIN	1 - 900	30

This table contains m values used to select a performance monitoring threshold level and alarm type for international applications. Variable m is used in the rr/m field of the CRTE, ED, and CHG change commands.

For PA, PB, and PC type NPCs:

In the following table, these definitions apply:

MI	Maintenance Information
DMA	Deferred Maintenance Action Minor Alarm
PMA Major	Prompt Maintenance Action Major Alarm

PMA Critical Prompt Maintenance Action Critical Alarm

<m>	Threshold Value	Alarm Type
0	Default	MI (Maintenance Information)
1	Default	DMA (Deferred Maintenance Minor Alarm)
2	Default	PMA (Prompt Maintenance Major Alarm)
3	Set 1	MI
4	Set 1	DMA
5	Set 1	PMA Major
6	Set 2	MI
7	Set 2	DMA
8	Set 2	PMA Major
9	Set 3	MI
a	Set 3	DMA
b	Set 3	PMA Major
c	Threshold disabled	no alarm
d	Default	PMA Critical
e	Set 1	PMA Critical
f	Set 2	PMA Critical
10	Set 3	PMA Critical

NOTE 1: m = 0 is the default.

NOTE 2: Threshold values for Set 1, Set 2, and Set 3 must be set (programmed) by using the command mentioned in the explanation of m above before variable m can be used to select threshold levels and alarm types other than the defaults.

IW Insertion Word

pq[r] Hexadecimal value of the Growth Insertion Word (GIW)

Used in the transmit direction on unassigned channels for CEPT NPCs.

pq transmitted data information

r transmitted signaling information

A special code, called the Growth Insertion Word (GIW), is transmitted by this NPC on unassigned channels. This code is specified by the optional keyword IW and its argument pq.

This code was previously called the Disconnect Code (DCC), but that name is properly reserved for the TCON Insertion Word, which is transmitted when the "TDIS::FROM,TO,...,DCC" command is used.

For PA and SH type NPCs, the IW argument is X'pq[r], and the default GIW code is X'D5D (Binary: 11010101 1101). The "pq" hex digits represent the CEPT insertion word for cross-connected time slots and the "r" hex digit represents the CEPT signaling options. The "r" digit is needed to accommodate the cross-connected CEPT time slot and its associated portion of TS16 used for signaling when provisioned for CAS.

Although the "r" digit is accepted on input, for NSA NPCs, it has no significance.

For clear E1 NPCs (y value "C" or "D") the insertion word option is **not** available and the message will be denied if this option is entered. The alarm indication signal (AIS) is transmitted in the disconnected or idle state for clear E1 NPCs.

AIS

Alarm indication signal

AIS is not detected by unframed clear (unchannelized) 2Mbit/s mnxDz type NPCs. Therefore, specifying AIS with one of the alarm level types MI, DMA, or PMA, is unnecessary. However, the command will not be denied if AIS is specified with an alarm level for unframed clear mnxDz NPCs. AIS with its alarm level will simply never be reported for unframed clear mnxDz NPCs.

MI

Maintenance information

This is the default option.

PMA

Prompt maintenance major alarm

PMC

Prompt maintenace critical alarm

DMA

Deferred maintenance minor alarm

LEV

Intervention Level

g

Intervention Level Setting (1-6)

Intervention Level is a feature that changes the Alarm Severity of an alarm based on the alarm severity and the Intervention Level setting.

[s]jkl

Nonhierarchical NPC number ([s]abc ≤ [s]jkl ≤ [t]def)

[t]mno Nonhierarchical NPC number ($[s]jkl \leq [t]mno \leq [t]def$)
uvjkl Hierarchical NPC number ($uvmnp \leq uvjkl \leq uvkqr$)
uvmno Hierarchical NPC number ($uvjkl \leq uvmno \leq uvkqr$)

 **NOTE:**
uvjkl and uvkqr are in the **same** unit.

ss/n First improper value of "rr/<m>" for which the message is denied.
For each NPC listed, this message prints out values of the states, counts, thresholds and options of the following facility performance parameters and the spare international and national bits in time slot 0 for CEPT DPCs.

parameter	explanation
CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
CV	Coding Violations
UAS	Unavailable Seconds
UATC	Unavailable Time Count

parameter	explanation
MER	Multiframe Errors
FEBE	Far End Block Errors
FES	Far End Errored Seconds
FSES	Far End Severely Errored Seconds
FUAS	Far End Unavailable Seconds

Note that parameters CV, FEBE, FES, FSES and FUAS do not apply to TH type NPCs.

Two sets of thresholds are kept for each parameter:

One for DAILY intervals and one for 15 MINUTE intervals.

2.048 Mbit/s Termination

For PA type NPCs:

Depending on which interface functions are enabled by the provisioning values of xyz, some parameters may not be applicable. In this case the threshold value, the parameter count (if present in the message) and the selection value will appear as dashes (-). In the table below N/A indicates that a parameter is not applicable for the given value of x or y.

Also, if the selection value m=c has been chosen for a parameter, the threshold value and the parameter count (if present in the message) will appear as dashes.

aaaaaaaa	Daily CRC block error threshold value.
a	Daily CRC block error threshold selection, (0 through 3)
bbbbbbbb	Daily framing error threshold value.
b	Daily framing error threshold selection, (0 through 3)

Parameter	CRC-4 Mode Disabled (x=A,B,E,F)	Far-End PM Disabled (x=0,2,4,6,A,B ,E,F)	CAS Disabled (y=8,9,C,D)	Unframed Clear 2Mbit/s (y=D)
CRC	N/A			N/A
FRER				N/A
OFS				N/A
ES				N/A
SES				N/A
CSS				
CV				
UAS				N/A
UATC				N/A
MER			N/A	N/A
FEBE		N/A		N/A
FES		N/A		N/A
FSES		N/A		N/A
FUAS		N/A		N/A
cccc	Daily out of frame seconds threshold value.			
c	Daily out of frame seconds threshold selection, (0 through 3)			
dddd	Daily errored second threshold value.			
d	Daily errored second threshold selection, (0 through 3)			
eeee	Daily severely errored second threshold value.			
e	Daily severely errored second threshold selection, (0 through 3)			
ffff	Daily controlled slip second threshold value.			
f	Daily controlled slip second threshold selection, (0 through 3)			
ggggggggg	Daily coding violation threshold value.			
g	Daily coding violation threshold selection, (0 through 3)			
hhhhh	Daily unavailable second threshold value.			
h	Daily unavailable second threshold selection, (0 through 3)			
iiii	Daily unavailable time count threshold value.			
i	Daily unavailable time count threshold selection, (0 through 3)			

jjjjj	Daily multiframe alignment error threshold value.
j	Daily multiframe alignment error threshold selection, (0 through 3)
kkkkkkkk	Daily far-end block error threshold value.
k	Daily far-end path block error selection, (0 through 3)
lllll	Daily far-end errored second threshold value.
l	Daily far-end path second threshold selection, (0 through 3)
mmmmm	Daily far-end severely errored second threshold value.
m	Daily far-end severely errored second threshold selection, (0 through 3)
nnnnn	Daily far-end unavailable second threshold value.
n	Daily far-end unavailable second threshold selection, (0 through 3)
_a_a_a_a_a_a	15-Minute CRC block error threshold value.
_a	15-Minute CRC block error threshold selection, (0 through 3)
_b_b_b_b_b_b_b	15-Minute framing error threshold value.
_b	15-Minute framing error threshold selection, (0 through 3)
_c_c_c	15-Minute out of frame seconds threshold value.
_c	15-Minute out of frame seconds threshold selection, (0 through 3)
_d_d_d	15-Minute errored second threshold value.
_d	15-Minute errored second threshold selection, (0 through 3)
_e_e_e	15-Minute severely errored second threshold value.
_e	15-Minute severely errored second threshold selection, (0 through 3)
_f_f_f	15-Minute controlled slip second threshold value.
_f	15-Minute controlled slip second threshold selection, (0 through 3)
_g_g_g_g_g_g_g	15-Minute coding violation threshold value.
_g	15-Minute coding violation threshold selection, (0 through 3)
_h_h_h	15-Minute unavailable second threshold value.
_h	15-Minute unavailable second threshold selection, (0 through 3)
_i_i	15-Minute unavailable time count threshold value.

<u>i</u>	15-Minute unavailable time count threshold selection, (0 through 3)
<u>j_j_j</u>	15-Minute multiframe alignment error threshold value.
<u>j</u>	15-Minute multiframe alignment error threshold selection, (0 through 3)
<u>k_k_k_k_k_k</u>	15-Minute far-end block error threshold value.
<u>k</u>	15-Minute far-end path block error selection, (0 through 3)
<u>ll_l</u>	15-Minute far-end errored second threshold value.
<u>l</u>	15-Minute far-end path second threshold selection, (0 through 3)
<u>m_m_m</u>	15-Minute far-end severely errored second threshold value.
<u>m</u>	15-Minute far-end severely errored second threshold selection, (0 through 3)
<u>n_n_n</u>	15-Minute far-end unavailable second threshold value.
<u>n</u>	15-Minute far-end unavailable second threshold selection, (0 through 3)

The options {a,b,c,d,e,f,g,h,i,j,k,l,m,n} and {a,b,c,d,e,f,g,h,i,j,k,l,m,n} are **m values** as previously shown and specify the threshold sets of the performance parameters listed.

The **TS0 abcdefgh** variables represent international and national bits in time slot`0, as defined by:

ab	Spare international bits S_i If the NPC is not provisioned for the CRC multiframe format, bits a and b shall represent the S_i bits in the Frame Word (FW) and the Non Frame Word (NFW), respectively. If the NPC is provisioned for the CRC multiframe format, a and b shall represent the S_i bits in frames 13 and 15 of the CRC multiframe in the NFW, respectively.
c	Remote Alarm Indication must be - (hyphen).
de	Two spare national bits S_4 through S_5 in the NFW.
f	RPSFI (Remote Power Supply Failure Indicator) bit in the NFW if provisioned for RPSFI otherwise spare national bit.
gh	Two spare national bits S_7 through S_8 in the NFW

These variables are set to their default values "11011111" by this command, except for the Transmic`1G option, where the default is "11000000."

The variables may later be changed by setting the abcdefgh parameters in the TS0 field of the ED-PRMTR-EQPT::NPC or CHG::NPC (38321) command. Each of the variables may then be set to "0", "1", "P" or "V." "P" indicates that the incoming bit will be cross-connected unchanged; "V" indicates that the bit received will be inverted.

When TS0 is cross-connected, the TS0 bits will be either passed, inverted or set to "0" or "1" as indicated by the "abcdefgh" variable values. Note that bits which are used for alarms (bit 3 always; bits 4 and 5 if provisioned by the **mnxyz** values) may not be set to "P."

This is also true for NPCs assigned as test port NPCs.

The **TS0M abcdefgh** field allows monitoring of state changes in the received spare international bits, where the "abcdefgh" variables refer to the same TS0 bits as defined above for the TS0 "abcdefgh" variables.

The TS0M variables are specified for monitoring in the command as:

The default values for TS0M variables are **abcdefgh=00000000**, unless the **xyz** parameters set them differently, i.e., for Transmic`1G the abcdefgh=00111111. The TS0M variables may later be provisioned by the CHG::TS0M`abcdefgh (I.38323) command.

cc

Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
20	Option rr/m has not been set up on 2nd database
24	Unit type error
26	NPC type error

cc	<i>Explanation</i>
34	NPC type option xyz is unassigned, or invalid for feature package
83	NPC type is inconsistent with FTMI type
84	Incompatible types of NPCs on a circuit pack
31	NPC not provisioned for NSA
32	Bit 3 provisioned for use as RAI3
33	Bit 4 provisioned for use as RAIS
39	NPC provisioned as a SYNC source cannot be provisioned for RPSFI
3A	Bit 4 provisioned for use as RBER
3B	Bit 5 provisioned for use as SFI
3C	Bits 3 through 8 are provisioned for Transmic 1G
3D	Alarm bits cannot be passed through or inverted
B0	Combination of bit g (b7) and h (b8) is invalid
BB	Timeslot channel numbering not allowed with CAS
CD	NPC not designated as sync timing source
F1	Parameter only valid with PA, PB, or PC type NPCs
F2	Invalid NPC number specified
FD	NPC range crosses unit boundary
8B	Must provision for SFI if also provisioning for RPSFI
8C	Must provision for CAS if also provisioning for RPSFI
A3	Transmic 1G NPC designated as SYNC source invalid
A4	Firmware timing invalid for Transmic 1G NPC
A5	AIS keyword incompatible with NPC type
AB	LEV keyword incompatible with NPC type
AC	LEV keyword not allowed with Intervention Level Feature OFF

cc	<i>Explanation</i>
04	This NPC type does not allow Payload
7E	Framed/Unframed clear 2Mbit/s NPC invalid for Automatic CRC-4
7F	Unframed clear 2Mbit/s NPC invalid for TS0 processing
80	Framed/Unframed clear 2Mbit/s NPC invalid for Transmic 1G, 2G
81	Framed/Unframed clear 2Mbit/s NPC invalid for Firmware Timing
82	Unframed clear 2Mbit/s NPC invalid for Bit 4 used as RA IS/RBER
85	IW not allowed to be specified in Clear 2Mbit/s
91	Option not programmable for this NPC type

GROWTH NPC for PB and PC TYPES

Explanation of Command



NOTE:

This command applies to 2.048 Mbit/s Termination only.

This command equips one or more primary block or primary block coaxial network processing circuits in a facility terminating unit within a CEPT or Gateway frame. The system uses type PB with 120-ohm and type PC with 75-ohm facility terminating module interfaces.

This command also enables the minor bit error rate (MBER) and signaling freeze delay time features.

When a range of NPCs is being equipped, the execution of this command may be aborted by entering the ABT command.

Although the NPC type field is optional for PB and PC types, it is required if the options field is specified.

One output message is printed for each NPC requested and successfully provisioned.

Provisioning commands where the specified NPC range crosses a Unit boundary is denied.

When a provisioning command addressing a range of NPCs is denied for successive NPCs in the range for the same reason, a summary denial message is output, giving the range of NPC numbers denied and the reason for the denial.

When a provisioning command addressing a range of NPCs within a unit crosses a facility terminating module (FTM) boundary, if the FTM is unequipped or provisioned as a CEPT module, then the FTM is skipped as a whole, with a summary denial message, as follows.

- If the type field is specified, and it is inconsistent with the first FTM specified or the first FTM specified is unequipped, the entire command is denied. Otherwise, the specified type field is applied to the entire NPC range.
- If the type field is omitted, the NPC type defaults to the type of the first FTM, either domestic or CEPT.

Whether or not the type field is specified, if an FTM, beyond the first one addressed, is of a different type, that entire FTM is denied.

The execution of the normal completions, or of denials for a reason other than diagnostic failures, then resumes at the next NPC and continues until the end of the range.

A summary denial message is not issued for denial of range NPC RESTORE commands if the reason is an NPC diagnostic failure. In this case, one message is output for each NPC in the range.

Command**Nonhierarchical**

[I.31362]

```
GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def] \
[,TYPE mnxyz][,OPTS (rr/<m>[,rr/<m>...])]\
[,IW X'pq[r]][,AIS {MI|PMA|PMC|DMA}][,LEV g]!
```

Hierarchical

[I.31362]

```
GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr] \
[,TYPE mnxyz][,OPTS (rr/<m>[,rr/<m>...])]\
[,IW X'pq[r]][,AIS {MI|PMA|PMC|DMA}][,LEV g]!
```

**Completion
Message****Nonhierarchical**

[O.31362]

```
M hh:mm:ss xy,ww n GRTH NPC [s]jkl TYPE mnxyz IW pqr \
[ AIS {MI|PMA|PMC|DMA}][ LEV g] 4 LN MSG:
24 HOUR                DM          SERS          ERS          US          \
    SLIP
THRESHOLDS             nnnnnn      ppppp      qqqqq      rrrrr      \
    SSSS
OPTIONS                e          f          g          h          \
    i    EOM
```

```
M hh:mm:ss xy,ww n GRTH NPC [s]jkl TYPE mnxyz IW pqr \
[ AIS {MI|PMA|PMC|DMA}][,LEV g] 4 LN MSG:
SHORT INTERVAL         DM          SERS          ERS          US          \
    SLIP
THRESHOLDS             _n_n_n_n_n    _p_p_p_p_p    _q_q_q_q_q    \
_r_r_r_r_r
```

```
  _S_S_S_S_S
OPTIONS      _e      _f      _g      _h      \
  _i      EOM
```

```
M hh:mm:ss xy,ww n GRTH NPC [s]jkl TYPE mnxyz TS0 abcdefgh \
TS0M abcdefgh COMPL
```

Hierarchical

[O.31362]

```
M hh:mm:ss xy,ww n GRTH NPC uvjkl TYPE mnxyz IW pqr \
[ AIS {MI|PMA|PMC|DMA}][ LEV g] 4 LN MSG:
24 HOUR          DM          SERS          ERS          US          SLIP
THRESHOLDS      nnnnn      ppppp      qqqqq      rrrrr      sssss
OPTIONS          e          f          g          h          i      EOM
```

```
M hh:mm:ss xy,ww n GRTH NPC uvjkl TYPE mnxyz IW pqr \
[ AIS {MI|PMA|PMC|DMA}][ LEV g] 4 LN MSG:
SHORT INTERVAL   DM          SERS          ERS          US          SLIP
THRESHOLDS      _n_n_n_n_n  _p_p_p_p_p  _q_q_q_q_q
_r_r_r_r_r
  _S_S_S_S_S
OPTIONS          _e          _f          _g          _h          _i
EOM
```

```
M hh:mm:ss xy,ww n GRTH NPC uvjkl TYPE mnxyz TS0 abcdefgh
TS0M abcdefgh COMPL
```

Denial Message

Nonhierarchical

[O.31362.01]

```
M hh:mm:ss xy,ww n GRTH NPC [s]jkl[-[t]mno] TYPE mnxyz \
[ ss/n][ IW pq[r]][ AIS {MI|PMA|PMC|DMA}][LEV g] COND cc DNY
```

If the output message requires more than 80 characters:

```
M hh:mm:ss xy,ww n GRTH NPC [s]jkl[-[t]mno] TYPE mnxyz 2 LN MSG:
[ ss/n][ IW pq[r]][ AIS {MI|PMA|PMC|DMA}][ LEV g] COND cc DNY
```

[O.31362.02]

```
M hh:mm:ss xy,ww n GRTH NPC [s]jkl[-[t]mno] TYPE mnxyz EQD DNY
```

Hierarchical

[O.31362.01]

```
M hh:mm:ss xy,ww n GRTH NPC uvjkl[-uvmno] TYPE mnxyz \  
[ ss/n][ IW pq[r]][ AIS {MI|PMA|PMC|DMA}][ LEV g] COND cc DNY
```

If the output message requires more than 80 characters:

```
M hh:mm:ss xy,ww n GRTH NPC uvjkl[-uvmno] TYPE mnxyz 2 LN MSG:  
[ ss/n][ IW pq[r]][ AIS {MI|PMA|PMC|DMA}][ LEV g] COND cc DNY
```

[O.31362.02]

```
M hh:mm:ss xy,ww n GRTH NPC uvjkl[-uvmno] TYPE mnxyz EQD DNY
```

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number, the first NPC of a range specification.
[t]def	The 3- or 4-digit nonhierarchical NPC number, the last NPC of a range specification.
	For a listing of the non-hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number, the first NPC of a range specification.
uvkqr	Hierarchical NPC number, the last NPC of a range specification.
uv	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
TYPE	Type
	For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
mn	NPC Type
PB	CEPT NPC (120-Ohm twisted pair)
PC	CEPT NPC (75-Ohm coaxial)
	If the NPC TYPE field is omitted, the NPC type defaults to PB100 or PC100 depending on how the FTMI is provisioned (75- or 120-ohm NPCs).

The argument xyz is to be interpreted as a 3-digit hexadecimal number. The 12 bits in xyz, represented as abcd efgh jklm, indicate the selection of provisioning options for the NPC.

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

Additionally:

- If the NPC is not located in a sync NPC location, bit b set to 1 will be denied.
- For telephone channel numbering, channels 16 to 30 occupy time slots 17 to 31.
- For time slot channel numbering, channels 16 to 30 occupy time slots 16 to 30.
- For NSA NPCs (bit d = 0), bits f and g are don't cares: any values are accepted.
- If bit d is set to 1 (that is, a CAS NPC) and jkl is 110 (that is, Transmic 1G), the command will be denied.
- If bit d is set to 1 (that is, a CAS NPC) and bit e is 1 for time slot channel numbering, the command will be denied.

OPTS	Options
rr	Facility performance parameter number Variable rr specifies the parameter whose alarm threshold is being selected.
<m>	Facility performance parameter threshold index (0 through X'10') Variable <m> is used to select threshold values previously programmed for rr. The default threshold value for each parameter is shown in the following table under the column heading Default Threshold Value. This is the value selected by m = 0, 1, 2 or d in the table of <m> values following the parameter table. A given value of m selects both the performance monitoring threshold level and the alarm type associated with it as shown in that table. Threshold values selected by values of m other than the default must exist, that is, must have been programmed, prior to being selected. These other thresholds can be set by using the CHG,SETOP,TYPE,ALL,NPCOP command. Thresholds of all unspecified parameters are set to the default value associated with m=0. Although the NPC type field is optional for PB and PC types, the options field must not be given without the NPC type field.

For PB and PC type NPCs:

rr	Parameter	Threshold Value Range	Default Threshold Value
31	Degraded Minutes, 1 hour	1-60	60
32	Degraded Minutes, 24 hours	1-1440	1440
33	Severely Errored Seconds, 15 mins	1-900	900
34	Severely Errored Seconds, 24 hours	1-65535	65535
35	Errored Seconds, 15 minutes	1-900	900
36	Errored Seconds, 24 hours	1-65535	65535
37	Unavailable Seconds, 15 minutes	1-900	900
38	Unavailable Seconds, 24 hours	1-65535	65535
39	Slips, 15 minutes	1-900	900
40	Slips, 24 hours	1-65535	65535

⇒ NOTE:
24-hour thresholds must be greater than their respective 15-minute or 1-hour threshold.

This table contains m values used to select a performance monitoring threshold level and alarm type for international applications. Variable m is used in the rr/m field of the CRTE, ED, and CHG change commands.

For PA, PB, and PC type NPCs:

In the following table, these definitions apply:

MI Maintenance Information
DMA Deferred Maintenance Action Minor Alarm
PMA Major Prompt Maintenance Action Major Alarm
PMA Critical Prompt Maintenance Action Critical Alarm

<m>	Threshold Value	Alarm Type
0	Default	MI (Maintenance Information)

<m>	Threshold Value	Alarm Type
1	Default	DMA (Deferred Maintenance Minor Alarm)
2	Default	PMA (Prompt Maintenance Major Alarm)
3	Set 1	MI
4	Set 1	DMA
5	Set 1	PMA Major
6	Set 2	MI
7	Set 2	DMA
8	Set 2	PMA Major
9	Set 3	MI
a	Set 3	DMA
b	Set 3	PMA Major
c	Threshold disabled	no alarm
d	Default	PMA Critical
e	Set 1	PMA Critical
f	Set 2	PMA Critical
10	Set 3	PMA Critical

NOTE 1: m = 0 is the default.

NOTE 2: Threshold values for Set 1, Set 2, and Set 3 must be set (programmed) by using the command mentioned in the explanation of m above before variable m can be used to select threshold levels and alarm types other than the defaults.



NOTE:

If the queried NPC can not be accessed for some reason, for example because the Facility Terminating Module is not equipped or the FTMI or Unit Controller is out of service, then the NPC's parameter count fields are

printed as a string of dashes to indicate that the counts are not available.
The parameter thresholds and options will still be correctly output.

In addition, certain parameters do not apply. In the cases where specific parameters do not apply to the queried NPC, the respective parameter count fields, threshold values and threshold options are all displayed as a string of dashes.

IW	Insertion Word
pq[r]	Hexadecimal value of the Growth Insertion Word (GIW) Used in the transmit direction on unassigned channels for CEPT NPCs. pq transmitted data information r transmitted signaling information A special code, called the Growth Insertion Word (GIW), is transmitted by this NPC on unassigned channels. This code is specified by the optional keyword IW and its argument pq. <i>This code was previously called the Disconnect Code (DCC), but that name is properly reserved for the TCON Insertion Word, which is transmitted when the "TDIS::FROM,TO,...,DCC" command is used.</i> For PB and PC type NPCs, the IW argument is X'pq[r], and the default GIW code is X'D5D (Binary: 11010101 1101). Hexadecimal digits "pq" represent the CEPT insertion word for cross-connected time slots and hexadecimal digit "r" represents the CEPT signaling option. The "r" digit is needed to accommodate the cross-connected CEPT time slot and its associated portion of TS16 used for signaling when provisioned for channel associated signaling (CAS). Although the "r" digit is accepted on input, for NSA NPCs, it has no significance.
AIS	Alarm indication signal
LEV	Intervention Level
g	Intervention Level Setting(1-6) Intervention Level is a feature that changes the Alarm Severity of an alarm based on the alarm severity and the Intervention Level setting.
MI	Maintenance information This is the default option.
PMA	Prompt maintenance major alarm

DMA	Deferred maintenance minor alarm
PMC	Prompt Maintenance Critical Alarm
[s]jkl	Nonhierarchical NPC number ($[s]abc \leq [s]jkl \leq [t]def$)
[t]mno	Nonhierarchical NPC number ($[s]jkl \leq [t]mno \leq [t]def$)
uvjkl	Hierarchical NPC number ($uvmnp \leq uvjkl \leq uvkqr$)
uvmno	Hierarchical NPC number ($uvjkl \leq uvmno \leq uvkqr$)

 **NOTE:**
uvjkl and uvkqr are in the **same** unit.

ss/n First improper value of "rr/<m>" for which the message is denied.

For each NPC listed, this message prints out values of the states, counts, thresholds and options of the following facility performance parameters and the spare international and national bits in time slot 0 for CEPT NPCs.

For PB and PC type NPCs:

DM	Degraded Minutes
nnnnn	24-hour Degraded Minutes threshold
_n_n_n_n_n	1-hour DM threshold
e	24-hour Degraded Minutes threshold/alarm selection
_e	1-hour DM threshold/alarm selection
SERS	Severely Errored Seconds
ppppp	24-hour Severely Errored Seconds threshold
_p_p_p_p_p	15-minute SERS threshold
f	24-hour Severely Errored Seconds threshold/alarm selection
_f	15-minute SERS threshold/alarm selection
ERS	Errored Seconds
qqqqq	24-hour Errored Seconds threshold
_q_q_q_q_q	15-minute ERS threshold
g	24-hour Errored Seconds threshold/alarm selection
_g	15-minute ES threshold/alarm selection

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US	Unavailable Seconds

rrrrr	24-hour Unavailable Seconds threshold
_r_r_r_r_r	15-minute US threshold
h	24-hour Unavailable Seconds threshold/alarm selection
_h	15-minute US threshold/alarm selection
SLIP	Slip Events
sssss	24-hour Slip Events threshold
_s_s_s_s_s	15-minute SLIP threshold
i	24-hour Slip threshold/alarm selection
_i	15-minute SLIP threshold/alarm selection

For SHORT INTERVAL, DM is calculated hourly and SERS, ERS, US, and SLIP are calculated at 15 minute intervals.

The **TS0 abcdefgh** variables represent international and national bits in time slot`0, as defined by:

ab	Spare international bits S_i If the NPC is not provisioned for the CRC multiframe format, bits a and b shall represent the S_i bits in the Frame Word (FW) and the Non Frame Word (NFW), respectively. If the NPC is provisioned for the CRC multiframe format, a and b shall represent the S_i bits in frames 13 and 15 of the CRC multiframe in the NFW, respectively.
c	Remote Alarm Indication must be - (hyphen).
de	Two spare national bits S_4 through S_5 in the NFW.
f	RPSFI (Remote Power Supply Failure Indicator) bit in the NFW if provisioned for RPSFI otherwise spare national bit.
gh	Two spare national bits S_7 through S_8 in the NFW

These variables are set to their default values "11011111" by this command, except for the Transmic`1G option, where the default is "11000000."

The variables may later be changed by setting the abcdefgh parameters in the TS0 field of the CHG::NPC command.

Each of the variables may then be set to "0", "1", or "P." "P" indicates that the incoming bit will be cross-connected unchanged.

When TS0 is cross-connected, the TS0 bits will be either passed, or set to "0" or "1" as indicated by the "abcdefgh" variable values. Note that bits which are used for alarms (bit 3 always; bits 4 and 5 if provisioned by the **mnxyz** values) may not be set to "P."

This is also true for NPCs assigned as test port NPCs.

The **TS0M abcdefgh** field allows monitoring of state changes in the received spare international bits, where the "abcdefgh" variables refer to the same TS0 bits as defined above for the TS0 "abcdefgh" variables.

The TS0M variables are specified for monitoring in the command as:

The default values for TS0M variables are **abcdefgh=00000000**, unless the **xyz** parameters set them differently, that is, for Transmic`1G the abcdefgh=00111111. The TS0M variables may later be provisioned by the CHG::TS0M`abcdefgh or the ED-PRMTR-EQPT TS0M-abcdefgh (38323) command.

cc Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
20	Option rr/m has not been set up on 2nd database
24	Unit type error
26	NPC type error
34	NPC type option xyz is unassigned, or invalid for feature package
83	NPC type is inconsistent with FTMI type
84	Incompatible types of NPCs on a circuit pack
14	1 hr >= 24 hr for DM opt
15	15 min >= 24 hr for SERS opt
16	15 min >= 24 hr for ERS opt
17	15 min >= 24 hr for US opt

cc	<i>Explanation</i>
18	15 min >= 24 hr for SLIP opt
31	NPC not provisioned for NSA
32	Bit 3 provisioned for use as RAI3
33	Bit 4 provisioned for use as RAIS
3A	Bit 4 provisioned for use as RBER
3B	Bit 5 provisioned for use as SFI
3C	Bits 3 through 8 are provisioned for Transmic 1G
3D	Alarm bits cannot be passed through or inverted
B0	Combination of bit g (b7) and h (b8) is invalid
BB	Timeslot channel numbering not allowed with CAS
CD	NPC not designated as sync timing source
F1	Parameter only valid with PA, PB, or PC type NPCs
F2	Invalid NPC number specified
FD	NPC range crosses unit boundary
1A	The facility parameter not programmable for specified x or z parameter
A3	Transmic 1G NPC designated as SYNC source invalid
A4	Firmware timing invalid for Transmic 1G NPC
A5	AIS keyword incompatible with NPC type
AB	LEV keyword incompatible with NPC type
AC	LEV keyword not allowed with Intervention Level Feature OFF
04	This NPC type does not allow Payload
91	Option not programmable for this NPC type

PROVISION NPC TYPE DS

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This SLC[®] 96 carrier command requests the equipage of network processing circuit (NPC) type DSxyz. It may also be used to request the equipage of a range of NPCs. Arguments x, y, and z following DS specify the multiframe format for the digroup, line and signaling format, and counting sequence format.

The OPTS keyword is used to select prestored values for facility performance parameter alarm thresholds from a secondary data base using the variables rr and m. rr specifies the alarm threshold to be set and m selects from the secondary data base one of the prestored values of the given threshold. Values of rr range from 01 through 10. There are four values stored for each of the ten facility performance parameters. All unspecified options are set to the default value 0.

A special code, called the disconnect code (DCC), is transmitted by this NPC on unassigned channels. This code is specified by pq in the optional field IW X'pq. The default is the unassigned channel code with the value X'7F. The DCC may be assigned any 2-digit hexadecimal value.

The execution of this command may be stopped by entering ABT.

Command

Nonhierarchical

[I.31371]

```
GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TYPE DSxyz \
[,OPTS(rr/m [,rr/m][...])][,IW X'pq]!
```

Hierarchical

[I.31371]

```
GRTH:[FRM xy][,SEQ ww]:NPC uvmp[-uvkqr],TYPE DSxyz \
[,OPTS(rr/m [,rr/m][...])][,IW X'pq]!
```

**Completion
Message**

One output message is printed for each NPC requested and successfully grown.

When an NPC range growth command within a unit crosses a facility terminating module (FTM) boundary, if the FTM is unequipped or of the wrong type (CEPT if domestic NPC has been specified, or vice-versa), then gaps for such FTMs shall be skipped, with a summary message, as noted below.

Specifically:

- GRTH commands where the range address crosses a Unit boundary shall be denied.
- For the Growth NPC range command: gaps for Gateway Units, with alternating domestic and cept modules, shall be:
 - defaulted to the respective domestic or CEPT default types, if the type field is omitted, or
 - denied in a summary command, if the type field is given, and the NPC type is inconsistent with the FTM, or the FTM is unequipped.

The denial summary shall use a floating window denial:

Floating Window Denial Message

Where a range NPC command is denied for successive NPCs in the range for the same reason, a summary denial message shall be output, giving the range of NPCs denied, and the reason. The execution of the normal completions, or of denials for a reason other than diagnostic failures, then resumes at the next NPC, up to the end of the range.

Nonhierarchical

[O.31371]

```
M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl TYPE DSxyz IW pq \  
4 LN MSG:  
          SLIP      BER      ERS      SERS      COFA      SANE      SAFE  
THRESHOLDS  mmm    nnn    p    q    rrrrr    sss    ttt    uuu    xxxxx \  
ZZZZZ  
OPTIONS      e    f    g    h    i          j    k    l    v    w \  
COMPL
```

Hierarchical

[O.31371]

```
M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl TYPE DSxyz IW pq \  
4 LN MSG:
```

	SLIP		BER		ERS		SERS		COFA		SANE		SAFE
THRESHOLDS	mmm	nnn	p	q	rrrrr	sss	ttt	uuu	xxxxx	\			
zzzzz													
OPTIONS	e	f	g	h	i	j	k	l	v	w	\		
COMPL													

Denial Message**Nonhierarchical**

[O.31371.01]

M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl[-[t]mno] \
TYPE DSxyz [ss/n][IW pq] COND cc DNY

[O.31371.02]

M hh:mm:ss xy,ww n[vv] GRTH NPC [s]jkl[-[t]mno] \
TYPE DSxyz EQD DNY

Hierarchical

[O.31371.01]

M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl[-uvmno] \
TYPE DSxyz [ss/n][IW pq] COND cc DNY

[O.31371.02]

M hh:mm:ss xy,ww n[vv] GRTH NPC uvjkl[-uvmno] \
TYPE DSxyz EQD DNY

**Explanation of
Parameters**

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number the first NPC number of a range.
[t]def	The 3- or 4-digit nonhierarchical NPC number the last NPC number of a range.
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number, the first NPC number of a range.
uvkqr	Hierarchical NPC number, the last NPC number of a range.
uv	Unit number
m,k	Module number
np,qr	NPC number within the module

	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
TYPE	Type
	For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
OPTS	Options
rr	Facility performance parameter number
	Variable rr specifies the parameter whose alarm threshold is being selected.
m	Facility performance parameter threshold index (0 through 3)
	Variable m is used to select threshold values previously programmed for rr. The default threshold value, the value selected by m=0, for each parameter is shown in the table below under the column heading "Default Threshold Value". Threshold values selected by m=1 through m=3 must exist, that is, must have been programmed, prior to being selected. These other thresholds can be set by using the CHG::SETOP (I.38201) command. Thresholds of all unspecified parameters are set to the default value associated with m=0. The options field must not be given without the NPC type field.

For DE, TE, SE or DS type NPCs:

For DE type NPCs, parameters with values rr = 1 through 8 are valid.

For DS type NPCs, parameters with values rr = 1 through 10 are valid.

For TE type NPCs, parameters with values rr = 1 through 8 are valid.

For SE type NPCs, parameters with values rr = 1 through 8 are valid.

For Clear-DS1 DE type NPCs, parameters with values rr = 1 through 4 are valid.

For Clear-DS1 TE type NPCs, parameters with values rr = 1 through 2 are valid.

For Clear-DS1 SE type NPCs, parameters with values rr = 1 through 2 are valid.

rr	Parameter	Threshold Value Range	Default Threshold Value
01	Slip major	000 to 255	255
02	Slip minor	000 to 255	4

rr	Parameter	Threshold Value Range	Default Threshold Value
03	Bit Error Rate major	1E-3* to 1E-6†	1E-3*
04	Bit Error Rate minor	1E-3* to 1E-6†	1E-6
05	Errored Seconds‡	00001 to 65535	864
06	Severely Errored Seconds‡	001 to 255	225
07	Change of Frame Alignment major	001 to 511	511
08	Change of Frame Alignment minor	001 to 255	17
09	Shelf Alarm Near End (SANE)§	00001 to 65535	00000
10	Shelf Alarm Far End (SAFE)§	00001 to 65535	00000

* 4 for clear-DS1 NPCs or DS type NPCs (default).

† 7 on DE or TE type NPCs using T1DM (x = 4) or on DE, TE, SE type NPCs using ESF (x=2 or 3) framing.

‡ Only applicable to DE or TE type NPCs using T1DM (x = 4) or DE, TE, SE type NPCs using ESF (x = 2 or 3) framing.

§ Applicable only to DS type NPCs.

Major thresholds must be greater than minor thresholds.

For Bit Error Rates, enter only the power of 10 (DACS assumes its sign is negative). For example, for a BER of 10^{-3} (.001), enter 3.

Slip major and Slip minor threshold crossing alarms may be disabled by programming threshold values of zero for the respective parameters.

The SANE and SAFE parameters are not applicable to DS1yz and DS7yz type NPCs.

Except for BER, major thresholds may not be equal to or less than the minor thresholds. The BER major threshold can be equal to the BER minor threshold.

**NOTE:**

If the queried NPC cannot be accessed for some reason, for example, because the Facility Terminating Module is not equipped or the FTMI or Unit Controller is out of service, then the NPC's parameter count fields are printed as a string of dashes to indicate that the counts are not available. The parameter thresholds and options are still correctly output in this case.

In addition, some parameters are not applicable to all NPCs. Certain parameters may or may not be collected based on NPC type. In the cases where specific parameters do not apply to the queried NPC, the respective parameter count fields, threshold values and threshold options are all displayed as a string of dashes.

IW	Insertion word
pq	Insertion word value (hexadecimal) Variable pq is a user defined insertion word. The default value of pq is 7F. The insertion word FF is recommended for unconnected channels in the SLC [®] interface and CPI applications.
[s]jkl	The 3- or 4-digit nonhierarchical NPC number ($[s]abc \leq [s]jkl \leq [t]def$)
[t]mno	The 3- or 4-digit nonhierarchical DS TYPE NPC number denoting the end of a range ($[s]jkl \leq [t]mno \leq [t]def$)
uvjkl	Hierarchical DS TYPE NPC number ($uvmnp \leq uvjkl \leq uvmno$)
uvmno	Hierarchical DS TYPE NPC number ($uvjkl \leq uvmno \leq uvkqr$)
mmm	SLIP major alarm threshold (0 through 255)
nnn	SLIP minor alarm threshold (0 through 255)
e	SLIP major option selection (0 through 3)
f	SLIP minor option selection (0 through 3)
p	BER major alarm threshold (4 through 6)
q	BER minor alarm threshold (4 through 6)
g	BER major option selection (0 through 3)
h	BER minor option selection (0 through 3)
rrrrr	ERS threshold (1 through 65535)
i	ERS option selection (0 through 3)
sss	SERS threshold (1 through 255)

j	SERS option selection (0 through 3)
ttt	COFA major alarm threshold (1 through 511)
uuu	COFA minor alarm threshold (1 through 255)
k	COFA major option selection (0 through 3)
l	COFA minor option selection (0 through 3)
xxxxx	SANE threshold (0 through 65535)
v	SANE option selection (0 through 3)
zzzzz	SAFE threshold (0 through 65535)
w	SAFE option selection (0 through 3)
ss/n	First improper values of "rr/m" for which message is denied
cc	Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
20	Option rr/m has not been set up on 2nd database
21	Minor >= major for SLIP opt
22	Minor <= major for BER opt
23	Minor >= major for COFA opt
24	Unit type error
34	NPC type option xyz is unassigned, or invalid for feature package
83	NPC type is inconsistent with FTMI type
84	Incompatible types of NPCs on a circuit pack
7C	Different DSxyz types are used for DGA/DGP on same DDC for Mode I
7F	NPC is not added
8A	x & z parameters on DSxyz are inconsistent
BE	NPC type option Y is invalid for SLC-96 NPC

cc	<i>Explanation</i>
FD	NPC range crosses unit boundary
1A	The facility parameter not programmable for specified x or z parameter
0A	Minor Slip threshold disabled before Major Slip threshold

PROVISION DIGITAL SIGNAL PROCESSING NPC

Explanation of Command

This command requests the provisioning of a Digital Signal Processing (DSP) circuit pack which may either be used for a DACS II feature or for a separate DACS II application that is packaged separately from the DACS II software.

Integrated DACS II Feature

The DSP circuit pack may be used for a feature that is integrated into the DACS II software. The Integrated Test Set (ITS) feature is currently supported in the DACS II software.

DSP Circuit packs are provisioned for the Integrated Test Set feature using the type field ST100 when placed in an INternational Facility Terminating Module (FTM). DSP circuit packs are provisioned for the Integrated Test Set feature using the type field ST110 when placed in a North American Facility Termination Module (FTM). Both odd and even numbered STxy NPCs may be provisioned.

DACS II Application Platform

The DSP circuit pack may be used as an application platform for the following applications:

- The X.50/X.57 International Subrate application, which has the type SD111.
- The Digital Multipoint Bridge (DMB) application, which has the type field SD311 (this application is similar to the DMB feature that may be provisioned in the DSPU).
- The DDS Subrate and Multipoint Junction Unit application, which has the type field SD411 (this application is similar to the SRM and MJU features that may be provisioned in the DSPU). This application supports 19.2 MJU circuits, which the DSPU MJU does not support.
- Any future application, which has a type field of the form SDxyz.

Only odd numbered SD NPCs may be provisioned. The next higher even numbered NPC is not available for other NPC types and must be unequipped when an SD NPC is provisioned. When specifying a range of NPCs to be provisioned the beginning and end of the range should be specified as odd numbers.

DSP applications are separately orderable products and are shipped with their own documentation. See command I.55721 INSTALL on how to install an application.

Available Channels

The DSP circuit pack may be provisioned in an FTU,IFTU, or IFTU2. In those units it may be provisioned in a North American or in an International module. When being provisioned in an International module, a full complement of 64 channels are usable unless the application itself restricts the number of channels. A total number of 16 DSP circuit packs may be provisioned in an International module. When being provisioned in a North American module, a maximum number of 48 channels are available to the application running on the circuit pack. A total of 20 DSP circuit packs may be provisioned in a North American module. Customers running a North American DACS II installation may want to set one or more FTU (IFTU or IFTU2) modules aside and provision them as International modules for running the DSP circuit packs with a maximum of 64 channels.

Command

Nonhierarchical

[I.31331]

GRTH:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def],TYPE mnxyz!

Hierarchical

[I.31331]

GRTH:[FRM xy][,SEQ ww]:NPC uvmnp[-wxkqr],TYPE mnxyz!

Completion Message

Nonhierarchical

[O.31331]

M hh:mm:ss xy,ww n[vv] GRTH NPC [s]abc[-[t]def] TYPE mnxyz COMPL

Hierarchical

[O.31331]

M hh:mm:ss xy,ww n[vv] GRTH NPC uvmnp[-wxkqr] TYPE mnxyz COMPL

Denial Message**Nonhierarchical**

[O.31331.01]

M hh:mm:ss xy,ww n[vv] GRTH NPC [s]abc[-[t]def] TYPE mnxyz EQD DNY

[O.31331.01]

M hh:mm:ss xy,ww n[vv] GRTH NPC [s]abc[-[t]def] TYPE mnxyz COND \
cc DNY**Hierarchical**

[O.31331.01]

M hh:mm:ss xy,ww n[vv] GRTH NPC uvmnp[-wxkqr] TYPE mnxyz EQD DNY

[O.31331.01]

M hh:mm:ss xy,ww n[vv] GRTH NPC uvmnp[-wxkqr] TYPE mnxyz COND cc \
DNY**Explanation of
Parameters**

NPC	Network Processing Circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number
[t]def	The 3- or 4-digit nonhierarchical NPC number designating the end of a range specification For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number
wxkqr	Hierarchical NPC number designating the end of a range specification
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
mnxyz	NPC type
SD111	X.50/X.57 International Subrate application
SD311	Digital Multipoint Bridge (DMB) application
SD411	DDS Subrate and MJU application
SDxyz	Any future DSPP application

ST100 Integrated Test Set provisioned for International
FTM

ST110 Integrated Test Set provisioned for North American
FTM

cc Hexadecimal condition code

cc *Explanation*

10 Unit is not equipped

11 UC is out of service

12 UC is in service but failed

13 FTMI is not equipped

34 NPC type option xyz is unassigned, or invalid
for feature package

83 NPC type is inconsistent with FTMI type

84 Incompatible types of NPCs on a circuit pack

F2 Invalid NPC number specified

FD NPC range crosses unit boundary

GROW SYNCHRONIZER TIME BASE

Explanation of Command

This message requests equipage of the time base circuit packs of the synchronizer. Both sides of the time base (sides 0 and 1) are equipped by entering this command.

Command

1.544 Mbit/s Termination

[I.31101]

GRTH:[FRM xy][,SEQ ww]:SYNC,TB,TYPE TBpqr!

2.048 Mbit/s Termination

[I.31101]

GRTH:[FRM xy][,SEQ ww]:SYNC,TB,TYPE TBpqr!

Completion Message

1.544 Mbit/s Termination

[O.31101]

M hh:mm:ss xy,ww n[vv] GRTH SYNC TB TYPE TBpqr COMPL

2.048 Mbit/s Termination

[O.31101]

M hh:mm:ss xy,ww n[vv] GRTH SYNC TB TYPE TBpqr COMPL

Denial Message

1.544 Mbit/s Termination

[O.31101.01]

M hh:mm:ss xy,ww n[vv] GRTH SYNC TB TYPE TBpqr COND cc DNY

2.048 Mbit/s Termination

[O.31101.01]

M hh:mm:ss xy,ww n[vv] GRTH SYNC TB TYPE TBpqr COND cc DNY

Explanation of Parameters

SYNC	Synchronizer
TB	Time base
p	Time base identifier
qr	Unassigned
	q and r can take any value from 0 through 9
p	Time base
0	Stratum 3
1	CEPT Local (2.048 Mbit/s Termination only)
2	CEPT Toll (2.048 Mbit/s Termination only)
3	Stratum 2
cc	Hexadecimal condition code

cc	<i>Explanation</i>
AA	Syncs are equipped

mmmm	<i>Explanation</i>
SNVS	Syncs are equipped

PROVISION SYNCHRONIZER TIMING LINK INTERFACE

Explanation of Command

This command provisions the synchronizer's timing link interface. The TLI can be configured as a timing extractor or as a timing distributor.

If the timing extractor is selected, you must also select synchronizer sync port (SSP) 0 or 1 and its source for priority.

Timing extractor types must be compatible for both SSP 0 and SSP 1.

Command

1.544 Mbit/s Termination

[I.31121]

```
GRTH:[FRM xy][,SEQ ww]:SYNC,TLI m, \
{TYPE texyz,SSP a,SRC p|TYPE TDxyz}!
```

2.048 Mbit/s Termination

Nonhierarchical

[I.31121]

```
GRTH:[FRM xy][,SEQ ww]:SYNC,TLI m, \
{TYPE texyz,SSP a,SRC p[,NPC [0]abc]|TYPE TDxyz}!
```

Hierarchical

[I.31121]

```
GRTH:[FRM xy][,SEQ ww]:SYNC,TLI m, \
{TYPE texyz,SSP a,SRC p[,NPC uvmnp]|TYPE TDxyz}!
```

Completion Message

1.544 Mbit/s Termination

[O.31121]

```
M hh:mm:ss xy,ww n[vv] GRTH SYNC TLI m 2 LN MSG:
{TYPE texyz SSP a SRC p|TYPE TDxyz} COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

[O.31121]

M hh:mm:ss xy,ww n[vv] GRTH SYNC TLI m 2 LN MSG:
{TYPE texyz SSP a SRC p[NPC [0]abc]|TYPE TDxyz} COMPL

Hierarchical

[O.31121]

M hh:mm:ss xy,ww n[vv] GRTH SYNC TLI m 2 LN MSG:
{TYPE texyz SSP a SRC p[,NPC uvmnp]|TYPE TDxyz} COMPL

Denial Message

1.544 Mbit/s Termination

[O.31121.01]

M hh:mm:ss xy,ww n[vv] GRTH SYNC TLI m 2 LN MSG:
{TYPE texyz SSP a SRC p|TYPE TDxyz} COND cc DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.31121.01]

M hh:mm:ss xy,ww n[vv] GRTH SYNC TLI m 2 LN MSG:
{TYPE texyz SSP a SRC p[NPC [0]abc]|TYPE TDxyz} COND cc DNY

Hierarchical

[O.31121.01]

M hh:mm:ss xy,ww n[vv] GRTH SYNC TLI m 2 LN MSG:
{TYPE texyz SSP a SRC p[NPC uvmnp]|TYPE TDxyz} COND cc DNY

Explanation of Parameters

SYNC	Synchronizer
TLI	Timing link interface
m	TLI number (1 through 4)
TYPE	Type
texyz	Timing Extractor type

TC	Composite Clock Timing Extractor
TE	DS1 Timing Extractor
TP	Primary Block Timing Extractor
TR	Basic System Reference Frequency (BSRF)
TU	Unipolar Clock Timing Extractor

⇒ **NOTE:**
For the TC, TU and TR timing extractors the x, y and z parameters can be any value from 0 to 9.

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

SSP Synchronizer synchronization port
a SSP number (0 or 1)
Required when texyz is specified.

⇒ **NOTE:**
Timing Extractors must have the same te type for both SSP 0 and SSP 1.

SRC Source
p Priority (1 through 8)
Required when texyz is specified. 1 = HIGHEST priority, 8 = LOWEST priority

TDxyz Timing Distributor type
For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

NPC Network Processing Circuit
The NPC keyword and its associated parameter are only specified in conjunction with the SSP and SRC keywords for TLI type TUxyz.
This keyword indicates that the synchronization signal is terminated in one of the facility terminating locations. Use of this keyword allows the DACS II system to correlate a synchronizing source failure to either an NPC failure or an NPC input signal failure.

[0]abc The 3- or 4-digit nonhierarchical NPC number
Timing source NPC number

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

2.048 Mbit/s Termination

uvmnp Hierarchical NPC number

uv Unit number

m Module number

np NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

cc Hexadecimal condition code

cc	<i>Explanation</i>
01	Subject entity is equipped
16	SYNC TB is not equipped
A7	Sync 0 is not in-service
A8	Sync 1 is not in-service
A9	Both syncs are out-of-service
AC	Timing Extractor type TLI (need SSP info)
AD	Not Timing Extractor type TLI (not SSP)
AE	Wrong TLI type (need CRO grow command)
AF	3 Timing Distributor type TLIs are equipped
B1	Illegal priority value
B2	Illegal SSP type (not same as other SSPs)
B3	X option is illegal
B4	Y option is illegal
B5	Z option is illegal
BE	Hardware mismatch or not present
CB	NPC parameter only valid with TU type TLI
CC	NPC is still provisioned to provide sync timing
CD	NPC not designated as sync timing source
CE	NPC already allocated as sync timing source

cc	<i>Explanation</i>
CF	NPC already grown as non-synchronization source
F1	Parameter only valid with PA, PB, or PC type NPCs
E4	NPC already has Equipment Loopback

GROWTH CLOCK REFERENCE OSCILLATOR

Explanation of Command

This message requests equipage of the synchronizer time base as a clock reference oscillator (CRO), which is the extra (third) time base on the synchronizer. The CRO is required to provision the synchronizer to the master mode and is located in timing link interface 3 of side 1 of the synchronizer.

Command

1.544 Mbit/s Termination

[I.31111]

GRTH:[FRM xy][,SEQ ww]:SYNC,TLI 3,TYPE TBpqr!

2.048 Mbit/s Termination

[I.31111]

GRTH:[FRM xy][,SEQ ww]:SYNC,TLI 3,TYPE TBpqr!

Completion Message

1.544 Mbit/s Termination

[O.31111]

M hh:mm:ss xy,ww n[vv] GRTH SYNC TLI 3 TYPE TBpqr CRO COMPL

2.048 Mbit/s Termination

[O.31111]

M hh:mm:ss xy,ww n[vv] GRTH SYNC TLI 3 TYPE TBpqr CRO COMPL

Denial Message

1.544 Mbit/s Termination

[O.31111.01]

M hh:mm:ss xy,ww n[vv] GRTH SYNC TLI 3 TYPE TBpqr CRO
COND cc DNY

2.048 Mbit/s Termination

[O.31111.01]

M hh:mm:ss xy,ww n[vv] GRTH SYNC TLI 3 TYPE TBpqr CRO
COND cc DNY

Explanation of Parameters

SYNC	Synchronizer
TL	Timing Link Interface
TYPE	Type
TB	Time base
p	Time base identifier
qr	Unassigned
q and r can take any value from 0 through 9	
p	Time base
0	Stratum 3
1	CEPT Local (2.048 Mbit/s Termination only)
2	CEPT Toll (2.048 Mbit/s Termination only)
3	Stratum 2
CRO	Clock reference oscillator
COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
01	Subject entity is equipped
16	SYNC TB is not equipped
33	Wrong TLI type
A5	(Timing Distributor) TLI is not equipped
A7	Sync 0 is not in-service
A8	Sync 1 is not in-service
A9	Both syncs are out-of-service

cc	<i>Explanation</i>
AA	Syncs are equipped
AB	Bad sync mode
CC	One of the IS SYNC is pested

mmmm	<i>Explanation</i>
ENRE	Subject entity is equipped
ENEQ	SYNC TB is not equipped
SNVS	Wrong TLI type
SNVS	(Timing Distributor) TLI is not equipped
SAOS	Sync 0 is not in-service
SAOS	Sync 1 is not in-service
SAOS	Both syncs are out-of-service
SNVS	Syncs are equipped
SNVS	Bad sync mode
SNVS	One of the IS SYNC is pested

GROWTH TEST-ACCESS GROUP

Explanation of Command

This command provisions a test-access group (TG) as a network processing circuit for test groups (NPCTG) covering a specific channel range.

The TG consists of two bundles of *n* consecutive DS0 channels each. The TG's width is determined by the number of channels within the range specified in the command. The east bundle of the TG is located on the first NPCTG and spans the given channel range; the west bundle is located on the second NPCTG and spans the second channel range. Both bundles may be assigned to the same NPCTG, provided the necessary bandwidth is available.

Command

[I.31421]

```
GRTH:[FRM xy][,SEQ ww]:TG mmm,NPCTG (rrr,eee[-fff];sss,www[-xxx]) \
[,<tc>]!
```

Completion Message

[O.31421]

```
M hh:mm:ss xy,www n[vv] GRTH TG mmm NPCTG (rrr,eee[-fff];sss, \
www[-xxx]) 2 LN MSG:
[<tc>] COMPL
```

Denial Message

[O.31421.01]

```
M hh:mm:ss xy,www n[vv] GRTH TG mmm[ <tc>] COND cc DNY
```

Explanation of Parameters

TG	Test (access) group
mmm	TG number (1 through 400)
NPCTG	NPC (for) test group
rrr	NPCTG number supporting the east bundle
sss	NPCTG number supporting the west bundle, may be same as rrr

eee,fff Channel range for east bundle
www,xxx Channel range for west bundle
001-024

2.048 Mbit/s Termination

001-030 Primary NPCs grown as Channel Associated Signaling (CAS)
001-031 Primary NPCs grown as Non Signaling Associated (NSA)
tc Trunk conditioning
If trunk conditioning is desired for a test group provisioned on an NSA NPCTG, then TRSP,IW X'pq must be specified; otherwise, a denial results.
COND Condition
cc Hexadecimal condition code

cc	<i>Explanation</i>
1E	Customer control or red circuit exists
85	Using the 24th channel of a T1DM NPC
86	Using the 24th channel of a DMI NPC
4A	channel part of a TP or TG
4B	channel already under test
57	Designated TG or circuit to be tested in process of being rolled
59	Invalid TC specification
5D	Inconsistent Signaling on CEPT NPCTGs
64	TG width too large for single NPCTG
65	Ending channel is out of range
66	TG number previously assigned
95	TG East/West type inconsistent with each other or circuit
A0	TS16 specified for CAS TG
A1	NPC has been designated as NPCTG

cc	<i>Explanation</i>
A3	Channels assigned, cannot be grown as test group
A8	NPCTG not grown
AC	Both ITS TG bundles must be on same TG193B card

GROW TEST PORT

Explanation of Command

This command provisions a test port.

If trunk conditioning is omitted from the input command, the test port is provisioned as a *dynamic* test port. A dynamic test port's trunk conditioning is set to match the trunk conditioning of the circuit under test at the time the circuit is accessed.

If trunk conditioning is given in the input command, the test port is provisioned as a *static* test port. A static test port's trunk conditioning is set at the time the port is provisioned. Its trunk conditioning does not change when a circuit is accessed for testing.

The *static* or *dynamic* designations have meaning only for access to unmapped terminations.

For access to a mapped termination, trunk conditioning is always adopted from the circuit under test.

Command

1.544 Mbit/s Termination

[I.31411]

GRTH:[FRM xy][,SEQ ww]:TP kk[,<tc>]!

2.048 Mbit/s Termination

[I.31411]

GRTH:[FRM xy][,SEQ ww]:TP kk[,<tc>]!

Completion Message

1.544 Mbit/s Termination

[O.31411]

M hh:mm:ss xy,ww n[vv] GRTH TP kk [<tc>] COMPL

2.048 Mbit/s Termination

[O.31411]

M hh:mm:ss xy,ww n[vv] GRTH TP kk[<tc>] COMPL

Denial Message

1.544 Mbit/s Termination

[O.31411.01]

M hh:mm:ss xy,ww n[vv] GRTH TP kk[<tc>] NPCTP UEQD DNY

[O.31411.02]

M hh:mm:ss xy,ww n[vv] GRTH TP kk[<tc>] TP NSO DNY

[O.31411.03]

M hh:mm:ss xy,ww n[vv] GRTH TP kk[<tc>] TERM ASGN DNY

[O.31411.04]

M hh:mm:ss xy,ww n[vv] GRTH TP kk[<tc>] IMPR TC DNY

[O.31411.08]

M hh:mm:ss xy,ww n[vv] GRTH TP kk[<tc>] COND cc DNY

2.048 Mbit/s Termination

[O.31411.01]

M hh:mm:ss xy,ww n[vv] GRTH TP kk[<tc>] NPCTP UEQD DNY

[O.31411.02]

M hh:mm:ss xy,ww n[vv] GRTH TP kk[<tc>] TP NSO DNY

[O.31411.03]

M hh:mm:ss xy,ww n[vv] GRTH TP kk[<tc>] TERM ASGN DNY

[O.31411.04]

M hh:mm:ss xy,ww n[vv] GRTH TP kk[<tc>] IMPR TC DNY

[O.31411.08]

M hh:mm:ss xy,ww n[vv] GRTH TP kk[<tc>] COND cc DNY

Explanation of Parameters	TP	Test port
	kk	Test port number (01 through 96)

1.544 Mbit/s Termination

A 1.544Mbit/s non-SLC NPC supports 12 test ports numbered as follows:

	Channel	
	FROM	TO
01,13,25,37,49 ,61,73,85	1	2
02,14,26,38, 50,62,74,86	3	4
03,15,27,39, 51,63,75,87	5	6
04,16,28,40, 52,64,76,88	7	8
05,17,29,41, 53,65,77,89	9	10
06,18,30,42, 54,66,78,90	11	12
07,19,31,43, 55,67,79,91	13	14
08,20,32,44, 56,68,80,92	15	16
09,21,33,45, 57,69,81,93	17	18
10,22,34,46, 58,70,82,94	19	20
11,23,35,47, 59,71,83,95	21	22
12,24,36,48, 60,72,84,96	23	24

2.048 Mbit/s Termination

A 2Mbit/s NPC supports 12 test ports numbered as follows:

	Channel	
	FROM	TO
01,13,25,37,49 ,61,73,85	5	6
02,14,26,38, 50,62,74,86	7	8
03,15,27,39, 51,63,75,87	9	10
04,16,28,40, 52,64,76,88	11	12
05,17,29,41, 53,65,77,89	13	14
06,18,30,42, 54,66,78,90	16	17
07,19,31,43, 55,67,79,91	18	19
08,20,32,44, 56,68,80,92	20	21
09,21,33,45, 57,69,81,93	22	23
10,22,34,46, 58,70,82,94	24	25
11,23,35,47, 59,71,83,95	26	27
12,24,36,48, 60,72,84,96	28	29

tc

Trunk conditioning

Represents the desired signaling and insertion word to be applied when a failure occurs. A trunk conditioning specification consists of a combination of a signaling specification followed by

an insertion word specification. For example, TRSP,IW X'pq
(input form).

1.544 Mbit/s Termination

2.048 Mbit/s Termination

1.544 Mbit/s Termination

2.048 Mbit/s Termination

1.544 Mbit/s Termination

TC(ijkl,mnop)

2-way, 4-state signaling in binary

TC(ijklmnop,qrstuvw)

2-way, 16-state signaling in binary

TC(X'ab,X'cd)

2-way, 16-state in hexadecimal

TRSP Transparent, no signaling

2.048 Mbit/s Termination

TC(ijkl,mnop)

2-way, 4-state signaling in binary. For CEPT and
ESF type framing format, software expands 4-state
to 16-state by duplicating the bits.

TC(efghijkl,mnopqrst)

2-way, 16-state in binary

TC(X'ab,X'cd)

2-way, 16-state in hexadecimal

TRSP Transparent, no signaling

Omitted Cross-connections. Default is TC X'FF,X'FF if both
terminations are channel associated signaling
types. Default is TRSP if one of the terminations is
nonsignaling associated (NSA) type.

1.544 Mbit/s Termination

IW X'pq The 8-bit pattern corresponding to the hexadecimal
value of pq is inserted in the downstream direction
of a failure on either line.

TRB Standard trouble code, equal to IW X'E4

MUX MUX out of sync code, equal to IW X'1A

2.048 Mbit/s Termination

IW X'pq The 8-bit pattern corresponding to the hexadecimal value of pq is inserted in the downstream direction of a failure on either line.

Omitted Will default to IW X'FF

For 4-state signaling, the A/B signaling bits of both test port channels are specified by ijkl for the receive time slot interchange (RTSI), and by mnop for the transmit time slot interchange (TTSI).

For 16-state signaling, the A/B/C/D signaling bits of both test port channels are specified by efghijkl (or hexadecimal digits ab) for the RTSI, and by mnopqrst (or hexadecimal digits cd) for the TTSI.

NPCTP	NPC for test ports
UEQD	Unequipped
TP NSO	Test port not in sequence order
TERM	Terminated
ASGN	Assigned
IMPR	Improper
TC	Trunk conditioning
COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
1E	Customer control or red circuit exists
82	Can not use 12-th TP when NPCTP is in the T1DM or DMI mode
FF	Termination is in process of being rolled
50	Invalid MIU/MXR type specified
4B	channel already under test

PROVISION FACILITY TERMINATING MODULE INTERFACE

Explanation of Command

2.048 Mbit/s Termination

This command requests provisioning of the facility terminating module (FTM) and its interface and format converter in DACS II UNIT q with a specified termination impedance (75 or 120 ohms).

2.048 Mbit/s Termination

1.544 Mbit/s Termination

This command requests provisioning of the facility terminating module (FTM) and its interface and format converter in DACS II UNIT q with a specified equalization. Equalization may be specified for either a half or a whole FTM.

1.544 Mbit/s Termination

Command

1.544 Mbit/s Termination

[I.31321]

GRTH:[FRM xy][,SEQ ww]:UNIT [q]q,FTMI d,EQL(l,r)!

2.048 Mbit/s Termination

[I.31321]

GRTH:[FRM xy][,SEQ ww]:UNIT [q]q,FTMI d,IMP <imp>!

Completion Message

1.544 Mbit/s Termination

[O.31321]

M hh:mm:ss xy,ww n[vv] GRTH UNIT [q]q FTMI d FC 0d 1d EQL(l r) \
COMPL

2.048 Mbit/s Termination

[O.31321]

M hh:mm:ss xy,ww n[vv] GRTH UNIT [q]q FTMI d FC 0d 1d IMP \
(<imp>) CEPT COMPL

Denial Message

1.544 Mbit/s Termination

[O.31321.01]

M hh:mm:ss xy,ww n[vv] GRTH UNIT [q]q FTMI d FC 0d 1d EQL(l r) \
COND cc DNY

2.048 Mbit/s Termination

[O.31321.01]

M hh:mm:ss xy,ww n[vv] GRTH UNIT [q]q FTMI d FC 0d 1d IMP \
(<imp>) CEPT COND cc DNY

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
FC	Format converter
0	FC side 0
1	FC side 1
d	FC number (1 through 4)
FTMI	Facility terminating module interface
d	FTMI in the DACS II unit (1 through 4)

1.544 Mbit/s Termination

EQL	Equalization
l	Left half shelf equalization value (first 10 Dual Digroup Circuits)
r	Right half shelf equalization value (second 10 Dual Digroup Circuits)
	Equalization option values for 255AS/24 gauge cable
1	000 to 100 feet
2	100 to 200 feet

3 200 to 300 feet

4 300 to 400 feet

5 400 to 500 feet

Equalization option values for 600 series/22 gauge cable

1 000 to 050 feet

2 051 to 267 feet

3 268 to 400 feet

4 401 to 533 feet

5 534 to 655 feet

Equalization option values for 1249/26 gauge cable

1 000 to 090 feet

2 090 to 180 feet

3 180 to 270 feet

4 270 to 360 feet

5 360 to 450 feet

2.048 Mbit/s Termination

IMP Impedance

imp Impedance value

CEPT facility terminating module impedance setting

Valid values are listed below:

75 75-ohm coaxial termination

120 120-ohm twisted pair termination

CEPT Conference of European Postal and Telecommunications
Administration

COND Condition

cc Hexadecimal condition code

cc *Explanation*

01 Subject entity is equipped

10 Unit is not equipped

cc	<i>Explanation</i>
11	UC is out of service
12	UC is in service but failed
24	Unit type error

GROWTH MULTIPLEXER INTERFACE UNIT

Explanation of Message

This command equips one or more Multiplexer Interface Unit (MIU) circuit packs in a DS3 Unit. A MIU can only be grown with a MXR of circuit pack type KCR5. As many as seven MIUs can be equipped with one command.

Command

[I.31501]
GRTH:[FRM xy][,SEQ ww]:UNIT [q]q,MIU c[-d][,TYPE mnxyz]!

Completion Message

One output message is printed for each requested MIU growth, either completion or denial.

[O.31501]
M hh:mm:ss xy,ww n[vv] GRTH UNIT [q]q MIU a TYPE mnxyz COMPL

Denial Message

[O.31501.01]
M hh:mm:ss xy,ww n[vv] GRTH UNIT [q]q MIU a[TYPE mnxyz]EQD DNY

[O.31501.02]
M hh:mm:ss xy,ww n[vv] GRTH UNIT [q]q MIU a[TYPE mnxyz] \
COND cc DNY

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
MIU	Multiplexer interface unit
c, d	MIU numbers within the unit (P, 1 through 6)
TYPE	Type
mnxyz	MIU type. The only MIU type available is MI100.

EQD	The MIU is already equipped.
a	MIU number within the range of MIU c and MIU d.
cc	Hexadecimal condition code
cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
50	Invalid MIU/MXR type specified
52	The MMFG is protected
09	Wrong MXR type grown for this MIU

GROWTH MULTIPLEXER

Explanation of Command

**NOTE:**

The following command applies to 1.544 Mbit/s Termination only.

This command equips one or more regular Multiplexer (MXR) circuit packs and their associated DS3 facilities in the service slots of a DACS II DS3 Unit. It also equips the Hybrid Multiplexer (HMXR) circuit packs and their associated DS3 facilities in the service slots of a DACS II Hybrid DS3 (HDS3) Unit.

The protection MXR or HMXR circuit pack is not grown because no specific DS3 facility is associated with it. The protection MXR or HMXR is provisioned when DS3 or HDS3 unit is grown.

Up to six MXRs or HMXRs and their DS3 facilities can be grown with one command.

There is one output message (either completion or denial) for each MXR or HMXR that is grown.

Command

[I.31511]

```
GRTH:[FRM xy][,SEQ ww]:UNIT [q]q,MXR c[-d] \  
[,TYPE mnxyz][,OPTS(rr/m[,rr/m][...])][,BERM s][,BERT t][,LBO <b>]!
```

Completion Message

1.544 Mbit/s Termination

For Regular (nonhybrid) DS3 Multiplexers

[O.31511]

```
M hh:mm:ss xy,ww n[vv] GRTH UNIT [q]q MXR a TYPE mnxyz 2 LN MSG:  
BERM s BERT t LBO <b> COMPL
```

For Hybrid DS3 Multiplexers

[O.31511]

```
M hh:mm:ss xy,ww n[vv] GRTH UNIT [q]q MXR a TYPE mnxyz 5 LN MSG:  
BERM s BERT t LBO <b>
```

```
DAILY      CVL      ESL    SESL   CVP
THRESHOLDS aaaaaaaa bbbbbb ccccc dddddddd
OPTIONS    a        b      c      dEOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH UNIT [q]q MXR a TYPE mnxyz 5 LN MSG:
BERM s BERT t LBO <b>
```

```
DAILY      FMP      ESP     SESP   FSESP UASP
THRESHOLDS jjjjjjjj kkkkkk lllll mmmmnn nnnnnn
OPTIONS    j        k      l      m      nEOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH UNIT [q]q MXR a TYPE mnxyz 5 LN MSG:
BERM s BERT t LBO <b>
```

```
15MIN      CVL      ESL     SESL   CVP
THRESHOLDS eeeeeeeee ffffff gggggg hhhhhhhh
OPTIONS    e        f      g      hEOM
```

```
M hh:mm:ss xy,ww n[vv] GRTH UNIT [q]q MXR a TYPE mnxyz 5 LN MSG:
BERM s BERT t LBO <b>
```

```
15MIN      FMP      ESP     SESP   FSESP UASP
THRESHOLDS pppppppp qqqqq rrrrr sssss ttttt
OPTIONS    p        q      r      s      tCOMPL
```

Denial Message

[O.31511.01]

```
M hh:mm:ss xy,ww n[vv] GRTH UNIT [q]q MXR a[ TYPE mnxyz] 2 LN MSG:
[ ss/n][ BERM s][ BERT t][ LBO <b>] EQD DNY
```

[O.31511.02]

```
M hh:mm:ss xy,ww n[vv] GRTH UNIT [q]q MXR a[ TYPE mnxyz] 2 LN MSG:
[ss/n ][BERM s ][BERT t ][LBO <b>] COND cc DNY
```

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
MXR	Multiplexer
c	MXR number within the unit (1 through 6)
d	MXR number within the unit (1 through 6)
	Variable d is used to specify a range of MXRs
a	MXR number within the range of MXR c and MXR d
TYPE	Type
mnxyz	The DS3 format processed by the MXR:

mn	DS3 type
<i>mn</i>	<i>Explanation</i>
MX	The original R4.0 DS3 facility type supported by the Multiplexer (MXR) circuit pack (KCR-1).
EX	The enhanced R6.0 DS3 facility type supported by the Enhanced Multiplexer (EMXR) circuit pack (KCR-5).
HX	The hybrid facility type supported by the Hybrid Multiplexer (HMXR) circuit pack (KCR-8).

If the unit is a regular DS3U of unit type DT100, then the default is the MX type for backward compatibility. If the unit is a Hybrid DS3U of unit type HT100, then the default is HX.

Allowed xyz values

MX100	KCR-1 circuit pack with M13 framing
MX200	KCR-1 circuit pack with C-bit parity framing
EX100	KCR-5 circuit pack with M13 framing
EX200	KCR-5 circuit pack with C-bit parity framing
HX110	KCR-8 Hybrid circuit pack with M13 framing ANSI interpretation of X-bit values
HX100	KCR-8 Hybrid circuit pack with M13 framing Reverse of ANSI interpretation of X-bit values.

Type HX110 and HX100 set the X-bits (carried by the DS3 signal) in the transmit direction and interpret the value of the X-bits in the receive direction for the purpose of obtaining a Remote Alarm Indication (RAI) for the DS3 signal. Type HX110 interprets X-bit values (there are two X-bits) of 1 as normal, while values of 0 indicate an RAI. Type HX100 interprets X-bit values of 0 as normal and X-bit values of 1 as RAI.

rr	Facility performance parameter number (hybrid DS3 only) Variable rr specifies the parameter whose alarm threshold is being selected
m	Facility performance parameter threshold index (0 through 3) (hybrid DS3 only) Variable m is used to select threshold values previously programmed for rr. The default threshold value, the value selected by m=0, for each parameter is shown in the table below under the column heading Default Threshold Value. Threshold values selected by m=1 through m=3 must exist; that is, must

have been programmed prior to being selected. The nondefault thresholds can be set by using the **CHG::SETOP** (I.38203) command. Thresholds of all unspecified parameters are set to the default value associated with m=0.

For HX type (Hybrid) DS3 signals:

<rr>	Parameter	Interval	Threshold Value Range	Default Threshold Value
101	Code Violations Line	DAILY	0 - 1073700000	3867523
102	Errored Seconds Line	DAILY	0 - 86400	4320
103	Severely Errored Seconds Line	DAILY	0 - 86400	90
104	Code Violations Path	DAILY	0 - 353870000	3867523
105	F and M Bit Violations Path	DAILY	0 - 22096800	176947
106	Errored Seconds Path	DAILY	0 - 86400	4320
107	Severely Errored Seconds Path	DAILY	0 - 86400	90
108	Far End Severely Errored Sec. Path	DAILY	0 - 86400	90
109	Unavailable Seconds	DAILY	0 - 86400	0

<rr>	Parameter	Interval	Threshold Value Range	Default Threshold Value
111	Code Violations Line	15MIN	0 - 29490750	402867
112	Errored Seconds Line	15MIN	0 - 900	300
113	Severely Errored Seconds Line	15MIN	0 - 900	30
114	Code Violations Path	15MIN	0 - 3686175	402867
115	F and M Bit Violations Path	15MIN	0 - 230175	18432
116	Errored Seconds Path	15MIN	0 - 900	300
117	Severely Errored Seconds Path	15MIN	0 - 900	30
118	Far End Severely Errored Sec. Path	15MIN	0 - 900	30
119	Unavailable Seconds	15MIN	0 - 900	0
EQD	Multiplexer is already equipped; the command is denied			
BERM	Bit error rate calculation method			
s	The requested BER calculation method			
B	Bipolar violations (BPV - default)			
P	DS3 Parity Errors			

	C	Both Bipolar violations (BPV) and DS3 Parity Errors, HMXR only
BERT		Bit error rate threshold for declaring High BER condition
t		Requested BER threshold
	3	Corresponds to threshold of 10 ³ (default)
	6	Corresponds to threshold of 10 ⁶
LBO		Line buildout
b		LBO specification
	ON	Line build out is turned on
	OFF	Line build out is turned off (default)
		LBO is required as shown in the following table for the different cabling types to the DSX-3.

734A Cabling	KS-19224,L2 Cabling	LBO
0 to 225 feet	0 to 75 feet	ON
225 to 450 feet	75 to 150 feet	OFF

 **NOTE:**
LBO may be used to change the LBO setting of an in-service, traffic-carrying Multiplexer-Multiplexer Interface Unit (MMFG).

ss/n	First improper value of rr/m for which the message is denied
cc	Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
20	Option rr/m has not been set up on 2nd database

PROVISION A UNIT

Explanation of Command

This command requests the provisioning of a DACS II unit, which also results in the provisioning of the expanded time slot interchanger. When this request has completed, all circuit packs required by the subject unit to cross-connect to other equipped units have been provisioned.

The unit type is optionally specified in the TYPE field.

The unit type can be a facility terminating unit, a DS3 terminating unit, a Hybrid DS3 terminating unit, a digital signal processing unit.

If the unit is a digital signal processing unit, its associated digital signal processing interface is also provisioned. If the unit is a DS3 or a Hybrid DS3 facility terminating unit, both of its associated service and protection facility line interface packs, both sides of its formatter or hybrid formatter packs (side 0 and 1), and its protection multiplexer or hybrid multiplexer are also provisioned. Only facility line interface packs, Hybrid Formatter packs (HFMT), and Hybrid Multiplexer packs (HMXR) can be equipped in the Hybrid DS3 facility terminating unit. Therefore, FMT and MXR as shown in the command output messages should be interpreted as HFMT and HMXR when the Hybrid DS3 Unit type HT100 is provisioned.

**NOTE:**

DSPU NPC, FC, ETSI, and FMT/HFMT circuit packs must be inserted into the inactive side of DACS II. Inserting circuit packs into the active side may result in transmission "hits."

Command

[I.31211]

GRTH:[FRM xy][,SEQ ww]:UNIT [q]q[,TYPE utxyz]!

Completion Message

For DACS II frames growing FT100, DP100, DT100, or HT 100 units :

[O.31212]

M hh:mm:ss xy,ww n[vv] GRTH UNIT qq TYPE utxyz e LN MSG:
ETSI 0qq 1qq TOTAL ETSIS kk
0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr

```
0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr 0rr 1rr \
[ COMPL]
[FMT 0 1   FLI S P   MXR P COMPL]
```

**NOTE:**

If the unit type is FT100 or DP100, the output is a 4-line message. If the unit type is DT100, the output is a 5-line message.

Denial Message

[O.31211.01]

```
M hh:mm:ss xy,ww n[vv] GRTH UNIT [q]q TYPE utxyz \
{EQD uexyz|NSUP} DNY
```

[O.31211.02]

```
M hh:mm:ss xy,ww n[vv] GRTH UNIT [q]q TYPE utxyz COND cc DNY
```

**Explanation of
Parameters****UNIT**

Unit

[q]q

Unit number (1 through 16)

utxyz

Unit type as submitted in the input message

uexyz

Type of unit already equipped as

FT100 FT = Facility Terminating Unit**DP100** DP = Digital Signal Processing Unit**1.544 Mbit/s Termination****DT100** DT = DS3 Facility Terminating Unit**Either Termination****HT100** HT = Hybrid DS3 Facility Terminating Unit

The unit type is optionally specified in the TYPE utxyz field. The unit type can be an FTxyz (Facility Terminating Unit), a DTxyz (DS3 Terminating Unit), an HTxyz (Hybrid DS3 Terminating Unit), or a DPxyz (Digital Signal Processing Unit) type.

Currently, only FT100, DT100 (for 1.544 Mbit/s Termination), HT100, and DP100 types are supported by DACS II.

The unit type entered must be consistent with the unit type entered for the configuration file.

If the unit is a DPxyz type, its associated DSPI (Digital Signal Processing Interface) is also provisioned.

If the unit is a DTxyz or HTxyz type, both of its associated Service and Protection Facility Line Interface (FLI) packs, both sides of its Formatter (FMT) or Hybrid Formatter (HFMT) packs (side 0 and 1), and its Protection Multiplexer (MXR) or Hybrid Multiplexer (HMXR) pack are also provisioned.

If the unit type is not entered, the unit type defaults to FT100.

e	Number of lines in message Equals either 4 or 5 depending on the type of the unit provisioned.
ETSI	Expanded time slot interchanger
0qq	ETSI number side 0
1qq	ETSI number side 1 0qq and 1qq identify the ETSI packs provisioned by this command. qq is the unit number (see UNIT above). Three dashes --- are shown if an ETSI pack is not provisioned.
kk	Total number of provisioned ETSIs in frame (02 through 32)
rr	Unit number with the same definition as qq.

1.544 Mbit/s Termination

FMT	Formatter (FMT), Hybrid Formatter (HFMT), or High Speed Formatter sides 0 and 1 (automatically provisioned FMT with DT100 or HFMT with HT100 units)
FLI	Facility line interface
S	Service FLI (automatically provisioned with DT100 or HT100 units)
FLI	Facility line interface
P	Protection FLI (automatically provisioned with DT100 or HT100 units)

Either Termination

MXR	Multiplexer (MXR) or Hybrid Multiplexer (HMXR)
P	Protection multiplexer (MXR) or Hybrid Multiplexer (HMXR) (automatically provisioned MXR with DT100 or HMXR with HT100 units)
EQD	Equipped
NSUP	Not supported
cc	Hexadecimal condition code

cc	<i>Explanation</i>
27	Illegal connectivity specified
28	Connectivity contains unequipped units
97	Entity can't be addressed in this configuration
99	Unit type (xyz) not supported
CA	Connectivity can not be specified for CEF unit

Contents

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STARTUP

**Explanation of
Message**

DACS II outputs this message immediately after a hardware reset. The message notifies remote systems by the major alarm state (indicated by **) that the frame has reset.

**Autonomous
Message**

[O.01201]
**ICI RESET

**Explanation of
Parameters**

ICI	Intelligent communications interface
RESET	Reset
	Indicates a hardware reset of the frame

STARTUP

**Explanation of
Message**

The intelligent communications interface has initialized itself and has performed self-diagnostics. The results of these diagnostics are reported as some tests failed or all tests passed.

**Autonomous
Message**

[O.01211]
ICI STARTUP {STF|ATP}

**Explanation of
Parameters**

ICI	Intelligent communications interface
STARTUP	Startup Indicates initialization
STF	Some tests failed
ATP	All tests passed

GENERIC IN PROGRESS MESSAGE

Explanation of Command

This output message indicates that the requested action (verb) is in progress.

Autonomous Message

Hierarchical

[O.55703]

M hh:mm:ss xy,ww n[vv] <verb> IN PROGRESS

INHIBIT DS1 PERFORMANCE MONITORING REPORT

Explanation of Command

This command inhibits DACS II scheduled performance monitoring report output for DA and TA type NPCs. The user may inhibit performance monitoring report output for a single, range or all NPCs on the frame.

NPC Addressing

This command handles NPC addressing in the input command as follows:

- If only a single NPC is addressed in the input command, then either a completion or denial response is generated for the addressed NPC. DACS II always denies invalid commands to specifically addressed NPCs.
- If a range of NPCs is addressed and the feature applies to one or more NPCs within the range, DACS II inhibits outputting the scheduled reports for the NPCs in the range that support this feature, but skip the NPCs which do not support this feature.

DACS II provides a variety of line termination types which support different features and can be randomly mixed within the frame. If at least one of the NPCs in the addressed range supports this feature, DACS II generates a completion response for the entire range of NPCs; individual denial responses are not generated for NPCs within the range which do not support the feature. If *none* of the NPCs in the addressed range support the requested feature, DACS II generates a range denial response.

Command

Nonhierarchical

[I.51161]

```
INH: [FRM xy][, SEQ ww]:PMREPT, {NPC [s]abc[-[t]def]|ALL}!
```

Hierarchical

[I.51161]

```
INH: [FRM xy][, SEQ ww]:PMREPT, {NPC uvmp[-wxkqr]|ALL}!
```

Completion Message

Nonhierarchical

[O.51161]

M hh:mm:ss xy,ww n[vv] INH PMREPT {NPC [s]abc[-[t]def]|ALL} COMPL

Hierarchical

[O.51161]

M hh:mm:ss xy,ww n[vv] INH PMREPT {NPC uvmnp[-wxkqr]|ALL} COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.51161.01]

M hh:mm:ss xy,ww n[vv] INH PMREPT {NPC [s]abc[-[t]def]|ALL} \
COND cc DNY

Hierarchical

[O.51161.01]

M hh:mm:ss xy,ww n[vv] INH PMREPT {NPC uvmnp[-wxkqr]|ALL} \
COND cc DNY

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical starting NPC number
[t]def	The 3- or 4-digit nonhierarchical ending NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical starting NPC number
wxkqr	Hierarchical ending NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

cc		Hexadecimal condition code
cc	<i>Explanation</i>	
15	NPC is unequipped	
26	NPC type error	
0C	PM scheduling report is already inhibited for this entity	
17	Command did not execute for any entity specified in the command	

INHIBIT SWITCH MMFG

Explanation of Command

This command requests the inhibition of automatic protection switching from multiplexer-multiple interface unit functional group (MMFG) c on a DS3 unit (DS3U) or a Hybrid DS3 unit (HDS3U) to MMFG P or the automatic switchback from MMFG P to service MMFG c (when MMFG c becomes in-service). Only automatic switches due to failure are affected by this command.

If TOPRTN is specified and MMFG P is already protecting the MMFG c's facility, the command is denied.

If TOSRVC is specified and MMFG c is not under protection, the command is denied.

This inhibition is removed if a switch occurs from the selected MMFG.

Command

[I.35311]
INHSW: [FRM xy][, SEQ ww]:UNIT [q]q, MMFG c[-d], {TOPRTN|TOSRVC}!

Completion Message

There is one output message per MMFG, either completion or denial.

[O.35311]
M hh:mm:ss xy,ww n[vv] INHSW UNIT [q]q MMFG a {TOPRTN|TOSRVC} COMPL

Denial Message

[O.35311.01]
M hh:mm:ss xy,ww n[vv] INHSW UNIT [q]q MMFG a {TOPRTN|TOSRVC} \ COND cc DNY

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
MMFG	Multiplexer-multiplexer interface unit functional group

c,d The number of the MMFG within the unit (1 - 6)
TOPRTN To protection
TOSRVC To service
 When TOSRVC is specified, a range of MMFGs is not acceptable. In this case, the command is denied.
a The number of the service MMFG within the range c and d
cc Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
44	Service MXR is not equipped
4B	The Service MMFG is already under protection
4C	The Service MMFG is not under protection
4E	The switch is already inhibited

UTILITY FOR APPLICATION SOFTWARE RELEASE INSTALLATION, REMOVAL, AND UPGRADE

Explanation of Command

Software that runs on the Digital Signal Processing Platform (DSPP) circuit pack is called application software because it is treated by DACS II as a separate and distinct application that interacts with the DACS II generic software through an operating system like interface. Applications for the DSPP circuit pack are packaged and shipped as separately orderable software releases on PCMCIA cards. Documentation for an individual application is also separate from regular DACS II documentation and is shipped together with the PCMCIA card containing that application.

This (INSTALL) command performs installation services for application releases. These services consist of

- Listing application releases currently installed.
- Installation of a new application release.
- Upgrading an older release of an application with a newer release of that application.
- Removal of an application release.

Usage of this command is limited to the Frame Administrator and users with Restricted Maintenance privileges. The following configuration must be present for a successful application installation, removal, or upgrade.

1. The Main Controller (MC) must be in Maintenance Condition (MCOND).
2. The SMEM slot of the MC must contain the following depending on the task:
 - For installing or upgrading an application the SMEM slot must have inserted into it a PCMCIA card purchased from Lucent Technologies that contains the application to be installed or upgraded.
 - For removing an application the SMEM slot should contain the normal DACS II card with the current executables and system database.

This command allows the listing of application version information, but DACS II must be in MCOND for this to work. Command I.51001 UTL::QRY, MEMSTAT should be used for listing application version information while DACS II is in-service.

To install DSPP Application software, follow the Installation Procedure in the Software Release Description which should have accompanied the software. The following steps can be considered an overview:

1. The Main Controller must be placed in Maintenance Condition (MCOND).
2. The regular memory card in the SMEM slot must be removed logically and physically.
3. The memory card with the application must be inserted into slot SMEM and then must be restored.
4. The customer must invoke the INSTALL command as shown in the input command format section.
5. The INSTALL command appears as shown in Menu Display 1 (following). The user is asked to respond with a number between "1" and "3" or with a "Q" to quit. A response of "1" initially generates a response as shown in Menu Display 1, which shows that in the PMEM slot there is a regular DACS II memory card. This card does not have an application program, thus no application line is shown. The memory card in the SMEM slot is identified as an application distribution card (called DSP DISTRIBUTION CARD), and it **does** have an application on it. Note that the type, the version, and the date stamp of when the application was built is given; this is the identity of the application.
6. The actual install happens when the user responds with a "2" to the INSTALL menu. This is shown in Menu Display 4.
7. Then the user can quit out of the install menu as shown in Menu Display 9.

Upgrading an application from one version to another is a very similar procedure as given previously. The memory card carrying the new version of the application must be in the SMEM slot.

Menu Display 3 shows what a listing of the applications looks like. Notice that the regular DACS II card in PMEM has the application version that is to be replaced, while the application card in the SMEM slot has the application version that is to replace the current version.

Menu Display 5 shows how the actual upgrade takes place if no NPCs are actually running the application.

Menu Display 6 shows how the actual upgrade takes place if at least one NPC is running the application. The user gets a chance to reconsider the upgrade, which must be responded to with a "Y", before the actual upgrade takes place. Please note that as part of the upgrade the application is downloaded into the appropriate DSPP Circuit Pack(s) if they are in service and each affected DSPP Circuit Pack is then rebooted after the download is complete. This last step happens at the time the MC is placed back into service.

Menu Display 7 shows how to remove an application from the regular DACS II memory card. Again, the user is required to respond to "ARE YOU REALLY SURE" questions to ensure that no inadvertent mistakes are made.

Menu Display 8 shows what happens when an attempt is being made to remove an application when at least one NPC is still running that application. The removal attempt is denied.

As previously stated, the execution of the INSTALL command generates a menu for the user. These menus are shown in nine displays next:

Menu Display 1:

Listing application releases (No application installed, but application card in SMEM slot):

***** DSP PLATFORM - LOAD INSTALLATION UTILITY *****

1. List DSPP Load Files
2. Install DSPP Load Files
3. Remove DSPP Load Files

Enter number of command [1-3], or Q to QUIT:1

DSP LOADS ON MEMORY CARDS:

```
===== LOADS ON PMEM: (DACS II CARD) =====
NAME      BYTES TYPE  VERSION  DATE BUILT
-----
```

```
===== LOADS ON SMEM: (DSP DISTRIBUTION CARD) =====
NAME      BYTES TYPE  VERSION  DATE BUILT
-----
SDxload   bbbbb SDx  g.ii.rr  yy/mm/dd hh:mm:ss
-----
```

Menu Display 2:

Listing application releases (Both PMEM and SMEM have the same application):

***** DSP PLATFORM - LOAD INSTALLATION UTILITY *****

1. List DSPP Load Files
2. Install DSPP Load Files
3. Remove DSPP Load Files

Enter number of command [1-3], or Q to QUIT:1

DSP LOADS ON MEMORY CARDS:

```
===== LOADS ON PMEM: (DACS II CARD) =====
NAME          BYTES TYPE  VERSION  DATE BUILT
-----
SDxload      bbbbbbb SDx  g.ii.rr  yy/mm/dd hh:mm:ss
```

```
===== LOADS ON SMEM: (DACS II CARD) =====
NAME          BYTES TYPE  VERSION  DATE BUILT
-----
SDxload      bbbbbbb SDx  g.ii.rr  yy/mm/dd hh:mm:ss
```

Menu Display 3:

Listing application releases (PMEM and SMEM have different versions of the same application, SMEM has an application card)

***** DSP PLATFORM - LOAD INSTALLATION UTILITY *****

1. List DSPP Load Files
2. Install DSPP Load Files
3. Remove DSPP Load Files

Enter number of command [1-3], or Q to QUIT:1

DSP LOADS ON MEMORY CARDS:

```
===== LOADS ON PMEM: (DACS II CARD) =====
NAME      BYTES TYPE  VERSION  DATE BUILT
-----
SDxload    bbbbbbb SDx  g.ii.rr  yy/mm/dd hh:mm:ss
```

```
===== LOADS ON SMEM: (DSP DISTRIBUTION CARD) =====
NAME      BYTES TYPE  VERSION  DATE BUILT
-----
SDxload    bbbbbbb SDx  g.ii.rr  yy/mm/dd hh:mm:ss
```

Menu Display 4:

Installing a new application release:

***** DSP PLATFORM - LOAD INSTALLATION UTILITY *****

1. List DSPP Load Files
2. Install DSPP Load Files
3. Remove DSPP Load Files

Enter number of command [1-3], or Q to QUIT:2

Installing DSP load file: x.xx/SDxload, bbbbbbb bytes from SMEM to PMEM

Installation Complete, Number of files installed from SMEM to PMEM: 1.

Menu Display 5:

Upgrading an older release of an application with a newer release of that application:

***** DSP PLATFORM - LOAD INSTALLATION UTILITY *****

1. List DSPP Load Files
2. Install DSPP Load Files
3. Remove DSPP Load Files

Enter number of command [1-3], or Q to QUIT:2
WARNING: different SDxload file exists on target: PMEM
OLD (PMEM): SDxxx g.ii.rr yy/mm/dd hh:mm:ss
NEW (SMEM): SDxxx g.ii.rr yy/mm/dd hh:mm:ss
0 NPCs may be affected

Do you wish to continue overwrite of this file? [y/N]:Y
Installing DSP load file: x.xx/SDxload, bbbbbbb bytes from SMEM to PMEM

Installation Complete, Number of files installed from SMEM to PMEM: 1.

Menu Display 6:

Upgrading an older release of an application with a newer release of that application while at least one NPC is running the application.

***** DSP PLATFORM - LOAD INSTALLATION UTILITY *****

1. List DSPP Load Files
2. Install DSPP Load Files
3. Remove DSPP Load Files

Enter number of command [1-3], or Q to QUIT:3 2
WARNING: different SDxload file exists on target: PMEM
OLD (PMEM): SDxxx g.ii.rr yy/mm/dd hh:mm:ss
NEW (SMEM): SDxxx g.ii.rr yy/mm/dd hh:mm:ss
x NPCs may be affected

Do you wish to continue overwrite of this file? [y/N]:Y
Installing DSP load file: x.xx/SDxload, bbbbbb bytes from SMEM to PMEM

Installation Complete, Number of files installed from SMEM to PMEM: 1.

Menu Display 7:

Removing an application release:

***** DSP PLATFORM - LOAD INSTALLATION UTILITY *****

1. List DSPP Load Files
2. Install DSPP Load Files
3. Remove DSPP Load Files

Enter number of command [1-3], or Q to QUIT:3

WARNING: This function will REMOVE a DSP PLATFORM load
from the DACSII flash card you specify.

Are you REALLY SURE you wish to proceed? [y/N]: Y
Enter Device [A=PMEM, B=SMEM]: A
----- REMOVE FILES: PMEM DEVICE -----

1. Remove SDxload (bbbbbb bytes)
- Q. QUIT

Enter File number to remove, or "Q" to QUIT: 1
WARNING: This will remove SDxload on PMEM.

Are you REALLY sure? [y/N]: Y
File SDxload removed from PMEM.

Menu Display 8:

Attempting to remove an application release when NPCs are running that application:

***** DSP PLATFORM - LOAD INSTALLATION UTILITY *****

1. List DSPP Load Files
2. Install DSPP Load Files
3. Remove DSPP Load Files

Enter number of command [1-3], or Q to QUIT:3

WARNING: This function will REMOVE a DSP PLATFORM load
from the DACSII flash card you specify.

Are you REALLY SURE you wish to proceed? [y/N]: Y

Enter Device [A=PMEM, B=SMEM]: A

----- REMOVE FILES: PMEM DEVICE -----

1. Remove SDxload (bbbbbbb bytes) 1 NPCs using load!
- Q. QUIT

Enter File number to remove, or "Q" to QUIT: 1

Can't remove file SDxload, there are 1 NPCs using this load

Menu Display 9:

Quitting the INSTALL menu:

***** DSP PLATFORM - LOAD INSTALLATION UTILITY *****

1. List DSPP Load Files
2. Install DSPP Load Files
3. Remove DSPP Load Files

Enter number of command [1-3], or Q to QUIT:Q
INSTALL QUIT

Command

[I.55721]
INSTALL;

Completion Message

[O.55721]
<install menu> and <user responses>
INSTALL QUIT

Denial Message

M hh:mm:ss xy,ww n[vv] INSTALL 2 LN MSG:
[MUST BE USER DAX OR HAVE RMON PRIVILEGE TO USE INSTALL DNY]
[FRAME MUST BE IN MCOND TO USE INSTALL DNY]

Explanation of Parameters

INSTALL	Invoke the install menu to list, install, upgrade, or remove application files
g.ii.rr	Generic.issue.release string that identifies the version of the application
SDx	The "x" in the type field SDx identifies the application
D1X.50/X.57	Subrate application
SD3	Digital Multipoint Bridge application
SD4DDS	Subrate and Multipoint Junction Unit application

INVALID SOFTWARE IDENTIFICATION BLOCK

Explanation of Message

This message indicates that either a software identification block check failed or that a mismatch exists in the generic number, point issue, or release number.

Autonomous Message

[O.01291]
I hh:mm:ss xy,ww INVALID SFW ID BLOCK COND cc COMPL

Explanation of Parameters

SFW	Software
ID	Identification
BLOCK	Block
COND	Condition

Contents

■ LINE,TOTAL	<u>15-2</u>
■ LIST,END	<u>15-3</u>
■ LOGIN,USER,PASSWD,DACS,II	<u>15-5</u>
■ LOGOFF,USER,LINK,INCL	<u>15-8</u>

QUERY LINE NUMBER

Explanation of Command

This command retrieves the current line number and the total number of lines within the macro while in a macro session.

Command

Nonhierarchical

[I.19071]

LINE:[FRM xy][,SEQ ww]:!

Completion Message

1.544 Mbit/s Termination

[O.19071]

M hh:mm:ss xy,ww n[vv] LINE <line pointer> TOTAL \
<line total> COMPL

2.048 Mbit/s Termination

[O.19071]

M hh:mm:ss xy,ww n[vv] LINE <line pointer> TOTAL \
<line total> COMPL

Explanation of Parameters

LINE	Line
line pointer	Current line number
TOTAL	Total
line total	Total number of lines within the macro

LIST MACRO CONTENTS

**Explanation of
Command**

This command is used to list the contents of a macro. If neither a range of line numbers nor END is specified, then the line pointed to by the line pointer (the current line) is listed.

Command

[I.19061]
LIST:[FRM xy][,SEQ ww]:{<starting line>|END}[-{<ending line>| \
END}]]!

**Completion
Message****Nonhierarchical**

If the macro contains no component command:

[O.19061]
M hh:mm:ss xy,ww n[vv] LIST[{<starting line>| \
END}[-{<ending line>|END}]] NONE COMPL

If the macro contains one or more component commands:

[O.19062]
M hh:mm:ss xy,ww n[vv] LIST[{<starting line>| \
END}[-{<ending line>|END}]] e LN MSG:
00001 <first 65 characters of 1st component command text>
 <remaining characters of 1st component command text>
 .
 .
 .
mmmmm <first 65 characters of mth component command text>
 <remaining characters of mth component command text> {EOM|COMPL}

M hh:mm:ss xy,ww n[vv] LIST[<starting line> | \
[-<ending line>]] e LN MSG:
nnnnn <first 65 characters of nth component command text>
 <remaining characters of nth component command text>
 .
 .
 .

```
ppppp <first 65 characters of pth component command text>
      <remaining characters of pth component command text> {EOM|COMPL}

M hh:mm:ss xy,ww n[vv] LIST[ <starting line> \
[-<ending line>]] e LN MSG:
qqqqq <first 65 characters of qth component command text>
      <remaining characters of qth component command text>
      .
      .
      .
zzzzz <first 65 characters of zth component command text>
      <remaining characters of zth component command text> COMPL
```

Denial Message

[O.19061.01]

```
M hh:mm:ss xy,ww n[vv] LIST[ {<starting line>| \
END}[-{<ending line>|END}]] COND cc DNY
```

**Explanation of
Parameters**

e	Number of lines in the Completion Message
starting line	Beginning line number of a line range (1, 2, ..., n) Starting line indicates the line number of the first line of a range of lines within a macro that are to be listed.
ending line	Ending line number of a line range (2, 3, ..., n+1) Ending line indicates the line number of the last line of a range of lines within a macro that are to be deleted.
END	End Line number of the line at the end of the macro.
00001, mmmmm, nnnnn, ppppp, qqqqq, zzzzz	Component command line numbers (00001 through 99999)
cc	Hexadecimal condition code

cc	<i>Explanation</i>
6B	Invalid line number
6E	No edit session active

LOG ON TO DACS II

Explanation of Command



NOTE:

Before logging on to DACS II for the first time, it is suggested that the user thoroughly read the documentation for this message.

This command allows a user or frame administrator to identify himself/herself to DACS II by an identification code, the **user id**, on any link.

DACS II checks the user id and password against entries previously stored in the data base. If the user is not authorized, DACS II will deny the input command.

A user can log on to DACS II from more than one link.

If on a Snider administrative link, the command must be entered as follows:

LOGIN:FRM xy,SEQ ww:USER <user id>!

The DACS II system will respond with the following dialogue:

PASSWD: The user enters a password. Note that the password is not echoed by DACS II.

If on an X.25 administrative link, the command must be entered as follows:

LOGIN:FRM xy,SEQ ww:USER <user id>,PASSWD <user password>!

Output from this command is sent only to the link on which the command was input.

Command

1.544 Mbit/s Termination

[I.39001]

LOGIN:[FRM xy][,SEQ ww]:USER <user id>[,PASSWD <user password>]!

If the user is on a Snider protocol administrative link, the message is entered as follows:

[I.39001]

LOGIN:[FRM xy][,SEQ ww]:USER <user id>!

Then DACS II will prompt the following:

PASSWD: <user enters the user password>

2.048 Mbit/s Termination

[I.39001]

LOGIN:[FRM xy][,SEQ ww]:USER <user id>[,PASSWD <user password>]!

If the user is on a Snider protocol administrative link, the message is entered as follows:

[I.39001]

LOGIN:[FRM xy][,SEQ ww]:USER <user id>!

Then DACS II will prompt the following:

PASSWD: <user enters the user password>

Completion Message

1.544 Mbit/s Termination

[O.39001]

M hh:mm:ss xy,ww n[vv] LOGIN USER <user id> COMPL

WARNING MESSAGE

THIS SYSTEM IS RESTRICTED TO [AT&T]AUTHORIZED USERS FOR
BUSINESS PURPOSES. UNAUTHORIZED ACCESS IS A VIOLATION OF THE
LAW. THIS SERVICE MAY BE MONITORED FOR ADMINISTRATIVE AND SECU-
RITY REASONS. BY PROCEEDING, YOU CONSENT TO THIS MONITORING.

2.048 Mbit/s Termination

[O.39001]

M hh:mm:ss xy,ww n[vv] LOGIN USER <user id> COMPL

WARNING MESSAGE

THIS SYSTEM IS RESTRICTED TO [AT&T]AUTHORIZED USERS FOR
BUSINESS PURPOSES. UNAUTHORIZED ACCESS IS A VIOLATION OF THE
LAW. THIS SERVICE MAY BE MONITORED FOR ADMINISTRATIVE AND SECU-
RITY REASONS. BY PROCEEDING, YOU CONSENT TO THIS MONITORING.

Denial Message

1.544 Mbit/s Termination

[O.39001.01]

M hh:mm:ss xy,ww n[vv] LOGIN USER <user id> COND cc DNY

2.048 Mbit/s Termination

[O.39001.01]

M hh:mm:ss xy,ww n[vv] LOGIN USER <user id> COND cc DNY

Explanation of Parameters

USER	User
user id	User identifier The user login identification (two to eight alphabetic characters)
PASSWD	Password
user password	User password (at least six alphanumeric characters)
cc	Hexadecimal condition code

cc	<i>Explanation</i>
D3	User does not exist
D4	A user is already logged in on the link/vc
D6	Incorrect or missing password

LOG OFF USER OR LINK

Explanation of Command

This command requests DACS II to log off a user or a link. A user is specified by his or her **<user id>**; a link, by its physical link number. The virtual link number is optional. The INCL keyword is also optional. The virtual link number and INCL are mutually exclusive. The INCL keyword must be specified to log off all virtual links of an X.25 link (5 or 6) or a TCP/IP link (7).

The DACS II frame administrator can use the **<user id>** option from any link to log off any user on another link. If the user is logged in on more than one link and is not the frame administrator, DACS II will log the user off every link. An autonomous message will appear on the user's link if the frame administrator logs a user out.

Output from this command is sent only to the link on which the command was input.

Command

1.544 Mbit/s Termination

[I.39101]

```
LOGOFF:[FRM xy][,SEQ ww]:{USER <user id>|LINK j[{mm|,INCL}]}
```

2.048 Mbit/s Termination

[I.39101]

```
LOGOFF:[FRM xy][,SEQ ww]:{USER <user id>|LINK j[{mm|,INCL}]}
```

Completion Message

1.544 Mbit/s Termination

[O.39101]

```
M hh:mm:ss xy,ww n[vv] LOGOFF {USER <user id>|LINK j[{mm|,INCL}]}  
COMPL
```

2.048 Mbit/ s Termination

[O.39101]

M hh:mm:ss xy,ww n[vv] LOGOFF {USER <user id>|LINK j[{mm}|,INCL]}}
COMPL

Denial Message

1.544 Mbit/s Termination

[O.39101.01]

M hh:mm:ss xy,ww n[vv] LOGOFF {USER <user id>|LINK j[{mm}|,INCL]}}
COND cc DNY

2.048 Mbit/ s Termination

[O.39101.01]

M hh:mm:ss xy,ww n[vv] LOGOFF {USER <user id>|LINK j[{mm}|,INCL]}}
COND cc DNY

Autonomous Message

1.544 Mbit/s Termination

2.048 Mbit/ s Termination

Explanation of Parameters

USER	User
user id	User identifier (two to eight alphabetic characters)
	User login identification
TERM	Terminal (link)
LINK	Link
j[mm]	Administrative link number
j	Physical link number (1 through 7)
mm	Virtual link/session number (01 through 16)
	The virtual link/session number must be entered when logging off a single virtual link of an X.25 link or a session of a TCP/IP link.
INCL	Inclusive

Include virtual links of link 5,6 or sessions of link 7. The INCL keyword can only be entered with links 5,6 or 7, and no virtual link/session number is allowed when this keyword is used. That is, "mm" and "INCL" are mutually exclusive. In addition, the INCL keyword is also mutually exclusive with the "<user id>". When the INCL keyword is entered, it means that the logoff applies to all the virtual links of the X.25 link (link 5, 6) or all the sessions of the TCP/IP link (link 7).

COND

Condition

cc

Hexadecimal condition code

cc	<i>Explanation</i>
D3	User does not exist
D5	No user is logged in on the link/vc
D7	Cannot execute privileged command
DA	User is not logged in
E1	Virtual circuit is not specified for X.25 link
E2	Invalid link number specified
E3	Invalid keyword(s) combination specified

Contents

■ MC,MCOND	<u>16-2</u>
■ MC,RESET,RELEASE,DACSII,ISSUE	<u>16-3</u>
■ MOVE,FROM,END,TO	<u>16-6</u>
■ MP,STARTUP,STF,ATP	<u>16-8</u>
■ MTC,STF,ATP	<u>16-9</u>

UTILITIES

Explanation of Command

This autonomous message reports that the Main Controller is in maintenance condition during the boot process.

Autonomous Message

[O.58011]
I hh:mm:ss xy,ww MC MCOND

Explanation of Parameters

MC	Main controller
MCOND	Main condition

MAIN CONTROLLER RESET RELEASE DACS II ISSUE

Explanation of Message

This message is used to report that the reset procedure has successfully completed.

Autonomous Message

[O.01261]
I hh:mm:ss xy,ww n[vv] MC RESET RELEASE DACSIgg.pp ISSUE r \
2 LN MSG:
FPKG kkttuuvv [COND cc] COMPL

Explanation of Parameters

MC	Main controller
RESET	Reset
RELEASE	Release
ISSUE	Issue
gg.pp	DACS II software release number
r	Software issue number of the release
FPKG	Feature package
kkttuuvv	Feature package identification (Hex)
00000001	DS1
00000002	CEPT
00000004	Subrate
00000008	Direct SLC [®] 96 and Series 5 Carrier Interface
00000010	DS3 Terminations
00000020	Enhanced CEPT
	C-bit
	C-bit filtering
	RPSFI
00000040	Switched Teleconferencing
00000080	CEF

00000100 Enhanced DS1 Performance Monitoring
00000200 DS0/DS1 Roll
00000400 AT&T Security Warning Message
00000800 Nx64kbit Test Access
00001000 Clear 2MB/s Interface
00002000 TS0 to Non TS0 Cross-connection
00004000 2MB/S Roll
00008000 SPARE
00010000 TRT/FT Features
Intervention Level
00020000 DS3 Hybrid

In general, a feature package identification code is a combination of several individual feature package numbers. To determine the individual features that make up a feature package, decode the feature package identification code. This code is an eight digit hexadecimal number. Each hexadecimal number represents a four-bit binary number. Within this binary number each feature is associated with one particular bit. Consequently to determine the feature list from a feature package identification code it is necessary to convert each hexadecimal digit to its binary equivalent and look up the features in the preceding list. For example, the feature package identification code 0000000F can be converted to the following binary number working from left to right one hex digit at a time.

0000 0000 0000 0000 0000 0000 0000 1111

This number contains eight binary numbers each representing one of the hexadecimal numbers in the feature package identification code 0000000F. The rightmost number of the code contains four features since there are four bits set to one. This would be decoded as follows using the preceding table of features.

Binary	Hex	Feature
0001	1	DS1
0010	2	CEPT
0100	4	Subrate

Binary	Hex	Feature
1000	8	Direct SLC
Total:		
1111	F	DS1 + CEPT + Subrate + SLC

COND

Condition

DACSII Digital Access and Cross-Connect System II

MOVE MACRO LINES

Explanation of Command

This command moves one or more lines and places them after a specified line in the macro while in a macro session.

If only one line is specified, the starting line or END, then only that line is moved to destination line.

Command

```
[I.19091]
MOVE:[FRM xy][,SEQ ww]:FROM {<starting line>|END} \
[-{<ending line>|END}],TO {<destination line>|END}!
```

Completion Message

```
[O.19091]
M hh:mm:ss xy,ww n[vv] MOVE FROM {<starting line>|END} \
[-{<ending line>|END}] TO {<destination line>|END} COMPL
```

Denial Message

```
[O.19091.01]
M hh:mm:ss xy,ww n[vv] MOVE FROM {<starting line>|END} \
[-{<ending line>|END}] TO {<destination line>|END} COND cc DNY
```

Explanation of Parameters

FROM	From
starting line	Beginning line number of a line number range (1, 2, ..., n) Starting line indicates the first line of the group of lines to be moved.
ending line	Ending line number of a line number range (2, 3, ..., n+1) Ending line indicates the end line of the group of lines to be moved.
END	End

END is a special line number that marks the position of the last line in the macro. If END is specified in place of ending line, then the lines from starting line through END are moved to destination line. If END is specified as destination line, then the line range specified in the command is moved, as a unit, to the line following END. The line number associated with END changes to the new line number of the last line moved.

TO To

destination line Destination line number for the move (0, 1, 2, ..., n)

The first line of the lines to be moved are placed on the line following destination line.

COND Condition

cc Hexadecimal condition code

cc	<i>Explanation</i>
6B	Invalid line number

STARTUP

Explanation of Message

This message indicates that the main processor has initialized itself, established local area network communications between itself and the communications interface, or the enhanced communications interface, and has performed self-diagnostics. The results of these diagnostics are reported as some tests failed or all tests passed.

Autonomous Message

[O.01221]
MP STARTUP {STF|ATP}

Explanation of Parameters

MP	Main processor
STARTUP	Startup
	Indicates initialization
STF	Some tests failed
ATP	All tests passed

MAINTENANCE

**Explanation of
Message**

This message indicates that the maintenance controller has initialized itself and has performed self-diagnostics. The results of these diagnostics are reported as some tests failed or as all tests passed.

**Autonomous
Message**

[O.01281]
MTC {STF|ATP}

**Explanation of
Parameters**

MTC	Maintenance circuit
STF	Some tests failed
ATP	All tests passed

Contents

■ OCNT, FROM, TO, MPM, NAM, CUS, INCL, RDC	<u>17-2</u>
■ OCNT, FROM, TO, RDC, CUS, INCL, PRIOUT, NAM	<u>17-12</u>
■ OCON, FROM, TO, MPM, NAM, CUS, INCL, RDC	<u>17-24</u>
■ OCON, FROM, TO, RDC, CUS, INCL, PRIOUT, NAM	<u>17-34</u>
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■ ODIS, FROM, TO, INCL, OOS, DCC, PRIOUT	<u>17-58</u>
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ONE-WAY CROSS-CONNECT TERMINATED MULTIPOINT CIRCUIT

Explanation of Command

1.544 Mbit/s Termination

This message requests a leg to be one-way terminated and cross-connected to a multipoint circuit. The terminated cross-connection means that the circuit is set up in the terminated state with the disconnect channel code inserted in both directions of transmission. Note that for the SLC[®] related denial messages, "not provisioned" means not added and/or not grown.

The backbone and broadcast terminations are on the virtual NPCs.

If the user wants to cross-connect Nx64 kbits/s circuits, then the range feature of this command should be used.

2.048 Mbit/s Termination

This message requests a leg to be one-way terminated and cross-connected to a multipoint circuit. The terminated cross-connection means that the circuit is set up in the terminated state with the disconnect channel code inserted in both directions of transmission.

The backbone and broadcast terminations are on the virtual NPCs.

For both NSA and CAS primaries, the channel numbering range, ddd and eee, is 001 to 030 and jjj is from 001 to 999. Only TRSP channels are allowed for CAS primaries. For CAS primaries, the spare bits of the signaling channel (timeslot 16) are cross-connected by using the value of 031 for both directions.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.12121]

OCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \\
MPM(fmd,tmd),<tc>[, {CUS|INCL}][,RDC]!

Hierarchical

[I.12121]

OCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \\
MPM(fmd, tmd), <tc>[, {INCL|CUS}][, RDC]!

2.048 Mbit/s Termination

Nonhierarchical

[I.12121]

OCNT:[FRM xy][,SEQ ww]:FROM [s]abcdddd[-eee],TO [t]ghijjj[-kkk], \\
MPM(fmd, tmd)[, <tc>][, NAM][, {CUS|INCL}][, RDC]!

Hierarchical

[I.12121]

OCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \\
MPM(fmd, tmd)[, <tc>][, NAM][, {INCL|CUS}][, RDC]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.12121]

M hh:mm:ss xy, ww n[vv] OCNT [s]abcdddd[-eee], [t]ghijjj[-kkk] \\
2 LN MSG:
fmd, tmd <tc>[NOBBL {F|T}][CUS][RDC] COMPL

Hierarchical

[O.12121]

M hh:mm:ss xy, ww n[vv] OCNT uvmnpddd[-eee], wxkqrjjj[-kkk] \\
fmd, tmd <tc>[NOBBL {F|T}][CUS][RDC] COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.12121]

M hh:mm:ss xy, ww n[vv] OCNT [s]abcdddd[-eee], [t]ghijjj[-kkk] \\
2 LN MSG:
fmd, tmd[<tc>][NOBBL {F|T}][CUS][RDC][NAM] COMPL

Hierarchical

[O.12121]

M hh:mm:ss xy,ww n[vv] OCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
2 LN MSG:
fmd,tmd[<tc>][NOBBL {F|T}][CUS][RDC][NAM] COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.12121.01]

M hh:mm:ss xy,ww n[vv] OCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.12121.02]

M hh:mm:ss xy,ww n[vv] OCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] d <st> DNY

Hierarchical

[O.12121.01]

M hh:mm:ss xy,ww n[vv] OCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.12121.02]

M hh:mm:ss xy,ww n[vv] OCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] d <st> DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.12121.01]

M hh:mm:ss xy,ww n[vv] OCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.12121.02]

M hh:mm:ss xy,ww n[vv] OCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] d <st> DNY

Hierarchical

[O.12121.01]

M hh:mm:ss xy,ww n[vv] OCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.12121.02]

M hh:mm:ss xy,ww n[vv] OCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] d <st> DNY

Explanation of Parameters

FROM	From
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
TO	To
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical FROM NPC number
	uv,wx Unit number
	m,k Module number
	np,qr NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd, jjj	FROM channel numbers
eee, kkk	TO channel numbers denoting end of range specification
	Channel numbers
	001-024
	001-047 Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)

001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)

025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)

049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

000-030 CEPT type NPCs grown as CAS

000-031 CEPT type NPCs grown as NSA

Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.

Conference numbers 001-500 (Virtual NPC)

MPM Multipoint mode

fmd FROM mode

tmd TO mode

Modes fmd and tmd set the modes of the FROM and TO ends of the circuit. There are three possible values of fmd and tmd:

LEG Nonvirtual circuit end of the cross-connections. Must be an FTU, DS3U, HDS3U channel.

BRD Nonbackbone leg of a virtual conference. Must be a virtual NPC channel.

BBL Backbone leg of a virtual conference. Must be a virtual NPC channel.

For OCNT multipoint circuits, there are two valid combinations for fmd and tmd:

(LEG,BBL)

for the backbone leg of a broadcast multipoint circuit

(BRD,LEG)

for the broadcast legs of the multipoint circuit.



NOTE:

Default values for noise guard (NG) and echo suppression (ES) are applied to symmetrical bridges (multipoint mode SYM) and polling circuits (multipoint mode BBL,BRD):

	Symmetrical bridges	NG = -18 db	ES = -18 db
	Polling circuits	NG = 0 db	ES = 0 db
NOBBL	No Backbone Leg		
F	From		
T	To		
tc	Trunk conditioning		
	Represents the desired cross-connected signaling and insertion word applied when a failure occurs. The tc options allowed are as follows:		
	1.544 Mbit/s Termination		
	TRSP,TRB		
	no signaling, insertion word pattern of E4		
	TRSP,MUX		
	no signaling, insertion word pattern of 1A		
	Both Terminations		
	TRSP,IW X'pq		
	no signaling, insertion word pattern of pq		
	TRSP no signaling		
	All leg connections to multipoint circuits using a virtual NPC must use TRSP signaling (no signaling). The insertion word (IW) portion is user specified and may be varied from leg to leg.		

⇒ NOTE:
In a gateway application, when E1 channels are connected to T1 channels, the following rules apply to the transmittal of the Insertion Word (IW) towards the facility. If the Insertion Word needs to be transmitted towards the facility as a result of consequent action, then the Insertion Word transmitted by the T1 NPC towards its transmission facility is the Insertion Word specified in this command; however, the Insertion Word transmitted by the E1 NPC towards its facility is always X'FF.

NAM No A-law to μ -law

The A-law to μ -law and μ -law to A-law code translators on the E1 type NPC are disabled. This keyword is valid in the following types of cross-connects:

E1 to E1 Multi-point cross-connects have A-law to μ -law and μ -law to A-law set as a default. This conversion is performed on pure E1 multi-point connections in case a DS1 leg is ever added to the broadcast connection. The NAM keyword is used to disable the conversions. It may be desirable to disable conversions in a pure E1 multi-point cross-connect since such a connection has more quantization noise than a pure E1 two-point cross-connect. This is due to the back to back A-law to μ -law and μ -law to A-law conversions which are taking place.

E1 to DS1 or DS1 to E1

Same explanation as E1 to E1.

DS1 to DS1

Not applicable.

CUS	Customer
	The optional CUS keyword indicates a Customer Controlled Circuit. All legs on a multipoint Customer-Controlled circuit must be designated as CUS.
	A disconnected termination previously marked CUS remains as a Customer Controlled termination.
INCL	Inclusive
	The INCL keyword must be used to reconnect this termination to other terminations. However, if they are reconnected without the CUS keyword, they lose their Customer Controlled status.
RDC	Red circuit
	If the optional RDC field is present, the circuit is flagged as a Red Circuit. All legs on a multipoint Red Circuit must be designated RDC.
mmm	FROM channel number involved in the denial (ddd through eee)
nnn	TO channel number involved in the denial (jjj through kkk)
d	Direction
	F FROM
	T TO
	B Both
st	Status
cc	Hexadecimal condition code

cc	<i>Explanation</i>
06	Invalid range for specified FROM NPC type
07	Invalid range for specified TO NPC type
08	Invalid FROM NPC type for AIS insertion
09	Invalid TO NPC type for AIS insertion
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
20	Line format types are incompatible
21	Trunk conditioning is invalid
22	FMC cannot be cross-connected in this format
50	Trunk conditioning doesn't match that of conference
51	CUS flag doesn't match that of conference
52	RDLD flag doesn't match that of conference
70	Try to add a BBL to VC, but the VC already has backbone
79	Try to operate a TWO-WAY conference with an ONE-WAY input command
80	Database conference width does not match the range in input command
83	Invalid input BBL in terminated TWOWAY/ ONEWAY command
84	Trying to add or delete a leg when a conference is under test

cc	<i>Explanation</i>
85	Input BRD (BBL) has same NPC and channel as BBL (BRD)
B0	Bad use of INCL, cannot override the current state of the conference
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
DD	A loopback is active on the TO termination
E0	Unmatched channel range involving SLC Mode III termination
E4	RT-DCLU cross-connect with different ids
E5	RT-DCLU cross-connect with different channel number
E6	Cross-connect a non Mode I channel to DCLU
E7	Cross-connect a non SLC channel to DCLU
E8	SC invalid for cross-connection specified
E9	MUX or TRB invalid for cross-connection specified

cc	<i>Explanation</i>
EA	AIS invalid for cross-connection specified
EB	NAM invalid for cross-connection specified
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
FF	Termination is in process of being rolled

ONE-WAY CROSS-CONNECTION TERMINATE

Explanation of Command

1.544 Mbit/s Termination

This command connects a one-way terminated circuit or a range of one-way terminated circuits. The circuit(s) are formed with the disconnect code (DCC) inserted in the direction of transmission unless the trunk conditioning specification TRSP,MUX has been used; in this case, the unassigned multiplex code (UMC = X'18) is inserted.

If the user wants to cross-connect Nx64 kbits/s circuits, then the range feature of this command should be used.



NOTE:

For denial messages related to the SLC[®] carrier, "not provisioned" means not added and/or not grown.



NOTE:

For the Gateway application, cross-connection of a CEPT channel to the 24th channel of a T1DM DS1 is not allowed.

2.048 Mbit/s Termination

For a CAS primary, the channel numbering range, ddd, eee, jjj and kkk is 000 to 030 and for NSA primaries, the channel numbering range is 000 to 031. If the 000 (timeslot 0) value is used, it must be used in both the FROM and TO sides of the cross-connect and only the bits reserved for national and international use are cross-connected. If 031 is used in the TO side of the CAS primary, the FROM side must also be a CAS primary and only the spare bits are cross-connected. If 031 is used in the TO side of an NSA, then any value except 000 can be used in the FROM side and all bits are cross-connected.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.12101]

OCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
,<tc>[,RDC][,{CUS|INCL}][,PRIOUT]!

Hierarchical

[I.12101]

OCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
,<tc>[,RDC][,{CUS|INCL}][,PRIOUT]!

2.048 Mbit/s Termination

Nonhierarchical

[I.12101]

OCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
[,<tc>][,<sc>][,NAM][,RDC][,{CUS|INCL}][,PRIOUT]!

Hierarchical

[I.12101]

OCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
[,<tc>][,<sc>][,NAM][,RDC][,{CUS|INCL}][,PRIOUT]!

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.12101]

M hh:mm:ss xy,ww n[vv] OCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
<tc>[RDC][CUS][PRIOUT] COMPL

[O.12102]

M hh:mm:ss xy,ww n[vv] OCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
2 LN MSG:
<tc> [RDC][CUS][PRIOUT]COMPL

Hierarchical

[O.12101]

M hh:mm:ss xy,ww n[vv] OCNT uvmnp[-eee],wxkqrjjj[-kkk] <tc> \
[RDC] [CUS][PRIOUT] COMPL

[O.12102]

M hh:mm:ss xy,ww n[vv] OCNT uvmnpddd[-eee],wxkqrjjj[-kkk] 2 LN MSG:
<tc> [RDC][CUS][PRIOUT]COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.12101]

M hh:mm:ss xy,ww n[vv] OCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
[<tc>][<sc>][NAM][RDC][CUS][PRIOUT] COMPL

[O.12102]

M hh:mm:ss xy,ww n[vv] OCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
2 LN MSG:
[<tc>][<sc>][NAM][RDC][CUS][PRIOUT]COMPL

Hierarchical

[O.12101]

M hh:mm:ss xy,ww n[vv] OCNT uvmnp[-eee],wxkqrjjj[-kkk] \
[<tc>][<sc>][NAM][RDC][CUS][PRIOUT] COMPL

[O.12102]

M hh:mm:ss xy,ww n[vv] OCNT uvmnpddd[-eee],wxkqrjjj[-kkk] 2 LN MSG:
[<tc>][<sc>][NAM][RDC][CUS][PRIOUT]COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.12101.01]

M hh:mm:ss xy,ww n[vv] OCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.12101.02]

M hh:mm:ss xy,ww n[vv] OCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] d <st> DNY

Hierarchical

[O.12101.01]

M hh:mm:ss xy,ww n[vv] OCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] d <st> DNY

[O.12101.02]

M hh:mm:ss xy,ww n[vv] OCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] d <st> DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.12101.01]

M hh:mm:ss xy,ww n[vv] OCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.12101.02]

M hh:mm:ss xy,ww n[vv] OCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] d <st> DNY

Hierarchical

[O.12101.01]

M hh:mm:ss xy,ww n[vv] OCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.12101.02]

M hh:mm:ss xy,ww n[vv] OCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] d <st> DNY

Explanation of Parameters

FROM	From
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
TO	To
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number

	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd, jjj	Channel numbers, denoting the beginning of a range
eee, kkk	Channel numbers, denoting the end of a range
	001-024
	001-047 Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
	000-030 CEPT type NPCs grown as CAS
	000-031 CEPT type NPCs grown as NSA
	Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.

The Facility Data Link (FDL) channel 000 is not allowed in a range. Only the FDL of DE type NPC with ESF Format can be cross-connected.

2.048 Mbit/s Termination

Channel 000 is not allowed in a range of channels and CAS channel 031 (that is, TS16 of a CEPT type NPC) is also not allowed in a range of channel numbers.

tc Trunk conditioning specification

This specifies the signaling and insertion word to be applied to the cross-connection when a failure occurs. In the input command the signaling and insertion word specifications are entered separately, with a comma as the delimiter. An example of tc is "TC(----,mnop),TRB". The following signaling options are allowed:

1.544 Mbit/s Termination

TC(----,mnop) One-way, 4-state signaling in binary

For ESF type framing format, software expands 4-state to 16-state by duplicating the format on the remaining frames on a superframe.

TC(-----,mnopqrst)

One-way, 16-state signaling in binary

Only valid for ESF framing formats.

TC(X'-- ,X'cd) One-way, 16-state signaling in hexadecimal

TRSP Transparent, no signaling

2.048 Mbit/s Termination

TC(----,mnop) One-way, 4-state signaling in binary

For CEPT type framing format, software expands 4-state to 16-state by duplicating the format on the remaining frames on a superframe.

TC(-----,mnopqrst)

One-way, 16-state signaling in binary

Only valid for CEPT framing formats

TC(X'-- ,X'cd) One-way, 16-state signaling in hexadecimal

TRSP Transparent, no signaling

Omitted Defaults to TC(X'-- ,X'FF) if both terminations are channel associated signaling (CAS) type. It defaults to TRSP if one of the terminations is nonsignaling associated (NSA) type.

Both Terminations

The following insertion word options are allowed:

1.544 Mbit/s Termination

IW X'pq	The 8-bit pattern corresponding to the hexadecimal value of pq is inserted in the downstream direction of a failure on either line
TRB	Standard trouble code, equal to IW X'E4
MUX	MUX out of sync code, equal to IW X'1A

2.048 Mbit/s Termination

IW X'pq	The 8-bit pattern corresponding to the hexadecimal value of pq is inserted in the downstream direction of a failure on either line
Omitted	Defaults to IW X'FF Additional rules apply for CEPT cross-connection. (See Tables 1 and 2.)
TC	Trunk conditioning When the DCC option is provided in GRTH::NPC, a 4-bit pattern is inserted into the associated portion of time slot 16 for CAS circuits when the circuit is disconnected.
CAS	Channel associated signaling in time slot 16
TRSP	No signaling sent out in the associated portion of time slot 16 for CAS primaries. TRSP is the only option for NSA primaries.

Allowable Signaling Type and Signaling Consequent Action

Primary Type in Cross-connect	Allowable <tc> Signaling Specification	Resulting Signaling Code FROM, TO	Resulting Signaling Consequent Action (Hardware) FROM, TO	Resulting Signaling Consequent Action (Firmware) FROM, TO	Resulting Disconnect (When DCC used in disconnect command)
CAS ↔ CAS	TRSP	Fixed at X'D	Fixed at X'D	Fixed at X'D	X'D
	TC- X'uv,X'yz*	CAS (Passed Through)	X'F	X'uv,X'yz	X'v,X'z
	Omitted	CAS (Passed Through)	X'F	X'F	X'F

Allowable Signaling Type and Signaling Consequent Action

Primary Type in Cross-connect	Allowable <tc> Signaling Specification	Resulting Signaling Code FROM, TO	Resulting Signaling Consequent Action (Hardware) FROM, TO	Resulting Signaling Consequent Action (Firmware) FROM, TO	Resulting Disconnect (When DCC used in disconnect command)
NSA ↔ CAS	TRSP/ Omitted	None (Fixed at X'D in CAS direction)	Fixed at X'D in CAS direction	Fixed at X'D in CAS direction	X'D in CAS direction
NSA ↔ NSA	TRSP/ Omitted	Not appl.	Not appl.	Not appl.	Not appl.



NOTE:

For TCON and TCNT TC is X'uv,X'yz.
For OCON, OCNT and BCON TC is --,X'yz.

Allowable <tc> Time slot X-connect keyword	Resulting Cross-Connected Time slot Consequent Action TO	Resulting Disconnect Code (when DCC used in disconnect command)
Omitted	X'FF	X'FF
IW X'pq*	X'FF	X'pq
* Only used as a means of providing per time slot DCC codes. If the DCC code is not used when issuing the disconnect command, then the insertion word at the time the NPC was grown is used. This growth insertion word defaults to hex D5 if not explicitly specified at growth time.		



NOTE:

In a gateway application, when E1 channels are connected to T1 channels, the following rules apply to the transmittal of the Insertion Word (IW) towards the facility. If the Insertion Word needs to be transmitted towards the facility as a result of consequent action, then the Insertion Word

transmitted by the T1 NPC towards its transmission facility is the Insertion Word specified in this command; however, the Insertion Word transmitted by the E1 NPC towards its facility is always X'FF.

sc Signaling control

The variable sc represents the optional signaling bit control specification and is used only in the Channel Associated Signaling (CAS) to CAS application with CAS signaling.

If this option is not used, all four cross-connected time slot 16 (abcd) signaling bits in each direction will be cross-connected unchanged.

Signaling control is specified as follows:

SC(----,efgh)

efgh To direction

Where efgh represents the four time slot 16 signaling bits to be controlled. All 4 bits can be controlled independently. Control is applied by replacing each character in the variable efgh with the appropriate control character.

The allowable control characters are

P Pass through unchanged

V Pass through inverted

0 Set output to 0

1 Set output to 1

The effect of the V control character depends upon whether the connection is international or gateway.

International: Inversion takes place on both the From and To directions. The net effect is to cancel out the inversion. Hence it appears that no inversion took place.

Gateway: Inversion takes place only on the international side of the connection. The effect is an inversion.

Two-Point:

E1 to DS1 Gateway cross-connects have A-law to μ -law and μ -law to A-law conversion set as a default. The NAM keyword is used to disable the conversions.

	E1 to E1	Default, the NAM keyword may be used but there is no need to specify NAM explicitly since A-law to μ -law and μ -law to A-law conversion is not needed, and therefore not performed, for a pure E1 cross-connect.
	DS1 to DS1	Not applicable.
	CUS	Customer The circuit is flagged as a customer controlled circuit.
RDC		Red circuit
INCL		Inclusive A termination designated as CUS or RDC cannot be disconnected or modified without using the INCL keyword in the message. Also, an NPC which supports these circuits cannot be manually removed unless the INCL keyword is given in the remove message.
PRIOUT		Priority Output This keyword is used on the command line to prioritize the output response.
mmm		FROM channel number involved in the denial (ddd through eee)
nnn		TO channel number involved in the denial (jjj through kkk)
d		Direction
	F	From
	T	To
	B	Both
st		Status
cc		Hexadecimal condition code

cc	<i>Explanation</i>
06	Invalid range for specified FROM NPC type
07	Invalid range for specified TO NPC type
08	Invalid FROM NPC type for AIS insertion
09	Invalid TO NPC type for AIS insertion

cc	<i>Explanation</i>
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
20	Line format types are incompatible
21	Trunk conditioning is invalid
22	FMC cannot be cross-connected in this format
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
DD	A loopback is active on the TO termination
DF	Unmatched channel range

cc	<i>Explanation</i>
E0	Unmatched channel range involving SLC Mode III termination
E2	Attempt to one way cross-connect a locally switched channel
E4	RT-DCLU cross-connect with different ids
E5	RT-DCLU cross-connect with different channel number
E6	Cross-connect a non Mode I channel to DCLU
E7	Cross-connect a non SLC channel to DCLU
E8	SC invalid for cross-connection specified
E9	MUX or TRB invalid for cross-connection specified
EA	AIS invalid for cross-connection specified
EB	NAM invalid for cross-connection specified
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
FF	Termination is in process of being rolled

ONE WAY CROSS-CONNECTIONS

Explanation of Command

This command requests a one-way cross-connection from the specified FROM termination(s) and to the TO termination. It is used to construct a one-way multipoint circuit. The backbone and broadcast terminations are on the virtual NPCs.

If the user wants to cross-connect Nx64 kbits/s circuits, then the range feature of this command should be used.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.11121]

```
OCN:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \
MPM(fmd,tmd),<tc>[, {CUS|INCL}][,RDC]!
```

Hierarchical

[I.11121]

```
OCN:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \
MPM(fmd,tmd),<tc>[, {INCL|CUS}][,RDC]!
```

2.048 Mbit/s Termination

Nonhierarchical

[I.11121]

```
OCN:FRM xy,SEQ ww:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \
MPM(fmd,tmd),<tc>[, {CUS|INCL}][,RDC]!
```

Hierarchical

[I.11121]

```
OCN:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \
MPM(fmd,tmd)[,<tc>][,NAM][,{INCL|CUS}][,RDC]!
```

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.11121]

M hh:mm:ss xy,ww n[vv] OCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
2 LN MSG:
fmd,tmd <tc>[NOBBL {F|T}][CUS][RDC][NAM] COMPL

Hierarchical

[O.11121]

M hh:mm:ss xy,ww n[vv] OCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
2 LN MSG:
fmd,tmd <tc>[NOBBL {F|T}][CUS][RDC][NAM] COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.11121]

M hh:mm:ss xy,ww n[vv] OCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
2 LN MSG:
fmd,tmd[<tc>][NOBBL {F|T}][CUS][RDC][NAM] COMPL

Hierarchical

[O.11121]

M hh:mm:ss xy,ww n[vv] OCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
2 LN MSG:
fmd,tmd[<tc>][NOBBL {F|T}][CUS][RDC][NAM] COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.11121.01]

M hh:mm:ss xy,ww n[vv] OCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,jjj] cc <st> DNY

[O.11121.02]

M hh:mm:ss xy,ww n[vv] OCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,jjj] d <st> DNY

Hierarchical

[O.11121.01]

M hh:mm:ss xy,ww n[vv] OCN uvmnpddd[-eee],wxkqrjjj[-kkk] \ [mmm, jjj] cc <st> DNY

[O.11121.02]

M hh:mm:ss xy,ww n[vv] OCN uvmnpddd[-eee],wxkqrjjj[-kkk] \ [mmm, jjj] d <st> DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.11121.01]

M hh:mm:ss xy,ww n[vv] OCN [s]abcddd[-eee],[t]ghijjj[-kkk] \ [mmm, jjj] cc <st> DNY

[O.11121.02]

M hh:mm:ss xy,ww n[vv] OCN [s]abcddd[-eee],[t]ghijjj[-kkk] \ [mmm, jjj] d <st> DNY

Hierarchical

[O.11121.01]

M hh:mm:ss xy,ww n[vv] OCN uvmnpddd[-eee], \ wxkqrjjj[-kkk][mmm, jjj] cc <st> DNY

[O.11121.02]

M hh:mm:ss xy,ww n[vv] OCN uvmnpddd[-eee], \ wxkqrjjj[-kkk][mmm, jjj] d <st> DNY

Explanation of Parameters

[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
uv,wx	Unit number
m,k	Module number

	np,qr	NPC number within the module
		For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd, jjj		Channel numbers
eee, kkk		Channel numbers denoting the end of a range specification
	001-024	
	001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
	000-030	CEPT type NPCs grown as CAS
	000-031	CEPT type NPCs grown as NSA
		Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.
	001-500	(Virtual NPC)
		Range values -eee, -kkk apply only to the FTU/DS3U/HDS3U end of an FTU/DS3U/HDS3U/HSU Virtual NPC circuit, that is, they cannot apply to the Virtual NPC end of the circuit.
MPM		Multipoint mode
fmd		FROM mode
tmd		TO mode
		Multipoint modes of the FROM and TO ends of the circuit

- LEG** Non-VI circuit end of the cross connections. Must be an FTU/DS3U/HDS3U/HSU channel.
- BRD** Nonbackbone leg of a virtual conference. Must be a virtual NPC channel.
- BBL** Backbone leg of a virtual conference. Must be a Virtual NPC channel.

For OCN multipoint circuits, there are two valid combinations for fmd and tmd:

- LEG,BBL** For the backbone leg of a broadcast multipoint circuit
- BRD,LEG** For the broadcast legs of the multipoint circuit.



NOTE:

Default values for noise guard (NG) and echo suppression (ES) are applied to symmetrical bridges (multipoint mode SYM) and polling circuits (multipoint mode BBL,BRD):

Symmetrical bridges	NG = -18db	ES = -18db
Polling circuits	NG = 0db	ES = 0db

tc

Trunk conditioning, which has the input form

TRSP, {IW X'pq|TRB|MUX}

Represents the desired cross-connected signaling and insertion word applied when a failure occurs. A trunk conditioning specification consists of a combination of a signaling specification followed by an insertion word specification. The TRSP (transparent) signaling specification is the only one allowed.

The following signaling option is allowed:

- TRSP** Transparent, no signaling.

The following insertion word options are allowed:

- IW X'pq** The 8-bit pattern corresponding to the hexadecimal value of pq is inserted in the downstream direction of a failure on either line.
- TRB** Standard trouble code, equal to IW X'E4, not valid for CEPT.
- MUX** MUX out of sync code, equal to IW X'1A, not valid for CEPT.

	Omitted	Only valid for CEPT, defaults to IW-X-FF.
NOBBL		No backbone leg
F		From
T		To
		Hex notation is shown for brevity, but binary is allowed.
CAS		Channel associated signaling
		Indicates that channel associated signaling has been applied in time slot 16.
TRSP		Transparent
		No signaling sent out in the associated portion of time slot 16 for CAS primaries.
IW		Insertion word
		The insertion word is provided with the DCC option, an 8-bit pattern that is inserted in the specified time slot when the circuit is disconnected.
		During the alarm state, AIS (all ones) is sent out in the specified time slot.
		All leg connections to multipoint circuits using a Virtual NPC must use TRSP signaling (no signaling). The insertion word portion is user specified as noted above and may be varied from leg to leg.

⇒ NOTE:
In a gateway application, when E1 channels are connected to T1 channels, the following rules apply to the transmittal of the Insertion Word (IW) towards the facility. If the Insertion Word needs to be transmitted towards the facility as a result of consequent action, then the Insertion Word transmitted by the T1 NPC towards its transmission facility is the Insertion Word specified in this command; however, the Insertion Word transmitted by the E1 NPC towards its facility is always X'FF.

NAM No A-law to μ -law

The A-law to μ -law and μ -law to A-law code translators on the E1 type NPC are disabled. This keyword is valid in the following types of cross-connects:

E1 to E1 Multi-point cross-connects have A-law to μ -law and μ -law to A-law set as a default. This conversion is performed on pure E1 multi-point connections in case a DS1 leg is ever added to the broadcast connection. The NAM keyword is used to disable the conversions. It may be desirable to disable conversions in a pure E1 multi-point cross-connect since such a connection has more quantization noise than a pure E1 two-point cross-connect. This is due to the back to back A-law to μ -law and μ -law to A-law conversions which are taking place.

E1 to DS1 or DS1 to E1 Same explanation as E1 to E1.

DS1 to DS1 Not applicable.

CUS

Customer

Customer-controlled circuit

The optional CUS field indicates a customer controlled circuit. All legs on a multipoint customer-controlled circuit must be designated CUS.

INCL

Inclusive

A disconnected termination previously marked CUS remains as a customer controlled termination. The INCL keyword must be used to reconnect this termination to other terminations. However, if they are reconnected without the CUS keyword, they lose their customer controlled status.

RDC

Red circuit

All legs on a multipoint red circuit must be designated RDC.

ddd,jjj

Channel numbers

mmm

FROM channel number involved in the denial ($ddd \leq mmm \leq eee$)

st

Status

d

Direction

F From

T To
B Both
cc Hexadecimal condition code

cc	<i>Explanation</i>
06	Invalid range for specified FROM NPC type
07	Invalid range for specified TO NPC type
08	Invalid FROM NPC type for AIS insertion
09	Invalid TO NPC type for AIS insertion
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
20	Line format types are incompatible
21	Trunk conditioning is invalid
22	FMC cannot be cross-connected in this format
50	Trunk conditioning doesn't match that of conference
51	CUS flag doesn't match that of conference
52	RDLD flag doesn't match that of conference
70	Try to add a BBL to VC, but the VC already has backbone
79	Try to operate a TWO-WAY conference with an ONE-WAY input command
80	Database conference width does not match the range in input command

cc	<i>Explanation</i>
82	Invalid input BRD as tmd in ONE-WAY command
84	Trying to add or delete a leg when a conference is under test
85	Input BRD (BBL) has same NPC and channel as BBL (BRD)
B0	Bad use of INCL, cannot override the current state of the conference
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
DD	A loopback is active on the TO termination
E0	Unmatched channel range involving SLC Mode III termination
E4	RT-DCLU cross-connect with different ids
E5	RT-DCLU cross-connect with different channel number
E6	Cross-connect a non Mode I channel to DCLU

cc	<i>Explanation</i>
E7	Cross-connect a non SLC channel to DCLU
E8	SC invalid for cross-connection specified
E9	MUX or TRB invalid for cross-connection specified
EA	AIS invalid for cross-connection specified
EB	NAM invalid for cross-connection specified
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
FF	Termination is in process of being rolled

st	d	<i>Explanation</i>
ASGN	{F T B}	Termination assigned
CUS	{F T B}	Customer-controlled Circuit
FAIL	{F T B}	Failed
INVLD	{F T B}	Invalid NPC type
OOS	{F T B}	Out-of-service
RDC	{F T B}	Red Circuit
RDLD	{F T B}	Red Lined
ROLL	{F T B}	Circuit is involved in a roll
TG	{F T B}	
TP	{F T B}	NPC is used for test access
UEQD	{F T B}	Unequipped
UTST	{F T B}	Under Test

ONE WAY CROSS-CONNECTIONS

Explanation of Command

This message requests the connection of a one-way cross-connect circuit or a range of one-way circuits.

If the user wants to cross-connect Nx64 kbit/s circuits, then the range feature of this command should be used.

Command

1.544 Mbit/s Termination

Nonhierarchical

[l.11101]

```
OCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \
<tc>[,RDC][{,CUS|,INCL}][,PRIOUT]!
```

[l.11101]

```
OCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \
<tc>[,RDC][{,CUS|,INCL}][,PRIOUT]!
```

2.048 Mbit/s Termination

Nonhierarchical

[l.11101]

```
OCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
[,<tc>][,<sc>][,NAM][,RDC][{,CUS|,INCL}][,PRIOUT]!
```

[l.11101]

```
OCON:FRM xy,SEQ ww:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
[,<tc>][,<sc>][,NAM][,RDC][{,CUS|,INCL}][,PRIOUT]!
```

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.11101]

M hh:mm:ss xy,ww n[vv] OCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
<tc>[RDC][{CUS|INCL}][PRIOUT] COMPL

[O.11102]

M hh:mm:ss xy,ww n[vv] OCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
2 LN MSG:
<tc>[RDC][{CUS|INCL}][PRIOUT] COMPL

Hierarchical

[O.11101]

M hh:mm:ss xy,ww n[vv] OCON uvmnp[-eee],wxkqrjjj[-kkk] \
<tc>[RDC][{CUS|INCL}][PRIOUT] COMPL

[O.11102]

M hh:mm:ss xy,ww n[vv] OCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
2 LN MSG:
<tc>[RDC][{CUS|INCL}][PRIOUT] COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.11101]

M hh:mm:ss xy,ww n[vv] OCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
[<tc>][<sc>][NAM][RDC][{CUS|INCL}][PRIOUT] COMPL

Hierarchical

[O.11101]

M hh:mm:ss xy,ww n[vv] OCON uvmnp[-eee],wxkqrjjj[-kkk] \
[<tc>][<sc>][NAM][RDC][{CUS|INCL}][PRIOUT] COMPL

[O.11102]

M hh:mm:ss xy,ww n[vv] OCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
2 LN MSG:
[<tc>][<sc>][NAM][RDC][{CUS|INCL}][PRIOUT] COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.11101.01]

M hh:mm:ss xy,ww n[vv] OCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.11101.02]

M hh:mm:ss xy,ww n[vv] OCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] d <st> DNY

Hierarchical

[O.11101.01]

M hh:mm:ss xy,ww n[vv] OCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.11101.02]

M hh:mm:ss xy,ww n[vv] OCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] d <st> DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.11101.01]

M hh:mm:ss xy,ww n[vv] OCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

Hierarchical

[O.11101.01]

M hh:mm:ss xy,ww n[vv] OCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.11101.02]

M hh:mm:ss xy,ww n[vv] OCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] d <st> DNY

Explanation of Parameters

[s]abc

The 3- or 4-digit nonhierarchical FROM NPC number

[t]ghi

The 3- or 4-digit nonhierarchical TO NPC number

	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd, jjj	Channel numbers
eee, kkk	Channel numbers denoting the end of a range
001-024	
001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
000-030	CEPT type NPCs grown as CAS
000-031	CEPT type NPCs grown as NSA
	Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.

1.544 Mbit/s Termination

The Facility Data Link (FDL) channel 000 is not allowed in a range. Only the FDL of DE type NPC with ESF Format can be cross-connected.

2.048 Mbit/s Termination

Channel 000 and CAS channel 31 (that is, TS16 of a CEPT-type NPC) are not allowed in a range of channel numbers.

tc Trunk conditioning

tc represents the desired cross-connected signaling and insertion word applied when a failure occurs. The signaling and the insertion word specification are entered separately, with a comma as the delimiter, which have the following form:

<tc_sig>,<tc_iw>

The following signaling options are allowed:

1.544 Mbit/s Termination

TC(----,mnop) 1-way, 4-state signaling in binary. For ESF type framing format, software will expand 4-state to 16-state by duplicating the format on the remaining frames on a superframe.

TC(-----,mnopqrst) 1-way, 16-state in binary. Only valid for ESF framing formats.

TC(X'-- ,X'cd) 1-way, 16-state in hexadecimal.

TRSP Transparent, no signaling.

If the channel being connected is a Facility Data Link (FDL), then ddd (jjj) is 000 and signaling type should be of type TC (ijkl,mnop).

2.048 Mbit/s Termination

TC(----,mnop) 1-way, 4-state signaling in binary. For CEPT type framing format, software expands 4-state to 16-state by duplicating the format on the remaining frames on a superframe.

TC(-----,mnopqrst) 1-way, 16-state in binary. Only valid for CEPT framing formats.

TC(X'-- ,X'cd) 1-way, 16-state in hexadecimal.

TRSP Transparent, no signaling.

Omitted Only valid for CEPT cross-connections, defaults to TC(X'-- ,X'FF) if both terminations are channel associated signaling type. It

defaults to TRSP if one of the terminations is a nonsignaling associated (NSA) type.

1.544 Mbit/s Termination

The following insertion word options are allowed:

IW X'pq	The 8-bit pattern corresponding to the hexadecimal value of pq will be inserted to the downstream direction of a failure on the line.
TRB	Standard trouble code, equal to IW X'E4.
MUX	MUX out of sync code, equal to IW X'1A.

2.048 Mbit/s Termination

IW X'pq	The 8-bit pattern corresponding to the hexadecimal value of pq will be inserted to the downstream direction of a failure on the line.
Omitted	Only valid for CEPT, will default to IW X'FF.
TC	Trunk conditioning When the DCC option is provided in the disconnect command, a 4-bit pattern is inserted into the associated portion of time slot 16 for CAS circuits when the circuit is disconnected.
CAS	Channel associated signaling Channel associated signaling in time slot 16
TRSP	Transparent No signaling sent out in the associated portion of time slot 16 for CAS primaries. TRSP is the only option for NSA primaries.

Allowable Signaling Type and Signaling Consequent Action

Primary Type in Cross-connect	Allowable <tc> Signaling Specification	Resulting Signaling Code FROM, TO	Resulting Signaling Consequent Action (Hardware) FROM, TO	Resulting Signaling Consequent Action (Firmware) FROM, TO	Resulting Disconnect (When DCC used in disconnect command)
	TRSP	Fixed at X'D	Fixed at X'D	Fixed at X'D	X'D

Allowable Signaling Type and Signaling Consequent Action

Primary Type in Cross-connect	Allowable <tc> Signaling Specification	Resulting Signaling Code FROM, TO	Resulting Signaling Consequent Action (Hardware) FROM, TO	Resulting Signaling Consequent Action (Firmware) FROM, TO	Resulting Disconnect (When DCC used in disconnect command)
CAS $\longleftrightarrow$ CAS	TC- X'uv,X'yz*	CAS (Passed Through)	X'F	X'uv,X'yz	X'v,X'z
	Omitted	CAS (Passed Through)	X'F	X'F	X'F
NSA $\longleftrightarrow$ CAS	TRSP/ Omitted	None (Fixed at X'D in CAS direction)	Fixed at X'D in CAS direction	Fixed at X'D in CAS direction	X'D in CAS direction
NSA $\longleftrightarrow$ NSA	TRSP/ Omitted	Not appl.	Not appl.	Not appl.	Not appl.



NOTE:

For TCON and TCNT TC is X'uv,X'yz.

For OCON, OCNT and BCON TC is --,X'yz.

Allowable Time slot X-connect keyword	Resulting Cross-Connected Time slot Consequent Action TO	Resulting Disconnect Code (when DCC used in disconnect command)
Omitted	X'FF	X'FF
IW X'pq*	X'FF	X'pq

*Only used as a means of providing per time slot DCC codes. If the DCC code is not used when issuing the disconnect command, then the insertion word at the time the NPC was grown is used. This growth insertion word defaults to hex "D5" is not explicitly specified at growth time.

Allowable Signaling Type and Signaling Consequent Action

Primary Type in Cross-connect	Allowable <tc> Signaling Specification	Resulting Signaling Code FROM, TO	Resulting Signaling Consequent Action (Hardware) FROM, TO	Resulting Signaling Consequent Action (Firmware) FROM, TO	Resulting Disconnect (When DCC used in disconnect command)
CAS ↔ CAS	TRSP	Fixed at X-D	Fixed at X-D	Fixed at X-D	X-D
	TC-X-uv,X-yz*	CAS (Passed Through)	X-F	X-uv,X-yz	X-v,X-z
	Omitted	CAS (Passed Through)	X-F	X-F	X-F
NSA ↔ CAS	TRSP/ Omitted	None (Fixed at X-D in CAS direction)	Fixed at X-D in CAS direction	Fixed at X-D in CAS direction	X-D in CAS direction
NSA ↔ NSA	TRSP/ Omitted	Not appl.	Not appl.	Not appl.	Not appl.

⇒ **NOTE:**
For TCON and TCNT TC is X-uv,X-yz.
For OCON, OCNT and BCON TC is --,X-yz.

2.048 Mbit/s Termination

Both Terminations

⇒ **NOTE:**
In a gateway application, when E1 channels are connected to T1 channels, the following rules apply to the transmittal of the Insertion Word (IW) towards the facility. If the Insertion Word needs to be transmitted towards the facility as a result of consequent action, then the Insertion Word transmitted by the T1 NPC towards its transmission facility is the Insertion Word specified in this command; however, the Insertion Word transmitted by the E1 NPC towards its facility is always X'FF.

2.048 Mbit/s Termination

sc Signaling control

The variable sc represents the optional signaling bit control specification and is used only in the Channel Associated Signaling (CAS) to CAS application with CAS signaling.

If this option is not used, all four cross-connected time slot 16 (abcd) signaling bits in each direction will be cross-connected unchanged.

Signaling control is specified as follows:

SC(----,efgh)

efgh To direction

Where efgh represents the four time slot 16 signaling bits to be controlled. All 4 bits can be controlled independently. Control is applied by replacing each character in the variable efgh with the appropriate control character.

The allowable control characters are

P Pass through unchanged

V Pass through inverted

0 Set output to 0

1 Set output to 1

The effect of the V control character depends upon whether the connection is international or gateway.

International: Inversion takes place on both the From and To directions. The net effect is to cancel out the inversion. Hence it appears that no inversion took place.

Gateway: Inversion takes place only on the international side of the connection. The effect is an inversion.

Two-Point:

E1 to DS1 Gateway cross-connections have A-law to μ -law and μ -law to A-law conversion set as a default. The NAM keyword is used to disable the conversions.

E1 to E1 Default, the NAM keyword may be used but there is no need to specify NAM explicitly since A-law to μ -law and μ -law to A-law conversion is not needed,

and therefore not performed, for a pure E1 cross-connect.

DS1 to

DS1 Not applicable.

Both Terminations

CUS

Customer

Used to indicate a customer-controlled circuit

RDC

Red circuit

INCL

Inclusive

A termination designated as customer controlled or a red circuit cannot be disconnected or modified without using the INCL keyword in the message. Also, an NPC which supports these circuits cannot be manually removed unless the inclusive keyword is given in the remove message.

PRIOUT

Priority Output

This keyword is used on the command line to prioritize the output response.

TERM indicates that the cross connection will come up in the terminated state. This corresponds to the PDS OCNT command.

mmm

FROM channel number involved in the denial (ddd through eee)

nnn

TO channel number involved in the denial (jjj through kkk)

st

Status of denial

d

Direction

F From

T To

B Both

cc

Hexadecimal condition code

cc *Explanation*

06 Invalid range for specified FROM NPC type

07 Invalid range for specified TO NPC type

08 Invalid FROM NPC type for AIS insertion

09 Invalid TO NPC type for AIS insertion

cc	<i>Explanation</i>
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
20	Line format types are incompatible
21	Trunk conditioning is invalid
22	FMC cannot be cross-connected in this format
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
DD	A loopback is active on the TO termination
DF	Unmatched channel range

cc	<i>Explanation</i>
E0	Unmatched channel range involving SLC Mode III termination
E2	Attempt to one way cross-connect a locally switched channel
E4	RT-DCLU cross-connect with different ids
E5	RT-DCLU cross-connect with different channel number
E6	Cross-connect a non Mode I channel to DCLU
E7	Cross-connect a non SLC channel to DCLU
E8	SC invalid for cross-connection specified
E9	MUX or TRB invalid for cross-connection specified
EA	AIS invalid for cross-connection specified
EB	NAM invalid for cross-connection specified
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
FF	Termination is in process of being rolled

st	d	<i>Explanation</i>
ASGN	{F T B}	Termination assigned
CUS	{F T B}	Customer-controlled Circuit
FAIL	{F T B}	Failed
INVLD	{F T B}	Invalid NPC type
OOS	{F T B}	Out-of-service
RDC	{F T B}	Red Circuit
RDLD	{F T B}	Red Lined
ROLL	{F T B}	Circuit is involved in a roll
TG	{F T B}	NPC is grown as a test group

st	d	Explanation
TP	{F T B}	NPC is used for test access
UNEQD	{F T B}	Unequipped
UTST	{F T B}	Under Test

ONE-WAY NONCHANNELIZED DIGITAL SIGNAL CROSS CONNECT

Explanation of Command

This command requests a one-way cross-connection between two non-channelized network processing circuits.

The idle code is the alarm-indication signal (AIS-all ones), and does not need to be specified. The disconnect code for 64 kbit/s disconnection cannot be used for nonchannelized network processing circuits.

When a failure occurs or during an alarm state, the AIS is transmitted toward the TO network processing circuits.

Command

Nonhierarchical

[I.11131]

OCON:[FRM xy][,SEQ ww]:FROM [s]abc,TO \
[t]ghi[,RDC][,{CUS|INCL}][,PRIOUT]!

Hierarchical

[I.11131]

OCON:[FRM xy][,SEQ ww]:FROM uvmnp,TO \
wxkqr[,RDC][,{CUS|INCL}][,PRIOUT]!

Completion Message

Nonhierarchical

[O.11131]

M hh:mm:ss xy,ww n[vv] OCON [s]abc,[t]ghi[RDC][CUS][PRIOUT] \
COMPL

Hierarchical

[O.11131]

M hh:mm:ss xy,ww n[vv] OCON uvmnp,wxkqr[RDC][CUS][PRIOUT] COMPL

Denial Message

Nonhierarchical

[O.11131.01]

M hh:mm:ss xy,ww n[vv] OCN [s]abc,[t]ghi cc <st> DNY

[O.11131.02]

M hh:mm:ss xy,ww n[vv] OCN [s]abc,[t]ghi d <st> DNY

Hierarchical

[O.11131.01]

M hh:mm:ss xy,ww n[vv] OCN uvmnp,wxkqr cc <st> DNY

[O.11131.02]

M hh:mm:ss xy,ww n[vv] OCN uvmnp,wxkqr d <st> DNY

Explanation of Parameters

[s]abc

The 3- or 4-digit nonhierarchical nonchannelized FROM NPC

[t]ghi

The 3- or 4-digit nonhierarchical nonchannelized TO NPC

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical FROM NPC number

wxkqr

Hierarchical TO NPC number

uv,wx Unit number

m,k Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

RDC

Red circuit

CUS

Customer-controller circuit

INCL

Inclusive option removes CUS marking

PRIOUT

Priority Output

This keyword is used on the command line to prioritize the output response.

st

Status

d Direction

1.544 Mbit/s Termination

TERM Terminated
Terminated cross connection, the IDLE signal
(in this case AIS) is transmitted from both output ports.

cc Hexadecimal condition code

cc	<i>Explanation</i>
04	No NPC's out of service and OOS keyword used
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
21	Trunk conditioning is invalid
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
FF	Termination is in process of being rolled

st	d	Explanation
ASGN	{F T B}	Termination assigned
CUS	{F T B}	Customer-controlled Circuit
FAIL	{F T B}	Failed
INVLD	{F T B}	Invalid NPC type
NPCTA	{F T B}	NPC used for Test Access
OOS	{F T B}	Out-of-service
RDC	{F T B}	Red Circuit
RDLD	{F T B}	Red Lined
ROLL	{F T B}	Circuit is involved in a roll
UEQD	{F T B}	Unequipped
UTST	{F T B}	Under Test

ONE-WAY MULTIPOINT DISCONNECTIONS

Explanation of Command

This command requests a one-way disconnection from the specified FROM end termination(s) to the TO end termination. It is used to disconnect a one-way multipoint circuit.

Command

Nonhierarchical

[I.15102]

ODIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
[,INCL][,OOS][,DCC]!

Hierarchical

[I.15102]

ODIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
[,INCL][,OOS][,DCC]!

Completion Message

Nonhierarchical

[O.15102]

M hh:mm:ss xy,ww n[vv] ODIS [s]abcddd[-eee],[t]ghijjj[-kkk] \
2 LN MSG:
[NOBBL {F|T}][MPDIS {F|T|B}][OOS][CUS][RDC][DCC] COMPL

Hierarchical

[O.15102]

M hh:mm:ss xy,ww n[vv] ODIS uvmnpddd[-eee],wxkqrjjj[-kkk] \
2 LN MSG:
[NOBBL {F|T}][MPDIS {F|T|B}][OOS][CUS][RDC][DCC] COMPL

Denial Message

Nonhierarchical

[O.15101.01]

M hh:mm:ss xy,ww n[vv] ODIS [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.15101.02]

M hh:mm:ss xy,ww n[vv] ODIS [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] <d> <st> DNY

Hierarchical

[O.15101.01]

M hh:mm:ss xy,ww n[vv] ODIS uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.15101.02]

M hh:mm:ss xy,ww n[vv] ODIS uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] <d> <st> DNY

Explanation of Parameters

FROM	From terminations
TO	To terminations
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd,jjj	Channel number
eee,kkk	Channel number denoting the end of range.
001-024	
000-030	CEPT type NPCs grown as CAS

000-031 CEPT type NPCs grown as NSA

Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.

001-047 Odd only (SLC 96[®] Carrier, Mode 3, DGA)

049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)

001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)

025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)

049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)

073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)

001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)

025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)

049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

The backbone termination is on the Virtual NPC (001 through 500).

INCL

Inclusive

To disconnect a channel or range of channels including one or more channels marked as a Red Circuit, use the INCL option. The message is denied if any circuits in the range are Red Circuits and the INCL option is not used.

OOS

Out of service

At least one end of the circuit must be out-of-service or the OOS disconnect is denied.

DCC

Disconnect code

DACS II inserts the user-defined disconnect code and signaling into the disconnected channels. This disconnect code and signaling are specified by the trunk conditioning field of the TCON command that initially connected the channels. If the DCC option is not used, the disconnect code specified in the grow NPC command is used.

NOBBL

No backbone leg

	The optional NOBBL appears if the multipoint circuit FROM or TO was in the broadcast mode but has no backbone leg.	
MPDIS	Multipoint disconnect	
F	From	
T	To	
	Full disconnection of the multipoint circuits is indicated by MPDIS for FROM or TO.	
CUS	Customer	
	Customer-control circuit	
RDC	Red circuit	
	Disconnection was performed on a red circuit. If the disconnection was given on more than one circuit, then at least one of them was a red circuit.	
mmm,nnn	Channel number involved in denial.	
st	Status of denial	
d	Direction	
	F	From
	T	To
	B	Both
cc	Hexadecimal condition code	

cc	<i>Explanation</i>
04	No NPC's out of service and OOS keyword used
06	Invalid range for specified FROM NPC type
07	Invalid range for specified TO NPC type
08	Invalid FROM NPC type for AIS insertion
09	Invalid TO NPC type for AIS insertion
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS

cc	<i>Explanation</i>
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
34	Termination is under customer control (CUS)
35	Termination is protected (RDLD)
71	Try to delete a BBL leg from VC; however, VC has no BBL leg
72	The NPC of VC BBL leg doesn't match that in the input command
73	The first channel of VC BBL leg doesn't match that in the input cmd
74	Try to delete a BRD leg from VC; however, VC has no BRD leg
75	The input BRD leg is not in VC
76	The first channel of VC BRD leg doesn't match that in the input cmd
77	Tried to disconnect a nonexisting VC
79	Try to operate a TWO-WAY conference with an ONE-WAY input command
80	Database conference width does not match the range in input command
81	Invalid input BBL as fmd in ONE-WAY command
82	Invalid input BRD as tmd in ONE-WAY command
84	Trying to add or delete a leg when a conference is under test
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS

cc	<i>Explanation</i>
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D3	Corresponding NPC for FROM virtual channel is not provisioned
D4	Corresponding NPC for TO virtual channel is not provisioned
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
DD	A loopback is active on the TO termination
DF	Unmatched channel range
E0	Unmatched channel range involving SLC Mode III termination
E4	RT-DCLU cross-connect with different ids
E5	RT-DCLU cross-connect with different channel number
E6	Cross-connect a non Mode I channel to DCLU
E7	Cross-connect a non SLC channel to DCLU
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
FF	Termination is in process of being rolled

st	d	Explanation
CUS	{F T B}	Customer-controlled Circuit
FAIL	{F T B}	Failed
NOMTH	{F T B}	No Match
OOS	{F T B}	Out-of-service
RDC	{F T B}	Red Circuit
RDLD	{F T B}	Red Lined
TP	{F T B}	NPC is used for test access
UEQD	{F T B}	Unequipped
UNPAS GN	{F T B}	Unassigned or Not Properly Assigned
UTST	{F T B}	Under Test

ONE-WAY DISCONNECT

Explanation of Command

This command disconnects a one-way two-point cross-connect circuit or a range of one-way circuits.

Command

Nonhierarchical

[I.15101]

ODIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
[,INCL][,OOS][,DCC][,PRIOUT]!

Hierarchical

[I.15101]

ODIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
[,INCL][,OOS][,DCC][,PRIOUT]!

Completion Message

Nonhierarchical

[O.15101]

M hh:mm:ss xy,ww n[vv] ODIS [s]abcddd[-eee],[t]ghijjj[-kkk] \
[OOS][DCC][CUS][RDC][PRIOUT] COMPL

Hierarchical

[O.15101]

M hh:mm:ss xy,ww n[vv] ODIS uvmnpddd[-eee],wxkqrjjj[-kkk] \
[OOS][DCC][CUS][RDC][PRIOUT] COMPL

Denial Message

Nonhierarchical

[O.15101.01]

M hh:mm:ss xy,ww n[vv] ODIS [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.15101.02]

M hh:mm:ss xy,ww n[vv] ODIS [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] <d> <st> DNY

Hierarchical

[O.15101.01]

M hh:mm:ss xy,ww n[vv] ODIS uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.15101.02]

M hh:mm:ss xy,ww n[vv] ODIS uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] <d> <st> DNY

Explanation of Parameters

FROM	From
TO	To
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number for beginning of NPC range
wxkqr	Hierarchical TO NPC number for end of NPC range
	The valid values are listed below:
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	FROM channel number
jjj	TO channel number
eee	FROM channel number denoting the end of a channel range.

kkk	TO channel number denoting the end of a channel range.
001-024	
000-030	CEPT type NPCs grown as CAS
000-031	CEPT type NPCs grown as NSA
	Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.
001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
	INCL Inclusive
	To disconnect a circuit or range of circuits including one or more circuits marked either RDC or CUS, use the optional INCL keyword. If this keyword is not used, the message is denied if any circuits in the range are red circuits or customer controlled circuits.
OOS	Out-of-service
	An Out-Of-Service disconnect may be done by giving the optional OOS keyword. At least one end of the circuit must be out-of-service or the OOS disconnect is denied.
PRIOUT	Priority Output
	This keyword is used on the command line to prioritize the output response.
DCC	Disconnect code

	If DCC is specified, DACS II inserts the user-defined disconnect code and signaling into the disconnected channels. This disconnect code and signaling are specified by the <tc> field of the TCON command that initially connected the channels. If the DCC option is not used, the disconnect code specified in the GRTH NPC command is used.	
RDC	Red circuit	
CUS	Customer	
	Customer-controlled circuit	
	Terminations cross-connected using the optional CUS keyword retain their CUS status when disconnected. If the terminations are reconnected without the CUS or INCL keyword, the command is denied. When they are reconnected with the INCL keyword, they lose their customer controlled status.	
mmm,nnn	Channel number involved in denial. Otherwise the same as ddd.	
d	Direction	
	F	From
	T	To
	B	Both
st	Status	
cc	Hexadecimal condition code	

cc	<i>Explanation</i>
04	No NPC's out of service and OOS keyword used
06	Invalid range for specified FROM NPC type
07	Invalid range for specified TO NPC type
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS

cc	<i>Explanation</i>
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
DD	A loopback is active on the TO termination
DF	Unmatched channel range
E0	Unmatched channel range involving SLC Mode III termination
E4	RT-DCLU cross-connect with different ids
E5	RT-DCLU cross-connect with different channel number
E6	Cross-connect a non Mode I channel to DCLU
E7	Cross-connect a non SLC channel to DCLU
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed

st	d	<i>Explanation</i>
CUS	{F T B}	Customer-controlled Circuit
FAIL	{F T B}	Failed
INVLD	{F T B}	Invalid NPC type
NOMTH	{F T B}	No Match
OOS	{F T B}	Out-of-service
RDC	{F T B}	Red Circuit
RDLD	{F T B}	Red Lined
ROLL	{F T B}	Circuit is involved in a roll
TP	{F T B}	NPC is used for test access
UEQD	{F T B}	Unequipped
UNPAS GN	{F T B}	Unassigned or Not Properly Assigned
UTST	{F T B}	Under Test

ONE-WAY DISCONNECT

Explanation of Command

This command disconnects a one-way cross-connection between two non-channelized network processing circuits. When the circuit is disconnected, the idle code (AIS) is transmitted.

Command

Nonhierarchical

[I.15111]

ODIS:[FRM xy][,SEQ ww]:FROM [s]abc,TO [t]ghi[,OOS][,INCL][,PRIOUT]!

Hierarchical

[I.15111]

ODIS:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxkqr[,OOS][,INCL][,PRIOUT]!

Completion Message

Nonhierarchical

[O.15111]

M hh:mm:ss xy,ww n[vv] ODIS [s]abc,[t]ghi[OOS][RDC][CUS] \
[PRIOUT] COMPL

Hierarchical

[O.15111]

M hh:mm:ss xy,ww n[vv] ODIS uvmnp,wxkqr[OOS][RDC][CUS] \
[PRIOUT] COMPL

Denial Message

Nonhierarchical

[O.15111.01]

M hh:mm:ss xy,ww n[vv] ODIS [s]abc,[t]ghi cc <st> DNY

[O.15111.02]

M hh:mm:ss xy,ww n[vv] ODIS [s]abc,[t]ghi d <st> DNY

Hierarchical

[O.15111.01]

M hh:mm:ss xy,ww n[vv] ODIS uvmnp,wxkqr cc <st> DNY

[O.15111.02]

M hh:mm:ss xy,ww n[vv] ODIS uvmnp,wxkqr d <st> DNY

Explanation of Parameters

[s]abc	The 3- or 4-digit nonhierarchical nonchannelized FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical nonchannelized TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical number of nonchannelized FROM NPC
wxkqr	Hierarchical number of nonchannelized TO NPC
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
INCL	Inclusive
	Required for a customer-controlled circuit or a red circuit
OOS	Out-of-Service
	May be specified if one or both NPCs are out of service
RDC	Red circuit
	Disconnection of Red circuit
CUS	Customer
	Disconnection of Customer-controlled circuit
PRIOUT	Priority Output
	This keyword is used on the command line to prioritize the output response.

st	Status of denial
d	Direction
F	From
T	To
B	Both
cc	Hexadecimal condition code

cc	<i>Explanation</i>
04	No NPC's out of service and OOS keyword used
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed

st	d	Explanation
CUS	{F T B}	Customer-controlled Circuit
FAIL	{F T B}	Failed
INVLD	{F T B}	Invalid NPC type
NOMTH	{F T B}	No Match
NPCTA	{F T B}	NPC used for Test Access
OOS	{F T B}	Out-of-service
RDC	{F T B}	Red Circuit
ROLL	{F T B}	Circuit is involved in a roll
UEQD	{F T B}	Unequipped
UNPAS GN	{F T B}	Unassigned or Not Properly Assigned
UTST	{F T B}	Under Test

FACILITY LOOPBACK ACTIVATE

Explanation of Command

For DA and TA type NPCs:

ANSI (American National Standards Institute) T1.403 is a DS1 interface specification, which among other things, specifies the use of the 4kb/s ESF data link for network maintenance. The data link is used to communicate between network elements which transport the DS1 facility.

This command is used to initiate near-end (at the DACS II) and far-end (at the terminal on the other end of the DS1 facility) loopbacks for ESF formatted facilities as defined by ANSI T1.403.

DACS II executes a near-end payload loopback by transmitting the received information bits of each frame back onto the DS1 facility. The framing bit position is regenerated by DACS II during a payload loopback.

DACS II also sends payload, line, or network loopback commands on the ESF data link to far-end equipment, ordering the equipment on the other end of the DS1 facility to execute the respective loopbacks.

For TE and TH type NPCs on HDS3Us:

This command can be used to request line loopbacks towards the facility for all TE and TH type NPCs provisioned on Hybrid MXRs (KCR8s) within a Hybrid DS3U for DS1 or E1 facilities respectively. However, line loopbacks for TE type NPCs provisioned on MXR/EMXR circuit packs (KCR1s/KCR5s), even though provisioned within a Hybrid DS3U, are not supported. AIS is sent downstream as a default operation unless stopped under user control (t=N). Near end (LOCN NEND) line (LINE) loopback is the only type of loopback that may be requested for TE or TH type NPCs on an HDS3U.

An E1 or DS1 line loopback on an HDS3U is activated without regard to whether a DS3 or OC3 loopback is already active. If a DS3 line loopback is active (see command I.26161), the DS1 or E1 line loopback has no effect until the DS3 line loopback is removed. If a DS3 equipment loopback is active, the DS1 or E1 line loopback is operating, but it results in a circular transmission path for the DS1 or E1, which is most likely undesirable.

If a loopback is active, another loopback request to the same NPC is denied.

Local loopbacks are dropped during a system reset or a system reboot.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.26141]

OPR:[FRM xy][,SEQ ww]:LPBK loop[t],NPC [s]abc,LOCN locn!

Hierarchical

[I.26141]

OPR:[FRM xy][,SEQ ww]:LPBK loop[t],NPC uvmnp,LOCN locn!

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.26141]

M hh:mm:ss xy,ww n[vv] OPR LPBK loop[t] NPC [s]abc LOCN locn COMPL

Hierarchical

[O.26141]

M hh:mm:ss xy,ww n[vv] OPR LPBK loop[t] NPC uvmnp LOCN locn COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.26141.01]

M hh:mm:ss xy,ww n[vv] OPR LPBK loop[t] NPC [s]abc LOCN locn \
COND cc DNY

Hierarchical

[O.26141.01]

M hh:mm:ss xy,ww n[vv] OPR LPBK loop[t] NPC uvmnp LOCN locn \
COND cc DNY

**Explanation of
Parameters**

LPBK	Loopback
loop	Loopback Type
LINE	Line
PYLD	Payload
NTWK	Network
t	Loopback signal transmission specifier
N	Do not send AIS downstream
	For TE and TH type NPCs on an HDS3U, AIS is sent downstream as a default.
NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number
	The valid values are as follows, except that for TH type NPCs that carry E1s within a Hybrid DS3U all NPC numbers that are divisible by 4 as well as all NPC numbers that end with a "D" or "H" are invalid:
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
LOCN	Location
locn	Loopback Location
NEND	Near-end
FEND	Far-end
	The NEND parameter must be coded for DS1 (T1) or E1 loopbacks that are carried within a Hybrid DS3, even though the far-end loopbacks cannot be invoked.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
26	NPC type error
9B	The MXR is not grown
B2	MXR is out of service
05	Invalid parameter combination
0B	Another signal already active prevents this signal from being sent
29	This signal is already being sent
30	No signals active
84	NPC is non-channelized
86	NPC number out of range

HYBRID DS3 LOOPBACK

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This command requests a local loopback for a DS3 signal being processed on the addressed Hybrid Multiplexer (HMXR) in a Hybrid DS3 Unit (HDS3U). Following HDS3U and DS3U convention, the HMXR is addressed as an MXR/MIU Functional Group (MMFG). Note that the loopback operation for a DS3 signal is not allowed for a regular multiplexer (MXR/EMXR) in an MMFG of a DS3 Unit (DS3U) or Hybrid DS3 Unit (HDS3U).

The HDS3U supports two kinds of local loopback functions:

- Equipment loopback (diagnostic local loopback): The outgoing DS3 signal is looped back towards the DACS II equipment, overriding the normally received DS3 signal. AIS is substituted for the transmitted signal unless stopped by the user (t=N).
- Facility loopback (line local loopback): The incoming DS3 signal is looped back and transmitted towards the facility. When the DS3 loopback is activated, DACS II no longer outputs its own clock on the DS3 line. AIS is substituted for the received signal unless stopped by the user (t=N).

Only one of the two types of loopback (equipment or facility) may be activated at one time. Also, the command denies a loopback request when that same type of loopback is already active.

An active loopback is removed if the system is reset or re-booted.

Command

[I.26161]

OPR: [FRM xy][,SEQ ww]:LPBK d[t],UNIT [q]q,MMFG a!

Completion Message

[O.26161]

M hh:mm:ss xy,ww n[vv] OPR LPBK d[t] UNIT [q]q MMFG a COMPL

Denial Message

[O.26161.01]

M hh:mm:ss xy,ww n[vv] OPR LPBK d[t] UNIT [q]q MMFG a COND cc DNY

Explanation of Parameters

LPBK	Loopback
d	Loopback Type
E	Equipment loopback (diagnostic local loopback) - the outgoing DS3 signal is looped back towards the DACS II equipment.
F	Facility loopback (line local loopback) - the incoming DS3 signal is looped back towards the facility.
N	Stop loopback
t	Loopback signal AIS specifier
N	Do not send AIS on the loop-backed circuit.
	<i>If t is not specified for an equipment loopback request, the default is to send AIS upstream towards the facility while the DS3 signal is looped back towards the DACS II equipment.</i>
	<i>If t is not specified for a facility loopback request, the default is to send AIS downstream towards the equipment while the DS3 signal is looped back towards the facility.</i>
UNIT	Unit
[q]q	Unit number (1 through 16) Hybrid Multiplexer-Multiplexer Interface Unit Functional Group
a	The number of the MMFG within the unit (P, 1 through 6) (P means the protection MMFG)

FACILITY TEST SIGNAL ACTIVATE

Explanation of Command

This command is used to initiate facility test signals on DACS II DA and TA DS1 facility types. The test signals support network maintenance activities.

For the Yellow Test, High Density Test, Low Density Test, and Quasi-Random Test Signals, once the test signal activation command is received and executed, the test signal remains on the line until it is deactivated by a subsequent user command.

The In-Band Loop-back Activate and In-Band Loop-back Deactivate Signals are temporary test signals. These test signals are activated by a command, transmitted for a duration of 5-8 seconds, and then automatically deactivated. When these are deactivated, the facility returns to its previous state, transmitting either normal data or any previously active test signal.

DACS II always applies downstream trunk conditioning before the NPC begins transmitting the requested test signal.

For DA and TA type DS1 facilities using the ESF format, DACS II also transmits a Loopback Retention signal on the ESF-DL. Transmission of this signal does not cause DACS II to apply downstream trunk conditioning because the Loopback Retention signal affects only the contents of the ESF-DL.

This signal is defined in ANSI (American National Standards Institute) T1.403 as a Bit Oriented Message which is reserved for network use. ANSI T1.403 is a DS1 interface specification, which among other things, specifies the use of the 4kb/s ESF data link for network maintenance. The data link is used to communicate between network elements which transport the DS1 facility.



NOTE:

Test signals overwrite, by design, any cross-connect signal on the line regardless of which was initiated first; the cross-connect or the test signal.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.28101]

OPR:[FRM xy][,SEQ ww]:TSIG test,NPC [s]abc!

Hierarchical

[I.28101]

OPR:[FRM xy][,SEQ ww]:TSIG test,NPC uvmnp!

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.28101]

M hh:mm:ss xy,ww n[vv] OPR TSIG test NPC [s]abc COMPL

Hierarchical

[O.28101]

M hh:mm:ss xy,ww n[vv] OPR TSIG test NPC uvmnp COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.28101.01]

M hh:mm:ss xy,ww n[vv] OPR TSIG test NPC [s]abc COND cc DNY

Hierarchical

[O.28101.01]

M hh:mm:ss xy,ww n[vv] OPR TSIG test NPC uvmnp COND cc DNY

**Explanation of
Parameters**

TSIG	Test signal
test	Test signal type

	YELT	Yellow Test Signal
	HDTS	High Density Test Signal
	LDTS	Low Density Test Signal
	QRTS	Quasi-Random Test Signal
	ILBA	In-Band Loopback Activate Signal
	ILBD	In-Band Loopback Deactivate Signal
	LRET	Loopback Retention Signal
NPC		Network processing circuit
[s]abc		The 3- or 4-digit nonhierarchical NPC number
		For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp		Hierarchical NPC number
	uv	Unit number
	m	Module number
	np	NPC number within the module
		For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
cc		Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
26	NPC type error
9B	The MXR is not grown
B2	MXR is out of service
BE	Invalid loopback type and location
05	Invalid parameter combination

cc	<i>Explanation</i>
0B	Another signal already active prevents this signal from being sent
29	This signal is already being sent
30	No signals active
84	NPC is non-channelized
86	NPC number out of range

Lucent Technologies
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Command and Message Manual
(Release 9.1.3 PDS)

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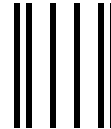
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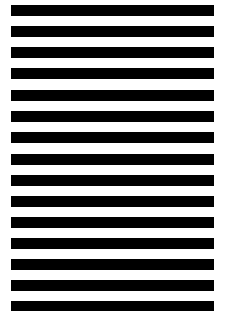
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GL

Glossary

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Contents

About This Manual

Background

Purpose

The *DACS II Release 9.1.3 Command and Message Manual* describes the input commands and output messages of Release 9.1.3 of the Digital Access and Cross-Connect System II (DACS II). In addition, it provides full support for previous product releases.



NOTE:

Those customers using this manual with Releases 3 through 7.0.3 software should be aware that all features of a particular message shown for Release 9.1.3 may or may not apply to previous releases.

Reason for Issue

The *DACS II Release 9.1.3 Command and Message Manual* has been issued to include updated and new commands applicable to Release 9.1.3.

Background (Continued)

Intended Audiences

This manual is a catalog of messages intended for reference by a technician or craftperson who needs additional details about a message. It provides the user with supplemental information for the Digital Access and Cross-Connect System II (DACS II) that is programmed in the HuMan-Machine Language (MML) Program Documentation Standards (PDS) language. An example of a user is someone performing a task from an operation and maintenance manual who needs the definition of a specific keyword to complete the task.

Manual Contents

Volume Breakdown

This manual consists of four volumes as follows:

- **Volume I** - This volume contains general information about the document, a detailed introduction that defines DACS II messages, relates how to communicate with DACS II, introduces the administrative links, and discusses in detail NPC addressing, on-line help feature, system configuration and features a listing of related documentation. Message listings in this volume include alphabetical and numerical, summary list of input commands and a list of autonomous messages. A comprehensive presentation of input commands and output messages (ABT through CTST) concludes this volume.
 - **Volume II, III, and IV** - These three volumes contain input commands and output messages in the following order:
 - **Volume II** - DCH through OPR
 - **Volume III** - REPT through TTST
 - **Volume IV** - UTL and the Glossary
-

Manual Conventions

Special Font Used This manual uses special fonts to differentiate computer input/output. The constant width font indicates message formats and messages as they would appear on a DACS II terminal screen.

Notes Notes inform users of special considerations, situations, or items to remember. An example of a Note is shown below:



NOTE:

Terminated connection for DMB concatenation is not allowed.

Safety Label

Cautions indicate the presence of a hazard that will or can cause a frame alarm or property damage if hazard is not avoided. An example of a Caution is shown below:



CAUTION:

The UMC is inserted towards the direction that is terminated, potentially causing a loss of service.

Related Documentation

Related DACS II Documents

The following documents support the DACS II:

- DACS II Installation Manual
 - IPH903 (DACS II CEF)
 - IPH903I (DACS II ESBF).

Audience: Customers planning to install the equipment

Content: Customer installation instructions.

- DACS II Release 7.0 Product Description Manuals:
 - 365-353-085 (24 Channel)
 - 365-353-086 (30 Channel).

Audience: Network planners, engineers, and others that need to know how the DACS II works and fits into the network

Content: Features, applications, and description and other reference information.

- DACS II Release 9.0 Operations and Maintenance:
 - 365-353-261(1.544 PDS)
 - 365-353-271 (1.544 MML)
 - 365-353-281(2.048 PDS)
 - 365-353-291 (2.048 MML)

Audience: End-user maintenance personnel

Contents: Procedures to operate and maintain the DACS II.

- DACS II Release 9.1.3 Feature Guide:
 - 365-353-298 (PDS)
 - 365-353-297 (MML)

Audience: End-user maintenance personnel

Content: Information and procedures for this new feature.

(Continued on next page)

Related Documentation (Continued)

Related DACS II Documents, Continued

- DACS II Release 9.1.3 Command and Message Manuals:

- 365-359-212 (PDS)
- 365-359-211 (MML)

Audience: End-user maintenance personnel

Content: Description of each software input message and its response along with a description of each system output report.

- X.50/X.57 Subrate Application
Release 1.0.3 for DACS II/Release 1.0.4 for DACS II ISX
MML 2.048 Mbit/s Interface User's Manual

- 365-350-101 (MML).

Audience: End-user maintenance personnel

Content: Complete manual describing how to install and operate the X.50/X.57 Subrate application on the DACS II or DACS II ISX. Commands and messages describing how to perform subrate cross-connects and subrate test access are included.

- DDS Subrate and MJU Application
Release 1.0.4 for DACS II/Release 1.0.5 for DACS II ISX
User's Manual

- 365-350-110 (PDS)
- 365-350-111 (MML).

Audience: End-user maintenance personnel

Content: Complete manual describing how to install and operate the DDS Subrate and MJU application on the DACS II or DACS II ISX. Commands and messages describing how to perform DDS subrate cross-connects, subrate test access, and subrate MJU operations are included.

(Continued on next page)

Related Documentation (Continued)

Related DACS II Documents, Continued

- Digital Multipoint Bridge (DMB)
DSP Platform Application
Release 1.0.2 for DACS II/Release 1.0.3 for DACS II ISX
User's Manual
 - 365-353-144 (PDS)
 - 365-353-154 (MML).

Audience: End-user maintenance personnel

Content: Complete manual describing how to install and operate the DMB application on the DACS II or DACS II ISX. Commands and messages describing how to perform DMB cross-connects and DMB test access operations are included.

How to Order Documentation

Overview

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-

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For technical information, call the DACS II Documentation Coordinator: (1-732-949-5989).

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REPORT DS1 PERFORMANCE MONITORING

Explanation of Command

This command is automatically generated by DACS II as the result of a user scheduling automatic DACS II performance reports for DA and TA type NPCs. The autonomous report format specifies the NPC along with all of the data necessary to identify the specific performance parameters and accumulation time periods that are being reported. The actual parameter counts are reported along with their historical validity indicators.

Denial Message

[O.61011.01]

I hh:mm:ss xy,ww REPT PM ABORT COMPL

Autonomous Message

Nonhierarchical

[O.61011]

```
I hh:mm:ss xy,ww REPT PM e LN MSG:
  NPC  PARAM  COUNT  VLDTY  LOCN  AI  MONDAT  MONTIM
[s]abc  pppp  cccccccc  v   locn  aaaaa  mmdd  hhmm
.       pppp  cccccccc  v   locn  aaaaa  mmdd  hhmm
.       pppp  cccccccc  v   locn  aaaaa  mmdd  hhmm
.       pppp  cccccccc  v   locn  aaaaa  mmdd  hhmm
.       pppp  cccccccc  v   locn  aaaaa  mmdd  hhmm
.       pppp  cccccccc  v   locn  aaaaa  mmdd  hhmm
.       pppp  cccccccc  v   locn  aaaaa  mmdd  hhmm
.       pppp  cccccccc  v   locn  aaaaa  mmdd  hhmm
[v]ghi  pppp  cccccccc  v   locn  aaaaa  mmdd  hhmm EOM
```

.
.
.

```
I hh:mm:ss xy,ww REPT PM e LN MSG:
  NPC  PARAM  COUNT  VLDTY  LOCN  AI  MONDAT  MONTIM
[u]jkl  pppp  cccccccc  v   locn  aaaaa  mmdd  hhmm
.       pppp  cccccccc  v   locn  aaaaa  mmdd  hhmm
.       pppp  cccccccc  v   locn  aaaaa  mmdd  hhmm
.       pppp  cccccccc  v   locn  aaaaa  mmdd  hhmm
```

```

      .      pppp ccccccccc v   locn aaaaa mmdd hhmm
      .      pppp ccccccccc v   locn aaaaa mmdd hhmm
      .      pppp ccccccccc v   locn aaaaa mmdd hhmm
      .      pppp ccccccccc v   locn aaaaa mmdd hhmm
      .      pppp ccccccccc v   locn aaaaa mmdd hhmm
[t]def pppp ccccccccc v   locn aaaaa mmdd hhmm COMPL

```

Hierarchical

[O.61011]

```

I hh:mm:ss xy,ww REPT PM e LN MSG:
  NPC  PARAM  COUNT  VLDTY LOCN  AI  MONDAT  MONTIM
uvmnp  pppp  cccccccc v   locn aaaaa mmdd  hhmm
      .      pppp  cccccccc v   locn aaaaa mmdd  hhmm
      .      pppp  cccccccc v   locn aaaaa mmdd  hhmm
      .      pppp  cccccccc v   locn aaaaa mmdd  hhmm
      .      pppp  cccccccc v   locn aaaaa mmdd  hhmm
      .      pppp  cccccccc v   locn aaaaa mmdd  hhmm
      .      pppp  cccccccc v   locn aaaaa mmdd  hhmm
      .      pppp  cccccccc v   locn aaaaa mmdd  hhmm
      .      pppp  cccccccc v   locn aaaaa mmdd  hhmm
edhfg  pppp  cccccccc v   locn aaaaa mmdd  hhmm EOM

```

.
.
.

```

I hh:mm:ss xy,ww REPT PM e LN MSG:
  NPC  PARAM  COUNT  VLDTY LOCN  AI  MONDAT  MONTIM
opjst  pppp  cccccccc v   locn aaaaa mmdd  hhmm
      .      pppp  cccccccc v   locn aaaaa mmdd  hhmm
      .      pppp  cccccccc v   locn aaaaa mmdd  hhmm
      .      pppp  cccccccc v   locn aaaaa mmdd  hhmm
      .      pppp  cccccccc v   locn aaaaa mmdd  hhmm
      .      pppp  cccccccc v   locn aaaaa mmdd  hhmm
      .      pppp  cccccccc v   locn aaaaa mmdd  hhmm
      .      pppp  cccccccc v   locn aaaaa mmdd  hhmm
      .      pppp  cccccccc v   locn aaaaa mmdd  hhmm
wxkqr  pppp  cccccccc v   locn aaaaa mmdd  hhmm COMPL

```

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical starting NPC number
[v]ghi	The 3- or 4-digit nonhierarchical NPC number ([s]abc through [t]def)
[u]jkl	The 3- or 4-digit nonhierarchical NPC number ([s]abc through [t]def)
[t]def	The 3- or 4-digit nonhierarchical ending NPC number

uvmnp	Hierarchical starting NPC number
edhfg	Hierarchical NPC number (uvmnp through wxkqr)
opjst	Hierarchical NPC number (uvmnp through wxkqr)
wxkqr	Hierarchical ending NPC number
uv,ed,op,wx	Unit number
m,h,j,k	Module number
np,fg,st,qr	NPC number within the module
PARAM	Parameter
pppp	Parameter name
	The type of monitored parameter whose value is reported.
CVP	Path Coding Violations
CVL	Line Coding Violations
ESP	Path Errored Seconds
ESL	Line Errored Seconds
SESP	Path Severely Errored Seconds
SESL	Line Severely Errored Seconds
SEFS	Path Severely Errored Framing Seconds
CSSP	Path Controlled Slip Seconds
UASP	Path Unavailable Seconds
COUNT	Count
cccccccc	The accumulated count of a monitored parameter (000000000 through 134217728)
VLDTY	Validity
v	Validity indicator
	Indicates the validity of historical monitoring information. This parameter indicates whether the information for the specified accumulation interval was accumulated over the entire interval or some portion of it.
A	Adjusted, data was manually initialized
C	Complete, data was accumulated over the entire interval
L	Long, data was accumulated longer than the interval period

	P	Partial, data was accumulated over only part of the interval
LOCN		Location
locn		The location being performance monitored
	NEND	Near-end
	FEND	Far-end
AI		Accumulation interval
aaaaa		Accumulation interval specification
		The accumulation or performance monitoring period for the specified parameter.
	15 MIN	Parameter count from a 15-minute accumulator
	DAILY	Parameter count from a daily accumulator
MONDAT		Monitored date
mmdd		Beginning date of the performance monitoring period
		The date on which the performance monitoring period begins. This period is specified in the AI parameter.
mm		Month of year (01 through 12)
dd		Day of the month (01 through 31)
MONTIM		Monitored time
hhmm		Time at which performance monitoring begins
		When outputting current or historical data, this parameter indicates the beginning time of day of the historical accumulation interval specified in the AI parameter.
hh		Hour of day (00 through 23)
mm		Minute of hour (00 through 59)
ABORT		Abort
		The automomous ABORT message is generated when the buffer is overfilled with scheduled PM reports.

STARTUP

Explanation of Message

This autonomous message indicates that the reset procedure has not successfully completed.

Autonomous Message

[O.01251]
RESET STOPPED

FACILITY LOOPBACK RELEASE

Explanation of Command

This command applies to 1.544Mbit/s Terminations only.

For TA type NPCs on DS3Us:

ANSI (American National Standards Institute) T1.403 is a DS1 interface specification, which among other things, specifies the use of the 4kb/s ESF data link for network maintenance. The data link is used to communicate between network elements which transport the DS1 facility.

This command is used to deactivate near-end (at the DACS II) and far-end (at the terminal on the other end of the DS1 facility) loopbacks on ESF formatted facilities as defined by ANSI T1.403.

This command can be used to deactivate a DACS II near-end payload loopback or to cause DACS II to transmit payload or line loopback deactivate commands on the ESF data link to far-end equipment, ordering the equipment on the other end of the DS1 facility to deactivate the respective loopbacks.

For TE and TH type NPCs on Hybrid DS3Us:

This command can also be used to release a line loopback towards the facility of a DS1 circuit of type TE or of an E1 circuit of type TH within a Hybrid DS3. (See command I.26141 to activate such loopbacks.)

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.26151]

RLS: [FRM xy][, SEQ ww]:LPBK loop,NPC [s]abc,LOCN locn!

Hierarchical

[I.26151]

RLS: [FRM xy][, SEQ ww]:LPBK loop,NPC uvmnp,LOCN locn!

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.26151]

M hh:mm:ss xy,ww n[vv] RLS LPBK loop NPC [s]abc LOCN locn COMPL

Hierarchical

[O.26151]

M hh:mm:ss xy,ww n[vv] RLS LPBK loop NPC uvmnp LOCN locn COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.26151.01]

M hh:mm:ss xy,ww n[vv] RLS LPBK loop NPC [s]abc LOCN locn \
COND cc DNY

Hierarchical

[O.26151.01]

M hh:mm:ss xy,ww n[vv] RLS LPBK loop NPC uvmnp LOCN locn \
COND cc DNY

**Explanation of
Parameters**

LPBK

Loopback

loop

Loopback type

LINE

Line

PYLD

Payload

NPC

Network processing circuit

[s]abc

The 3- or 4-digit nonhierarchical NPC number

The valid values are as follows, except that for TH type NPCs that carry E1s within a Hybrid DS3U all NPC numbers that are divisible by 4 as well as all NPC numbers that end with a "D" or "H" are invalid:

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
LOCN	Location
locn	Loopback Location
NEND	Near-end
FEND	Far-end

The NEND parameter must be coded for DS1 (T1) or E1 loopbacks that are carried within a Hybrid DS3, even though the far-end loopbacks cannot be invoked.

cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
26	NPC type error
9B	The MXR is not grown
B2	MXR is out of service
05	Invalid parameter combination
0B	Another signal already active prevents this signal from being sent
29	This signal is already being sent

cc	<i>Explanation</i>
30	No signals active
84	NPC is non-channelized
86	NPC number out of range

FACILITY TEST SIGNAL DEACTIVATE

Explanation of Command

This command is used to deactivate facility test signals and ANSI data link bit-oriented messages on DACS II DA and TA DS1 facility types. The test signals support network maintenance activities.

This command is required to deactivate any Yellow Test, High Density Test, Low Density Test, or Quasi-Random Test Signal previously applied to a facility because once these test signals are activated, they remain on the line until they are deactivated by this command.

Although this command also deactivates any currently active In-Band Loop-back Activate or In-Band Loop-back Deactivate Signal, these signals are temporary test signals which are transmitted for a duration of 5-8 seconds and then automatically deactivated by DACS II.

Deactivating a test signal also causes DACS II to remove any downstream trunk conditioning that was applied because the test signal was activated.

This command is also used to deactivate all data link test signals on DA or TA type DS1 facilities using the ESF format. Data link test signals include the Yellow Test signal (ESF mode), the Loopback Retention signal, and the ANSI far-end loopback activate/deactivate sequences which are initiated using the "Operate Loopback" command (26141). Data link test signals are defined in ANSI (American National Standards Institute) T1.403 as Bit Oriented Messages. ANSI T1.403 is a DS1 interface specification, which among other things, specifies the use of the 4kb/s ESF data link for network maintenance. The data link is used to communicate between network elements which transport the DS1 facility.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.28201]

RLS:[FRM xy][,SEQ ww]:TSIG test,NPC [s]abc!

Hierarchical

[I.28201]

RLS:[FRM xy][,SEQ ww]:TSIG test,NPC uvmnp!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.28201]

M hh:mm:ss xy,ww n[vv] RLS TSIG test NPC [s]abc COMPL

Hierarchical

[O.28201]

M hh:mm:ss xy,ww n[vv] RLS TSIG test NPC uvmnp COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.28201.01]

M hh:mm:ss xy,ww n[vv] RLS TSIG test NPC [s]abc COND cc DNY

Hierarchical

[O.28201.01]

M hh:mm:ss xy,ww n[vv] RLS TSIG test NPC uvmnp COND cc DNY

Explanation of Parameters

TSIG

Test signal

test

Test signal type

ALLP

All Payload Test Signals, including High Density Test Signal, Low Density Test Signal, Quasi-Random Test Signal, In-Band Loopback Activate Signal, In-Band Loopback Deactivate Signal, and Yellow Test Signal in D4/T1DM mode

	ALLD	All Data Link Test Signals, including Yellow Test Signal in ESF mode, Loopback Retention Signal, and ANSI Bit-Oriented Far-End Loopback Activate/Deactivate Sequences.
	ALL	All Test Signals in both the payload and data link.
NPC		Network processing circuit
[s]abc		The 3- or 4-digit nonhierarchical NPC number
		For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp		Hierarchical NPC number
	uv	Unit number
	m	Module number
	np	NPC number within the module
		For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
cc		Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
26	NPC type error
9B	The MXR is not grown
B2	MXR is out of service
05	Invalid parameter combination
0B	Another signal already active prevents this signal from being sent
29	This signal is already being sent

cc	<i>Explanation</i>
30	No signals active
84	NPC is non-channelized
86	NPC number out of range

REMOVE CROSS-CONNECT BUFFER

Explanation of Command

This command applies only to the noncapacity expansion frame (NCEF).
It requests the removal of the cross-connect buffer from service.

Command

1.544 Mbit/s Termination

[I.33202]

RMV:FRM xy,SEQ ww:CCB sf!

2.048 Mbit/s Termination

[I.33202]

RMV:FRM xy,SEQ ww:CCB sf!

Completion Message

1.544 Mbit/s Termination

[O.33202]

M hh:mm:ss xy,ww n[vv] RMV CCB sf COND 00 COMPL

2.048 Mbit/s Termination

[O.33202]

M hh:mm:ss xy,ww n[vv] RMV CCB sf COND 00 COMPL

Denial Message

1.544 Mbit/s Termination

[O.33202.01]

**hh:mm:ss xy,ww n[vv] RMV CCB sf COND cc DNY

2.048 Mbit/s Termination

[O.33202.01]

**hh:mm:ss xy,ww n[vv] RMV CCB sf COND cc DNY

Autonomous Message

1.544 Mbit/s Termination

[O.33202]

pa <il> hh:mm:ss xy,ww n[vv] RMV CCB sf [PMC|PMA|DMA|MI]
COND 00 COMPL

[O.33202.01]

pa <il> hh:mm:ss xy,ww n[vv] RMV CCB sf [PMC|PMA|DMA|MI]
COND cc DNY

2.048 Mbit/s Termination

[O.33202]

pa <il> hh:mm:ss xy,ww n[vv] RMV CCB sf [PMC|PMAS|DMA|MI]
COND 00 COMPL

[O.33202.01]

pa <il> hh:mm:ss xy,ww n[vv] RMV CCB sf [PMC|PMA|DMA|MI]
COND cc DNY

Explanation of Parameters

pa	Priority of action field.	
	I	Information
	*	Minor alarm
	**	Major alarm
	*C	Critical alarm
il	Intervention level.	
	AMI	Immediate maintenance action
	AMD	Deferred maintenance action
	SI	No intervention
PMC	Prompt Maintenance Action Critical	
PMA	Prompt Maintenance Action Major	

DMA	Deferred Maintenance Action Minor
MI	Maintenance Information
CCB	Cross-connect buffer
sf	CCB identification
	s Side No. (0 or 1).
	f CCB No. (1 through 6).
COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
18	CCNI is out of service
19	Mate CCN side is out of service

REMOVE CLOCK CONTROL INTERFACE

Explanation of Command

This command requests that the clock and control interface (CCI) in side s be removed from service.

When a CCI pack is removed from service, its two corresponding bus terminator (BT) packs are also removed.

Command

1.544 Mbit/s Termination

[I.33251]

RMV:[FRM xy][,SEQ ww]:CCI s!

2.048 Mbit/s Termination

[I.33251]

RMV:[FRM xy][,SEQ ww]:CCI s!

Completion Message

1.544 Mbit/s Termination

[O.33251]

M hh:mm:ss xy,ww n[vv] RMV CCI s COND 00 COMPL

2.048 Mbit/s Termination

[O.33251]

M hh:mm:ss xy,ww n[vv] RMV CCI s COND 00 COMPL

Denial Message

1.544 Mbit/s Termination

[O.33251.01]

M hh:mm:ss xy,ww n[vv] RMV CCI s COND cc DNY

2.048 Mbit/s Termination

[O.33251.01]

M hh:mm:ss xy,ww n[vv] RMV CCI s COND cc DNY

Autonomous Message

1.544 Mbit/s Termination

[O.33251]

pa <il> hh:mm:ss xy,ww n[vv] RMV CCI s [PMC|PMA|DMA|MI] \
COND c'c' COMPL

[O.33251.01]

pa <il> hh:mm:ss xy,ww n[vv] RMV CCI s [PMC|PMA|DMA|MI] \
COND cc DNY

2.048 Mbit/s Termination

[O.33251]

pa <il> hh:mm:ss xy,ww n[vv] RMV CCI s [PMC|PMA|DMA|MI] \
COND c'c' COMPL

[O.33251.01]

pa <il> hh:mm:ss xy,ww n[vv] RMV CCI s [PMC|PMA|DMA|MI] \
COND cc DNY

Explanation of Parameters

pa		Priority of action field.
	I	Information
	*	Minor alarm
	**	Major alarm
	*C	Critical alarm
il		Intervention level.
	AMI	Immediate maintenance action
	AMD	Deferred maintenance action
	SI	No intervention
PMC		Prompt Maintenance Action Critical
PMA		Prompt Maintenance Action Major

DMA	Deferred Maintenance Action Minor
MI	Maintenance Information
CCI	Clock and control interface
s	Side No. (0 or 1)
cc	Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
19	Mate CCN side is out of service

REMOVE CROSS-CONNECT NETWORK INTERFACE

Explanation of Command

This command applies only to the noncapacity expansion frame (NCEF).
It requests the removal of the cross-connect network interface from service.

Command

1.544 Mbit/s Termination

[I.33201]

RMV:FRM xy,SEQ ww:CCNI s!

2.048 Mbit/s Termination

[I.33201]

RMV:FRM xy,SEQ ww:CCNI s!

Completion Message

1.544 Mbit/s Termination

[O.33201]

M hh:mm:ss xy,ww n[vv] RMV CCNI s COND cc COMPL

2.048 Mbit/s Termination

[O.33201]

M hh:mm:ss xy,ww n[vv] RMV CCNI s COND cc COMPL

Denial Message

1.544 Mbit/s Termination

[O.33201.01]

M hh:mm:ss xy,ww n[vv] RMV CCNI s COND cc DNY

2.048 Mbit/s Termination

[O.33201.01]

M hh:mm:ss xy,ww n[vv] RMV CCNI s COND cc DNY

Autonomous Message

1.544 Mbit/s Termination

[O.33201]

pa <il> hh:mm:ss xy,ww n[vv] RMV CCNI s [PMC|PMA|DMA|MI]
COND cc COMPL

[O.33201.01]

pa <il> hh:mm:ss xy,ww n[vv] RMV CCNI s [PMC|PMA|DMA|MI]
COND cc DNY

2.048 Mbit/s Termination

[O.33201]

pa <il> hh:mm:ss xy,ww n[vv] RMV CCNI s [PMC|PMA|DMA|MI]
COND cc COMPL

[O.33201.01]

pa <il> hh:mm:ss xy,ww n[vv] RMV CCNI s [PMC|PMA|DMA|MI]
COND cc DNY

Explanation of Parameters

pa		Priority of action field.
	I	Information
	*	Minor alarm
	**	Major alarm
	*C	Critical alarm
il		Intervention level.
	AMI	Immediate maintenance action
	AMD	Deferred maintenance action
	SI	No intervention
PMC		Prompt Maintenance Action Critical
PMA		Prompt Maintenance Action Major

DMA	Deferred Maintenance Action Minor
MI	Maintenance Information
CCNI	Cross-connect network interface
s	CCNI number (0 or 1)
cc	Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
19	Mate CCN side is out of service

REMOVE ETSI

Explanation of Command

This command requests the removal of an expanded time slot interchanger (ETSI) from service. DACS II denies this command if the mate expanded cross-connect network (ECCN) side is out-of-service (OOS).

Command

[I.33261]
RMV:[FRM xy][,SEQ ww]:ETSI sqq!

Completion Message

[O.33261]
M hh:mm:ss xy,ww n[vv] RMV ETSI sqq COND 00 COMPL

Denial Message

[O.33261.01]
M hh:mm:ss xy,ww n[vv] RMV ETSI sqq COND cc DNY

Autonomous Message

[O.33261]
pa <il> hh:mm:ss xy,ww n[vv] RMV ETSI sqq [PMC|PMA|DMA|MI] \ COND 00 COMPL

[O.33261.01]
pa <il> hh:mm:ss xy,ww n[vv] RMV ETSI sqq [PMC|PMA|DMA|MI] \ COND cc DNY

Explanation of Parameters

pa	Priority of action field
I	Information
*	Minor alarm
**	Major alarm

	*C	Critical alarm
il		Intervention level
	AMI	Immediate maintenance action
	AMD	Deferred maintenance action
	SI	No intervention
PMC		Prompt Maintenance Action Critical
PMA		Prompt Maintenance Action Major
DMA		Deferred Maintenance Action Minor
MI		Maintenance Information
ETSI		Expanded time slot interchanger
s		Side (0 or 1)
qq		Unit number (01 through 16)
COND		Condition
cc		Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
19	Mate CCN side is out of service
CE	CCI is out of service

REMOVE ETIS ALL

Explanation of Command

This command requests the removal of all in-service expanded time slot interchangers (ETISs) in side s of the expanded cross-connect network (ECCN). This message is denied if ECCN side s is the active side and the mate ECCN side is out-of-service (OOS).

Command

[I.33271]
RMV:[FRM xy][,SEQ ww]:ETIS,ECCN s,ALL!

Completion Message

[O.33271]
M hh:mm:ss xy,ww n[vv] RMV ETIS ECCN s ALL 5 LN MSG:
TOTAL ETIS kk
s01 r nn s02 r nn s03 r nn s04 r nn s05 r nn s06 r nn \
s07 r nn s08 r nn s09 r nn s10 r nn s11 r nn s12 r nn \
s13 r nn s14 r nn s15 r nn s16 r nn \
COND 00 COMPL

Denial Message

[O.33271.01]
M hh:mm:ss xy,ww n[vv] RMV ETIS ECCN s ALL \
COND cc DNY

Explanation of Parameters

ETIS	Expanded time slot interchangers
ECCN	Expanded cross-connect network
s	Side number (0 or 1)
kk	Total number of ETISs equipped in side s (01 through 16).
r	Indication of the completion or denial of the removal for each individual ETIS pack.
C	Completed

	D	Denied
	-	ETSI not equipped
nn		Hexadecimal condition code for the particular ETSI
		For r = C
	00	No condition
		For r = D
	04	Subject entity is out of service
		nn will be shown as -- if r is -
cc		Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
19	Mate CCN side is out of service
CE	CCI is out of service

REMOVE LINK

Explanation of Command

This command removes the administrative link from service.

Command

[I.33011]
RMV:[FRM xy][,SEQ ww]:LINK j!

Completion Message

[O.33011]
M hh:mm:ss xy,ww n[vv] RMV LINK j COND cc COMPL

Denial Message

[O.33011.01]
M hh:mm:ss xy,ww n[vv] RMV LINK j COND cc DNY

Explanation of Parameters

LINK	Link
j	Administrative link number (1 through 7)
pa	Priority of action field
	* Minor alarm
	** Major alarm
	M Manual Response
cc	Hexadecimal condition code
	cc <i>Explanation</i>
	00 No conditions
	04 Subject entity is out of service
	08 Cannot remove own link

cc	<i>Explanation</i>
09	Last link in service
D0	Command is Frame administrator (DAX) only.
FC	Superuser logged on
FD	Command not allowed

REMOVE MAIN CONTROLLER

Explanation of Command

This command removes the main controller from service. The MC must be in service for this command to be accepted. Diagnostic and restore messages can still be run on the MC.

Command

[I.33001]
RMV: [FRM xy][, SEQ ww]:MC!

Completion Message

[O.33001]
M hh:mm:ss xy,ww n[vv] RMV MC COND 00 COMPL

Denial Message

[O.33001.01]
M hh:mm:ss xy,ww n[vv] RMV MC COND cc DNY

Autonomous Message

1.544 Mbit/s Termination

[O.33001]
pa <il> hh:mm:ss xy,ww RMV MC [PMC|PMA|DMA|MI] COND cc COMPL

2.048 Mbit/s Termination

[O.33001]
pa <il> hh:mm:ss xy,ww RMV MC [PMC|PMA|DMA|MI] COND cc COMPL

Explanation of Parameters

MC Main controller
pa Priority of action field

	I	Information
	*	Minor alarm
	**	Major alarm
	*C	Critical alarm
il		Intervention level
	AMI	Immediate maintenance action
	AMD	Deferred maintenance action
	SI	No intervention
	PMC	Prompt Maintenance Action Critical
	PMA	Prompt Maintenance Action Major
	DMA	Deferred Maintenance Action Minor
	MI	Maintenance Information
cc		Hexadecimal condition code
	cc	<i>Explanation</i>
	04	Subject entity is out of service

REMOVE NPCs

Explanation of Command

This command removes a single Network Processing Circuit (NPC) or a range of NPCs within a unit from service.

The NPCs can belong to a Facility Terminating Unit, a DS3 Unit, a HDS3 Unit, a HSU or a Digital Signal Processing Unit. For TH type NPCs, the NPC numbers which are divisible by four with a remainder of zero are not valid THxyz NPCs. However, the range of TH type NPC numbers is still supported with the understanding that there may be gaps in the NPC number range.

Digital Signal Processing (DSP) NPCs in Facility Terminating Units may also be removed by this command. Please note also that SDxyz type NPCs are always odd and the next higher even NPC number is not used.

A range of NPCs cannot be specified for Digital Signal Processing Unit NPCs in a DSPU. When a range of NPCs is being removed, execution of this command may be aborted by entering ABT.

The INCL keyword is required for removal of one or more cross-connected Network Processing Circuits with customer or red circuit marking.

⇒ NOTE:
INCL is also required for subrate Network Processing Circuits with established channels (i.e., channels connected by the SECH command). The INCL keyword is required for removal of one or more cross-connected Network Processing Circuits with customer or red circuit marking.

⇒ NOTE:
INCL is also required for C-bit processing DSPU packs with C-bit connected channels.

One message segment is output for each Network Processing Circuit requested and successfully removed.

For NPCs with a Digital Signal Processing Unit (DSPU), this command results in the removal of all NPCs in the circuit pack on only one of the duplicated sides.

When an NPC remove command addresses a range of NPCs, the removal of two or more consecutive NPCs in the range or even an entire Facility Terminating

Module (FTM) of NPCs can be skipped, with a summary message, for the following conditions: A range command addressing NPCs within a Unit crosses an FTM boundary and the FTM is unequipped; Addressed NPCs are unequipped; Addressed NPCs are out-of-service; Addressed NPCs have other conditions not involving a failure condition determined by diagnostics.

Specifically:

- Remove commands where the address range crosses a Unit boundary shall be denied.
- For remove commands which address a range of NPCs, denials for sets of two or more NPCs shall be output in a summary command. The summary denial shall use a floating window denial:

Floating Window Denial Message

When a remove command for a range of NPCs is denied for successive NPCs in the range for the same reason, a summary denial message shall be output, identifying the relevant range of NPCs and the reason. The generation of additional completion or denial responses for reasons other than diagnostic failure resumes at the next NPC and continues to the end of the range.

Command

Nonhierarchical

[I.33351]

RMV:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def][,SIDE s][,INCL]!

Hierarchical

[I.33351]

RMV:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr][,SIDE s][,INCL]!

Completion Message

Nonhierarchical

[O.33351]

M hh:mm:ss xy,ww n[vv] RMV NPC [s]ghi[SIDE s] TYPE mnxyz[INCL] \
COND kk COMPL

Hierarchical

[O.33351]

M hh:mm:ss xy,ww n[vv] RMV NPC uvghi[SIDE s] TYPE mnxyz[INCL] \
COND kk COMPL

Denial Message

Nonhierarchical

[O.33351.01]

M hh:mm:ss xy,ww n[vv] RMV NPC [s]jkl[-[t]mno][SIDE s] TYPE \
mnxyz[INCL] COND cc DNY

Hierarchical

[O.33351.01]

M hh:mm:ss xy,ww n[vv] RMV NPC uvjkl[-uvmno][SIDE s] TYPE mnxyz\
[INCL] COND cc DNY

Autonomous Message

1.544 Mbit/s Termination

Nonhierarchical

[O.33351]

pa hh:mm:ss xy,ww n[vv] RMV NPC [s]ghi[SIDE s] TYPE mnxyz[INCL] \
COND kk COMPL

[O.33351.01]

pa hh:mm:ss xy,ww n[vv] RMV NPC [s]jkl[SIDE s] TYPE mnxyz[INCL] \
COND cc DNY

Hierarchical

[O.33351]

pa hh:mm:ss xy,ww n[vv] RMV NPC uvghi[SIDE s] TYPE mnxyz[INCL] \
COND kk COMPL

[O.33351.01]

pa hh:mm:ss xy,ww n[vv] RMV NPC uvjkl[SIDE s] TYPE mnxyz[INCL] \
COND cc DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.33351]

pa <il> hh:mm:ss xy,ww n[vv] RMV NPC [s]ghi[SIDE s] TYPE \
mnxyz[INCL] [PMC|PMA|DMA|MI] COND kk COMPL

[O.33351.01]

pa <il> hh:mm:ss xy,ww n[vv] RMV NPC [s]jkl[SIDE s] TYPE \
mnxyz[INCL] COND cc DNY

Hierarchical

[O.33351]

pa <il> hh:mm:ss xy,ww n[vv] RMV NPC uvghi[SIDE s] TYPE \
mnxyz[INCL] [PMC|PMA|DMA|MI] COND kk COMPL

[O.33351.01]

pa <il> hh:mm:ss xy,ww n[vv] RMV NPC uvjkl[SIDE s] TYPE \
mnxyz[INCL] COND cc DNY

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number (beginning of the range).
[t]def	The 3- or 4-digit nonhierarchical NPC number (end of the range).
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number (beginning of the range).
uvkqr	Hierarchical NPC number (end of the range).
	uv Unit number
	m,k Module number
	np,qr NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
SIDE	Side
s	Side of duplicated DSPU circuit to be removed (0 or 1)

1.544 Mbit/s Termination

INCL Inclusive

This keyword is required for removal of one or more NPCs which have cross-connections marked as customer or red. It is also required for Subrate NPCs with established channels. For Subrate circuit packs, there is only one NPC per circuit pack.

2.048 Mbit/s Termination

INCL Inclusive

This keyword is required for removal of one or more NPCs which have cross-connections marked as customer or red. It is also required for C-bit processing DSPU packs with C-bit connected channels. For CEPT circuit packs, there is only one NPC per circuit pack.

Both Terminations

pa Priority of action

***C** Critical

****** Major

***** Minor

A Autonomous

il Intervention level

AMI Immediate maintenance action

AMD Deferred maintenance action

SI No intervention

PMC Prompt Maintenance Action Critical

PMA Prompt Maintenance Action Major

DMA Deferred Maintenance Action Minor

MI Maintenance Information

[s]ghi The 3- or 4-digit nonhierarchical number of a successfully removed NPC ([s]abc through [t]def).

[s]jkl The 3- or 4-digit nonhierarchical number of an NPC whose removal is denied.

If used in a range, it denotes the first NPC of the range ([s]abc through [t]def).

[t]mno The 3- or 4-digit nonhierarchical number of an NPC whose removal is denied.

	It denotes the last NPC of a range ([s]abc through [t]def).
uvghi	Hierarchical number of a successfully removed NPC (uvmnp through uvkqr).
uvjkl	Hierarchical number of an NPC whose removal is denied. If used in a range, it denotes the first NPC of the range (uvmnp through uvkqr).
uvmno	Hierarchical number of an NPC whose removal is denied. It denotes the last NPC of a range (uvmnp through uvkqr).
uv	Unit number
m,g,k,j	Module number
np,q,hi, kl,no	NPC number within the module
TYPE	Type For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
DA	Dual digroup ANSI NPC
DE	Dual digroup NPC
DS	SLC [®] carrier NPC
	The mn value is identified for the SDxyz application type NPCs.
SD	Digital Signal Processing Application Circuit Pack
ST	Digital Signal Processing Circuit Pack (2 NPCs per card)
TA	DS3U ANSI NPC
TE	DS3U or HDS3U Noninterface unit NPC
TH	Hybrid DS3U CEPT NPC
MB	Digital multipoint bridge NPC
MJ	Multipoint junction unit NPC
SR	Subrate multiplexer unit NPC
CB	C-bit processor (CPR) NPC
COND	Condition
ST	Digital Signal Processing Circuit Pack (2 NPCs per card)

kk Hexadecimal completion code
See cc to interpret values.

cc Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
02	Subject entity is not equipped
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
15	NPC is unequipped
19	Mate CCN side is out of service
1E	Customer control or red circuit exists
1F	FTMI is in service but failed
24	Unit type error
37	DSPI out-of-service
3E	DSPI failed
5C	NPC providing timing to inservice SSP
86	Attempt to remove DGA w/o INCL keyword or prior prot. sw. request
8E	DGA protected; use INCL to remove, or unswitch protection
9B	INCL must be specified for SRDC ckts
F2	Invalid NPC number specified
F5	INCL keyword needed to perform this command
FD	NPC range crosses unit boundary
A0	The selected MXR associated with the NPC is Out-Of-Service

cc	<i>Explanation</i>
A1	The selected MXR associated with the NPC is In-Service but failed
A3	The selected MIU associated with the NPC is In-Service but failed
B7	The associated MXR is In-Service but pested
69	Use of this NPC is RESERVED for SLC 96 MD 1
AA	Integrated Test Set is currently active on TG
31	The MPR is Out Of Service
33	The MPR is In Service but failed
34	The MPR is In Service but pested

RMV RT | DL

**Explanation of
Command****NOTE:**

This command applies to 1.544 Mbit/s Termination only.

This command removes all NPCs associated with the specified RT or DL from service, so the type of the NPCs can be changed using the CHG RT command I.38481. Each NPC removed prints a RMV (O.33351) message. If an NPC removal fails the error condition of the RMV NPC message (O.33351) gives the reason. This command removes the NPCs associated with the RT or DL one at a time in the proper order. If it encounters an error removing any one of the NPCs it will not continue removing the remaining NPCs.

Command

[I.33481]

RMV:[FRM xy][,SEQ ww]:{RT|DL} ffff!

**Completion
Message****Nonhierarchical**

[O.33481]

M hh:mm:ss xy,ww n[vv] RMV {RT|DL} ffff 3 LN MSG:
DGA [s]aaa 00S [DGB [s]bbb 00S] [DGC [s]ccc 00S] [DGD [s]ddd 00S]
[DGP [s]ppp 00S]
COMPL

Hierarchical

[O.33481]

M hh:mm:ss xy,ww n[vv] RMV {RT|DL} ffff 3 LN MSG:
DGA uvjab 00S [DGB uvkcd 00S] [DGC uvlef 00S] [DGD uvmgh 00S] \
[DGP uvjpr 00S]
COMPL

Denial Message 1.544 Mbit/s Termination

Nonhierarchical

[O.33481.01]

M hh:mm:ss xy,ww n[vv] RMV {RT|DL} ffff 3 LN MSG:
[DGA [s]aaa {OOS|INS}][DGB [s]bbb {OOS|INS}][DGC [s]ccc \\
{OOS|INS}]
[DGD [s]ddd {OOS|INS}][DGP [s]ppp {OOS|INS}] \\
COND cc DNY

Hierarchical

[O.33481.01]

M hh:mm:ss xy,ww n[vv] RMV {RT|DL} ffff 3 LN MSG:
[DGA uvjab {OOS|INS}][DGB uvkcd {OOS|INS}][DGC uvlef {OOS|INS}]
[DGD uvmgh {OOS|INS}][DGP uvjpr {OOS|INS} COND cc DNY

Common

If there is no RT or DL:

[O.33481.01]

M hh:mm:ss xy,ww n[vv] RMV {RT|DL} ffff 2 LN MSG:
COND cc DNY

Explanation of Parameters

RT	SLC remote terminal
DL	Digital carrier line unit
ffff	Bank identification number (0000 through 9999)
OOS	Out of Service
INS	Inservice
DNY	Denied
DGA	Digroup A of SLC
DGB	Digroup B of SLC
DGC	Digroup C of SLC
DGD	Digroup D of SLC
DGP	Digroup P of SLC
[s]aaa	DGA NPC number
[s]bbb	DGB NPC number

[s]ccc	DGC NPC number
[s]ddd	DGD NPC number
[s]ppp	DGP NPC number
uvjab	DGA NPC number
uvkcd	DGB NPC number
uvlef	DGC NPC number
uvmgh	DGD NPC number
uvjpr	DGP NPC number
cc	Hexadecimal condition code

REMOVE PMEM OR SMEM

Explanation of Command

This command removes the Primary Memory card (PMEM) or Secondary Memory card (SMEM) from service.

The SMEM card can be alarmed but the PMEM card cannot.

The PMEM card may only be removed when the main controller (MC) is in maintenance condition (MCOND). The SMEM card may be removed when the MC is in service (IS) or MCOND.

If either card fails autonomously, it is removed by software. However, if the PMEM fails autonomously, the MC first goes into MCOND.

If the SMEM is removed manually, it is removed by software also. Removing the SMEM card does not change the state of the MC. When the MC is IS, all writes to the card are completed before this command completes.

Command

[I.33211]
RMV: [FRM xy][, SEQ ww]: {SMEM|PMEM}!

Completion Message

[O.33211]
M hh:mm:ss xy,ww n[vv] RMV {PMEM|SMEM} COMPL

Denial Message

[O.33211.01]
M hh:mm:ss xy,ww n[vv] RMV {PMEM|SMEM} COND cc DNY

Autonomous Message

[O.33211]
pa <il> hh:mm:ss xy,ww n[vv] RMV {PMEM|SMEM} {PMC|PMA|DMA|MI} COMPL

Explanation of Parameters	PMEM	Primary memory
	SMEM	Secondary memory
	pa	Priority of Action
	A	Autonomous
	I	Informational
	*	Minor
	**	Major
	*C	Critical
	il	Intervention level
	AMI	Immediate maintenance action
	AMD	Deferred maintenance action
	SI	No intervention
	PMC	Prompt Maintenance Action Critical
	PMA	Prompt Maintenance Action Major
	DMA	Deferred Maintenance Action Minor
	MI	Maintenance Information
	COND	Condition
	cc	Hexadecimal condition code
	cc	<i>Explanation</i>
	03	Subject entity is in service
	0B	BOOT on subject entity failed
	8B	PMEM not in service or not ready
	F1	PMEM and SMEM synchronization fail
	F2	Not a DACS II compatible Flash Card
	F3	Flash Card is empty
	F4	PMEM and SMEM are different
	F5	Flash Card is not present
	F6	Flash Card is bad

REMOVE SYNCHRONIZER'S TLI

Explanation of Message

This message prints when a synchronizer's timing link interface (TLI) extractor is autonomously removed from service. The message 33121 prints to identify the SSPs being removed from service.

Autonomous Message

1.544 Mbit/s Termination

[O.33131]

```
pa <il> hh:mm:ss xy,ww  RMV SYNC a TLI m \
[PMC|PMA|DMA|MI] COND 00 COMPL
```

2.048 Mbit/s Termination

[O.33131]

```
pa <il> hh:mm:ss xy,ww  RMV SYNC a TLI m \
[PMC|PMA|DMA|MI] COND 00 COMPL
```

Explanation of Parameters

pa		Priority of action field.
	I	Information
	M	Manual
	*	Minor alarm
	**	Major alarm
	*C	Critical alarm
il		Intervention level.
	AMI	Immediate maintenance action
	AMD	Deferred maintenance action
	SI	No intervention
	PMC	Prompt Maintenance Action Critical
	PMA	Prompt Maintenance Action Major
	DMA	Deferred Maintenance Action Minor

	MI	Maintenance Information
SYNC		Synchronizer
a		SYNC number (0 or 1)
TLI		Timing Link Interface
m		TLI number (1 through 4)

REMOVE SYNCHRONIZER TIME BASE AS A CLOCK REFERENCE OSCILLATOR

Explanation of Message

This command removes the synchronizer time base as a clock reference oscillator.

Command

[I.33111]
RMV: [FRM xy][,SEQ ww]:SYNC,TLI 3,CRO!

Completion Message

[O.33111]
M hh:mm:ss xy,ww n[vv] RMV SYNC TLI 3 CRO COND 00 COMPL

Denial Message

[O.33111.01]
M hh:mm:ss xy,ww n[vv] RMV SYNC TLI 3 CRO COND cc DNY

Autonomous Message

1.544 Mbit/s Termination

[O.33111]
pa <il> hh:mm:ss xy,ww RMV SYNC a TLI m[CRO]
[PMC|PMA|DMA|MI] COND 00 COMPL

[O.33111.01]
pa <il> hh:mm:ss xy,ww RMV SYNC a TLI m[CRO]
[PMC|PMA|DMA|MI] COND cc DNY

2.048 Mbit/s Termination

Explanation of Parameters	pa	Priority of Action	
		*C	Critical
		**	Major
		*	Minor
		A	Autonomous
	il	Intervention level	
		AMI	Immediate maintenance action
		AMD	Deferred maintenance action
		SI	No intervention
		PMC	Prompt Maintenance Action Critical
		PMA	Prompt Maintenance Action Major
		DMA	Deferred Maintenance Action Minor
		MI	Maintenance Information
	SYNC	Synchronizer	
	a	Synchronizer number (0 or 1)	
	TLI	Timing link interface	
	m	TLI number (1 through 4)	
	CRO	Clock Reference Oscillator	
	COND	Condition	
	cc	Hexadecimal condition code	
		cc	<i>Explanation</i>
		02	Subject entity is not equipped
		04	Subject entity is out of service
		32	Both SYNCs are OOS
		33	Wrong TLI type
		A9	Both syncs are out-of-service
		CC	One of the IS SYNC is pested

REMOVE SYNCHRONIZER'S TLI OR SSP

Explanation of Command

Input Command:

This command requests the removal from service of a synchronizer's timing link interface (TLI) if the TLI is grown as a distributor or the removal from service of an SSP if the TLI was grown as an extractor. If the timing link interface was configured as a timing extractor, synchronizer sync Port 0 or 1 must also be specified.

Autonomous Removal:

The same autonomous removal message is used to indicate that either a TLI is being removed or that an SSP is being removed. If an SSP is identified in the output, the message is indicating that an SSP is being removed and the alarm level used is that assigned to TREF in Alarm Severity. If the SSP is not identified in the output, the message is indicating that the TLI is being removed and the alarm level used is that assigned to TLI in Alarm Severity.

Command

1.544 Mbit/s Termination

[I.33121]

RMV:[FRM xy][,SEQ ww]:SYNC a,TLI m[,SSP b]!

2.048 Mbit/s Termination

[I.33121]

RMV:[FRM xy][,SEQ ww]:SYNC a,TLI m[,SSP b]!

Completion Message

1.544 Mbit/s Termination

[O.33121]

M hh:mm:ss xy,ww n[vv] RMV SYNC a TLI m[SSP b] COND cc \
COMPL

2.048 Mbit/s Termination

[O.33121]

M hh:mm:ss xy,ww n[vv] RMV SYNC a TLI m[SSP b] COND cc \
COMPL

Denial Message

1.544 Mbit/s Termination

[O.33121.01]

M hh:mm:ss xy,ww n[vv] RMV SYNC a TLI m[SSP b] COND cc DNY

2.048 Mbit/s Termination

[O.33121.01]

M hh:mm:ss xy,ww n[vv] RMV SYNC a TLI m[SSP b] COND cc DNY

Autonomous Message

1.544 Mbit/s Termination

[O.33121]

pa <il> hh:mm:ss xy,ww RMV SYNC a TLI m[SSP b[c]] \
[PMC|PMA|DMA|MI] COND 00 COMPL

2.048 Mbit/s Termination

[O.33121]

pa <il> hh:mm:ss xy,ww RMV SYNC a TLI m[SSP b[c]] \
[PMC|PMA|DMA|MI] COND 00 COMPL

Explanation of Parameters

pa	Priority of action field.
I	Information
M	Manual
*	Minor alarm
**	Major alarm
*C	Critical alarm
il	Intervention level.

	AMI	Immediate maintenance action
	AMD	Deferred maintenance action
	SI	No intervention
PMC		Prompt Maintenance Action Critical
PMA		Prompt Maintenance Action Major
DMA		Deferred Maintenance Action Minor
MI		Maintenance Information
SYNC		Synchronizer
a		SYNC number (0 or 1)
TLI		Timing Link Interface
m		TLI number (1 through 4)
SSP		Synchronizer Sync Port
b,c		SSP number of TLI-m (0 or 1)
		Only a single SSP, "b", can be specified in the input command. Two SSPs, "b" and "c", can appear in an autonomous removal message.
cc		Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
16	SYNC TB is not equipped
17	SYNC is out of service
33	Wrong TLI type
BE	Hardware mismatch or not present
C8	Sync pack denied command

REMOVE SYNCHRONIZER

Explanation of Command

This command removes the synchronizer from service. This includes the timing extractor circuit, the phase-locked loop, the clock generator circuit, and the service and reply circuit. The removal of a synchronizer side from service results in the removal of its associated cross-connect side.

If the mate synchronizer is not available for switchover, this message will be denied.

Command

[I.33101]
RMV:[FRM xy][,SEQ ww]:SYNC a!

Completion Message

[O.33101]
M hh:mm:ss xy,ww n[vv] RMV SYNC a COND 00 COMPL

Denial Message

[O.33101.01]
M hh:mm:ss xy,ww n[vv] RMV SYNC a COND cc DNY

Autonomous Message

[O.33101]
pa <il> hh:mm:ss xy,ww RMV SYNC a [PMC|PMA|DMA|MI] COND 00 COMPL

Explanation of Parameters

SYNC	Synchronizer
a	Synchronizer side (0 or 1)
pa	Priority of action field.
I	Information
M	Manual

	*	Minor alarm
	**	Major alarm
	*C	Critical alarm
il		Intervention level.
	AMI	Immediate maintenance action
	AMD	Deferred maintenance action
	SI	No intervention
PMC		Prompt Maintenance Action Critical
PMA		Prompt Maintenance Action Major
DMA		Deferred Maintenance Action Minor
MI		Maintenance Information
COND		Condition
cc		Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
19	Mate CCN side is out of service
1A	Mate SYNC is out of service
31	Failed to switch SYNC side
AB	Bad sync mode
E005	Failed to lock sync to timing reference

REMOVE TIME SLOT INTERCHANGE

Explanation of Command

This command applies only to a noncapacity expansion frame (NCEF).

It requests the removal of the time slot interchange (TSI) from service.

If the TSI on the other side has already been removed this command is denied unless no circuits are provisioned for this TSI.

Command

1.544 Mbit/s Termination

[I.33221]

RMV:FRM xy,SEQ ww:TSI sft!

2.048 Mbit/s Termination

[I.33221]

RMV:FRM xy,SEQ ww:TSI sft!

Completion Message

1.544 Mbit/s Termination

[O.33221]

M hh:mm:ss xy,ww n[vv] RMV TSI sft COND cc COMPL

2.048 Mbit/s Termination

[O.33221]

M hh:mm:ss xy,ww n[vv] RMV TSI sft COND cc COMPL

Denial Message

1.544 Mbit/s Termination

[O.33221.01]

M hh:mm:ss xy,ww n[vv] RMV TSI sft COND cc DNY

2.048 Mbit/s Termination

[O.33221.01]

M hh:mm:ss xy,ww n[vv] RMV TSI sft COND cc DNY

Explanation of Parameters

pa	Priority of action field.
I	Information
*	Minor alarm
**	Major alarm
*C	Critical alarm
il	Intervention level.
AMI	Immediate maintenance action
AMD	Deferred maintenance action
SI	No intervention
PMC	Prompt Maintenance Action Critical
PMA	Prompt Maintenance Action Major
DMA	Deferred Maintenance Action Minor
MI	Maintenance Information
TSI	Time slot interchange
s	Side number (0 or 1)
f	Cross-connect buffer (CCB) number (1 through 6)
t	TSI number (1 through 6)
cc	Hexadecimal condition code
cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
19	Mate CCN side is out of service

REMOVE

Explanation of Command

This command is applicable only to a noncapacity expansion frame (NCEF).

It requests the removal of all in-service time slot interchanges in the cross-connect network side.

This message will be denied if the cross-connect network side specified is the active side and any time slot interchange on the inactive side is out of service. The exception to this is if there are no cross-connected circuits in the system.

Command

[I.33241]

RMV:[FRM xy,SEQ ww]:TSIS,CCN s,ALL!

Completion Message

[O.33241]

```
M hh:mm:ss xy,ww n[vv] RMV TSIS ALL 5 LN MSG:
TOTAL TSIS tt
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
EOP
M hh:mm:ss xy,ww n[vv] RMV TSIS ALL 5 LN MSG:
TOTAL TSIS tt
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
COND c'c' COMPL
```

Denial Message

[O.33241.01]

M hh:mm:ss xy,ww n[vv] RMV TSIS CCN s ALL COND cc DNY

Explanation of Parameters

TSIS	Time slot interchanges
CCN	Cross-connect network
s	CCN side (0 or 1)

ALL	All
TOTAL	Total
f	Cross-connect buffer number (1 through 6)
t	TSI number (1 through 6)
tt	Number of TSIs currently in service (01 through 72)
r	Status of the removal request for the particular TSI
	C COMPL
	D DNY
nn	Hexadecimal condition code for the particular TSI See cc below to interpret values of nn.
COND	Condition
c'c'	Completion condition code See cc below to interpret values of c'c'.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
18	CCNI is out of service
19	Mate CCN side is out of service
00	No conditions

REMOVE

Explanation of Command

This command is applicable only to a noncapacity expansion frame (NCEF).

This message allows removal of all time slot interchanges (TSI) that connect the specified unit to the indicated units, one of which may be the specified unit in cross-connect network side 0 or 1 through use of the optional field. If the field is omitted, then all TSIs connected to the specified unit are removed.

Note that if the TSI on the other CCN side has already been removed, this command will be executed only if no circuits are cross-connected through the TSI. The reason for allowing removal on both sides is to degrow the UNIT or change its connectivity.

Command

1.544 Mbit/s Termination

[I.33231]

```
RMV:FRM xy,SEQ ww:TSIS,CCN s,UNIT q
[,CONN(a[,b[,c[,d[,e[,f]]]]]])]!
```

2.048 Mbit/s Termination

[I.33231]

```
RMV:FRM xy,SEQ ww:TSIS,CCN s,UNIT q
[,CONN(a[,b[,c[,d[,e[,f]]]]]])]!
```

Completion Message

1.544 Mbit/s Termination

[O.33231]

```
M hh:mm:ss xy,ww n[vv] RMV TSIS UNIT q
[ CONN (a[ b[ c[ d[ e[ f]]]]]])]
e LN MSG:
```

```
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
COND 00 COMPL
```

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[O.33231]

M hh:mm:ss xy,ww n[vv] RMV TSIS UNIT q
[CONN (a[b[c[d[e[f]]]]))]]
e LN MSG:
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
COND 00 COMPL

Denial Message

1.544 Mbit/s Termination

[O.33231.01]

M hh:mm:ss xy,ww n[vv] RMV TSIS CCN s UNIT q
[CONN (a[b[c[d[e[f]]]]))]] COND cc DNY

2.048 Mbit/s Termination

[O.33231.01]

M hh:mm:ss xy,ww n[vv] RMV TSIS CCN s UNIT q
[CONN (a[b[c[d[e[f]]]]))]] COND cc DNY

Explanation of Parameters

e	Number of lines in the message segment
TSIS	Time slot interchanges
CCN	Cross-connect network
s	Side number (0 or 1).
UNIT	Unit
q	Unit number containing TSIs (1 through 6).
CONN	Connect
a,b,c,d,e,f	Unit number to which UNIT q can be connected (1 through 6).
sft	TSI identifier
s	Side number (0 or 1)
f	CCB (Cross-Connect Buffer) number (1 through 6)
t	TSI number (1 through 6).
r	Status code

	C	COMPL
	D	DNY
nn	Hexadecimal condition code for the particular TSI.	
	For r = C	
	00	No Condition
	For r = D	
	02	Subject entity is not equipped
	04	Subject entity is out of service
COND	Condition	
cc	Hexadecimal condition code	

cc	<i>Explanation</i>
04	Subject entity is out of service
10	Unit is not equipped
18	CCNI is out of service
19	Mate CCN side is out of service
28	Connectivity contains unequipped units

REMOVE UNIT FORMAT CONVERTER

Explanation of Command This command requests removal of the unit format converter from service.

Command [I.33331]
RMV:[FRM xy][,SEQ ww]:UNIT [q]q,FC sb!

Completion Message [O.33331]
M hh:mm:ss xy,ww n[vv] RMV UNIT [q]q FC sb COND c'c' COMPL

Denial Message [O.33331.01]
M hh:mm:ss xy,ww n[vv] RMV UNIT [q]q FC sb COND cc DNY

Autonomous Message **1.544 Mbit/s Termination**
[O.33331]
pa <il> hh:mm:ss xy,ww n[vv] RMV UNIT [q]q FC sb [PMC|PMA|DMA|MI] \
COND cc COMPL

[O.33331.01]
pa <il> hh:mm:ss xy,ww n[vv] RMV UNIT [q]q FC sb [PMC|PMA|DMA|MI] \
COND cc DNY

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[O.33331]
pa <il> hh:mm:ss xy,ww n[vv] RMV UNIT [q]q FC sb [PMC|PMA|DMA|MI] \
COND cc COMPL

Explanation of Parameters	UNIT	Unit
	[q]q	Unit number (1 through 16)
	FC	Format converter
	s	Side number (0 or 1)
	b	FC number (1 through 4)
	pa	Priority of action
		** Major
		*C Critical
		* Minor
		I Information
	il	Intervention level
		AMI Immediate maintenance action
		AMD Deferred maintenance action
		SI No intervention
	PMC	Prompt Maintenance Action Critical
	PMA	Prompt Maintenance Action Major
	DMA	Deferred Maintenance Action Minor
	MI	Maintenance Information
	COND	Condition
	cc	Hexadecimal condition code
		cc Explanation
		04 Subject entity is out of service
		10 Unit is not equipped
		11 UC is out of service
		12 UC is in service but failed
		13 FTMI is not equipped
		14 FTMI is out of service
		19 Mate CCN side is out of service
		1F FTMI is in service but failed

REMOVE FACILITY LINE INTERFACE

Explanation of Command

This command requests and reports the removal of one facility line interface (FLI) in a DS3 unit (DS3U) or a Hybrid DS3 Unit (HDS3U). The removal can be caused by either a manual request or autonomously by error recovery.

A request for removal of an FLI causes a protection switch. A request to remove an unprotected FLI is denied unless no service multiplexer (MXR) or hybrid multiplexer (HMXR) or protection MIU is equipped and the protection MMFG is out-of-service in that DS3U or HDS3U.

This message also reports an unsuccessful automatic attempt to remove an unprotected FLI, which causes a critical alarm.

Command

[I.33401]
RMV:[FRM xy][,SEQ ww]:UNIT [q]q,FLI k!

Completion Message

[O.33401]
M hh:mm:ss xy,ww n[vv] RMV UNIT [q]q FLI k COMPL

Denial Message

[O.33401.01]
M hh:mm:ss xy,ww n[vv] RMV UNIT [q]q FLI k COND cc DNY

Autonomous Message

[O.33401]
**hh:mm:ss xy,ww RMV UNIT [q]q FLI k COMPL

[O.33401.01]
**hh:mm:ss xy,ww RMV UNIT [q]q FLI k COND cc DNY

**Explanation of
Parameters**

UNIT	Unit
[q]q	Unit number (1 through 16)
FLI	Facility line interface
k	FLI identifier
S	Service FLI
P	Protection FLI
COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
37	Major/Minor BER threshold value is invalid for SLC NPCs
35	The mate FLI is OOS and Protection MIU is equipped
36	The mate FLI is OOS and Protection MXR is IS
37	The mate FLI is OOS and at least one Service MXR is equipped
38	The selected FLI is IS and Pested and at least 1 Service MXR is eqd
39	An autonomous switch is in progress
B0	FLI is out of service

REMOVE FORMATTER

Explanation of Command

This command requests and reports the removal of one formatter (FMT) or Hybrid Formatter (HFMT) in a DS3 unit or Hybrid DS3 unit (HDS3U). The removal can be either manually by a command or autonomously by error recovery.

A successful request to remove an FMT or HFMT automatically causes a switch to the other cross-connect side. A request for removal of an FMT or HFMT is denied if the switch to the other cross-connect side is not possible. The output of this command also reports an unsuccessful automatic attempt to remove an unprotected FMT or HFMT. The removal of both FMTs/HFMTs automatically comes into effect when the unit is degrown.

Command

```
[I.33411]
RMV:[FRM xy][,SEQ ww]:UNIT [q]q,FMT s!
```

Completion Message

```
[O.33411]
M hh:mm:ss xy,ww n[vv] RMV UNIT [q]q FMT s COMPL
```

Denial Message

```
[O.33411.01]
M hh:mm:ss xy,ww n[vv] RMV UNIT [q]q FMT s COND cc DNY
```

Autonomous Message

```
[O.33411]
pahh:mm:ss xy,ww RMV UNIT [q]q FMT s COMPL

[O.33411.01]
pahh:mm:ss xy,ww RMV UNIT [q]q FMT s COND cc DNY
```

**Explanation of
Parameters**

UNIT Unit
[q]q Unit number (1 through 16)

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FMT Formatter or Hybrid Formatter

s Side

0 Side 0

1 Side 1

pa Priority of action

***C** Critical

****** Major

M Manual

OOS Out-of-service

cc Hexadecimal condition code

cc *Explanation*

02 Subject entity is not equipped

04 Subject entity is out of service

10 Unit is not equipped

11 UC is out of service

12 UC is in service but failed

19 Mate CCN side is out of service

B1 FMT is out of service

REMOVE FTMI OR DSPI

Explanation of Command

This command removes a facility terminating module interface or a digital signal processor interface from service.

Command

[I.33321]
RMV:[FRM xy][,SEQ ww]:UNIT [q]q,{FTMI d|DSPI}!

Completion Message

[O.33321]
M hh:mm:ss xy,ww n[vv] RMV UNIT [q]q {FTMI d|DSPI} \
COND cc COMPL

Denial Message

[O.33321.01]
M hh:mm:ss xy,ww n[vv] RMV UNIT [q]q {FTMI d|DSPI} COND cc \
DNY

Autonomous Message

1.544 Mbit/s Termination

[O.33321]
pa <il> hh:mm:ss xy,ww n[vv] RMV UNIT [q]q {FTMI d|DSPI} \
COND cc COMPL

[O.33321.01]
pa <il> hh:mm:ss xy,ww n[vv] RMV UNIT [q]q {FTMI d|DSPI} \
COND cc DNY

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Nonhierarchical

[O.33321]

```
pa <il> hh:mm:ss xy,ww n[vv] RMV UNIT [q]q {FTMI d|DSPI} \
[PMC|PMA|DMA|MI] COND cc COMPL
```

[O.33321.01]

```
pa <il> hh:mm:ss xy,ww n[vv] RMV UNIT [q]q {FTMI d|DSPI} \
COND cc DNY
```

Explanation of Parameters

pa	Priority of action field
I	Information
*	Minor alarm
**	Major alarm
*C	Critical alarm
il	Intervention level
AMI	Immediate maintenance action
AMD	Deferred maintenance action
SI	No intervention
PMC	Prompt Maintenance Action Critical
PMA	Prompt Maintenance Action Major
DMA	Deferred Maintenance Action Minor
MI	Maintenance Information
UNIT	Unit
[q]q	Unit number (1 through 16)
FTMI	Facility terminating module interface
d	FTMI number (1 through 4)
DSPI	Digital signal processor interface
OOS	Out-of-service
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed

REMOVE MULTIPLEXER INTERFACE UNIT

Explanation of Command



NOTE:

This command applies to 1.544 Mbit/s Termination only.

This command removes from service one or more Multiplexer Interface Unit (MIU) circuit packs in a DS3 unit. Using the INCL (inclusive) option, this remove command removes all TA-type NPCs associated with the MIU. Executing this command results in protection switching if any TA-type NPCs are in-service. TA type NPCs provide ESF data link communications according to the ANSI T1.403-1989 standard and enhanced performance monitoring.



NOTE:

This command can not be generated autonomously.

A RMV IN PROGRESS message is generated at 20-second intervals while this command is being executed.

There will be one completion or denial output message for each circuit pack removed.

Command

[I.33431]

RMV: [FRM xy][, SEQ ww]:UNIT [q]q,MIU c[-d][, INCL]!

Completion Message

A RMV IN PROGRESS message is generated every 20 second while this command is being executed.

There is one completion or denial output message for each circuit pack.

[O.33431]

M hh:mm:ss xy,ww n[vv] RMV UNIT [q]q MIU a[INCL] TYPE MI100
COMPL

Denial Message

[O.33431.01]

M hh:mm:ss xy,ww n[vv] RMV UNIT [q]q MIU a[INCL] COND cc DNY

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
MIU	Multiplexer interface unit
c,d	The number of the MIU within the unit (P, 1 through 6) (P means the protection MIU)
a	The MIU number within the range of c and d
INCL	Inclusive This keyword causes the removal of all TA type NPCs served by the MIU.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
24	Unit type error
BF	MIU is not equipped
9D	Attempt to remove a Service MIU which is under protection
A9	INCL not specified and at least one NPC In Service
CF	MIU is out of service

REMOVE MMFG

Explanation of Command

This command requests and reports the removal of the circuit packs of one or more Multiplexer - Multiplexer Interface Unit Functional Groups (MMFG). The removal of an MMFG can be caused either by manual command or autonomous DACS II error recovery action.

An RMV MMFG command removes the Multiplexer (MXR) or Hybrid Multiplexer (HMXR) and the Multiplexer Interface Unit (MIU) if the MIU is in-service. Note that MIU currently is not supported by HDS3U, therefore, MIU does not exist in an MMFG with the HMXR.

A manual removal request of an MMFG causes protection switching if protection is available. However, the automatic switch to protection (or the automatic switchback from a protection MMFG) can be inhibited by specifying the FRC option, which can result in loss of service. The FRC option must be used to request the unprotected removal of an MMFG. Any resulting loss of service does not cause an alarm. An attempt to remove more than one MMFG without the FRC option is denied.

The Inclusive (INCL) keyword must be used if at least one of the DS3's tributary NPCs is in service. This option removes the NPCs together with the MMFG.

This command also reports the unsuccessful automatic attempt to remove an unprotected MMFG, which causes a critical alarm. An RMV IN PROGRESS message is generated at 20-second intervals while this command is being executed. There is one completion or denial output message for each circuit pack removed.

Command

[I.33421]

RMV: [FRM xy][, SEQ ww]:UNIT [q]q,MMFG c[-d][, FRC[, INCL]]!

Completion Message

A RMV IN PROGRESS message is generated every 20 seconds while this command is being executed.

There will be one completion or denial output message for each circuit pack.

[O.33421]

M hh:mm:ss xy,ww n[vv] RMV UNIT [q]q MMFG a[FRC[INCL]] \\
2 LN MSG:
MXR a TYPE mnxyz[MIU a TYPE MI100] COMPL

Denial Message

[O.33421.01]

M hh:mm:ss xy,ww n[vv] RMV UNIT [q]q MMFG a[FRC[INCL]] \\
COND cc DNY

Autonomous Message

[O.33421]

**hh:mm:ss xy,ww RMV UNIT [q]q MMFG a[FRC[INCL]] 2 LN MSG:
MXR a TYPE mnxyz[MIU a TYPE MI100] COMPL

[O.33421.01]

*Chh:mm:ss xy,ww RMV UNIT [q]q MMFG a[FRC[INCL]] COND cc \\
DNY

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
MMFG	Multiplexer-Multiplexer Interface Unit functional group.
c,d	The number of the MMFG within the unit (P, 1 through 6) (P means the protection MMFG)
a	The number of the MMFG that is removed or denied (c or d)
FRC	Force This keyword forces a manual removal (in the case that protection is not available) and prevents automatic protection switching from accompanying the removal, thus forcing the removal of all the DS1 facilities served by the MMFG.
INCL	Inclusive This keyword causes all tributary NPCs which are still in service to be removed. A command with the INCL keyword must also contain the FRC keyword or it is denied by DACS II.
*C	Critical priority of action

**	Major priority of action
M	Manual priority of action
MXR	Multiplexer (MXR) or Hybrid Multiplexer (HMXR)
a	MXR or HMXR identifier (P, 1 through 6)
TYPE	Type
mnxyz	The DS3 format processed by the MXR:
mn	DS3 type
MX	The original R4.0 DS3 facility type supported by the Multiplexer (MXR) circuit pack (KCR-1)
EX	The enhanced R6.0 DS3 facility type supported by the Enhanced Multiplexer (EMXR) circuit pack (KCR-5)
HX	The hybrid facility type supported by the Hybrid Multiplexer (HMXR) circuit pack (KCR-8)
	If the unit is a regular DS3U of unit type DT100, then the default is the MX type for backward compatibility. If the unit is a Hybrid DS3U of unit type HT100, then the default is HX.
	For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	MIU
	Multiplexer interface unit
a	MIU identifier (P, 1 through 6)
cc	Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
24	Unit type error
9B	The MXR is not grown
A8	The MMFG is Out Of Service
A9	INCL not specified and at least one NPC In Service
AA	Range entered without FRC keyword

cc	<i>Explanation</i>
AB	FRC specified for protection, and service MMFG is In Service
AC	No protection is available for the Service MMFG
AD	The Protection MMFG is selected, and auto. switchback is unavailable
B7	The associated MXR is In-Service but pested

REMOVE UNIT CONTROLLER

Explanation of Command

This command removes the specified unit controller from service. Only the unit controller for the IFTU and DSPU has a changeable alarm severity and intervention level.

Command

```
[I.33311]  
RMV:[FRM xy][,SEQ ww]:UNIT [q]q,UC!
```

Completion Message

```
[O.33311]  
M hh:mm:ss xy,wz n RMV UNIT [q]q UC COND cc COMPL
```

Denial Message

```
[O.33311.01]  
M hh:mm:ss xy,ww n[vv] RMV UNIT [q]q UC COND cc DNY
```

Autonomous Message

```
[O.33311]  
pa <il> hh:mm:ss xy,wz n RMV UNIT [q]q UC [PMC|PMA|DMA|MI] \  
COND cc COMPL  
  
[O.33311.01]  
pa <il> hh:mm:ss xy,ww n[vv] RMV UNIT [q]q UC [PMC|PMA|DMA|MI] \  
COND cc DNY
```

Explanation of Parameters

pa	Priority of action field.
I	Information
M	Manual
*	Minor alarm

	**	Major alarm
	*C	Critical alarm
il		Intervention level.
	AMI	Immediate maintenance action
	AMD	Deferred maintenance action
	SI	No intervention
PMC		Prompt Maintenance Action Critical
PMA		Prompt Maintenance Action Major
DMA		Deferred Maintenance Action Minor
MI		Maintenance Information
UC		Unit controller
UNIT		Unit
[q]q		Unit number (1 through 16)
COND		Condition
cc		Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service

REPORT NPC THRESHOLD CROSSING ALARM FOR PA, TA, DA, TH and SA TYPE NPCS

Explanation of Command

1.544 Mbit/s Termination

This autonomous output message reports a facility performance monitoring parameter threshold crossing event for the specified DA, TA, TH or SA type NPC. For DA, TA SA type NPCs, this is a nonalarmed event. Threshold crossing alert messages can be generated for both 15-minute and daily parameter accumulation intervals.

For DS3Us, if alarm messages for DS1s embedded within a DS3 are turned off in the event the DS3 signal fails, then it is possible for a threshold message for a TA type NPC to be generated in the 10 second alarm integration interval between the beginning of the DS3 signal failure and the generation of the DS3 alarm message, even though DS1 threshold messages are normally suppressed during the time interval that the carrying DS3 signal is in a failed state (LOS, LOF, BER, or AIS).

The command that turns alarm message suppression on or off for DS1s embedded within DS3s is: CHG::DS1ALMDS3.

2.048 Mbit/s Termination

This autonomous output message reports a facility performance monitoring parameter threshold crossing event for the specified PA type NPC. Threshold crossing alert messages can be generated for both 15-minute and daily parameter accumulation intervals.

Autonomous Message

1.544 Mbit/s Termination

Nonhierarchical

For DA and TA type NPCs:

[O.65061]

```
I hh:mm:ss xy,ww RPT T-<parameter> NPC [s]abc 2 LN MSG:
LOCN locn AI aaaaa COUNT cccccccc THLEV llllllll COMPL
```


Hierarchical

For DA and TA type NPCs:

[O.65061]

```
I hh:mm:ss xy,ww  RPT T-<parameter> NPC uvmnp  2 LN MSG:
LOCN locn AI aaaaa COUNT ccccccccc THLEV lllllllll COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

[O.65061]

```
pa <il> hh:mm:ss xy,ww  ALM <state> <parameter> NPC [s]abc \
2 LN MSG:
AI aaaaa COUNT ccccccccc THLEV lllllllll COMPL
```

Hierarchical

[O.65061]

```
pa <il> hh:mm:ss xy,ww  ALM <state> <parameter> NPC uvmnp  \
2 LN MSG:
AI aaaaa COUNT ccccccccc THLEV lllllllll COMPL
```

Both Terminations

Nonhierarchical

For TH type NPCs:

[O.65061]

```
pa <il> hh:mm:ss xy,ww  ALM <state> <parameter> NPC [s]abc \
2 LN MSG:
AI aaaaa COUNT ccccccccc THLEV lllllllll COMPL
```

Hierarchical

For TH type NPCs:

[O.65061]

```
pa <il> hh:mm:ss xy,ww  ALM <state> <parameter> NPC uvmnp  \
2 LN MSG:
AI aaaaa COUNT ccccccccc THLEV lllllllll COMPL
```

Explanation of Parameters	AI	Accumulation Interval
	aaaaa	The accumulation time period for the specified parameter
	15MIN	Parameter count from a 15-minute accumulator
	DAILY	Parameter count from a daily accumulator
	NPC	Network processing circuit
	[s]abc	The 3- or 4-digit nonhierarchical NPC number
	uvmnp	Hierarchical NPC number
	uv	Unit number
	m	Module number
	np	NPC number within the module

1.544 Mbit/s Termination

T-parameter	Threshold crossing parameter
T	Threshold
parameter	The type of monitored parameter for which a threshold crossing is reported

For DA, TA or SA type NPC

CVP	Path Coding Violations
CVL	Line Coding Violations
ESP	Path Errored Seconds
ESL	Line Errored Seconds
SESP	Path Severely Errored Seconds
SESL	Line Severely Errored Seconds
SEFS	Path Severely Errored Framing Seconds
CSSP	Path Controlled Slip Seconds
UASP	Path Unavailable Seconds
LOCN	Location
locn	The location being performance monitored
NEND	Near-end
FEND	Far-end

Both Terminations

COUNT	Count

cccccccc	The count accumulated for the monitored parameter 1.544 Mbit/s Termination (000000001 through 134217728) 2.048 Mbit/s Termination (000000001 through 345600000)
THLEV	Threshold Level
IIIIIIII	The programmed threshold level of the monitored parameter 2.048 Mbit/s Termination (000000001 through 345600000) 1.544 Mbit/s Termination (000000001 through 134217728) Values of threshold levels within the preceding ranges may cause threshold crossing alert messages.
pa	Priority of Action I Information * Minor alarm ** Major alarm, service affecting *C Critical alarm, service affecting
il	Intervention level AMI Immediate maintenance action AMD Deferred maintenance action SI No intervention
state	Alarm state MI Maintenance Information DMA Deferred Maintenance Minor Alarm PMA Prompt Maintenance Major Alarm PMC Prompt Maintenance Critical Alarm
For PA type NPCs:	
CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds

ES	Severely Errored Seconds
CSS	Controlled Slip Seconds
CV	Coding Violations
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors
FEBE	Far End Block Errors
FES	Far End Errored Seconds
FSES	Far End Severely Errored Seconds
FUAS	Far End Unavailable Seconds

Both Terminations

For TH type NPCs:

CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors

REPORT THRESHOLD CROSSING FOR HYBRID DS3 PERFORMANCE PARAMETER

Explanation of Command

**NOTE:**

This command applies to the 1.544 Mbit/s Termination Interface only.

This autonomous message reports a threshold crossing event for a performance monitoring parameter for the specified Hybrid DS3 facility. Such a performance parameter threshold crossing is a nonalarmed event. Threshold crossing alert messages can be generated for both 15-minute and daily accumulation intervals.

Autonomous Message

[O.65063]

I hh:mm:ss xy,ww RPT <parameter> UNIT [q]q DS3 c 2 LN MSG:
AI aaaaa COUNT cccccccc THLEV llllllll COMPL

Explanation of Parameters

AI	Accumulation Interval
aaaaa	The accumulation is either DAILY or 15MIN
UNIT	Hybrid DS3 Unit
[q]q	Unit number (1 through 16)
DS3	Hybrid DS3 Facility
c	Number of Hybrid DS3 facility (1 through 6) within the Unit
parameter	Performance Parameter
CVL-	Code Violation for the DS3 Line
ESL-	Errored Seconds for the DS3 Line
SESL-	Severely Errored Seconds for the DS3 Line
CVP-	Code Violation for the DS3 Path
FMP-	F- or M-bit errors for the DS3 Path
ESP-	Errored Seconds for the DS3 Path

SESP-	Severely Errored Seconds for the DS3 Path
FSESP-	Far End Severely Errored Seconds for the DS3 Path
UASP-	Unavailable Seconds for the DS3 Path
COUNT	Count
cccccccc	The count accumulated for the monitored parameter
THLEV	Threshold Level
IIIIIIII	The programmed threshold level of the monitored parameter

RESTORE CROSS-CONNECT BUFFER

Explanation of Command

This command applies only to the noncapacity expansion frame (NCEF).
It requests the restoration of the specified cross-connect buffer to service.

Command

1.544 Mbit/s Termination

[I.34202]

RST:FRM xy,SEQ ww:CCB sf!

2.048 Mbit/s Termination

[I.34202]

RST:FRM xy,SEQ ww:CCB sf!

Completion Message

1.544 Mbit/s Termination

[O.34202]

M hh:mm:ss xy,ww n[vv] RST CCB sf COND cc COMPL

2.048 Mbit/s Termination

[O.34202]

M hh:mm:ss xy,ww n[vv] RST CCB sf COND cc COMPL

Denial Message

1.544 Mbit/s Termination

[O.34202.01]

M hh:mm:ss xy,ww n[vv] RST CCB sf COND cc DNY

2.048 Mbit/s Termination

[O.34202.01]

M hh:mm:ss xy,ww n[vv] RST CCB sf COND cc DNY

Explanation of Parameters

CCB	Cross-connect buffer
s	Side number (0 or 1)
f	CCB number (1 through 6)
COND	Condition
cc	Completion condition code (hexadecimal) To interpret values see cc.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
0A	DGN on subject entity failed
0B	BOOT on subject entity failed
16	SYNC TB is not equipped
17	SYNC is out of service
18	CCNI is out of service
1B	CCN side s is in service
CF	SYNC is inservice but failed
D3	CCNI is inservice but failed

RESTORE CONTROL AND CLOCK INTERFACE

Explanation of Command

This command restores the clock and control interface pack of side *s* to service. The two bus terminator packs of side *s* are also restored along with the CCI pack.

Command

[I.34251]
RST:[FRM *xy*][,SEQ *ww*]:CCI *s*!

Completion Message

[O.34251]
M hh:mm:ss *xy*,*ww* n[*vv*] RST CCI *s* COND *cc* COMPL

Denial Message

[O.34251.01]
M hh:mm:ss *xy*,*ww* n[*vv*] RST CCI *s* COND *cc* DNY

Explanation of Parameters

CCI	Clock and control interface
s	Side number (0 or 1)
cc	Hexadecimal condition code

cc	<i>Explanation</i>
03	Subject entity is in service
0A	DGN on subject entity failed
0B	BOOT on subject entity failed
16	SYNC TB is not equipped
17	SYNC is out of service
CF	SYNC is inservice but failed
00	No conditions

RESTORE CROSS-CONNECT NETWORK INTERFACE

Explanation of Command

This command is applicable only to the noncapacity expansion frame (NCEF).
It allows restoral of a cross-connect network interface to service.

Command

1.544 Mbit/s Termination

[I.34201]

RST:FRM xy,SEQ ww:CCNI s!

2.048 Mbit/s Termination

[I.34201]

RST:FRM xy,SEQ ww:CCNI s!

Completion Message

1.544 Mbit/s Termination

[O.34201]

M hh:mm:ss xy,ww n[vv] RST CCNI s COND cc COMPL

2.048 Mbit/s Termination

[O.34201]

M hh:mm:ss xy,ww n[vv] RST CCNI s COND cc COMPL

Denial Message

1.544 Mbit/s Termination

[O.34201.01]

M hh:mm:ss xy,ww n[vv] RST CCNI s COND cc DNY

2.048 Mbit/s Termination

[O.34201.01]

M hh:mm:ss xy,ww n[vv] RST CCNI s COND cc DNY

Explanation of Parameters

CCNI	Cross-connect network interface.
s	Side No. (0 or 1).
cc	Hexadecimal condition code

cc	<i>Explanation</i>
03	Subject entity is in service
0A	DGN on subject entity failed
0B	BOOT on subject entity failed
16	SYNC TB is not equipped
17	SYNC is out of service
1B	CCN side s is in service
CF	SYNC is inservice but failed

RESTORE EXPANDED TIME SLOT INTERCHANGER

Explanation of Command

This command restores an Expanded Time Slot Interchanger (ETSI) to service.

Command

[I.34261]
RST:[FRM xy][,SEQ ww]:ETSI sqq!

Completion Message

[O.34261]
M hh:mm:ss xy,ww n[vv] RST ETSI sqq COND 00 COMPL

Denial Message

[O.34261.01]
M hh:mm:ss xy,ww n[vv] RST ETSI sqq COND cc DNY

Explanation of Parameters

ETSI	Expanded time slot interchanger
s	Side number (0 or 1)
qq	Unit number (01 through 16) Note that the unit number qq must always be shown with two digits in both the input and output. The leading 0 is required.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
0A	DGN on subject entity failed
0B	BOOT on subject entity failed

cc	<i>Explanation</i>
16	SYNC TB is not equipped
17	SYNC is out of service
CE	CCI is out of service
CF	SYNC is inservice but failed
D1	CCI is not present
D4	CCI is inservice but failed

RESTORE ALL ETSIS

Explanation of Command

This command requests that all equipped expanded time slot interchangers (ETSI) in side s of the expanded cross-connect network (ECN) be restored to service.

Command

[I.34271]
RST:[FRM xy][,SEQ ww]:ETSI,ECN s,ALL!

Completion Message

[O.34271]
M hh:mm:ss xy,ww n[vv] RST ETSI ECN s ALL 5 LN MSG:
TOTAL ETSI kk
s01 r nn s02 r nn s03 r nn s04 r nn s05 r nn s06 r nn
s07 r nn s08 r nn s09 r nn s10 r nn s11 r nn s12 r nn
s13 r nn s14 r nn s15 r nn s16 r nn COND cc COMPL

Denial Message

[O.34271.01]
M hh:mm:ss xy,ww n[vv] RST ETSI ECN s ALL COND cc DNY

Explanation of Parameters

ETSI	Expanded time slot interchangers
ECN	Expanded cross-connect network
s	Side number (0 or 1)
kk	Total number of ETSIs equipped (01 through 16)
r	Restore status
	Indication of the completion or denial of the restoration for each individual ETSI pack.
C	Completed
D	Denied

	-	ETSI not equipped
nn		Hexadecimal condition code for the particular ETSI To interpret values of nn see cc below.
cc		Hexadecimal completion condition code. To interpret values of cc see cc below.
cc		Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
0A	DGN on subject entity failed
0B	BOOT on subject entity failed
0C	DGN on subject entity denied
16	SYNC TB is not equipped
17	SYNC is out of service
CF	SYNC is inservice but failed
D1	CCI is not present
D4	CCI is inservice but failed
00	No conditions
41	Failed to boot subject CCN side
CE	CCI is out of service

RESTORE ADMINISTRATIVE LINK

Explanation of Command

This command restores the administrative LINK to service. The autonomous output message is generated when the administrative link is successfully restored by the auto-restoration option.

Command

[I.34011]
RST: [FRM xy][, SEQ ww]:LINK j!

Completion Message

[O.34011]
M hh:mm:ss xy, ww n[vv] RST LINK j COND cc COMPL

Denial Message

[O.34011.01]
M hh:mm:ss xy, ww n[vv] RST LINK j COND cc DNY

Autonomous Message

[O.34011]
A hh:mm:ss xy, ww RST LINK j COND cc COMPL

Explanation of Parameters

LINK	Link
j	Administrative link number (1 through 7)
cc	Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
03	Subject entity is in service
0A	DGN on subject entity failed

RESTORE MAIN CONTROLLER

Explanation of Command

1.544 Mbit/s Termination



WARNING: **1.544 Mbit/s Termination**

The RST::MC command provides different functions when different keywords are entered. DACS II responses to each keyword entered are explained below:

1. RST:FRM xy,SEQ ww:MC,MCOND!

The MCOND keyword transfers the DACS II Main Controller (MC) from the normal in-service state to the Maintenance Condition (MCOND) state. MCOND is a state of the MC in which it is not fully OOS but is in a restricted mode to allow certain maintenance operations. Network traffic carried by the system is not affected by MCOND.

2. RST:FRM xy,SEQ ww:MC!

This command restores the MC to the normal in-service state from either the OOS or the MCOND state by using the data base on the PMEM. Therefore, if the primary memory data base contains the state existing prior to entering the OOS or MCOND state, the system returns to the original state without affecting service, that is, no network traffic disruption. Normal in-service or original state imply that only states provisioned by the user are recorded in the data base and are used for restoral; transient states are not recorded or used for restoral. This command should be used to restore the system for normal operations.

Any test groups and ports established prior to entering the RST::MC command are autonomously released by this command. Upon completion of the command, a test group release message is issued for the last test group released as a result of the RST::MC. No messages are issued for any test ports released during command execution.

3. RST:FRM xy,SEQ ww:MC,NOJRN!

The NOJRN keyword causes the system to be restored without the data base journals on the PMEM. At the completion of this command, the system returns to the state of the last data base backup from RAM to PMEM. The effect of the commands entered after the last data base backup is destroyed. Therefore, if cross-connect commands were

executed after the last backup, the resulting cross-connections are disconnected by this command. This command is useful for system restoration after the system fails to boot due to JOURNAL failure.

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- For Installation and Product Evaluation Only. Can be used only if the AT&T security warning feature bit is set.

RST:FRM xy,SEQ ww:MC,CLR!

The CLR keyword erases Main Processor (MP) and all Unit data bases in the processor memory and on the PMEM before restoring the system. Thus, all transmission equipment is de-grown and all cross-connects are disconnected. This command should be used for installation only and should NOT be used for any other maintenance operations. Note that the Communications Interface (CI) data base is not erased by this command.

- For Installation and Product Evaluation Only. Can be used only if the AT&T security warning feature bit is set.

RST:FRM xy,SEQ ww:MC,CLR,ALL!

The only difference between using only the CLR keyword and using both the CLR and ALL keywords is that entering ALL causes the Communications Interface (CI) data base to be erased before restoring the system. Therefore, all information associated with user logins (except the Frame Administrator DAX login) is deleted from the data base and the provisioning data for the administrative links returns to the default values.



WARNING:

The use of the NOJRN keyword can also affect existing services. DACS II treats the following commands as restricted commands (see Message 36103 for RMON privilege):

RST:FRM xy,SEQ ww:MC,NOJRN!

1.544 Mbit/s Termination

RST:FRM xy,SEQ ww:MC,CLR!

RST:FRM xy,SEQ ww:MC,CLR,ALL!

That is, these commands are restricted to only the users who have the RMON privilege. In addition, to prevent users from accidentally destroying services, when any of these commands is entered, DACS II responds with

ARE YOU SURE?(YES/NO)

.

Command

For Normal Operations:

[I.34001]

RST:[FRM xy][,SEQ ww]:MC[, {MCOND|NOJRN}]!

For Installation and Product Evaluation Only:

(Can be used only if the AT&T security warning feature bit is set)

[I.34001]

RST:[FRM xy][,SEQ ww]:MC,CLR[,ALL]!

Completion Message

For Normal Operations:

[O.34001]

M hh:mm:ss xy,ww n[vv] RST MC[{MCOND|NOJRN}] COND cc COMPL

For Installation and Product Evaluation Only:

(Will be available only if the AT&T security warning feature bit is set)

[O.34001]

M hh:mm:ss xy,ww n[vv] RST MC CLR[ALL] COND cc COMPL

Denial Message

For Normal Operations:

[O.34001.01]

M hh:mm:ss xy,ww n[vv] RST MC[{MCOND|NOJRN}] COND cc DNY

For Installation and Product Evaluation Only:

(Will be available only if the AT&T security warning feature bit is set)

[O.34001.01]

M hh:mm:ss xy,ww n[vv] RST MC CLR[ALL] COND cc DNY

Explanation of Parameters	MC	Main controller
	MCOND	Maintenance condition If the optional MCOND key word is entered, the command causes the DACS II frame to be placed in the Maintenance Condition. This condition is similar to the results of the RMV::MC command (Message No. I.33001), but the PMEM is left with power on. The RST::MC command restores the Main Controller to the normal in-service condition.
	NOJRN	No Journal Boot frame without journals
	cc	Hexadecimal condition code

cc	<i>Explanation</i>
03	Subject entity is in service
04	Subject entity is out of service
0A	DGN on subject entity failed
0B	BOOT on subject entity failed
4B	PMEM error, boot from SMEM
18	DSPI not in service, or failed
20	Software Identification Block is not readable
21	Software Identification Block failed comparison
22	Release number mismatch
23	Point number mismatch
24	PDI Version number mismatch
52	Database is empty
53	Database is not empty
91	Can't mount or unmount SMEM
92	Can't mount or unmount PMEM
93	SMEM is not present
F9	Cannot clear journals for OOS unit
EE	Can't RST MC CLR when a unit is equipped
EF	SSC Circuit Pack is Still Equipped

cc	<i>Explanation</i>
F1	PMEM and SMEM synchronization fail
F2	Not a DACS II compatible Flash Card
F3	Flash Card is empty
F4	PMEM and SMEM are different
F5	Flash Card is not present
F6	Flash Card is bad
46	Failed to boot CONF file
47	Failed to boot DB
48	Failed to boot journal--recurrence indicates database corruption
49	Failed to boot unit

RESTORE NPC MONITOR

Explanation of Command

**NOTE:**

This command applies to the 2.048 Mbit/s Termination Interface only.

This command restores the *Monitor* function on the C-bit processing pack after buffer overflow has occurred (see Message O.65221). Use this command only for CB-type NPCs in a DSPU.

The autonomous form of this message is not an alarm. The output message reports that all C-bit channels designated for monitoring (via the CHG::DD,TO commands) are enabled.

The completion (COMPL) message may take some time (up to seconds) before it is sent. This is due to the incremental enabling of the monitored circuits. The circuit pack starts monitoring the received C-bits as soon as the first group of 256 bits is enabled.

Command

Nonhierarchical

[I.34361]

RST:[FRM xy][,SEQ ww]:NPC [s]abc,MON!

Hierarchical

[I.34361]

RST:[FRM xy][,SEQ ww]:NPC uvmnp,MON!

**Completion
Message**

2.048 Mbit/s Termination

Nonhierarchical

[O.34361]

M hh:mm:ss xy,ww n[vv] RST NPC [s]abc MON COMPL

Hierarchical

[O.34361]

M hh:mm:ss xy,ww n[vv] RST NPC uvmnp MON COMPL

Denial Message

2.048 Mbit/s Termination

Nonhierarchical

[O.34361.01]

M hh:mm:ss xy,ww n[vv] RST NPC [s]abc MON COND cc DNY

Hierarchical

[O.34361.01]

M hh:mm:ss xy,ww n[vv] RST NPC uvmnp MON COND cc DNY

**Autonomous
Message**

Nonhierarchical

[O.34361]

I hh:mm:ss xy,ww n[vv] RST NPC [s]abc MON COMPL

[O.34361.01]

A hh:mm:ss xy,ww n[vv] RST NPC [s]abc MON COND cc DNY

Hierarchical

[O.34361]

I hh:mm:ss xy,ww n[vv] RST NPC uvmnp MON COMPL

[O.34361.01]

A hh:mm:ss xy,ww n[vv] RST NPC uvmnp MON COND cc DNY

**Explanation of
Parameters**

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
MON	Restore C-bit monitoring
cc	Hexadecimal condition code
cc	<i>Explanation</i>
04	Subject entity is out of service
0B	BOOT on subject entity failed
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
15	NPC is unequipped
24	Unit type error
26	NPC type error
36	DSPI not equipped
37	DSPI out-of-service
3E	DSPI failed
E0	Hardware database mismatch
46	NPC Failed or Out of Service
50	CPR in buffer overflow condition

RESTORE NPCs

Explanation of Command

This command restores Facility Terminating Unit (FTU/IFTU/IFTU2), DS3 Unit (DS3U), Hybrid DS3 Unit (HDS3U), or Digital Signal Processing Unit (DSPU) Network Processing Circuits (NPC) to service. This command also restores applications on Digital Signal Processing Platform (DSPP) NPCs (TG193) which have been grown in Facility Terminating Units. DSPP NPCs are always odd.

A range of FTU (IFTU or IFTU2), DS3U and HDS3U NPCs may be specified, but DSPU NPCs must be individually restored.

One output message, either completion or denial, is printed for each NPC addressed in the restore command.

DSPU NPCs are duplicated and are associated with the DACS II Cross-Connect Network (CCN) sides. DSPU NPCs are addressed with a side number, and are restored one side at a time. A single DSPU NPC restore command restores only the one addressed side of the duplicated DSPU NPC.



CAUTION:

Digital Signal Processing Unit (DSPU) circuit packs must be inserted into the inactive Cross-Connect network side. Inserting DSPU circuit packs into the active side may result in brief transmission impairments.



NOTE:

The restore options SIDE and INHTIM are incompatible because SIDE applies for DSPU NPCs and INHTIM does not apply for DSPU NPCs. Consequently, the presence of one option excludes the other.

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Each DMB circuit pack supports two NPCs. Restoring either side of a DMB NPC restores both NPCs supported by the circuit pack.

Each Subrate circuit pack supports one NPC. Restoring either side of a Subrate NPC restores the NPC supported by the circuit pack.

To restore RT(DL) SLC carrier terminated digroups with the range command, digroup A (DGA) must have been restored previously or must be one of the NPCs specified in the command.

Execution of this command may be stopped by entering the ABT command.

2.048 Mbit/s Termination

For a Network Processing Circuit provisioned with the Minor Bit Error Rate (MBER) feature, the command is denied if the installed hardware of the addressed NPC does not support the MBER Feature.

Command

Nonhierarchical

[I.34351]

```
RST:[FRM xy][,SEQ ww]:NPC [s]abc[-[t]def][,SIDE s]\  
[,INH[,INHTIM hrnm]]!
```

Hierarchical

[I.34351]

```
RST:[FRM xy][,SEQ ww]:NPC uvmnp[-uvkqr][,SIDE s]\  
[,INH[,INHTIM hrnm]]!
```

Completion Message

Nonhierarchical

[O.34351]

```
M hh:mm:ss xy,ww n[vv] RST NPC [s]ghi[ SIDE s] TYPE \  
mnxyz [INH[INHTIM hrnm]]COND 00 COMPL
```

Hierarchical

[O.34351]

```
M hh:mm:ss xy,ww n[vv] RST NPC uvghi[ SIDE s]] TYPE \  
mnxyz [INH[INHTIM hrnm]]COND 00 COMPL
```

Denial Message**Nonhierarchical**

[O.34351.01]

M hh:mm:ss xy,ww n[vv] RST NPC [s]jkl[-[t]mno][SIDE s] \

TYPE mnxyz[INH[INHTIM hrnm]] COND cc DNY

Hierarchical

[O.34351.01]

M hh:mm:ss xy,ww n[vv] RST NPC uvjkl[-uvmno][SIDE s] TYPE mnxyz \

[INH[INHTIM hrnm]] COND cc DNY

**Explanation of
Parameters**

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number (beginning of the range)
[t]def	The 3- or 4-digit nonhierarchical NPC number (end of the range)
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number (beginning of the range)
uvkqr	Hierarchical NPC number (end of the range)
uv	Unit number
m	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
SIDE	Side
s	Side of duplicated DSPU circuit to be removed (0 or 1)
	For DSPU NPCs, each restore command results in the restoral of one duplicated side of both NPCs on the circuit pack. However, each Subrate circuit pack only contains one NPC.
INHTIM	Inhibit timer keyword
[s]ghi	The 3- or 4-digit nonhierarchical number of a successfully restored NPC ([s]abc through [t]def)
[s]jkl	The 3- or 4-digit nonhierarchical number of an NPC whose restoral is denied ([s]abc through [t]def)
	If used in a range, it denotes the first NPC of the range.

[t]mno	The 3- or 4-digit nonhierarchical number of an NPC whose restoral is denied. It denotes the last NPC of a range ([s]abc through [t]def).
uvghi	Hierarchical number of a successfully restored NPC (uvmnp through uvkqr)
uvjkl	Hierarchical number of an NPC whose restoral is denied If used in a range, it denotes the first NPC of the range (uvmnp through uvkqr).
uvmno	Hierarchical number of an NPC whose restoral is denied It denotes the last NPC of a range (uvmnp through uvkqr).
uv	Unit number
m,g,k,j	Module number
np,qr,hi,kl,no	NPC number within the module
TYPE	Type of NPC For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
DA	Dual digroup ANSI NPC
DE	Dual digroup NPC
DS	SLC [®] carrier NPC
TA	DS3U ANSI NPC
TE	DS3U or HDS3U Noninterface unit NPC
TH	Hybrid DS3U CEPT NPC
MB	Digital multipoint bridge NPC
MJ	Multipoint junction unit NPC
SR	Subrate multiplexer unit NPC
CB	C-bit processor (CPR) NPC
PA	CEPT NPC (75- or 120-ohm)
PB	CEPT NPC (120-ohm twisted pair)
PC	CEPT NPC (75-ohm coaxial)
	The mn value is identified for the SDxyz application type NPCs.
SD	Digital Signal Processing Application Circuit Pack

For a listing of the NPC parameters, refer to Chapter 2,
"NPC Numbering and XYZ Parameters." cc

Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
0A	DGN on subject entity failed
0B	BOOT on subject entity failed
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
15	NPC is unequipped
16	SYNC TB is not equipped
17	SYNC is out of service
18	CCNI is out of service
1F	FTMI is in service but failed
24	Unit type error
36	DSPI not equipped
37	DSPI out-of-service
3E	DSPI failed
40	FC out of service
E0	Hardware database mismatch
0D	Unpestering error registers for subj. entity failed
67	DGA is not added
7F	NPC is not added
84	Mate NPC is not equipped
8D	RT/DL has unrestored DGA
F2	Invalid NPC number specified
FD	NPC range crosses unit boundary

cc	<i>Explanation</i>
A0	The selected MXR associated with the NPC is Out-Of-Service
A2	The selected MIU associated with the NPC is Out-Of-Service
A3	The selected MIU associated with the NPC is In-Service but failed
B7	The associated MXR is In-Service but pested
F1	Invalid NPC type
69	Use of this NPC is RESERVED for SLC 96 MD 1
CD	Subject NPC does not support CEPT BER feature
CE	CCI is out of service
CF	SYNC is inservice but failed
D1	CCI is not present
D2	ETSI is not present
D3	CCNI is inservice but failed
D4	CCI is inservice but failed
D5	CCB is not equipped
D6	CCB is out of service
D7	CCB is inservice but failed
D8	ETSI is not equipped
D9	ETSI is out of service
DA	ETSI is inservice but failed
DB	FC is inservice but failed

RESTORE NPC TIME SLOT 0 MONITOR

Explanation of Command

2.048 Mbit/s Termination

This command resets the current TS0M buffer overflow condition on the specified PA, PB, or PC type NPC.

1.544 Mbit/s Termination

This command resets the current TS0M buffer overflow condition on the specified TH type NPC.

Command

Nonhierarchical

[I.34371]

RST:[FRM xy][,SEQ ww]:NPC [s]abc,TS0M!

Hierarchical

[I.34371]

RST:[FRM xy][,SEQ ww]:NPC uvmnp,TS0M!

Completion Message

Nonhierarchical

[O.34371]

M hh:mm:ss xy,ww <n[vv]> RST NPC [s]abc TS0M COMPL

Hierarchical

[O.34371]

M hh:mm:ss xy,ww <n[vv]> RST NPC uvmnp TS0M COMPL

Denial Message**Nonhierarchical**

[O.34371.01]

M hh:mm:ss xy,ww <n[vv]> RST NPC [s]abc TS0M COND cc DNY

Hierarchical

[O.34371.01]

M hh:mm:ss xy,ww <n[vv]> RST NPC uvmnp TS0M COND cc DNY

**Explanation of
Parameters****[s]abc**

The 3- or 4-digit nonhierarchical NPC number

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical NPC number

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

TS0M

Time slot 0 monitor

cc

Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
15	NPC is unequipped
1F	FTMI is in service but failed
24	Unit type error
E0	Hardware database mismatch
46	NPC Failed or Out of Service
F1	Parameter only valid with PA, PB, or PC type NPCs
F2	Invalid NPC number specified

cc	<i>Explanation</i>
9B	The MXR is not grown
AE	MXR is failed
B2	MXR is out of service

RESTORE PMEM AND/OR SMEM

Explanation of Command

This command restores the primary memory card (PMEM) or secondary memory card (SMEM) to service. The PMEM card may be restored manually when the main controller (MC) is in maintenance condition (MCOND). The SMEM card may be restored manually when the MC is in-service (IS) or in MCOND.

The options CLR, FRC, and BKGRND can only be used with SMEM. In addition, the option CLR can only be used when the main controller is in MCOND. The options FRC and BKGRND can only be used when the main controller is IS. The options do the following:

- The CLR option is used when the frame administrator wants to create a blank card. The executables and the database are erased from the card. The CLR option cannot be used with the FRC or BKGRND option.
- The FRC option is used when an SMEM card is to be synchronized but one or more items on the SMEM card are incompatible with the same item on the PMEM card. The purpose of the FRC option is to allow the frame administrator to force synchronization, even though an incompatibility has been detected.
- The FRC option may be used together with BKGRND option. It is incompatible with the CLR option.
- The BKGRND option is used when the frame administrator wants to allow the execution of a certain set of commands to proceed while the synchronization of the SMEM card is proceeding in the background. The BKGRND keyword is incompatible with the CLR keyword, but it may be used together with the FRC keyword.

Command

[I.34211]

```
RST: [FRM xy][, SEQ ww]: {PMEM|SMEM[{, CLR|[, FRC][, BKGRND]}}]!
```

Completion Message

[O.34211]

```
M hh:mm:ss xy,ww n[vv] RST {PMEM|SMEM[ CLR][ FRC][ BKGRND]} COMPL
```

Denial Message

[O.34211.01]

```
M hh:mm:ss xy,ww n[vv] RST {PMEM|SMEM[ CLR][ FRC][ BKGRND]} \
COND cc DNY
```

Autonomous Message

Normal completion message when command is issued during Boot procedure

[O.34211]

```
I hh:mm:ss xy,ww n[vv] RST SMEM BKGRND COMPL
```

Error message when command issued during Boot procedure terminates abnormally

[O.34211.01]

```
A hh:mm:ss xy,ww n[vv] RST SMEM BKGRND COND cc DNY
```

Explanation of Parameters**PMEM**

Primary memory card

CLR

Clear

The CLR option causes all volumes on the card inserted in the SMEM slot to be initialized. It is not allowed for the PMEM option. If the CLR keyword is entered, DACS II responds:

ARE YOU SURE?(YES/NO)

If YES, the command request is submitted to DACS II. After completion, all of the file volumes on the SMEM card are initialized and all information stored previously is cleared.

If NO, DACS II responds as indicated under the Completion or Denial Message.

SMEM

Secondary memory card

If the MC is in MCOND, the SMEM card is restored without any transfer of databases or executables to the card. It is restored if it passes hardware diagnostics and is recognized as a DACS II compatible memory card. If the MC is IS, restoring an SMEM card results in the following actions:

1. The card goes through hardware diagnostics and a check to ensure it is a DACS II compatible card.
2. The SMEM card is made bit-for-bit identical to the PMEM card.

3. The system software ensures that subsequent writes to the PMEM card are also written to the SMEM card, so that the contents of the PMEM and SMEM cards are always synchronized.

FRC

Force

If the MC is IS and the SMEM has passed hardware diagnostics and is a compatible card, then the following conditions are checked on the SMEM:

- blank or uninitialized card
- a frame ID mismatch between the PMEM and SMEM cards
- a unique ID mismatch between the PMEM and SMEM cards
- a release version mismatch between the PMEM and SMEM cards
- the database on the SMEM is corrupted, missing or unrecognizable
- the PMEM and SMEM cards do not contain identical DSP Platform applications

If any of the above conditions exist, the frame generates a warning message listing the condition and denies the command as follows:

Warning: The SMEM Card being restored has the following problems!

<message describing the problem>

IF YOU STILL WISH TO PROCEED, USE FRC OPTION

If the user re-issues the command with the FRC option, then the following message appears:

ARE YOU SURE? (YES/NO)

A response of YES causes the command to be executed. Any other response, or a 60-second time interval, causes the command to be aborted.

BKGRND

Background

The BKGRND command is used when the main controller is In Service and is only valid when used with SMEM.

The following is a list of commands that are available while the backup procedure is running in the background.

[I.11001]	TCON,FROM,TO,RDC,CUS,INCL
[I.11011]	TCON,FROM,TO,RDC,CUS,INCL (clear DS1/clear 2M bps)
[I.11021]	TCON,FROM,TO,MPM,NAM,NTR,RDC, CUS,INCL
[I.11051]	TCON,FROM,TO,PFW,NFW (TS0 to non-TS0)
[I.15001]	TDIS,FROM,TO,INCL,OOS,DCC
[I.15002]	TDIS,FROM,TO,INCL,OOS,DCC (multi-point)
[I.15011]	TDIS,FROM,TO,OOS,INCL (clear DS1/clear 2M bps)
[I.19001]	ED,MACRO,MAP
[I.19101]	SECH,TO,DS0A,DS0B,SEC,PCH
[I.19111]	SECH,TO,RATE,DP,PCH
[I.19151]	SDCH,TO,PCH,DCC
[I.19201]	SCON,RATE,TPT,FROM,TO
[I.19211]	SCON,DS0A,RATE,TPT,FROM,TO, DS0B
[I.19221]	SCON,RATE,MPTM,MJU,MA
[I.19401]	SDIS,RATE,TPT,FROM,TO
[I.19411]	SDIS,RATE,TPT,FROM,TO
[I.19421]	SDIS,RATE,MPTM,MJU (MJU branch)
[I.19431]	SDIS,RATE,MPTM,MJU,ALL (MJU master)
[I.19501]	CHG,SECH,OLD,NEW,PCH,DCC
[I.19581]	CHG,SCON,OLD,NEW (change MJU branch)

[I.19591]	CHG,SCON,OLD,NEW,MPTM (change MJU master)
[I.39001]	LOGIN,USER,PASSWD,DACS,II
[I.39101]	LOGOFF,USER,LINK
[I.51011]	UTL,TOD,CFA,MONDAT,FAC,BMTR, PRIM,BKGRND
[I.51041]	UTL,QRY,WHO
[I.51131]	UTL,QRY,SQN
[I.52011]	UTL,QRY,CMAP
[I.52041]	UTL,QRY,TO
[I.52061]	UTL,QRY,TO (clear DS1/clear 2M bps)
[I.52501]	UTL,QRY,SECH,TO
[I.52511]	UTL,QRY,SCON,CH,TO
[I.52521]	UTL,QRY,SCON,TO
[I.52531]	UTL,QRY,SRHDW,TO
[I.55711]	ABT
[I.56311]	UTL,QRY,STATE,NPC (except DA,TA,PA types)
[I.56314]	UTL,QRY,STATE,NPC (DA,TA,PA types only)
[I.56501]	UTL,QRY,SROOF,TO,ALL
[I.81001]	AUD,QRY,CFA,CGA,LFVR,FFER

Additionally, the following test access commands are available for use during a background backup procedure.

[I.19601]	STST,MON,TO,TP
[I.19621]	STST,MON,TO,MJU,TP
[I.19631]	STST,SPL,TO,TP

[I.19601]	STST,MON,TO,TP
[I.19651]	STST,SPL,TO,MJU,TP
[I.19671]	STST,TPR,TP
[I.19681]	STST,TPR,ALL,LINKS
[I.20001]	CTST,FAD,FROM,TO,AIS,INCL
[I.20031]	CTST,HUB,FAD,TO,INCL
[I.20101]	CTST,FAD,AIS,INCL
[I.20111]	CTST,FAD,EMODE,FMODE,INCL
[I.20201]	CTST,TNR,FAD,OOS,RDC,CUS, UMPD,EMODE
[I.20202]	CTST,TNR,ALL,OOS
[I.20301]	CTST,LPBKT,FAD,INCL
[I.21001]	TTST,MON,TO,TP
[I.21021]	TTST,MON,TO,TG
[I.21031]	TTST,MON,TG
[I.23001]	TTST,SPL,TP
[I.23021]	TTST,SPL,TG
[I.24001]	TTST,HUB,TO,TP
[I.24021]	TTST,HUB,TO,TG
[I.26101]	TTST,RT,DGA,DGB,DGC,DGD,DGP
[I.27001]	TTST,TPR,TP,OOS
[I.27002]	TTST,TPR,ALL,OOS
[I.27021]	TTST,TGR,TG,OOS
[I.29001]	TTST,LPD,TP
[I.29021]	TTST,LPD,TG
[I.53061]	UTL,QRY,TPS

[I.19601] STST,MON,TO,TP

[I.53081] UTL,QRY,TGS

[I.53091] UTL,QRY,NPCTG

cc

Hexadecimal condition code

cc	<i>Explanation</i>
03	Subject entity is in service
06	Device failed to format
07	Device failed to initialize
0B	BOOT on subject entity failed
91	Can't mount or unmount SMEM
FB	PMEM verification failed
11	PMEM type no longer supported
F1	PMEM and SMEM synchronization fail
F2	Not a DACS II compatible Flash Card
F3	Flash Card is empty
F4	PMEM and SMEM are different
F5	Flash Card is not present
F6	Flash Card is bad

RST RT | DL

Explanation of Command

This command is used to restore to service all the NPCs associated with the specified RT or DL. Each NPC restored will print a RST (O.34351) message. If an NPC restoral fails the cc of the RST NPC message(O.34351) will give the reason. This command will restore the NPCs associated with the RT or DL one at a time in the proper order. If it encounters an error restoring any one of the NPCs it will not continue restoring the remaining NPCs. This command will insure that the two NPCs associated with the DL and RT of DGA or DGP have the same type before it restores them.

Command

1.544 Mbit/s Termination

[I.34481]

RST:FRM xy,SEQ ww:{RT|DL} ffff!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.34481]

M hh:mm:ss xy,ww n[vv] RST {RT|DL} ffff 3 LN MSG:
DGA [s]aaa INS [DGB [s]bbb INS] [DGC [s]ccc INS] [DGD [s]ddd INS]
[DGP [s]ppp INS]
COMPL

Hierarchical

[O.34481]

M hh:mm:ss xy,ww n[vv] RST {RT|DL} ffff 3 LN MSG:
DGA uvjab INS [DGB uvkcd INS] [DGC uvlef INS] [DGD uvmgh INS]
[DGP uvjpr INS]
COMPL

Denial Message 1.544 Mbit/s Termination**Nonhierarchical**

[O.34481.01]

```
M hh:mm:ss xy,ww n[vv] RST {RT|DL} ffff 3 LN MSG:
[DGA [s]aaa {OOS|INS}][ DGB [s]bbb {OOS|INS}][ DGC [s]ccc
{OOS|INS}]
[DGD [s]ddd {OOS|INS}]
COND cc DNY
```

Hierarchical

[O.34481.01]

```
M hh:mm:ss xy,ww n[vv] RST {RT|DL} ffff 3 LN MSG:
[DGA uvjab {OOS|INS}][ DGB uvkcd {OOS|INS}][ DGC uvlef {OOS|INS}]
[ DGD uvmgh {OOS|INS}][ DGP uvjpr {OOS|INS}]
COND cc DNY
```

Common

If there is no RT or DL:

[O.33481.01]

```
M hh:mm:ss xy,ww n[vv] RST {RT|DL} ffff 2 LN MSG:
COND cc DNY
```

**Explanation of
Parameters**

RT	SLC remote terminal
DL	Digital carrier line unit
ffff	Bank identification number (0000 through 9999)
OOS	Out of Service
INS	IN Service
DNY	Denied
DGA	Digroup A of SLC
DGB	Digroup B of SLC
DGC	Digroup C of SLC
DGD	Digroup D of SLC
DGP	Digroup P of SLC
[s]aaa	DGA NPC number

[s]bbb	DGB NPC number
[s]ccc	DGC NPC number
[s]ddd	DGD NPC number
[s]ppp	DGP NPC number
uvjab	DGA NPC number
uvkcd	DGB NPC number
uvlef	DGC NPC number
uvmgh	DGD NPC number
uvjpr	DGP NPC number
cc	Hexadecimal condition code

CHANGE LINE AND SIGNALING FORMAT

**Explanation of
Command****NOTE:**

This command applies to the 1.544 Mbit/s Termination interface only.

This command is used to change the Line and Signaling format for all the NPCs associated with the specified RT or DL. With this command it is possible to have the type of the NPCs associated with the RT and DL of a DGA or DGP be different. This is not a normal condition and the types must match before the NPCs are restored.

Command

[I.38481]

CHG: [FRM xy][, SEQ ww]: {RT|DL} ffff, {ZCS|B8ZS}!

**Completion
Message****Nonhierarchical**

[O.38481]

M hh:mm:ss xy,ww n[vv] CHG {RT|DL} ffff {ZCS|B8ZS} 3 LN MSG:
DGA [s]aaa {ZCS|B8ZS} [DGB [s]bbb {ZCS|B8ZS}][DGC [s]ccc\
{ZCS|B8ZS}]
[DGD [s]ddd {ZCS|B8ZS}][DGP [s]ppp {ZCS|B8ZS}] COMPL

Hierarchical

[O.38481]

M hh:mm:ss xy,ww n[vv] CHG {RT|DL} ffff {ZCS|B8ZS} 3 LN MSG:
DGA uvjab {ZCS|B8ZS} [DGB uvkcd {ZCS|B8ZS}] [DGC uvlef {ZCS|B8ZS}]
[DGD uvmgh {ZCS|B8ZS}][DGP uvjpr {ZCS|B8ZS}] COMPL

Denial Message**Nonhierarchical**

[O.38481.01]

M hh:mm:ss xy,ww n[vv] CHG {RT|DL} ffff {ZCS|B8ZS} 3 LN MSG:
DGA [s]aaa {ZCS|B8ZS} DGB [s]bbb {ZCS|B8ZS} DGC [s]ccc {ZCS|B8ZS} \
DGD [s]ddd {ZCS|B8ZS} DGP [s]ppp {ZCS|B8ZS}

DGD [s]ddd {ZCS|B8ZS} DGP [s]ppp {ZCS|B8ZS}
COND cc DNY

If there is no RT or DL:

[O.33481.01]

M hh:mm:ss xy,ww n[vv] CHG {RT|DL} ffff {ZCS|B8ZS} 2 LN MSG:
COND cc DNY

Hierarchical

[O.38481.01]

M hh:mm:ss xy,ww n[vv] CHG {RT|DL} ffff {ZCS|B8ZS} 3 LN MSG:
DGA uvjab {ZCS|B8ZS} DGB uvkcd {ZCS|B8ZS} DGC uvlef {ZCS|B8ZS} \
DGD uvmgh {ZCS|B8ZS} DGP uvjpr {ZCS|B8ZS}
COND cc DNY

If there is no RT or DL:

[O.33481.01]

M hh:mm:ss xy,ww n[vv] CHG {RT|DL} ffff {ZCS|B8ZS} 2 LN MSG:
COND cc DNY

Explanation of Parameters

RT	SLC remote terminal
DL	Digital carrier line unit
ffff	Bank identification number (0000 through 9999)

Line and Signaling Format Options

ZCS	Zero Code Suppression If this option is chosen, the y value of the DSxyz is set equal to 0.
B8ZS	Bipolar 8 Zeros Substitution If this option is chosen, the y value of the DSxyz is set equal to 2.

RESTORE CLOCK REFERENCE OSCILLATOR

Explanation of Command This command restores the synchronizer time base as a clock reference oscillator.

Command [I.34111]
RST: [FRM xy][, SEQ ww]:SYNC, TLI 3, CRO!

Completion Message [O.34111]
M hh:mm:ss xy,ww n[vv] RST SYNC TLI 3 CRO COND 00 COMPL

Denial Message [O.34111.01]
M hh:mm:ss xy,ww n[vv] RST SYNC TLI 3 CRO COND cc DNY

Explanation of Parameters	SYNC	Synchronizer
	TLI	Timing link interface
	CRO	Clock reference oscillator
	cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
0A	DGN on subject entity failed
0B	BOOT on subject entity failed
16	SYNC TB is not equipped
32	Both SYNCs are OOS

cc	<i>Explanation</i>
A0	Not a CRO TLI
A9	Both syncs are out-of-service
36	TD on one(both) sync(s) is not equipped or not in-service

RESTORE SYNCHRONIZER'S TIMING LINK
INTERFACE

Explanation of Command	This command restores the synchronizer's timing link interface. If the timing link interface is configured as a timing extractor, synchronizer sync port 0 or 1 must be specified.	
Command	[I.34121] RST:[FRM xy][,SEQ ww]:SYNC a,TLI m[,SSP b]!	
Completion Message	[O.34121] M hh:mm:ss xy,ww n[vv] RST SYNC a TLI m[SSP b] COND 00 COMPL	
Denial Message	[O.34121.01] M hh:mm:ss xy,ww n[vv] RST SYNC a TLI m[SSP b] COND cc DNY	
Explanation of Parameters	SYNC	Synchronizer
	a	SYNC number (0 or 1)
	TLI	Timing link interface
	m	TLI number (1 through 4)
	SSP	Synchronizer synchronization port
	b	SSP number (0 or 1)
	cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
0A	DGN on subject entity failed
16	SYNC TB is not equipped
17	SYNC is out of service
33	Wrong TLI type
5D	Sync source NPC is not inservice
5E	Sync source NPC is not equipped
CF	NPC already grown as non-synchronization source

RESTORE SYNCHRONIZER

Explanation of Command

This command restores the specified synchronizer to service. This includes all constituent circuit packs; i.e., the timing extractor circuit, the phase-locked loop, the clock generator circuit, and the service and reply circuit.

Command

[I.34101]
RST:[FRM xy][,SEQ ww]:SYNC a!

Completion Message

[O.34101]
M hh:mm:ss xy,ww n[vv] RST SYNC a COND cc COMPL

Denial Message

[O.34101.01]
M hh:mm:ss xy,ww n[vv] RST SYNC a COND cc DNY

Explanation of Parameters

SYNC	Synchronizer
a	Synchronizer side number (0 or 1)
cc	Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
02	Subject entity is not equipped
03	Subject entity is in service
0A	DGN on subject entity failed
91	Sync is not configured yet

cc	<i>Explanation</i>
92	Boot TLI failed
93	TB type in hardware mismatches DB
AB	Bad sync mode
C8	Sync pack denied command
C9	Syncs failed to cross couple
CA	Mate sync pack denied command
CB	Sync not completely reset

RESTORE TIME SLOT INTERCHANGE

Explanation of Command

This command is applicable only to the noncapacity expansion frame (NCEF).
It requests the restoration of the time slot interchange to service.

Command

1.544 Mbit/s Termination

[I.34221]

RST:FRM xy,SEQ ww:TSI sft!

2.048 Mbit/s Termination

[I.34221]

RST:FRM xy,SEQ ww:TSI sft!

Completion Message

1.544 Mbit/s Termination

[O.34221]

M hh:mm:ss xy,ww n[vv] RST TSI sft COND cc COMPL

2.048 Mbit/s Termination

[O.34221]

M hh:mm:ss xy,ww n[vv] RST TSI sft COND cc COMPL

Denial Message

1.544 Mbit/s Termination

[O.34221.01]

M hh:mm:ss xy,ww n[vv] RST TSI sft COND cc DNY

2.048 Mbit/s Termination

[O.34221.01]

M hh:mm:ss xy,ww n[vv] RST TSI sft COND cc DNY

Explanation of Parameters

TSI	Time slot interchange
s	Side No. (0 or 1).
f	From unit No. (1 through 6).
t	To unit No. (1 through 6).
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
0A	DGN on subject entity failed
0B	BOOT on subject entity failed
16	SYNC TB is not equipped
17	SYNC is out of service
18	CCNI is out of service
1B	CCN side s is in service
CF	SYNC is inservice but failed
D3	CCNI is inservice but failed
D5	CCB is not equipped
D6	CCB is out of service
D7	CCB is inservice but failed

RESTORE TIME SLOT INTERCHANGES

Explanation of Command

This command applies only to the noncapacity expansion frame (NCEF).

It requests the restoration of all in-service Time Slot Interchanges in the specified Cross-Connect Network side.

Command

1.544 Mbit/s Termination

[I.34241]

RST:FRM xy,SEQ ww:TSIS,CCN s,ALL!

2.048 Mbit/s Termination

[I.34241]

RST:FRM xy,SEQ ww:TSIS,CCN s,ALL!

Completion Message

1.544 Mbit/s Termination

[O.34241]

M hh:mm:ss xy,ww n[vv] RST TSIS CCN s ALL 5 LN MSG:
TOTAL TSIS tt
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
EOP

M hh:mm:ss xy,ww n[vv] RST TSIS CCN s ALL 5 LN MSG:
TOTAL TSIS tt
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
COND cc COMPL

2.048 Mbit/s Termination

[O.34241]

M hh:mm:ss xy,ww n[vv] RST TSIS CCN s ALL 5 LN MSG:
TOTAL TSIS tt
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
EOP

M hh:mm:ss xy,ww n[vv] RST TSIS CCN s ALL 5 LN MSG:
TOTAL TSIS tt
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
COND cc COMPL

Denial Message

1.544 Mbit/s Termination

[O.34241.01]

M hh:mm:ss xy,ww n[vv] RST TSIS CCN s ALL COND cc DNY

2.048 Mbit/s Termination

[O.34241.01]

M hh:mm:ss xy,ww n[vv] RST TSIS CCN s ALL COND cc DNY

Explanation of Parameters

TSIS	Time slot interchanges
ALL	All
TOTAL	Total
tt	Number of TSIs currently in service (01 through 36)
CCN	Cross-connect network
s	Cross-connect network side number (0 or 1)
f	From unit number (1 through 6)
t	To unit number (1 through 6)
r	Status
C	COMPL

	D	DNY
nn	Hexadecimal condition code for the particular TSI for r = C	
	00	No condition
	for r = D	
	02	Subject entity is not equipped
	03	Subject entity is in service
	0A	Diagnostic (DGN) on subject entity failed
	0B	Boot on subject entity failed
COND	Condition	
cc	Completion condition code To interpret values see cc.	
cc	Hexadecimal condition code	

cc	<i>Explanation</i>
0C	DGN on subject entity denied
16	SYNC TB is not equipped
17	SYNC is out of service
18	CCNI is out of service
1B	CCN side s is in service
CF	SYNC is inservice but failed
D3	CCNI is inservice but failed
D5	CCB is not equipped
D6	CCB is out of service
D7	CCB is inservice but failed
00	No conditions

RESTORE

Explanation of Command

This command applies only to the noncapacity expansion frame (NCEF).

It requests the restoration of time slot interchanges (TSIs) that connect **UNIT q** to other specified units. **CCN s** specifies which cross-connect network side the TSIs are on.

If the optional connectivity field is omitted, then all TSIs connected to **UNIT q** are restored.

Command

1.544 Mbit/s Termination

[I.34231]

```
RST:FRM xy,SEQ ww:TSIS,CCN s,UNIT q
[,CONN(a[,b[,c[,d[,e[,f]]]]]])]!
```

2.048 Mbit/s Termination

[I.34231]

```
RST:FRM xy,SEQ ww:TSIS,CCN s,UNIT q
[,CONN(a[,b[,c[,d[,e[,f]]]]]])]!
```

Completion Message

1.544 Mbit/s Termination

[O.34231]

```
M hh:mm:ss xy,ww n[vv] RST TSIS CCN s UNIT q
[ CONN (a[ b[ c[ d[ e[ f]]]]]])]
e LN MSG:
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
COND cc COMPL
```

2.048 Mbit/s Termination

[O.34231]

```
M hh:mm:ss xy,ww n[vv] RST TSIS CCN s UNIT q
[ CONN (a[ b[ c[ d[ e[ f]]]]))]
e LN MSG:
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
sft r nn sft r nn sft r nn sft r nn sft r nn sft r nn
COND cc COMPL
```

Denial Message

1.544 Mbit/s Termination

[O.34231.01]

```
M hh:mm:ss xy,ww n[vv] RST TSIS CCN s UNIT q
[ CONN (a[ b[ c[ d[ e[ f]]]]))] COND cc DNY
```

2.048 Mbit/s Termination

[O.34231.01]

```
M hh:mm:ss xy,ww n[vv] RST TSIS CCN s UNIT q
[ CONN (a[ b[ c[ d[ e[ f]]]]))] COND cc DNY
```

Explanation of Parameters

UNIT	Unit
q	Unit number containing TSIs (1 through 6)
TSIS	Time Slot Interchanges
a,b,c,d,e,f	Unit numbers to which UNIT q can be connected
CCN	Cross-Connect Network
sft	CCN identifier
	s Side number (0 or 1)
	f FROM unit number (1 through 6)
	t TO unit number (1 through 6)
r	Status
	C COMPL
	D DNY
nn	Hexadecimal condition code for the particular TSI

	for r = C
00	No condition
	for r = D
03	Subject entity is in service
0A	Diagnostic on subject entity failed
0B	Boot on subject entity failed
cc	Hexadecimal condition code

cc	<i>Explanation</i>
0B	BOOT on subject entity failed
0C	DGN on subject entity denied
10	Unit is not equipped
16	SYNC TB is not equipped
17	SYNC is out of service
18	CCNI is out of service
1B	CCN side s is in service
27	Illegal connectivity specified
CF	SYNC is inservice but failed
D3	CCNI is inservice but failed
D5	CCB is not equipped
D6	CCB is out of service
D7	CCB is inservice but failed

RESTORE UNIT

Explanation of Command This command restores a format converter of a facility terminating unit to service.

Command [I.34331]
RST:[FRM xy][,SEQ ww]:UNIT [q]q,FC sb!

Completion Message [O.34331]
M hh:mm:ss xy,ww n[vv] RST UNIT [q]q FC sb COND 00 COMPL

Denial Message [O.34331.01]
M hh:mm:ss xy,ww n[vv] RST UNIT [q]q FC sb COND cc DNY

Explanation of Parameters	UNIT	Unit
	[q]q	Unit number (1 through 16)
	FC	Format converter
	s	Side number (0 or 1)
	b	Format Converter number (1 through 4)
	cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
0A	DGN on subject entity failed
0B	BOOT on subject entity failed
10	Unit is not equipped

cc	<i>Explanation</i>
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
16	SYNC TB is not equipped
17	SYNC is out of service
18	CCNI is out of service
1B	CCN side s is in service
1F	FTMI is in service but failed
40	FC out of service
CE	CCI is out of service
CF	SYNC is inservice but failed
D1	CCI is not present
D2	ETSI is not present
D3	CCNI is inservice but failed
D4	CCI is inservice but failed
D5	CCB is not equipped
D6	CCB is out of service
D7	CCB is inservice but failed
D8	ETSI is not equipped
D9	ETSI is out of service
DA	ETSI is inservice but failed
DB	FC is inservice but failed

RESTORE FACILITY LINE INTERFACE

Explanation of Command

This command requests and reports the restoration of one facility line interface (FLI) in a DS3 unit (DS3U) or a Hybrid DS3 unit (HDS3U).

Command

[I.34401]
RST:FRM xy,SEQ ww:UNIT [q]q,FLI k!

Completion Message

[O.34401]
M hh:mm:ss xy,ww n[vv] RST UNIT [q]q FLI k COMPL

Denial Message

1.544 Mbit/s Termination

[O.34401.01]
M hh:mm:ss xy,ww n[vv] RST UNIT [q]q FLI k COND cc DNY

2.048 Mbit/s Termination

[O.34401.01]
M hh:mm:ss xy,ww n[vv] RST UNIT [q]q FLI k COND cc DNY

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
FLI	Facility line interface
k	FLI identifier
	S Service side
	P Protection side
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
0A	DGN on subject entity failed
0B	BOOT on subject entity failed
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
16	SYNC TB is not equipped
17	SYNC is out of service
18	CCNI is out of service
B1	FMT is out of service
CE	CCI is out of service
CF	SYNC is inservice but failed
D1	CCI is not present
D2	ETSI is not present
D3	CCNI is inservice but failed
D4	CCI is inservice but failed
D5	CCB is not equipped
D6	CCB is out of service
D7	CCB is inservice but failed
D8	ETSI is not equipped
D9	ETSI is out of service
DA	ETSI is inservice but failed
DD	FMT is in service but failed

RESTORE FORMATTER

Explanation of Command

This command requests and reports the restoration of one Formatter (FMT) in a DS3 Unit or Hybrid Formatter (HFMT) in a Hybrid DS3 (HDS3) Unit. If the restoration of the FMT or HFMT causes all the packs in the associated side to be in service, the side is marked In-Service. If an attempt is made to restore an FMT in an HDS3 or an HFMT in a DS3 unit, then a diagnostic failure results.

Command

[I.34411]
RST:[FRM xy][,SEQ ww]:UNIT [q]q,FMT s!

Completion Message

[O.34411]
M hh:mm:ss xy,ww n[vv] RST UNIT [q]q FMT s COMPL

Denial Message

[O.34411.01]
M hh:mm:ss xy,ww n[vv] RST UNIT [q]q FMT s COND cc DNY

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
FMT	Formatter or Hybrid Formatter
s	FMT/HFMT side
	0 Side 0
	1 Side 1
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
0A	DGN on subject entity failed
0B	BOOT on subject entity failed
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
16	SYNC TB is not equipped
17	SYNC is out of service
18	CCNI is out of service
0D	Unpesteing error registers for subj. entity failed
CE	CCI is out of service
CF	SYNC is inservice but failed
D1	CCI is not present
D2	ETSI is not present
D3	CCNI is inservice but failed
D4	CCI is inservice but failed
D5	CCB is not equipped
D6	CCB is out of service
D7	CCB is inservice but failed
D8	ETSI is not equipped
D9	ETSI is out of service
DA	ETSI is inservice but failed

RESTORE FTMI or DSPI

Explanation of Command

This command restores a facility terminating module interface or a digital signal processor interface to service.

Command

[I.34321]
RST:[FRM xy][,SEQ ww]:UNIT [q]q,{FTMI d|DSPI}!

Completion Message**Nonhierarchical**

[O.34321]
M hh:mm:ss xy,ww n[vv] RST UNIT [q]q,{FTMI d|DSPI} COND 00 COMPL

Denial Message

[O.34321.01]
M hh:mm:ss xy,ww n[vv] RST UNIT [q]q {FTMI d|DSPI} COND cc DNY

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
FTMI	Facility terminating module interface
d	FTMI number (1 through 4)
DSPI	Digital signaling processing interface
COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
03	Subject entity is in service
0A	DGN on subject entity failed
0B	BOOT on subject entity failed
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
16	SYNC TB is not equipped
17	SYNC is out of service
18	CCNI is out of service
CE	CCI is out of service
CF	SYNC is inservice but failed
D1	CCI is not present
D2	ETSI is not present
D3	CCNI is inservice but failed
D4	CCI is inservice but failed
D5	CCB is not equipped
D6	CCB is out of service
D7	CCB is inservice but failed
D8	ETSI is not equipped
D9	ETSI is out of service
DA	ETSI is inservice but failed

RESTORE MULTIPLEXER INTERFACE UNIT

Explanation of Command

**NOTE:**

This command applies to the 1.544 Mbit/s Termination Interface only.

This command adds ANSI performance monitoring capability to an already operating Multiplexer-Multiplexer Interface Unit Functional Group(s) (MMFG) in a DS3 unit without interrupting service. This command follows a GRTH UNIT MIU TYPE command for an already-operating MMFG with only the MXR circuit pack in service.

Failure to restore all equipped TA-type tributary Network Processing Circuits results in denial of the whole command. The INCL option is ignored if the MMFG is not selected to carry service.

An RST IN PROGRESS message is generated every 20 seconds while this command is being executed.

A completion or denial message occurs for each MIU.

Command

[I.34431]

RST:[FRM xy][,SEQ ww]:UNIT [q]q,MIU c[-d][,INCL]!

Completion Message

[O.34431]

M hh:mm:ss xy,ww n[vv] RST UNIT [q]q MIU a[INCL] TYPE mnxyz \
COMPL

Denial Message

[O.34431.01]

M hh:mm:ss xy,ww n[vv] RST UNIT [q]q MIU a[INCL] COND cc DNY

Explanation of Parameters	UNIT	Unit
	[q]q	Unit number (1 through 16)
	MIU	Multiplexer interface unit
	c,d	The number of the MIU in the DS3 Unit (P, 1 through 6)
	a	The number of the MIU within the range of c and d
	INCL	Restore all equipped TA type tributary NPCs Failure to restore <i>all</i> equipped NPCs will result in denial of the whole command. This keyword will be ignored if the associated MMFG is not selected to carry service.
	TYPE	Type For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	MI100	Multiplexer interface unit
	----	Type unassigned
	cc	Hexadecimal condition code
	cc	<i>Explanation</i>
	10	Unit is not equipped
	11	UC is out of service
	12	UC is in service but failed
	16	SYNC TB is not equipped
	17	SYNC is out of service
	18	CCNI is out of service
	24	Unit type error
	B3	MIU is already in service
	BF	MIU is not equipped
	99	No FLI is In Service
	9A	Formatter (FMT) on active CCN side is Out-Of-Service
	A6	The MIU diagnostics failed
	A7	The MIU boot failed
	AE	MXR is failed
	B2	MXR is out of service

cc	<i>Explanation</i>
B7	The associated MXR is In-Service but pested
CE	CCI is out of service
CF	SYNC is inservice but failed
D1	CCI is not present
D2	ETSI is not present
D3	CCNI is inservice but failed
D4	CCI is inservice but failed
D5	CCB is not equipped
D6	CCB is out of service
D7	CCB is inservice but failed
D8	ETSI is not equipped
D9	ETSI is out of service
DA	ETSI is inservice but failed
DD	FMT is in service but failed
DF	FLI is inservice but failed

RESTORE MMFG

Explanation of Command

**NOTE:**

This command applies to the 1.544 Mbit/s Termination Interface only.

This command requests and reports the restoration of one or more Multiplexer-Multiplexer Interface Unit Functional Groups (MMFG) in a DS3 or Hybrid DS3 Unit (HDS3U). One MMFG consists of one Multiplexer (MXR), and one Multiplexer Interface Unit (MIU). Note that an MIU is currently not supported by the HDS3U. Failure to restore either the MXR/HMXR or the MIU results in a denial. There is also an option (INCL) to restore all equipped NPCs associated with the MMFG using this command.

Failure to restore any of the NPCs results in denial of the whole command. The INCL option is ignored if the MMFG is not selected to carry service.

A RST IN PROGRESS message is generated every 20 seconds while this command is being executed.

A completion or denial message occurs for each MMFG.

Command

[I.34421]

RST:[FRM xy][,SEQ ww]:UNIT [q]q,MMFG c[-d][,INCL]!

Completion Message

[O.34421]

M hh:mm:ss xy,ww n[vv] RST UNIT [q]q MMFG a[INCL] 2 LN MSG:
MXR a TYPE mnxyz[MIU a TYPE MI100] COMPL

Denial Message

[O.34421.01]

M hh:mm:ss xy,ww n[vv] RST UNIT [q]q MMFG c[INCL]
COND cc DNY

**Explanation of
Parameters**

UNIT	Unit
[q]q	Unit number (1 through 16)
MMFG	Multiplexer-multiplexer interface unit functional group
c,d	MMFG number within the unit (P, 1 through 6)
INCL	Inclusive
	Restore all tributary NPCs that are equipped. Failure to restore any of the NPCs results in the denial of the whole command. This INCL option is ignored if the MMFG is not selected to carry service.

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TYPE	Type
mnxyz	Type identifier
MX	The original R4.0 DS3 facility type supported by the multiplexer (MXR) circuit pack (KCR-1).
EX	The enhanced R6.0 DS3 facility type supported by the enhanced multiplexer (EMXR) circuit pack (KCR-5).
HX	The hybrid facility type supported by the Hybrid Multiplexer(HMXR) circuit pack (KCR-8).
	If the unit is a regular DS3U of unit type DT100, then the default is the MX type for backward compatibility. If the unit is a Hybrid DS3U of unit type HT100, then the default is HX.
xyz	Format type
x	The DS3 framing format
	1 - M13 (default)
	2 - C-bit parity format, not supported by HMXR
y	Not assigned (the only valid value is 0)
z	Not assigned (the only valid value is 0)
MIU	Multiplexer interface unit
a	The number of the MMFG/MXR/MIU within the range of c and d.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
16	SYNC TB is not equipped
17	SYNC is out of service
18	CCNI is out of service
24	Unit type error
99	No FLI is In Service
9A	Formatter (FMT) on active CCN side is Out-Of-Service
9B	The MXR is not grown
9C	The MMFG is already In-Service
A4	The MXR diagnostics failed
A6	The MIU diagnostics failed
A7	The MIU boot failed
B6	The MXR boot failed
CE	CCI is out of service
CF	SYNC is inservice but failed
D1	CCI is not present
D2	ETSI is not present
D3	CCNI is inservice but failed
D4	CCI is inservice but failed
D5	CCB is not equipped
D6	CCB is out of service
D7	CCB is inservice but failed
D8	ETSI is not equipped
D9	ETSI is out of service
DA	ETSI is inservice but failed
DD	FMT is in service but failed

cc	<i>Explanation</i>
DF	FLI is inservice but failed
FF	EMXR/MXR can't be used as P-MXR for HDS3U
08	Mismatch between service MXR and protection MXR types

RESTORE UNIT CONTROLLER

Explanation of Command	This command restores the unit controller to service.	
Command	[I.34311] RST:FRM xy,SEQ ww:UNIT [q]q,UC!	
Completion Message	Nonhierarchical [O.34311] M hh:mm:ss xy,ww n[vv] RST UNIT [q]q UC COND cc COMPL [O.34312] M hh:mm:ss xy,ww n[vv] RST IN PROGRESS	
Denial Message	[O.34311.01] M hh:mm:ss xy,ww n[vv] RST UNIT [q]q UC COND cc DNY	
Explanation of Parameters	UNIT	Unit
	[q]q	Unit number (1 through 16)
	UC	Unit controller
	cc	Hexadecimal condition code
	cc	Explanation
	02	Subject entity is not equipped
	03	Subject entity is in service
	0A	DGN on subject entity failed

cc	<i>Explanation</i>
0B	BOOT on subject entity failed
42	RST failed to boot program
47	Failed to boot DB
48	Failed to boot journal--recurrence indicates database corruption
49	Failed to boot unit
51	General boot failure (vanilla flavor)
18	DSPI not in service, or failed
43	RST failed to boot DB
C4	XMIT continuity test won't be run
C6	No available timeslots on any inservice NPCS associated with FC/FMT

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■ SW,BCAST,OLD,NEW,INCL	<u>19-163</u>
■ SW,BCAST,OLD,NEW,INCL	<u>19-169</u>
■ SW,DISC,OOS	<u>19-176</u>
■ SW,DISC,OOS	<u>19-181</u>
■ SW,NPC,RT,PSW,USW,ALW,INH,FRC,INCL	<u>19-187</u>
■ SW,ROLL,OLD,NEW,INCL,FRC,OOS,TWAY	<u>19-191</u>
■ SW,ROLL,OLD,NEW,OOS,INCL,FRC	<u>19-197</u>
■ SW,UNIT,FLI,TOPRTN	<u>19-203</u>
■ SW,UNIT,FLI,TOSRVC	<u>19-205</u>
■ SW,UNIT,MMFG,TOPRTN,FRC	<u>19-207</u>
■ SW,UNIT,MMFG,TOSRVC	<u>19-210</u>

SAVE COMPONENT COMMANDS

Explanation of Command	This command saves the contents of a macro while in the macro session.	
Command	<pre>[I.19081] SAVE:[FRM xy][,SEQ ww]:!</pre>	
Completion Message	<pre>[O.19081] M hh:mm:ss xy,ww n[vv] SAVE <macro name> SPACE sss \ USED uuu COMPL</pre>	
Denial Message	<pre>[O.19081.01] M hh:mm:ss xy,ww n[vv] SAVE <macro name> SPACE sss \ USED uuu COND cc DNY</pre>	
Explanation of Parameters	macro name	Name of the macro to be saved
	SPACE	Space
	sss	Number representing the percent of total disk space allocated to macro storage
	USED	Used
	uuu	Number representing the percent of the allocated disk space (sss) being used to store macros
	cc	Hexadecimal condition code

cc	<i>Explanation</i>
60	User macro/map space is full
61	System macro/map space is full
65	Command invalid while backup in progress
6E	No edit session active
6C	File is empty

SLC[®] ALARM

Explanation of Command

1.544 Mbit/s Termination only:

This autonomous output message reports a SLC###V-Rg-V### carrier interface related alarm. The message provides the affected bank, the alarm-causing digroup, the associated network processing circuit (NPC) number, and the state and location of the alarm.

Autonomous Message

Nonhierarchical

[O.65131]

pahh:mm:ss xy,ww SC ALM <state>[{CGA|DLF|INH|MRV|MSW|PSW}]/
{RT|DL}
ffff {DGA|DGB|DGC|DGD|DGP} [s]abc[k] <location> COMPL

Hierarchical

[O.65131]

pahh:mm:ss xy,ww SC ALM <state>[{CGA|DLF|INH|MRV|MSW|PSW}]/
{RT|DL}
ffff {DGA|DGB|DGC|DGD|DGP} uvmnp[k] <location> COMPL

Explanation of Parameters

The permissible output parameters are somewhat different if the CGA option is present in this message. These are noted below.

pa	Priority of action
pa	Explanation
I	Information (Only without CGA) /* pds */
A	Autonomous (Only without CGA) /* mml */
*	Minor alarm, non-service-affecting (no CGA declaration)
**	Major alarm, service-affecting, 1 to 5 NPCs including AIS state.

	(With or without CGA)
*C	Critical alarm, service-affecting, more than 5 NPCs. (With or without CGA)
SC	SLC [®] carrier
ALM	Alarm
state	Alarm state
state	Explanation
MJ	Major alarm (with or without CGA)
MN	Minor alarm (no CGA declaration)
IDLD	Idled
MJ	Major
MN	Minor
IDLD	Idled
CGA	Carrier group alarm
DLF	Data link failure
INH	Inhibition (Protection switch)
MRV	Manually Removed
MSW	Manual (protection) switch
PSW	Autonomous protection switch
RT	Remote terminal
DL	Digital carrier line unit (DCLU)
fff	Bank identification number (0000 through 9999)
DGA	SLC Carrier Digroup A
DGB	SLC Carrier Digroup B
DGC	SLC Carrier Digroup C
DGD	SLC Carrier Digroup D
DGP	SLC Carrier Digroup P
NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number
uvmnp	Hierarchical NPC number

	uv	Unit number
	m	Module number
	np	NPC number
k		Alarm type
	k	Explanation
	Y	Yellow
	R	Red
	B	Both yellow and red
location		Alarm location
	location	Explanation
	CLF	Carrier loop failure (with or without CGA)
	NE	Near end (the DACS II end) (with or without CGA)
	FE	Far end

SLC® CARRIER ALARM

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination interface only.

This output message reports the existence of a minor alarm between a SLC® Series 5 carrier feature package C (FPC) remote terminal (RT) and the DACS II frame. Also reported is any incompatible provisioning between the two ends. The message keywords indicate the reason for the incompatibility.

Autonomous Message

[O.65171]

I hh:mm:ss xy,ww SC ALM COMP <state> RT ffff[INDX][LBRV] \
[AB][CD][P][ALP] COMPL

Explanation of Parameters

ALM	Alarm
COMP	Compatibility
state	Alarm state
MN	Minor
IDLD	Idled
RT	Remote Terminal
ffff	RT bank ID number
reasons	Reasons for the alarm
INDX	Index
	The release generic index value does not match.
LBRV	Low bit rate voice
	The low bit rate voice byte value does not match.
AB	A and B
	Digroups A and B provisioning information does not match.
CD	C and D
	Digroups C and D provisioning information does not match.

P	Protection
	Digroup P provisioning information does not match.
ALP	Alpha
	The ALPHA byte value does not match.

SLC[®] ALARM DUPLEX

Explanation of
Command

1.544 Mbit/s Termination

This autonomous output message reports the existence of an alarm and duplex failure on the frame. Duplex means failures that affect both sides of the system. The entity printed in the message is the most recently failed side.

Autonomous
Message

Nonhierarchical

[O.65151]
I hh:mm:ss xy,ww SC ALM <state> DPLX {SYNC a|CCB sf|CCNI s| \ CCI s|TSI sft|ETSI sqq|FC sb UNIT [q]q|FMT s UNIT [q]q| \ NPC [s]abc SIDE s} NE COMPL

Hierarchical

[O.65151]
I hh:mm:ss xy,ww SC ALM <state> DPLX {SYNC a|CCB sf|CCNI s| \ CCI s|TSI sft|ETSI sqq|FC sb UNIT [q]q|FMT s UNIT [q]q| \ NPC uvmp SIDE s} NE COMPL

Explanation of
Parameters

SC	SLC [®]
DPLX	Duplex
ALM	Alarm
state	Alarm status
	CR Critical alarm
	IDLD Idled
SYNC	Synchronizer
a	Synchronizer number (0 or 1)
UNIT	Unit
[q]q	Unit number (1 through 16)

CCB	Cross-connect buffer
CCNI	Cross-connect network interface
SIDE	Side
s	Side number (0 or 1)
f	CCB number (1 through 6)
TSI	Time slot interchange
t	TSI number (1 through 6)
CCI	Clock and control interface
ETSI	Expanded time slot interchanger
s	Side number (0 or 1)
FC	Format converter
b	Module Number (1, 2, 3, or 4)
FMT	Formatter
NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical DSPU NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical DSPU NPC number
uv	Unit number
m	Module number
np	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
NE	Near end
IDLD	Idled

SLC® CARRIER ALARM

Explanation of Command

1.544 Mbit/s Termination

This autonomous output message reports an alarm and a possible service-affecting failure. The failures could be the main controller, facility terminating module interface (FTMI), or the digital signal processing interface (DSPI) circuit pack.

Autonomous Message

1.544 Mbit/s Termination

[O.65161]

I hh:mm:ss xy,ww SC ALM <state> {MC|UC [q]q|FTMI [q]qb| \ DSPI [q]q} NE COMPL

Explanation of Parameters

MC	Main controller
UC	Unit controller
[q]q	Unit number (1 through 16)
FTMI	Facility terminating module interface
[q]qb	FTMI identifier
	[q]q Unit number (see above)
	b FTMI number (1 through 4)
DSPI	Digital signal processing interface
[q]q	Unit number (see above)

state	Alarm state
MJ	Major
MN	Minor
IDLD	Idled
NE	Near End

SLC® CARRIER ALARM

Explanation of Command



NOTE:

This command applies to 1.544 Mbit/s Termination only.

This output message reports the existence of a power (PWR) or miscellaneous (MISC) alarm and its state at the far end.

Autonomous Message

[O.65141]

pahh:mm:ss xy,ww SC ALM[<alarm type>] <state> {RT|DL} \
ffff[FE] COMPL

Explanation of Parameters

RT	Remote Terminal
DL	Digital Carrier Line Unit (DCLU)
ffff	Bank id number (0000 to 9999)
alarm type	Type of SLC Carrier failure or alarm
PWR	Power failure alarm
MISC	Miscellaneous alarm (SLC 96 Carrier only)
MISC1	Miscellaneous alarm (SLC Series 5 Carrier FPC only)
MISC2	Miscellaneous alarm (SLC Series 5 Carrier FPC only)
RGF	Ringing Generator Failure (SLC Series 5 Carrier FPC only)
EEPROM	EEPROM alarm (SLC Series 5 Carrier FPC only)
COMP	Compatibility alarm (SLC Series 5 Carrier FPC only)
state	Alarm state

	MJ	Major alarm
	MN	Minor alarm
	IDLD	Idled
pa		Priority of action
	*	Minor alarm, not service-affecting
	**	Major alarm, service-affecting, 1 to 5 NPCs including AIS state
FE		Far End

SUBRATE TERMINATED CROSS-CONNECTION

Explanation of Command

This command performs a terminated cross-connection of the FROM and TO customers in both directions.

Command

1.544 Mbit/s Termination

Nonhierarchical

USAGE: The following applies to a range of DS-0A channels:

[l.19311]

```
SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM [s]abcd-dd-eee[/01], \
TO [t]ghijjj-kkk[/01]!
```

USAGE: The following applies to a range of DS-0B channels:

[l.19311]

```
SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM [s]abcd-dd/ff-mm, \
TO [t]ghijjj/ll-nn!
```

Hierarchical

USAGE: The following applies to a range of DS-0A channels:

[l.19311]

```
SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM uvmp-dd-dd-eee[/01], \
TO wxkqrjjj-kkk[/01]!
```

USAGE: The following applies to a range of DS-0B channels:

[l.19311]

```
SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM uvmp-dd-dd/ff-mm, \
TO wxkqrjjj/ll-nn!
```

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

USAGE: The following applies to a range of DS-0A channels:

[O.19311]

M hh:mm:ss xy,ww n[vv] SCNT RATE rr [s]abcddd-eee[/01] \
[t]ghijjj-kkk[/01] COMPL

USAGE: The following applies to a range of DS-0B channels:

[O.19311]

M hh:mm:ss xy,ww n[vv] SCNT RATE rr [s]abcddd/ff-mm \
[t]ghijjj/ll-nn COMPL

Hierarchical

USAGE: The following applies to a range of DS-0A channels:

[O.19311]

M hh:mm:ss xy,ww n[vv] SCNT RATE rr uvmnpddd-eee[/01] \
wxkqrjjj-kkk[/01] COMPL

USAGE: The following applies to a range of DS-0B channels:

[O.19311]

M hh:mm:ss xy,ww n[vv] SCNT RATE rr uvmnpddd/ff-mm \
wxkqrjjj/ll-nn COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

USAGE: The following applies to a range of DS-0A channels:

[O.19311.01]

M hh:mm:ss xy,ww n[vv] SCNT RATE rr FROM [s]abcddd-eee[/01] \
3 LN MSG:
TO [t]ghijjj-kkk[/01] ppp/pp,qqq/qq
<reason> DNY

USAGE: The following applies to a range of DS-0B channels:

[O.19311.01]

M hh:mm:ss xy,ww n[vv] SCNT RATE rr FROM [s]abcddd/ff-mm \
3 LN MSG:
TO [t]ghijjj/ll-nn ppp/pp,qqq/qq
<reason> DNY

Hierarchical

USAGE: The following applies to a range of DS-0A channels:

[O.19311.01]

M hh:mm:ss xy,ww n[vv] SCNT RATE rr FROM uvmnpddd-eee[/01] \
3 LN MSG:
TO wxkqrjjj-kkk[/01] ppp/pp,qqq/qq
<reason> DNY

USAGE: The following applies to a range of DS-0B channels:

[O.19311.01]

M hh:mm:ss xy,ww n[vv] SCNT RATE rr FROM uvmnpddd/ff-mm \
3 LN MSG:
TO wxkqrjjj/ff-nn ppp/pp,qqq/qq
<reason> DNY

Explanation of Parameters

RATE	Rate
rr	Transmission rate specification
24	2.4 kb/s
48	4.8 kb/s
96	9.6 kb/s
56	56 kb/s
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
uv,wx	Unit number
m,k	Module number

np,q NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

ddd FROM channel number

eee FROM channel number for end of range specified

jjj TO channel number

kkk TO channel number for end of range specified

001-024

001-047 Odd only (SLC 96[®] Carrier, Mode 3, DGA)

049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)

001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)

025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)

049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)

073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)

001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)

025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)

049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

ff FROM customer number

mm FROM customer number for end of range specified

ll TO customer number

nn TO customer number for end of range specified

Customer Number:

01 (DS0A at 2.4, 4.8, 9.6, or 56 kb/s)

01-20 (DS0B at 2.4 kb/s)

01-10 (DS0B at 4.8 kb/s)

01-05 (DS0B at 9.6 kb/s)

If a digroup and channel in the range is error corrected, termination takes place after error correction is performed. This command does not allow the FROM and TO customers to be the same (that is, a looped connection).

ppp/pp	FROM channel number/FROM customer number
ppp	FROM channel number
pp	FROM customer number
qqq/qq	TO channel number/TO customer number
qqq	TO channel number
qq	TO customer number
reason	Reason for denial

reason

CHANNEL [s]abcbdd IS A PARITY CHANNEL

CUSTOMER NUMBER MUST BE SPECIFIED FOR DS0B
CHANNEL [s]abcbdd

CHANNEL [s]abcbdd WITH SR ERROR CORRECTION AND
RATE 56 NOT ALLOWED

CHANNEL [s]abcbdd SR MULTIPLEXER RATE CANNOT
SUPPORT CIRCUIT RATE

CUSTOMER NUMBER RANGE NOT ALLOWED FOR DS0A
CHANNEL [s]abcbdd

CHANNEL RANGE NOT ALLOWED FOR DS0B CHANNEL
[s]abcbdd

INVALID CHANNEL NUMBER FOR CHANNEL [X]XXXXYY

SCNT CANNOT BE SPECIFIED FOR A LOOPED CIRCUIT

FROM AND TO RANGES ARE NOT THE SAME SIZE

FROM AND TO RANGES PARTIALLY OVERLAP

CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0A
CHANNEL [s]abcbdd

CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0B
CHANNEL [s]abcbdd

CHANNEL [s]abcbdd IS OUT OF RANGE

[X]XXXXYY-FFF IS AN INVALID RANGE OF CHANNELS

CIRCUIT [s]abcbdd/ff IS ASSIGNED

CHANNEL [s]abcbdd IS NOT ESTABLISHED TO SR FEATURE

CIRCUIT [s]abcbdd/ff IS UNDER TEST

NPC [X]XXX IS NOT PROVISIONED AS DIGROUP-A OF AN
RT

THE NPC ASSOCIATED WITH VIRTUAL CHANNEL
[X]XXXYYY IS NOT PROVISIONED

NPC [X]XXX IS IN LINE LOOPBACK STATE

UNIT [q]q IS NOT FACILITY TERMINATING TYPE

NO DSPU IS EQUIPPED

NO SRM TYPE NPC IS EQUIPPED

NO MJU TYPE NPC IS EQUIPPED

TSI sft IS NOT EQUIPPED

CCB sf IS NOT EQUIPPED

ETSI sqq IS NOT EQUIPPED

UNIT [q]q IS NOT EQUIPPED

UNIT [q]q FTMI d IS NOT EQUIPPED

UNIT [q]q FC sb IS NOT EQUIPPED

DSPI IN UNIT [q]q IS NOT EQUIPPED

NPC [s]abc IS NOT EQUIPPED

UNIT [q]q MXR c NOT EQUIPPED

CONNECTION EXCEEDS REMAINING EC CAPACITY

BOTH CCN SIDES ARE OUT-OF-SERVICE

INACTIVE CCN SIDE IN-SERVICE AND NPC ON INACTIVE
SIDE IS OOS

ACTIVE CCN SIDE IS OUT-OF-SERVICE

CCNI s IS OUT-OF-SERVICE

TSI sft IS OUT-OF-SERVICE

CCB sf IS OUT-OF-SERVICE

CCI s IS OUT-OF-SERVICE

ETSI sqq IS OUT-OF-SERVICE

UNIT [q]q IS OUT-OF-SERVICE

UNIT [q]q FTMI d IS OUT-OF-SERVICE

UNIT [q]q FC sb IS OUT-OF-SERVICE

DSPI IN UNIT [q]q IS OUT-OF-SERVICE

NPC [s]abc IS OUT-OF-SERVICE

NPC [s]abc SIDE s IS OUT-OF-SERVICE
UNIT [q]q FLI k IS OUT-OF-SERVICE
UNIT [q]q FMT s IS OUT-OF-SERVICE
UNIT [q]q MXR c IS OUT-OF-SERVICE
UNIT [q]q MIU c IS OUT-OF-SERVICE
MAINTENANCE CONDITION PREVENTS COMPLETION OF
THIS COMMAND
SROF
ACTIVE CCN SIDE IS FAILED
CCNI s IS FAILED
TSI sft IS FAILED
CCB sf IS FAILED
CCI s IS FAILED
ETSI sqq IS FAILED
UNIT [q]q IS FAILED
UNIT [q]q FTMI d IS FAILED
UNIT [q]q FC sb IS FAILED
DSPI IN UNIT [q]q IS FAILED
NPC [s]abc IS FAILED
NPC [s]abc SIDE s IS FAILED
UNIT [q]q FLI k IS FAILED
UNIT [q]q FMT s IS FAILED
UNIT [q]q MXR c IS FAILED
UNIT [q]q MIU c IS FAILED
ACTIVE CCN SIDE IS PESTED

SUBRATE TERMINATED CROSS-CONNECTION

Explanation of Command

This command performs a subrate terminated multipoint cross-connection of MJU ssss.

The master leg of the multipoint circuit (MPTM) is specified by digroup abc, channel ddd, and customer number ff, and serves as the reference for addressing all MJUs and branches in the circuit.

The command inserts the Unassigned multiplexer channel (UMC) code towards both the upstream (MJU) and downstream (branch facility) directions of the cross-connected branch. If a digroup and channel of a customer to be connected to a branch is error corrected, termination takes place after error correction is performed. If no branch field appears in the command, it is denied since there is nothing to terminate.

MJU control legs are not terminated with this command. This includes the control leg of MJU 0001 that is connected to the multipoint master. MJU control legs can be terminated using the STST command. By not terminating control legs, the user can set up a circuit using a mixture of SCNT commands (to connect to terminated branches) and SCON commands (to connect to unterminated or active branches). Also, by not terminating the multipoint master and MJU control legs, transmission to and from the active (not terminated) customers is always preserved.

All channels [s]abcd and [t]ghij must be established before they can be cross-connected with SCNT.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.19321]

```
SCNT:[FRM xy][,SEQ ww]:[RATE rr,]MPTM [s]abcd[/ff],MJU ssss \
[,MA(tttt,u)],<branch>[,<branch>][,<branch>][,<branch>]!
```

Hierarchical

[I.19321]

SCNT:[FRM xy][,SEQ ww]:[RATE rr,]MPTM uvmnpddd[/ff],MJU ssss \
[,MA(tttt,u)],<branch>[,<branch>][,<branch>][,<branch>]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19321]

M hh:mm:ss xy,ww n[vv] SCNT RATE rr MPTM [s]abcdddd/ff \
MJU ssss 4 LN MSG:
[MA tttt,u]<branch>[<branch>][<branch>][<branch>
NEW MJU ssss MA {tttt,u|MPTM} s BR1 <data> s BR2 <data> s
BR3 <data> s BR4 <data> s \
COMPL

Hierarchical

[O.19321]

M hh:mm:ss xy,ww n[vv] SCNT RATE rr MPTM uvmnpddd/ff
MJU ssss 4 LN MSG:
[MA tttt,u]<branch>[<branch>][<branch>][<branch>
NEW MJU ssss MA {tttt,u|MPTM} s BR1 <data> s BR2 <data> s
BR3 <data> s BR4 <data> s \
COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19321.01]

M hh:mm:ss xy,ww n[vv] SCNT RATE rr MPTM [s]abcdddd/ff \
MJU ssss 3 LN MSG:
[MA tttt,u]<branch>[<branch>][<branch>][<branch>
<reason> DNY

Hierarchical

[O.19321.01]

M hh:mm:ss xy,ww n[vv] SCNT RATE rr MPTM uvmnpddd/ff \
MJU ssss 3 LN MSG:
[MA tttt,u]<branch>[<branch>][<branch>][<branch>]
<reason> DNY

Explanation of Parameters

RATE	Rate
rr	Transmission rate specification
24	2.4 kb/s
48	4.8 kb/s
96	9.6 kb/s
56	56 kb/s
MPTM	Multipoint Master
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number of the multipoint circuit master leg For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number of the multipoint circuit master leg
uv	Unit number
m	Module number
np	NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	FROM channel number of the multipoint circuit master leg
001-024	
001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)

	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
ff		Customer number of circuit under test, or of multipoint master leg
	01	(DSOA at 2.4, 4.8, 9.6, or 56 kb/s)
	01-20	(DSOB at 2.4 kb/s)
	01-10	(DSOB at 4.8 kb/s)
	01-05	(DSOB at 9.6 kb/s)
NEW		New
MJU		Multipoint junction unit
ssss		MJU number of cross-connected MJU (0001-9999)
This command cross-connects MJU ssss to MJU tttt.		
s		Termination state of the MJU control or branch leg
		Indicates whether either or both ends of the cross-connection are in the terminate and leave state. The "TO" direction is defined as the direction facing the MJU.
	R	RELEASED. Neither side is terminated
	F	FROM side is terminated
	T	TO side is terminated
	B	BOTH sides are terminated
BR1		Branch 1
BR2		Branch 2
BR3		Branch 3
BR4		Branch 4
MA		Master
tttt		MJU number (0001 through 9999)
u		Branch number (1 through 4)

MA, tttt, and u specify an MJU to MJU connection. MJU tttt branch u is connected to the control leg of MJU ssss.

branch External facility terminations for branches connected to MJU ssss.

The branch listed in the branch field is connected to the external facility termination, and is left in the terminate and leave state in both directions of transmission. The NEW MJU fields list the resulting cross-connection and terminate and leave status for all connections associated with MJU ssss. Note that the control leg and other branches not named in the SCNT command may be in any of the possible terminate and leave states as a result of previous cross-connect, change, or test access commands.

branch

BRi [t]ghijj[/II]

BR Branch

i Branch number of MJU ssss (1 through 4)

[t]ghijj/II External facility termination of added branch

[t]ghi The 3- or 4-digit nonhierarchical NPC number of termination connected to BRi.

For valid values see [s]abc above.

jij Channel number of termination connected to BRi.

For valid values see ddd above.

II Customer number of termination connected to BRi

For valid values see ff above.

data Branch connection data

[0]000000/00

Unassigned branch

MJU-nnnn Branch connected to MJU nnnn (0002 through 9999).

reason Reason for denial

reason

CHANNEL [s]abcddd IS A PARITY CHANNEL

CUSTOMER NUMBER MUST BE SPECIFIED FOR DS-0B

CHANNEL [s]abcddd

CHANNEL [s]abcddd WITH SUBRATE ERROR CORRECTION AND RATE 56 NOT ALLOWED

CHANNEL [s]abcddd SUBRATE MULTIPLEXER RATE
CANNOT SUPPORT CIRCUIT RATE

CIRCUIT [s]abcddd/ff IS CONNECTED BUT NOT AS A
MULTIPOINT MASTER LEG

CIRCUIT [s]abcddd/ff IS SPECIFIED MORE THAN ONCE
INVALID CHANNEL NUMBER FOR CHANNEL [s]abcddd

SPECIFIED RATE DOES NOT MATCH EXISTING CIRCUIT
RATE

MJU 1 MUST BE SPECIFIED AS THE MULTIPOINT MASTER
LEG MJU

CIRCUIT RATE MUST BE SPECIFIED

MA FIELD MUST BE SPECIFIED FOR A NEW MJU

MA FIELD MUST MATCH CIRCUIT

MA FIELD NOT ALLOWED WHEN MJU 1 IS SPECIFIED

MJU NAMED IN MJU AND MA FIELDS CANNOT BE THE
SAME

UPSTREAM BRANCH SPECIFIED IN MA FIELD IS
ASSIGNED

UPSTREAM BRANCH SPECIFIED IN MA FIELD DOES NOT
EXIST

CUSTOMER NUMBER ff IS OUT OF RANGE FOR
DS-0A CHANNEL [s]abcddd

CUSTOMER NUMBER ff IS OUT OF RANGE FOR
DS-0B CHANNEL [s]abcddd

CHANNEL [s]abcddd IS OUT OF RANGE

CHANNEL [s]abcddd/ff IS ASSIGNED

BR i IS ALREADY ASSIGNED TO ANOTHER
CHANNEL OR MJU

BR i IS SPECIFIED MORE THAN ONCE

CHANNEL [s]abcddd IS NOT ESTABLISHED TO
SUBRATE FEATURE

CIRCUIT IS UNDER TEST

CHANNEL [s]abcddd/ff IS UNDER TEST

NPC [X]abc IS NOT PROVISIONED AS DIGROUP-
A OF AN RT

DIGROUP-B ASSOCIATED WITH VIRTUAL
CHANNEL [s]abcd IS NOT PROVISIONED

DIGROUP-C ASSOCIATED WITH VIRTUAL
CHANNEL [s]abcd IS NOT PROVISIONED

DIGROUP-D ASSOCIATED WITH VIRTUAL
CHANNEL [s]abcd IS NOT PROVISIONED

NPC [s]abc IS IN LINE LOOPBACK STATE

Maintenance Conditions

UNIT [q]q IS NOT FACILITY TERMINATING TYPE

TSI sft IS NOT EQUIPPED

CCB sf IS NOT EQUIPPED

ETSI sqq IS NOT EQUIPPED

UNIT [q]q IS NOT EQUIPPED

UNIT [q]q FTMI d IS NOT EQUIPPED

UNIT [q]q FC sb IS NOT EQUIPPED

NPC [s]abc IS NOT EQUIPPED

UNIT [q]q MXR c NOT EQUIPPED

CCNI s IS OUT-OF-SERVICE

TSI sft IS OUT-OF-SERVICE

CCB sf IS OUT-OF-SERVICE

CCI s IS OUT-OF-SERVICE

ETSI sqq IS OUT-OF-SERVICE

UNIT [q]q IS OUT-OF-SERVICE

UNIT [q]q FTMI d IS OUT-OF-SERVICE

UNIT [q]q FC sb IS NOT EQUIPPED

DSPI IN UNIT [q]q IS OUT-OF-SERVICE

NPC [s]abc IS OUT-OF-SERVICE

NPC [s]abc SIDE s IS OUT-OF-SERVICE

UNIT [q]q FLI k IS OUT-OF-SERVICE

UNIT [q]q FMT s IS OUT-OF-SERVICE

UNIT [q]q MXR c IS OUT-OF-SERVICE

UNIT [q]q MIU c IS OUT-OF-SERVICE

MAINTENANCE CONDITION PREVENTS
COMPLETION OF THIS COMMAND

ACTIVE CCN SIDE IS PESTED

CCNI s IS FAILED

TSI sft IS FAILED

CCB sf IS FAILED

CCI s IS FAILED

ETSI sqq IS FAILED

UNIT [q]q IS FAILED

UNIT [q]q FTMI d IS FAILED

UNIT [q]q FC sb IS FAILED

DSPI IN UNIT [q]q IS FAILED

NPC [s]abc IS FAILED

NPC [s]abc SIDE s IS FAILED

UNIT [q]q FLI k IS FAILED

UNIT [q]q FMT s IS FAILED

UNIT [q]q MXR c IS FAILED

UNIT [q]q MIU c IS FAILED

SUBRATE TERMINATED CROSS-CONNECTION

Explanation of Command

This command performs a terminated cross-connection of the FROM and TO subrate customers in both directions. The customer number fields are optional for DS-0A terminations. If not specified, the default value is 01.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.19301]

SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM [s]abcddd[/ff], \
TO [t]ghijjj[/ll]!

Hierarchical

[I.19301]

SCNT:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM uvmnpddd[/ff], \
TO wxkqrjjj[/ll]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19301]

M hh:mm:ss xy,ww n[vv] SCNT RATE rr [s]abcddd/ff \
[t]ghijjj/ll COMPL

Hierarchical

[O.19301]

M hh:mm:ss xy,ww n[vv] SCNT RATE rr uvmnpddd/ff wxkqrjjj/ll \
COMPL

Denial Message 1.544 Mbit/s Termination

Nonhierarchical

[O.19301.01]

M hh:mm:ss xy,ww n[vv] SCNT RATE rr FROM [s]abcddd/ff \
TO [t]ghijjj/ll 2 LN MSG:
<reason> DNY

Hierarchical

[O.19301.01]

M hh:mm:ss xy,ww n[vv] SCNT RATE rr FROM uvmnpddd/ff \
TO wxkqrjjj/ll 2 LN MSG:
<reason> DNY

Explanation of Parameters

RATE	Rate
rr	Transmission rate specification
24	2.4 kb/s
48	4.8 kb/s
96	9.6 kb/s
56	56 kb/s
TPT	Two-Point
	Retained only for DACS/SRDC compatibility.
FROM	From
TO	To
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

ddd

FROM channel number

jjj

TO channel number

001-024 (Domestic)

001-047 Odd only (SLC 96[®] Carrier, Mode 3, DGA)

049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)

001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)

025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)

049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)

073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)

001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)

025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)

049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

ff

FROM customer number

ll

TO customer number

01 (DS0A at 2.4, 4.8, 9.6, or 56 kb/s)

01-20 (DS0B at 2.4 kb/s)

01-10 (DS0B at 4.8 kb/s)

01-05 (DS0B at 9.6 kb/s)

If [s]abcdddd or [t]ghijjj is an error-corrected channel, termination is performed after error correction is done. Also, this command does not allow the FROM and TO customers to be the same (that is, a looped connection), nor does it allow the use of a semi-colon in place of a comma after the TPT keyword. Both directions of the circuit are terminated with insertion of the Unassigned Multiplexer Channel (UMC) control code.

reason

Reason for denial

Input Errors

reason

CHANNEL [s]abcddd IS A PARITY CHANNEL
CUSTOMER NUMBER MUST BE SPECIFIED FOR DS0B
CHANNEL [s]abcddd
CHANNEL [s]abcddd WITH SR ERROR CORRECTION AND
RATE 56 NOT ALLOWED
CHANNEL [s]abcddd SR MULTIPLEXER RATE CANNOT
SUPPORT CIRCUIT RATE
CUSTOMER NUMBER RANGE NOT ALLOWED FOR DS0A
CHANNEL [s]abcddd
CHANNEL RANGE NOT ALLOWED FOR DSOB CHANNEL
[s]abcddd
FROM AND TO RANGES ARE NOT THE SAME SIZE
FROM AND TO RANGES PARTIALLY OVERLAP
INVALID CHANNEL NUMBER FOR CHANNEL [s]abcddd
CHANNEL [s]abcddd/ff IS SPECIFIED MORE THAN ONCE
CHANNEL [s]abcddd/ff IS CONNECTED BUT NOT AS A
MULTIPOINT MASTER LEG
SPECIFIED RATE DOES NOT MATCH EXISTING CIRCUIT
RATE
MJU 1 MUST BE SPECIFIED AS THE MULTIPOINT MASTER
LEG MJU
CIRCUIT RATE MUST BE SPECIFIED
MA FIELD MUST BE SPECIFIED FOR A NEW MJU
MA FIELD MUST MATCH CIRCUIT
UPSTREAM BRANCH SPECIFIED IN MA FIELD IS
ASSIGNED
UPSTREAM BRANCH SPECIFIED IN MA FIELD DOES NOT
EXIST
BR i IS SPECIFIED MORE THAN ONCE
MA FIELD NOT ALLOWED WHEN MJU 1 IS SPECIFIED
MJU NAMES IN MJU AND MA FIELDS CANNOT BE THE
SAME
SCNT CANNOT BE SPECIFIED FOR A LOOPED CIRCUIT
CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0A
CHANNEL [s]abcddd

CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0B
CHANNEL [s]abcddd

CHANNEL [s]abcddd IS OUT OF RANGE

[s]abcddd-ff IS AN INVALID RANGE OF CHANNELS

SAAS Status, already assigned

CIRCUIT [s]abcddd/ff IS ASSIGNED

BR i IS ALREADY ASSIGNED TO ANOTHER CHANNEL OR
MJU

MJU ssss ALREADY EXISTS IN THE CIRCUIT

CHANNEL [s]abcddd IS NOT ESTABLISHED TO SR FEATURE

CIRCUIT [s]abcddd/ff IS UNDER TEST

NPC [s]abc IS NOT PROVISIONED AS DIGROUP-A OF AN RT
THE NPC ASSOCIATED WITH VIRTUAL CHANNEL [s]abcddd
IS NOT PROVISIONED

NPC [s]abc IS IN LINE LOOPBACK STATE

CIRCUIT IS UNDER TEST

Maintenance Conditions

reason

UNIT [q]q IS NOT FACILITY TERMINATING TYPE

NO DSPU IS EQUIPPED

NO SRM TYPE NPC IS EQUIPPED

NO MJU TYPE NPC IS EQUIPPED

TSI sft IS NOT EQUIPPED

CCB sf IS NOT EQUIPPED

ETSI sqq IS NOT EQUIPPED

UNIT [q]q IS NOT EQUIPPED

UNIT [q]q FTMI d IS NOT EQUIPPED

UNIT [q]q FC s IS NOT EQUIPPED

NPC [s]abc IS NOT EQUIPPED

UNIT [q]q MXR c NOT EQUIPPED

CONNECTION EXCEEDS REMAINING EC CAPACITY

SNIS Status, not in-service

BOTH CCN SIDES ARE OUT-OF-SERVICE

INACTIVE CCN SIDE IN-SERVICE AND NPC ON INACTIVE
SIDE IS OOS

ACTIVE CCN SIDE IS OUT-OF-SERVICE

CCNI s IS OUT-OF-SERVICE

TSI sft IS OUT-OF-SERVICE

CCB sf IS OUT-OF-SERVICE

CCI s IS OUT-OF-SERVICE

ETSI sqq IS OUT-OF-SERVICE

UNIT [q]q IS OUT-OF-SERVICE

UNIT [q]q FTMI d IS OUT-OF-SERVICE

UNIT [q]q FC sb IS OUT-OF-SERVICE

DSPI IN UNIT [q]q IS OUT-OF-SERVICE

NPC [s]abc IS OUT-OF-SERVICE

NPC [s]abc SIDE s IS OUT-OF-SERVICE

UNIT [q]q FLI k IS OUT-OF-SERVICE

UNIT [q]q FMT s IS OUT-OF-SERVICE

UNIT [q]q MXR c IS OUT-OF-SERVICE

UNIT [q]q MIU c IS OUT-OF-SERVICE

ACTIVE CCN SIDE IS PESTED

MAINTENANCE CONDITION PREVENTS COMPLETION OF
THIS COMMAND

ACTIVE CCN SIDE IS FAILED

CCNI s IS FAILED

TSI sft IS FAILED

CCB sf IS FAILED

CCI s IS FAILED

ETSI sqq IS FAILED

UNIT [q]q IS FAILED

UNIT [q]q FTMI d IS FAILED

UNIT [q]q FC sb IS FAILED

DSPI IN UNIT [q]q IS FAILED

NPC [s]abc IS FAILED

NPC [s]abc SIDE s IS FAILED

UNIT [q]q FLI k IS FAILED

UNIT [q]q FMT s IS FAILED

UNIT [q]q MXR c IS FAILED

UNIT [q]q MIU c IS FAILED

SUBRATE CROSS-CONNECTION

Explanation of Command

This command cross-connects the FROM and TO customers in both directions.
This command also extends the format of I.19201 to support ranges of two-point,
two-way cross-connections.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.19211]

For a DS0A Channel

```
SCON:[FRM xy][,SEQ ww]:RATE rr,[TPT,]FROM [s]abcd-dd-eee[/01], \  
TO [t]ghijjj-kkk[/01]!
```

For a DS0B Channel

```
SCON:[FRM xy][,SEQ ww]:RATE rr,[TPT,]FROM [s]abcd-dd/ff-mm, \  
TO [t]ghijjj/ll-nn!
```

Hierarchical

[I.19211]

For a DS0A Channel

```
SCON:[FRM xy][,SEQ ww]:RATE rr,[TPT,]FROM uvmnpddd-eee[/01], \  
TO wxkqrjjj-kkk[/01]!
```

For a DS0B Channel

```
SCON:[FRM xy][,SEQ ww]:RATE rr,[TPT,]FROM uvmnpddd/ff-mm, \  
TO wxkqrjjj/ll-nn!
```

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

USAGE: For range connections of DS0A channels

[O.19211]

M hh:mm:ss xy,ww n[vv] SCON RATE rr [s]abcddd-eee/01 \
[t]ghijjj-kkk/01 COMPL

USAGE: For range connections of subrate customer numbers

[O.19211]

M hh:mm:ss xy,ww n[vv] SCON RATE rr [s]abcddd-eee/ff-mm \
[t]ghijjj-kkk/ll-nn COMPL

Hierarchical

USAGE: For range connections of DS0A channels

[O.19211]

M hh:mm:ss xy,ww n[vv] SCON RATE rr uvmnpddd-eee/01 \
wxkqrjjj-kkk/01 COMPL

USAGE: For range connections of subrate customer numbers

[O.19211]

M hh:mm:ss xy,ww n[vv] SCON RATE rr uvmnpddd-eee/ff-mm \
wxkqrjjj-kkk/ll-nn COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

USAGE: For range connections of DS0A channels

[O.19211.01]

M hh:mm:ss xy,ww n[vv] SCON RATE rr FROM [s]abcddd-eee/01 \
3 LN MSG:
TO [t]ghijjj-kkk/01 ppp/pp,qqq/qq
<reason> DNY

USAGE: For range connections of subrate customer numbers

[O.19211.01]

M hh:mm:ss xy,ww n[vv] SCON RATE rr FROM [s]abcd-dd-eee/ff-mm \\
3 LN MSG:
TO [t]ghijjj-kkk/ll-nn ppp/pp,qqq/qq
<reason> DNY

Hierarchical

USAGE: For range connections of DS0A channels

[O.19211.01]

M hh:mm:ss xy,ww n[vv] SCON RATE rr FROM uvmpddd-eee/01 \\
3 LN MSG:
TO wxkqrjjj-kkk/01 ppp/pp,qqq/qq
<reason> DNY

USAGE: For range connections of subrate customer numbers

[O.19211.01]

M hh:mm:ss xy,ww n[vv] SCON RATE rr FROM uvmpddd-eee/ff-mm \\
3 LN MSG:
TO wxkqrjjj-kkk/ll-nn ppp/pp,qqq/qq
<reason> DNY

Explanation of Parameters

[s]abc The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi The 3- or 4-digit nonhierarchical TO NPC number
For a listing of the nonhierarchical numbering scheme, refer to
Chapter 2, "NPC Numbering and XYZ Parameters."

1.544 Mbit/s Termination

uvmpnp Hierarchical FROM NPC number

wxkqr Hierarchical TO NPC number

uv,wx Unit number

m,k Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer
to Chapter 2, "NPC Numbering and XYZ Parameters."

ddd FROM channel number

eee FROM channel number for end of range specified

jjj	TO channel number
kkk	TO channel number for end of range specified
001-024	
001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
ff	FROM customer number
mm	FROM customer number for end of range specified
ll	TO customer number
nn	TO customer number for end of range specified
01	(DS0A at 2.4, 4.8, 9.6, or 56 kb/s)
01-20	(DS0B at 2.4 kb/s)
01-10	(DS0B at 4.8 kb/s)
01-05	(DS0B at 9.6 kb/s)
RATE	Rate
rr	Transmission rate specification
24	2.4 kb/s
48	4.8 kb/s
96	9.6 kb/s
56	56 kb/s

The FROM and TO fields specify the customers to cross-connect. The FROM and TO keywords have no significance to DACS II and either customer of the

circuit may be designated FROM or TO. To loop a range of customers back to themselves, specify the FROM and TO fields identically. There are two ways to specify ranges, as evidenced by the two formats that may follow the FROM and TO keywords:

- Range specified in channel field: [s]abcd-dd-eee[/01]

Ranges must be specified in the channel field when a range of DS0A customers is desired. However, a range is allowed in the channel field only if the channels are DS0A channels. The optional field must, if present, be 01. As an example, [0]001002-010/01 specifies a range of nine DS0A customers on NPC [0]001. [0]001002-010 does the same thing without the optional customer number field.

- Range specified in customer number field: [s]abcd-dd/ff-mm

Ranges must be specified in the customer number field when a range of DS0B customers is desired. If NPC [0]020, channel 004 was established as a 10-customer DS0B channel, then [0]020004/01-09 specifies a range of nine customers on NPC [0]020 channel 004.

Specifying a range in both the channel and customer number field for the same customer specification, such as [0]001001-009/01-09, will be denied.

RATE	Rate
rr	Transmission rate specification
	24 2.4 kb/s
	48 4.8 kb/s
	96 9.6 kb/s
	56 56 kb/s
ppp/pp	FROM termination involved in the denial where:
	ppp FROM channel number
	pp FROM customer number
qqq/qq	TO termination involved in the denial where:
	qqq TO channel number
	qq TO customer number
reason	Reason for denial
	Input Errors
	reason
	CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0A CHANNEL [s]abcd-dd

CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0B
CHANNEL [s]abcddd
CHANNEL [s]abcddd IS OUT OF RANGE
[s]abcddd-eee IS AN INVALID RANGE OF CHANNELS
CIRCUIT [s]abcddd/ff IS ALREADY ASSIGNED
CHANNEL [s]abcddd IS NOT ESTABLISHED TO SR FEATURE
CIRCUIT [s]abcddd/ff IS UNDER TEST
NPC [s]abc IS NOT PROVISIONED AS DIGROUP-A OF AN RT
DIGROUP-B ASSOCIATED WITH VIRTUAL CHANNEL
[s]abcddd IS NOT PROVISIONED
DIGROUP-C ASSOCIATED WITH VIRTUAL CHANNEL
[s]abcddd IS NOT PROVISIONED
DIGROUP-D ASSOCIATED WITH VIRTUAL CHANNEL
[s]abcddd IS NOT PROVISIONED
NPC [s]abc IS IN LINE LOOPBACK STATE
Maintenance Conditions
reason
explanation of error condition code
NO DSPU IS EQUIPPED
NO SRM TYPE NPC IS EQUIPPED
NO MJU TYPE NPC IS EQUIPPED
TSI sft IS NOT EQUIPPED
CCB sf IS NOT EQUIPPED
ETSI sqq IS NOT EQUIPPED
NPC [s]abc IS NOT EQUIPPED
UNIT [q]q MXR c NOT EQUIPPED
UNIT [q]q IS NOT EQUIPPED
UNIT [q]q FTMI d IS NOT EQUIPPED{OUT-OF-
SERVICE|FAILED}
UNIT [q]q FC sb IS NOT EQUIPPED
UNIT [q]q IS NOT FACILITY TERMINATING TYPE
CONNECTION EXCEEDS REMAINING EC CAPACITY
SNIS Status,not in-service

BOTH CCN SIDES ARE OUT-OF-SERVICE
INACTIVE CCN SIDE IN-SERVICE AND NPC ON INACTIVE
SIDE IS OOS
ACTIVE CCN SIDE IS OUT-OF-SERVICE
CCNI s IS OUT-OF-SERVICE
TSI sft IS OUT-OF-SERVICE
CCB sf IS OUT-OF-SERVICE
CCI s IS OUT-OF-SERVICE
ETSI sqq IS OUT-OF-SERVICE
DSPI IN UNIT [q]q IS OUT-OF-SERVICE
NPC [s]abc IS OUT-OF-SERVICE
NPC [s]abc SIDE s IS OUT-OF-SERVICE
UNIT [q]q IS OUT-OF-SERVICE
UNIT [q]q FTMI d IS OUT-OF-SERVICE
UNIT [q]q FC sb IS OUT-OF-SERVICE
DSPI IN UNIT [q]q IS OUT-OF-SERVICE
UNIT [q]q FLI k IS OUT-OF-SERVICE
UNIT [q]q FMT s IS OUT-OF-SERVICE
UNIT [q]q MXR c IS OUT-OF-SERVICE
UNIT [q]q MIU c IS OUT-OF-SERVICE
MAINTENANCE CONDITION PREVENTS COMPLETION OF
THIS COMMAND
ACTIVE CCN SIDE IS FAILED
ACTIVE CCN SIDE IS PESTED
CCNI s IS FAILED
TSI sft IS FAILED
CCB sf IS FAILED
CCI s IS FAILED
ETSI sqq IS FAILED
DSPI IN UNIT [q]q IS FAILED
NPC [s]abc IS FAILED
NPC [s]abc SIDE s IS FAILED

UNIT [q]q FLI k IS FAILED

UNIT [q]q FMT s IS FAILED

UNIT [q]q MXR c IS FAILED

UNIT [q]q MIU c IS FAILED

UNIT [q]q IS FAILED

UNIT [q]q FTMI d IS FAILED

UNIT [q]q FC sb IS FAILED

DSPI IN UNIT [q]q IS FAILED

SUBRATE CROSS-CONNECTION

Explanation of Command

This command performs a subrate multipoint cross-connection of the specified MJU. The master leg of the multipoint circuit is specified by digroup and channel and customer number, and serves as the reference for addressing all multipoint junction units and branches in the circuit.

All channels ddd and jjj must be established before they can be cross-connected by this command.

Multipoint circuits are built incrementally, one command at a time. Many commands can address the same multipoint circuit. Indeed, many commands can address the same MJU of a circuit. A command addressing an MJU, say MJU 0005, might connect customers to branches 1 and 2. Another command might also address MJU 0005 and connect a customer to branch 3. This command results in no service interruption to branches 1 and 2 that are already connected.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.19221]

```
SCON:[FRM xy][,SEQ ww]:[RATE rr,]MPTM [s]abcddd[/ff],MJU ssss \
[,MA(tttt,u)] [,<branch>][,<branch>][,<branch>][,<branch>]!
```

Hierarchical

[I.19221]

```
SCON:[FRM xy][,SEQ ww]:[RATE rr,]MPTM uvmnpddd[/ff],MJU ssss \
[,MA(tttt,u)][,<branch>][,<branch>][,<branch>][,<branch>]!
```

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.19221]

M hh:mm:ss xy,ww n[vv] SCON RATE rr MPTM [s]abcddd/ff \
MJU ssss e LN MSG:
[MA tttt,u][<branch>][<branch>][<branch>][<branch>]
NEW MJU ssss MA {tttt,u|MPTM} s BR1 <data> s BR2 <data> s
BR3 <data> s BR4 <data> s
COMPL

Hierarchical

[O.19221]

M hh:mm:ss xy,ww n[vv] SCON RATE rr MPTM uvmnpddd/ff \
MJU ssss e LN MSG:
[MA tttt,u][<branch>][<branch>][<branch>][<branch>] \
NEW MJU ssss MA {tttt,u|MPTM} s BR1 <data> s BR2 <data> s

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19221.01]

M hh:mm:ss xy,ww n[vv] SCON[RATE rr] MPTM [s]abcddd/ff \
MJU ssss e LN MSG:
[MA tttt,u][<branch>][<branch>][<branch>][<branch>] \
<reason> DNY

Hierarchical

[O.19221.01]

M hh:mm:ss xy,ww n[vv] SCON[RATE rr] MPTM uvmnpddd/ff \
MJU ssss e LN MSG:
[MA tttt,u][<branch>][<branch>][<branch>][<branch>] \
<reason> DNY

**Explanation of
Parameters**

RATE	Rate
rr	Transmission rate specification
24	2.4 kb/s

48	4.8 kb/s
96	9.6 kb/s
56	56 kb/s

rr determines the transmission rate of the customers' cross-connection, and thus, the rate at which the MJU operates. All MJUs in the same circuit must operate at the same rate. The "RATE rr" field must be specified in the first command addressing MJU 0001. "RATE rr" need not be re-specified after it has once been set for MJU 0001. Hence, it is shown as optional. If "RATE rr" is omitted from subsequent commands, any additional MJUs connected operate at the rate specified for MJU 0001. If "RATE rr" appears in subsequent commands, it is checked against the rate specified for MJU 0001. If the rates are not the same, the command is denied.

In addition to assuring that all MJUs in a circuit operate at the same rate, there is an additional check performed on the rate. In circuits that connect customers in DS0B channels, the rate of the MJUs cannot exceed the maximum customer rate of the subrate multiplexers associated with those DS0B channels. The allowed customer numbers used in either the master leg or branch connections depend on the rate of the circuit and the type of DS0B channel associated with each termination, as shown below:

For DS0A channels, rr is checked against the type of error correction previously specified in the SECH command for that channel. Similarly, if the channel has subrate error correction, a circuit rate of 56 is not allowed.

Circuit Rate rr	DS0B Type		
	20-channel (max. customer rate 2.4 kb/s)	10-channel (max. customer rate 4.8 kb/s)	5-channel (max. customer rate 9.6 kb/s)
RATE 24	Cust. #s 1-20 Allowed	Cust. #s 1-10 Allowed	Cust. #s 1-5 Allowed
RATE 48	Denied	Cust. #s 1-10 Allowed	Cust. #s 1-5 Allowed
RATE 96	Denied	Denied	Cust. #s 1-5 Allowed

		DS0B Type		
		20-channel (max. customer rate 2.4 kb/s)	10-channel (max. customer rate 4.8 kb/s)	5-channel (max. customer rate 9.6 kb/s)
	Circuit Rate rr			
	RATE 56	Denied	Denied	Denied
MPTM	Multipoint master			
[s]abcd[ff]	Termination number			
	There is exactly one multipoint master for a multipoint circuit. The multipoint master termination number is connected to the control leg of MJU 1. MJU 1 must be the first MJU connected in any circuit. This field uniquely identifies the circuit. The data sent by this multipoint master is broadcast to all branches on the circuit. The data sent to the multipoint master is a summation of data sent by the branches. Because the multipoint master is used to uniquely identify the circuit as a whole, it is required for all SCON commands, regardless of which MJU the command addresses (MJU ssss in the message format). The first time a particular termination number is named in a command as a multipoint master, "MJU ssss" must be specified as "MJU 0001". The system connects the termination to the control leg of MJU 0001. Subsequently, the multipoint master is included in commands addressing an MJU only to identify the circuit to which the MJU belongs.			
[s]abc	The 3- or 4-digit nonhierarchical NPC number of the multipoint circuit master leg For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."			
uvmnp	Hierarchical NPC number of the multipoint circuit master leg uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."			
MJU	Multipoint junction unit			
ssss	MJU number addressed by this command (0001 through 9999)			

If the MJU being addressed by the SCON command is 0001 (MJU ssss is MJU 0001) then the field "MA(tttt,u)" must not appear in the command (see the explanation of MA(tttt,u) below).

As previously discussed, it must always be connected to the multipoint master termination. The first time an MJU other than 0001 appears in a command, the command must also contain the MJU connection field.

No MJU can be created with an unconnected control leg.

MA

Master

tttt

MJU number (1 through 9999)

u

Branch number (1 through 4)

The master is also known as the control leg. Every MJU has a control leg. The control leg of MJU 0001 must be connected to the multipoint master. The control leg of an MJU other than 0001 must be connected to a branch of another MJU to form an MJU-to-MJU connection. The field MA(tttt,u) specifies the MJU-to-MJU connection. The control leg of MJU ssss is connected to branch u of MJU tttt.

The first command addressing an MJU in the circuit must address MJU 1. Otherwise, a new MJU of any number can be connected to any existing MJU in the circuit, assuming the new MJU's number is not already used in the circuit and the old MJU has an unconnected branch available to connect to.

The MJU connection field "MA(tttt,u)" specifies where to connect the control leg of MJU ssss. If MJU ssss is addressed in a subsequent SCON command, after a connection for its control leg has been specified, the MJU connection field need not be re-specified. Hence, "MA(tttt,u)" appears as an optional field in the message format. If it is respecified, it is checked against the actual MJU-to-MJU connection.

It should also be noted that tttt cannot equal ssss. Also, branch u of MJU tttt must not have been previously connected. If it were, it could not be connected to the control leg of MJU ssss.

branch

Branch and termination number

branchtermination number

BRI[t]ghijj[/II]

The termination is connected to branch i of MJU ssss.

One branch field is listed for each branch specified in the input command. Since some multipoint SCON input commands do not list any branch data, this line may be absent.

The branch and termination number can appear from zero to four times in a subrate cross-connect command, connecting up to four different customers to the four branches of MJU ssss. The branch fields for the four branches of MJU ssss can appear in any order and any or all branch fields can be omitted. Nothing is connected to branch fields that are omitted from (do not appear in) the command.

Branch fields might be omitted for several reasons. If branches 1 and 2 of MJU ssss were already connected, and the user wished to connect a customer to branch 3 of MJU ssss, then only BR3 and its associated termination number would appear in the command.

Branches 1 and 2 would not appear because they are already connected and branch 4 would not appear because nothing is to be connected to it. Branch 4 might be saved to provide an MJU-to-MJU connection at a later time.

[t]ghi

The 3- or 4-digit nonhierarchical NPC number of termination connected to BR_i with the same valid values as the master leg

jjj

Channel number of termination connected to BR_i with the same valid values as the master leg

ll

Customer number of termination connected to BR_i with the same valid values as the master leg

If the customer is a DSOA customer, ll is optional and if present, must be 01.

ff

Customer number of circuit under test, or of multipoint master leg

01 (DSOA at 2.4, 4.8, 9.6, or 56 kb/s)

01-20 (DSOB at 2.4 kb/s)

01-10 (DSOB at 4.8 kb/s)

01-05 (DSOB at 9.6 kb/s)

BR

Branch

i

Branch number (1 through 4)

BR_i refers to branch i of MJU ssss, the MJU addressed by this command.

Red Circuit and Customer Control Marking

SRDC cross-connections are marked automatically as red circuits. This results in the need to specify the INCL keyword in the RMV,NPC command whenever a facility terminating NPC carrying SRDC circuits is removed. Also, the SCON verb does not affect the customer control marking of a channel. The CUS marking is disabled while the channel is established to the Subrate feature, but is returned once the channel is disestablished.

Secondary Channel Capability

This command supports secondary channel capability.

Circuits that use DDS secondary channel capability can be assigned to any DS0B channel, provided that the channel's facility terminating NPC was provisioned without zero suppression. If the facility terminating NPC has zero suppression, the user must ensure that secondary channel services are only assigned to the following customers of the given DS0B type:

DS0B nn	Customer Numbers Compatible with Secondary Channel
DS0B 20	2, 3, 6, 8, 11, 12, 13, 18
DS0B 10	2, 3, 6, 8
DS0B 5	2, 3

ddd

Channel number of the multipoint circuit master leg

001-024

001-047 Odd only (SLC 96[®] Carrier, Mode 3, DGA)

049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)

001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)

025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)

049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)

073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)

001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)

025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)

049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
	01	(DS0A at 2.4, 4.8, 9.6, or 56 kb/s)
	01-20	(DS0B at 2.4 kb/s)
	01-10	(DS0B at 4.8 kb/s)
	01-05	(DS0B at 9.6 kb/s)
	wxkqr	Hierarchical NPC number of termination connected to BRi with the same valid values as the master leg.
data	Data	
		The data fields refer to the connection data associated with the four branch legs of MJU ssss. Each branch data field can take one of three forms, depending on whether the branch is unassigned, cross-connected to an external facility termination, or cross-connected to a cascaded MJU control leg.
	000000/00	For unassigned branches
	ghijjj/ll	For branches connected to external facility terminations
	MJU nnnn	For branches connected to another MJU with number nnnn (0002 through 9999)
s	Termination state of the MJU control or branch leg	
		Variable s contained in the MA and branch data indicates the terminate and leave status of each MJU connection. Branches or MJUs connected by the SCON command are automatically assigned the terminate and leave released status. The TO direction is defined as the direction facing the MJU.
	R	RELEASED; neither side is terminated
	F	FROM side is terminated
	T	TO side is terminated
	B	BOTH sides are terminated
reason	Reason for denial	
	Reason	
		CHANNEL [s]abcddd IS A PARITY CHANNEL
		CUSTOMER NUMBER MUST BE SPECIFIED FOR DS0B
		CHANNEL [s]abcddd

CHANNEL [s]abcddd WITH SR ERROR CORRECTION AND
RATE 56

NOT ALLOWED

CHANNEL [s]abcddd SR MULTIPLEXER RATE CANNOT
SUPPORT

CIRCUIT RATE

CUSTOMER NUMBER RANGE NOT ALLOWED FOR DS0A
CHANNEL [s]abcddd

CHANNEL RANGE NOT ALLOWED FOR DS-OB CHANNEL
[s]abcddd

FROM AND TO RANGES ARE NOT THE SAME SIZE

FROM AND TO RANGES PARTIALLY OVERLAP

INVALID CHANNEL NUMBER FOR CHANNEL [s]abcddd

SPECIFIED RATE DOES NOT MATCH EXISTING CIRCUIT
RATE

MJU 1 MUST BE SPECIFIED AS THE MULTIPOINT MASTER
LEG MJU

CIRCUIT RATE MUST BE SPECIFIED

CHANNEL [s]abcddd/ff IS CONNECTED BUT NOT AS A
MULTIPOINT MASTER LEG

MA FIELD MUST BE SPECIFIED FOR A NEW MJU

MA FIELD MUST MATCH CIRCUIT

UPSTREAM BRANCH SPECIFIED IN MA FIELD IS
ASSIGNED

UPSTREAM BRANCH SPECIFIED IN MA FIELD DOES NOT
EXIST

CIRCUIT [s]abcddd/ff IS SPECIFIED MORE THAN ONCE

BR i IS SPECIFIED MORE THAN ONCE

MA FIELD NOT ALLOWED WHEN MJU 1 IS SPECIFIED

MJU NAMES IN MJU AND MA FIELDS CANNOT BE THE
SAME

CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0A
CHANNEL [s]abcddd

CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0B
CHANNEL [s]abcddd

CHANNEL [s]abcddd IS OUT OF RANGE
CHANNEL [s]abcddd/ff IS ASSIGNED
BR i IS ALREADY ASSIGNED TO ANOTHER CHANNEL OR
MJU
MJU ssss ALREADY EXISTS IN THE CIRCUIT
CHANNEL [s]abcddd IS NOT ESTABLISHED TO SR FEATURE
CIRCUIT [s]abcddd/ff IS UNDER TEST
NPC [s]abc IS NOT PROVISIONED AS DIGROUP-A OF AN RT
DIGROUP-B ASSOCIATED WITH VIRTUAL CHANNEL
[s]abcddd IS
NOT PROVISIONED
DIGROUP-C ASSOCIATED WITH VIRTUAL CHANNEL
[s]abcddd IS
NOT PROVISIONED
DIGROUP-D ASSOCIATED WITH VIRTUAL CHANNEL
[s]abcddd IS
NOT PROVISIONED
NPC [s]abc IS IN LINE LOOPBACK STATE
CIRCUIT IS UNDER TEST
UNIT [q]q IS NOT FACILITY TERMINATING TYPE
NO DSPU IS EQUIPPED
NO SRM TYPE NPC IS EQUIPPED
NO MJU TYPE NPC IS EQUIPPED
CCNI s IS NOT EQUIPPED
TSI sft IS NOT EQUIPPED
CCB sf IS NOT EQUIPPED
CCI s IS NOT EQUIPPED
ETSI sqq IS NOT EQUIPPED
UNIT [q]q IS NOT EQUIPPED
UNIT [q]q FTMI d IS NOT EQUIPPED
UNIT [q]q FC sb IS NOT EQUIPPED
DSPI IN UNIT [q]q IS NOT EQUIPPED
NPC [s]abc IS NOT EQUIPPED

NPC [s]abc SIDE s IS NOT EQUIPPED
NPC [s]abc IS NOT EQUIPPED
UNIT [q]q MXR c NOT EQUIPPED
CONNECTION EXCEEDS REMAINING MJU CAPACITY
BOTH CCN SIDES ARE OUT-OF-SERVICE
ACTIVE CCN SIDE IS OUT-OF-SERVICE
ACTIVE CCN SIDE IS PESTED
INACTIVE CCN SIDE IN-SERVICE AND NPC [s]abc ON
INACTIVE
SIDE IS OOS
CCNI s IS OUT-OF-SERVICE
TSI sft IS OUT-OF-SERVICE
CCB sf IS OUT-OF-SERVICE
CCI s IS OUT-OF-SERVICE
ETSI sqq IS OUT-OF-SERVICE
UNIT [q]q IS OUT-OF-SERVICE
UNIT [q]q FTMI d IS OUT-OF-SERVICE
UNIT [q]q FC sb IS OUT-OF-SERVICE
DSPI IN UNIT [q]q IS OUT-OF-SERVICE
NPC [s]abc IS OUT-OF-SERVICE
NPC [s]abc SIDE s IS OUT-OF-SERVICE
UNIT [q]q FLI k IS FAILED
UNIT [q]q FMT s IS FAILED
UNIT [q]q MXR c IS FAILED
UNIT [q]q MIU c IS FAILED
MAINTENANCE CONDITION PREVENTS COMPLETION OF
THIS COMMAND
ACTIVE CCN SIDE IS FAILED
CCNI s IS FAILED
TSI sft IS FAILED
CCB sb IS FAILED
CCI s IS FAILED

ETSI sqq IS FAILED

UNIT [q]q IS FAILED

UNIT [q]q FTMI d IS FAILED

UNIT [q]q FC sb IS FAILED

DSPI IN UNIT [q]q IS FAILED

NPC [s]abc IS FAILED

NPC [s]abc SIDE s IS FAILED

UNIT [q]q FLI k IS FAILED

UNIT [q]q FMT s IS FAILED

UNIT [q]q MXR c IS FAILED

NIT [q]q MIU c IS FAILED

mmmm Explanation

IDNV Input, data not valid

explanation of error condition code

SUBRATE CROSS-CONNECTION

Explanation of Command

This command cross-connects the FROM and TO customers defined by the ff and ll fields. The customer number fields are optional for DS0A terminations; if not specified, the default value is 01.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.19201]

SCON:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM [s]abcddd[/ff], \
TO [t]ghijjj[/ll]!

Hierarchical

[I.19201]

SCON:[FRM xy][,SEQ ww]:RATE rr[,TPT],FROM uvmnpddd[/ff], \
TO wxkqrjjj[/ll]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19201]

M hh:mm:ss xy,ww n[vv] SCON RATE rr,TPT;[s]abcddd/ff, \
[t]ghijjj/ll COMPL

Hierarchical

[O.19201]

M hh:mm:ss xy,ww n[vv] SCON RATE rr,TPT;uvmnpddd/ff, \
wxkqrjjj/ll COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19201.01]

M hh:mm:ss xy,ww n[vv] SCON RATE rr,TPT;[s]abcddd/ff, \\
[t]ghijjj/ll 2 LN MSG:
<reason> DNY

Hierarchical

[O.19201.01]

M hh:mm:ss xy,ww n[vv] SCON RATE rr,TPT;uvmnpddd/ff, \\
wxkqrjjj/ll 2 LN MSG:
<reason> DNY

Explanation of Parameters

1.544 Mbit/s Termination

TPT	Two-Point (optional) Retained only for DACS/SRDC compatibility. The command format above shows that RATE rr and the optional TPT are followed by a comma (.). To preserve DACS/SRDC compatibility, this comma may also be replaced with a semicolon (;).
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	FROM channel number
jjj	TO channel number

	001-024	
	001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
ff	FROM customer number	
ll	TO customer number	
	01	(DS0A at 2.4, 4.8, 9.6, or 56 kb/s)
	01-20	(DS0B at 2.4 kb/s)
	01-10	(DS0B at 4.8 kb/s)
	01-05	(DS0B at 9.6 kb/s)
RATE	Rate	
rr	Transmission rate specification	
	24	2.4 kb/s
	48	4.8 kb/s
	96	9.6 kb/s
	56	56 kb/s

The channels abcd and ghij must be established using a subrate establish command before they can be cross-connected. The RATE cannot exceed the maximum customer rate of the subrate multiplexers associated with those DS0B channels. The allowed customer numbers (ff and ll) depend on the rate of the circuit and the type of DS0B channel associated with each termination, as shown below:

Circuit Rate rr	DS0B Type		
	20-channel (max. customer rate 2.4 kb/s)	10-channel (max. customer rate 4.8 kb/s)	5-channel (max. customer rate 9.6 kb/s)
RATE 24	Cust. #s 1-20 Allowed	Cust. #s 1-10 Allowed	Cust. #s 1-5 Allowed
RATE 48	Denied	Cust. #s 1-10 Allowed	Cust. #s 1-5 Allowed
RATE 96	Denied	Denied	Cust. #s 1-5 Allowed
RATE 56	Denied	Denied	Denied

The customer numbers ff and ll, are optional when the customer to be connected is in a DS0A signal. This is because there is only one customer in a DS0A signal. If specified, it must appear as 01. Also, for DS0A channels, the RATE is checked against the type of error correction previously specified in the command used to establish that channel. If the channel has subrate error correction, a circuit rate of 56 is not allowed.

The user must ensure that a circuit using the secondary channel capability is assigned only to a facility termination that is compatible with this capability. If the termination is a DS0A or if its associated facility NPC was grown without zero suppression, any assignment of the NEW termination is compatible with the secondary channel capability. If the termination is in a DS0B **and its associated facility NPC was grown with zero suppression, the user can only assign secondary channel services to a termination with the following customer numbers within the given DS0B type:**

DS0B Type	Allowed Customer Numbers
20-channel	2, 3, 6, 8, 11, 12, 13, and 18
10-channel	2, 3, 6, and 8
5-channel	2 and 3

The fields, FROM [s]abcd[ff] and TO [t]ghij[ll] specify the customers to cross-connect. FROM and TO have no significance to DACS II and either customer of

the circuit may be designated FROM or TO. To loop a customer back to itself, specify the FROM and TO fields identically.

Subrate cross-connections are marked automatically as red circuits. This results in the need to specify the INCL keyword in the command to remove an NPC whenever a facility terminating NPC carrying SRDC circuits is removed.

Also, the SCON verb does not affect the customer control marking of a channel. The CUS marking is disabled while the channel is established to the Subrate feature, but is returned once the channel is disestablished. The **RATE rr field indicates the customer rate of the circuit specified in the input command ff and ll define the customer numbers associated with the FROM and TO channel pair. These fields are optional in the input command for DS0A terminations. If the input command did not specify one or both of these numbers, the output value is 01.**

reason	Reason for denial
	CHANNEL [s]abctddd IS A PARITY CHANNEL
	CUSTOMER NUMBER MUST BE SPECIFIED FOR DS0B CHANNEL [s]abctddd
	CHANNEL [s]abctddd SR MULTIPLEXER RATE CANNOT SUPPORT CIRCUIT RATE
	CHANNEL [s]abctddd WITH SR ERROR CORRECTION AND RATE 56 NOT ALLOWED
	INVALID CHANNEL NUMBER FOR CHANNEL [s]abctddd
	CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0A CHANNEL [s]abctddd
	CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0B CHANNEL [s]abctddd
	CHANNEL [s]abctddd IS OUT OF RANGE
	CIRCUIT [s]abctddd/ff IS ASSIGNED
	CHANNEL [s]abctddd IS NOT ESTABLISHED TO THE SR FEATURE
	CIRCUIT [s]abctddd/ff IS UNDER TEST
	DIGROUP-B ASSOCIATED WITH VIRTUAL CHANNEL [s]abctddd IS NOT PROVISIONED
	DIGROUP-C ASSOCIATED WITH VIRTUAL CHANNEL [s]abctddd IS NOT PROVISIONED
	DIGROUP-D ASSOCIATED WITH VIRTUAL CHANNEL [s]abctddd IS NOT PROVISIONED

NPC [s]abc IS NOT PROVISIONED AS DIGROUP-A OF AN RT
NPC [s]abc IS IN LINE LOOPBACK STATE
NO DSPU IS EQUIPPED
NPC [s]abc IS NOT EQUIPPED
TSI sft IS NOT EQUIPPED
CCB sf IS NOT EQUIPPED
ETSI sqq IS NOT EQUIPPED
UNIT [q]q IS NOT FACILITY TERMINATING TYPE
CONNECTION EXCEEDS REMAINING EC CAPACITY
BOTH CCN SIDES ARE OUT-OF-SERVICE
NO SRM TYPE NPC IS EQUIPPED
NO MJU TYPE NPC IS EQUIPPED
INACTIVE CCN SIDE IN-SERVICE AND NPC ON INACTIVE
SIDE IS OOS
ACTIVE CCN SIDE IS OUT-OF-SERVICE
CCNI s IS OUT-OF-SERVICE
TSI sft IS OUT-OF-SERVICE
CCB sf IS OUT-OF-SERVICE
CCI s IS OUT-OF-SERVICE
ETSI sqq IS OUT-OF-SERVICE
DSPI IN UNIT [q]q IS OUT-OF-SERVICE
NPC [s]abc IS OUT-OF-SERVICE
NPC [s]abc SIDE s IS OUT-OF-SERVICE
MAINTENANCE CONDITION PREVENTS COMPLETION OF
THIS COMMAND
UNIT [q]q FLI k IS OUT-OF-SERVICE
UNIT [q]q FMT s IS OUT-OF-SERVICE
UNIT [q]q MXR c IS OUT-OF-SERVICE
UNIT [q]q MIU c IS OUT-OF-SERVICE
UNIT [q]q MXR c NOT EQUIPPED
UNIT [q]q FLI k IS FAILED
UNIT [q]q FMT s IS FAILED

UNIT [q]q MXR c IS FAILED
UNIT [q]q MIU c IS FAILED
ACTIVE CCN SIDE IS FAILED
CCNI s IS FAILED
CCI s IS FAILED
TSI sft IS FAILED
CCB sf IS FAILED
ETSI sqq IS FAILED
DSPI IN UNIT [q]q IS FAILED
NPC [s]abc IS FAILED
NPC [s]abc SIDE s IS FAILED
ACTIVE CCN SIDE IS PESTED

SUBRATE DISCONNECTION

Explanation of Command

This command provides deletion of MJUs and disconnection of customers in both directions. Customers must have been cross-connected (using the SCON or SCNT verbs) before they can be disconnected with SDIS. This command performs a cascaded MJU disconnection. The MJU ssss field identifies the place to begin the disconnection. MJU ssss as well as any MJUs cascaded from it are disconnected. A maximum of 21 MJUs can be disconnected in one command. Message Number I.19421 only disconnects customers from branches of MJUs.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.19431]

```
SDIS:[FRM xy][,SEQ ww]:[RATE rr,]MPTM [s]abcddd[/ff],MJU ssss \  
[,ALL]!
```

Hierarchical

[I.19431]

```
SDIS:[FRM xy][,SEQ ww]:[RATE rr,]MPTM uvmnpddd[/ff],MJU ssss \  
[,ALL]!
```

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19431]

```
M hh:mm:ss xy,ww n[vv] SDIS RATE rr MPTM [s]abcddd/ff \  
MJU ssss[ ALL] e LN MSG:  
OLD MJU ssss MA {tttt,u|MPTM } s BR1 <data> s BR2 <data> s  
BR3 <data> s BR4 <data> s  
<Two data lines for each additional disconnected OLD MJU (see \  
below)> EOM  
M hh:mm:ss xy,ww n[vv] SDIS RATE rr MPTM [s]abcddd/ff  
MJU ssss[ ALL] e LN MSG:
```

```
OLD MJU vvvv  MA wwwwww,x s  BR1 <data> s  BR2 <data> s  
                                     BR3 <data> s  BR4 <data> s  
NEW MJU tttt  MA {yyyy,z|MPTM } s  BR1 <data> s  BR2 <data> s  
                                     BR3 <data> s  BR4 <data> s \  
[OOS ]COMPL
```

Hierarchical

[O.19431]

```
M hh:mm:ss xy,ww n[vv] SDIS RATE rr MPTM uvmnpddd/ff \  
MJU ssss[ ALL]  e LN MSG:  
OLD MJU ssss  MA {tttt,u|MPTM } s  BR1 <data> s  BR2 <data> s  
                                     BR3 <data> s  BR4 <data> s  
  
<Two data lines for each additional disconnected OLD MJU (see \  
below)> EOM  
M hh:mm:ss xy,ww n[vv] SDIS RATE rr MPTM uvmnpddd/ff  
MJU ssss[ ALL]  e LN MSG:  
OLD MJU vvvv  MA wwwwww,x s  BR1 <data> s  BR2 <data> s  
                                     BR3 <data> s  BR4 <data> s  
NEW MJU tttt  MA {yyyy,z|MPTM } s  BR1 <data> s  BR2 <data> s  
                                     BR3 <data> s  BR4 <data> s \  
[OOS ]COMPL
```

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19431.01]

```
M hh:mm:ss xy,ww n[vv] SDIS[ RATE rr] MPTM [s]abcddd/ff \  
MJU ssss[ ALL]  e LN MSG:  
[OLD MJU ssss  MA {tttt,u|MPTM } s  BR1 <data> s  BR2 <data> s]  
[                                     BR3 <data> s  BR4 <data> s]  
<reason> DNY
```

Hierarchical

[O.19431.01]

```
M hh:mm:ss xy,ww n[vv] SDIS[ RATE rr] MPTM uvmnpddd/ff \  
MJU ssss[ ALL]  e LN MSG:  
[OLD MJU ssss  MA {tttt,u|MPTM } s  BR1 <data> s  BR2 <data> s]  
[                                     BR3 <data> s  BR4 <data> s]  
<reason> DNY
```


**Explanation of
Parameters**

e	Number of lines in the message
RATE	Rate
rr	Transmission rate specification
24	2.4 kb/s
48	4.8 kb/s
96	9.6 kb/s
56	56 kb/s
	The optional RATE rr field specifies the rate at which customers are cross-connected, and thus, the rate at which MJUs operate. All MJUs in the same circuit operate at the same rate. If specified, rr is checked and must be the same rate as given in the SCON or SCNT command. If it is not the same, the SDIS command is denied.
MPTM	Multipoint master
	The NPC, channel, and optional customer number of the external facility termination connected to the control leg of MJU 1. There is exactly one multipoint master for a multipoint circuit. This field is used to identify the circuit as a whole. The data sent by this multipoint master is broadcast to all branches on the circuit. The data sent to the multipoint master is a summation of data sent by the branches.
	The multipoint master is required for all SDIS commands, since it uniquely identifies the circuit, regardless of which MJU the command addresses (MJU ssss in the INPUT FORMATS).
[s]abc	The 3- or 4-digit nonhierarchical NPC number of the multipoint circuit master leg
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number of the multipoint circuit master leg
uv	Unit number
m	Module number
np	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number of the multipoint circuit master leg
001-024	
001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)

	049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
ff	Customer number of circuit under test, or of multipoint master leg	
	01	(DSOA at 2.4, 4.8, 9.6, or 56 kb/s)
	01-20	(DSOB at 2.4 kb/s)
	01-10	(DSOB at 4.8 kb/s)
	01-05	(DSOB at 9.6 kb/s)
NEW	New	
	The lines in the output message associated with the NEW keyword list the new connection data for the just-upstream MJU after the disconnection of the control leg of MJU ssss. These cross-connections remain in effect after completion of the disconnect. If the disconnected MJU ssss is MJU 1, the NEW MJU fields are filled with zeroes, indicating that no MJUs remain in the circuit.	
OLD	Old	
	The lines in the output message associated with the OLD keyword list all of the disconnected MJUs and branches associated with MJU ssss. This includes the branch data of MJU ssss, as well as the data for up to twenty additional MJUs that may have been cascaded from MJU ssss and its associated downstream connections.	
MJU	Multipoint junction unit	
ssss	MJU number of disconnected MJU (0001 through 9999)	

ssss identifies the MJU at which to begin the disconnection. Leading zeros are not required when specifying ssss. All MJUs are given a number, ssss, when the circuit is built with the SCON or SCNT commands. This number should be used in the SDIS command to choose the MJU at which to begin the disconnection. The maximum number of MJUs that can be disconnected with a single command is 21. If there are more than 20 MJUs cascaded (connected directly or indirectly) to MJU ssss, the command is denied. If by specifying ssss, 21 or fewer MJUs are disconnected, the control leg of MJU ssss is disconnected as is everything cascaded from the branches of MJU ssss. If the multipoint circuit is composed of 21 or fewer MJUs and ssss is specified as 0001, the entire multipoint circuit is disconnected.

ALL

All

If ALL is not specified, all the branches of MJU ssss must be unconnected. Then, MJU ssss and its control leg are disconnected.

If ALL is specified, it denotes that MJU ssss, its control leg, and everything connected directly or indirectly to the branches of MJU ssss is disconnected.

ALL appears in the output message only if present in the input command, and is normally used whenever the disconnection of MJU ssss also results in the disconnection of its branches from external facility terminations or cascaded MJUs.

MA

Master

The MA keyword identifies the upstream MJU number and branch connected to the control leg of MJU ssss. In the case of MJU 1, the control leg is actually the master leg of the circuit and is indicated in the MA field by MPTM.

tttt

MJU number connected to control leg of MJU ssss (0001 through 9999)

u

Branch number of MJU tttt (1 through 4)

vvvv

MJU number of additional cascaded MJUs (0002 through 9999)

wwwwww

MJU number connected to control leg of MJU vvvv

x

Branch number of MJU connected to control leg of MJU vvvv

yyyy

MJU number connected to control leg of MJU tttt

z

Branch number of MJU connected to control leg of MJU tttt

BR1

Branch 1

BR2

Branch 2

BR3	Branch 3
BR4	Branch 4
	The BRi <data> fields refer to the connection data associated with the four branch legs of MJU ssss. Each branch data field can take one of three forms, depending on whether the branch is unassigned, cross-connected to an external facility termination, or cross-connected to a cascaded MJU control leg.
data	Branch connection data in the form [0]000000/00 Nonhierarchical format for unassigned branches [t]ghijj//l Nonhierarchical format for branches connected to external facility terminations 00000000/00 Nonhierarchical format for unassigned branches wxkqrjj//l Nonhierarchical format for branches connected to external facility terminations MJU nnnn For branches connected to another MJU with number nnnn (0002 through 9999)
s	Termination state of the MJU control or branch leg Indicates whether either or both ends of the cross-connection are in the terminate and leave state. The TO direction is defined as the direction facing the MJU. R Released; neither side is terminated F FROM side is terminated T TO side is terminated B BOTH sides are terminated
OOS	Out-of-service If the disconnected facilities are associated with one or more OOS facility terminating NPCs, the OOS keyword appears in the output message. In this case, the user should note that the Unassigned Multiplexer Channel (UMC) code may not be inserted towards the facilities of the disconnected circuits until they are restored to service. mmmm <i>Explanation</i> <i>explanation of error condition code</i>
reason	Reason for denial

reason

CHANNEL [s]abcddd IS NOT ESTABLISHED TO SR FEATURE

CHANNEL [s]abcddd IS A PARITY CHANNEL

CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0A

CHANNEL [s]abcddd

CUSTOMER NUMBER MUST BE SPECIFIED FOR DS0B

CHANNEL [s]abcddd

CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0B

CHANNEL [s]abcddd

CIRCUIT [s]abcddd/FF IS CONNECTED BUT NOT AS A
MULTIPOINT MASTER LEG

CIRCUIT [s]abcddd/ff IS UNDER TEST

CIRCUIT [s]abcddd/ff IS UNASSIGNED CHANNEL [s]abcddd
IS OUT OF RANGE

NPC [X]XXX IS NOT PROVISIONED AS DIGROUP-A OF AN
RT

THE NPC ASSOCIATED WITH VIRTUAL CHANNEL
[X]XXXYYY IS NOT PROVISIONED

INVALID CHANNEL NUMBER FOR CHANNEL [X]XXXYYY

[X]XXXYYY-FFF IS AN INVALID RANGE OF CHANNELS

NPC [X]XXX IS IN LINE LOOPBACK STATE

MJU ssss DOES NOT EXIST IN THE CIRCUIT NUMBER OF
DISCONNECTED MJUS EXCEEDS THE LIMIT OF 21

SPECIFIED RATE DOES NOT MATCH EXISTING CIRCUIT
RATE

CIRCUIT IS UNDER TEST

CONNECTED BRANCHES ARE PRESENT AND THE ALL
KEYWORD IS NOT SPECIFIED

BOTH CCN SIDES ARE OUT-OF-SERVICE

ACTIVE CCN SIDE IS {OUT-OF-SERVICE|FAILED|PESTED}

UNIT [q]q IS NOT FACILITY TERMINATING TYPE

CCNI s IS {OUT-OF-SERVICE|FAILED}

TSI sft IS {NOT EQUIPPED|OUT-OF-SERVICE|FAILED}

CCB sf IS {NOT EQUIPPED|OUT-OF-SERVICE|FAILED}

CCI s IS {OUT-OF-SERVICE|FAILED}

ETSI sqq IS {NOT EQUIPPED|OUT-OF-SERVICE |FAILED}

UNIT [q]q IS {NOT EQUIPPED|OUT-OF-SERVICE |FAILED}

UNIT [q]q FTMI d IS {NOT EQUIPPED |OUT-OF-SERVICE|FAILED}

UNIT [q]q FC sb IS {NOT EQUIPPED |OUT-OF-SERVICE|FAILED}

DSPI IN UNIT [q]q IS {OUT-OF-SERVICE|FAILED}

NPC [s]abc IS NOT EQUIPPED

NPC [s]abc SIDE s IS {OUT-OF-SERVICE|FAILED}

MAINTENANCE CONDITION PREVENTS COMPLETION OF
THIS COMMAND

DS3U related errors

UNIT [q]q MXR c NOT EQUIPPED

UNIT [q]q FLI k IS OUT-OF-SERVICE

UNIT [q]q FMT s IS OUT-OF-SERVICE

UNIT [q]q MXR c IS OUT-OF-SERVICE

UNIT [q]q MIU c IS OUT-OF-SERVICE

UNIT [q]q FLI k IS FAILED

UNIT [q]q FMT s IS FAILED

UNIT [q]q MXR c IS FAILED

UNIT [q]q MIU c IS FAILED

SUBRATE DISCONNECTION

Explanation of Command

This command provides multipoint branch disconnection of customers in both directions. All channels must have been cross-connected using the SCON or SCNT commands before they can be disconnected with SDIS. It is used to disconnect customers from the branches of a multipoint junction unit (MJU). The MJU itself remains connected to the circuit. As many as four branches can be disconnected from an MJU with one command. This command *cannot be used to disconnect MJUs or branches that are cascaded to additional MJUs. To disconnect MJUs and branches, see SDIS::RATE,MPTM,MJU,ALL*

Multipoint circuits can be disconnected incrementally, one command at a time. Many commands can address the same multipoint circuit. Indeed, many commands can address the same MJU of a circuit. A command might address an MJU, say MJU 0005 which has branches 1, 2, 3, and 4 connected, and disconnect customers from branches 1 and 2. This command results in no service interruption to branches 3 and 4 which are still connected. Another command might also address MJU 0005 and disconnect the customer from branch 3, leaving branch 4 undisturbed.

Red Circuit and Customer Control Marking

Subrate cross-connections are automatically marked as red circuits. Removal (RMV) of a facility terminating NPC with Subrate circuits connected to it requires the INCL keyword.

The SDIS action does not affect the customer control marking of a channel. The CUS marking is disabled while the channel is established to the Subrate feature, but is enabled once the channel is disestablished.

Once customers are disconnected, the UMC code is sent towards the customers' facilities. Disconnected customers do not require a re-establishment (SECH) of their channels before being re-connected (SCON or SCNT).

The master leg of the multipoint circuit (MPTM) is specified by digroup abc, channel ddd, customer number ff, and serves as the reference for addressing all MJUs and branches in the circuit. At least one branch must be specified with its corresponding external facility termination data.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.19421]

SDIS:[FRM xy][,SEQ ww]:[RATE rr,]MPTM [s]abcddd[/ff],MJU ssss, \
<branch>[,<branch>][,<branch>][,<branch>]!

Hierarchical

[I.19421]

SDIS:[FRM xy][,SEQ ww]:[RATE rr,]MPTM uvmnpddd[/ff],MJU ssss, \
<branch>[,<branch>][,<branch>][,<branch>]!

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.19421]

M hh:mm:ss xy,ww n[vv] SDIS RATE rr MPTM [s]abcddd/ff \
MJU ssss 4 LN MSG:
BRi [t]ghijjj/ll[<branch>][<branch>][<branch>]
NEW MJU ssss MA {tttt,u|MPTM} s BR1 <data> s BR2 <data> s
BR3 <data> s BR4 <data> s \
[OOS]COMPL

Hierarchical

[O.19421]

M hh:mm:ss xy,ww n[vv] SDIS RATE rr MPTM uvmnpddd/ff \
MJU ssss 4 LN MSG:
BRi wxkqrjjj/ll[<branch>][<branch>][<branch>]
NEW MJU ssss MA {tttt,u|MPTM} s BR1 <data> s BR2 <data> s
BR3 <data> s BR4 <data> s \
[OOS]COMPL

Denial Message 1.544 Mbit/s Termination**Nonhierarchical**

[O.19421.01]

```
M hh:mm:ss xy,ww n[vv] SDIS[ RATE rr] MPTM [s]abcddd/ff \
MJU ssss 3 LN MSG:
BRi[ [t]ghijjj/ll][ <branch>][ <branch>][ <branch>]
<reason> DNY
```

[O.19421.01]

```
M hh:mm:ss xy,ww n[vv] SDIS[ RATE rr] MPTM uvmnpddd/ff \
MJU ssss 3 LN MSG:
BRi[ wxkqrjjj/ll][ <branch>][ <branch>][ <branch>]
<reason> DNY
```

**Explanation of
Parameters**

[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number of the master leg For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number of the master leg The allowable values are presented below: uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number of the multipoint circuit master leg 001-024 001-047 Odd only (SLC 96® Carrier, Mode 3, DGA) 049-095 Odd only (SLC 96 Carrier, Mode 3, DGC) 001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA) 025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB) 049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC) 073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD) 001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)

	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
ff	Customer number of circuit under test, or of multipoint master leg	
	01	(DSOA at 2.4, 4.8, 9.6, or 56 kb/s)
	01-20	(DSOB at 2.4 kb/s)
	01-10	(DSOB at 4.8 kb/s)
	01-05	(DSOB at 9.6 kb/s)
RATE	Rate	
rr	Transmission rate specification	
	24	2.4 kb/s
	48	4.8 kb/s
	96	9.6 kb/s
	56	56 kb/s

RATE rr is always optional on an SDIS. rr specifies the rate at which customers are cross-connected, and thus, the rate at which MJUs operate. All MJUs in the same circuit operate at the same rate. If specified, RATE rr is checked, and must be the same rate as originally appeared in the SCON or SCNT command. If it is not the same, the SDIS command is denied.

MPTM Multipoint master

[s]abcddd[/ff] The NPC, channel, and optional customer number connected to the control leg of MJU 1.

This field is used to identify the circuit as a whole. There is exactly one multipoint master for a multipoint circuit.

The data sent BY the multipoint master is broadcast to all branches on the circuit. The data sent TO the multipoint master is a summation of data sent by the branches.

The customer number, ff, is optional when the customer is in a DSOA channel because there is only one customer in a DSOA channel. If specified, it must appear as 01.

A customer number is required when specifying a customer in a DSOB signal. Allowed customer numbers differ depending on the type of DSOB channel, as shown below.

DS0B nn	Allowed Subrate Customer Numbers
DS0B 20	1 through 20
DS0B 10	1 through 10
DS0B 5	1 through 5

Because the multipoint master is used to uniquely identify the circuit as a whole, it is required for all SDIS commands, regardless of which MJU the command addresses (MJU ssss in the message formats above).

MJU

Multipoint junction unit

ssss

MJU number of cross-connected MJU (0001-9999)

MJU ssss identifies the MJU that the command addresses. All MJUs are given a number, ssss, when the circuit is built with the SCON or SCNT commands. This number should be used in the SDIS command to address an MJU.

branch

External facility termination for branch connected to MJU ssss

The termination part of the branch is optional since the system knows what customer is connected to MJU ssss branch i.

The branch field identifies a branch that is disconnected from the customer connected to it. If the customer is a DS0A customer, the customer number is optional and, if present, must be 01. If the NPC and channel numbers are specified for a DS0B customer the customer number is required.

From one to four branches can be specified in an SDIS command; disconnecting up to four customers from the four branches of an MJU. At least one branch must be specified. A maximum of four branches is allowed. The <branch> fields can appear in any order. Nothing is disconnected from branches that are not specified in the command.

If an unconnected branch, like branch 4, is specified in an SDIS command, the command is denied.

BRi [t]ghijj//l

Nonhierarchical termination number connected to branch i of MJU ssss

BRi wxkqrjjj//l

Hierarchical termination number connected to branch i of MJU ssss

BR

Branch

i

Branch number of MJU ssss (1 through 4)

	[t]ghi	The 3- or 4-digit nonhierarchical NPC number of termination connected to BRi
	wxkqr	Hierarchical NPC number of termination connected to BRi.
	jjj	Channel number of termination connected to BRi
	ll	Customer number of termination connected to BRi
NEW	New	
BR1	Branch 1	
BR2	Branch 2	
BR3	Branch 3	
BR4	Branch 4	
data	Branch connection data upon completion of the branch disconnection	

[0]000000/00Nonhierarchical format for unassigned branch

00000000/00Hierarchical format for unassigned branch

[t]ghijj/llNonhierarchical format for branch connected to an external facility termination

wxkqrjjj/llHierarchical format for branch connected to an external facility termination

MJU nnnnBranch connected to MJU number nnnn (0002 through 9999)

tttt MJU number connected to control leg of MJU ssss (0001 through 9999)

u Branch number of MJU tttt (1 through 4)

s- Termination state of the MJU control or branch leg
Indicates the terminate and leave state of one or both ends of the cross-connection. The TO direction is defined as the direction facing the MJU.

FFROM (FROM side is terminated)

TTO (TO side is terminated)

BBOTH (BOTH sides are terminated)

RRELEASED (Neither side is terminated)

MA	Master MA identifies the upstream MJU number and branch connected to the control leg of MJU ssss. In the case of MJU 1, the control leg is actually the master leg of the circuit and is indicated in the MA field by MPTM.
OOS	Out-of-service OOS appears in the output whenever the disconnection involves an out-of-service or failed facility termination NPC. In this case, the user should note that the Unassigned Multiplexer Channel (UMC) code may not be inserted towards the facilities of the disconnected circuit until the facility is restored to service.
Reason	Reason for denial reason CHANNEL [s]abcddd IS A PARITY CHANNEL CUSTOMER NUMBER MUST BE SPECIFIED FOR DS0B CHANNEL [s]abcddd CIRCUIT [s]abcddd/FF IS CONNECTED BUT NOT AS A MULTIPOINT MASTER LEG CIRCUIT [s]abcddd/ff IS IS SPECIFIED MORE THAN ONCE INVALID CHANNEL NUMBER FOR CHANNEL [X]XXXXYY SPECIFIED RATE DOES NOT MATCH EXISTING CIRCUIT RATE BR i IS SPECIFIED MORE THAN ONCE BR i IS CONNECTED TO A DOWNSTREAM MJU MJU ssss DOES NOT EXIST IN THE CIRCUIT BR i IS NOT CONNECTED AS SPECIFIED BR i IS UNASSIGNED CIRCUIT [s]abcddd/ff IS UNASSIGNED CHANNEL [s]abcddd IS NOT ESTABLISHED TO SR FEATURE CIRCUIT [s]abcddd/ff IS UNDER TEST NPC [X]XXX IS NOT PROVISIONED AS DIGROUP-A OF AN RT

THE NETWORK PROCESSING CIRCUIT
ASSOCIATED WITH VIRTUAL CHANNEL
[X]XXXXXX IS NOT PROVISIONED
NPC [X]XXX IS IN LINE LOOPBACK STATE
CIRCUIT IS UNDER TEST
TSI sft IS NOT EQUIPPED
CCB sf IS NOT EQUIPPED
ETSI sqq IS NOT EQUIPPED
NPC [s]abc IS NOT EQUIPPED
UNIT [q]q IS NOT EQUIPPED
UNIT [q]q FTMI d IS NOT EQUIPPED
UNIT [q]q FC sb IS OUT-OF-SERVICE
UNIT [q]q MXR c NOT EQUIPPED
UNIT [q]q IS NOT FACILITY TERMINATING TYPE
BOTH CCN SIDES ARE OUT-OF-SERVICE
ACTIVE CCN SIDE IS OUT-OF-SERVICE
CCNI s IS OUT-OF-SERVICE
TSI sft IS OUT-OF-SERVICE
CCB sf IS OUT-OF-SERVICE
CCI s IS OUT-OF-SERVICE
ETSI sqq IS OUT-OF-SERVICE
UNIT [q]q IS OUT-OF-SERVICE
UNIT [q]q FTMI d IS OUT-OF-SERVICE
UNIT [q]q FC sb IS OUT-OF-SERVICE
DSPI IN UNIT [q]q IS OUT-OF-SERVICE
NPC [s]abc IS OUT-OF-SERVICE
NPC [s]abc SIDE s IS OUT-OF-SERVICE
UNIT [q]q FLI k IS OUT-OF-SERVICE
UNIT [q]q FMT s IS OUT-OF-SERVICE
UNIT [q]q MXR c IS OUT-OF-SERVICE
UNIT [q]q MIU c IS OUT-OF-SERVICE
ACTIVE CCN SIDE IS FAILED

ACTIVE CCN SIDE IS PESTED
CCNI s IS FAILED
TSI sft IS FAILED
CCB sf IS FAILED
CCI s IS FAILED
ETSI sqq IS FAILED
UNIT [q]q IS FAILED
UNIT [q]q FTMI d IS FAILED
UNIT [q]q FC sb IS OUT-OF-SERVICE
DSPI IN UNIT [q]q IS FAILED
NPC [s]abc SIDE s IS FAILED
UNIT [q]q FLI k IS FAILED
U:g/NIT [q]q FMT s IS FAILED
UNIT [q]q MXR c IS FAILED
UNIT [q]q MIU c IS FAILED

SUBRATE DISCONNECTION

Explanation of Command

This command disconnects the FROM and TO customers in both directions. The channels abcd and ghij must be cross-connected (using the SCON or SCNT verbs) before they can be disconnected with SDIS.

The optional RATE rr field defines the rate at which the FROM and TO customers were cross-connected. If specified it is checked and must be the same rate as originally appeared in the SCON or SCNT command. The TPT keyword means two-point and is optional. It conveys no information and is retained for DACS/SRDC compatibility.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.19401]

```
SDIS:[FRM xy][,SEQ ww]:[RATE rr[,TPT],] FROM [s]abcd[/ff], \
TO [t]ghij[/ll]!
```

Hierarchical

[I.19401]

```
SDIS:[FRM xy][,SEQ ww]:[RATE rr[,TPT],] FROM uvmnpdd[/ff], \
TO wxkqrjjj[/ll]!
```

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19401]

```
M hh:mm:ss xy,ww n[vv] SDIS RATE rr,TPT:[s]abcd[/ff], \
[t]ghij[/ll] [OOS] COMPL
```


Hierarchical

[O.19401]

M hh:mm:ss xy,ww n[vv] SDIS RATE rr,TPT;uvmnpddd/ff, \wxkqrjjj/ll[00S] COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19401.01]

M hh:mm:ss xy,ww n[vv] SDIS[RATE rr] FROM [s]abcddd/ff \TO [t]ghijjj/ll 2 LN MSG:
<reason> DNY

Hierarchical

[O.19401.01]

M hh:mm:ss xy,ww n[vv] SDIS[RATE rr] FROM uvmnpddd/ff \TO wxkqrjjj/ll 2 LN MSG:
<reason> DNY

Explanation of Parameters

RATE	Rate
rr	Transmission rate specification
24	2.4 kb/s
48	4.8 kb/s
96	9.6 kb/s
56	56 kb/s
TPT	Two-point
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
uv,wx	Unit number

	m,k	Module number
	np,q	NPC number within the module
		For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	ddd	FROM channel number
	jjj	TO channel number
	001-024	
	001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
	II	TO customer number
	ff	Customer number of circuit under test, or of multipoint master leg
	01	(DSOA at 2.4, 4.8, 9.6, or 56 kb/s)
	01-20	(DSOB at 2.4 kb/s)
	01-10	(DSOB at 4.8 kb/s)
	01-05	(DSOB at 9.6 kb/s)

1.544 Mbit/s Termination

OOS	Out-of-service
	OOS appears in the output whenever the disconnection involves an out-of-service or failed facility termination NPC. In this case, the user should note that the Unassigned Multiplexer Channel (UMC) code may not be inserted towards the facilities of the disconnected circuit until the facility is restored to service.

reasonReason for denial

reason

CUSTOMER NUMBER ff IS OUT OF RANGE FOR
DS0A CHANNEL [s]abctddd

CUSTOMER NUMBER ff IS OUT OF RANGE FOR
DS0B CHANNEL [s]abctddd

CHANNEL [s]abctddd IS OUT OF RANGE

CHANNELS ARE NOT CONNECTED TO EACH
OTHER

CHANNEL [s]abctddd IS NOT ESTABLISHED TO
SR FEATURE

CIRCUIT [s]abctddd/ff IS UNDER TEST

NPC [X]XXX IS NOT PROVISIONED AS
DIGROUP-A OF AN RT

THE NPC ASSOCIATED WITH VIRTUAL
CHANNEL [X]XXXYYY IS NOT PROVISIONED

NPC [X]XXX IS IN LINE LOOPBACK STATE

CHANNEL [s]abctddd IS A PARITY CHANNEL

CUSTOMER NUMBER MUST BE SPECIFIED
FOR DS0B CHANNEL [s]abctddd

INVALID CHANNEL NUMBER FOR CHANNEL
[X]XXXYYY

SPECIFIED RATE DOES NOT MATCH EXISTING
CIRCUIT RATE

UNIT [q]q IS NOT FACILITY TERMINATING TYPE

TSI sft IS NOT EQUIPPED

CCB sf IS NOT EQUIPPED

TSI sqq IS NOT EQUIPPED

NPC [s]abc IS NOT EQUIPPED

UNIT [q]q IS NOT EQUIPPED

UNIT [q]q FTMI d IS NOT EQUIPPED

UNIT [q]q FC sb IS OUT-OF-SERVICE

UNIT [q]q MXR c NOT EQUIPPED

BOTH CCN SIDES ARE OUT-OF-SERVICE

ACTIVE CCN SIDE IS OUT-OF-SERVICE

CCNI s IS OUT-OF-SERVICE
TSI sft IS OUT-OF-SERVICE
CCB sf IS OUT-OF-SERVICE
CCI s IS OUT-OF-SERVICE
ETSI sqq IS OUT-OF-SERVICE
UNIT [q]q IS OUT-OF-SERVICE
UNIT [q]q FTMI d IS OUT-OF-SERVICE
UNIT [q]q FC sb IS OUT-OF-SERVICE
DSPI IN UNIT [q]q IS OUT-OF-SERVICE
NPC [s]abc IS OUT-OF-SERVICE
NPC [s]abc SIDE s IS OUT-OF-SERVICE
UNIT [q]q FLI k IS OUT-OF-SERVICE
UNIT [q]q FMT s IS OUT-OF-SERVICE
UNIT [q]q MXR c IS OUT-OF-SERVICE
UNIT [q]q MIU c IS OUT-OF-SERVICE
MAINTENANCE CONDITION PREVENTS
COMPLETION OF THIS
COMMAND
ACTIVE CCN SIDE IS FAILED
CCNI s IS FAILED
TSI sft IS FAILED
CCB sf IS FAILED
CCI s IS FAILED
ETSI sqq IS FAILED
UNIT [q]q IS FAILED
UNIT [q]q FTMI d IS FAILED
UNIT [q]q FC sb IS OUT-OF-SERVICE
DSPI IN UNIT [q]q IS FAILED
NPC [s]abc IS FAILED
NPC [s]abc SIDE s IS FAILED
UNIT [q]q FLI k IS FAILED
UNIT [q]q FMT s IS FAILED

UNIT [q]q MXR c IS FAILED

UNIT [q]q MIU c IS FAILED

ACTIVE CCN SIDE IS PESTED

SUBRATE DISCONNECTION

Explanation of Command

This command disconnects the FROM and TO customers in both directions. It extends the format of the SDIS,RATE,TPT,FROM,TO command to ranges of two-point, two-way disconnections. This command is the same as the SDIS,RATE,TPT,FROM,TO command except for the range feature. See the SDIS,RATE,TPT,FROM,TO command for an explanation of features not related to the range feature.

The FROM and TO fields specify the customers to disconnect. The FROM and TO keywords have no significance to DACS II and either customer or range of customers may be designated FROM or TO. The FROM and TO designations do not have to be the same on an SDIS,RATE,TPT,FROM,TO command as they were on the corresponding SCON or SCNT command.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.19411]

```
SDIS:[FRM xy][,SEQ ww]:[RATE rr,][TPT,] FROM [s]abcddd{-eee[/01]| \
/ff-mm},TO [t]ghijjj{-kkk[/01]|/ll-nn}!
```

Hierarchical

[I.19411]

```
SDIS:[FRM xy][,SEQ ww]:[RATE rr,][TPT,] FROM uvmnpdd{-eee[/01]| \
/ff-mm},TO wxkqrjjj{-kkk[/01]|/ll-nn}!
```

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19411]

```
M hh:mm:ss xy,ww n[vv] SDIS [RATE rr] [s]abcddd{-eee[/01]| \
/ff-mm}[t]ghijjj{-kkk[/01]|/ll-nn} [ 00S] COMPL
```

Hierarchical

[O.19411]

M hh:mm:ss xy,ww n[vv] SDIS [RATE rr] uvmnpddd{-eee[/01]| \

/ff-mm}wxkqrjjj{-kkk[/01]|/ll-nn}[OOS] COMPL

Denial Message**1.544 Mbit/s Termination****Nonhierarchical**

[O.19411.01]

M hh:mm:ss xy,ww n[vv] SDIS[RATE rr] FROM [s]abcdddd{-eee \

/01]|/ff-mm} 3 LN MSG:

TO [t]ghijjj{-kkk[/01]|/ll-nn} ddd/{01|ff},jjj/{01|ll}

<reason> DNY

Hierarchical

[O.19411.01]

M hh:mm:ss xy,ww n[vv] SDIS[RATE rr] FROM uvmnpddd{-eee \

/01]|/ff-mm} 3 LN MSG:

TO wxkqrjjj{-kkk[/01]|/ll-nn} ddd/{01|ff},jjj/{01|ll}

<reason> DNY

**Explanation of
Parameters**

RATE	Rate
RATE	Rate
rr	Transmission rate specification
	24 2.4 kb/s
	48 4.8 kb/s
	96 9.6 kb/s
	56 56 kb/s
TPT	Two-Point, Two-way disconnection
FROM	From
TO	To
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical FROM NPC number

wxkqr

Hierarchical TO NPC number

uv,wx Unit number

m,k Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

ddd

FROM Channel number

eee

FROM channel number for end of range specified

jjj

TO Channel number

kkk

TO channel number for end of range specified

001-024

001-047 Odd only (SLC 96[®] Carrier, Mode 3, DGA)

049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)

001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)

025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)

049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)

073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)

001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)

025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)

049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

ff

Customer number of circuit under test, or of multipoint master leg

01 (DSOA at 2.4, 4.8, 9.6, or 56 kb/s)

01-20 (DSOB at 2.4 kb/s)

01-10 (DSOB at 4.8 kb/s)

01-05 (DSOB at 9.6 kb/s)

mm	FROM DS0B Customer number for end of range
ll	TO DS0A or DS0B Customer number, similar to ff
nn	TO DS0B Customer number for end of range

There are two ways to specify ranges.

- Range specified in channel field: [s]abctddd-eee[/01]

This option applies only to DS0A channels, and the channel range, i.e., eee, must be specified when a range of DS0A customers is desired. The customer number for DS0a channels is always 01. For example, [0]001002-010/01 specifies a range of nine DS0A customers on NPC 001, while [0]001002-010 does the same thing without the optional customer number.

- Range specified in customer number field: [s]abctddd/ff-mm

This option applies only to a DS0B channel, and the range must be specified in the customer number field when a range of DS0B customers is desired. If NPC [0]020, channel 004 was established (using the SECH verb) as a 10 customer DS0B channel, then [0]020004/01-09 specifies a range of nine customers on NPC [0]020 channel 004.

Specifying a range in both the channel and customer number field for the same customer specification, such as [0]001001-009/01-09, is denied.

1.544 Mbit/s Termination

OOS Out-of-service

OOS appears in the output whenever the disconnection involves an out-of-service or failed facility termination NPC. In this case, the user should note that the Unassigned Multiplexer Channel (UMC) code may not be inserted towards the facilities of the disconnected circuit until the facility is restored to service.

reason Reason for denial

Reason

CUSTOMER NUMBER ff IS OUT OF RANGE FOR
DS0A CHANNEL [s]abctddd

CUSTOMER NUMBER ff IS OUT OF RANGE FOR
DS0B CHANNEL [s]abctddd

CHANNEL [s]abctddd IS OUT OF RANGE

[X]XXXXYYY-FFF IS AN INVALID RANGE OF
CHANNELS

CIRCUIT [s]abctddd/ff IS UNDER TEST

CHANNELS ARE NOT CONNECTED TO EACH
OTHER

CIRCUIT [s]abcddd/ff IS UNASSIGNED

CHANNEL [s]abcddd IS NOT ESTABLISHED TO
SR FEATURE

NPC [X]XXX IS NOT PROVISIONED AS
DIGROUP-A OF AN RT

THE NPC ASSOCIATED WITH VIRTUAL
CHANNEL [X]XXXYYY IS NOT PROVISIONED

NPC [X]XXX IS IN LINE LOOPBACK STATE

CHANNEL [s]abcddd IS A PARITY CHANNEL

CUSTOMER NUMBER MUST BE SPECIFIED
FOR DS0B CHANNEL [s]abcddd

CUSTOMER NUMBER RANGE NOT ALLOWED
FOR DS0A CHANNEL [s]abcddd

CHANNEL RANGE NOT ALLOWED FOR DS-OB
CHANNEL [s]abcddd

INVALID CHANNEL NUMBER FOR CHANNEL
[X]XXXYYY

FROM AND TO RANGES ARE NOT THE SAME
SIZE

FROM AND TO RANGES PARTIALLY OVERLAP

SPECIFIED RATE DOES NOT MATCH EXISTING
CIRCUIT RATE

UNIT [q]q IS NOT FACILITY TERMINATING TYPE

TSI sft IS NOT EQUIPPED

CCB sf IS NOT EQUIPPED

ETSI sqq IS NOT EQUIPPED

NPC [s]abc IS NOT EQUIPPED

UNIT [q]q IS NOT EQUIPPED

UNIT [q]q FTMI d IS NOT EQUIPPED

UNIT [q]q FC sb IS OUT-OF-SERVICE

UNIT [q]q MXR c NOT EQUIPPED

BOTH CCN SIDES ARE OUT-OF-SERVICE

ACTIVE CCN SIDE IS OUT-OF-SERVICE

CCNI s IS OUT-OF-SERVICE
TSI sft IS OUT-OF-SERVICE
CCB sf IS OUT-OF-SERVICE
CCI s IS OUT-OF-SERVICE
ETSI sqq IS OUT-OF-SERVICE
UNIT [q]q IS OUT-OF-SERVICE
UNIT [q]q FTMI d IS OUT-OF-SERVICE
UNIT [q]q FC sb IS OUT-OF-SERVICE
DSPI IN UNIT [q]q IS OUT-OF-SERVICE
NPC [s]abc IS OUT-OF-SERVICE
NPC [s]abc SIDE s IS OUT-OF-SERVICE
UNIT [q]q FLI k IS OUT-OF-SERVICE
UNIT [q]q FMT s IS OUT-OF-SERVICE
UNIT [q]q MXR c IS OUT-OF-SERVICE
UNIT [q]q MIU c IS OUT-OF-SERVICE
MAINTENANCE CONDITION PREVENTS
COMPLETION OF THIS COMMAND
ACTIVE CCN SIDE IS FAILED
CCNI s IS FAILED
TSI sft IS FAILED
CCB sf IS FAILED
CCI s IS FAILED
ETSI sqq IS FAILED
DSPI IN UNIT [q]q IS FAILED
NPC [s]abc IS FAILED
NPC [s]abc SIDE s IS FAILED
UNIT [q]q IS FAILED
UNIT [q]q FTMI d IS FAILED
UNIT [q]q FC sb IS OUT-OF-SERVICE
UNIT [q]q FLI k IS FAILED
UNIT [q]q FMT s IS FAILED
UNIT [q]q MXR c IS FAILED

UNIT [q]q MIU c IS FAILED
ACTIVE CCN SIDE IS PESTED

SUBRATE ESTABLISH CHANNEL

Explanation of Command



NOTE:

This command applies to 1.544 Mbit/s Terminations only.

This command connects a channel (or a range of channels) in a digroup to the subrate feature. When connected to the subrate feature, the channel is provided with test access capability using the STST commands and, if specified, a subrate multiplexer and/or an error correction function. A channel must be established before any cross-connections can be made via the SCON command. This command is recommended over the DACS/SRDC-compatible version SECH::TO,RATE,DP,PCH (I.19111) due to its improved clarity.

DACS II denies this command if it attempts to establish a DS0B channel on channel 24 of a DS1 provisioned with the T1DM framing format.

This command is used to establish five types of channels as follows:

1. A DS0B channel capable of multiplexing 5, 10, or 20 subrate customers.
2. A DS0A channel (at any rate) without error correction.
3. A subrate DS0A channel with subrate dataport error correction.
4. A 56-kb/s channel with parity channel error correction. (This type of error correction is also commonly referred to as "56-kb/s dataport" error correction.)
5. A DS0B channel capable of multiplexing 5, 10, or 20 subrate customers and parity channel error correction.

When a channel is established, it cannot be already established, cross-connected, or under test access. All channels within a specified range are established with the same parameters.



NOTE:

For user convenience, an alphabetical "O" or a numerical "0" can be typed for the zero in DS0.

DS0B Channels Without Error Correction

A DS0B channel is established by specifying a digroup and channel and the DS0B nn field.

The SEC or PCH fields must not be present for this type of channel.

As indicated above, a mix of customer rates can be cross-connected, provided the maximum rate for each type of subrate multiplexer is not exceeded.

DS0A Channels Without Error Correction

A DS0A channel without error correction is established by specifying a digroup and channel and DS0A rr.

Again, the SEC or PCH keywords must not be present.



NOTE:

The Subrate feature performs no rate-sensitive processing on this type of channel, and cross-connection is allowed to any other Subrate channel. The user must ensure that the signal rate is compatible with the intended cross-connection.

For example, if a DS0A channel with an actual rate of 4.8 kb/s is established, a cross-connection to a 10-channel or 20-channel multiplexer is allowed, but only the connection to the 10-channel multiplexer provides error-free transmission.

DS0A Channels With Subrate Error Correction

A subrate DS0A channel with subrate error correction is established by specifying the DS0A keyword with an rr value of 24, 48, or 96, and the SEC keyword. Subrate error correction performs a majority vote among the repeated bytes inherent in the byte-stuffed subrate DS0A signal to determine the corrected data. An rr value of 56 is not allowed, and the PCH keyword must not be present in specifying this type of channel.

56 kb/s Channels With Error Correction

A 56-kb/s channel with parity channel error correction is established by specifying the DS0A keyword with an rr value of 56, and the PCH keyword. This command has the effect of establishing two channels, one for carrying the customer data and one for carrying parity error correction information. If no parity channel number (ppp) is specified, the parity channel is assigned automatically to the next higher numbered channel from the data channel (ddd + 1). Due to the need to assign parity channels, range provisioning of 56 kb/s channels with error correction is not allowed. Also, use of the PCH keyword when the rr value is less than 56 is not allowed.

DS0B Channels With Error Correction

A DS0B channel that also has parity channel error correction performed on it is established by specifying the DS0B nn and PCH keywords. As above,

the nn value determines the type of multiplexer, and the PCH keyword assigns a parity channel number ppp or defaults to ddd + 1. Also, range provisioning of this type of channel is not allowed.

Subrate established channels are marked automatically as red circuits. This results in the need to specify the INCL keyword in the RMV NPC command whenever a facility terminating NPC carrying Subrate channels is removed.

Also, the Subrate establish channel command has no effect on the customer controlled marking status of DACS II channels that previously have been marked with the CUS keyword. The CUS marking is disabled while the channel is established to the Subrate feature, but is enabled again once the channel is disestablished.

1.544 Mbit/s Termination



WARNING:

The user should limit the number of subrate channels established to a digroup using D4-type framing. When the unassigned multiplex code (UMC) is present on too many channels it simulates a yellow alarm. A limit of 10 channels is safe for an AT&T D-bank.

1.544 Mbit/s Termination



NOTE:

When all 24 channels of an NPC using D4 superframe are established as DS0B channels, a yellow CGA can be declared for the NPC, even though there is no failure, if either of the following conditions exists:

- The DS1 signal is looped at the DSX-1 and the mux out of sync (MOS) code is transmitted on all channels.
- The far end is transmitting the MOS code on all 24 channels.



NOTE:

When all 24 channels are receiving MOS, the D4 superframe yellow alarm signal is simulated thus causing the CGA to be declared.

Command

Nonhierarchical

[I.19101]

SECH:FRM xy,SEQ ww:TO [s]abcddd[-eee],{DS0A rr|DS0B nn} \
[, {SEC|PCH[ppp]}]!

Hierarchical

[I.19101]

SECH:FRM xy,SEQ ww:TO uvmnpddd[-eee],{DS0A rr|DS0B nn} \
[, {SEC|PCH[ppp]}]!

**Completion
Message**

Nonhierarchical

[O.19101]

M hh:mm:ss xy,ww n[vv] SECH [s]abcddd[-eee] {DS0A rr|DS0B nn} \
[{SEC|PCH ppp}] COMPL

Hierarchical

[O.19101]

M hh:mm:ss xy,ww n[vv] SECH uvmnpddd[-eee] {DS0A rr|DS0B nn} \
[{SEC|PCH ppp}] COMPL



NOTE:

In the preceeding two messages, the optional parity channel information in lines 3 through 5 appears only if channel ppp is not specified in the input command.

Denial Message

Nonhierarchical

[O.19101.01]

M hh:mm:ss xy,ww n[vv] SECH [s]abcddd[-eee] {DS0A rr|DS0B nn} \
[{SEC|PCH[ppp]}] 2 LN MSG:
<reason> DNY

Hierarchical

[O.19101.01]

M hh:mm:ss xy,ww n[vv] SECH uvmnpddd[-eee] {DS0A rr|DS0B nn} \
[{SEC|PCH[ppp]}] 2 LN MSG:
<reason> DNY

**Explanation of
Parameters****1.544 Mbit/s Termination**

TO	To
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number
eee	Channel number for end of range specified Channel numbers 001-024 001-047 Odd only (SLC 96 [®] Carrier, Mode 3, DGA) 049-095 Odd only (SLC 96 Carrier, Mode 3, DGC) 001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA) 025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB) 049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC) 073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD) 001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA) 025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB) 049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

DS0A Digital signal 0A

rr DS0A channel rate (24, 48, 96, or 56)

The established channel is a DS0A type, that is, a single customer signal at rate rr.

DS0B Digital signal 0B

nn Number of DS0B subrate customer channels (05, 10, or 20)

The established channel is connected to a subrate multiplexer capable of multiplexing nn customers.

SEC Subrate error correction

Subrate error correction is performed on the established channel. SEC cannot be used for either a DS0A or DS0B channel without error correction.

PCH Parity channel

Parity error correction is performed on this channel. PCH cannot be used for either a DS0A or DS0B channel without error correction. The SEC and PCH fields are present only if specified in the input command.

ppp Parity channel number

Specifies the associated parity channel number. If not specified in the input command, this number defaults to the channel number + 1 (ddd + 1).

reason Reason for denial

If a denial pertains to a particular channel in a range, the channel number is given in the optional qqg field. The user should note that *none* of the preceding channels in a range are completed if a problem is found, and subsequent channels may or may not have additional problems.

SPECIFIED DIGROUP DOES NOT SUPPORT SUBRATE CHANNELS

CHANNEL dd IS OUT OF RANGE FOR NPC TYPE SPECIFIED

CHANNEL [s]abcddd IS A TEST GROUP CHANNEL

PARITY CHANNEL [s]abcddd IS A TEST GROUP CHANNEL

SPECIFIED CHANNEL IS A TEST PORT

SPECIFIED CHANNEL IS ALREADY ASSIGNED

SPECIFIED CHANNEL IS ALREADY ESTABLISHED
SPECIFIED CHANNEL IS UNDER TEST
SPECIFIED PARITY CHANNEL IS A TEST PORT
SPECIFIED PARITY CHANNEL IS ALREADY ASSIGNED
SPECIFIED PARITY CHANNEL IS UNDER TEST
SPECIFIED PARITY CHANNEL IS ALREADY SPECIFIED AS
DATA CHANNEL
PARITY CHANNEL NUMBER IS OUT OF RANGE
SUBRATE ERROR CORRECTION NOT ALLOWED WITH
RATE 56
PARITY CHANNEL ERROR CORRECTION NOT ALLOWED
FOR 24, 48, OR 96 RATES
PCH KEYWORD NOT ALLOWED WITH RANGE CROSS-
CONNECTS
CONNECTION EXCEEDS REMAINING SRM CAPACITY
ERROR CORRECTION CAPACITY UNAVAILABLE ON
DESIRED TYPE SUBRATE PACK
ACTIVE CROSS-CONNECT NETWORK SIDE IS FAILED
SPECIFIED NPC IS UNEQUIPPED
SPECIFIED NPC IS OUT-OF-SERVICE
SPECIFIED NPC IS FAILED
REQUIRED UNIT NOT EQUIPPED, NOT IN SERVICE, OR
FAILED
REQUIRED CCB NOT EQUIPPED, NOT IN SERVICE, OR
FAILED
REQUIRED TSI NOT EQUIPPED, NOT IN SERVICE, OR
FAILED
REQUIRED ETSI NOT EQUIPPED, NOT IN SERVICE, OR
FAILED
REQUIRED FTMI NOT EQUIPPED, NOT IN SERVICE, OR
FAILED
REQUIRED FC NOT EQUIPPED, NOT IN SERVICE, OR
FAILED
REQUIRED DSPI NOT EQUIPPED, NOT IN SERVICE, OR
FAILED

	REQUIRED SRM NOT EQUIPPED, NOT IN SERVICE, OR FAILED
	REQUIRED SUBRATE PACK NOT EQUIPPED, NOT IN SERVICE, OR FAILED
	UNIT [q]q MXR c NOT EQUIPPED
IDNV	Input, data not valid
	CHANNEL [s]abc-ddd IS A TEST GROUP CHANNEL
	PARITY CHANNEL [s]abc-ddd IS A TEST GROUP CHANNEL
SAAS	Status, already assigned
	Termination is in process of being rolled
	UNIT [q]q FLI k IS OUT-OF-SERVICE
	UNIT [q]q FMT s IS OUT-OF-SERVICE
	UNIT [q]q MXR c IS OUT-OF-SERVICE
	UNIT [q]q MIU c IS OUT-OF-SERVICE
	UNIT [q]q FLI k IS FAILED
	UNIT [q]q FMT s IS FAILED
	UNIT [q]q MXR c IS FAILED
	UNIT [q]q MIU c IS FAILED

SUBRATE ESTABLISH CHANNEL

Explanation of Command

A channel must be established before any cross-connections can be made.

This command is used to establish five different types of channels as follows:

- A DS0B channel capable of multiplexing 5, 10, or 20 subrate customers.
- A 56-kb/s channel without error correction.
- A subrate DS0A channel with subrate dataport error correction.
- A 56-kb/s channel with parity channel error correction. (This type of error correction is also commonly referred to as "56-kb/s dataport" error correction.)
- A DS0B channel capable of multiplexing 5, 10, or 20 subrate customers and parity channel error correction.

When a channel (or range of channels) is established, it (they) cannot be already established, cross-connected, or under test access. All channels within a specified range are established with the same parameters.

DS0B Channels (Without Error Correction)

A DS0B channel is established by specifying a digroup and channel and the RATE rr field. The DP and PCH fields must not be present for this type of channel. The RATE rr field defines the number of customer channels and the maximum customer rate of the subrate multiplexer as follows:

rr	Subrate multiplexer rate
24	20 - 2.4-kb/s customers
48	10 - 2.4- or 4.8-kb/s customers
96	5 - 2.4, 4.8, or 9.6-kb/s customers

As indicated in the table above, a mix of customer rates can be cross-connected provided the maximum rate for each type of subrate multiplexer is not exceeded.

56-kb/s Channels Without Error Correction

A 56-kb/s DS0A channel without error correction is established by specifying a digroup and channel and RATE 56. The DP keyword is also allowed if desired, but otherwise is ignored by the system. The PCH keyword must not be present. This type of channel actually can be operated at any DDS rate since the Subrate

performs no rate-sensitive processing on it. The user must ensure, however, that any subsequent cross-connections to other Subrate channels are compatible with the rate actually present in the channel. For example, when the channel actually carries a 4.8-kb/s byte-stuffed DS0A, the user may connect it to a 10-channel multiplexer or to a 20-channel multiplexer. In both cases, the command is allowed, but only the connection to the 10-channel multiplexer provides error-free transmission.

DS0A Channels With Subrate Error Correction

A subrate DS0A channel with subrate error correction is established by specifying an rr value of 24, 48, or 96, and the DP keyword. Subrate error correction performs a majority vote among the repeated bytes inherent in the byte-stuffed subrate DS0A signal to determine the corrected data. An rr value of 56 is not allowed, and the PCH keyword must not be present in specifying this type of channel.

56-kb/s Channels With Error Correction

A 56-kb/s channel with parity channel error correction is established by specifying an rr value of 56 and both the DP and PCH keywords. This command has the effect of establishing two channels, one for carrying the customer data and one for carrying parity error correction information. If no parity channel number (ppp) is specified, the parity channel is assigned automatically to the next higher numbered channel from the data channel (ddd + 1). Due to the need to assign parity channels, range provisioning of 56-kb/s channels with error correction is not allowed.

DS0B Channels With Error Correction

A DS0B channel that also has parity channel error correction performed on it is established by specifying a RATE of 24, 48, or 96, corresponding to 20, 10, or 5 channel multiplexers, respectively, and the DP and PCH keywords. As above, if no parity channel number (ppp) is specified, the parity channel is assigned to ddd + 1. Also, no range provisioning of this type of channel is allowed.

Subrate established channels are marked automatically as red circuits. This results in the need to specify the **INCL** keyword in the RMV NPC command whenever a facility terminating NPC carrying Subrate channels is removed.

Also, the Subrate establish channel command has no effect on the customer control marking status of DACS II channels that previously have been marked with the **CUS** keyword. **The CUS marking is disabled while the channel is established to the Subrate feature, but is returned once the channel is disestablished.**

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.19111]

SECH:[FRM xy][,SEQ ww]:TO [s]abcddd[-eee],RATE rr[,DP] \
[,PCH[ppp]]!

Hierarchical

[I.19111]

SECH:[FRM xy][,SEQ ww]:TO uvmnpddd[-eee],RATE rr[,DP] \
[,PCH[ppp]]!

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.19111]

M hh:mm:ss xy,ww n[vv] SECH [s]abcddd[-eee] RATE rr [DP] \
[PCH ppp] COMPL

Hierarchical

[O.19111]

M hh:mm:ss xy,ww n[vv] SECH uvmnpddd[-eee] RATE rr [DP] \
[PCH ppp] COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19111.01]

M hh:mm:ss xy,ww n[vv] SECH [s]abcddd[-eee] RATE rr [DP] \
[PCH[ppp]] 2 LN MSG:
<reason> DNY

Hierarchical

[O.19111.01]

```
M hh:mm:ss xy,ww n[vv] SECH uvmnpddd[-eee] RATE rr[ DP] \  
[ PCH[ ppp]] 2 LN MSG:  
<reason> DNY
```

**Explanation of
Parameters**

[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number
eee	Channel number for end of range specified
001-024	
001-047	Odd only (SLC 96® Carrier, Mode 3, DGA)
049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

The channel is now ready for Subrate cross-connection. Optional field eee appears if the input message requested the establishment of a range of channels.

The RATE rr field specifies the channel rate. If the optional DP and PCH fields are not present and rr = 24, 48, or 96, the established channel is connected

to a subrate multiplexer capable of multiplexing 20, 10, or 5 customers, respectively. If $rr = 56$ and the optional fields are not present, the established channel is a DS0A type, i.e., a single customer signal without error correction.

When the optional **DP** field is present and $rr = 24, 48, \text{ or } 96$, the established channel is a DS0A type with subrate error correction. If both **DP** and **PCH** fields are present and $rr = 24, 48, \text{ or } 96$, the established channel is connected to a subrate multiplexer capable of multiplexing 20, 10, or 5 customers, respectively, and has parity channel error correction. An rr value of 56 in combination with both **DP** and **PCH** fields indicate a 56 kb/s DS0A channel with parity channel error correction.

The **ppp** field specifies the parity channel number associated with the parity channel error correction function. If not specified in the input command, this number is defaulted to $ddd + 1$.

rr Channel rate (24, 48, 96, or 56)

ppp Number of parity error correction channel

If the reason for denial pertains to a particular channel in a range, the user should note that *none of the preceding channels in the range are completed if a problem is found, and subsequent channels may or may not have additional problems.*

The optional **DP** and **PCH ppp** fields indicate subrate and parity channel error correction, respectively. These fields are present only if specified in the input command.

reason reason for denial

Input Errors

SPECIFIED DIGROUP DOES NOT SUPPORT SUBRATE CHANNELS

CHANNEL dd IS OUT OF RANGE FOR NPC TYPE SPECIFIED

CHANNEL $[s]abcd$ IS A TEST GROUP CHANNEL

PARITY CHANNEL $[s]abcd$ IS A TEST GROUP CHANNEL

SPECIFIED CHANNEL IS A TEST PORT

SPECIFIED CHANNEL IS ALREADY ASSIGNED

SPECIFIED CHANNEL IS ALREADY ESTABLISHED

SPECIFIED CHANNEL IS UNDER TEST

SPECIFIED PARITY CHANNEL IS A TEST PORT

SPECIFIED PARITY CHANNEL IS ALREADY ASSIGNED

SPECIFIED PARITY CHANNEL IS UNDER TEST
SPECIFIED PARITY CHANNEL IS ALREADY SPECIFIED AS
DATA CHANNEL
PARITY CHANNEL NUMBER IS OUT OF RANGE
DP KEYWORD WITHOUT PCH KEYWORD NOT ALLOWED
WITH RATE 56
PCH KEYWORD WITHOUT DP KEYWORD NOT ALLOWED
PCH KEYWORD NOT ALLOWED FOR RANGE CROSS-
CONNECTS
CONNECTION EXCEEDS REMAINING SRM CAPACITY
ERROR CORRECTION CAPACITY UNAVAILABLE ON
DESIRED TYPE SUBRATE PACK

Maintenance Conditions

ACTIVE CROSS-CONNECT NETWORK SIDE IS FAILED
SPECIFIED NPC IS UNEQUIPPED
SPECIFIED NPC IS OUT-OF-SERVICE
SPECIFIED NPC IS FAILED
REQUIRED UNIT NOT EQUIPPED, NOT IN SERVICE, OR
FAILED
REQUIRED CCB NOT EQUIPPED, NOT IN SERVICE, OR
FAILED
REQUIRED TSI NOT EQUIPPED, NOT IN SERVICE, OR
FAILED
REQUIRED ETSI NOT EQUIPPED, NOT IN SERVICE, OR
FAILED
REQUIRED FTMI NOT EQUIPPED, NOT IN SERVICE, OR
FAILED
REQUIRED FC NOT EQUIPPED, NOT IN SERVICE, OR
FAILED
REQUIRED DSPI NOT EQUIPPED, NOT IN SERVICE, OR
FAILED
REQUIRED SRM NOT EQUIPPED, NOT IN SERVICE, OR
FAILED
REQUIRED SUBRATE PACK NOT EQUIPPED, NOT IN
SERVICE, OR FAILED

Error condition code for DS3U

UNIT [q]q MXR c NOT EQUIPPED

CHANNEL [s]abc-ddd IS A TEST GROUP CHANNEL

PARITY CHANNEL [s]abc-ddd IS A TEST GROUP CHANNEL

UNIT [q]q FLI k IS OUT-OF-SERVICE

UNIT [q]q FMT s IS OUT-OF-SERVICE

UNIT [q]q MXR c IS OUT-OF-SERVICE

UNIT [q]q MIU c IS OUT-OF-SERVICE

UNIT [q]q FMT s IS FAILED

UNIT [q]q FLI k IS FAILED

UNIT [q]q MIU c IS FAILED

UNIT [q]q MXR c IS FAILED

BEGINNING OF RETRIEVED LOGGED MESSAGES

Explanation of Command

This is an autonomous message marking the beginning of a block of retrieved logged messages. The logged messages follow this autonomous message with no break until the "END LOG MSG" autonomous message (O.83011). The messages are output as a result of the command I.57011.

Autonomous Message

[O.83001]
A hh:mm:ss xy,ww START LOG MSG COMPL

Explanation of Parameters

START LOG MSG Start of a block of logged messages

STOP MACRO

Explanation of Command

This command stops the execution of a macro.

A regular DACS II user can use the link number option to stop macro execution on the link he or she is currently using. A frame administrator may use this option to stop macro execution on any link.

If this command was entered by the frame administrator, then output from this command is sent only to the link on which the frame administrator entered the command.

Command

```
[I.39311]
STOP:[FRM xy][,SEQ ww]:MACRO[,LINK j[mm]]!
```

Completion Message

Nonhierarchical

```
[O.39311]
M hh:mm:ss xy,ww n[vv] STOP MACRO <macro name>[ j[mm]] COMPL
```

Denial Message

```
[O.39311.01]
M hh:mm:ss xy,ww n[vv] STOP MACRO <macro name>[ j[mm]]
COND cc DNY
```

Explanation of Parameters

MACRO	Macro
LINK	Link
j[mm]	Administrative link number
j	Physical link number (1 through 7)
mm	Virtual link/session number (01 through 16)

Variable mm is the virtual link/session number in the administrative link. mm may only be specified when j is 5, 6 or 7.

COND

Condition

cc

Hexadecimal condition code

cc	<i>Explanation</i>
6A	No macro is currently executing
D0	Command is Frame administrator (DAX) only.

SUBRATE TEST ACCESS

Explanation of Command

1.544 Mbit/s Termination

This command requests monitor test access on test port kk to a Subrate multipoint circuit. In this mode, data transmission in the tested circuit is not interrupted.

This command can only be used when the test port is in the released mode. If the desired multipoint test access point is already in the split mode, the STST,MON,TO,TP command can be used to place it in the monitor mode.

This command overrides any static trunk conditioning that may have been specified for the test port. The test port is given TRSP,MUX trunk conditioning for the duration of the Subrate test access and returned to its previous trunk conditioning state upon release.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.19621]

```
STST:[FRM xy][,SEQ ww]:MON,TO [s]abcddd[/ff],MJU ssss,[BRi,] \
TP kk!
```

Hierarchical

[I.19621]

```
STST:[FRM xy][,SEQ ww]:MON,TO uvmnpddd[/ff],MJU ssss,[BRi,] \
TP kk!
```

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.19621]

M hh:mm:ss xy,ww n[vv] STST MON MPTM [s]abcddd/ff MJU ssss \
[BRi] 2 LN MSG:
RATE rr TP kk[UNMAPPED] CGA (ftp) TLA s COMPL

Hierarchical

[O.19621]

M hh:mm:ss xy,ww n[vv] STST MON MPTM uvmnpddd/ff MJU ssss \
[BRi] 2 LN MSG:
RATE rr TP kk[UNMAPPED] CGA (ftp) TLA s COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19621.01]

M hh:mm:ss xy,ww n[vv] STST MON [s]abcddd[/ff] MJU ssss \
[BRi] 3 LN MSG:
TP kk <reason 1>
<reason 2> DNY

Hierarchical

[O.19621.01]

M hh:mm:ss xy,ww n[vv] STST MON uvmnpddd[/ff] MJU ssss \
[BRi] 3 LN MSG:
TP kk <reason 1>
<reason 2> DNY

**Explanation of
Parameters**

[s]abc	The 3- or 4-digit nonhierarchical NPC number of the multipoint circuit master leg
For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."	
uvmnp	Hierarchical NPC number of the multipoint circuit master leg
uv	Unit number

	m	Module number
	np	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."	
ddd		Channel number of the multipoint circuit master leg
	001-024	
	001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
ff		TO customer number of the multipoint circuit master leg (1 through 20)
	The customer number ff is required when the master leg of the multipoint circuit is a customer within a multiplexed DS0B channel. When the master leg is a nonmultiplexed (DS0A) channel, the customer number is entered as 01, or if the user prefers, the customer number can be omitted and the system defaults the value to 01. The customer number appears in the output message only if specified in the input command.	
	01	(DS0A at 2.4, 4.8, 9.6, or 56 kb/s)
	01-20	(DS0B at 2.4 kb/s)
	01-10	(DS0B at 4.8 kb/s)
	01-05	(DS0B at 9.6 kb/s)
MON		Monitor
TO		To
MJU		Multipoint junction unit

ssss	MJU number of accessed MJU (0001 through 9999) ssss is the MJU requested for connection to the TO test port. If MJU 0001 is specified, the TO test port faces the control leg of MJU 0001 and the FROM test port faces the master leg external facility termination. If an MJU number other than 0001 is specified and the BR is not listed, the TO side faces towards the control leg of the specified MJU and the FROM side faces upstream towards the branch of a cascaded MJU.								
BR	Branch								
i	Branch number of MJU ssss (1 through 4) Specify BRi to connect branch i (i = 1 through 4) of MJU ssss to the TO test port. The FROM side faces downstream. BRi is present only if specified in the input command.								
RATE	Rate								
rr	Transmission rate specification <table><tr><td>24</td><td>2.4 kb/s</td></tr><tr><td>48</td><td>4.8 kb/s</td></tr><tr><td>96</td><td>9.6 kb/s</td></tr><tr><td>56</td><td>56 kb/s</td></tr></table>	24	2.4 kb/s	48	4.8 kb/s	96	9.6 kb/s	56	56 kb/s
24	2.4 kb/s								
48	4.8 kb/s								
96	9.6 kb/s								
56	56 kb/s								
TP	Test port								
kk	Test port number (01 through 96) Indicates the test port number used for test access to the circuit.								
UNMAPPED	Unmapped UNMAPPED is output if the specified test access point is not cross-connected. (This situation can occur only when test access to a branch is specified.) When the test access point is unmapped, no signal is connected to the odd test port channel.								
MPTM	Multipoint master [s]abcddd/ff or uvmnpddd/ff specifies the NPC, channel, and optional customer number of the multipoint master (MPTM) leg of the circuit. Note that this is <i>not</i> the facility connected to the TO side of the test port. The TO test port is connected to an MJU defined by ssss .								
CGA	Carrier group alarm								
ftp	CGA status								
f	FROM CGA state								

	F	FROM facility in CGA
	0	FROM facility is not in CGA
t		TO CGA state
	T	TO facility in CGA
	0	TO facility is not in CGA
p		Test port digroup CGA state
	P	Test port digroup in CGA
	0	Test port digroup is not in CGA
		The side of the test access port that faces the control leg of an MJU (that is, downstream) always has the corresponding CGA status listed as "0", indicating no alarm. The CGA status of a side facing upstream corresponds to the status of the circuit's master leg facility.
	F	FROM facility in CGA
	0	FROM facility is not in CGA
	T	TO facility in CGA
	0	TO facility is not in CGA
	P	Test port digroup in CGA
	0	Test port digroup is not in CGA
		The side of the test access port that faces the control leg of an MJU (that is, downstream) always has the corresponding CGA status listed as "0"; indicating no alarm. The CGA status of a side facing upstream corresponds to the status of the circuit's master leg facility.
TLA		Terminate and leave active
s		Terminate and leave status of the test access point
		s determines whether the access point is terminated in the FROM, TO, or BOTH, directions, or whether all terminations are released. The user should note that unmapped access points cannot be terminated.
	R	RELEASED; neither side is terminated
	F	FROM side is terminated
	T	TO side is terminated
	B	BOTH sides are terminated
reason 1		Coded reason for denial

reason 2	Explanation of reason 1
INERR	THE SPECIFIED TEST PORT IS NOT EQUIPPED
UEQD	THE TEST PORT GROUP NPC [s]abc IS NOT EQUIPPED
F UEQD	THE FROM SIDE NPC [s]abc IS NOT EQUIPPED
T UEQD	THE TO SIDE NPC [s]abc IS NOT EQUIPPED
MCOND	TSI sft IS NOT EQUIPPED
MCOND	CCB sf IS NOT EQUIPPED
MCOND	ETSI sqq IS NOT EQUIPPED
MCOND	UNIT [q]q IS NOT EQUIPPED
MCOND	UNIT [q]q FTMI d IS NOT EQUIPPED
MCOND	UNIT [q]q FC sb IS NOT EQUIPPED
MCOND	NPC [s]abc IS NOT EQUIPPED
MCOND	NO DSPU IS EQUIPPED
MCOND	NO SRM OR MJU TYPE NPC IS EQUIPPED
RNGIE	CHANNEL NUMBER ddd IS OUT OF RANGE FOR NPC [s]abc
CN RATE	CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0B CHANNEL [s]abcddd
CN RATE	CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0A CHANNEL [s]abcddd
PCH	THE SPECIFIED ACCESS POINT IS A PARITY CHANNEL
INERR	MJU ssss DOES NOT EXIST IN THE CIRCUIT
PTLA	THE SPECIFIED TEST ACCESS POINT IS ALREADY IN TLA MODE
NTLA	THE SPECIFIED TEST ACCESS POINT IS ALREADY IN TLR MODE
MPTM	CUSTOMER IS NOT SPECIFIED FOR THE DS0B CHANNEL
INERR	CHANNEL [s]abcddd IS NOT A MULTIPOINT MASTER LEG
INERR	THE SPECIFIED NPC [s]abc IS NOT FACILITY TERMINATING TYPE
MCOND	UNIT [q]q IS NOT FACILITY TERMINATING TYPE

MCOND	BOTH CCN SIDES ARE OUT-OF-SERVICE
MCOND	ACTIVE CCN SIDE s IS OUT-OF -SERVICE
OOS	THE TEST PORT GROUP NPC [s]abc IS OUT-OF-SERVICE
MCOND	INACTIVE CCN SIDE IN-SERVICE AND NPC [s]abc ON INACTIVE SIDE IS OOS
F OOS	THE FROM SIDE NPC [s]abc IS OUT-OF-SERVICE
T OOS	THE TO SIDE NPC [s]abc IS OUT-OF-SERVICE
MCOND	CCNI s IS OUT-OF-SERVICE
MCOND	TSI sft IS OUT-OF-SERVICE
MCOND	CCB sf IS OUT-OF-SERVICE
MCOND	CCI s IS OUT-OF-SERVICE
MCOND	ETSI sqq IS OUT-OF-SERVICE
MCOND	UNIT [q]q IS OUT-OF-SERVICE
MCOND	UNIT [q]q FTMI d IS OUT-OF-SERVICE
MCOND	UNIT [q]q FC sb IS OUT-OF-SERVICE
MCOND	DSPI IN UNIT [q]q IS OUT-OF-SERVICE
MCOND	NPC [s]abc SIDE s IS OUT-OF-SERVICE
INERR	THE SPECIFIED TEST PORT CANNOT BE USED FOR SR CIRCUITS
INERR	TESTPORTS IN THIS GROUP INVALID FOR SR CIRCUIT
MCOND	ACTIVE CCN SIDE s IS FAILED
MCOND	ACTIVE CCN SIDE s IS PESTED
FAIL	THE TEST PORT GROUP NPC [s]abc IS FAILED
F FAIL	THE FROM SIDE NPC [s]abc IS FAILED
T FAIL	THE TO SIDE NPC [s]abc IS FAILED
MCOND	CCNI s IS FAILED
MCOND	TSI sft IS FAILED
MCOND	CCB sf IS FAILED
MCOND	CCI s IS FAILED
MCOND	ETSI sqq IS FAILED

MCOND	UNIT [q]q IS FAILED
MCOND	UNIT [q]q FTMI d IS FAILED
MCOND	UNIT [q]q FC sb IS FAILED
MCOND	DSPI IN UNIT [q]q IS FAILED
MCOND	NPC [s]abc SIDE s IS FAILED
ASGN	THE SPECIFIED TEST PORT IS UNDER TEST
UTST	THE SPECIFIED ACCESS POINT IS UNDER TEST
CH NOT EST	
	THE SPECIFIED ACCESS POINT IS NOT ESTABLISHED TO SR FEATURE
MONITOR	THE SPECIFIED TEST PORT IS ALREADY IN MONITOR MODE
NUTST	THE SPECIFIED TEST PORT IS UNASSIGNED
NA	CONNECTION EXCEEDS REMAINING EC CAPACITY

SUBRATE TEST ACCESS

Explanation of Command

This command requests a change of test port *kk* to the monitor mode for a Subrate circuit. [Note: The format of this command is compatible with DACS/SRDC.] In this mode, data transmission in the tested circuit is not interrupted.

The named external facility termination can be part of a two-point circuit or the master leg or branch termination of a multipoint circuit. (See STST,MON,TO,MJU,BR for a monitor command that specifies the test point in terms of MJU and branch numbers.)

If the test access point specified is established to the Subrate feature but not cross-connected, the output message contains the keyword UNMAPPED. When the test access point is unmapped, no signal is connected to the odd test port channel. A DS0B channel is always considered mapped, even when there are no customers cross-connected to it. In this case, the even test port faces the external facility and the odd test port faces the internal subrate multiplexer hardware.

This command can also be entered by using the TTST verb. In the case where an external facility termination is specified, no customer number can be present or the command is denied. This limits this case to testing either entire DS0B channels or nonmultiplexed DS0A channels. If the Subrate circuit is already under test, the TTST verb can be used to place any type of Subrate termination in the monitor mode. In all cases, the resulting output format is the same as that for the STST command except for the substitution of the TTST verb for the STST verb.

This command also overrides any static trunk conditioning that may have been specified for the test port. The test port is given TRSP,MUX trunk conditioning for the duration of the Subrate test access and returned to its previous trunk conditioning state upon release.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.19601]

STST:[FRM *xy*][, SEQ *ww*]:MON[, TO [*s*]abcddd[/ff]],TP *kk*!

Hierarchical

[I.19601]

STST:[FRM xy][,SEQ ww]:MON[,TO uvmnpddd[/ff]],TP kk!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19601]

M hh:mm:ss xy,ww n[vv] STST MON [s]abcdddd[/ff] RATE rr TP kk \
[UNMAPPED| LOOPED] 2 LN MSG:
CGA (ftp) TLA s COMPL

[O.19602]

M hh:mm:ss xy,ww n[vv] STST MON [s]abcdddd DS0B nn TP kk \
CGA (0tp) TLA s COMPL

Hierarchical

[O.19601]

M hh:mm:ss xy,ww n[vv] STST MON uvmnpddd[/ff] RATE rr TP kk \
[UNMAPPED| LOOPED] 2 LN MSG:
CGA (ftp) TLA s COMPL

[O.19602]

M hh:mm:ss xy,ww n[vv] STST MON uvmnpddd DS0B nn TP kk \
CGA (0tp) TLA s COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19601.01]

M hh:mm:ss xy,ww n[vv] STST MON[[s]abcdddd[/ff]] TP kk \
<reason 1> 2 LN MSG:
<reason 2> DNY

Hierarchical

[O.19601.01]

M hh:mm:ss xy,ww n[vv] STST MON[uvmnpddd[/ff]] TP kk \
<reason 1> 2 LN MSG:
<reason 2> DNY

**Explanation of
Parameters**

[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number of the circuit side to be connected to the TO test port channel For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number of the circuit side to be connected to the TO test port channel Unit number Unit number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number of the circuit side connected to the TO test port channel 001-024 001-047 Odd only (SLC 96® Carrier, Mode 3, DGA) 049-095 Odd only (SLC 96 Carrier, Mode 3, DGC) 001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA) 025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB) 049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC) 073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD) 001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA) 025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB) 049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC) 073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

ff	Customer number of circuit under test, or of multipoint master leg
01	(DSOA at 2.4, 4.8, 9.6, or 56 kb/s)
01-20	(DSOB at 2.4 kb/s)
01-10	(DSOB at 4.8 kb/s)
01-05	(DSOB at 9.6 kb/s)
kk	Test port number (01 through 96) kk is used to indicate the test port number to be used for test access to the circuit.
MON	Monitor If the test port is in the released mode, the [s]abcd[ff] external facility termination must be specified. This termination is connected to the even test port channel. If the test port already has a Subrate circuit under test, the external facility termination must not be specified or the command is denied. Variable [s]abcd[ff] specifies the NPC, channel, and customer numbers to be connected to the test port. If a multiplexed DS0B channel is tested, the customer number ff is omitted. To test a single customer in the DS0B channel, the customer number field must be specified. When the tested channel is a nonmultiplexed (DS0A) channel, the customer number is listed as 01, or if the user prefers, the customer number can be omitted and the system defaults the value to 01.
RATE	Rate
rr	Transmission rate specification
24	2.4 kb/s
48	4.8 kb/s
96	9.6 kb/s
56	56 kb/s
	rr indicates the customer rate of the circuit. If the circuit is mapped; i.e., subrate cross-connected, the listed RATE is equal to the subrate cross-connect rate. For unmapped circuits, in which case the UNMAPPED keyword appears in the output, the listed rate depends on the type of test access point. If test access is to a DS0A established channel, the establish channel rate is listed. If the access is to an unconnected subrate channel of a DS0B, the listed rate is the maximum subrate supported by the DS0B. If the circuit is mapped; that is, subrate

	cross-connected, the listed RATE is equal to the subrate cross-connect rate.
CGA	Carrier group alarm
ftp	CGA status ftp defines the alarm status of the FROM, TO, and test port facilities, respectively. In the case where the FROM side of the test access faces the master leg of a multipoint circuit, the corresponding FROM CGA status is always listed as "0"; i.e., no alarm. If the test access is associated with a branch of a multipoint circuit, in which case the FROM side faces upstream towards an MJU, the CGA status of the circuit's master leg facility is listed in the FROM field.
f	FROM CGA state F FROM facility in CGA 0 FROM facility is not in CGA
t	TO CGA state T TO facility in CGA 0 TO facility is not in CGA
p	Test port digroup CGA state P Test port digroup in CGA 0 Test port digroup is not in CGA
DS0B	Subrate customer channel
nn	Number of subrate customer channels (05, 10, or 20)
TLA	Terminate and leave activate
s	Termination state of the access point s indicates the terminate and leave status of the test access point. s states whether the access point is terminated in the FROM, TO, or BOTH, directions, or whether all terminations are released. The user should note that unmapped or looped access points cannot be terminated. B BOTH sides are terminated F FROM side is terminated R Neither side is terminated T TO side is terminated
LPD	Looped Appears in the case of a two-point circuit that is looped on itself.

[s]abcddd/ff	External facility termination connected to the TO test port channel
reason 1	Coded reason for denial
reason 2	Explanation of reason 1
reason 1	reason 2
INERR	THE SPECIFIED TEST PORT IS NOT EQUIPPED
UEQD	THE TEST PORT GROUP NPC [s]abc IS NOT EQUIPPED
F UEQD	THE FROM SIDE NPC [s]abc IS NOT EQUIPPED
T UEQD	THE TO SIDE NPC [s]abc IS NOT EQUIPPED
MCOND	TSI sft IS NOT EQUIPPED
MCOND	CCB sf IS NOT EQUIPPED
MCOND	ETSI sqq IS NOT EQUIPPED
MCOND	UNIT [q]q IS NOT EQUIPPED
MCOND	UNIT [q]q FTMI d IS NOT EQUIPPED
MCOND	UNIT [q]q FC sb IS NOT EQUIPPED
MCOND	NPC [s]abc IS NOT EQUIPPED
MCOND	NO DSPU IS EQUIPPED
MCOND	NO SRM OR MJU TYPE NPC IS EQUIPPED
RNGIE	CHANNEL NUMBER ddd IS OUT OF RANGE FOR NPC [s]abc
CN RATE	CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0B CHANNEL [s]abcddd
CN RATE	CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0A CHANNEL [s]abcddd
PCH	THE SPECIFIED ACCESS POINT IS A PARITY CHANNEL
INERR	THE SPECIFIED NPC [s]abc IS NOT FACILITY TERMINATING TYPE
MCOND	UNIT [q]q IS NOT FACILITY TERMINATING TYPE
MCOND	BOTH CCN SIDES ARE OUT-OF-SERVICE
MCOND	ACTIVE CCN SIDE s IS OUT-OF -SERVICE
OOS	THE TEST PORT GROUP NPC [s]abc IS OUT-OF-SERVICE

MCOND	INACTIVE CCN SIDE IN-SERVICE AND NPC [s]abc ON INACTIVE SIDE IS OOS
F OOS	THE FROM SIDE NPC [s]abc IS OUT-OF-SERVICE
T OOS	THE TO SIDE NPC [s]abc IS OUT-OF-SERVICE
MCOND	CCNI s IS OUT-OF-SERVICE
MCOND	TSI sft IS OUT-OF-SERVICE
MCOND	CCB sf IS OUT-OF-SERVICE
MCOND	CCI s IS OUT-OF-SERVICE
MCOND	ETSI sqq IS OUT-OF-SERVICE
MCOND	UNIT [q]q IS OUT-OF-SERVICE
MCOND	UNIT [q]q FTMI d IS OUT-OF-SERVICE
MCOND	UNIT [q]q FC sb IS OUT-OF-SERVICE
MCOND	DSPI IN UNIT [q]q IS OUT-OF-SERVICE
MCOND	NPC [s]abc SIDE s IS OUT-OF-SERVICE
INERR	THE SPECIFIED TEST PORT CANNOT BE USED FOR SR CIRCUITS
INERR	TESTPORTS IN THIS GROUP INVALID FOR SR CIRCUIT
MCOND	ACTIVE CCN SIDE s IS FAILED
MCOND	ACTIVE CCN SIDE s IS PESTED
FAIL	THE TEST PORT GROUP NPC [s]abc IS FAILED
F FAIL	THE FROM SIDE NPC [s]abc IS FAILED
T FAIL	THE TO SIDE NPC [s]abc IS FAILED
MCOND	CCNI s IS FAILED
MCOND	TSI sft IS FAILED
MCOND	CCB sf IS FAILED
MCOND	CCI s IS FAILED
MCOND	ETSI sqq IS FAILED
MCOND	UNIT [q]q IS FAILED
MCOND	UNIT [q]q FTMI d IS FAILED
MCOND	UNIT [q]q FC sb IS FAILED
MCOND	DSPI IN UNIT [q]q IS FAILED

MCOND	NPC [s]abc SIDE s IS FAILED
ASGN	THE SPECIFIED TEST PORT IS UNDER TEST
UTST	THE SPECIFIED ACCESS POINT IS UNDER TEST
CH NOT EST	THE SPECIFIED ACCESS POINT IS NOT ESTABLISHED TO SR FEATURE
MONITOR	THE SPECIFIED TEST PORT IS ALREADY IN MONITOR MODE
NUTST	THE SPECIFIED TEST PORT IS UNASSIGNED
NA	CONNECTION EXCEEDS REMAINING EC CAPACITY

CHANGE TEST ACCESS TIME SLOT

**Explanation of
Command****NOTE:**

This command applies to 1.544 Mbit/s Termination only.

The corresponding PDS command is STST,MON,TO,TP (I.19601).

**Completion
Message**

See messages 0.19601, 0.19602, and 0.19603.

kk	Test port number (1 -48)
MON	Monitor
[s]abc	The 3- or 4-digit nonhierarchical NPC number of circuit under test, or of multipoint master leg For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uv-m-np	Hierarchical NPC number of circuit under test, or of multipoint master leg For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number of circuit under test, or of multipoint master leg Valid values are: 001-024 001-047 Odd only (SLC 96® Carrier, Mode 3, DGA) 049-095 Odd only (SLC 96 Carrier, Mode 3, DGC) 001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA) 025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB) 049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC) 073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD) 001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA) 025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)

049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
01	(DS0A at 2.4, 4.8, 9.6, or 56 kb/s)
01-20	(DS0B at 2.4 kb/s)
01-10	(DS0B at 4.8 kb/s)
01-05	(DS0B at 9.6 kb/s)

SUBRATE TEST ACCESS SPLIT

Explanation of Command

This command requests split test access on a test port to a Subrate multipoint circuit.

This command overrides any static trunk conditioning that may have been specified for the test port. The test port is given TRSP,MUX trunk conditioning for the duration of the subrate test access and returned to its previous trunk conditioning state upon release.

The master leg of the multipoint circuit is specified by network processing circuit, channel, and customer number and serves as the circuit reference for the multipoint junction unit named in the command.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.19651]

STST:[FRM xy][,SEQ ww]:SPL,TO [s]abcddd[/ff],MJU ssss,[BRi,],TP kk!

Hierarchical

[I.19651]

STST:[FRM xy][,SEQ ww]:SPL,TO uvmnpddd[/ff],MJU ssss,[BRi,],TP kk!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19651]

M hh:mm:ss xy,ww n[vv] STST SPL MPTM [s]abcddd/ff MJU ssss \
[BRi] 2 LN MSG:
RATE rr TP kk[UNMAPPED] CGA (ftp) TLA s COMPL

Hierarchical

[O.19651]

M hh:mm:ss xy,ww n[vv] STST SPL MPTM uvmnpddd/ff MJU ssss \
[BRi] 2 LN MSG:
RATE rr TP kk[UNMAPPED] CGA (ftp) TLA s COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19651.01]

M hh:mm:ss xy,ww n[vv] STST SPL MPTM [s]abcddd/ff \
MJU ssss[BRi] <reason 1> 2 LN MSG:
<reason 2> DNY

Hierarchical

[O.19651.01]

M hh:mm:ss xy,ww n[vv] STST SPL MPTM uvmnpddd/ff \
MJU ssss[BRi] <reason 1> 2 LN MSG:
<reason 2> DNY

Explanation of Parameters

SPL	Split test access
TO	To Termination
[s]abc	The 3- or 4-digit nonhierarchical NPC number of TO external facility termination of circuit master leg For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number of TO external facility termination of circuit master leg uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number of the multipoint circuit master leg

	001-024	
	001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
ff	Customer number of circuit under test, or of multipoint master leg	
	01	(DSOA at 2.4, 4.8, 9.6, or 56 kb/s)
	01-20	(DSOB at 2.4 kb/s)
	01-10	(DSOB at 4.8 kb/s)
	01-05	(DSOB at 9.6 kb/s)
	The optional customer number ff is required when the master leg of the multipoint circuit is a customer within a multiplexed DSOB channel. When the master leg is a nonmultiplexed (DSOA) channel, the customer number is listed as 01, or if the user prefers, the customer number can be omitted and the system defaults the value to 01.	
	The external facility termination of the circuit is given by the NPC, channel, and customer number for the master leg of the multipoint circuit. Note that this is <i>not</i> the facility defined as the TO side of the circuit.	
MJU	Multipoint junction unit	
ssss	MJU number of accessed MJU (0001 through 9999)	
	The TO test port is connected to an MJU defined by ssss. If MJU 0001 is specified, the TO test port faces the control leg of MJU 0001 and the FROM test port faces the master leg external facility termination. If an MJU number other than 0001 is	

specified and a branch has not been entered, the TO side faces towards the control leg of the specified MJU and the FROM side faces upstream towards the branch of a cascaded MJU.

If branch *i* was specified then branch *i* of MJU ssss is connected to the TO test port and the FROM side faces downstream.

BR

Branch

i

Branch number of MJU ssss (1 through 4)

If the BR*i* field is present, the TO side faces upstream towards the indicated branch of the specified MJU and the FROM side faces downstream, either towards another MJU or towards an external facility termination.

TP

Test port

kk

Test port number (01 through 96)

kk indicates the test port number used for test access to the circuit.

UNMAPPED

Unmapped

This keyword is output if the test access point specified is not cross-connected. (This situation can occur only when test access to a branch is specified.) When the test access point is unmapped, no signal is connected to the odd test port channel.

TLA

Terminate and leave activate

s

Termination state of the access point

s defines whether the access point is terminated in the FROM, TO, or BOTH, directions, or whether all terminations are released. The user should note that unmapped access points cannot be terminated.

R Released; neither side is terminated

F FROM side is terminated

T TO side is terminated

B BOTH sides are terminated

RATE

Rate

rr

Transmission rate specification

24 2.4 kb/s

48 4.8 kb/s

96 9.6 kb/s

56 56 kb/s

	The customer rate of the circuit is indicated by rr. If the access is to an unconnected or unmapped branch the listed rate is the same as the rest of the multipoint circuit.	
MPTM	Multipoint master	
	The multipoint master leg of the circuit is specified by the termination number which consists of the NPC, channel, and customer numbers combined. Note that this is <i>not</i> the facility connected to the TO side of the test port.	
CGA	Carrier group alarm	
ftp	Alarm status, FROM, TO, and test port, respectively	
	The side of the test access port that faces the control leg of an MJU (that is, downstream) always has the corresponding CGA status listed as "0"; indicating no alarm. The CGA status of a side facing upstream corresponds to the status of the circuit's master leg facility.	
f	FROM CGA state	
	F	FROM facility in CGA
	0	FROM facility is not in CGA
t	TO CGA state	
	T	TO facility in CGA
	0	TO facility is not in CGA
p	Test port digroup CGA state	
	P	Test port digroup in CGA
	0	Test port digroup is not in CGA
reason 1	Coded reason for denial	
reason 2	Explanation of reason 1	
	INERR	THE SPECIFIED TEST PORT IS NOT EQUIPPED
	UEQD	THE TEST PORT GROUP NPC [s]abc IS NOT EQUIPPED
	F UEQD	THE FROM SIDE NPC [s]abc IS NOT EQUIPPED
	T UEQD	THE TO SIDE NPC [s]abc IS NOT EQUIPPED
	MCOND	TSI sft IS NOT EQUIPPED
	MCOND	CCB sf IS NOT EQUIPPED
	MCOND	ETSI sqq IS NOT EQUIPPED
	MCOND	UNIT [q]q IS NOT EQUIPPED

MCOND	UNIT [q]q FTMI d IS NOT EQUIPPED
MCOND	UNIT [q]q FC sb IS NOT EQUIPPED
MCOND	NPC [s]abc IS NOT EQUIPPED
MCOND	NO DSPU IS EQUIPPED
MCOND	NO SRM OR MJU TYPE NPC IS EQUIPPED
RNGIE	CHANNEL NUMBER ddd IS OUT OF RANGE FOR NPC [s]abc
CN RATE	CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0B CHANNEL [s]abcddd
CN RATE	CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0A CHANNEL [s]abcddd
INERR	MJU ssss DOES NOT EXIST IN THE CIRCUIT
PCH	THE SPECIFIED ACCESS POINT IS A PARITY CHANNEL
PTLA	THE SPECIFIED TEST ACCESS POINT IS ALREADY IN TLA MODE
NTLA	THE SPECIFIED TEST ACCESS POINT IS ALREADY IN TLR MODE
MPTM	CUSTOMER IS NOT SPECIFIED FOR THE DS0B CHANNEL
INERR	CHANNEL [s]abcddd IS NOT A MULTIPOINT MASTER LEG
INERR	THE SPECIFIED NPC [s]abc IS NOT FACILITY TERMINATING TYPE
MCOND	UNIT [q]q IS NOT FACILITY TERMINATING TYPE
INERR	TESTPORTS IN THIS GROUP INVALID FOR SR CIRCUIT
MCOND	BOTH CCN SIDES ARE OUT-OF-SERVICE
MCOND	ACTIVE CCN SIDE s IS OUT-OF -SERVICE
OOS	THE TEST PORT GROUP NPC [s]abc IS OUT-OF-SERVICE
MCOND	INACTIVE CCN SIDE IN-SERVICE AND NPC [s]abc ON INACTIVE SIDE IS OOS
F OOS	THE FROM SIDE NPC [s]abc IS OUT-OF-SERVICE
T OOS	THE TO SIDE NPC [s]abc IS OUT-OF-SERVICE

MCOND	CCNI s IS OUT-OF-SERVICE
MCOND	TSI sft IS OUT-OF-SERVICE
MCOND	CCB sf IS OUT-OF-SERVICE
MCOND	CCI s IS OUT-OF-SERVICE
MCOND	ETSI sqq IS OUT-OF-SERVICE
MCOND	UNIT [q]q IS OUT-OF-SERVICE
MCOND	UNIT [q]q FTMI d IS OUT-OF-SERVICE
MCOND	UNIT [q]q FC sb IS OUT-OF-SERVICE
MCOND	DSPI IN UNIT [q]q IS OUT-OF-SERVICE
MCOND	NPC [s]abc SIDE s IS OUT-OF-SERVICE
MCOND	ACTIVE CCN SIDE s IS FAILED
MCOND	ACTIVE CCN SIDE s IS PESTED
FAIL	THE TEST PORT GROUP NPC [s]abc IS FAILED
F FAIL	THE FROM SIDE NPC [s]abc IS FAILED
T FAIL	THE TO SIDE NPC [s]abc IS FAILED
MCOND	CCNI s IS FAILED
MCOND	TSI sft IS FAILED
MCOND	CCB sf IS FAILED
MCOND	CCI s IS FAILED
MCOND	ETSI sqq IS FAILED
MCOND	UNIT [q]q IS FAILED
MCOND	UNIT [q]q FTMI d IS FAILED
MCOND	UNIT [q]q FC sb IS FAILED
MCOND	DSPI IN UNIT [q]q IS FAILED
MCOND	NPC [s]abc SIDE s IS FAILED
ASGN	THE SPECIFIED TEST PORT IS UNDER TEST
UTST	THE SPECIFIED ACCESS POINT IS UNDER TEST
CH NOT EST	
	THE SPECIFIED ACCESS POINT IS NOT ESTABLISHED TO SR FEATURE
NMON	THE SPECIFIED TEST PORT IS ALREADY IN SPLIT MODE

NMON	A DS-OB CHANNEL CANNOT BE SPLIT UNLESS MONITORED FIRST
NUTST	THE SPECIFIED TEST PORT IS UNASSIGNED
NA	CONNECTION EXCEEDS REMAINING EC CAPACITY

SUBRATE SPLIT TEST ACCESS

Explanation of Command

This command connects a subrate circuit to test port kk and places it in the split mode. In this mode, data transmission in the tested circuit is interrupted.

The user must specify the termination number (digroup, channel, and customer numbers) to be connected to the test port. To test a single customer in a DS0B channel, the customer number is required.

Split test access to an entire multiplexed DS0B channel (rather than a single subrate circuit within the DS0B) can only be done by first monitoring the channel and then splitting it by use of this command without a digroup and channel number.

When the tested channel is a nonmultiplexed (DS0A) channel, the customer number is entered as 01, or if the user prefers, the customer number can be omitted and the system defaults the value to 01.

The specified termination can be part of a two-point circuit or the master leg or branch termination of a multipoint circuit.

1.544 Mbit/s Termination

This command overrides any static trunk conditioning that may have been specified for the test port. The test port is given TRSPMUX trunk conditioning for the duration of the subrate test access, and returned to its previous trunk conditioning state upon release.



CAUTION:

Split test access to a DS0B channel can potentially cause loss of service to as many as 20 subrate customers.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.19631]

STST:[FRM xy][,SEQ ww]:SPL[,TO [s]abcddd[/ff]],TP kk!

Hierarchical

[I.19631]

STST:[FRM xy][,SEQ ww]:SPL[,TO uvmnpddd[/ff]],TP kk!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19631]

M hh:mm:ss xy,ww n[vv] STST SPL [s]abcdddd/ff RATE rr TP kk \
[UNMAPPED| LOOPED] 2 LN MSG:
CGA (ftp) TLA s COMPL

[O.19632]

M hh:mm:ss xy,ww n[vv] STST SPL [s]abcdddd DS0B nn TP kk \
CGA (0tp) TLA s COMPL

Hierarchical

[O.19631]

M hh:mm:ss xy,ww n[vv] STST SPL uvmnpddd/ff RATE rr TP kk \
[UNMAPPED| LOOPED] 2 LN MSG:
CGA (ftp) TLA s COMPL

[O.19632]

M hh:mm:ss xy,ww n[vv] STST SPL uvmnpddd DS0B nn TP kk \
CGA (0tp) TLA s COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19631.01]

M hh:mm:ss xy,ww n[vv] STST SPL[[s]abcdddd/ff] TP kk \
<reason 1> 2 LN MSG:
<reason 2> DNY

Hierarchical

[O.19631.01]

M hh:mm:ss xy,ww n[vv] STST SPL[uvmnpddd/ff] TP kk \
<reason 1> 2 LN MSG:
<reason 2> DNY

Explanation of Parameters

SPL	Split
TO	To
[s]abc	The 3- or 4-digit nonhierarchical NPC number of the circuit side connected to the TO test port channel For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number of the circuit side connected to the TO test port channel uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number of the circuit side connected to the TO test port channel 001-024 001-047 Odd only (SLC 96[®] Carrier, Mode 3, DGA) 049-095 Odd only (SLC 96 Carrier, Mode 3, DGC) 001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA) 025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB) 049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC) 073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD) 001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA) 025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB) 049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
ff		Customer number of the circuit side connected to the TO test port channel
	01	(DS0A at 2.4, 4.8, 9.6, or 56 kb/s)
	01-20	(DS0B at 2.4 kb/s)
	01-10	(DS0B at 4.8 kb/s)
	01-05	(DS0B at 9.6 kb/s)
TP		Test port
kk		Test port number (01 through 96)
		The TP kk field indicates the test port number used for test access to the channel.
		If the test port is in the released mode, [s]abcd[ff] or uvmnp[ff] must be specified. This termination is connected to the even test port channel. If the test port already has a Subrate circuit under test, the external facility termination must not be specified or the command is denied.
UNMAPPED		Unmapped
		UNMAPPED appears in the output message if the test access point specified is established to the subrate feature but not cross-connected. When the test access point is unmapped, no signal is connected to the odd test port channel.
		A DS0B channel is always considered mapped, even when there are no customers cross-connected to it. In this case, the even test port faces the external facility and the odd test port faces the internal subrate multiplexer hardware.
DS0B		Digital Signal 0B
nn		Number of subrate customer channels (05, 10, or 20)
LOOPED		Looped
		The two-point circuit is looped upon itself.
RATE		Rate
rr		Transmission rate specification
	24	2.4 kb/s
	48	4.8 kb/s
	96	9.6 kb/s
	56	56 kb/s

	If the circuit is mapped; that is, subrate cross-connected the listed RATE is equal to the subrate cross-connect rate. For unmapped circuits, in which case the UNMAPPED keyword appears in the output, the listed rate depends on the type of test access point. If test access is to a DS0A established channel, the establish channel rate is listed. If the access is to an unconnected subrate channel of a DS0B, the listed rate is the maximum subrate supported by the DS0B.	
CGA	Carrier group alarm	
ftp	FROM, TO, and test port CGA status, respectively	
	Where the FROM side of the test access faces the master leg of a multipoint circuit, the corresponding FROM CGA status is always listed as "0"; indicating no alarm. If the test access is associated with a branch of a multipoint circuit, in which case the FROM side faces upstream towards an MJU, the CGA status of the circuit's master leg facility is listed in the FROM field.	
f	FROM CGA state	
	F	FROM facility in CGA
	0	FROM facility is not in CGA
t	TO CGA state	
	T	TO facility in CGA
	0	TO facility is not in CGA
p	Test port digroup CGA state	
	P	Test port digroup in CGA
	0	Test port digroup is not in CGA
TLA	Terminate and leave active	
s	Termination state of the access point	
	For DS0B access points s = R since such access points cannot be terminated.	
	R	RELEASED; neither side is terminated
	F	FROM side is terminated
	T	TO side is terminated
	B	BOTH sides are terminated
LPD	Looped	
reason 1	Coded reason for denial	

reason 2	Explanation of reason 1
INERR	THE SPECIFIED TEST PORT IS NOT EQUIPPED
UEQD	THE TEST PORT GROUP NPC [s]abc IS NOT EQUIPPED
F UEQD	THE FROM SIDE NPC [s]abc IS NOT EQUIPPED
T UEQD	THE TO SIDE NPC [s]abc IS NOT EQUIPPED
MCOND	TSI sft IS NOT EQUIPPED
MCOND	CCB sf IS NOT EQUIPPED
MCOND	ETSI sqq IS NOT EQUIPPED
MCOND	UNIT [q]q IS NOT EQUIPPED
MCOND	UNIT [q]q FTMI d IS NOT EQUIPPED
MCOND	UNIT [q]q FC sb IS NOT EQUIPPED
MCOND	NPC [s]abc IS NOT EQUIPPED
MCOND	NO DSPU IS EQUIPPED
MCOND	NO SRM OR MJU TYPE NPC IS EQUIPPED
RNGIE	CHANNEL NUMBER ddd IS OUT OF RANGE FOR NPC [s]abc
CN RATE	CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0B CHANNEL [s]abcddd
CN RATE	CUSTOMER NUMBER ff IS OUT OF RANGE FOR DS0A CHANNEL [s]abcddd
PCH	THE SPECIFIED ACCESS POINT IS A PARITY CHANNEL
INERR	TESTPORTS IN THIS GROUP INVALID FOR SR CIRCUIT
INERR	THE SPECIFIED NPC [s]abc IS NOT FACILITY TERMINATING TYPE
MCOND	UNIT [q]q IS NOT FACILITY TERMINATING TYPE
MCOND	BOTH CCN SIDES ARE OUT-OF-SERVICE
MCOND	ACTIVE CCN SIDE s IS OUT-OF -SERVICE
OOS	THE TEST PORT GROUP NPC [s]abc IS OUT-OF-SERVICE
MCOND	INACTIVE CCN SIDE IN-SERVICE AND NPC [s]abc ON INACTIVE SIDE IS OOS

F OOS	THE FROM SIDE NPC [s]abc IS OUT-OF-SERVICE
T OOS	THE TO SIDE NPC [s]abc IS OUT-OF-SERVICE
MCOND	CCNI s IS OUT-OF-SERVICE
MCOND	TSI sft IS OUT-OF-SERVICE
MCOND	CCB sf IS OUT-OF-SERVICE
MCOND	CCI s IS OUT-OF-SERVICE
MCOND	ETSI sqq IS OUT-OF-SERVICE
MCOND	UNIT [q]q IS OUT-OF-SERVICE
MCOND	UNIT [q]q FTMI d IS OUT-OF-SERVICE
MCOND	UNIT [q]q FC sb IS OUT-OF-SERVICE
MCOND	DSPI IN UNIT [q]q IS OUT-OF-SERVICE
MCOND	NPC [s]abc SIDE s IS OUT-OF-SERVICE
INERR	THE SPECIFIED TEST PORT CANNOT BE USED FOR SR CIRCUITS
MCOND	ACTIVE CCN SIDE s IS FAILED
MCOND	ACTIVE CCN SIDE s IS PESTED
FAIL	THE TEST PORT GROUP NPC [s]abc IS FAILED
F FAIL	THE FROM SIDE NPC [s]abc IS FAILED
T FAIL	THE TO SIDE NPC [s]abc IS FAILED
MCOND	CCNI s IS FAILED
MCOND	TSI sft IS FAILED
MCOND	CCB sf IS FAILED
MCOND	CCI s IS FAILED
MCOND	ETSI sqq IS FAILED
MCOND	UNIT [q]q IS FAILED
MCOND	UNIT [q]q FTMI d IS FAILED
MCOND	UNIT [q]q FC sb IS FAILED
MCOND	DSPI IN UNIT [q]q IS FAILED
MCOND	NPC [s]abc SIDE s IS FAILED
ASGN	THE SPECIFIED TEST PORT IS UNDER TEST
UTST	THE SPECIFIED ACCESS POINT IS UNDER TEST

CH NOT EST

THE SPECIFIED ACCESS POINT IS NOT
ESTABLISHED TO SR FEATURE

NMON THE SPECIFIED TEST PORT IS ALREADY IN
SPLIT MODE

NMON A DS-OB CHANNEL CANNOT BE SPLIT UNLESS
MONITORED FIRST

NUTST THE SPECIFIED TEST PORT IS UNASSIGNED

NA CONNECTION EXCEEDS REMAINING EC
CAPACITY

SUBRATE TEST ACCESS

Explanation of Command

This command requests termination of a subrate circuit under test on test port kk.

Before using this command, the circuit must be attached to a test port by use of either the STST,MON,TO,TP or the STST,SPL,TO,TP command.

This command can only be used on cross-connected two-point or multipoint circuits. It cannot be used during test access to entire DS0B channels or to unmapped (established but not cross-connected) external facility terminations and unmapped multipoint circuit branches. It also cannot be used for two-point circuits that are looped on themselves.



NOTE:

If the termination under test is a DS0B customer and on an Out-Of-Service NPC, this command completes; however, the new state for that termination does NOT take effect until that NPC is restored to service.

Command

1.544 Mbit/s Termination

[I.19661]

STST:[FRM xy][,SEQ ww]:{TLA|TLR} m,TP kk!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

USAGE: For standard (DS0A) access points:

[O.19661]

M hh:mm:ss xy,ww n[vv] STST {TLA|TLR} m [s]abcddd/ff RATE rr \
TP kk 2 LN MSG:
CGA (ftp) TLA s COMPL

USAGE: For access points specified in terms of an MJU and (optional) branch number:

[O.19662]

M hh:mm:ss xy,ww n[vv] STST {TLA|TLR} m MPTM [s]abcddd/ff \
MJU ssss[BRi] 2 LN MSG:
RATE rr TP kk CGA(ftp) TLA s COMPL

Hierarchical

USAGE: For standard (DS0A) access points:

[O.19661]

M hh:mm:ss xy,ww n[vv] STST {TLA|TLR} m uvmnpddd/ff RATE rr \
TP kk 2 LN MSG:
CGA (ftp) TLA s COMPL

USAGE: For access points specified in terms of an MJU and (optional) branch number:

[O.19662]

M hh:mm:ss xy,ww n[vv] STST {TLA|TLR} m MPTM uvmnpddd/ff \
MJU ssss[BRi] 2 LN MSG:
RATE rr TP kk CGA(ftp) TLA s COMPL

Denial Message

1.544 Mbit/s Termination

[O.19661.01]

M hh:mm:ss xy,ww n[vv] STST {TLA|TLR} m TP kk <reason 1> \
2 LN MSG:
<reason 2> DNY

Explanation of Parameters

TLA	Terminate and leave activate
TLR	Terminate and leave released
s	The resulting terminate and leave state of the access point upon completion of the command.
m	The requested TLA/TLR modification:
F	Terminate/release the FROM side
T	Terminate/release the TO side
B	Terminate/release BOTH sides

m is used to specify the terminate and leave state change for either the FROM, TO, or BOTH direction(s) of the circuit. The TO side is defined as the side of the circuit connected to the even numbered test port channel, and the FROM side is connected to the odd numbered test port channel. The Unassigned Multiplexer Channel (UMC) control code is inserted in the direction towards the named circuit end(s).

Before using this command, the circuit must be attached to a test port by use of the appropriate monitor or split command.

The termination state resulting from the command depends on the state prior to the command as indicated by the following table:

PRIOR STATE	REQUESTED CHANGE	NEW STATE	PRIOR STATE	REQUESTED CHANGE	NEW STATE
R	TLA F	F	R	TLR F	DNY
R	TLA T	T	R	TLR T	DNY
R	TLA B	B	R	TLR B	DNY
F	TLA F	DNY	F	TLR F	R
F	TLA T	B	F	TLR T	DNY
F	TLA B	B	F	TLR B	R
B	TLA F	DNY	B	TLR F	T
B	TLA T	DNY	B	TLR T	F
B	TLA B	DNY	B	TLR B	R
T	TLA T	DNY	T	T	R
T	F	B	T	F	DNY
T	B	B	T	B	R

TP Test Port

kk Test port number (01 through 96)

kk indicates the test port number used for test access to the circuit.

This command can only be used on cross-connected two-point or multipoint circuits. It cannot be used during test access to entire DS0B channels, to the uncorrected point in an error-corrected circuit, or to unmapped (that is, established but not cross-connected) external facility terminations and unmapped multipoint circuit branches. It also cannot be used for two-point circuits that are looped on themselves.

MJU	Multipoint junction unit
ssss	MJU number of MJU under test (0001 through 9999)
BR	Branch
i	Branch number of MJU under test (1 through 4)
ff	Customer number of circuit under test, or of multipoint master leg
	01 (DSOA at 2.4, 4.8, 9.6, or 56 kb/s)
	01-20 (DSOB at 2.4 kb/s)
	01-10 (DSOB at 4.8 kb/s)
	01-05 (DSOB at 9.6 kb/s)
[s]abc	Nonhierarchical NPC number of the external facility termination connected to the TO test port channel or of multipoint master leg For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number of the external facility termination connected to the TO test port channel or of multipoint master leg
	uv Unit number
	m Module number
	np NPC number within the module
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number of the external facility termination connected to the TO test port channel or of multipoint master leg
	001-024
	001-047 Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)

	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
RATE	Rate	
rr	Transmission rate specification	
	24	2.4 kb/s
	48	4.8 kb/s
	96	9.6 kb/s
	56	56 kb/s
	The customer rate of the circuit is indicated by rr. This is the rate at which the circuit is mapped (that is, subrate cross-connected via an SCON or SCNT command).	
CGA	Carrier group alarm	
ftp	FROM, TO, and test port CGA alarm status.	
	Where the FROM side of the test access faces the master leg of a multipoint circuit, the corresponding FROM CGA status is always listed as "0"; indicating no alarm.	
	If the test access is associated with a branch of a multipoint circuit, in which case the FROM side faces upstream towards an MJU, the CGA status of the circuit's master leg facility is listed in the FROM field.	
f	FROM CGA state	
	F	FROM facility in CGA
	0	FROM facility is not in CGA
t	TO CGA state	
	T	TO facility in CGA
	0	TO facility is not in CGA
p	Test port digroup CGA state	
	P	Test port digroup in CGA

	0	Test port digroup is not in CGA
F		FROM facility in CGA
0		FROM facility is not in CGA
T		TO facility in CGA
0		TO facility is not in CGA
P		Test port digroup in CGA
0		Test port digroup is not in CGA
s		Termination state of the access point
	F	FROM side is terminated
	T	TO side is terminated
	B	BOTH sides are terminated
	R	Neither side is terminated
reason 1		Coded reason for denial
reason 2		Explanation of reason 1
	INERR	THE SPECIFIED TEST PORT IS NOT EQUIPPED
	UEQD	THE TEST PORT GROUP NPC [s]abc IS NOT EQUIPPED
	F UEQD	THE FROM SIDE NPC [s]abc IS NOT EQUIPPED
	T UEQD	THE TO SIDE NPC [s]abc IS NOT EQUIPPED
	MCOND	TSI sft IS NOT EQUIPPED
	MCOND	CCB sf IS NOT EQUIPPED
	MCOND	ETSI sqq IS NOT EQUIPPED
	MCOND	UNIT [q]q IS NOT EQUIPPED
	MCOND	UNIT [q]q FTMI d IS NOT EQUIPPED
	MCOND	UNIT [q]q FC sb IS NOT EQUIPPED
	MCOND	NO DSPU IS EQUIPPED
	MCOND	NO SRM OR MJU TYPE NPC IS EQUIPPED
	INERR	TLA CANNOT BE SPECIFIED FOR A LOOPED CHANNEL
	INERR	TLR CANNOT BE SPECIFIED FOR DS-0B
	INERR	TLA CANNOT BE SPECIFIED FOR DS-0B
	UASGN	TLA CANNOT BE SPECIFIED FOR AN UNMAPPED CIRCUIT

UASGN	TLR CANNOT BE SPECIFIED FOR AN UNMAPPED CIRCUIT
MCOND	UNIT [q]q IS NOT FACILITY TERMINATING TYPE
MCOND	BOTH CCN SIDES ARE OUT-OF-SERVICE
MCOND	ACTIVE CCN SIDE s IS OUT-OF -SERVICE
OOS	THE TEST PORT GROUP NPC [s]abc IS OUT-OF-SERVICE
MCOND	INACTIVE CCN SIDE IN-SERVICE AND NPC [s]abc ON INACTIVE SIDE IS OOS
F OOS	THE FROM SIDE NPC [s]abc IS OUT-OF-SERVICE
T OOS	THE TO SIDE NPC [s]abc IS OUT-OF-SERVICE
MCOND	CCNI s IS OUT-OF-SERVICE
MCOND	TSI sft IS OUT-OF-SERVICE
MCOND	CCB sf IS OUT-OF-SERVICE
MCOND	CCI s IS OUT-OF-SERVICE
MCOND	ETSI sqq IS OUT-OF-SERVICE
MCOND	UNIT [q]q IS OUT-OF-SERVICE
MCOND	UNIT [q]q FTMI d IS OUT-OF-SERVICE
MCOND	UNIT [q]q FC sb IS OUT-OF-SERVICE
MCOND	DSPI IN UNIT [q]q IS OUT-OF-SERVICE
MCOND	NPC [s]abc SIDE s IS OUT-OF-SERVICE
MCOND	ACTIVE CCN SIDE s IS FAILED
MCOND	ACTIVE CCN SIDE s IS PESTED
FAIL	THE TEST PORT GROUP NPC [s]abc IS FAILED
F FAIL	THE FROM SIDE NPC [s]abc IS FAILED
T FAIL	THE TO SIDE NPC [s]abc IS FAILED
MCOND	CCNI s IS FAILED
MCOND	TSI sft IS FAILED
MCOND	CCB sf IS FAILED
MCOND	CCI s IS FAILED
MCOND	ETSI sqq IS FAILED
MCOND	UNIT [q]q IS FAILED

MCOND	UNIT [q]q FTMI d IS FAILED
MCOND	UNIT [q]q FC sb IS FAILED
MCOND	DSPI IN UNIT [q]q IS FAILED
MCOND	NPC [s]abc SIDE s IS FAILED
M OOS	THE MULTIPOINT MASTER (MPTM) NPC [s]abc IS OUT-OF-SERVICE
M UEQD	THE MULTIPOINT MASTER (MPTM) NPC [s]abc IS NOT EQUIPPED
M FAIL	THE MULTIPOINT MASTER (MPTM) NPC [s]abc IS FAILED
CH NOT EST	THE SPECIFIED TEST PORT IS NOT ESTABLISHED TO THE SR FEATURE
INERR	TESTPORTS IN THIS GROUP INVALID FOR SR CIRCUIT
NTLA	THE SPECIFIED TEST ACCESS POINT IS ALREADY IN TLA MODE
PTLA	THE SPECIFIED TEST ACCESS POINT IS ALREADY IN TLA MODE
NUTST	THE SPECIFIED TEST PORT IS UNASSIGNED
NA	CONNECTION EXCEEDS REMAINING EC CAPACITY

DISCONNECT TEST ACCESS TIME SLOT

Explanation of Command

1.544 Mbit/s Termination

This command releases all Subrate circuits from test access and restores the circuit to normal. If the ALL keyword is specified, only those test ports whose test access was originally connected by administrative link n[vv] are released. If the LINKS keyword is specified, all test ports connected to subrate channels or customers are released, regardless of which administrative link initiated the test access.

This command does not affect the terminate and leave state of the released circuit. If the circuit was terminated either before or during test access, it retains the termination state upon release.

Command

1.544 Mbit/s Termination

[I.19681]

STST:[FRM xy][,SEQ ww]:TPR,{ALL|LINKS}!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.19681]

M hh:mm:ss xy,ww n[vv] STST TPR ALL COMPL

[O.19682]

M hh:mm:ss xy,ww n[vv] STST TPR ALL 2 LN MSG:
NO SUBRATE TEST PORTS WERE ACTIVE BY LINK COMPL

[O.19687]

M hh:mm:ss xy,ww n[vv] STST TPR LINKS 2 LN MSG:
NO SUBRATE TEST PORTS WERE ACTIVE COMPL

**Explanation of
Parameters****TPR**

Test port release

ALL

All

When specified, this keyword causes the release of only those test ports whose test access was initiated (that is, originally connected) by administrative link $\eta[vv]$. If the ALL keyword is used, both SRDC and non-SRDC circuits are released.

LINKS

Links

When specified, this keyword causes all test ports connected to Substrate channels or customers to be released, regardless of which administrative link initiated the test access.

SUBRATE TEST ACCESS

Explanation of Command

This command releases a subrate circuit from test access on a test port and restores the circuit to normal. The output from this command depends upon whether the access point is a DS0A, DS0B, or MJU.

This command does not affect the terminate and leave state of the released circuit. If the circuit is terminated either before or during test access, it retains the termination state upon release.

Command

1.544 Mbit/s Termination

[I.19671]

STST:[FRM xy][,SEQ ww]:TPR,TP kk!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

USAGE: For standard (DS0A) Subrate test access points:

[O.19671]

M hh:mm:ss xy,ww n[vv] STST TPR [s]abcddd/ff RATE rr TP kk 2 LN \
MSG:
TLA s[UNMAPPED|LOOPED][00S] COMPL

USAGE: For DS0B test access points:

[O.19672]

M hh:mm:ss xy,ww n[vv] STST TPR [s]abcddd DS0B nn TP kk 2 LN MSG:
TLA R[00S] COMPL

USAGE: For access points specified in terms of an MJU and (optional) branch number:

[O.19674]

M hh:mm:ss xy,ww n[vv] STST TPR [s]abcddd/ff RATE rr TP kk \
MJU ssss[BRi] 2 LN MSG:
TLA s[UNMAPPED][OOS] COMPL

Hierarchical

USAGE: For standard (DS0A) Subrate test access points:

[O.19671]

M hh:mm:ss xy,ww n[vv] STST TPR uvmnpddd/ff RATE rr TP kk 2 LN MSG:
TLA s[UNMAPPED|LOOPED][OOS] COMPL

USAGE: For DS0B test access points:

[O.19672]

M hh:mm:ss xy,ww n[vv] STST TPR uvmnpddd DS0B nn TP kk 2 LN MSG:
TLA R[OOS] COMPL

USAGE: For access points specified in terms of an MJU and
(optional) branch number:

[O.19674]

M hh:mm:ss xy,ww n[vv] STST TPR uvmnpddd/ff RATE rr TP kk \
MJU ssss[BRi] 2 LN MSG:
TLA s[UNMAPPED][OOS] COMPL

Denial Message

1.544 Mbit/s Termination

[O.19671.01]

M hh:mm:ss xy,ww n[vv] STST TPR TP kk <reason 1> 2 LN MSG:
<reason 2> DNY

Explanation of Parameters

TPR	Test port release The termination number (combined NPC, channel, and customer number) indicates the external facility termination of the circuit released from the TO side of the test port.
TP	Test port
kk	Test port number (01 through 96)

[s]abctddd/ff	External facility termination released from the TO test port channel
RATE	Rate
rr	Transmission rate specification
24	2.4 kb/s
48	4.8 kb/s
96	9.6 kb/s
56	56 kb/s
	If the circuit is mapped (subrate cross-connected) the listed RATE is equal to the subrate cross-connect rate. For unmapped circuits, the listed rate depends on the type of test access point. If test access is to a DS0A established channel, the establish channel rate is listed. If the access is to an unconnected subrate channel of a DS0B, the listed rate is the maximum subrate supported by the DS0B.
UNMAPPED	Unmapped
LOOPED	Looped
TLA	Terminate and leave status of the circuit after it is released from test access
s	Termination state of the released circuit
F	FROM side is terminated
B	BOTH sides are terminated
R	RELEASED; neither side is terminated
T	TO side is terminated
[s]abc	The 3- or 4-digit nonhierarchical NPC number of circuit under test, or of multipoint master leg
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number of circuit under test, or of multipoint master leg
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number of circuit under test, or of multipoint master leg
001-024	
001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)

	001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
ff	Customer number of circuit under test, or of multipoint master leg	
	01	(DSOA at 2.4, 4.8, 9.6, or 56 kb/s)
	01-20	(DSOB at 2.4 kb/s)
	01-10	(DSOB at 4.8 kb/s)
	01-05	(DSOB at 9.6 kb/s)
DS0B	Digital signal zero B	
nn	Number of DS0B substrate customer channels (05, 10, or 20)	
MJU	Multipoint junction unit	
ssss	MJU number of MJU under test (0001 through 9999)	
BR	Branch	
i	Branch number of MJU under test (1 - 4)	
OOS	Out of service	
	The facility terminating NPC is out-of-service	
reason 1	Coded reason for denial	
reason 2	Explanation of reason 1	
	INERR	THE SPECIFIED TEST PORT IS NOT EQUIPPED
	INERR	TESTPORTS IN THIS GROUP INVALID FOR SR CIRCUIT
	UEQD	THE TEST PORT GROUP NPC [s]abc IS NOT EQUIPPED
	MCOND	TSI sft IS NOT EQUIPPED

MCOND	CCB sf IS NOT EQUIPPED
MCOND	ETSI sqq IS NOT EQUIPPED
MCOND	UNIT [q]q IS NOT EQUIPPED
MCOND	UNIT [q]q FTMI d IS NOT EQUIPPED
MCOND	UNIT [q]q FC sb IS NOT EQUIPPED
MCOND	NO DSPU IS EQUIPPED
MCOND	NO SRM OR MJU TYPE NPC IS EQUIPPED
MCOND	UNIT [q]q IS NOT FACILITY TERMINATING TYPE
MCOND	BOTH CCN SIDES ARE OUT-OF-SERVICE
MCOND	ACTIVE CCN SIDE s IS OUT-OF -SERVICE
OOS	THE TEST PORT GROUP NPC [s]abc IS OUT-OF-SERVICE
MCOND	INACTIVE CCN SIDE IN-SERVICE AND NPC [s]abc ON INACTIVE SIDE IS OOS
MCOND	CCNI s IS OUT-OF-SERVICE
MCOND	TSI sft IS OUT-OF-SERVICE
MCOND	CCB sf IS OUT-OF-SERVICE
MCOND	CCI s IS OUT-OF-SERVICE
MCOND	ETSI sqq IS OUT-OF-SERVICE
MCOND	UNIT [q]q IS OUT-OF-SERVICE
MCOND	UNIT [q]q FTMI d IS OUT-OF-SERVICE
MCOND	UNIT [q]q FC sb IS OUT-OF-SERVICE
MCOND	DSPI IN UNIT [q]q IS OUT-OF-SERVICE
MCOND	NPC [s]abc SIDE s IS OUT-OF-SERVICE
MCOND	ACTIVE CCN SIDE s IS FAILED
MCOND	ACTIVE CCN SIDE s IS PESTED
FAIL	THE TEST PORT GROUP NPC [s]abc IS FAILED
F FAIL	THE FROM SIDE NPC [s]abc IS FAILED
T FAIL	THE TO SIDE NPC [s]abc IS FAILED
MCOND	CCNI s IS FAILED
MCOND	TSI sft IS FAILED
MCOND	CCB sf IS FAILED

MCOND CCI s IS FAILED
MCOND ETSI sqq IS FAILED
MCOND UNIT [q]q IS FAILED
MCOND UNIT [q]q FTMI d IS FAILED
MCOND UNIT [q]q FC sb IS FAILED
MCOND DSPI IN UNIT [q]q IS FAILED
MCOND NPC [s]abc SIDE s IS FAILED

CH NOT EST

THE SPECIFIED TEST PORT IS NOT
ESTABLISHED TO A SR CIRCUIT

NUTST THE SPECIFIED TEST PORT IS UNASSIGNED

NA CONNECTION EXCEEDS REMAINING EC
CAPACITY

DS0 CIRCUIT ROLL - BRIDGE COMMAND

Explanation of Command

This command is used to perform the Bridge step of the DS0 (64kbit/s) Roll operation. (For DS1 or 2 Mbit/s Roll operations, use the commands I.14061, I.14071, and I.14081.)

Test signals may exist on the new DS0. If allowed to remain, they overwrite the signal transferred from the old DS0.

Use the UTL::QRY,TSIG,NPC command, prior to executing this command, to verify that no test signals exist on the new DS0.

The DS0 (64kbit/s) Roll procedure consists of three commands:

1. Bridge

This step bridges the transmit data by broadcasting to the new DS0 as well as the old DS0. Use this command.

2. Roll

This step rolls the service by switching the receive data from the old DS0 to the new DS0. Use command I.14031.

3. Cut

This step takes down the bridge by disconnecting the transmit data from the old DS0. Use command I.14041.



NOTE:

The ROLL procedure will re-direct ALL cross-connections associated with the DS0 signal being rolled.

1.544 Mbit/s Termination

The user should limit the number of subrate channels established to a digroup using D4-type framing. When the unassigned multiplex code (UMC) is present on too many channels, it simulates a yellow alarm. A limit of 10 channels is safe for an AT&T D-bank. This problem only exists when the DS0Bs are established but not connected.

Command**Nonhierarchical**

[I.14021]

SW:[FRM xy][,SEQ ww]:BCAST,OLD [s]abcddd[-eee],NEW [t]ghijjj \
[-kkk][,INCL]**Hierarchical**

[I.14021]

SW:[FRM xy][,SEQ ww]:BCAST,OLD uvmnpddd[-eee],NEW wxkqrjjj \
[-kkk][,INCL]**Completion
Message****Nonhierarchical**

[O.14021]

M hh:mm:ss xy,ww n[vv] SW BCAST [s]abcddd[-eee],[t]ghijjj[-kkk] \
[INCL] COMPL**Hierarchical**

[O.14021]

M hh:mm:ss xy,ww n[vv] SW BCAST uvmnpddd[-eee],wxkqrjjj[-kkk] \
[INCL] COMPL**Denial Message****Nonhierarchical**

[O.14021.01]

M hh:mm:ss xy,ww n[vv] SW BCAST [s]abcddd[-eee],[t]ghijjj[-kkk] \
[INCL][mmm,nnn] COND cc DNY**Hierarchical**

[O.14021.01]

M hh:mm:ss xy,ww n[vv] SW BCAST uvmnpddd[-eee],wxkqrjjj[-kkk] \
[INCL][mmm,nnn] COND cc DNY**Explanation of
Parameters****BCAST**

Broadcast

OLD

Old

The bridge step does not need the OLD NPC to be in service, however the roll step does. Therefore, the bridge step may be allowed and the subsequent roll step is denied.

For the hierarchical unit entities, however, the bridge step needs both the OLD NPC hierarchy and the NEW NPC hierarchy to be in service. Otherwise, the bridge step is denied.

NEW	New
[s]abc	The 3- or 4-digit nonhierarchical OLD NPC number
[t]ghi	The 3- or 4-digit nonhierarchical NEW NPC number

1.544 Mbit/s Termination

⇒ **NOTE:**
Valid types for old and new NPCs are DExyz and DAxyz (except DE9y9 and DA9y9) and TExyz and TAxz (except TE9y9 and TA9y9).

2.048 Mbit/s Termination

⇒ **NOTE:**
Valid types for old and new NPCs are PAxyz, PBxyz, PCxyz, and THxyz except for the following cases:

- Either NPC is of type PAxyz where y=C or y=D (Clear 2Mb/s)
- The old NPC supports Channel Associated Signaling (CAS) and the new NPC does not
- The old NPC supports Non Signaling Associated, the new NPC supports CAS, and CTS16 is being rolled to CTS16

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp	Hierarchical OLD NPC number
wxkqr	Hierarchical NEW NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

ddd, jjj	Channel numbers for beginning of channel range
eee, kkk	Channel numbers for end of channel range

	To connect a range of channels, use the optional fields eee and kkk.
INCL	Inclusive A circuit designated as a customer controlled circuit, a red circuit or a subrate T1 circuit cannot be modified without using the inclusive keyword in the message. Also, an NPC which supports these circuits cannot be manually removed unless the INCL keyword is given in the remove message.
mmm	The OLD channel number involved in denial (ddd through eee).
nnn	The NEW channel number involved in denial (jjj through kkk).
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
05	Subject entity is pested
1E	Customer control or red circuit exists
26	NPC type error
01	Invalid range for specified NPC type
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
21	Trunk conditioning is invalid
32	Termination is under test
33	Termination is a test port

cc	<i>Explanation</i>
C8	Exceeded depth limit of 6 on broadcast conference concatenation
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inactive side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
46	NPC Failed or Out of Service
A9	Cross-connect not consistent with feature package
B7	No DSP unit equipped
B8	No CBTYPE NPC equipped
B9	No CBTYPE NPC capacity remaining
BA	Inactive side NPC out of service and inactive side in service
EA	AIS invalid for cross-connection specified
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
0A	All CBTYPE NPCs out of service or failed
7E	Incomplete circuit exists on OLD NPC
E0	ETSI not equipped, not in service, or failed
68	New NPC already cross-connected or mapped channel(s) exist on New
69	Mapped parity channel(s) on new
6C	Old and New channel on same NPC and within the range

cc	<i>Explanation</i>
6E	Old or new is a non-channelized type in a DS0 command
6F	The OLD or NEW NPC is already being rolled.
70	One of the FAR end channels is being rolled
71	Unmapped channel(s) on old
72	One of the far NPC(s) is SLC
73	Channel has a FAR, which is within the range
77	Obsolete circuit type
78	Ranges of old and new do not match
79	DCTN conference channel cannot be rolled
7A	Testport/testgroup channel cannot be rolled
7B	Channel out-of-bounds in a Broadcast or Virtual Circuit
7C	Parity channel out of bound on new
7D	Not first channel in a BCON/virtual conf
9C	Parity channel cannot be within the range of a DS0 command.

FACILITY ROLL - BRIDGE COMMAND

Explanation of Command

This input command is used to perform the Bridge step of the DS1 or 2Mbit/s Roll operation. (For DS0 Roll operations, use the commands I.14021, I.14031, and I.14041.)

Test signals may exist on the new DS0. If allowed to remain they overwrites the signal transferred from the old DS0.

Use the UTL::QRY,TSIG,NPC command, prior to executing this command, to verify that no test signals exist on the new DS0.

This command is denied with a condition code of 73 if one or more pairs of channels within the old NPC are cross-connected to each other. This command is also denied with the same condition code if a channel is looped back on itself.

The error message that corresponds to condition code 73:

Channel has a FAR, which is within the range

The term FAR in that error message refers to the other channel that is cross-connected to a channel on the NPC that is being rolled, but the other channel of the cross-connection must not be rolled, thus the error message occurs for a cross-connection that connects two channels on the same NPC.

The DS1 or 2Mbit/s Roll procedure consists of three commands:

1. Bridge

This step bridges the transmit data by broadcasting to the new NPC as well as the old NPC. Use this command.

2. Roll

This step rolls the service by switching the receive data from the old NPC to the new NPC. Use command I.14071.

3. Cut

This step takes down the bridge by disconnecting the transmit data from the old NPC. Use command I.14081.

1.544 Mbit/s Termination

The user should limit the number of subrate channels established to a digroup using D4-type framing. When the unassigned multiplex code (UMC) is present on too many channels, it simulates a yellow alarm. A limit of 10 channels is safe for an AT&T D-bank. This problem only exists when the DS0Bs are established but not connected.

Command

Nonhierarchical

[I.14061]

SW:[FRM xy][,SEQ ww]:BCAST,OLD [s]abc,NEW [t]ghi[,INCL]

Hierarchical

[I.14061]

SW:[FRM xy][,SEQ ww]:BCAST,OLD uvmnp,NEW wxkqr[,INCL]

Completion Message

Nonhierarchical

[O.14061]

M hh:mm:ss xy,ww n[vv] SW BCAST [s]abc,[t]ghi[INCL] COMPL

Hierarchical

[O.14061]

M hh:mm:ss xy,ww n[vv] SW BCAST uvmnp,wxkqr[INCL] COMPL

Denial Message

Nonhierarchical

[O.14061.01]

M hh:mm:ss xy,ww n[vv] SW BCAST [s]abc,[t]ghi \
[INCL][mmm,nnn] COND cc DNY

Hierarchical

[O.14061.01]

M hh:mm:ss xy,ww n[vv] SW BCAST uvmnp,wxkqr \
[INCL][mmm,nnn] COND cc DNY

Explanation of Parameters

BCAST	Broadcast
OLD	Old The bridge step does not need the OLD NPC to be in service; however, the roll step does. Therefore, it is possible that the bridge step is allowed but the subsequent roll step is denied. For the hierarchical unit entities, however, the bridge step needs both the OLD NPC hierarchy and the NEW NPC hierarchy to be in service. Otherwise, the bridge step will be denied.
NEW	New
[s]abc	The 3- or 4-digit nonhierarchical OLD NPC number
[t]ghi	The 3- or 4-digit nonhierarchical NEW NPC number

1.544 Mbit/s Termination

⇒ **NOTE:**
Valid types for old and new NPCs are DExyz, DAxzy, TExyz, and TAxzy.

2.048 Mbit/s Termination

⇒ **NOTE:**
Valid types for old and new NPCs are PAXyz, PBxyz, PCxyz, and THxyz.

⇒ **NOTE:**
The valid combinations of old/new NPCs are as follow:

- When the old NPC is of type PBxyz/PCxyz, the new NPC is of type PBxyz/PCxyz and the xyz values of the old and new NPCs are the same.

- When the old NPC is of type PBxyz/PCxyz, the new NPC is of type PAxyz, and the xyz values of the old and new NPCs are equivalent. The characteristics in the PBxyz/PCxyz are present in the PAxyz type, even though the xyz values are different.
- When the old NPC is of type PAxyz, the new NPC is of type PAxyz and the xyz values of the old and new NPCs are the same.

The roll procedure will be denied based upon the valid combinations rules, the service status of the old/new NPCs, the new NPC under PBA, channels on the old/new NPCs under test or loopback. The denial messages will explain the denial condition.

If a channel is involved in C-bit monitoring (i.e. its C bits is being monitored by the C-bit processor), the roll still takes place, the CTS16 cross-connection to the C-bit processor on the old NPC remains unimpacted, and the rolled channel will not automatically be C-bit monitored on the new NPC.

At the facility level, however, 2Mbit/s roll will be denied if the CTS16 is cross-connected to the C-bit processor.

Some information is carried forward from the old to the new NPC. Some information is NOT carried forward with the roll.

Information being carried forward to the new NPC:

- Channel Timeslot 0 (CTS0) alarm bit settings (e.g. alarm bits 3,4,5 can be set to 0 or 1).
- Spare bit settings for CTS0 to CTS0 cross connection. (dictate how the spare bits will be treated: passthrough, invert, etc.)
- Spare bit settings for CTS0 to non CTS0 cross connection.
- The Pseudo Frame Word (PFW) or the NFW (Mode 2) mode.
- All circuit parameters (e.g. RDLC, CUS, trunk conditioning, etc.) are retained for all channels.

It is important to note that if a roll procedure is reversed, the copying of the CTS0 settings to the new NPC will NOT be reversed. Therefore, the copied CTS0 settings on the new NPC will remain there.

Information NOT being carried forward to the new NPC:

- Alarm severity level information (alarms can be provisioned to be informational, minor, major, etc.)

- Threshold parameters, including THMODE state.
- Since xyz must be the same (or equivalent) between the old and new NPCs, if the old NPC is provisioned to be a possible Synchronization source, the new NPC must also be provisioned as one. However, the roll will not cause the new NPC to be an **active** sync source, even if the old one is.

In addition, it should be noted that all of the CTS0-related settings on the old NPC will not be affected by the roll. They will remain unchanged.

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical OLD NPC number

wxkqr

Hierarchical NEW NPC number

uv,wx Unit number

m,k Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

INCL

Inclusive

A circuit designated as a customer controlled circuit, a red circuit or a substrate T1 circuit cannot be modified without using the inclusive keyword in the message. Also, an NPC which supports these circuits cannot be manually removed unless the INCL keyword is given in the remove message.

ccHexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
05	Subject entity is pested
1E	Customer control or red circuit exists
26	NPC type error
01	Invalid range for specified NPC type

cc	<i>Explanation</i>
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
21	Trunk conditioning is invalid
32	Termination is under test
C8	Exceeded depth limit of 6 on broadcast conference concatenation
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
46	NPC Failed or Out of Service
A9	Cross-connect not consistent with feature package
B6	C-bit operations are enabled
B7	No DSP unit equipped
B8	No CBTYPE NPC equipped
B9	No CBTYPE NPC capacity remaining

cc	<i>Explanation</i>
BA	Inactive side NPC out of service and inactive side in service
EA	AIS invalid for cross-connection specified
0A	All CBTYPE NPCs out of service or failed
7E	Incomplete circuit exists on OLD NPC
E0	ETSI not equipped, not in service, or failed
68	New NPC already cross-connected or mapped channel(s) exist on New
6B	No mapped channel on old
6D	One NPC is a non-channelized type and the other is not
6F	The OLD or NEW NPC is already being rolled.
70	One of the FAR end channels is being rolled
72	One of the far NPC(s) is SLC
73	Channel has a FAR, which is within the range
74	Old and new are the same NPC in a DS1 command
77	Obsolete circuit type
79	DCTN conference channel cannot be rolled
7A	Testport/testgroup channel cannot be rolled
7B	Channel out-of-bounds in a Broadcast or Virtual Circuit
7C	Parity channel out of bound on new
7D	Not first channel in a BCON/virtual conf
9B	Termination is under test or is a test port or group
9C	Parity channel cannot be within the range of a DS0 command.

DS0 CIRCUIT ROLL - DISCONNECT COMMAND

Explanation of Message

This input command is used to perform the Cut step of the DS0 (or 64 kbit/s) Roll operation. (For DS1 or 2 Mbit/s Roll operations use the commands I.14061, I.14071, and I.14081.)

The DS0 (or 64kbit/s) Roll procedure consists of three commands:

1. Bridge

This step will bridge the transmit data by broadcasting to the new DS0 as well as the old DS0. Use command I.14021.

2. Roll

This step rolls the service by switching the receive data from the old DS0 to the new DS0. Use command I.14031.

3. Cut

This step takes down the bridge by disconnecting the transmit data from the old DS0. Use this command.



NOTE:

The ROLL procedure will re-direct ALL cross-connections associated with the DS0 signal being rolled.

Command

Nonhierarchical

[I.14041]

SW:[FRM xy][,SEQ ww]:DISC [s]abcddd[-eee][,OOS]

Hierarchical

[I.14041]

SW:[FRM xy][,SEQ ww]:DISC uvmnpddd[-eee][,OOS]

**Completion
Message****Nonhierarchical**

[O.14041]

M hh:mm:ss xy,ww n[vv] SW DISC [s]abcddd[-eee][OOS] COMPL

Hierarchical

[O.14041]

M hh:mm:ss xy,ww n[vv] SW DISC uvmnpddd[-eee][OOS] COMPL

Denial Message**Nonhierarchical**

[O.14041.01]

M hh:mm:ss xy,ww n[vv] SW DISC [s]abcddd[-eee] \
[OOS][mmm] COND cc DNY**Hierarchical**

[O.14041.01]

M hh:mm:ss xy,ww n[vv] SW DISC uvmnpddd[-eee]
[OOS][mmm] COND cc DNY**Explanation of
Parameters****DISC**

Disconnect

[s]abc

The 3- or 4-digit nonhierarchical NPC number

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

**NOTE:**

For 1.544-Mb/s interfaces, valid NPC types are DExyz and DAxyz (except DE9y9 and DA9y9) and TExyz and TAxzy (except TE9y9 and TA9y9).

**NOTE:**

For 2.048-Mb/s interfaces, valid NPC types are PAxyz, PBxyz, and PCxyz, except for the following cases:

- Either NPC is of type PAxyz where y=C or y=D (Clear 2Mb/s)
- The old NPC supports Channel Associated Signaling (CAS) and the new NPC does not.

- The old NPC supports Non-Signaling Associated (NSA), the new NPC supports CAS and CTS16 is being rolled to CTS16.

uvmnp Hierarchical OLD NPC number

wxkqr Hierarchical NEW NPC number

uv,wx Unit number

m,k Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

ddd Channel number for beginning of channel range

eee Channel number for end of channel range

To connect a range of channels, use the optional field eee.

OOS Out Of Service

The OOS keyword is used to force a disconnect from an NPC which is out of service.

mmm The channel number involved in denial (ddd through eee).

cc Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
01	Invalid range for specified NPC type
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
C8	Exceeded depth limit of 6 on broadcast conference concatenation

cc	<i>Explanation</i>
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
A9	Cross-connect not consistent with feature package
B7	No DSP unit equipped
B8	No CBTYPE NPC equipped
B9	No CBTYPE NPC capacity remaining
BA	Inactive side NPC out of service and inactive side in service
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
0A	All CBTYPE NPCs out of service or failed
E0	ETSI not equipped, not in service, or failed
67	Improper roll command sequence
6C	Old and New channel on same NPC and within the range
75	Old and new channels have not been paired by a BCAST command.
76	Channel or NPC not bridged
79	DCTN conference channel cannot be rolled
7A	Testport/testgroup channel cannot be rolled
7B	Channel out-of-bounds in a Broadcast or Virtual Circuit

cc	<i>Explanation</i>
7C	Parity channel out of bound on new
7D	Not first channel in a BCON/virtual conf
9C	Parity channel cannot be within the range of a DS0 command.

FACILITY ROLL - DISCONNECT COMMAND

Explanation of Command

This input command is used to perform the Cut step of the DS1 or 2Mbit/s Roll procedure. (For DS0 Roll operations, use the commands I.14021, I.14031, and I.14041.)

The DS1 or 2Mbit/s Roll procedure consists of three commands:

1. Bridge

This step bridges the transmit data by broadcasting to the new NPC as well as the old NPC. Use command I.14061.

2. Roll

This step rolls the service by switching the receive data from the old NPC to the new NPC. Use command I.14071.

3. Cut

This step takes down the bridge by disconnecting the transmit data from the old NPC. Use this command.

Command

Nonhierarchical

[I.14081]

SW:[FRM xy][,SEQ ww]:DISC [s]abc[,OOS]

Hierarchical

[I.14081]

SW:[FRM xy][,SEQ ww]:DISC uvmnp[,OOS]

Completion Message

Nonhierarchical

[O.14081]

M hh:mm:ss xy,ww n[vv] SW DISC [s]abc[OOS] COMPL

Hierarchical

[O.14081]

M hh:mm:ss xy,ww n[vv] SW DISC uvmpn[OOS] COMPL

Denial Message

Nonhierarchical

[O.14081.01]

M hh:mm:ss xy,ww n[vv] SW DISC [s]abc[OOS][mmm] COND cc DNY

Hierarchical

[O.14081.01]

M hh:mm:ss xy,ww n[vv] SW DISC uvmpn [OOS][mmm] COND cc DNY

Explanation of Parameters

DISC Disconnect
[s]abc The 3- or 4-digit nonhierarchical NPC number

1.544 Mbit/s Termination

⇒ **NOTE:**
Valid NPC types are DExyz, DAxyz, TExyz, TAxzy, THxyz.

2.048 Mbit/s Termination

⇒ **NOTE:**
Valid NPC types are PAxyz, PBxyz, and PCxyz.

⇒ **NOTE:**
The valid combinations of old/new NPCs are as follow:

- When the old NPC is of type PBxyz/PCxyz, the new NPC is of type PBxyz/PCxyz and the xyz values of the old and new NPCs are the same.
- When the old NPC is of type PBxyz/PCxyz, the new NPC is of type PAxyz, and the xyz values of the old and new NPCs are equivalent. The characteristics in the PBxyz/PCxyz are present in the PAxyz type, even though the xyz values are different.

- When the old NPC is of type PAXyz, the new NPC is of type PAXyz and the xyz values of the old and new NPCs are the same.

The roll procedure is denied based upon the valid combinations rules, the service status of the old/new NPCs, the new NPC under PBA, channels on the old/new NPCs under test or loopback. The denial messages explain the denial condition.

If a channel is involved in C-bit monitoring (i.e., its C bits is being monitored by the C-bit processor), the roll still takes place, the CTS16 cross-connection to the C-bit processor on the old NPC remains unimpacted, and the rolled channel does not automatically become C-bit monitored on the new NPC.

At the facility level, however, 2Mbit/s roll is denied if the CTS16 is cross-connected to the C-bit processor.

Some information is carried forward from the old to the new NPC. Some information is NOT carried forward with the roll.

Information being carried forward to the new NPC:

- Channel Timeslot 0 (CTS0) alarm bit settings (e.g. alarm bits 3,4,5 can be set to 0 or 1).
- Spare bit settings for CTS0 to CTS0 cross connection. (dictate how the spare bits will be treated: passthrough, invert, etc.)
- Spare bit settings for CTS0 to non CTS0 cross connection.
- The Pseudo Frame Word (PFW) or the NFW (Mode 2) mode.
- All circuit parameters (e.g. RDLC, CUS, trunk conditioning, etc.) are retained for all channels.

Even if a roll procedure is reversed, the copying of the CTS0 settings to the new NPC will **NOT** be reversed. Therefore, the copied CTS0 settings on the new NPC remains there.

Information NOT being carried forward to the new NPC:

- Alarm severity level information (alarms can be provisioned to be informational, minor, major, etc.)
- Threshold parameters, including THMODE state.
- Since xyz must be the same (or equivalent) between the old and new NPCs, if the old NPC is provisioned to be a possible Synchronization source, the new NPC must also be provisioned as one. However, the roll does not cause the new NPC to be an **active** sync source, even if the old one is.

In addition, it should be noted that all of the CTS0-related settings on the old NPC will not be affected by the roll. They will remain unchanged.

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical OLD NPC number

wxkqr

Hierarchical NEW NPC number

uv,wx Unit number

m,k Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

OOS

Out of service

The OOS keyword is used to force a disconnect from an NPC which is out of service.

cc

Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
01	Invalid range for specified NPC type
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
C8	Exceeded depth limit of 6 on broadcast conference concatenation
1A	Required FLI not equipped, not in service, or failed

cc	<i>Explanation</i>
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
A9	Cross-connect not consistent with feature package
B7	No DSP unit equipped
B8	No CBTYPE NPC equipped
B9	No CBTYPE NPC capacity remaining
BA	Inactive side NPC out of service and inactive side in service
0A	All CBTYPE NPCs out of service or failed
E0	ETSI not equipped, not in service, or failed
67	Improper roll command sequence
6B	No mapped channel on old
75	Old and new channels have not been paired by a BCAST command.
76	Channel or NPC not bridged
79	DCTN conference channel cannot be rolled
7A	Testport/testgroup channel cannot be rolled
7B	Channel out-of-bounds in a Broadcast or Virtual Circuit
7C	Parity channel out of bound on new
7D	Not first channel in a BCON/virtual conf
9C	Parity channel cannot be within the range of a DS0 command.

SWITCH NPC

Explanation of Command

**NOTE:**

This command applies to the 1.544 Mbit/s Termination interface only.

This command requests the activation (PSW), termination (USW), permission (ALW) or inhibition (INH) of protection switching on the SLC Carrier terminated digroups.

The **INCL** keyword must always be used for any digroup A switching activity such as activation, inhibition, permission, or termination.

The **FRC** keyword is meaningful only when used with the **INH** option to inhibit a failed digroup from being protected.

Command

Nonhierarchical

[I.39401]

```
SW:[FRM xy][,SEQ ww]:{NPC [s]abc|RT ffff,xxx}, \
{PSW|USW|ALW|INH}[ ,FRC][ ,INCL]!
```

Hierarchical

[I.39401]

```
SW:[FRM xy][,SEQ ww]:{NPC uvmnp|RT ffff,xxx}, \
{PSW|USW|ALW|INH}[ ,FRC][ ,INCL]!
```

Completion Message

Nonhierarchical

[O.39401]

```
M hh:mm:ss xy,ww n[vv] SW {NPC [s]abc|RT ffff,xxx} \
{PSW|USW|ALW|INH}[ FRC][ INCL] COMPL
```

Hierarchical

[O.39401]

M hh:mm:ss xy,ww n[vv] SW {NPC uvmnp|RT ffff,xxx} \
{PSW|USW|ALW|INH} [FRC][INCL] COMPL

Denial Message**Nonhierarchical**

[O.39401.01]

M hh:mm:ss xy,ww n[vv] SW {NPC [s]abc|RT ffff,xxx} \
{PSW|USW|ALW|INH} [FRC][INCL] COND cc DNY

Hierarchical

[O.39401.01]

M hh:mm:ss xy,ww n[vv] SW {NPC uvmnp|RT ffff,xxx} \
{PSW|USW|ALW|INH}[FRC][INCL] COND cc DNY

**Explanation of
Parameters**

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number within the unit np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
RT	Remote terminal
ffff	RT bank identification number (0000 - 9999 inclusive)
xxx	Digroup designation DGA Digroup A DGB Digroup B DGC Digroup C DGD Digroup D

ALL	All Digroups (DGA, DGB, DGC and DGD) The ALL option is not applicable to the MML message. The DGx in the autonomous output means DGA, DGB, DGC, or DGD.
PSW	Perform a protection switch
USW	Perform an unswitch
ALW	Allow a digroup to be protected
INH	Inhibit a digroup from protection
FRC	Force
INCL	Inclusive
cc	Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
15	NPC is unequipped
46	NPC Failed or Out of Service
63	NPC is a DGP
6A	NPC type is not DS type
78	Protection switch process failed
7E	Bank id number not found
7F	NPC is not added
87	DGP is protecting a primary digroup
8B	Digroup name and bank id don't match
C9	The INCL keyword is needed for DGA
CA	No protection switch is currently active
CB	Protection entity out of service or failed
CC	Protection entity is unequipped
CD	Data link failed
CE	Far end failed to respond

cc	<i>Explanation</i>
D1	Protection switch existing is autonomous
D2	Protection switching is already inhibited
D3	Protection switching is already allowed
D4	Active CCN side is out of service
D5	Boot in progress, can't service request
FD	Line Loop Back is active
A6	Invalid switch request for DCLU

FACILITY ROLL - ROLL COMMAND

Explanation of Command

This command performs the Roll step of the DS1 or 2Mbit/s Roll procedure. (For DS0 Roll operations, use the commands I.14021, I.14031, and I.14041.)

The DS1 or 2Mbit/s Roll procedure consists of three commands:

1. Bridge

This step bridges the transmit data by broadcasting to the new NPC as well as the old NPC. Use command I.14061.

2. Roll

This step rolls the service by switching the receive data from the old NPC to the new NPC. Use this command.

3. Cut

This step takes down the bridge by disconnecting the transmit data from the old NPC. Use command I.14081.

Command

Nonhierarchical

[I.14071]

SW:[FRM xy][,SEQ ww]:ROLL,OLD [s]abc,NEW [t]ghi[,INCL][,FRC] \[,OOS][,TWAY]

Hierarchical

[I.14071]

SW:[FRM xy][,SEQ ww]:ROLL,OLD uvmnp,NEW wxkqr[,INCL][,FRC] \[,OOS][,TWAY]

Completion Message

Nonhierarchical

[O.14071]

M hh:mm:ss xy,ww n[vv] SW ROLL [s]abc,[t]ghi[INCL][FRC] \[OOS][TWAY] COMPL

Hierarchical

[O.14071]

M hh:mm:ss xy,ww n[vv] SW ROLL uvmnp,wxkqr[INCL][FRC][OOS] \
[TWAY] COMPL

Denial Message

Nonhierarchical

[O.14071.01]

M hh:mm:ss xy,ww n[vv] SW ROLL [s]abc,[t]ghi \
[INCL][FRC][OOS][TWAY][mmm,nnn] COND cc DNY

Hierarchical

[O.14071.01]

M hh:mm:ss xy,ww n[vv] SW ROLL uvmnp,wxkqr \
[INCL][FRC][OOS][TWAY][mmm,nnn] COND cc DNY

Explanation of Parameters

ROLL	Roll
OLD	Old
	The old termination
NEW	New
	The new termination
[s]abc	The 3- or 4-digit nonhierarchical OLD NPC number
[t]ghi	The 3- or 4-digit nonhierarchical NEW NPC number

1.544 Mbit/s Termination

⇒ **NOTE:**
Valid types for old and new NPCs are DExyz, DAAxyz, TExyz, TAAxyz,
and THxyz.

2.048 Mbit/s Termination

⇒ **NOTE:**
Valid types for old and new NPCs are PAxyz, PBxyz, and PCxyz.



NOTE:

The valid combinations of old/new NPCs are as follow:

- When the old NPC is of type PBxyz/PCxyz, the new NPC is of type PBxyz/PCxyz and the xyz values of the old and new NPCs are the same.
- When the old NPC is of type PBxyz/PCxyz, the new NPC is of type PAxyz, and the xyz values of the old and new NPCs are equivalent. The characteristics in the PBxyz/PCxyz are present in the PAxyz type, even though the xyz values are different.
- When the old NPC is of type PAxyz, the new NPC is of type PAxyz and the xyz values of the old and new NPCs are the same.

The roll procedure will be denied based upon the valid combinations rules, the service status of the old/new NPCs, the new NPC under PBA, channels on the old/new NPCs under test or loopback. The denial messages will explain the denial condition.

If a channel is involved in C-bit monitoring (i.e. its C bits is being monitored by the C-bit processor), the roll still takes place, the CTS16 cross-connection to the C-bit processor on the old NPC remains unimpacted, and the rolled channel will not automatically be C-bit monitored on the new NPC.

At the facility level, however, 2Mbit/s roll will be denied if the CTS16 is cross-connected to the C-bit processor.

Some information is carried forward from the old to the new NPC. Some information is NOT carried forward with the roll.

Information being carried forward to the new NPC:

- Channel Timeslot 0 (CTS0) alarm bit settings (e.g. alarm bits 3,4,5 can be set to 0 or 1).
- Spare bit settings for CTS0 to CTS0 cross connection. (dictate how the spare bits will be treated: passthrough, invert, etc.)
- Spare bit settings for CTS0 to non CTS0 cross connection.
- The Pseudo Frame Word (PFW) or the NFW (Mode 2) mode.
- All circuit parameters (e.g. RDLC, CUS, trunk conditioning, etc.) are retained for all channels.

It is important to note that if a roll procedure is reversed, the copying of the CTS0 settings to the new NPC will NOT be reversed. Therefore, the copied CTS0 settings on the new NPC will remain there.

Information NOT being carried forward to the new NPC:

- Alarm severity level information (alarms can be provisioned to be informational, minor, major, etc.)
- Threshold parameters, including THMODE state.
- Since xyz must be the same (or equivalent) between the old and new NPCs, if the old NPC is provisioned to be a possible Synchronization source, the new NPC must also be provisioned as one. However, the roll will not cause the new NPC to be an **active** sync source, even if the old one is.

In addition, it should be noted that all of the CTS0-related settings on the old NPC will not be affected by the roll. They will remain unchanged.

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical OLD NPC number

wxkqr

Hierarchical NEW NPC number

uv,wx Unit number

m,k Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

INCL

Inclusive

A circuit designated as a customer controlled circuit, a red circuit or a substrate T1 circuit cannot be modified without using the inclusive keyword in the message. Also, an NPC which supports these circuits cannot be manually removed unless the INCL keyword is given in the remove message.

FRC

Force

The FRC keyword is used to force a roll to an NPC which is in CGA.

OOS

Out of service

	The OOS keyword is used to force a roll from an NPC which is out of service.
TWAY	Two-way The TWAY keyword is used to request a two-way Roll (Bridge and Roll combined). The user should understand that combining the Bridge and Roll step should only be done if the DS1 or E1 to be rolled has no live traffic. Combining the two steps causes substantial interruption in traffic, because there can be no coordination between the Bridge and the Roll step.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
05	Subject entity is pested
01	Invalid range for specified NPC type
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
C8	Exceeded depth limit of 6 on broadcast conference concatenation
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed

cc	<i>Explanation</i>
46	NPC Failed or Out of Service
A9	Cross-connect not consistent with feature package
B6	C-bit operations are enabled
B7	No DSP unit equipped
B8	No CBTYPE NPC equipped
B9	No CBTYPE NPC capacity remaining
BA	Inactive side NPC out of service and inactive side in service
0A	All CBTYPE NPCs out of service or failed
E0	ETSI not equipped, not in service, or failed
67	Improper roll command sequence
6A	New in CGA or PBA
6B	No mapped channel on old NPC
75	Old and new channels have not been paired by a BCAST command.
79	DCTN conference channel cannot be rolled
7A	Testport/testgroup channel cannot be rolled
7B	Channel out-of-bounds in a Broadcast or Virtual Circuit
7C	Parity channel out of bound on new
7D	Not first channel in a BCON/virtual conf
7E	Incomplete circuit exists on OLD NPC
9C	Parity channel cannot be within the range of a DS0 command.

DS0 CIRCUIT ROLL- ROLL COMMAND

Explanation of Command

This input command is used to perform the Roll step of the DS0 (or 64kbit/s) Roll operation. (For DS1 or 2 Mbit/s Roll operations use the commands I.14061, I.14071, and I.14081.)

The DS0 (or 64kbit/s) Roll procedure consists of three commands:

1. Bridge

This step bridges the transmit data by broadcasting to the new DS0 as well as the old DS0. Use command I.14021.

2. Roll

This step rolls the service by switching the receive data from the old DS0 to the new DS0. Use this command.

3. Cut

This step takes down the bridge by disconnecting the transmit data from the old DS0. Use command I.14041.



NOTE:

The ROLL procedure will re-direct ALL cross-connections associated with the DS0 signal being rolled.

Command

Nonhierarchical

[I.14031]

SW:[FRM xy][,SEQ ww]:ROLL,OLD [s]abcddd[-eee],NEW [t]ghijjj[-kkk] \
[,INCL][,FRC][,OOS]

Hierarchical

[I.14031]

SW:[FRM xy][,SEQ ww]:ROLL,OLD uvmnpddd[-eee],NEW wxkqrjjj[-kkk] \
[,INCL][,FRC][,OOS]

Completion Message

Nonhierarchical

[O.14031]

M hh:mm:ss xy,ww n[vv] SW ROLL [s]abcddd[-eee],[t]ghijjj[-kkk] \
[INCL][FRC][OOS] COMPL

Hierarchical

[O.14031]

M hh:mm:ss xy,ww n[vv] SW ROLL uvmnpddd[-eee],wxkqrjjj[-kkk] \
[INCL][FRC][OOS] COMPL

Denial Message

Nonhierarchical

[O.14031.01]

M hh:mm:ss xy,ww n[vv] SW ROLL [s]abcddd[-eee],[t]ghijjj[-kkk] \
[INCL][FRC][OOS] 2 LN MSG:
[mmm,nnn] COND cc DNY

Hierarchical

[O.14031.01]

M hh:mm:ss xy,ww n[vv] SW ROLL uvmnpddd[-eee],wxkqrjjj[-kkk] \
[INCL][FRC][OOS] 2 LN MSG:
[mmm,nnn] COND cc DNY

Explanation of Parameters

ROLL	Roll
OLD	Old termination
NEW	New termination
[s]abc	The 3- or 4-digit nonhierarchical OLD NPC number
[t]ghi	The 3- or 4-digit nonhierarchical NEW NPC number

1.544 Mbit/s Termination



NOTE:

Valid types for old and new NPCs are DExyz and DAxyz (except DE9y9 and DA9y9) and TExyz and TAxyz (except TE9yz and TA9y9).

2.048 Mbit/s Termination



NOTE:

Valid types for old and new NPCs are PAxyz, PBxyz, PCxyz, and THxyz except for the following cases:

- Either is of type PAxyz where y=C or y=D (Clear 2Mb/s)
- The old NPC supports Channel Associated Signaling (CAS) and the new NPC does not
- The old NPC supports Non-Signaling Associated (NSA), the new NPC supports CAS, and CTS16 is being rolled to CTS16

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp Hierarchical OLD NPC number

wxkqr Hierarchical NEW NPC number

uv,wx Unit number

m,k Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

ddd, jjj Channel numbers for beginning of channel range

eee, kkk Channel numbers for end of channel range

To connect a range of channels, use the optional fields eee and kkk.

INCL Inclusive

A circuit designated as a customer controlled circuit, a red circuit or a subrate T1 circuit cannot be modified without using the inclusive keyword in the message.

1.544 Mbit/s Termination

FRC Force

The FRC keyword is used to force a roll to an NPC which is in CGA.

2.048 Mbit/s Termination

The FRC keyword is used to force a roll to an NPC which is in PBA.

OOS	Out of service The OOS keyword is used to force a roll from an NPC which is out of service.
mmm	The OLD channel number involved in denial (ddd through eee).
nnn	The NEW channel number involved in denial (jjj through kkk).
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
05	Subject entity is pested
1E	Customer control or red circuit exists
01	Invalid range for specified NPC type
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
C8	Exceeded depth limit of 6 on broadcast conference concatenation
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed

cc	<i>Explanation</i>
1F	Required MPR not equipped, not in service, or failed
46	NPC Failed or Out of Service
A9	Cross-connect not consistent with feature package
B7	No DSP unit equipped
B8	No CBTYPE NPC equipped
B9	No CBTYPE NPC capacity remaining
BA	Inactive side NPC out of service and inactive side in service
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
0A	All CBTYPE NPCs out of service or failed
E0	ETSI not equipped, not in service, or failed
67	Improper roll command sequence
6A	New in CGA or PBA
6C	Old and New channel on same NPC and within the range
75	Old and new channels have not been paired by a BCAST command.
78	Ranges of old and new do not match
79	DCTN conference channel cannot be rolled
7A	Testport/testgroup channel cannot be rolled
7B	Channel out-of-bounds in a Broadcast or Virtual Circuit
7C	Parity channel out of bound on new
7D	Not first channel in a BCON/virtual conf
9C	Parity channel cannot be within the range of a DS0 command.

SWITCH FLI TO PROTECTION

Explanation of Command

This command requests and reports a switch from the selected facility line interface (FLI) on a DS3 unit (DS3U) or a Hybrid DS3 unit (HDS3U). This command only covers the direction of switch from the service FLI in a DS3U or HDS3U to protection. The other direction of the FLI switch is covered in Message I.35105. The output message reports the occurrence of autonomous protection switching.

Command

[I.35101]
SW:FRM xy,SEQ ww:UNIT [q]q,FLI,TOPRTN!

Completion Message

[O.35101]
M hh:mm:ss xy,ww n[vv] SW UNIT [q]q FLI TOPRTN COMPL

Denial Message

[O.35101.01]
M hh:mm:ss xy,ww n[vv] SW UNIT [q]q FLI TOPRTN COND cc DNY

Autonomous Message

[O.35101]
I hh:mm:ss xy,ww SW UNIT [q]q FLI TOPRTN COMPL

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
FLI	Facility Line Interface
TOPRTN	To protection pack
cc	Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
40	The service FLI is out of service or pested (TOSRVC option)
41	The protection FLI is out of service or pested (TOPRTN option)
42	The service FLI is already selected (TOSRVC option)
43	The protection FLI is already selected (TOPRTN option)

SWITCH FLI TO SERVICE

Explanation of Command

This command requests and reports a switch from the protected facility line interface (FLI) on a DS3 unit (DS3U) or a Hybrid DS3 unit (HDS3U) to the service FLI. The output message reports the occurrence of automatic switchback.

Command

[I.35105]
SW:[FRM xy][,SEQ ww]:UNIT [q]q,FLI,TOSRVC!

See I.35101

Completion Message

[O.35105]
M hh:mm:ss xy,ww n[vv] SW UNIT [q]q FLI TOSRVC COMPL

Denial Message

[O.35105.01]
M hh:mm:ss xy,ww n[vv] SW UNIT [q]q FLI TOSRVC COND cc DNY

Autonomous Message

[O.35105]
I hh:mm:ss xy,ww SW UNIT [q]q FLI TOSRVC COMPL

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
TOSRVC	To Service Pack
cc	Hexadecimal condition code

cc	Explanation
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
40	The service FLI is out of service or pested (TOSRVC option)
42	The service FLI is already selected (TOSRVC option)

SWITCH MMFG TO PROTECTION

Explanation of Command

This command requests and reports a switch from multiplexer-multiple interface unit functional group (MMFG) c to MMFG P on a DS3 or HDS3 unit. The command can force MMFG P to serve the MMFG c facility, even though MMFG P was serving another facility which can result in that facility being out-of-service. Alarm reporting is discussed below in the case of a switch that results in that facility being out-of-service.

Alarm reporting in the case of double MMFG failures: (For example, a unit is equipped with MMFG 1 , 2 and P).

Event	MMFG 1 fails
	Automatic protection switch occurs
Message	I hh:mm:ss xy,ww SW UNIT q MMFG 1 TOPRTN COMPL
	MMFG 1 is autonomously removed
Message	**hh:mm:ss xy,ww RMV UNIT q MMFG 1 COMPL
Event	MMFG 2 fails

Event	MMFG 1 fails
Message	*C hh:mm:ss xy,ww RMV UNIT q MMFG 2 COND cc DNY
Event	The craft decides that MMFG-2 is more important and makes a switch
Command	SW:FRM xy,ww:UNIT q,MMFG 2,TOPRTN,FRC!
Message	M hh:mm:ss xy,ww[n[vv]] SW UNIT q MMFG 1 TOPRTN FRC COMPL MMFG 1 will switch back to service automatically
Message	I hh:mm:ss xy,ww SW UNIT q MMFG 1 TOSRVC COMPL

Notice that after the switch to protection of MMFG 2, no alarm reporting is associated with loss of service of MMFG 1. The alarm condition, which is escalated to critical after loss of service of MMFG 2, actually covers both failures. If the FRC keyword is used, then the MMFG that **was** under protection will no longer be in alarm but will still need to be restored. When the FRC keyword is used, the alarm is idled on the MMFG that **was** under protection, even though it is still OOS. Note also that the autonomous switch message precedes the removal command on the first failure.

Command

[I.35111]
SW:[FRM xy][,SEQ ww]:UNIT [q]q,MMFG c,TOPRTN[,FRC]!

**Completion
Message**

[O.35111]
M hh:mm:ss xy,ww[n[vv]] SW UNIT [q]q MMFG c TOPRTN[FRC] \
COMPL

Denial Message

[O.35111.01]
M hh:mm:ss xy,ww n[vv] SW UNIT [q]q MMFG c TOPRTN[FRC] COND \
cc DNY

**Autonomous
Message**

[O.35111]

I hh:mm:ss xy,ww[n[vv]] SW UNIT [q]q MMFG c TOPRTN[FRC] \
COMPL

**Explanation of
Parameters**

UNIT	Unit
[q]q	Unit number (1 through 16)
MMFG	Multiplexer-multiplexer interface unit functional Group
c	The number of the service MMFG within the unit ($1 \leq c \leq 6$)
TOPRTN	Protection Pack
FRC	Force the switch to protection MMFG even though it was serving another facility.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
1A	Required FLI not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
44	Service MXR is not equipped
47	Protection MXR is out of service
48	Protection MIU is not equipped
49	Protection MIU is out of service
4A	The protection MMFG is serving another facility
4B	The Service MMFG is already under protection

SWITCH MMFG TO SERVICE

Explanation of Command

This command requests and reports a switch from multiplexer-multiple interface unit functional group (MMFG) P to MMFG c on a DS3 or HDS3 unit. MMFG P was serving the DS3 or HDS3 facility associated with MMFG c. The output message also reports the occurrence of automatic switchback from protection.

Command

1.544 Mbit/s Termination

[I.35121]

SW:FRM xy,SEQ ww:UNIT [q]q,MMFG c,TOSRVC!

2.048 Mbit/s Termination

[I.35121]

SW:FRM xy,SEQ ww:UNIT [q]q,MMFG c,TOSRVC!

Completion Message

1.544 Mbit/s Termination

[O.35121]

M hh:mm:ss xy,ww n[vv] SW UNIT [q]q MMFG c TOSRVC COMPL

2.048 Mbit/s Termination

[O.35121]

M hh:mm:ss xy,ww n[vv] SW UNIT [q]q MMFG c TOSRVC COMPL

Denial Message

1.544 Mbit/s Termination

[O.35121.01]

M hh:mm:ss xy,ww n[vv] SW UNIT [q]q MMFG c TOSRVC COND cc DNY

2.048 Mbit/s Termination

[O.35121.01]

M hh:mm:ss xy,ww n[vv] SW UNIT [q]q MMFG c TOSRVC COND cc DNY

Autonomous Message

1.544 Mbit/s Termination

[O.35121]

I hh:mm:ss xy,ww SW UNIT [q]q MMFG c TOSRVC COMPL

2.048 Mbit/s Termination

[O.35121]

I hh:mm:ss xy,ww SW UNIT [q]q MMFG c TOSRVC COMPL

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
MMFG	Multiplexer-multiplexer interface unit functional group
c	The number of the service MMFG within the unit (1 through 6)
TOSRVC	To service
Priority of action	
I	Information
M	Manual
cc	Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
1A	Required FLI not equipped, not in service, or failed

cc	<i>Explanation</i>
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
44	Service MXR is not equipped
45	Service MXR is out of service
46	Service MIU is out of service
4C	The Service MMFG is not under protection

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TELEMETRY ASYNCHRONOUS BLOCK SERIAL IN PROGRESS

Explanation of Command

This autonomous output message indicates that a remote request using a telemetry asynchronous block serial protocol has been submitted to the DACS II frame and is in progress.

Autonomous Message

Hierarchical

[O.55704]

I hh:mm:ss xy,ww TABS IN PROGRESS

TABS COMPLETE

Explanation of Command

This autonomous message indicates a remote TABS (Telemetry Asynchronous Block Serial) protocol request has completed on DACS II.

Autonomous Message

[O.55705]
I hh:mm:ss xy,ww TABS COMPL

Explanation of Parameters

TABS Telemetry asynchronous block serial

TWO-WAY CROSS-CONNECTION TERMINATED

Explanation of Message

This command requests a set of terminated cross-connections over a range of specified From-direction and To-direction terminations.

If the user wants to cross-connect Nx64 kbits/s circuits, then the range feature of this command should be used.

For 1.544-Mb/s interfaces, the circuit is formed in the terminated state with the disconnect code (DCC) inserted in both directions of transmission unless the trunk conditioning was specified as TRSP,MUX; in this case, the Unassigned Multiplex Code (UMC), equal to hex 18, is inserted.

The circuit is formed in the terminated state with the disconnect code (DCC) inserted in both directions of transmission.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.12001]

```
TCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \
<tc>[,AIS][,{CUS|INCL}][,RDC][,PRIOUT]!
```

Hierarchical

[I.12001]

```
TCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \
<tc>[,AIS][,{CUS|INCL}][,RDC][,PRIOUT]!
```

2.048 Mbit/s Termination

Nonhierarchical

[I.12001]

```
TCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
[,<tc>][,<sc>][ NAM][,{CUS|INCL}][,RDC][,PRIOUT]!
```

Hierarchical

[I.12001]

TCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
[,<tc>][,<sc>][NAM][{CUS|INCL}][,RDC][,PRIOUT]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.12001]

M hh:mm:ss xy,ww n[vv] TCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
<tc>[AIS][CUS][RDC][PRIOUT] COMPL

[O.12002]

M hh:mm:ss xy,ww n[vv] TCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
2 LN MSG:
<tc>[AIS][CUS][RDC][PRIOUT] COMPL

Hierarchical

[O.12001]

M hh:mm:ss xy,ww n[vv] TCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
<tc>[AIS][CUS][RDC][PRIOUT] COMPL

[O.12002]

M hh:mm:ss xy,ww n[vv] TCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
2 LN MSG:
<tc>[AIS][CUS][RDC][PRIOUT] COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.12001]

M hh:mm:ss xy,ww n[vv] TCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
[<tc>][<sc>][NAM][CUS][RDC][PRIOUT] COMPL

[O.12002]

M hh:mm:ss xy,ww n[vv] TCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
2 LN MSG:
[<tc>][<sc>][NAM][CUS][RDC][PRIOUT]COMPL

Hierarchical

[O.12001]

M hh:mm:ss xy,ww n[vv] TCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
[<tc>][<sc>][NAM][CUS][RDC][PRIOUT] COMPL

[O.12002]

M hh:mm:ss xy,ww n[vv] TCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
2 LN MSG:
[<tc>][<sc>][NAM][CUS][RDC][PRIOUT]COMPL

Denial Message

Nonhierarchical

[O.12001.01]

M hh:mm:ss xy,ww n[vv] TCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.12001.02]

M hh:mm:ss xy,ww n[vv] TCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] <d> <st> DNY

Hierarchical

[O.12001.01]

M hh:mm:ss xy,ww n[vv] TCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.12001.02]

M hh:mm:ss xy,ww n[vv] TCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] <d> <st> DNY

Explanation of Parameters

FROM	From
[s]abcddd	Nonhierarchical termination in to direction
[s]abc	The 3- or 4-digit NPC number
ddd	Channel number, beginning of range
TO	To
[s]ghijj	Nonhierarchical termination in from direction
[s]ghi	NPC number

	jjj	Channel number, beginning of range
		For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnpddd		Hierarchical termination in from direction
wxkqrjjj		Hierarchical termination in to direction
	uv,wx	Unit number
	m,k	Module number
	np,qr	NPC number within the module
	ddd,jjj	Channel number, beginning of range
		For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
eee,kkk		Channel numbers for end of channel range
		To connect a range of channels, use the optional fields eee and kkk.
	001-024	
	001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
	000-030	CEPT type NPCs grown as CAS
	000-030	CEPT type NPCs grown as CAS
	000-031	CEPT type NPCs grown as NSA
		Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or

one-way cross-connected to another channel. Also these two channels cannot be part of any conference.

1.544 Mbit/s Termination

The Facility Data Link (FDL) channel 000 is not allowed in a range. Only the FDL of DE type NPC with ESF Format can be cross-connected.

2.048 Mbit/s Termination

The following channels are not allowed in a channel range:

- Channel 000
- CAS (channel associated signaling) channel 031 (TS16 of a CEPT type NPC)

tc

Trunk conditioning

Defines the cross-connected signaling and insertion word applied to the circuit during a failure condition. The signaling and insertion word are separately specified, using a comma as the delimiter using the form:

<tc_sig>,<tc_iw>

where: tc_sig is the **signaling** portion of trunk conditioning and tc_iw is the **insertion word** portion of trunk conditioning.

1.544 Mbit/s Termination

Valid values for two-way cross-connects are:

4-state signaling

TC(ijkl,mnop),TRB

TC(ijkl,mnop),IW X'nn

16-state signaling

TC(efghijkl,mnopqrst),TRB
TC(X'uv,X'yz),TRB

TC(efghijkl,mnopqrst),IW X'nn
TC(X'uv,X'yz),IW X'nn

Transparent signaling

TRSP,TRB

TRSP,IW X'nn

TRSP,MUX

TRSP

⇒ **NOTE:**
For ESF type framing, 4-state signaling is expanded to 16-state by duplicating the bits.

2.048 Mbit/s Termination

Valid values for two-way cross-connects are:

4-state signaling

TC(ijkl,mnop),IW X'nn

16-state signaling

TC(efghijkl,mnopqrst),IW X'nn
TC(X'uv,X'yz),IW X'nn

Transparent signaling

TRSP,IW X'nn

TRSP

⇒ **NOTE:**
4-state signaling is expanded to 16-state by duplicating the bits.

⇒ **NOTE:**
If <tc> is omitted and both terminations are Channel Associated Signaling (CAS) types, it defaults to 16-state signaling with all ones and an insertion word of all ones.

Example:

TC(X'FF,X'FF),IW X'FF

⇒ **NOTE:**
If <tc> is omitted, and one or both terminations are Nonsignaling Associated (NSA) types, it defaults to transparent signaling with no insertion word.

Example:

TRSP

ijkl 4-state binary signaling value - From direction

mnop 4-state binary signaling value - To direction

efghijkl 16-state binary signaling value - From direction

mnopqrst 16-state binary signaling value - To direction

uv	16-state hexadecimal signaling value - From direction
yz	16-state hexadecimal signaling value - To direction
nn	Hexadecimal Insertion Word

1.544 Mbit/s Termination

TRB	Trouble Code Equal to nn value of E4.
MUX	Multiplexer Out of Sync Code Equal to nn value of 1A. This keyword can not be entered in combination with signaling trunk conditioning. Instead, it must always be accompanied by the TRSP keyword.
TRSP	Transparent No robbed bit signaling is performed.

2.048 Mbit/s Termination

TRSP	Transparent Outgoing signaling will be fixed at 1101 (hex D) in slot 16 for Channel Associated Signaling (CAS) primaries. TRSP is the only allowable option for Non-Signaling Associated (NSA) primaries.

2.048 Mbit/s Termination

 **NOTE:**
When the provisioning insertion word (PIW) is assigned in the GRTH::NPC command, a four-bit pattern is inserted into the associated portion of time slot 16 for CAS circuits when the circuit is disconnected.

2.048 Mbit/s Termination Additional rules apply for 2.048 Mbit/s termination cross-connects. The allowable signaling type and signaling consequent action are shown in the following table.

Allowable Signaling Type and Signaling Consequent Action

Primary Type in Cross-connect	Allowable <tc> Signaling Specification	Resulting Signaling Code FROM, TO	Resulting Signaling Consequent Action (Hardware) FROM, TO	Resulting Signaling Consequent Action (Firmware) FROM, TO	Resulting Disconnect (When DCC used in disconnect command)
CAS ↔ CAS	TRSP	Fixed at X'D	Fixed at X'D	Fixed at X'D	X'D
	TC-X'uv,X'yz*	CAS (Passed Through)	X'F	X'uv,X'yz	X'v,X'z
	Omitted	CAS (Passed Through)	X'F	X'F	X'F
NSA ↔ CAS	TRSP/ Omitted	None (Fixed at X'D in CAS direction)	Fixed at X'D in CAS direction	Fixed at X'D in CAS direction	X'D in CAS direction
NSA ↔ NSA	TRSP/ Omitted	Not appl.	Not appl.	Not appl.	Not appl.

⇒ NOTE:
For TCON and TCNT TC is X'uv,X'yz.
For OCON, OCNT and BCON TC is --,X'yz.

The allowable cross-connected time slot consequent action are shown in the following table.

Allowable Cross-Connected Time Slot Consequent Action

Allowable <tc> Insertion Word	Resulting Cross-Connected Time Slot Consequent Action FROM, TO	Resulting Disconnect Code (When DCC used in disconnect command)
Omitted	X'FF, X'FF	X'FF

Allowable Cross-Connected Time Slot Consequent Action

Allowable <tc> Insertion Word	Resulting Cross-Connected Time Slot Consequent Action FROM, TO	Resulting Disconnect Code (When DCC used in disconnect command)
IW X'pq *	X'FF, X'FF	X'pq

* Only used as a means of providing per time slot DCC codes. If the DCC code is not used when issuing the disconnect command, then the insertion word at the time the NPC was grown is used. This growth insertion word defaults to hex D5 if not explicitly specified at growth time.

Allowable Signaling Type and Signaling Consequent Action

Primary Type in Cross- connect	Allowable <tc> Signaling Specification	Resulting Signaling Code FROM, TO	Resulting Signaling Consequent Action (Hardware) FROM, TO	Resulting Signaling Consequent Action (Firmware) FROM, TO	Resulting Disconnect (When DCC used in disconnect command)
CAS ↔ CAS	TRSP	Fixed at X-D	Fixed at X-D	Fixed at X-D	X-D
	TC-X-uv,X- yz*	CAS (Passed Through)	X-F	X-uv,X-yz	X-v,X-z
	Omitted	CAS (Passed Through)	X-F	X-F	X-F
NSA ↔ CAS	TRSP/ Omitted	None (Fixed at X-D in CAS direction)	Fixed at X-D in CAS direction	Fixed at X-D in CAS direction	X-D in CAS direction
NSA ↔ NSA	TRSP/ Omitted	Not appl.	Not appl.	Not appl.	Not appl.



NOTE:
For TCON and TCNT TC is X-uv,X-yz.
For OCON, OCNT and BCON TC is --,X-yz.

Allowable Cross-Connected Time Slot Consequent Action

Allowable <tc> Insertion Word	Resulting Cross-Connected Time Slot Consequent Action FROM, TO	Resulting Disconnect Code (When DCC used in disconnect command)
Omitted	X-FF, X-FF	X-FF
IW X-pq *	X-FF, X-FF	X-pq

* Only used as a means of providing per time slot DCC codes. If the DCC code is not used when issuing the disconnect command, then the insertion word at the time the NPC was grown is used. This growth insertion word defaults to hex D5 if not explicitly specified at growth time.



NOTE:

In a gateway application, when E1 channels are connected to T1 channels, the following rules apply to the transmittal of the Insertion Word (IW) towards the facility. If the Insertion Word needs to be transmitted towards the facility as a result of consequent action, then the Insertion Word transmitted by the T1 NPC towards its transmission facility is the Insertion Word specified in this command; however, the Insertion Word transmitted by the E1 NPC towards its facility is always X'FF.

sc

Signaling control

This variable represents the optional signaling bit control specification and is used only in the Channel Associated Signaling (CAS) to CAS application with CAS signaling.

If this option is not used, all four cross-connected time slot 16 (abcd) signaling bits in each direction are cross-connected unchanged.

Signaling control is specified as follows:

SC(abcd,efgh)

abcd Time slot 16 signalling bits, From direction

efgh Time slot 16 signalling bits, To direction

All 8 bits can be controlled independently. Control is applied by replacing each character in variable abcd or efgh with the appropriate control character.

The allowable control characters are

- P** Pass through unchanged
- V** Pass through inverted
- 0** Set output to 0
- 1** Set output to 1

The effect of the V control character depends upon whether the connection is international or gateway.

International: Inversion takes place on both the From and To-direction sides. The net effect is to cancel out the inversion. Hence it appears that no inversion took place.

Gateway: Inversion takes place only on the international side of the connection. The effect is an inversion.

NAM

No A-law to μ -law

The A-law to μ -law and μ -law to A-law code translators on the E1 type NPC are disabled. This keyword is valid in the following types of cross-connects:

Two-Point:

E1 to DS1 Gateway cross-connects have A-law to μ -law and μ -law to A-law conversion set as a default. The NAM keyword is used to disable the conversions.

E1 to E1 Default, the NAM keyword may be used but there is no need to specify NAM explicitly since A-law to μ -law and μ -law to A-law conversion is not needed, and therefore not performed, for a pure E1 cross-connect.

DS1 to

DS1 Not applicable.

AIS

Alarm indication signal (1.544-Mb/s interfaces only)

This optional keyword is used to cause the all ones signal to be inserted on the downstream digroup when detected on the incoming digroup or when the incoming digroup exhibits a CGA (Carrier Group Alarm).

CUS

Customer

This optional keyword is used to flag a circuit as a customer controlled circuit. On output it indicates that the circuit is customer controlled.

RDC

Red circuit

	This optional keyword is used to mark a circuit as a Red Circuit. On output it indicates that the circuit is a Red Circuit.	
INCL	Inclusive	
	A termination designated as a customer controlled circuit or a red circuit cannot be disconnected or modified without using this keyword in the message. Also, an NPC which supports these circuits cannot be manually removed unless this keyword is given in the remove command.	
PRIOUT	Priority Output	
	This keyword is used on the command line to prioritize the output response.	
mmm	The From-direction channel number involved in denial (ddd through eee).	
nnn	The To-direction channel number involved in denial (jjj through kkk).	
d	Direction	
	F	FROM
	T	TO
	B	Both
st	Status of denial	
cc	Hexadecimal condition code	

cc	<i>Explanation</i>
06	Invalid range for specified FROM NPC type
07	Invalid range for specified TO NPC type
08	Invalid FROM NPC type for AIS insertion
09	Invalid TO NPC type for AIS insertion
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS

cc	<i>Explanation</i>
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
20	Line format types are incompatible
21	Trunk conditioning is invalid
22	FMC cannot be cross-connected in this format
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
DD	A loopback is active on the TO termination
DF	Unmatched channel range
E0	Unmatched channel range involving SLC Mode III termination
E4	RT-DCLU cross-connect with different ids
E5	RT-DCLU cross-connect with different channel number
E6	Cross-connect a non Mode I channel to DCLU
E7	Cross-connect a non SLC channel to DCLU

cc	<i>Explanation</i>
E8	SC invalid for cross-connection specified
E9	MUX or TRB invalid for cross-connection specified
EA	AIS invalid for cross-connection specified
EB	NAM invalid for cross-connection specified
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
FF	Termination is in process of being rolled

TWO-WAY CROSS-CONNECT TERMINATE, FROM, TO, MULTIPOINT MODE

Explanation of Message

This command requests the two-way terminated cross-connection of a leg to a multipoint circuit. The circuit is set up in the terminated state with the disconnect channel code (DCC) inserted in both directions of transmission.



NOTE:

Range values apply only to the FTU end of an FTU to Virtual NPC circuit.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.12021]

TCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \\
MPM(fmd,tmd),<tc>[,NTR m][,RDC][,{CUS|INCL}]!

Hierarchical

[I.12021]

TCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \\
MPM(fmd,tmd),<tc>[,NTR m][,RDC][,{CUS|INCL}]!

2.048 Mbit/s Termination

Nonhierarchical

[I.12021]

TCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \\
MPM(fmd,tmd)[,<tc>][,NAM][,NTR m][,RDC][,{CUS|INCL}]!

Hierarchical

[I.12021]

TCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \\
MPM(fmd,tmd)[,<tc>][,NAM][,NTR m][,RDC][,{CUS|INCL}]!

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.12021]

M hh:mm:ss xy,ww n[vv] TCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \\
2 LN MSG:
fmd,tmd <tc>[NTR m][NOBBL {F|T}][CUS][RDC] COMPL

Hierarchical

[O.12021]

M hh:mm:ss xy,ww n[vv] TCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \\
2 LN MSG:
fmd,tmd <tc>[NTR m][NOBBL {F|T}][CUS][RDC] COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.12021]

M hh:mm:ss xy,ww n[vv] TCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \\
2 LN MSG:
fmd,tmd[<tc>][NAM][NTR m][NOBBL {F|T}][CUS][RDC] COMPL

Hierarchical

[O.12021]

M hh:mm:ss xy,ww n[vv] TCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \\
2 LN MSG:
fmd,tmd[<tc>][NAM][NTR m][NOBBL {F|T}][CUS][RDC] COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.12021.01]

M hh:mm:ss xy,ww n[vv] TCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \\
[mmm,nnn] cc <st> DNY

[O.12021.02]

M hh:mm:ss xy,ww n[vv] TCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] <d> <st> DNY

Hierarchical

[O.12021.01]

M hh:mm:ss xy,ww n[vv] TCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.12021.02]

M hh:mm:ss xy,ww n[vv] TCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] <d> <st> DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.12021.01]

M hh:mm:ss xy,ww n[vv] TCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.12021.02]

M hh:mm:ss xy,ww n[vv] TCNT [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] <d> <st> DNY

Hierarchical

[O.12021.01]

M hh:mm:ss xy,ww n[vv] TCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.12021.02]

M hh:mm:ss xy,ww n[vv] TCNT uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] <d> <st> DNY

Explanation of Parameters

[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number

wxkqr	Hierarchical TO NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	The list of valid values given below is limited by the equipage of the frame.
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd, jjj	Channel numbers
eee, kkk	Channel numbers denoting the end of a range specification
	Range variables eee and kkk apply only to the FTU end of an FTU to Virtual NPC circuit; that is, they cannot apply to the Virtual NPC end. Range variables do not apply to either end of an FTU to DMB or DMB to DMB circuit.
	Channel numbers
	001-024
	001-047 Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
	000-030 CEPT type NPCs grown as CAS
	000-031 CEPT type NPCs grown as NSA
	Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.

Conference numbers 001-085 (MB NPC)

001-500 (Virtual NPC)

Cross-connections may be between various Network Processing Circuit (NPC) types: Facility Terminating Unit (IFTU/FTU)/DS3U/ NPC and DMB

DMB and DMB

IFTU/FTU/DS3U/ NPC and Virtual NPC

MPM Multipoint mode

fmd Multipoint mode of FROM end of the circuit

tmd Multipoint mode of TO end of the circuit

The direction of data flow is indicated by MPM (fmd,tmd).

For DMB circuits, there are four possible values for fmd and tmd:

SYM For legs of a symmetrical multipoint circuit (must be a DMB channel)

BRD For nonbackbone (tributary) legs of a broadcast multipoint circuit (must be a DMB channel)

BBL For the backbone leg of a broadcast multipoint circuit (must be a DMB channel)

LEG For the end that does not terminate on the multipoint circuit (must be an FTU/DS3U/ channel)

For virtual NPC circuits, there are three possible values for fmd and tmd:

BRD For nonbackbone legs of a broadcast multipoint circuit (must be a virtual NPC channel)

BBL For the backbone leg of a broadcast multipoint circuit (must be a virtual NPC channel)

LEG For the end that does not terminate on the multipoint circuit (must be FTU/DS3U/HSU channels)

For within a DMB or virtual conference:

LEG,BBL

LEG,BRD

SYM,LEG (only for DMB)

For concatenation of conferences:

BRD,BBL

BBL, BBL

SYM, SYM



NOTE:

To avoid possible transmission delays in the conferencers, DACS II does not allow DMB broadcast conferences to be concatenated more than six deep. However, each concatenated conference does support the maximum allowable number of legs. This allows conferences to branch out at any point in the daisy chain, as long as each branch does not concatenate more than six conferences from the backbone leg.



NOTE:

Default values for noise guard (NG) and echo suppression (ES) are applied to symmetrical bridges (multipoint mode SYM) and polling circuits (multipoint mode BBL, BRD). These default values are:

Symmetrical bridges

NG = -18db ES = -18db

Polling circuits

NG = 0db ES = 0db

tc

Trunk conditioning, which has the input form

TRSP,{IW X'pq|TRB|MUX}

Represents the desired cross-connected signaling and insertion word applied when a failure occurs. A trunk conditioning specification consists of a combination of a signaling specification followed by an insertion word specification. The TRSP (transparent) signaling specification is the only one allowed.

The following signaling options are allowed:

TRSP Transparent, no signaling

The following insertion word options are allowed:

IW X'pq The 8-bit pattern corresponding to the hexadecimal value of pq is inserted in the downstream direction of a failure on either line.

TRB Standard trouble code, equal to IW X'E4, not valid for CEPT.

MUX MUX out of sync code, equal to IW X'1A, not valid for CEPT.

Omitted Only valid for CEPT, defaults to IW-X-FF.

All leg connections to multipoint circuits using a DMB NPC or a Virtual NPC must use TRSP signaling. The insertion word portion is user specified as noted above and may be varied from leg to leg.

For all multipoint to multipoint conference cross-connections (DMB concatenated conferences) the only allowable trunk conditioning specification is TRSP, and need not be specified, as it is the default. An insertion word is not valid for concatenated conferences.



NOTE:

In a gateway application, when E1 channels are connected to T1 channels, the following rules apply to the transmittal of the Insertion Word (IW) towards the facility. If the Insertion Word needs to be transmitted towards the facility as a result of consequent action, then the Insertion Word transmitted by the T1 NPC towards its transmission facility is the Insertion Word specified in this command; however, the Insertion Word transmitted by the E1 NPC towards its facility is always X'FF.

NTR

No transmit

m

Direction in which transmission is shut off

F FROM

T TO

To set up one-way connections; that is, to shut off transmission towards a FROM or TO termination, use NTR and specify the direction in variable m. If NTR m is specified on the BBL (backbone leg) of a multipoint circuit, then the broadcast (BRD) legs of this circuit have their outward transmission turned off.

NTR m is optional if the virtual NPC is part of the circuit.

NOBBL

No backbone leg

If the type of circuit was a broadcast circuit, NOBBL indicates that no backbone leg is yet specified in either the FROM or TO direction. This argument appears until a backbone leg is specified for this circuit.

F From

T To

CUS

Customer-controlled circuit

The optional CUS keyword is used to flag a circuit as a customer controlled circuit. On output it indicates that the circuit is customer controlled.

	All legs on a multipoint customer controlled circuit must be designated as CUS.
RDC	Red circuit On input the optional RDC keyword is used to mark a circuit as a Red Circuit. On output it indicates that the circuit is a Red Circuit.
	All legs on a multipoint Red Circuit must be designated RDC.
INCL	Inclusive A termination designated as CUS or RDC cannot be disconnected or modified without using the INCL keyword in the message. Also, an NPC which supports these circuits cannot be manually removed unless the INCL keyword is given in the remove message. A disconnected termination previously marked CUS remains a customer controlled termination. The INCL keyword must be used to reconnect this termination to other terminations. However, if they are reconnected without the CUS keyword, they lose their customer controlled status.
NAM	No A-law to μ -law The A-law to μ -law and μ -law to A-law code translators on the E1 type NPC are disabled. This keyword is valid in the following types of cross-connects: <i>Multi-Point:</i>
E1 to E1	Multi-point cross-connects have A-law to μ -law and μ -law to A-law set as a default. This conversion is performed on pure E1 multi-point connections in case a DS1 leg is ever added to the broadcast connection. The NAM keyword is used to disable the conversions. It may be desirable to disable conversions in a pure E1 multi-point cross-connect since such a connection has more quantization noise than a pure E1 two-point cross-connect. This is due to the back to back A-law to μ -law and μ -law to A-law conversions which are taking place.
E1 to DS1 or DS1 to E1	Same explanation as E1 to E1.
DS1 to DS1	Not applicable.
mmm	FROM channel number involved in the denial (ddd through eee)
nnn	TO channel number involved in the denial (jjj through kkk)

st Status of denial
d Direction
 B Both
 F FROM
 T TO
cc Hexadecimal condition code

cc	<i>Explanation</i>
06	Invalid range for specified FROM NPC type
07	Invalid range for specified TO NPC type
08	Invalid FROM NPC type for AIS insertion
09	Invalid TO NPC type for AIS insertion
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
20	Line format types are incompatible
21	Trunk conditioning is invalid
22	FMC cannot be cross-connected in this format
50	Trunk conditioning doesn't match that of conference
51	CUS flag doesn't match that of conference
52	RDLD flag doesn't match that of conference
70	Try to add a BBL to VC, but the VC already has backbone
78	Try to operate a ONE-WAY conference with a TWO-WAY input command

cc	<i>Explanation</i>
80	Database conference width does not match the range in input command
83	Invalid input BBL in terminated TWOWAY/ ONEWAY command
84	Trying to add or delete a leg when a conference is under test
85	Input BRD (BBL) has same NPC and channel as BBL (BRD)
A0	Illegal LEG LEG combination
A1	Illegal BBL BBL combination
A2	Illegal BRD BRD combination
A3	Illegal SYM BRD combination
A4	Illegal BRD SYM combination
A5	Illegal BBL SYM combination
A6	Illegal SYM BBL combination
A7	LEG mode was assigned to a DSPU-type NPC on the input
A8	A DMB mode was assigned to a FTU-type NPC on the input
A9	Trying to add a BBL to a DMB conference that already has one
AA	Trying to add a broadcast leg to a conference set up as SYM
AB	Trying to add a SYM leg to conference set up as broadcast
AC	Trying to add a BBL leg to a conference set up as SYM
B0	Bad use of INCL, cannot override the current state of the conference
B1	Bad use of INCL, cannot use keyword on conf.-to-conf. connection
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed

cc	<i>Explanation</i>
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
B5	CPR circuit pack specified in the command
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
DD	A loopback is active on the TO termination
DF	Unmatched channel range
E0	Unmatched channel range involving SLC Mode III termination
E1	A locally switched channel is specified as BBL, LEG, or BRD
E4	RT-DCLU cross-connect with different ids
E5	RT-DCLU cross-connect with different channel number
E6	Cross-connect a non Mode I channel to DCLU
E7	Cross-connect a non SLC channel to DCLU
E8	SC invalid for cross-connection specified
E9	MUX or TRB invalid for cross-connection specified
EA	AIS invalid for cross-connection specified
EB	NAM invalid for cross-connection specified

cc	<i>Explanation</i>
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
FF	Termination is in process of being rolled

TWO WAY CROSS-CONNECTION TERMINATE

Explanation of Command

This command requests the terminated connection of timeslot 0 (TS0) of one NPC to a timeslot other than TS0 (non-TS0) on another NPC. A cross-connect mode must be chosen to prevent the TS0 Frame Alignment Signal from being transmitted in a non-TS0 timeslot.

Command

Nonhierarchical

[I.12051]

TCNT:[FRM xy][,SEQ ww]:FROM [s]abcddd,TO [t]ghijjj
[, {PFW(abcdefg,ijklmno)|NFW}]!

Hierarchical

[I.12051]

TCNT:[FRM xy][,SEQ ww]:FROM uvmnpddd,TO wxkqrjjj
[, {PFW(abcdefg,ijklmno)|NFW}]!

Completion Message

Nonhierarchical

[O.12051]

M hh:mm:ss xy,ww n[vv] TCNT [s]abcddd,[t]ghijjj \\
{PFW(abcdefg,ijklmno)|NFW} COMPL

Hierarchical

[O.12051]

M hh:mm:ss xy,ww n[vv] TCNT uvmnpddd,wxkqrjjj \\
{PFW(abcdefg,ijklmno)|NFW} COMPL

Denial Message

Nonhierarchical

[O.12051.01]

M hh:mm:ss xy,ww n[vv] TCNT [s]abcddd,[t]ghijj \

[{PFW(abcdefg,ijklmno)|NFW}] cc <st> DNY

[O.12051.02]

M hh:mm:ss xy,ww n[vv] TCNT [s]abcddd,[t]ghijj \

[{PFW(abcdefg,ijklmno)|NFW}] d <st> DNY

Hierarchical

[O.12051.01]

M hh:mm:ss xy,ww n[vv] TCNT uvmnpddd,wxkqrjj \

[{PFW(abcdefg,ijklmno)|NFW}] cc <st> DNY

[O.12051.02]

M hh:mm:ss xy,ww n[vv] TCNT uvmnpddd,wxkqrjj \

[{PFW(abcdefg,ijklmno)|NFW}] d <st> DNY

Explanation of Parameters

FRM	Frame
FROM	From
TO	To
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number for FROM NPC
jjj	Channel number for TO NPC
000-030	on CEPT type NPCs grown as CAS

000-031 on CEPT type NPCs grown as NSA



NOTE:

One of the channel numbers specified (ddd or jjj) must be channel 000 (TS0), while the other channel number (jjj or ddd) must be a number other than channel 000 (non TS0). The NPC containing the TS0 channel must be a PA or TH type NPC, while the NPC containing the non TS0 channel can be either a PA, PB, PC or TH type NPC.

Channel 000 is not allowed in a range of channels.

PFW

Pseudo Frame Word

The PFW parameter is used to select Mode 1 of TS0 Cross-Connect: In both directions of transmission the Frame Word is replaced by a Pseudo Frame Word.

abcdefg

Value of the Pseudo Frame Word

This value replaces the Frame Alignment Signal (Bits 2 - 8) of the Frame Word being transmitted from the TO NPC to the FROM NPC.

The characters in the field represent the following bits:

a	Pseudo Frame Word Bit 2
b	Pseudo Frame Word Bit 3
c	Pseudo Frame Word Bit 4
d	Pseudo Frame Word Bit 5
e	Pseudo Frame Word Bit 6
f	Pseudo Frame Word Bit 7
g	Pseudo Frame Word Bit 8

Values for bits a - g:

0	Sets the corresponding bit to 0
1	Sets the corresponding bit to 1

ijklmno

Value of the Pseudo Frame Word

This value replaces the Frame Alignment Signal (Bits 2 - 8) of the Frame Word being transmitted from the FROM NPC to the TO NPC.

The characters in the field represent the following bits:

i	Pseudo Frame Word Bit 2
j	Pseudo Frame Word Bit 3

k	Pseudo Frame Word Bit 4
l	Pseudo Frame Word Bit 5
m	Pseudo Frame Word Bit 6
n	Pseudo Frame Word Bit 7
o	Pseudo Frame Word Bit 8

Values for bits i - o:

0	Sets the corresponding bit to 0
1	Sets the corresponding bit to 1



NOTE:

Bit 2 of timeslot 0 in a 2Mbit/s signal is used to distinguish the Frame Word from the Non Frame Word and it must always be 0 in the FW and 1 in the NFW. When defining the Pseudo Frame Word the user must make sure that the Pseudo Frame Word can be distinguished from the Non Frame Word.

NFW Non Frame Word

The NFW parameter is used to select Mode 2 of TS0 Cross-Connect. In both directions of transmission the Frame Word is replaced by the Non Frame Word, thus repeating the content of the Non Frame Word in consecutive frames.

If no mode is selected in the command, the default is NFW, that is, the default mode of operation is Mode 2.

d	Direction
F	From
T	To
B	Both
st	Status
cc	Hexadecimal condition code

cc	<i>Explanation</i>
06	Invalid range for specified FROM NPC type
07	Invalid range for specified TO NPC type
08	Invalid FROM NPC type for AIS insertion

cc	<i>Explanation</i>
09	Invalid TO NPC type for AIS insertion
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
20	Line format types are incompatible
21	Trunk conditioning is invalid
E8	SC invalid for cross-connection specified
EC	Invalid channel 000 cross-connection specified
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed
3A	Invalid FPI value
8A	Mismatch between channel 0 crossconnect and keywords

TWO-WAY C-BIT CROSS-CONNECTS

Explanation of Command

This message establishes a cross-connection between signaling timeslot 16 (channel 031) of the PB- or PC-type NPC provisioned for channel associated signaling and the C-bit (CB) type NPC on the DSPU. The software automatically assigns the CB number and the channel number on the CB.

Command

2.048 Mbit/s Termination

Nonhierarchical

[I.11041]

TCON:FRM xy,SEQ ww:FROM [s]abc,CB[,CUS][,RDC][,INCL]!

Hierarchical

[I.11041]

TCON:FRM xy,SEQ ww:FROM uvmnp,CB[,CUS][,RDC][,INCL]!

Completion Message

2.048 Mbit/s Termination

Nonhierarchical

[O.11041]

M hh:mm:ss: xy,ww n[vv] TCON [s]abc CB[CUS][RDC]
[INCL] COMPL

Hierarchical

[O.11041]

M hh:mm:ss: xy,ww n[vv] TCON uvmnp,CB[CUS][RDC]
[INCL] COMPL

Denial Message 2.048 Mbit/s Termination

Nonhierarchical

[O.11041.01]

M hh:mm:ss: xy,ww n[vv] TCON [s]abc CB cc <st> DNY

[O.11041.02]

M hh:mm:ss: xy,ww n[vv] TCON [s]abc CB <d> <st> DNY

Hierarchical

[O.11041.01]

M hh:mm:ss: xy,ww n[vv] TCON uvmnp CB cc <st> DNY

[O.11041.02]

M hh:mm:ss: xy,ww n[vv] TCON uvmnp CB <d> <st> DNY

Explanation of Parameters

FROM	From FTU NPC identifier keyword
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
CB	C-bit C-bit processing NPC identifier keyword Note: The CB number and the channel number on the CB are automatically assigned by software.
CUS	Customer Specify that this cross-connect is customer controlled
RDC	Red circuit

	Specify that this is a red circuit
INCL	Inclusive Specify that red circuits and/or customer controlled circuits are to be included. A termination designated as a CUS or a RDC cannot be disconnected or modified without using the INCL keyword in the message. An NPC which supports these circuits cannot be manually removed unless the INCL keyword is given in the remove message.
d	Direction
F	FROM
T	TO
B	Both
st	Status
cc	Hexadecimal condition code

cc	<i>Explanation</i>
03	No RDLD or CUS circuits and INCL keyword used
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
30	NPC not provisioned for CAS
B7	No DSP unit equipped
B8	No CBTYPE NPC equipped
B9	No CBTYPE NPC capacity remaining
BA	Inactive side NPC out of service and inactive side in service

cc	<i>Explanation</i>
F1	Parameter only valid with PA, PB, or PC type NPCs
0A	All CBTYPE NPCs out of service or failed
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed
2C	not allowed for clear 2MB

st	d	<i>Explanation</i>
ASGN	F	Termination assigned
CUS	F	Customer-controlled Circuit
FAIL	F	Failed
OOS	F	Out-of-service
UEQD	F	Unequipped
UTST	F	Under Test

TWO-WAY CROSS-CONNECTION

Explanation of Command

This command requests the two-point two-way connection of two specified cross-connect circuits or a range of cross-connected circuits.

If the user wants to cross-connect Nx64 kbits/s circuits, then the range feature of this command should be used.

For 1.544-Mb/s interfaces, channel 24 of DS1 circuits that have T1DM framing may not be cross-connected.

Gateway

Gateway supports 2 and 4-state signaling, as well as the 16 state format, in all cross-connect commands. When entering cross-connects, the signaling consequence code must always be entered in the 16-state format. If only 2-state and 4-state signaling is required at the 1544 Kbit/s PC, then only the hex values of 0, 5, A, and F are allowed. If a value other than these is selected, DACS assumes 16-state signaling is required. 16-state signaling on the 1544 Kbit/s NPC is only supported by NPC type DE200 or DE300.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.11001]

```
TCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \
<tc>[,AIS][,{CUS|INCL}][,RDC][,PRIOUT]!
```

Hierarchical

[I.11001]

```
TCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \
<tc>[,AIS][,{CUS|INCL}][,RDC][,PRIOUT]!
```


2.048 Mbit/s Termination

Nonhierarchical

[I.11001]

TCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \
[,<tc>][,<sc>][,NAM][,{CUS|INCL}][,RDC][,PRIOUT]!

Hierarchical

[I.11001]

TCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \
[,<tc>][,<sc>][,NAM][,{CUS|INCL}][,RDC][,PRIOUT]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.11001]

M hh:mm:ss xy,ww n[vv] TCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
<tc>[AIS][CUS][RDC][PRIOUT] COMPL

[O.11002]

M hh:mm:ss xy,ww n[vv] TCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
2 LN MSG:
<tc>[AIS][CUS][RDC][PRIOUT] COMPL

Hierarchical

[O.11001]

M hh:mm:ss xy,ww n[vv] TCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
<tc>[AIS][CUS][RDC][PRIOUT] COMPL

[O.11002]

M hh:mm:ss xy,ww n[vv] TCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
2 LN MSG:
<tc>[AIS][CUS][RDC][PRIOUT] COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.11001]

M hh:mm:ss xy,ww n[vv] TCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
[<tc>][<sc>][,NAM][CUS][RDC][PRIOUT] COMPL

[O.11002]

M hh:mm:ss xy,ww n[vv] TCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
2 LN MSG:
[<tc>][<sc>][NAM][CUS][RDC][PRIOUT] COMPL

Hierarchical

[O.11001]

M hh:mm:ss xy,ww n[vv] TCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
[<tc>][<sc>][NAM][CUS][RDC][PRIOUT] COMPL

[O.11002]

M hh:mm:ss xy,ww n[vv] TCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
2 LN MSG:
[<tc>][<sc>][NAM][CUS][RDC][PRIOUT] COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.11001.01]

M hh:mm:ss xy,ww n[vv] TCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.11001.02]

M hh:mm:ss xy,ww n[vv] TCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] d <st> DNY

Hierarchical

[O.11001.01]

M hh:mm:ss xy,ww n[vv] TCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.11001.02]

M hh:mm:ss xy,ww n[vv] TCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] d <st> DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.11001.01]

M hh:mm:ss xy,ww n[vv] TCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.11001.02]

M hh:mm:ss xy,ww n[vv] TCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] d <st> DNY

Hierarchical

[O.11001.01]

M hh:mm:ss xy,ww n[vv] TCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.11001.02]

M hh:mm:ss xy,ww n[vv] TCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] d <st> DNY

Explanation of Parameters

FROM	From
[s]abcddd	Nonhierarchical termination in from direction
[s]abc	The 3- or 4-digit NPC number
ddd	Channel number, beginning of range
TO	To
[s]ghijjj	Nonhierarchical termination in to direction
[s]ghi	The 3- or 4-digit NPC number
jjj	Channel number, beginning of range
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnpddd	Hierarchical termination in from direction
wxkqrjjj	Hierarchical termination in to direction
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
ddd,jjj	Channel number, beginning of range
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	If the channel being connected is an FDL (Facility Data Link), then ddd (jjj) is 000 and signaling type should be of type TC(ijkl,mnop). TRSP and 16-state signalling also work. Only the

eee, kkk

FDL of a DE type NPC with ESF Format can be cross-connected.

Channel numbers for end of channel range

To connect a range of channels, use the optional fields eee and kkk.

001-024

001-047 Odd only (SLC 96[®] Carrier, Mode 3, DGA)

049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)

001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)

025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)

049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)

073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)

001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)

025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)

049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

000-030 CEPT type NPCs grown as CAS

000-031 CEPT type NPCs grown as NSA

Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.

Channel 000 and channel 031 (that is, TS16 of a CEPT type NPC) are not allowed in a range of channel numbers. tc

Trunk conditioning

Defines the cross-connected signaling and insertion word applied to the circuit during a failure condition. The signaling and insertion word are separately specified, using a comma as the delimiter using the form:

<tc_sig>, <tc_iw>

where: tc_sig is the **signaling** portion of trunk conditioning and tc_iw is the **insertion word** portion of trunk conditioning.

1.544 Mbit/s Termination

Valid values for two-way cross-connects are:

4-state signaling

TC(ijkl,mnop),TRB

TC(ijkl,mnop),IW X'nn

16-state signaling

TC(efghijkl,mnopqrst),TRB
TC(X'uv,X'yz),TRB

TC(efghijkl,mnopqrst),IW X'nn
TC(X'uv,X'yz),IW X'nn

Transparent signaling

TRSP,TRB

TRSP,IW X'nn

TRSP,MUX

TRSP



NOTE:

For ESF type framing, 4-state signaling is expanded to 16-state by duplicating the bits.

2.048 Mbit/s Termination

Valid values for two-way cross-connects are:

4-state signaling

TC(ijkl,mnop),IW X'nn

16-state signaling

TC(efghijkl,mnopqrst),IW X'nn
TC(X'uv,X'yz),IW X'nn

Transparent signaling

TRSP,IW X'nn

TRSP



NOTE:

4-state signaling is expanded to 16-state by duplicating the bits.

⇒ NOTE:
If <tc> is omitted and both terminations are Channel Associated Signaling (CAS) types, it defaults to 16-state signaling with all ones and an insertion word of all ones.

Example:

TC(X'FF,X'FF),IW X'FF

⇒ NOTE:
If <tc> is omitted, and one or both terminations are Nonsignaling Associated (NSA) types, it defaults to transparent signaling with no insertion word.

Example:

TRSP

ijkl 4-state binary signaling value - From direction

mnop 4-state binary signaling value - To direction

efghijkl 16-state binary signaling value - From direction

mnopqrst 16-state binary signaling value - To direction

uv 16-state hexadecimal signaling value - From direction

yz 16-state hexadecimal signaling value - To direction

nn Hexadecimal Insertion Word

1.544 Mbit/s Termination

TRB Trouble Code

Equal to nn value of E4.

MUX Multiplexer Out of Sync Code

Equal to nn value of 1A. This keyword can not be entered in combination with signaling trunk conditioning. Instead, it must always be accompanied by the TRSP keyword.

TRSP Transparent

No robbed bit signaling is performed.

2.048 Mbit/s Termination

TRSP Transparent

Outgoing signaling will be fixed at 1101 (hex D) in slot 16 for Channel Associated Signaling (CAS) primaries. TRSP is the only allowable option for Non-Signaling Associated (NSA) primaries.

2.048 Mbit/s Termination**NOTE:**

When the provisioning insertion word (PIW) is assigned in the GRTH::NPC command, a four-bit pattern is inserted into the associated portion of time slot 16 for CAS circuits when the circuit is disconnected.

2.048 Mbit/s Termination

Additional rules apply for 2.048 Mbit/s termination cross-connects. The allowable signaling type and signaling consequent action are shown in the following table.

Allowable Signaling Type and Signaling Consequent Action

Primary Type in Cross-connect	Allowable <tc> Signaling Specification	Resulting Signaling Code FROM, TO	Resulting Signaling Consequent Action (Hardware) FROM, TO	Resulting Signaling Consequent Action (Firmware) FROM, TO	Resulting Disconnect (When DCC used in disconnect command)
CAS ↔ CAS	TRSP	Fixed at X'D	Fixed at X'D	Fixed at X'D	X'D
	TC-X'uv,X'yz*	CAS (Passed Through)	X'F	X'uv,X'yz	X'v,X'z
	Omitted	CAS (Passed Through)	X'F	X'F	X'F
NSA ↔ CAS	TRSP/ Omitted	None (Fixed at X'D in CAS direction)	Fixed at X'D in CAS direction	Fixed at X'D in CAS direction	X'D in CAS direction
NSA ↔ NSA	TRSP/ Omitted	Not appl.	Not appl.	Not appl.	Not appl.



NOTE:

For TCON and TCNT TC is X'uv,X'yz.

For OCON, OCNT and BCON TC is --,X'yz.

The allowable cross-connected time slot consequent action are shown in the following table.

Allowable Cross-Connected Time Slot Consequent Action

Allowable <tc> Insertion Word	Resulting Cross-Connected Time Slot Consequent Action FROM, TO	Resulting Disconnect Code (When DCC used in disconnect command)
Omitted	X'FF, X'FF	X'FF
IW X'pq *	X'FF, X'FF	X'pq

* Only used as a means of providing per time slot DCC codes. If the DCC code is not used when issuing the disconnect command, then the insertion word at the time the NPC was grown is used. This growth insertion word defaults to hex D5 if not explicitly specified at growth time.

Allowable Signaling Type and Signaling Consequent Action

Primary Type in Cross- connect	Allowable <tc> Signaling Specification	Resulting Signaling Code FROM, TO	Resulting Signaling Consequent Action (Hardware) FROM, TO	Resulting Signaling Consequent Action (Firmware) FROM, TO	Resulting Disconnect (When DCC used in disconnect command)
CAS "Æ CAS	TRSP	Fixed at X-D	Fixed at X-D	Fixed at X-D	X-D
	TC-X-uv,X- yz*	CAS (Passed Through)	X-F	X-uv,X-yz	X-v,X-z
	Omitted	CAS (Passed Through)	X-F	X-F	X-F

Allowable Signaling Type and Signaling Consequent Action

Primary Type in Cross-connect	Allowable <tc> Signaling Specification	Resulting Signaling Code FROM, TO	Resulting Signaling Consequent Action (Hardware) FROM, TO	Resulting Signaling Consequent Action (Firmware) FROM, TO	Resulting Disconnect (When DCC used in disconnect command)
NSA "Æ CAS	TRSP/ Omitted	None (Fixed at X-D in CAS direction)	Fixed at X-D in CAS direction	Fixed at X-D in CAS direction	X-D in CAS direction
NSA "Æ NSA	TRSP/ Omitted	Not appl.	Not appl.	Not appl.	Not appl.

⇒ **NOTE:**
For TCON and TCNT TC is X-uv,X-yz.
For OCON, OCNT and BCON TC is --,X-yz.

Allowable Cross-Connected Time Slot Consequent Action

Allowable <tc> Insertion Word	Resulting Cross-Connected Time Slot Consequent Action FROM, TO	Resulting Disconnect Code (When DCC used in disconnect command)
Omitted	X-FF, X-FF	X-FF
IW X-pq *	X-FF, X-FF	X-pq

* Only used as a means of providing per time slot DCC codes. If the DCC code is not used when issuing the disconnect command, then the insertion word at the time the NPC was grown is used. This growth insertion word defaults to hex D5 if not explicitly specified at growth time.

⇒ **NOTE:**
In a gateway application, when E1 channels are connected to T1 channels, the following rules apply to the transmittal of the Insertion Word (IW) towards the facility. If the Insertion Word needs to be transmitted towards the facility as a result of consequent action, then the Insertion Word transmitted by the T1 NPC towards its transmission facility is the Insertion Word specified in this command; however, the Insertion Word transmitted by the E1 NPC towards its facility is always X'FF.

sc

Signaling control

This variable represents the optional signaling bit control specification and is used only in the Channel Associated Signaling (CAS) to CAS application with CAS signaling.

If this option is not used, all four cross-connected time slot 16 (abcd) signaling bits in each direction are cross-connected unchanged.

Signaling control is specified as follows:

SC(abcd,efgh)

abcd Time slot 16 signalling bits, From direction

efgh Time slot 16 signalling bits, To direction

All 8 bits can be controlled independently. Control is applied by replacing each character in variable abcd or efgh with the appropriate control character.

The allowable control characters are

P Pass through unchanged

V Pass through inverted

0 Set output to 0

1 Set output to 1

The effect of the V control character depends upon whether the connection is international or gateway.

International: Inversion takes place on both the From and To-direction sides. The net effect is to cancel out the inversion. Hence it appears that no inversion took place.

Gateway: Inversion takes place only on the international side of the connection. The effect is an inversion.

NAM

No A-law to μ -law

The A-law to μ -law and μ -law to A-law code translators on the E1 type NPC are disabled. This keyword is valid in the following types of cross-connects:

Two-Point:

E1 to DS1 Gateway cross-connects have A-law to μ -law and μ -law to A-law conversion set as a default. The NAM keyword is used to disable the conversions.

E1 to E1 Default, the NAM keyword may be used but there is no need to specify NAM explicitly since A-law to μ -law and μ -law to A-law conversion is not needed, and therefore not performed, for a pure E1 cross-connect.

DS1 to DS1

Not applicable.

AIS	Alarm indication signal for 1.544-Mb/s interfaces This optional keyword is used to cause the all ones signal to be inserted on the downstream digroup when detected on the incoming digroup or when the incoming digroup exhibits a CGA (Carrier Group Alarm).
CUS	Customer This optional keyword is used to flag a circuit as a customer controlled circuit. On output it indicates that the circuit is customer controlled.
RDC	Red circuit This optional keyword is used to mark a circuit as a Red Circuit. On output it indicates that the circuit is a Red Circuit.
INCL	Inclusive A termination designated as a customer controlled circuit or a red circuit cannot be disconnected or modified without using this keyword in the message. Also, an NPC which supports these circuits cannot be manually removed unless this keyword is given in the remove command.
PRIOUT	Priority Output This keyword is used on the command line to prioritize the output response.
mmm	The From-direction channel number involved in denial (ddd through eee).
nnn	The To-direction channel number involved in denial (jjj through kkk).
d	Direction F FROM T TO B Both
st	Status

cc	Hexadecimal condition code
cc	<i>Explanation</i>
06	Invalid range for specified FROM NPC type
07	Invalid range for specified TO NPC type
08	Invalid FROM NPC type for AIS insertion
09	Invalid TO NPC type for AIS insertion
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
20	Line format types are incompatible
21	Trunk conditioning is invalid
22	FMC cannot be cross-connected in this format
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D6	Invalid FROM channel number

cc	<i>Explanation</i>
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
DD	A loopback is active on the TO termination
DF	Unmatched channel range
E0	Unmatched channel range involving SLC Mode III termination
E4	RT-DCLU cross-connect with different ids
E5	RT-DCLU cross-connect with different channel number
E6	Cross-connect a non Mode I channel to DCLU
E7	Cross-connect a non SLC channel to DCLU
E8	SC invalid for cross-connection specified
E9	MUX or TRB invalid for cross-connection specified
EA	AIS invalid for cross-connection specified
EB	NAM invalid for cross-connection specified
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
85	Using the 24th channel of a T1DM NPC
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed

st	d	<i>Explanation</i>
ASGN	{F T B}	Termination assigned
CUS	{F T B}	Customer-controlled Circuit
FAIL	{F T B}	Failed

st	d	Explanation
INVLD	{F T B}	Invalid NPC type
OOS	{F T B}	Out-of-service
RDC	{F T B}	Red Circuit
RDLD	{F T B}	Red Lined
ROLL	{F T B}	Circuit is involved in a roll
TG	{F T B}	NPC is grown as a test group
TP	{F T B}	NPC is used for test access
UEQD	{F T B}	Unequipped
UTST	{F T B}	Under Test

TWO-WAY CROSS-CONNECT FROM, TO MULTIPOINT MODE

Explanation of Command

This command requests a multipoint two-way cross-connection between the specified FROM and TO end terminations and is used to connect a DS0 leg to a multipoint circuit, or to cross-connect a leg, consisting of a single or a contiguous range of DS0 channels, to a multipoint circuit in the virtual network processing circuit. Cross-connections may be between various network processing circuit types.

If the user wants to cross-connect Nx64 kbits/s circuits, then the range feature of this command should be used.

Command

1.544 Mbit/s Termination

Nonhierarchical

[l.11021]

TCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \ MPM(fmd, tmd), <tc>, [NTR m][,RDC][,{CUS|INCL}]!

Hierarchical

[l.11021]

TCON:FRM xy,SEQ ww:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \ MPM(fmd, tmd), <tc>, [NTR m][,RDC][,{CUS|INCL}]!

2.048 Mbit/s Termination

Nonhierarchical

[l.11021]

TCON:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk], \ MPM(fmd, tmd)[, <tc>][,NAM],[NTR m][,RDC][,{CUS|INCL}]!

Hierarchical

[I.11021]

TCON:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk], \\
MPM(fmd,tmd)[,<tc>][,NAM],[NTR m][,RDC][,{CUS|INCL}]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.11021]

M hh:mm:ss xy,ww n[vv] TCON [s]abcddd[-eee],[t]ghijjj[-kkk] \\
2 LN MSG:
fmd,tmd <tc>[NTR m][NOBBL {F|T}][{CUS|INCL}][RDC] COMPL

Hierarchical

[O.11021]

M hh:mm:ss xy,ww n[vv] TCON uvmnpddd[-eee],wxkqrjjj[-kkk] \\
2 LN MSG:
fmd,tmd <tc>[NTR m][NOBBL {F|T}][{CUS|INCL}][RDC] COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.11021]

M hh:mm:ss xy,ww n[vv] TCON [s]abcddd[-eee],[t]ghijjj[-kkk] \\
2 LN MSG:
fmd,tmd[<tc>][NAM][NTR m][NOBBL {F|T}][{CUS|INCL}][RDC] \\
COMPL

Hierarchical

[O.11021]

M hh:mm:ss xy,ww n[vv] TCON uvmnpddd[-eee],wxkqrjjj[-kkk] \\
2 LN MSG:
fmd,tmd[<tc>][NAM][NTR m][NOBBL {F|T}][{CUS|INCL}][RDC] \\
COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.11021.01]

M hh:mm:ss xy,ww n[vv] TCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.11021.02]

M hh:mm:ss xy,ww n[vv] TCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] d <st> DNY

Hierarchical

[O.11021.01]

M hh:mm:ss xy,ww n[vv] TCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.11021.02]

M hh:mm:ss xy,ww n[vv] TCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] d <st> DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.11021.01]

M hh:mm:ss xy,ww n[vv] TCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.11021.02]

M hh:mm:ss xy,ww n[vv] TCON [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] d <st> DNY

Hierarchical

[O.11021.01]

M hh:mm:ss xy,ww n[vv] TCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.11021.02]

M hh:mm:ss xy,ww n[vv] TCON uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] d <st> DNY

Explanation of Parameters	[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
	[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
		For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	uvmnp	Hierarchical FROM NPC number
	wxkqr	Hierarchical TO NPC number
	uv,wx	Unit number
	m,k	Module number
	np,qr	NPC number within the module
		For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	ddd, jjj	Channel or conference numbers
	eee, kkk	Channel or conference numbers denoting the end of range specification
		Channel numbers
		001-024
	001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
	000-030	CEPT type NPCs grown as CAS
	000-031	CEPT type NPCs grown as NSA
		Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or

one-way cross-connected to another channel. Also these two channels cannot be part of any conference.

Conference numbers 001-085 (MB NPC)

001-500 (Virtual NPC)

Cross-connections may be between various Network Processing Circuit (NPC) types:

- Facility Terminating Unit (FTU)/IFTU/DS3U/HDS3U NPC and DMB (1.544 Mbit/s Termination)
- DMB and DMB
- FTU/IFTU/DS3U/HDS3U NPC and Virtual NPC (1.544 Mbit/s Termination)

1.544 Mbit/s Termination

Range values -eee and -kkk apply only to the FTU/IFTU/DS3U/HDS3U end of an FTU/IFTU/DS3U/HDS3U-Virtual NPC circuit; i.e., cannot apply to the Virtual NPC end. No range values can apply to either end of an FTU/IFTU/DS3U/HDS3U NPC-DMB or DMB-DMB circuit. Note also that the range of allowable NPC numbers is dependent on the equipage of the frame.

MPM Multipoint mode

fmd FROM mode

tmd TO mode

Multipoint modes of the FROM and TO ends of the circuit

For DMB circuits, there are four possible values for fmd and tmd:

SYM For legs of a symmetrical multipoint circuit (must be a DMB channel)

BRD For nonbackbone (tributary) legs of a broadcast multipoint circuit (must be a DMB channel)

BBL For the backbone leg of a broadcast multipoint circuit (must be a DMB channel)

LEG For the end that does not terminate on the multipoint circuit (must be an FTU/DS3U/HDS3U channel)

For virtual NPC circuits, there are three possible values for fmd and tmd:

BRD For nonbackbone legs of a broadcast multipoint circuit (must be a virtual NPC channel)

BBL For the backbone leg of a broadcast multipoint circuit (must be a virtual NPC channel)

LEG For the end that does not terminate on the multipoint circuit (must be FTU/DS3U/HDS3U channels)

For within a DMB or virtual conference the valid combinations of fmd and tmd are:

LEG, BBL or BBL, LEG

LEG, BRD or BRD, LEG

SYM, LEG or LEG, SYM (only for DMB)

For concatenation of conferences:

BRD, BBL or BBL, BRD

BBL, BBL

SYM, SYM

Default values for noise guard (NG) and echo suppression (ES) are applied to symmetrical bridges (multipoint mode SYM) and polling circuits (multipoint mode BBL, BRD). These default values are:

Symmetrical bridges	NG = -18db	ES = -18db
Polling circuits	NG = 0db	ES = 0db



NOTE:

To avoid possible transmission delays in the conferencers, DACS II does not allow DMB broadcast conferences to be concatenated more than six deep. However, each concatenated conference supports the maximum allowable number of legs. This allows conferences to branch out at any point in the daisy chain, as long as each branch does not concatenate more than six conferences from the backbone leg.

tc

Trunk conditioning, which has the input form

TRSP,{IW X'pq|TRB|MUX}

Represents the desired cross-connected signaling and insertion word applied when a failure occurs. A trunk conditioning specification consists of a combination of a signaling specification followed by an insertion word specification. The TRSP (transparent) signaling specification is the only one allowed.

The following signaling options are allowed:

TRSP Transparent, no signaling

The following insertion word options are allowed:

IW X'pq The 8-bit pattern corresponding to the hexadecimal value of pq is inserted in the downstream direction of a failure on either line.

TRB Standard trouble code, equal to IW X'E4, not valid for CEPT.

MUX MUX out of sync code, equal to IW X'1A, not valid for CEPT.

Omitted Only valid for CEPT, defaults to IW-X-FF.

All leg connections to multipoint circuits using a DMB NPC or a Virtual NPC must use TRSP signaling. The insertion word is user specified and may be varied from leg to leg.

For all multipoint to multipoint conference cross-connections (DMB concatenated conferences) only TRSP signaling is allowed and is the default hence it need not be specified. The insertion word is not valid for concatenated conferences.



NOTE:

In a gateway application, when E1 channels are connected to T1 channels, the following rules apply to the transmittal of the Insertion Word (IW) towards the facility. If the Insertion Word needs to be transmitted towards the facility as a result of consequent action, then the Insertion Word transmitted by the T1 NPC towards its transmission facility is the Insertion Word specified in this command; however, the Insertion Word transmitted by the E1 NPC towards its facility is always X'FF.

NTR No Transmit

m The direction toward which transmission is shut off

F FROM

T TO

The NTR option is used to set up one-way connections; that is, to shut off transmission towards the specified FROM or TO termination. If NTR m is specified on the BBL (backbone leg) of a multipoint circuit, then the BRD (broadcast) legs of this circuit have their outward transmission turned off.

The NTR field is optional if the virtual NPC is part of the circuit. The direction of the data flow is indicated by the MPM (fmd, tmd) field.

CUS Customer

	All legs on a multipoint customer controlled circuit must be designated as CUS. A disconnected termination previously marked CUS remains as a customer controlled termination.
INCL	Inclusive The INCL keyword must be used to reconnect a termination to other terminations. However, if they are reconnected without the CUS keyword, they lose their customer controlled status.
NAM	No A-law to μ -law The A-law to μ -law and μ -law to A-law code translators on the E1 type NPC are disabled. This keyword is valid in the following types of cross-connects: E1 to E1 Multi-point cross-connects have A-law to μ -law and μ -law to A-law set as a default. This conversion is performed on pure E1 multi-point connections in case a DS1 leg is ever added to the broadcast connection. The NAM keyword is used to disable the conversions. It may be desirable to disable conversions in a pure E1 multi-point cross-connect since such a connection has more quantization noise than a pure E1 two-point cross-connect. This is due to the back to back A-law to μ -law and μ -law to A-law conversions which are taking place. E1 to DS1 or DS1 to E1 Same explanation as E1 to E1. DS1 to DS1 Not applicable.
RDC	Red circuit If the optional RDC field is present, the circuit is flagged as a Red Circuit. All legs on a multipoint red circuit must be designated RDC.
NOBBL	No backbone leg If the type of circuit was a broadcast circuit, the optional NOBBL indicates that no backbone leg is yet specified in either the FROM or TO direction. This argument appears until a backbone leg is specified for this circuit.
F	From
T	To
mmm	FROM channel number involved in the denial (ddd through eee)
nnn	TO channel number involved in the denial (jjj through kkk)
st	Status

d	Direction
F	FROM
T	TO
B	BOTH
cc	Hexadecimal condition code

cc	<i>Explanation</i>
06	Invalid range for specified FROM NPC type
07	Invalid range for specified TO NPC type
08	Invalid FROM NPC type for AIS insertion
09	Invalid TO NPC type for AIS insertion
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
20	Line format types are incompatible
21	Trunk conditioning is invalid
22	FMC cannot be cross-connected in this format
37	Two confs. were prev. connected or the concat. cause BRD-BBL loop
50	Trunk conditioning doesn't match that of conference
51	CUS flag doesn't match that of conference
52	RDLD flag doesn't match that of conference
70	Try to add a BBL to VC, but the VC already has backbone

cc	<i>Explanation</i>
78	Try to operate a ONE-WAY conference with a TWO-WAY input command
80	Database conference width does not match the range in input command
84	Trying to add or delete a leg when a conference is under test
85	Input BRD (BBL) has same NPC and channel as BBL (BRD)
A1	Illegal BBL BBL combination
A2	Illegal BRD BRD combination
A3	Illegal SYM BRD combination
A4	Illegal BRD SYM combination
A5	Illegal BBL SYM combination
A6	Illegal SYM BBL combination
A7	LEG mode was assigned to a DSPU-type NPC on the input
A8	A DMB mode was assigned to a FTU-type NPC on the input
A9	Trying to add a BBL to a DMB conference that already has one
AA	Trying to add a broadcast leg to a conference set up as SYM
AB	Trying to add a SYM leg to conference set up as broadcast
AC	Trying to add a BBL leg to a conference set up as SYM
B0	Bad use of INCL, cannot override the current state of the conference
B1	Bad use of INCL, cannot use keyword on conf.-to-conf. connection
C8	Exceeded depth limit of 6 on broadcast conference concatenation
1A	Required FLI not equipped, not in service, or failed

cc	<i>Explanation</i>
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
AE	A substrate circuit pack is specified in the command line
B5	CPR circuit pack specified in the command
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
DD	A loopback is active on the TO termination
DF	Unmatched channel range
E0	Unmatched channel range involving SLC Mode III termination
E1	A locally switched channel is specified as BBL, LEG, or BRD
E4	RT-DCLU cross-connect with different ids
E5	RT-DCLU cross-connect with different channel number
E6	Cross-connect a non Mode I channel to DCLU
E7	Cross-connect a non SLC channel to DCLU
E8	SC invalid for cross-connection specified
E9	MUX or TRB invalid for cross-connection specified

cc	<i>Explanation</i>
EA	AIS invalid for cross-connection specified
EB	NAM invalid for cross-connection specified
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
FF	Termination is in process of being rolled

st	d	<i>Explanation</i>
ASGN	{F T B}	Termination assigned
CUS	{F T B}	Customer-controlled Circuit
FAIL	{F T B}	Failed
INVLD	{F T B}	Invalid NPC type
NOCHAN	{F T B}	Conference has no more channels to connect
NOCUS	{F T B}	Conference not CUS
NORDC	{F T B}	Conference not RDC
OOS	{F T B}	Out-of-service
RDC	{F T B}	Red Circuit
RDLD	{F T B}	Red Lined
ROLL	{F T B}	Circuit is involved in a roll
TG	{F T B}	
TP	{F T B}	NPC is used for test access
UEQD	{F T B}	Unequipped
UTST	{F T B}	Under Test

TWO-WAY CROSS-CONNECTIONS

Explanation of Command

This command requests a TS0 to non TS0 cross-connection. A cross-connect mode must be chosen to prevent the TS0 Frame Alignment Signal from being transmitted in a non TS0 timeslot.

Command

Nonhierarchical

[I.11051]

```
TCON:[FRM xy][,SEQ ww]:FROM [s]abcddd,TO [t]ghijjj \  
[, {PFW(abcdefg,ijklmno)|NFW}]!
```

Hierarchical

[I.11051]

```
TCON:[FRM xy][,SEQ ww]:FROM uvmnpddd,TO wxkqrjjj \  
[, {PFW(abcdefg,ijklmno)|NFW}]!
```

Completion Message

Nonhierarchical

[O.11051]

```
M hh:mm:ss xy,ww n[vv] TCON [s]abcddd,[t]ghijjj \  
{PFW(abcdefg,ijklmno)|NFW} COMPL
```

Hierarchical

[O.11051]

```
M hh:mm:ss xy,ww n[vv] TCON uvmnpddd,wxkqrjjj \  
{PFW(abcdefg,ijklmno)|NFW} COMPL
```

Denial Message

Nonhierarchical

[O.11051.01]

M hh:mm:ss xy,ww n[vv] TCON [s]abcddd,[t]ghijjj \
[{PFW(abcdefg,ijklmno)|NFW}] cc <st> DNY

[O.11051.02]

M hh:mm:ss xy,ww n[vv] TCON [s]abcddd,[t]ghijjj \
[{PFW(abcdefg,ijklmno)|NFW}] d <st> DNY

Hierarchical

[O.11051.01]

M hh:mm:ss xy,ww n[vv] TCON uvmnpddd,wxkqrjjj \
[{PFW(abcdefg,ijklmno)|NFW}] cc <st> DNY

[O.11051.02]

M hh:mm:ss xy,ww n[vv] TCON uvmnpddd,wxkqrjjj \
[{PFW(abcdefg,ijklmno)|NFW}] d <st> DNY

Explanation of Parameters

FROM	From
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
TO	To
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
	uv,wx Unit number
	m,k Module number
	np,qr NPC number
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number for FROM NPC
jjj	Channel number for TO NPC
	000-030 on CEPT type NPCs grown as CAS
	000-031 on CEPT type NPCs grown as NSA



NOTE:

One of the channel numbers specified (ddd or jjj) must be channel 000 (TS0), while the other channel number (jjj or ddd) must be a number other than channel 000 (non-TS0).

The NPC containing the TS0 channel must be a PA or TH type NPC, while the NPC containing the non-TS0 channel can be either a PA, PB or PC or TH type NPC.

Channel 000 is not allowed in a range of channels (1.544 Mbit/s Termination).

PFW

Pseudo Frame Word

The PFW parameter is used to select Mode 1 of TS0 Cross-Connect: In both directions of transmission the Frame Word is replaced by a Pseudo Frame Word.

abcdefg

Value of the Pseudo Frame Word

This value replaces the Frame Alignment Signal (Bits 2 - 8) of the Frame Word being transmitted from the TO NPC to the FROM NPC.

The characters in the field represent the following bits:

- a** Pseudo Frame Word Bit 2
- b** Pseudo Frame Word Bit 3
- c** Pseudo Frame Word Bit 4
- d** Pseudo Frame Word Bit 5
- e** Pseudo Frame Word Bit 6
- f** Pseudo Frame Word Bit 7
- g** Pseudo Frame Word Bit 8

Values for bits a - g:

- 0** Sets the corresponding bit to 0
- 1** Sets the corresponding bit to 1

ijklmno

Value of the Pseudo Frame Word

This value replaces the Frame Alignment Signal (Bits 2 - 8) of the Frame Word being transmitted from the FROM NPC to the TO NPC.

The characters in the field represent the following bits:

- i** Pseudo Frame Word Bit 2

j	Pseudo Frame Word Bit 3
k	Pseudo Frame Word Bit 4
l	Pseudo Frame Word Bit 5
m	Pseudo Frame Word Bit 6
n	Pseudo Frame Word Bit 7
o	Pseudo Frame Word Bit 8

Values for bits i - o:

0	Sets the corresponding bit to 0
1	Sets the corresponding bit to 1



NOTE:

Bit 2 of timeslot 0 in a 2Mbit/s signal is used to distinguish the Frame Word from the Non Frame Word and it must always be 0 in the FW and 1 in the NFW. When defining the Pseudo Frame Word, the user must make sure that the Pseudo Frame Word can be distinguished from the Non Frame Word.

NFW

Non Frame Word

The NFW parameter is used to select Mode 2 of TS0 Cross-Connect. In both directions of transmission the Frame Word is replaced by the Non Frame Word, thus repeating the content of the Non Frame Word in consecutive frames.

If no mode is selected in the command, the default shall be NFW, that is, the default mode of operation is Mode 2.

NORM

Normal

NORM, NORM means that the cross-connection comes up in the normal state. The NORM keyword corresponds to the PDS TCON command.

TERM

Terminate

TERM, TERM means that the cross-connection comes up in the terminated state. The TERM keyword corresponds to the PDS TCNT command.

d

Direction

F	From
T	To
B	Both

st

Status

cc

Hexadecimal condition code

cc	<i>Explanation</i>
06	Invalid range for specified FROM NPC type
07	Invalid range for specified TO NPC type
08	Invalid FROM NPC type for AIS insertion
09	Invalid TO NPC type for AIS insertion
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
20	Line format types are incompatible
21	Trunk conditioning is invalid
E8	SC invalid for cross-connection specified
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed
3A	Invalid FPI value
8A	Mismatch between channel 0 crossconnect and keywords
9D	NPC containing channel 000 is invalid type.

st	d	<i>Explanation</i>
ASGN	F	Termination assigned
CUS	F	Customer-controlled Circuit
FAIL	F	Failed
OOS	F	Out-of-service
UEQD	F	Unequipped
UTST	F	Under Test

TWO-WAY NON-CHANNELIZED DIGITAL SIGNAL CROSS CONNECTION

Explanation of Command

This command forms a two-way cross-connection between two non channelized network processing circuits (NPCs). It is also used to form a terminated two-way cross-connection. The idle code is the alarm-indication signal (AIS, all ones) and does not need to be specified. The disconnect code (DCC) for 64 kbit/s disconnection cannot be used for nonchannelized NPCs.

When a failure occurs or during an alarm state, the AIS is transmitted toward the TO NPC.

NPCs with customer-controlled marking retain the CUS status when disconnected. When the NPCs are reconnected without CUS or inclusive (INCL) keyword, the command is denied. If the NPCs are reconnected with INCL keyword, they lose the CUS status.

Red circuit marking is removed when the circuit is disconnected.

Command

Nonhierarchical

[l.11011]

TCON:[FRM xy][,SEQ ww]:FROM [s]abc,TO \
[t]ghi[,RDC][,{CUS|INCL}][,PRIOUT]!

Hierarchical

[l.11011]

TCON:[FRM xy][,SEQ ww]:FROM uvmnp,TO
wxkqr[,RDC][,{CUS|INCL}][,PRIOUT]!

Completion Message

Nonhierarchical

[O.11011]

M hh:mm:ss xy,ww n[vv] TCON [s]abc,[t]ghi[RDC][CUS][PRIOUT] \
COMPL

Hierarchical

[O.11011]

M hh:mm:ss xy,ww n[vv] TCON uvmnp,wxkqr[RDC][CUS][PRIOUT] COMPL

Denial Message

Nonhierarchical

[O.11011.01]

M hh:mm:ss xy,ww n[vv] TCON [s]abc,[t]ghi cc <st> DNY

[O.11011.02]

M hh:mm:ss xy,ww n[vv] TCON [s]abc,[t]ghi d <st> DNY

Hierarchical

[O.11011.01]

M hh:mm:ss xy,ww n[vv] TCON uvmnp,wxkqr cc <st> DNY

[O.11011.02]

M hh:mm:ss xy,ww n[vv] TCON uvmnp,wxkqr d <st> DNY

Explanation of Parameters

[s]abc

The 3- or 4-digit nonhierarchical FROM NPC number

[t]ghi

The 3- or 4-digit nonhierarchical TO NPC number

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical FROM NPC number

wxkqr

Hierarchical TO NPC number

uv,wx Unit number

m,k Module number

np,qr NPC number within the module

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

RDC

Red circuit

CUS

Indicates a customer-controlled Circuit

INCL

Inclusive option must be used to remove CUS marking

PRIOUT	Priority Output
	This keyword is used on the command line to prioritize the output response.
st	Status of denial
d	Direction
F	From
T	To
B	Both
cc	Hexadecimal condition code

cc	<i>Explanation</i>
04	No NPC's out of service and OOS keyword used
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed

cc	<i>Explanation</i>
1F	Required MPR not equipped, not in service, or failed
EC	Invalid channel 000 cross-connection specified
FF	Termination is in process of being rolled

st	d	<i>Explanation</i>
ASGN	{F T B}	Termination assigned
CUS	{F T B}	Customer-controlled Circuit
FAIL	{F T B}	Failed
INVLD	{F T B}	Invalid NPC type
NPCTA	{F T B}	NPC used for Test Access
OOS	{F T B}	Out-of-service
ROLL	{F T B}	Circuit is involved in a roll
UEQD	{F T B}	Unequipped
UTST	{F T B}	Under Test

DISCONNECTIONS

Explanation of Command

NOTE:

This command applies to 2.048 Mbit/s Termination only.

This message requests a disconnection between the Facility Terminating Unit (FTU) or Hybrid DS3 Unit (HDS3U) type NPC signaling time slot 16 and the C-Bit Processor (CB) type NPC on the Digital Signal Processing Unit (DSPU). The CB number and the channel number on the CB are automatically specified by software.

Command

Nonhierarchical

[I.15004]

TDIS:[FRM xy][, SEQ ww]:FROM [s]abc,CB[, INCL][, OOS]!

Hierarchical

[I.15004]

TDIS:[FRM xy][, SEQ ww]:FROM uvmnp,CB[, INCL][, OOS]!

Completion Message

Nonhierarchical

[O.15004]

M hh:mm:ss: xy,ww n[vv] TDIS [s]abc,CB[OOS][CUS][RDC] \\
[INCL] COMPL

Hierarchical

[O.15004]

M hh:mm:ss: xy,ww n[vv] TDIS uvmnp,CB[OOS][CUS][RDC] \\
[INCL] COMPL

Denial Message

Nonhierarchical

[O.15004.01]

M hh:mm:ss: xy,ww n[vv] TDIS [s]abc,CB cc <st> DNY

[O.15004.02]

M hh:mm:ss: xy,ww n[vv] TDIS [s]abc,CB <d> <st> DNY

Hierarchical

[O.15004.01]

M hh:mm:ss: xy,ww n[vv] TDIS uvmnp,CB cc <st> DNY

[O.15004.02]

M hh:mm:ss: xy,ww n[vv] TDIS uvmnp,CB <d> <st> DNY

Explanation of Parameters

FROM	From termination
TO	To termination
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
uv	Unit number
m	Module number
np	NPC number For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

An Out-Of-Service disconnect may be done by giving the optional OOS keyword. At least one end of the circuit must be out-of-service or the OOS disconnect is denied.

d	Direction {F-from T-to B-both}
st	Status
cc	Hexadecimal condition code

d	st	Explanation
F	UEQD	FROM Unequipped
F	OOS	FROM Out-of-service
F	FAIL	FROM Failed
F	UASG	FROM Termination unassigned
F	CUS	FROM Customer Controlled Circuit
F	RDC	FROM Red Circuit
F	NOMTH	FROM No Match

cc	<i>Explanation</i>
03	No RDLD or CUS circuits and INCL keyword used
04	No NPC's out of service and OOS keyword used
12	Active CCN side not IS or failed or psted or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
30	NPC not provisioned for CAS
B6	C-bit operations are enabled
F1	Parameter only valid with PA, PB, or PC type NPCs
FF	Termination is in process of being rolled

st	d	<i>Explanation</i>
ROLL	{F T B}	Circuit is involved in a roll

DISCONNECTIONS, CROSS-CONNECT CIRCUITS

Explanation of Command

This command disconnects two-way, two-point cross-connect circuits or a range of cross-connected circuits.

Command

Nonhierarchical

[I.15001]

```
TDIS:[FRM xy][,SEQ ww]:FROM [s]abcddd[-eee],TO [t]ghijjj[-kkk] \  
[,INCL][,OOS][{,DCC|DCP}][,PRIOUT]!
```

Hierarchical

[I.15001]

```
TDIS:[FRM xy][,SEQ ww]:FROM uvmnpddd[-eee],TO wxkqrjjj[-kkk] \  
[,INCL][,OOS][{,DCC|DCP}][,PRIOUT]!
```

Completion Message

Nonhierarchical

[O.15001]

```
M hh:mm:ss xy,ww n[vv] TDIS [s]abcddd[-eee],[t]ghijjj[-kkk] \  
[ OOS][ {DCC| DCP}][ RDC][ PRIOUT] COMPL
```

Hierarchical

[O.15001]

```
M hh:mm:ss xy,ww n[vv] TDIS uvmnpddd[-eee],wxkqrjjj[-kkk] \  
[ OOS][ {DCC| DCP}][ RDC][ PRIOUT] COMPL
```

Denial Message

Nonhierarchical

[O.15001.01]

M hh:mm:ss xy,ww n[vv] TDIS [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.15001.02]

M hh:mm:ss xy,ww n[vv] TDIS [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] <d> <st> DNY

Hierarchical

[O.15001.01]

M hh:mm:ss xy,ww n[vv] TDIS uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.15001.02]

M hh:mm:ss xy,ww n[vv] TDIS uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] <d> <st> DNY

Explanation of Parameters

FROM	From termination
TO	To termination
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd,jjj	Channel numbers
eee,kkk	Channel numbers, denoting the end of a range.
001-024	
000-030	CEPT type NPCs grown as CAS

000-031 CEPT type NPCs grown as NSA

Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.

001-047 Odd only (SLC 96[®] Carrier, Mode 3, DGA)

049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)

001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)

025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)

049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)

073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)

001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)

025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)

049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

INCL Inclusive

To disconnect a circuit or range of circuits including one or more circuits marked either RDC or CUS, use the optional INCL keyword. If this keyword is not used, the message is denied if any circuits in the range are red circuits or customer controlled circuits.

OOS

Out of service

An Out-Of-Service disconnection may be done by giving the optional OOS keyword. At least one end of the circuit must be out-of-service or the OOS disconnection is denied. This keyword is not valid if the DSPP NPC is the only NPC out-of-service.

DCC

Disconnect code

If the Disconnect Code (DCC) option is specified, DACS II inserts the user-defined disconnect code and signaling into the disconnected channels. This disconnect code and signaling are specified by the trunk conditioning field of the cross connect command that initially connected the channels. Only the post 2.5 second signaling is inserted in the disconnected channels. If the DCC option was specified on a fully transparent (TRSP

	with no insertion word) domestic circuit, DACS II inserts the default trouble code X'E4. If the DCC option is not used, the disconnect code specified in the grow NPC command is used.
DCP	Disconnect Pre/Post code If the Disconnect Code (DCP) option is specified, DACS II inserts the user-defined disconnect code and signaling into the disconnected channels. This disconnect code and signaling are specified by the trunk conditioning field of the cross connect command that initially connected the channels. Both pre- and post 2.5 second signaling are inserted in the disconnected channels. If the DCP option was specified on a fully transparent (TRSP with no insertion word) domestic circuit, DACS II inserts the default trouble code X'E4. If the neither the DCC option nor the DCP option is used, the disconnect code specified in the grow NPC command is used.
PRIOUT	Priority Output This keyword is used on the command line to prioritize the output response.
CUS	Customer Customer-controlled circuit Terminations cross-connected using the optional CUS keyword retain their CUS status when disconnected. If the terminations are reconnected without the CUS or INCL keyword, the command is denied. When they are reconnected with the INCL keyword, they lose their customer controlled status.
RDC	Red circuit
mmm,nnn	Channel number involved in the denial. Otherwise the same as ddd.
d	Direction
	F From
	T To
	B Both
st	Status of denial
cc	Hexadecimal condition code

cc	<i>Explanation</i>
04	No NPC's out of service and OOS keyword used
06	Invalid range for specified FROM NPC type
07	Invalid range for specified TO NPC type
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
DD	A loopback is active on the TO termination

cc	<i>Explanation</i>
DF	Unmatched channel range
E0	Unmatched channel range involving SLC Mode III termination
E4	RT-DCLU cross-connect with different ids
E5	RT-DCLU cross-connect with different channel number
E6	Cross-connect a non Mode I channel to DCLU
E7	Cross-connect a non SLC channel to DCLU
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
FF	Termination is in process of being rolled
E0	ETSI not equipped, not in service, or failed

st	d	<i>Explanation</i>
CUS	{F T B}	Customer-controlled Circuit
FAIL	{F T B}	Failed
INVLD	{F T B}	Invalid NPC type
NOMTH	{F T B}	No Match
OOS	{F T B}	Out-of-service
RDC	{F T B}	Red Circuit
RDLD	{F T B}	Red Lined
ROLL	{F T B}	Circuit is involved in a roll
TP	{F T B}	NPC is used for test access
UEQD	{F T B}	Unequipped
UNPAS GN	{F T B}	Unassigned or Not Properly Assigned
UTST	{F T B}	Under Test

TWO-WAY DISCONNECTIONS

Explanation of Command

This message requests a disconnection between the specified FROM and TO end terminations and is used to disconnect a leg or legs from a multipoint circuit. Disconnections may be between various Network Processing Circuit (NPC) types:

- Facility Terminating Unit (FTU)/DS3U/HDS3U NPC and Digital Signal Processing (DSPU) Unit NPC
- FTU/DS3U/HDS3U NPC and Virtual NPC
- DSPU NPC and DSPU NPC

Command

Nonhierarchical

[I.15002]

TDIS:[FRM xy][,SEQ ww]:FROM [s]abcddd,TO [t]ghijjj[,INCL][,OOS][,DCC]!

Hierarchical

[I.15002]

TDIS:[FRM xy][,SEQ ww]:FROM uvmnpddd,TO wxkqrjjj[,INCL][,OOS][,DCC]!

Completion Message

Nonhierarchical

[O.15002]

M hh:mm:ss xy,ww n[vv] TDIS [s]abcddd,[t]ghijjj 2 LN MSG:
[NOBBL {F|T}][MPDIS {F|T|B}][OOS][CUS][DDC][RDC] COMPL

Hierarchical

[O.15002]

M hh:mm:ss xy,ww n[vv] TDIS uvmnpddd,wxkqrjjj 2 LN MSG:
[NOBBL {F|T}][MPDIS {F|T|B}][OOS][CUS][DDC][RDC] COMPL

Denial Message

Nonhierarchical

[O.15001.01]

M hh:mm:ss xy,ww n[vv] TDIS [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.15001.02]

M hh:mm:ss xy,ww n[vv] TDIS [s]abcddd[-eee],[t]ghijjj[-kkk] \
[mmm,nnn] <d> <st> DNY

Hierarchical

[O.15001.01]

M hh:mm:ss xy,ww n[vv] TDIS uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] cc <st> DNY

[O.15001.02]

M hh:mm:ss xy,ww n[vv] TDIS uvmnpddd[-eee],wxkqrjjj[-kkk] \
[mmm,nnn] <d> <st> DNY

Explanation of Parameters

FROM	From termination
TO	To termination
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number for beginning of NPC range
wxkqr	Hierarchical TO NPC number for end of NPC range
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."



NOTE:

The range of allowable NPC numbers is dependent on the equipment of the frame.

ddd	FROM channel or conference number
jjj	TO channel number or conference number
	Channel Numbers
	001-024
	000-030 CEPT type NPCs grown as CAS
	000-031 CEPT type NPCs grown as NSA
	Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.
	001-047 Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
	Conference Numbers 001-085 (MB NPC)
	001-500 (Virtual NPC)
	INCL Inclusive
	To disconnect a channel or range of channels including one or more channels marked as a Red Circuit, use the INCL (inclusive) option. If this option is not used, the message is denied if any circuits in the range are Red Circuits.
OOS	Out-of-service
	An Out-Of-Service disconnection may be done by giving the optional OOS keyword. At least one end of the circuit must be out-of-service or the OOS disconnection is denied.
DCC	Disconnect code

	If DCC is specified, DACS II inserts the user-defined disconnect code and signaling into the disconnected channels. This disconnect code and signaling are specified by the trunk conditioning field of the TCON command that initially connected to the channels. If the DCC option is not used, the disconnect code specified in the GRTH NPC command is used.	
mmm,nnn	Channel numbers involved in the denial. Otherwise, the same as ddd.	
CUS	Customer	
	Indicates the circuit is a customer controlled Circuit.	
NOBBL	No backbone leg	
	This optional field will appear if the multipoint circuit(s) FROM or TO is in the broadcast mode but has no backbone leg after the TDIS command.	
MPDIS	Multipoint disconnect	
	Full disconnection of the multipoint circuits is indicated by MPDIS for FROM, TO, or BOTH.	
RDC	Red circuit	
	RDC indicates that the disconnection was performed on a Red Circuit. This implies that the INCL keyword was given in the input message. If the disconnection was given on more than one circuit, then at least one of them was a Red Circuit.	
d	Direction	
	F	From
	T	To
	B	Both
st	Status of denial	
	17	Required ETSI not equipped, not in service, or failed or inactive side ETSI not equipped or not in service
cc	Hexadecimal condition code	

cc	<i>Explanation</i>
04	No NPC's out of service and OOS keyword used
06	Invalid range for specified FROM NPC type
07	Invalid range for specified TO NPC type
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
71	Try to delete a BBL leg from VC; however, VC has no BBL leg
72	The NPC of VC BBL leg doesn't match that in the input command
73	The first channel of VC BBL leg doesn't match that in the input cmd
74	Try to delete a BRD leg from VC; however, VC has no BRD leg
75	The input BRD leg is not in VC
76	The first channel of VC BRD leg doesn't match that in the input cmd
77	Tried to disconnect a nonexisting VC
78	Try to operate a ONE-WAY conference with a TWO-WAY input command
80	Database conference width does not match the range in input command
84	Trying to add or delete a leg when a conference is under test
A1	Illegal BBL BBL combination
A2	Illegal BRD BRD combination
A3	Illegal SYM BRD combination

cc	<i>Explanation</i>
A4	Illegal BRD SYM combination
A5	Illegal BBL SYM combination
A6	Illegal SYM BBL combination
AF	Delete or change a leg from a conference that has no leg
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
D0	FROM NPC is not provisioned as DGA
D1	TO NPC is not provisioned as DGA
D3	Corresponding NPC for FROM virtual channel is not provisioned
D4	Corresponding NPC for TO virtual channel is not provisioned
D6	Invalid FROM channel number
D7	Invalid TO channel number
D9	Invalid FROM channel number range
DA	Invalid TO channel number range
DC	A loopback is active on the FROM termination
DD	A loopback is active on the TO termination
DF	Unmatched channel range
E0	Unmatched channel range involving SLC Mode III termination
E4	RT-DCLU cross-connect with different ids

cc	<i>Explanation</i>
E5	RT-DCLU cross-connect with different channel number
E6	Cross-connect a non Mode I channel to DCLU
E7	Cross-connect a non SLC channel to DCLU
EC	Invalid channel 000 cross-connection specified
ED	Invalid channel 031 cross-connection specified
FF	Termination is in process of being rolled

st	d	<i>Explanation</i>
CUS	{F T B}	Customer-controlled Circuit
FAIL	{F T B}	Failed
NOMTH	{F T B}	No Match
OOS	{F T B}	Out-of-service
RDC	{F T B}	Red Circuit
RDLD	{F T B}	Red Lined
ROLL	{F T B}	Circuit is involved in a roll
TP	{F T B}	NPC is used for test access
UEQD	{F T B}	Unequipped
UNPAS GN	{F T B}	Unassigned or Not Properly Assigned
UTST	{F T B}	Under Test

TWO-WAY DISCONNECTION

Explanation of Command

This command disconnects a two-way cross-connection between two non-channelized network processing circuits. When the circuit is disconnected, the idle code (AIS) is transmitted.

Command

Nonhierarchical

[I.15011]

TDIS:[FRM xy][,SEQ ww]:FROM [s]abc,TO [t]ghi[,OOS][,INCL][,PRIOUT]!

Hierarchical

[I.15011]

TDIS:[FRM xy][,SEQ ww]:FROM uvmnp,TO wxkqr[,OOS][,INCL][,PRIOUT]!

Completion Message

Nonhierarchical

[O.15011]

M hh:mm:ss xy,ww n[vv] TDIS [s]abc,[t]ghi[OOS][RDC][CUS] \
[PRIOUT] COMPL

Hierarchical

[O.15011]

M hh:mm:ss xy,ww n[vv] TDIS uvmnp,wxkqr[OOS][RDC][CUS] \
[PRIOUT] COMPL

Denial Message

Nonhierarchical

[O.15011.01]

M hh:mm:ss xy,ww n[vv] TDIS [s]abc,[t]ghi cc <st> DNY

[O.15011.02]

M hh:mm:ss xy,ww n[vv] TDIS [s]abc,[t]ghi d <st> DNY

Hierarchical

[O.15011.01]

M hh:mm:ss xy,ww n[vv] TDIS uvmnp,wxkqr cc <st> DNY

[O.15011.02]

M hh:mm:ss xy,ww n[vv] TDIS uvmnp,wxkqr d <st> DNY

Explanation of Parameters

FROM	From termination
TO	To termination
[s]abc	The 3- or 4-digit nonhierarchical nonchannelized FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical nonchannelized TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical number of nonchannelized FROM NPC
wxkqr	Hierarchical number of nonchannelized TO NPC
uv,wx	Unit number
m,k	Module number
np,qr	NPC number
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
INCL	Inclusive
	Required for a CUS circuit or a red circuit
PRIOUT	Priority Output
	This keyword is used on the command line to prioritize the output response
OOS	Out-of-Service
	May be specified if one or both NPCs are out of service
RDC	Disconnection of Red circuit
CUS	Customer

	Disconnection of Customer-controlled Circuit	
st	Status of denial	
d	Direction	
	F	From
	T	To
	B	Both
cc	Hexadecimal condition code	
	cc	<i>Explanation</i>
	04	No NPC's out of service and OOS keyword used
	12	Active CCN side not IS or failed or pested or hardware OOS
	13	UNIT not equipped, not in service, or failed
	14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
	15	FTMI not equipped, not in service, or failed
	16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
	17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
	1A	Required FLI not equipped, not in service, or failed
	1B	Required MXR not equipped, not in service, or failed
	1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
	1D	Required MIU not equipped, not in service, or failed
	1E	Required OI not equipped, not in service, or failed
	1F	Required MPR not equipped, not in service, or failed
	FF	Termination is in process of being rolled
	E0	ETSI not equipped, not in service, or failed

st	d	Explanation
CUS	{F T B}	Customer-controlled Circuit
FAIL	{F T B}	Failed
INVLD	{F T B}	Invalid NPC type
NOMTH	{F T B}	No Match
NPCTA	{F T B}	NPC used for Test Access
OOS	{F T B}	Out-of-service
RDC	{F T B}	Red Circuit
RDLD	{F T B}	Red Lined
ROLL	{F T B}	Circuit is involved in a roll
UEQD	{F T B}	Unequipped
UNPAS GN	{F T B}	Unassigned or Not Properly Assigned
UTST	{F T B}	Under Test

REPORT THRESHOLD CROSSING ALARM FOR HSU FACILITIES

Explanation of Command

1.544 Mbit/s Termination

This autonomous output message reports a HSU facility performance monitoring parameter threshold crossing event for the Line, Path or VT Path of an OC-3 facility.

2.048 Mbit/s Termination

This autonomous output message reports a HSU facility performance monitoring parameter threshold crossing event for the Multiplex Section, High Order Path, or Low Order Path for a STM-1 facility.

Threshold crossing alert messages can be generated for both 15-minute and daily parameter accumulation intervals.

Autonomous Message

1.544 Mbit/s Termination

Nonhierarchical

[O.65861]

```
I hh:mm:ss xy,ww  UNIT q(q) OI kk[ MPR b][ VT (s)abc] 2 LN MSG:
THRESX <par> LOCN locn AI aaaaa COUNT cccccccc THLEV llllllll \
COMPL
```

Hierarchical

[O.65861]

```
I hh:mm:ss xy,ww  UNIT q(q) OI kk[ MPR b][ VT uvmnp] 2 LN MSG:
THRESX <par> COUNT cccccccc THLEV llllllll COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

[O.65861]

A hh:mm:ss xy,ww UNIT q(q) OI kk[MPR b][VT [s]abc] 2 LN MSG:
THRESX <par> COUNT cccccccc THLEV lllllllll COMPL

Hierarchical

[O.65861]

A hh:mm:ss xy,ww UNIT q(q) OI kk[MPR b][VT uvmnp] 2 LN MSG:
THRESX <par> COUNT cccccccc THLEV lllllllll COMPL

Explanation of Parameters

THRESX	Threshold Crossing
<par>	Performance Monitor Parameter
VT	Virtual Tributary
[s]abc	The 3- or 4-digit nonhierarchical virtual tributary number (same as NPC number inside the VT) For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical Virtual Tributary number (same as NPC number inside the VT) uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
OI	Optical Interface
kk	OI Facility Number 1S Service OI Facility 1 2S Service OI Facility 2 1P Protection OI Facility 1 2P Protection OI Facility 2
MPR	Mapper
b	Mapper number(1-6)

COUNT	Count
cccccccc	The count accumulated for the monitored parameter
THLEV	Threshold Level
IIIIIIII	The programmed threshold level of the monitored parameter
cc	Hexadecimal condition code

TIME SLOT ZERO RECEIVE NPC

Explanation of Command

**NOTE:**

This command applies to the 2.048 Mbit/s Termination interface only.

This autonomous output message reports a change of state in the spare national and international bits being received in time slot zero of a network processing circuit. The change of state probably is incompatible provisioning by using time slot zero monitor.

Autonomous Message

Nonhierarchical

[O.65201]

I hh:mm:ss xy,ww TS0 R NPC [s]abc OLD abcdefgh NEW \
abcdefgh COMPL

Hierarchical

[O.65201]

I hh:mm:ss xy,ww TS0 R NPC uvmnp OLD abcdefgh NEW \
abcdefgh COMPL

Explanation of Parameters

TS0	Time slot zero keyword
R	Received bits in time slot zero
NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

OLD	Old time slot zero pattern keyword
NEW	New time slot zero pattern keyword
abcdefgh	Time slot zero bits



NOTE:

The only bit values which are output are those which have been provisioned for monitoring. All other bits are output as (-) (dash).

ab Spare international bits S_i

If the NPC is not provisioned for the CRC multiframe format, bits a and b shall represent the S_i bits in the Frame Word (FW) and the Non Frame Word (NFW), respectively.

If the NPC is provisioned for the CRC multiframe format, a and b shall represent the S_i bits in frames 13 and 15 of the CRC multiframe in the NFW, respectively.

c Remote Alarm Indication must be - (hyphen).

de Two spare national bits S_4 through S_5 in the NFW.

f RPSFI (Remote Power Supply Failure Indicator) bit in the NFW if provisioned for RPSFI otherwise spare national bit.

gh Two spare national bits S_7 through S_8 in the NFW

ALARM TS0MBOFL

Explanation of Command

2.048 Mbit/s Termination

This output message prints out the buffer overflow condition for the time slot zero monitor (TS0M). This message applies to PA, PB, and PC type NPCs.

1.544 Mbit/s Termination

This output message prints out the buffer overflow condition for the time slot zero monitor (TS0M). This message applies to TH type NPCs.

Autonomous Message

Nonhierarchical

[O.65231]

I hh:mm:ss xy,ww TS0MBOFL [s]abc COMPL

Hierarchical

[O.65231]

I hh:mm:ss xy,ww TS0MBOFL uvmnp COMPL

Explanation of Parameters

TS0MBOFL

Time Slot 0 Monitor Buffer Overflow

[s]abc

The 3- or 4-digit nonhierarchical NPC number

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical NPC number

uv Unit number

m Module number

np NPC number

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

NX64Kbit/s TWO-WAY TEST ACCESS, HUB

Explanation of Command

To set up an Nx64Kbit/s hub test access connection via a test-access group to an Nx64Kbit/s TO termination. The TO termination consists of two Nx64Kbit/s bundles that are connected to the test-access group's east and west bundles. These channel bundles must be of the same width as the test-access group. If all of the channels, starting at the number specified for the TO termination, are not available, the first unavailable channel encountered causes the command to be denied. The channel that caused the denial is reported in the denial message.

Command

Nonhierarchical

[I.24021]

TTST:[FRM xy][,SEQ ww]:HUB,TO ([s]abcddd,[t]ghijjj),TG mmm[,<tc>]!

Hierarchical

[I.24021]

TTST:[FRM xy][,SEQ ww]:HUB,TO (uvmnpddd,wxkqrjjj),TG mmm[,<tc>]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.24021]

M hh:mm:ss xy,ww n[vv] TTST HUB [s]abcddd,[t]ghijjj NN TG mmm \\
2 LN MSG:
<tc> CGA(fsb) COMPL

Hierarchical

[O.24021]

M hh:mm:ss xy,ww n[vv] TTST HUB uvmnpddd,wxkqrjjj NN TG mmm \\
2 LN MSG:
<tc> CGA(fsb) COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.24021]

M hh:mm:ss xy,ww n[vv] TTST HUB [s]abcddd,[t]ghijjj NN TG mmm \\
2 LN MSG:
<tc> <sc> CGA(fsb) COMPL

Hierarchical

[O.24021]

M hh:mm:ss xy,ww n[vv] TTST HUB uvmnpddd,wxkqrjjj NN TG mmm \\
2 LN MSG:
<tc> <sc> CGA(fsb) COMPL

Denial Message

Nonhierarchical

[O.24021.01]

M hh:mm:ss xy,ww n[vv] TTST HUB [s]abcddd,[t]ghijjj TG mmm \\
[[u]jklppp] COND cc DNY

Hierarchical

[O.24021.01]

M hh:mm:ss xy,ww n[vv] TTST HUB uvmnpddd,wxkqrjjj TG mmm \\
[jklmnp] COND cc DNY

Explanation of Parameters

TG	Test (access) group
mmm	Test access group number (001 through 400) TG is designated as in the GRTH,TG,NPCTG command.
HUB	Hub
[s]abc	3- or 4-digit nonhierarchical first TO NPC number
[t]ghi	3- or 4-digit nonhierarchical second TO NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical first TO NPC number
wxkqr	Hierarchical second TO NPC number

	uv,wx	Unit number
	m,k	Module number
	np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."	
ddd	Starting channel number of first TO NPC	
jjj	Starting channel number of second TO NPC	
ppp	First channel causing denial	
	001-024	
	001-030	Primary NPCs grown as Channel Associated Signaling (CAS)
	001-031	Primary NPCs grown as Non Signaling Associated (NSA)
tc	Trunk conditioning	
	For 1.544-Mbit/s interfaces, if the static tc was not furnished in the growth TG command, it must be dynamically specified in this command or the test access is denied. A dynamic tc overrides any static tc. The effective tc is used for all channels used in this test connection, and is shown in the output.	
	For TGs supported by NSA NPCTG(s), the TO NPC(s) must be NSA type also. The default and the only allowed <tc> is TRSP IW FF. Any other input results in denial.	
	For TGs supported by CAS NPCTG(s), the TO NPC(s) must be CAS type also. If TRSP is entered as <tc>, TRSP IW FF is used as <tc>. If anything else or nothing is entered, TC(FF,FF) IW FF is used.	
sc	Signaling control	
	This variable represents the optional signaling bit control specification and is used only in the Channel Associated Signaling (CAS) to CAS application with CAS signaling.	
	If this option is not used, all four cross-connected time slot 16 (abcd) signaling bits in each direction will be cross-connected unchanged.	
	Signaling control is specified as follows:	
	SC(abcd,efgh)	
	abcd	Time slot 16 signalling bits, From direction
	efgh	Time slot 16 signalling bits, To direction

All 8 bits can be controlled independently. Control is applied by replacing each character in variable abcd or efgh with the appropriate control character.

The allowable control characters are

- P** Pass through unchanged
- V** Pass through inverted
- 0** Set output to 0
- 1** Set output to 1

The effect of the V control character depends upon whether the connection is international or gateway.

International: Inversion takes place on both the From and To-direction sides. The net effect is to cancel out the inversion. Hence it appears that no inversion took place.

Gateway: Inversion takes place only on the international side of the connection. The effect is an inversion.

CGA	Carrier group alarm
PBA	Primary block alarm
fsb	CGA or PBA state
f	First TO NPC CGA or PBA state
F	First TO NPC is in CGA or PBA
0	First TO NPC is not in CGA or PBA
s	Second TO NPC CGA or PBA state
S	Second TO NPC is in CGA or PBA
0	Second TO NPC is not in CGA or PBA
b	TG digroup CGA or PBA state
E	East-bundle NPCTG in CGA or PBA
W	West-bundle NPCTG in CGA or PBA
B	NPCTG(s) supporting both bundles in CGA or PBA
0	NPCTG(s) not in CGA or PBA
RDC	Red circuit
	The cross-connection tested is a red circuit.
CUS	Customer

The cross-connection tested is a customer-controlled circuit.

COND	Condition
NN	TG width
	1 through 24 for 1.544-Mbit/s interfaces
	1 through 31 for 2.048-Mbit/s interfaces
cc	Hexadecimal condition code

cc	<i>Explanation</i>
26	NPC type error
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
E0	ETSI not equipped, not in service, or failed
3C	TS0 specified with width not 1
3D	Illegal test access mode for TS0

cc	<i>Explanation</i>
3E	TS16 specified for test with width not 1
3F	Illegal test access mode for TS16
47	Invalid channel number
49	test group unequipped
4A	channel part of a TP or TG
4B	channel already under test
4D	Gateway test access not supported
51	TG width incompatible with circuit
53	inconsistent HUB width for specified TG
59	Invalid TC specification
5A	NPC unequipped, out of service or failed
5D	Inconsistent Signaling on CEPT NPCTGs
5E	invalid test access mode
5F	input channel out of range (SLC not supported)
60	circuit contains mapped channels for HUB request
95	TG East/West type inconsistent with each other or circuit
96	incompatible HUB feature types
AD	Only one ITS TG per pack can be in non-idle mode

TWO-WAY TEST ACCESS, HUB

Explanation of Command

This command requests a hubbing mode test access via a specified test port (TP) to the TO termination. In the hubbing mode, DACS II is used as a test access concentrator to connect a local TP to a remote TP. The cross-connection is made between TP kk and two 64-kb/s channels, the TO end of which is specified in the command. Successive termination numbers jjj and ddd correspond to lower and upper channels of the test port, respectively. These two channels are from a test port in another DACS II or other test access device to be cross-connected. DACS II does not know if the requested access is, in fact, to a hubbed test port on another frame; however, the request is denied if either channel is mapped, under test, or if channel jjj would be out of range on the NPC.

Trunk conditioning <tc> may be specified, however, it only has an effect on Gateway (T1-E1) conversion circuits. For hub test access of Non Gateway circuits, any trunk conditioning values entered by the user are overwritten by all one values for the circuit's signaling and insertion word.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.24001]

TTST:[FRM xy][,SEQ ww]:HUB,<tc>,TO [t]ghijjj,TP kk!

Hierarchical

[I.24001]

TTST:[FRM xy][,SEQ ww]:HUB,<tc>,TO uvmnpjjj,TP kk!

2.048 Mbit/s Termination

Nonhierarchical

[I.24001]

TTST:[FRM xy][,SEQ ww]:HUB,TO [t]ghijjj,TP kk[,<tc>][,NAM]!

Hierarchical

[I.24001]

TTST:[FRM xy][,SEQ ww]:HUB,TO uvmnpjjj,TP kk[,<tc>][,NAM]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.24001]

M hh:mm:ss xy,ww n[vv] TTST HUB [t]ghijjj,[t]ghimmm TP kk 2 LN MSG:
<tc>[NAM] CGA(ftp) COMPL

Hierarchical

[O.24001]

M hh:mm:ss xy,ww n[vv] TTST HUB uvmnpjjj,uvmnpmmm TP kk 2 LN MSG:
<tc>[NAM] CGA(ftp) COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.24001]

M hh:mm:ss xy,ww n[vv] TTST HUB [t]ghijjj,[t]ghimmm TP kk \
2 LN MSG:
[<tc>][NAM] CGA(ftp) COMPL

Hierarchical

[O.24001]

M hh:mm:ss xy,ww n[vv] TTST HUB uvmnpjjj,uvmnpmmm TP kk \
2 LN MSG:
[<tc>][NAM] CGA(ftp) COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.24001.01]

M hh:mm:ss xy,ww n[vv] TTST HUB [t]ghijjj <tc>[NAM] TP kk <st> DNY

If the error response exceeds 80 characters:

[O.24001.02]

M hh:mm:ss xy,ww n[vv] TTST HUB [t]ghijjj <tc> 2 LN MSG:
[NAM]TP kk <st> DNY

Hierarchical

[O.24001.01]

M hh:mm:ss xy,ww n[vv] TTST HUB uvmnpjjj <tc>[NAM] TP kk <st> \ DNY

If the error response exceeds 80 characters:

[O.24001.02]

M hh:mm:ss xy,ww n[vv] TTST HUB uvmnpjjj <tc> 2 LN MSG:
[NAM]TP kk <st> DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.24001.01]

M hh:mm:ss xy,ww n[vv] TTST HUB [t]ghijjj <tc>[NAM] TP kk <st> DNY

If the error response exceeds 80 characters:

[O.24001.02]

M hh:mm:ss xy,ww n[vv] TTST HUB [t]ghijjj <tc> 2 LN MSG:
[NAM]TP kk <st> DNY

Hierarchical

[O.24001.01]

M hh:mm:ss xy,ww n[vv] TTST HUB uvmnpjjj <tc>[NAM] TP kk <st> DNY

If the error response exceeds 80 characters:

[O.24001.02]

M hh:mm:ss xy,ww n[vv] TTST HUB uvmnpjjj <tc> 2 LN MSG:
[NAM]TP kk <st> DNY

Explanation of Parameters	HUB	Hub
	TO	To
	[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number For a listing of the non-hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	uvmnp	Hierarchical TO NPC number
	uv	Unit number
	m	Module number
	np	NPC number within the module
		For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

2.048 Mbit/s Termination

jjj	TO channel number The TO channel number must correspond to a lower channel of a test port for CEPT and Primary digroups

1.544 Mbit/s Termination

jjj	TO channel number The TO channel number must correspond to a lower channel of a test port.
tc	Trunk conditioning tc represents the desired cross-connected signaling and insertion word applied when a failure occurs. A trunk conditioning specification consists of a combination of a signaling specification followed by an insertion word specification. The signaling and the insertion word specification are entered separately, with a comma as the delimiter.

1.544 Mbit/s Termination

2.048 Mbit/s Termination

1.544 Mbit/s Termination

2.048 Mbit/s Termination

1.544 Mbit/s Termination

TC(ijkl,mnop)

2-way, 4-state signaling in binary.

TC(ijklmnop,qrstuvwx)

2-way, 16-state signaling in binary.

TC(X'ab,X'cd)

2-way, 16-state in hexadecimal.

TRSP Transparent, no signaling.

2.048 Mbit/s Termination

TC(ijkl,mnop)

2-way, 4-state signaling in binary. For CEPT and ESF type framing format, software will expand 4-state to 16-state by duplicating the bits.

TC(efghijkl,mnopqrst)

2-way, 16-state in binary.

TC(X'ab,X'cd)

2-way, 16-state in hexadecimal.

TRSP Transparent, no signaling.

Omitted Default is TC X'FF,X'FF if both terminations are channel associated signaling types (CAS). Default will be TRSP if one of the terminations is nonsignaling associated (NSA) type.

1.544 Mbit/s Termination

IW X'pq The 8-bit pattern corresponding to the hexadecimal value of pq will be inserted in the downstream direction of a failure on either line.

TRB Standard trouble code, equal to IW X'E4.

MUX MUX out of sync code, equal to IW X'1A.

2.048 Mbit/s Termination

	IW X'pq	The 8-bit pattern corresponding to the hexadecimal value of pq will be inserted in the downstream direction of a failure on either line.
	Omitted	Will default to IW X'FF.
mmm	Channel number	Variable mmm is equal to jjj + 1. Must be an even number.
TP	Test port	
kk	Test port number (01 through 96)	

In the hubbing mode, DACS II is used as a test access concentrator to make a TP-to-TP connection. The cross-connection to be made between a test port and two DS0 channels, the TO end of which is specified above. The channel specified (jjj) must be an odd channel. DACS II connects jjj and the next channel (mmm = jjj+1) to test port kk. DACS II does not know if the requested access is, in fact, to a hubbed test port on another frame; however, the request is denied if either channel is mapped or under test or if channel jjj does not correspond to a lower channel of a test port.

CGA	Carrier group alarm
f	FROM CGA status
	F FROM NPC is in CGA
	0 FROM NPC is not in CGA
t	TO CGA status
	T TO NPC is in CGA
	0 TO NPC is not in CGA
p	Test port NPC CGA status
	P Test port NPC is in CGA
	0 Test port NPC is not in CGA

 **NOTE:**
FROM test port NPC never appears in the CGA condition.

Signaling mode of port

T	Transparent
R	Robbed bit Signaling
C	Channel associated signaling (CAS)

	H	Hubbing
ASGN	Assigned	
	The test port is already assigned.	
NMON	Not monitor	
	The test port is not in monitor mode.	
st	Status	

 **NOTE:**
When st is set to "T NOT LOWER", for CEPT type NPCs, jjj must be one of the following channels:

005, 007, 009, 011, 013, 016, 018, 020, 022, 024, 026, or 028.

NX64Kbit/s TWO-WAY TEST ACCESS, INTEGRATED TEST SIGNAL ERROR INSERTION

Explanation of Command

This command is used to insert a bit error into test pattern generated by the Integrated Test Set. The test-access group specified must be in test signal generation ode. A bit error is inserted by the Integrated Test Set by inverting a bit in the next transmitted frame of the generated signal. The integrated test signal generation (and bit error insertion) function is provided by the TG193 circuit pack. No external test sets are required. The test group NPC (NPCTG) must be provisioned as an Integrated Test Set (type ST1yz) to allow integrated test signal generation.

Command

[I.22221]
TTST::[FRM xy][,SEQ ww]:INS,TG mmm!

Completion Message

[O.22221]
M hh:mm:ss xy, ww n[vv] TTST INS TG mmm COMPL

Denial Message

[O.22021.01]
M hh:mm:ss xy,ww n[vv] TTST INS TG mmm COND cc DNY

Explanation of Parameters

TG	Test-access group
mmm	Test-access Group number (001 through 400) The TG is designated as in command I.31421
INS	Insert a bit error into the generated test signal
cc	Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
15	FTMI not equipped, not in service, or failed
49	test group unequipped
75	ITS TG is Idle
76	ITS NPC Hardware Error

NX64Kbit/s LOOPED TEST ACCESS

Explanation of Command

This command is used to place both bundles of a test-access group (TG) in the looped mode. If the TG is not provisioned or currently assigned the command is denied.

Command

1.544 Mbit/s Termination

[I.29021]

TTST:[FRM xy][,SEQ ww]:LPD,TG mmm[,<tc>]!

2.048 Mbit/s Termination

[I.29021]

TTST:[FRM xy][,SEQ ww]:LPD,TG mmm[,<tc>]!

Completion Message

1.544 Mbit/s Termination

[O.29021]

M hh:mm:ss xy,ww n[vv] TTST LPD TG mmm NN <tc> COMPL

2.048 Mbit/s Termination

[O.29021]

M hh:mm:ss xy,ww n[vv] TTST LPD TG mmm NN <tc> COMPL

Denial Message

1.544 Mbit/s Termination

[O.29021.01]

M hh:mm:ss xy,ww n[vv] TTST LPD TG mmm COND cc DNY

2.048 Mbit/s Termination

[O.29021.01]

M hh:mm:ss xy,ww n[vv] TTST LPD TG mmm COND cc DNY

**Explanation of
Parameters**

LPD	Looped
TG	Test (access) group
mmm	TG number (001 through 400)
tc	Trunk conditioning If the static tc was not furnished in the growth TG command, it must be dynamically specified in this command or the test access is denied. A dynamic tc overrides any static tc. The effective tc is used, and output.
COND	Condition

1.544 Mbit/s Termination**NN** TG width (1 through 24)**2.048 Mbit/s Termination****NN** TG width (1 through 31)
cc Hexadecimal condition code

cc	<i>Explanation</i>
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed

cc	<i>Explanation</i>
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
E0	ETSI not equipped, not in service, or failed
3D	Illegal test access mode for TS0
3F	Illegal test access mode for TS16
49	test group unequipped
59	Invalid TC specification
5A	NPC unequipped, out of service or failed
5D	Inconsistent Signaling on CEPT NPCTGs
5E	invalid test access mode
AD	Only one ITS TG per pack can be in non-idle mode

LOOPED TEST ACCESS

Explanation of Command

This message requests that both test port channels on a given test port be placed in the looped mode.

Trunk conditioning *may be specified* to loop a static test port kk. If specified it overrides the specification given when the test port was equipped. If not specified it will default to the specification given when the test port was equipped.

Trunk conditioning *must be specified* to loop a dynamic test port kk since tc is dynamically set when any test access message makes the test port active. If trunk conditioning is omitted, the request will be denied.

TTST::TPR,TP will undo this command.

1.544 Mbit/s Termination

The test port is mapped to predesignated channels of a network processing circuit for test ports (NPCTP) during the provisioning of that test port. All domestic non-SLC NPC types can be provisioned as NPCTP. For the mapping between the test ports and the channels of the test NPCs, see the GRTH::TP message.

2.048 Mbit/s Termination

The test port is mapped to predesignated channels of a network processing circuit for test ports (NPCTP) during the provisioning of that test port. All CEPT types that have been provisioned for channel associated signaling (CAS) can be provisioned as NPCTP. For the mapping between the test ports and the channels of the test NPCs, see the CRTE::TP message.

Command

[I.29001]

TTST:[FRM xy][,SEQ ww]:LPD,TP kk,<tc>!

Completion Message

[O.29001]

M hh:mm:ss xy,ww n[vv] TTST LPD TP kk <tc> COMPL

Denial Message

[O.29001.01]

M hh:mm:ss xy,ww n[vv] TTST LPD TP kk <st> DNY

Explanation of Parameters

LPD

Looped

TP

Test port

kk

Test port number (01 through 96)

tc

Trunk conditioning

Represents the desired cross-connected signaling and insertion word applied when a failure occurs. A trunk conditioning specification consists of a combination of a signaling specification followed by an insertion word specification. For example, TRSP,IW X'pq (input form).

1.544 Mbit/s Termination

The following signaling options are allowed:

TC(ijkl,mnop)

2-way,4-state signaling in binary

For ESF type framing format, software expands 4-state to 16-state by duplicating the format on the remaining frames on a superframe.

TC(efghijkl,mnopqrst)

2-way,16-state in binary

Only valid for ESF framing format.

TC(X'ab,X'cd)

2-way,16-state in hexadecimal

TRSP

Transparent, no signaling

2.048 Mbit/s Termination

The following signaling options are allowed:

TC(ijkl,mnop)

2-way,4-state signaling in binary

For CEPT type framing format, software expands 4-state to 16-state by duplicating the format on the remaining frames on a superframe.

TC(efghijkl,mnopqrst)

2-way,16-state in binary

Only valid for CEPT framing format.

TC(X'ab,X'cd)

2-way,16-state in hexadecimal

TRSP Transparent, no signaling

omitted Only valid for CEPT cross-connections, defaults to TC(X'FF,X'FF) if both terminations are channel associated signaling type. It will default to TRSP if one of the terminations is nonsignaling associated (NSA) type.

1.544 Mbit/s Termination

The following insertion words options are allowed:

IW X'pq The 8-bit pattern corresponding to the hexadecimal value of pq will be inserted to the downstream direction of a failure on either line

TRB Standard trouble code, equal to IW X'E4

MUX MUX out of sync code, equal to IW X'A1 (only valid with signaling option TRSP)

2.048 Mbit/s Termination

The following insertion words options are allowed:

IW X'pq The 8-bit pattern corresponding to the hexadecimal value of pq is inserted to the downstream direction of a failure on either line.

Omitted Only valid for CEPT, defaults to IW X'FF

1.544 Mbit/s Termination

2.048 Mbit/s Termination

1.544 Mbit/s Termination

2.048 Mbit/s Termination

2.048 Mbit/s Termination

For channel 016 on a CAS primary trunk conditioning defaults to TRSP,IW X'FF and overrides any trunk conditioning option provided in this message.

The following trunk conditioning usage applies:

- If trunk conditioning is omitted from this message and was omitted from GRTH::TP the message is denied.

- If trunk conditioning is omitted from this message but was provided in GRTH::TP, the trunk conditioning value provided in GRTH::TP is applied.
- If trunk conditioning is provided in this message, it overrides the value (if provided), in GRTH::TP.

st Status

NX64Kbit/s TWO-WAY TEST ACCESS, MONITOR

Explanation of Command

This command changes the mode of a test-access group, that is currently in the split mode, to the monitor mode.



NOTE:

If the test-access group is already in the monitor mode, this command is denied.

Command

[I.21031]

TTST:[FRM xy][,SEQ ww]:MON,TG mmm!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.21031]

```
M hh:mm:ss xy,ww n[vv] TTST MON TG mmm FROM [s]abc TO [t]ghi \
5 LN MSG:
SG g CGA(ftb)[ RDC][ CUS][ ONEWAY] {TLA s|BCAST|UMPD <tc>}
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL
```

Hierarchical

[O.21031]

```
M hh:mm:ss xy,ww n[vv] TTST MON TG mmm FROM uvmpn TO wxkqr \
5 LN MSG:
SG g CGA(ftb)[ RDC][ CUS][ ONEWAY] {TLA s|BCAST|UMPD <tc>}
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL
```


2.048 Mbit/s Termination

Nonhierarchical

[O.21031]

```
M hh:mm:ss xy,ww n[vv] TTST MON TG mmm FROM [s]abc TO [t]ghi \
6 LN MSG:
SG g CGA(ftb)[ RDC][ CUS][ ONEWAY] {TLA s|BCAST|UMPD <tc>}
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL
```

Hierarchical

[O.21031]

```
M hh:mm:ss xy,ww n[vv] TTST MON TG mmm FROM uvmnp TO wxkqr \
6 LN MSG:
SG g CGA(ftb)[ RDC][ CUS][ ONEWAY] {TLA s|BCAST|UMPD <tc>}
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL
```

Denial Message

[O.21031.01]

```
M hh:mm:ss xy,ww n[vv] TTST MON TG mmm COND cc DNY
```

Explanation of Parameters

TG	Test-access group
mmm	Test-access group number (001 through 400) The TG is designated as in message 31421, and must have the same width as the number of channels specified in this message.
MON	Monitor
[s]abc	3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	3- or 4-digit nonhierarchical TO NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number

	uv,wx	Unit number
	m,k	Module number
	np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."	
ddd	FROM Channel numbers	
	001-024	
	2.048 Mbit/s Termination	
	001-031*	Primary NPCs grown as Channel Associated Signaling (CAS)
	001-031	Primary NPCs grown as Non Signaling Associated (NSA)
	*Circuits involving CAS channel 31 can only be tested individually.	

The FROM channel ddd is --- for circuits not involved in this test session. For unmapped TO channel(s) or a BBL without return, ddd is 000 in the corresponding channel position(s). If TO channel is mapped to a channel 000, the circuit can only be tested as N = 1, the corresponding FROM channel ddd is '000'.

tc	Trunk conditioning	
	For mapped circuits, tc will be omitted.	
	For unmapped circuits, the effective tc will be output.	
SG	Signaling	
g	Signaling mode of the TG	
	T	All channels are Transparent (TRSP)
	1.544 Mbit/s Termination	
	R	One or more channels is robbed-bit or non TRSP
	2.048 Mbit/s Termination	
	C	One or more channels is CAS or non TRSP
CGA	Carrier group alarm	
PBA	Primary block alarm	
ftb	CGA or PBA state	
f	FROM CGA or PBA state	
	F	FROM NPC is in CGA or PBA
	0	FROM NPC is not in CGA or PBA

t	TO CGA or PBA state
T	TO NPC is in CGA or PBA
0	TO NPC is not in CGA or PBA
b	TG digroup CGA or PBA state
E	East-bundle NPCTG in CGA or PBA
W	West-bundle NPCTG in CGA or PBA
B	NPCTG(s) supporting both bundles in CGA or PBA
0	NPCTG(s) not in CGA or PBA
RDC	Red circuit
CUS	Customer
	The cross-connection tested is a customer-controlled circuit.
ONEWAY	One-way
	The cross-connection tested is a one-way circuit.
BCAST	Broadcast
	The cross-connection tested is part of a broadcast circuit.
TLA	Terminate and leave active
s	Termination state of the circuit
R	All channels are released
F	One or more FROM channel is terminated
T	One or more TO channel is terminated
B	One or more of FROM and TO channels are terminated
UMPD	Unmapped
COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed

cc	<i>Explanation</i>
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
E0	ETSI not equipped, not in service, or failed
47	Invalid channel number
49	test group unequipped
5A	NPC unequipped, out of service or failed
5E	invalid test access mode
AA	Integrated Test Set is currently active on TG

TWO-WAY TEST ACCESS, MONITOR

Explanation of Command

This command is used to:

- Set up a previously unassigned test port to monitor a particular termination
- Change a previously assigned test port to monitor mode.

If the test port is already in the monitor mode, DACS II denies the execution of the message.

The trunk conditioning (tc) specified in this command applies only when accessing an unmapped termination. For an access to a mapped circuit, tc is adopted from the circuit being accessed and, therefore, is ignored if specified.

The DACS II test ports are either static or dynamic. A test port is defined as static when trunk conditioning is specified in a test port provisioning command, otherwise it is a dynamic test port. If the test port is static, trunk conditioning must be specified.

If the test port is in the split mode, do not specify the TO NPC number.

For Broadcast (BCON) connections, test access is denied except for the TS0 to non TS0 connection.

This command does **not** monitor any connections inside a Digital Signal Processing Platform (DSPP) application, such as the DDS Subrate and MJU application, the X.50 International subrate application, or the DMB application. However, test ports may be established to any of the applications via application commands, and may then be used, again via application commands, to monitor or split circuits within the application. If a test port has been established to an application, then that test port always appears as a split connection in an invocation of the UTL::QRY,TPS command, regardless of whether that test port is in monitor, split, or release mode inside the application.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.21001]

TTST:[FRM xy][,SEQ ww]:MON[,TO [t]ghijjj][,<tc>],TP kk!

Hierarchical

[I.21001]

TTST:[FRM xy][,SEQ ww]:MON[,TO uvmnpjjj][,<tc>],TP kk!

2.048 Mbit/s Termination

Nonhierarchical

[I.21001]

TTST:[FRM xy][,SEQ ww]:MON[,TO [t]ghijjj][,<tc>][,NAM],TP kk!

Hierarchical

[I.21001]

TTST:[FRM xy][,SEQ ww]:MON[,TO uvmnpjjj][,<tc>][,NAM],TP kk!

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.21001]

M hh:mm:ss xy,ww n[vv] TTST MON [s]abcddd,[t]ghijjj TP kk \
2 LN MSG:
<tc> SG g CGA(ftp)[RDC][CUS][ONEWAY] TLA s COMPL

[O.21002]

M hh:mm:ss xy,ww n[vv] TTST MON [t]ghijjj TP kk SG g \
2 LN MSG:
<tc> CGA(ftp) UMPD COMPL

Hierarchical

[O.21001]

M hh:mm:ss xy,ww n[vv] TTST MON wxkqrddd,uvmnpjjj TP kk \
2 LN MSG:
<tc> SG g CGA(ftp)[RDC][CUS][ONEWAY] TLA s COMPL

[O.21002]

M hh:mm:ss xy,ww n[vv] TTST MON uvmnpjjj TP kk SG g \
2 LN MSG:
<tc> CGA(ftp) UMPD COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.21001]

M hh:mm:ss xy,ww n[vv] TTST MON [s]abcdddd,[t]ghijjj TP kk \
2 LN MSG:
<tc>[NAM] SG g CGA(ftp)[RDC][CUS] [ONEWAY] TLA s COMPL

[O.21002]

M hh:mm:ss xy,ww n[vv] TTST MON [t]ghijjj TP kk[NAM] SG g \
2 LN MSG:
<tc> CGA(ftp) UMPD COMPL

Hierarchical

[O.21001]

M hh:mm:ss xy,ww n[vv] TTST MON wxkqrddd,uvmnpjjj TP kk \
2 LN MSG:
<tc>[NAM] SG g CGA(ftp)[RDC][CUS][ONEWAY] TLA s COMPL

[O.21002]

M hh:mm:ss xy,ww n[vv] TTST MON uvmnpjjj TP kk[NAM] SG g \
2 LN MSG:
<tc> CGA(ftp) UMPD COMPL

Denial Message 1.544 Mbit/s Termination

Nonhierarchical

[O.21001.01]

M hh:mm:ss xy,ww n[vv] TTST TP kk <reason> DNY

[O.21001.02]

M hh:mm:ss xy,ww n[vv] TTST MON[[t]ghijjj] TP kk 2 LN MSG:
[<tc>]<reason> DNY

[O.21001.03]

M hh:mm:ss xy,ww n[vv] TTST MON [t]ghijjj TP kk [s] \
klmnnn,[t]pqrsss ASGN DNY

[O.21001.04]

M hh:mm:ss xy,ww n[vv] TTST MON [s]abcddd,[t]ghijjj TP \
kk <reason> DNY

Hierarchical

[O.21001.01]

M hh:mm:ss xy,ww n[vv] TTST TP kk <reason> DNY

[O.21001.02]

M hh:mm:ss xy,ww n[vv] TTST MON[uvmnpjjj] TP kk \
2 LN MSG:
[<tc>]<reason> DNY

[O.21001.03]

M hh:mm:ss xy,ww n[vv] TTST MON uvmnpjjj TP kk edhfgnnn, \
opjstsss ASGN DNY

[O.21001.04]

M hh:mm:ss xy,ww n[vv] TTST MON wxkqrddd,uvmnpjjj TP \
kk <reason> DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.21001.01]

M hh:mm:ss xy,ww n[vv] TTST TP kk <reason> DNY

[O.21001.02]

M hh:mm:ss xy,ww n[vv] TTST MON[[t]ghijjj] TP kk 2 LN MSG:
[<tc>][NAM]<reason> DNY

[O.21001.03]

M hh:mm:ss xy,ww n[vv] TTST MON [t]ghijjj TP kk [s] \
klmnnn,[t]pqrsss ASGN DNY

[O.21001.04]

M hh:mm:ss xy,ww n[vv] TTST MON [s]abcddd,[t]ghijjj TP kk \
<reason> DNY

Hierarchical

[O.21001.01]

M hh:mm:ss xy,ww n[vv] TTST TP kk <reason> DNY

[O.21001.02]

M hh:mm:ss xy,ww n[vv] TTST MON[uvmnpjjj] TP kk 2 LN MSG:
[<tc>][NAM]<reason> DNY

[O.21001.03]

M hh:mm:ss xy,ww n[vv] TTST MON uvmnpjjj TP kk edhfgnnn, \
opjstsss ASGN DNY

[O.21001.04]

M hh:mm:ss xy,ww n[vv] TTST MON wxkqrddd,uvmnpjjj TP kk \
<reason> DNY

Explanation of Parameters

TP	Test port
kk	Test port number (01 through 96)
	A test port is mapped to predesignated channels of a network processing circuit for test ports (NPCTP) during the provisioning of that test port.
	1.544 Mbit/s Termination
	Only nonSLC® NPC types can be provisioned as an NPCTP.
	2.048 Mbit/s Termination
	Only NPC types that have been provisioned for channel associated signaling (CAS) can be provisioned as an NPCTP.

For the mapping between the test ports and the channels of the test NPCs, see the GRTH::TP message.

The DACS II test ports are either static or dynamic, as defined in the GRTH::TP message.

If the test port is in the split mode, TO [t]ghijj may not be specified.

In a gateway frame, an NPC type that has been provisioned for channel associated signaling (CAS) can also be provisioned as NPCTP.

[t]ghi

The 3- or 4-digit nonhierarchical TO NPC number

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical TO NPC number

uv Unit number

m Module number

np NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

jjj

TO Channel number

Channel numbers

001-024

001-047 Odd only (SLC 96[®] Carrier, Mode 3, DGA)

049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)

001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)

025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)

049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)

073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)

001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)

025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)

049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

000-030 CEPT type NPCs grown as CAS

000-031 CEPT type NPCs grown as NSA

Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.

Conference numbers 001-085 (MB NPC)

1.544 Mbit/s Termination

If channel jjj is an FDL (Facility Data Link), then jjj = 000.

tc

Trunk conditioning

If the tc option was not furnished in the test port provisioning command, it must be furnished in this input command to provide a test connection for unmapped circuits; otherwise, the test access is denied.

A trunk conditioning specification consists of a combination of a signaling specification followed by an insertion word specification.

For example, TRSP,IW X'pq (input form).

1.544 Mbit/s Termination

tc cannot be specified if jjj = 000.

2.048 Mbit/s Termination

For channel 031 on a CAS primary, tc must take on the value TRSP, and overrides any tc option provided in the input command.



NOTE:

For mapped terminations, tc takes on the mapped cross-connect tc value and overrides any tc option provided in the input command.

For unmapped terminations, trunk conditioning is applied as follows:

1.544 Mbit/s Termination

If tc is omitted from this command and was omitted in the test port provisioning command, the command is denied.

2.048 Mbit/s Termination

If tc is omitted from this command and was omitted in the test port provisioning command, the command is denied (unless CAS channel 031).

If tc is omitted from this command, but was provided in the test port provisioning command, the tc value provided in the provisioning command is applied.

If tc is provided in this command, it overrides the value (if provided) in the test port provisioning command.

1.544 Mbit/s Termination

TC(ijkl,mnop)

2-way, 4-state signaling in binary

TC(ijklmnop,qrstuvwx)

2-way, 16-state signaling in binary

TC(X'ab,X'cd)

2-way, 16-state in hexadecimal

TRSP Transparent, no signaling

2.048 Mbit/s Termination

TC(ijkl,mnop)

2-way, 4-state signaling in binary

For CEPT and ESF type framing format, software expands 4-state to 16-state by duplicating the bits.

TC(efghijkl,mnopqrst)

2-way, 16-state in binary

TC(X'ab,X'cd)

2-way, 16-state in hexadecimal

TRSP Transparent, no signaling

Omitted Default is TC X'FF,X'FF if both terminations are channel associated signaling types. Default is TRSP if one of the terminations is nonsignaling associated (NSA) type

1.544 Mbit/s Termination

IW X'pq The 8-bit pattern corresponding to the hexadecimal value of pq is inserted in the downstream direction of a failure on either line

TRB Standard trouble code, equal to IW X'E4

MUX MUX out of sync code, equal to IW X'1A

2.048 Mbit/s Termination

IW X'pq The 8-bit pattern corresponding to the hexadecimal value of pq is inserted in the downstream direction of a failure on either line

Omitted Will default to IW X'FF

For 4-state signaling, the A/B signaling bits of both test port channels are specified by ijkl for the receive time slot interchange (RTSI), and by mnop for the transmit time slot interchange (TTSI).

For 16-state signaling, the A/B/C/D signaling bits of both test port channels are specified by efghijkl (or hexadecimal digits ab) for the RTSI, and by mnopqrst (or hexadecimal digits cd) for the TTSI.

2.048 Mbit/s Termination

NAM	No A to Mu (conversion) This keyword is used to disable the A- to μ -law conversions on CEPT type NPCs which can be either the tested circuit or a test port itself. The NAM keyword has this meaning only in the following three configurations; in other test access configurations, DACS II provisions the accessed circuits appropriately and therefore the NAM keyword is ignored: Unmapped domestic termination accessed via a CEPT test port Unmapped CEPT termination accessed via a domestic test port Mapped pure domestic circuit accessed via a CEPT test port
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[s]klm	The 3- or 4-digit nonhierarchical FROM NPC number
[t]pqr	The 3- or 4-digit nonhierarchical TO NPC number
uvmnp	Hierarchical TO NPC number
wxkqr	Hierarchical FROM NPC number
	Supports the termination that is cross-connected to channel ghijj.
[s]klmnnn	Nonhierarchical format termination being tested as FROM on test port kk, otherwise the same as [s]abcddd. If this field is all zeroes, test port kk is assigned to an unmapped termination.
edhfgnnn	Hierarchical format of [s]klmnnn
pqrsss	Nonhierarchical format termination being tested as TO on test port kk; otherwise, the same as abcddd

opjstsss	Hierarchical format of [t]pqrsss
ddd	FROM channel number of the termination
nnn	FROM channel number of the termination that is cross-connected to channel [t]ghi-jjj
sss	TO channel number
SG	Signaling
g	Signaling mode of test port kk
	2.048 Mbit/s Termination
C	Channel Associated Signaling (CAS)
R	Robbed Bit Signaling
T	Transparent
CGA	Carrier group alarm

1.544 Mbit/s Termination

ftp	CGA state

2.048 Mbit/s Termination

ftp	PBA state
	1.544 Mbit/s Termination
f	FROM CGA state
F	FROM NPC is in CGA
0	FROM NPC is not in CGA
t	TO CGA state
T	TO NPC is in CGA
0	TO NPC is not in CGA
p	Test port digroup CGA state
P	Test port NPC is in CGA
0	Test port NPC is not in CGA
	2.048 Mbit/s Termination
f	FROM PBA state
F	FROM NPC is in PBA
0	FROM NPC is not in PBA
t	TO PBA state

	T	TO NPC is in PBA
	0	TO NPC is not in PBA
	p	Test port digroup PBA state
	P	Test port NPC is in PBA
	0	Test port NPC is not in PBA
RDC		Red circuit
CUS		Customer
		The cross-connection tested is a customer controlled circuit.
ONEWAY		One-way
		The cross-connection tested is a one-way circuit.
TLA		Terminate and leave activate
s		Termination state of the circuit
	R	RELEASED. Neither side is terminated
	F	FROM side is terminated
	T	TO side is terminated
	B	BOTH sides are terminated
ASGN		Assigned
		The test port is already assigned to another termination, denoted by [s]klmnnn,[t]pqrsss (or edhfgnnn,opjstsss)
UMPD		Unmapped
reason		Reason for denial
cc		Hexadecimal condition code
	cc	<i>Explanation</i>
	D1	TO NPC is not provisioned as DGA
	D4	Corresponding NPC for TO virtual channel is not provisioned
	D7	Invalid TO channel number

st	d	Explanation
BADCC B	N/A	CCB OOS or failed
BADCC N	N/A	CCN OOS or failed
BADCH AN	N/A	Bad channel number was specified
BADDS PI	N/A	DSPI OOS or failed
BADFC	N/A	FC OOS or failed
BADFLI	N/A	FLI OOS or failed
BADFM T	N/A	FMT (Formatter) OOS or failed
BADFT MI	N/A	FTMI OOS or failed
BADMIU	N/A	MIU OOS or failed
BADMX R	N/A	MXR OOS or failed
BADNP C	N/A	Bad NPC number
BADTSI	N/A	TSI OOS or failed
BCAST	N/A	The TO side is part of a broadcast circuit
C TOO DEEP	N/A	DMB concatenations go too deep (for more than 6 level)
CBIT	N/A	The TO side is part of a c-bit cross-connection
CWNOT 1	N/A	Conference width is not equal to 1 (for virtual conferences)
F ASGN	N/A	The FROM side NPC, wx-k-qr, is assigned
F FAIL	N/A	FROM side NPC is marked failed
F OOS	N/A	FROM side NPC (abc) is out of service
F UEQD	N/A	The DACS unit supporting the FROM termination is out-of-service or failed

st	d	<i>Explanation</i>
FAIL	N/A	Test port Group NPC failed
IMPR TC	N/A	Improper trunk conditioning specification
INERR	N/A	Input error
INV CKT TYPE	N/A	TO termination has invalid circuit type for test access
NA	N/A	DACS CCN or UNIT involved cannot perform the cross-connect
OOS	N/A	Test port Group NPC out of service
SG COND 02	N/A	Test port is dynamic
T ASGN	N/A	The TO side NPC is assigned
T CLR	N/A	The TO NPC is a clear-DS1 NPC
T FAIL	N/A	TO side NPC is marked failed
T OOS	N/A	TO side NPC is Out Of Service
T UEQD	N/A	TO side NPC is Unequipped
T UTST	N/A	TO termination is under test
TG	N/A	
TP	N/A	The TO termination is part of a test port
T_DCLU	N/A	Attempt to test a locally switched channel
UEQD	N/A	Test port kk is unequipped
UTST	N/A	Under Test

NX64Kbit/s TWO-WAY TEST ACCESS, MONITOR

Explanation of Command

This command is used to request a monitor test access of a specified group of Nx64Kbit/s terminations. Monitor test access of a broadcast TS0 to nonTS0 connection does not use this command but does use I.21001 instead. The test access is made through the test-access group specified in the command line.

The N TO channels to be tested may be entered as a range, a list, or a combination of both, in ascending order. For two-point circuits, the numbers do not have to be consecutive, and the circuits may have been cross-connected separately. For a one-way circuit under test, the other direction of the same termination cannot be tested at the same time. For Nx64Kbit/s broadcast circuits, the channels have to be consecutive and must have been set up together for the same broadcast circuit.

The primary output line does not echo the input with range(s) of channels, but does show a list of all channels.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.21021]

```
TTST:FRM xy,SEQ ww:MON,TO [t]ghi(jjj[-kkk][,lll,...])[,<tc>], \
TG mmm!
```

Hierarchical

[I.21021]

```
TTST:FRM xy,SEQ ww:MON,TO wxkqr(jjj[-kkk][,lll,...])[,<tc>], \
TG mmm!
```

2.048 Mbit/s Termination

Nonhierarchical

[I.21021]

```
TTST:FRM xy,SEQ ww:MON,TO [t]ghi(jjj[-kkk][,lll,...])[,<tc>], \
TG mmm!
```

Hierarchical

[I.21021]

TTST:FRM xy,SEQ ww:MON,TO wxkqr(jjj[-kkk][,lll,...])[,<tc>], \\
TG mmm!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.21021]

M hh:mm:ss xy,ww n[vv] TTST MON TG mmm FROM [s]abc TO [t]ghi \\
5 LN MSG:
SG g CGA(ftb)[RDC][CUS][ONEWAY] {TLA s|BCAST|UMPD <tc>}
ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd COMPL

Hierarchical

[O.21021]

M hh:mm:ss xy,ww n[vv] TTST MON TG mmm FROM uvmpn TO wxkqr \\
5 LN MSG:
SG g CGA(ftb)[RDC][CUS][ONEWAY] {TLA s|BCAST|UMPD <tc>}
ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.21021]

M hh:mm:ss xy,ww n[vv] TTST MON TG mmm FROM [s]abc TO [t]ghi \\
6 LN MSG:
SG g CGA(ftb)[RDC][CUS][ONEWAY] {TLA s|BCAST|UMPD <tc>}
ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd COMPL

Hierarchical

[O.21021]

M hh:mm:ss xy,ww n[vv] TTST MON TG mmm FROM uvmnp TO wxkqr \
6 LN MSG:
SG g CGA(ftb)[RDC][CUS][ONEWAY] {TLA s|BCAST|UMPD <tc>}
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.21021.01]

M hh:mm:ss xy,ww n[vv] TTST MON TG mmm[[t]ghipp] COND cc DNY

Hierarchical

[O.21021.01]

M hh:mm:ss xy,ww n[vv] TTST MON TG mmm[wxkqrpp] COND cc DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.21021.01]

M hh:mm:ss xy,ww n[vv] TTST MON TG mmm[[t]ghipp] COND cc DNY

Hierarchical

[O.21021.01]

M hh:mm:ss xy,ww n[vv] TTST MON TG mmm[wxkqrpp] COND cc DNY

Explanation of Parameters

MON	Monitor
TO	To
[s]abc	3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	3- or 4-digit nonhierarchical TO NPC number

	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	For an unmapped TO termination, or a backbone leg (BBL) without return, the FROM NPC number is shown as zeroes.
ddd	FROM Channel number
jjj,kkk,III	TO Channel numbers, where jjj-kkk indicates a range of channels and III indicates one of a list of channels.
ppp	First TO Channel number causing denial
	001-024
	01-030* Primary NPCs grown as Channel Associated Signaling (CAS)
	* Circuits involving CAS channel 31 can only be tested individually.
	001-031 Primary NPCs grown as Non Signaling Associated (NSA)
	The FROM channel ddd is --- for circuits not involved in this test session. For unmapped TO channel(s) or a BBL without return, ddd is 000 in the corresponding channel position(s). If channel jjj is mapped to a channel 000, the circuit can only be tested as N = 1, and the corresponding FROM channel ddd is 000.
tc	Trunk conditioning
	For mapped circuits, regardless of what is specified here, the circuit's tc is used but not shown in the output response.
	For unmapped circuits, if the static tc was not furnished when the TG was provisioned, it must be dynamically specified in this command or the test access is denied. A dynamic tc overrides any static tc. The effective tc is used for all channels under test, and is shown in the output.
	2.048 Mbit/s Termination

	For any unmapped circuits tested by NSA TGs, TRSP must be entered for tc or the command is denied.
	For channel 031 on a CAS primary, any tc value specified is replaced by TRSP.
TG	Test-access Group
mmm	Test-access Group number (001 through 400)
	The TG is designated as in GRTH::TG,NPCTG and must have the same width as the number of channels specified in this message.
SG	Signaling
g	Signaling mode of the TG
T	All channels are Transparent (TRSP)
	1.544 Mbit/s Termination
R	One or more channels is robbed-bit or non TRSP
	2.048 Mbit/s Termination
C	At least one channel is CAS or non TRSP
CGA	Carrier group alarm
PBA	Primary block alarm
ftb	CGA or PBA state
f	FROM CGA or PBA state
	F FROM NPC is in CGA or PBA
	0 FROM NPC is not in CGA or PBA
t	TO CGA or PBA state
	T TO NPC is in CGA or PBA
	0 TO NPC is not in CGA or PBA
b	TG digroup CGA or PBA state
	B NPCTG(s) supporting both bundles in CGA or PBA
	E East-bundle NPCTG in CGA or PBA
	W West-bundle NPCTG in CGA or PBA
	0 NPCTG(s) not in CGA or PBA
RDC	Red circuit
CUS	Customer
	The cross-connection tested is a customer-controlled circuit.

ONEWAY	One-way The cross-connection tested is a one-way circuit.
BCAST	Broadcast The cross-connection tested is part of a broadcast circuit.
TLA	Terminate and leave active
s	Termination state of the circuit
R	All channels are released
F	At least one FROM channel is terminated
T	At least one TO channel is terminated
B	At least one FROM and TO channel is terminated
UMPD	Unmapped
COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
26	NPC type error
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed

cc	<i>Explanation</i>
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
E0	ETSI not equipped, not in service, or failed
3C	TS0 specified with width not 1
3D	Illegal test access mode for TS0
3E	TS16 specified for test with width not 1
3F	Illegal test access mode for TS16
45	NPC not provisioned as DGA
46	virtual SLC NPC not provisioned
47	Invalid channel number
48	Invalid SLC Mode-III channel number
49	test group unequipped
4A	channel part of a TP or TG
4B	channel already under test
4C	BCON BBL has one or more legs under test
4D	Gateway test access not supported
4F	inconsistent BCON width for test access
50	invalid channel designation for BCON
51	TG width incompatible with circuit
52	FDL selected with width not 1
57	Designated TG or circuit to be tested in process of being rolled
59	Invalid TC specification
5A	NPC unequipped, out of service or failed
5B	channel is OCON in opposite direction
5C	Inconsistent or invalid circuit type for Nx64Kbit TA
5D	Inconsistent Signaling on CEPT NPCTGs
5E	invalid test access mode

cc	<i>Explanation</i>
5F	input channel out of range (SLC not supported)
61	not all FROM channels on same NPC
95	TG East/West type inconsistent with each other or circuit
A9	Circuits TCONed itself cannot be UTST
AD	Only one ITS TG per pack can be in non-idle mode

TWO-WAY TEST ACCESS LINE LOOPBACK

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This command initiates, terminates, allows or inhibits a line loopback (LLB) towards the RT or the DL (DCLU) on one of the digroups of the specified bank, optionally.

If neither the TO nor the FROM option is specified, the system takes the TO option as the default value and responds accordingly.

The TO option programs the DACS II to take appropriate action; that is, INI, TRM, ALW or INH, with regard to sending a far-end loopback (FELP) message towards the RT or the DL.

The FROM option programs the DACS II to take appropriate action; that is, INH or ALW, in the case where a FELP is received from an RT or DL.

If the FROM keyword is used, the INI or TERM options are not allowed.

Note that an autonomous message is reported if a loopback is initiated (terminated) by the remote terminal.

Command

[I.26101]

TTST:FRM xy,SEQ ww:RT ffff,{DGA|DGB|DGC|DGD|DGP}, \\
LLB[, {TO|FROM}], {INI|TRM|ALW|INH}!

Completion Message

[O.26101]

M hh:mm:ss xy,ww n[vv] TTST RT ffff {DGA|DGB|DGC|DGD| \\
DGP} LLB {TO|FROM} {INI|TRM|ALW|INH} COMPL

Denial Message

[O.26101.01]

M hh:mm:ss xy,ww n[vv] TTST RT ffff {DGA|DGB|DGC| \\
DGD|DGP} LLB[{TO|FROM}] {INI|TRM|ALW|INH} COND cc DNY

Autonomous Message

[O.26101]

I hh:mm:ss xy,ww n[vv] TTST RT ffff {DGA|DGB|DGC|DGD|DGP} \\
LLB FROM {INI|TRM} COMPL

Explanation of Parameters

LLB	Line loopback
INI	Initiate LLB
TRM	Terminate LLB
ALW	Allow LLB
INH	Inhibit LLB
RT	Remote Terminal
ffff	Bank identification number (0000 - 9999)
DGA	Digroup A of the bank
DGB	Digroup B of the bank
DGC	Digroup C of the bank
DGD	Digroup D of the bank
DGP	Digroup P of the bank
TO	Allows the loopback message to be sent toward the RT
FROM	Allows the loopback message to be received from the RT
COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
35	NPC has active circuit
6B	Operation mode and digroup name don't match
7E	Bank id number not found
8B	Digroup name and bank id don't match

cc	<i>Explanation</i>
A1	Loop back inhibited for digroup
A2	The requested digroup is carrying service
A3	LLB not initiated
A5	Autonomous loopback is active on DGA

NX64Kbit/s TWO-WAY TEST ACCESS, SPLIT

Explanation of Command

This command splits each direction of transmission of an Nx64Kbit/s circuit that is currently under test access in monitor mode.

The optional keyword NOYLW is added to allow DACS II to disable the yellow alarm transmission while the facility is connected to a Test Group which is set to split mode via this command with NOYLW option.



NOTE:

If the test-access group is connected to an unmapped Nx64Kbit/s termination, this command connects both directions of the unmapped termination to the test-access group's west bundle.

Command

1.544 Mbit/s Termination

[I.23021]

TTST:[FRM xy][,SEQ ww]:SPL,TG mmm[,NOYLW]!

2.048 Mbit/s Termination

[I.23021]

TTST:[FRM xy][,SEQ ww]:SPL,TG mmm!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.23021]

M hh:mm:ss xy,ww n[vv] TTST SPL TG mmm[NOYLW] FROM [s]abc TO\
[t]ghi 5 LN MSG:

SG g CGA(ftb)[RDC][CUS][ONEWAY] {TLA s|BCAST|UMPD <tc>}
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL

Hierarchical

[O.23021]

```
M hh:mm:ss xy,ww n[vv] TTST SPL TG mmm[ NOYLW] FROM uvmnp TO wxkqr
5 LN MSG:
SG g CGA(ftb)[ RDC][ CUS][ ONEWAY] {TLA s|BCAST|UMPD <tc>}
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

[O.23021]

```
M hh:mm:ss xy,ww n[vv] TTST SPL TG mmm FROM [s]abc TO [t]ghi \
5 LN MSG:
SG g CGA(ftb)[ RDC][ CUS][ ONEWAY] {TLA s|BCAST|UMPD <tc>}
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL
```

Hierarchical

[O.23021]

```
M hh:mm:ss xy,ww n[vv] TTST SPL TG mmm FROM uvmnp TO wxkqr \
5 LN MSG:
SG g CGA(ftb)[ RDC][ CUS][ ONEWAY] {TLA s|BCAST|UMPD <tc>}
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL
```

Denial Message

1.544 Mbit/s Termination

[O.23021.01]

```
M hh:mm:ss xy,ww n[vv] TTST SPL TG mmm[ NOYLW] COND cc DNY
```

2.048 Mbit/s Termination

[O.23021.01]

```
M hh:mm:ss xy,ww n[vv] TTST SPL TG mmm COND cc DNY
```

**Explanation of
Parameters**

TG	Test-access group
mmm	Test-access Group number (001 through 400) The TG is designated as in message 31421
SPL	Split

1.544 Mbit/s Termination

NOYLW	No Yellow Alarm Transmission The NOYLW option is used to disable the yellow alarm transmission for the TO-end facility NPC that is in test access split mode and recognizes a Carrier Group Alarm (CGA) condition. A command that changes the test access group from split mode to monitor mode or a command that releases the active test access group enables the yellow alarm behavior.
[s]abc	3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	3- or 4-digit nonhierarchical TO NPC number For a listing of the non-hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number uv,wx Unit number m,k Module number np,qr NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	FROM Channel numbers 001-024

2.048 Mbit/s Termination

001-031*	Primary NPCs grown as Channel Associated Signaling (CAS)
001-031	Primary NPCs grown as Non Signaling Associated (NSA) *Circuits involving CAS channel 31 can only be tested individually.

The FROM channel ddd will be --- for circuits not involved in this test session. For unmapped TO channel(s) or a BBL without return, ddd is 000 in the corresponding channel position(s). If TO channel is mapped to a channel 000, the circuit can only be tested as N = 1, the corresponding FROM channel ddd is 000.

tc	Trunk conditioning For mapped circuits, <tc> is omitted. For unmapped circuits, the effective <tc> is output.
SG	Signaling
g	Signaling mode of the TG
T	All channels are Transparent (TRSP) 1.544 Mbit/s Termination
R	One or more channels is robbed-bit or non-TRSP 2.048 Mbit/s Termination
C	One or more channels is CAS or non-TRSP
CGA	Carrier group alarm
PBA	Primary block alarm
ftb	CGA or PBA state
f	FROM CGA or PBA state
F	FROM NPC is in CGA or PBA
0	FROM NPC is not in CGA or PBA
t	TO CGA or PBA state
T	TO NPC is in CGA or PBA
0	TO NPC is not in CGA or PBA
b	TG digroup CGA or PBA state
E	East-bundle NPCTG in CGA or PBA
W	West-bundle NPCTG in CGA or PBA
B	NPCTG(s) supporting both bundles in CGA or PBA
0	NPCTG(s) not in CGA or PBA
RDC	Red circuit
CUS	Customer The cross-connection tested is a customer-controlled circuit.
TLA	Terminate and leave active
s	Termination state of the circuit
R	All channels are released
F	One or more FROM channel is terminated
T	One or more TO channel is terminated

	B	One or more of FROM and TO channels are terminated
COND		Condition
cc		Hexadecimal condition code
	cc	<i>Explanation</i>
	3D	Illegal test access mode for TS0
	3E	TS16 specified for test with width not 1
	3F	Illegal test access mode for TS16
	51	TG width incompatible with circuit
	5A	NPC unequipped, out of service or failed
	5E	invalid test access mode

TWO-WAY TEST ACCESS

Explanation of Command

1.544 Mbit/s Termination

This command splits a mapped circuit in the normal circuit state. Also, in the normal circuit state, it connects both directions of an unmapped termination to test port kk (01 through 48). If the test port is connected to an unmapped termination, this command connects both directions of an unmapped termination to the test port. When this command is used with the subrate feature for a circuit termination, the system response is a subrate test access message.

2.048 Mbit/s Termination

This command splits a mapped circuit in the normal circuit state. Also, in the normal circuit state, it connects both directions of an unmapped termination to test port kk (01 through 48). If the test port is connected to an unmapped termination, this command connects both directions of an unmapped termination to the test port.

This command does **not** split any connections inside a Digital Signal Processing Platform (DSPP) application, such as the DDS Subrate and MJU application, the X.50 International subrate application, or the DMB application. However, test ports may be established to any of the applications via application commands, and may then be used, again via application commands, to monitor or split circuits within the application. If a test port has been established to an application, then that test port always appears as a split connection in an invocation of the UTL::QRY,TPS command, regardless of whether that test port is in monitor, split, or release mode inside the application.

Command

[I.23001]

TTST:[FRM xy][,SEQ ww]:SPL,TP kk!

Completion Message

Nonhierarchical

[O.23001]

M hh:mm:ss xy,ww n[vv] TTST SPL [s]abcddd,[t]ghijjj \
[RDC] [CUS] TP kk[TLA s] COMPL

Hierarchical

[O.23001]

M hh:mm:ss xy,ww n[vv] TTST SPL wxkqrddd,uvmpjjj \
[RDC] [CUS] TP kk[TLA s] COMPL

Denial Message

Nonhierarchical

[O.23001.02]

M hh:mm:ss xy,ww n[vv] TTST SPL [s]abcd, [t]ghijjj TP kk <st> DNY

Hierarchical

[O.23001.02]

M hh:mm:ss xy,ww n[vv] TTST SPL wxkqrddd,uvmpjjj TP kk <st> DNY

Common

[O.23001.01]

M hh:mm:ss xy,ww n[vv] TTST SPL TP kk <st> DNY

Explanation of Parameters

TP	Test port
kk	Test port number (01 through 96) The test port is mapped to predesignated channels of a network processing circuit for test ports (NPCTP) during the provisioning of that test port. The NPC types that can be provisioned as NPCTP are all domestic non-SLC NPC types and all CEPT types that have been provisioned for channel associated signaling (CAS). For the mapping between the test ports and the channels of the test NPCs, see Message No. 31411. The DACS II test ports are either static or dynamic, as defined in Message No. I.31411.
SPL	Split
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp	Hierarchical TO NPC number
wxkqr	Hierarchical FROM NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	FROM channel number
jjj	TO channel number
	The valid values are:
	Channel numbers
	001-024
	001-047 Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
	000-030 CEPT type NPCs grown as CAS
	000-031 CEPT type NPCs grown as NSA
	Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.
	Conference numbers
	001-085 (MB NPC)

**NOTE:**

If the field [s]abcd (or wxkqrddd in Hierarchical addressing) is all zeroes, then this test port is assigned to a unmapped termination.

CUS	Customer
	Customer-controlled circuit.
RDC	Red circuit
TLA	Terminate and leave activate
s	Termination state of the circuit:
	R RELEASED. Neither side is terminated
	F FROM side is terminated
	T TO side is terminated
	B BOTH sides are terminated
st	Status
cc	Hexadecimal condition code

NX64Kbit/s TWO-WAY TEST ACCESS, TEST-ACCESS GROUP RELEASE

Explanation of Command

This command releases one or more currently active test-access groups and restores any circuits under test to their normal, terminated, or unmapped state. The OOS keyword is required to release a test-access group in two cases:

- The associated circuit under test is out-of-service.
- One of both of the NPCs supporting the test-access group is out-of-service.

Where more than one test-access group is specified in the input command, the completion message lists the test-access groups in ascending order by the test-access group number and provides information for all test-access groups. If an attempt is made to release a range of test-access groups and no test-access groups in the range have been provisioned, the release is denied. The output for test-access groups testing in other monitor or split modes is printed with a mapping of channels.

When an administrative link fails, all test-access groups associated with that link are released automatically. All circuits under test by those TGs are restored to their normal state; mapped or unmapped. Any termination state entered before or during the test access remains in effect.

If a failure in an entity involved in an autonomous test-access group release causes the release to fail, the release may be performed manually by this command.

Command

[I.27021]

TTST:[FRM xy][,SEQ ww]:TGR,TG mmm[-nnn][,OOS]!

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.27021]

M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm NN[OOS] 5 LN MSG:
FROM [s]abc TO [t]ghi[RDC][CUS][TLA s][NTR]
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd {EOM|COMPL}

or

M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm[-nnn] UEQD {EOM|COMPL}

or

M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm NN {UASGN|LPD} {EOM|COMPL}

or

M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm NN HUB [s]abcd, \[t]ghijjj[OOS] {EOM|COMPL}

Hierarchical

[O.27021]

M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm NN[OOS] 5 LN MSG:
FROM uvmp TO wxkqr[RDC][CUS][TLA s][NTR]
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd {EOM|COMPL}

or

M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm[-nnn] UEQD {EOM|COMPL}

or

M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm NN {UASGN|LPD} {EOM|COMPL}

or

M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm NN HUB uvmpddd,wxkqrjjj \[OOS] {EOM|COMPL}

2.048 Mbit/s Termination

Nonhierarchical

[O.27021]

```
M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm NN[ OOS] 5 LN MSG:
FROM [s]abc TO [t]ghi[ RDC][ CUS][ TLA s][ NTR]
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd {EOM|COMPL}
```

or

```
M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm[-nnn] UEQD {EOM|COMPL}
```

or

```
M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm NN {UASGN|LPD} {EOM|COMPL}
```

or

```
M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm NN HUB [s]abcd, \
[t]ghijjj[ OOS] {EOM|COMPL}
```

Hierarchical

[O.27021]

```
M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm NN[ OOS] 5 LN MSG:
FROM uvmnp TO wxkqr[ RDC][ CUS][ TLA s][ NTR]
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd {EOM|COMPL}
```

or

```
M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm[-nnn] UEQD {EOM|COMPL}
```

or

```
M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm NN {UASGN|LPD} {EOM|COMPL}
```

or

```
M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm NN HUB uvmnpddd,wxkqrjjj \
[ OOS] {EOM|COMPL}
```


Denial Message

1.544 Mbit/s Termination

[O.27021.01]

M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm[-nnn] COND cc DNY

2.048 Mbit/s Termination

[O.27021.01]

M hh:mm:ss xy,ww n[vv] TTST TGR TG mmm[-nnn] COND cc DNY

**Autonomous
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.27021]

I hh:mm:ss xy,ww TTST TGR TG mmm NN[OOS] 5 LN MSG:
FROM [s]abc TO [t]ghi[RDC][CUS][TLA s][NTR]
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd {EOM|COMPL}

or

I hh:mm:ss xy,ww TTST TGR TG mmm NN HUB [s]abcdddd [t]ghijjj \
[OOS] {EOM|COMPL}

Hierarchical

[O.27021]

I hh:mm:ss xy,ww TTST TGR TG mmm NN[OOS] 5 LN MSG:
FROM uvmp TO wxkqr[RDC][CUS][TLA s][NTR]
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd {EOM|COMPL}

or

I hh:mm:ss xy,ww TTST TGR TG mmm NN HUB uvmpddd wxkqrjjj \
[OOS] {EOM|COMPL}

Common

[O.27021]

I hh:mm:ss xy,ww TTST TGR TG mmm NN {UASGN|LPD} {EOM|COMPL}

[O.27021.01]

I hh:mm:ss xy,ww TTST TGR TG mmm COND cc DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.27021]

I hh:mm:ss xy,ww TTST TGR TG mmm NN[OOS] 5 LN MSG:
FROM [s]abc TO [t]ghi[RDC][CUS][TLA s][NTR]
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL

or

I hh:mm:ss xy,ww TTST TGR TG mmm NN HUB [s]abcddd [t]ghijjj \
[OOS] COMPL

Hierarchical

[O.27021]

I hh:mm:ss xy,ww TTST TGR TG mmm NN[OOS] 5 LN MSG:
FROM uvmpnp TO wxkqr[RDC][CUS][TLA s][NTR]
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL

or

I hh:mm:ss xy,ww TTST TGR TG mmm NN HUB uvmpnpddd wxkqrjjj \
[OOS] COMPL

Common

[O.27021]

I hh:mm:ss xy,ww TTST TGR TG mmm NN {UASGN|LPD} {EOM|COMPL}

[O.27021.01]

I hh:mm:ss xy,ww TTST TGR TG mmm COND cc DNY

**Explanation of
Parameters**

TGR	Test (access) group release
TG	Test (access) group

mmm	TG number (001 through 400)
nnn	TG number (001 through 400, greater than mmm)
	Variable mmm is used to specify a single TG number or to specify the beginning of a range of TG numbers. Variable nnn is used to specify the end of a range of TG numbers.
[s]abc	3- or 4-digit nonhierarchical FROM NPC number or first TO NPC number if TG is in HUB mode
[t]ghi	3- or 4-digit nonhierarchical TO NPC number or second TO NPC number if TG is in HUB mode
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number or first TO NPC number if TG is in HUB mode
wxkqr	Hierarchical TO NPC number or second TO NPC number if TG is in HUB mode
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	For an unmapped TO termination, or a backbone leg (BBL) without a return, the FROM NPC number is shown as zeroes.
ddd	FROM channel number or starting channel of first TO NPC in HUB mode
jjj	Starting channel of second TO NPC in HUB mode
	001-024
001-031*	Primary NPCs grown as Channel Associated Signaling (CAS)
001-031	Primary NPCs grown as Non Signaling Associated (NSA)

*Circuits involving CAS channel 31 can only be tested for N = 1.

The FROM channel ddd is --- for circuits not involved in this test session. For unmapped TO channel(s) or a BBL without return, ddd is 000 in the corresponding channel position(s). If channel jjj is mapped to a channel 000 (N = 1 only), the corresponding FROM channel ddd is 000.

OOS	Out-of-service
RDC	Red circuit

CUS	The circuit is customer controlled
TLA	Terminate and leave active
s	Termination state of the circuit
R	All channels are released
F	One or more FROM channel is terminated
T	One or more TO channel is terminated
B	One or more of FROM and TO channels are terminated
NTR	No Transmit
	Backbone leg with no return
UASGN	Unassigned
	TG is unassigned or idle
LPD	Looped
UEQD	Unequipped
	TG is not equipped
HUB	Hub
	TG is in Hub mode

1.544 Mbit/s Termination

NN	TG width (1 through 24)

2.048 Mbit/s Termination

NN	TG width (1 through 31)
COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed

cc	<i>Explanation</i>
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
E0	ETSI not equipped, not in service, or failed
49	test group unequipped
58	NPC is OOS for a TGR command and OOS keyword not specified
5A	NPC unequipped, out of service or failed
AA	Integrated Test Set is currently active on TG

TWO-WAY TEST ACCESS

Explanation of Command

This command modifies the terminate and leave activate status of one or both ends of the cross-connected channel associated with the specified test port. The test port is mapped to a predesignated channel of a network processing circuit for test ports during the provisioning of that test port. All domestic NPC types except SLC[®] NPCs can be provisioned as NPC test ports (NPCTP). All CEPT NPC types that have been provisioned with channel associated signaling may be provisioned as NPC test ports (NPCTP).

Command

Nonhierarchical

[I.25101]

TTST:[FRM xy][,SEQ ww]:TLA m[,NOT [t]rstvvv],TP kk!

Hierarchical

[I.25101]

TTST:[FRM xy][,SEQ ww]:TLA m[,NOT uvmnpvvv],TP kk!

Completion Message

Nonhierarchical

[O.25101]

M hh:mm:ss xy,ww n[vv] TTST TLA m [s]abcddd,[t]ghijjj TP kk \
2 LN MSG:
[NOT [t]rstvvv][RDC][CUS] TLA s COMPL

Hierarchical

[O.25101]

M hh:mm:ss xy,ww n[vv] TTST TLA m edhfgddd,wxkqrjjj TP kk \
2 LN MSG:
[NOT uvmnpvvv][RDC][CUS] TLA s COMPL

Denial Message

[O.25101.01]

M hh:mm:ss xy,ww n[vv] TTST TLA m TP kk <reason> DNY

Nonhierarchical

[O.25101.02]

M hh:mm:ss xy,ww n[vv] TTST TLA m [t]ghijjj TP kk T UASGN DNY

[O.25101.03]

M hh:mm:ss xy,ww n[vv] TTST TLA m [s]abcddd,[t]ghijjj \
TP kk <reason> DNY

[O.25101.04]

M hh:mm:ss xy,ww n[vv] TTST TLA m [s]abcddd,[t]ghijjj \
[RDC] [CUS] TP kk TLA s PTLA DNY

Hierarchical

[O.25101.02]

M hh:mm:ss xy,ww n[vv] TTST TLA m wxkqrjjj TP kk T UASGN DNY

[O.25101.03]

M hh:mm:ss xy,ww n[vv] TTST TLA m edhfgddd,wxkqrjjj \
TP kk <reason> DNY

[O.25101.04]

M hh:mm:ss xy,ww n[vv] TTST TLA m edhfgddd,wxkqrjjj \
[RDC] [CUS] TP kk TLA s PTLA DNY

Explanation of Parameters

TLA
m

Terminate and leave activate

The end of the tested circuit that must be put into the TLA state.

Set m to one of the values given below:

F Apply TLA to the FROM end

T Apply TLA to the TO end

B Apply TLA to BOTH ends

The following apply only to a DMB/conference

L Apply TLA on all legs towards facilities

G Apply TLA on all legs towards bridge

	A	Apply TLA on all legs in both directions
		The end or ends of the channel to which termination has been applied transmits the idle code specified in the insertion word entered in the GRTH::NPC message, or its default, instead of passing data from the other end of the circuit. If the growth insertion word is MUX (X'1A), the terminate transmit word is the UMC code (X'18).
		This message will be denied if test port kk is not in the monitor or split mode or if the tested circuit is already in the specified termination state.
[t]rst		The 3- or 4-digit nonhierarchical NPC number of a termination that must not be affected by this command.
		For a listing of the non-hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp		Hierarchical TO NPC number of a termination that must not be affected by this command.
	uv	Unit number
	m	Module number
	np	NPC number within the module
		For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
vvv		Channel or conference number
		Channel numbers
		001-024
	001-047	Odd only (SLC 96###V-Rg-V### Carrier, Mode 3, DGA)
	049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
	000-030	CEPT type NPCs grown as CAS
	000-031	CEPT type NPCs grown as NSA
	Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.	
	Conference numbers	
	001-085	(MB NPC)
	001-500	(Virtual NPC)
NOT	Not	Not means that the following channel number must not be affected by this command. This field is only valid if the termination state is equal to L, G, or A.
TP	Test port	
kk	Test port number (01 through 96)	The test port is mapped to predesignated channels of a Network Processing Circuit for test ports (NPCTP) during the provisioning of that test port.

1.544 Mbit/s Termination

	The NPC types that can be provisioned as an NPCTP are all domestic non-SLC NPC types.	
	For information on the mapping between the test ports and the channels of the test NPCs (NPCTP), see GRTH::TP kk[,<tc>].	
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number with the same valid values as [t]rst.	
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number with the same valid values as [t]rst.	
wxkqr	Hierarchical NPC number of the TO termination of the circuit assigned to the test port (with the same valid values as uvmnp).	
edhfg	Hierarchical NPC number side of the FROM termination of the circuit assigned to the test port. If the test port is assigned to an unmapped termination, this field will be all zeroes (with the same valid values as uvmnp).	
	ed,wx	Unit number
	h,k	Module number

	fg,qr	NPC number
jjj		TO channel number with the same value as vvv.
ddd		FROM channel number with the same value as vvv.
s		Termination state of the circuit
	B	BOTH sides are terminated
	F	FROM side is terminated
	R	RELEASED. Neither side is terminated
	T	TO side is terminated
RDC		Red circuit
CUS		Customer
		Customer-controlled circuit
T UASGN		The test port is assigned to an unmapped termination.
PTLA		The requested TLA state is the present TLA state.
reason		Denial reason

NX64Kbit/s TWO-WAY TEST ACCESS, TERMINATE- AND-LEAVE-ACTIVE

Explanation of Command

This command terminates one or both ends of an Nx64Kbit/s cross-connection associated with a test-access group.



NOTE:

In the terminated state, the data normally transmitted over the circuit is replaced by the trunk conditioning specified when the cross-connection was made. The Nx64Kbit/s circuit must be an unterminated, mapped one-way or two-way circuit that is currently in the Monitor or Split test access mode.

Command

[I.25121]

TTST:[FRM xy][,SEQ ww]:TLA m,TG mmm!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.25121]

M hh:mm:ss xy,ww n[vv] TTST TLA m TG mmm FROM [s]abc TO [t]ghi \
5 LN MSG:
TLA s[RDC][CUS][ONEWAY]
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL

Hierarchical

[O.25121]

M hh:mm:ss xy,ww n[vv] TTST TLA m TG mmm FROM uvmnp TO wxkqr \
5 LN MSG:
TLA s[RDC][CUS][ONEWAY]
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.25121]

```
M hh:mm:ss xy,ww n[vv] TTST TLA m TG mmm FROM [s]abc TO [t]ghi \
6 LN MSG:
TLA s[ RDC][ CUS][ ONEWAY]
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL
```

Hierarchical

[O.25121]

```
M hh:mm:ss xy,ww n[vv] TTST TLA m TG mmm FROM uvmnp TO wxkqr \
6 LN MSG:
TLA s[ RDC][ CUS][ ONEWAY]
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL
```

Denial Message

1.544 Mbit/s Termination

[O.25121.01]

```
M hh:mm:ss xy,ww n[vv] TTST TLA m TG mmm COND cc DNY
```

2.048 Mbit/s Termination

[O.25121.01]

```
M hh:mm:ss xy,ww n[vv] TTST TLA m TG mmm COND cc DNY
```

Explanation of Parameters

TG	Test-access Group
mmm	Test-access Group number (001 through 400) The TG is designated as in message 31421
[s]abc	3- or 4-digit non-hierarchical FROM NPC number
[t]ghi	3- or 4-digit non-hierarchical TO NPC number

For a listing of the non-hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp Hierarchical FROM NPC number

wxkqr Hierarchical TO NPC number

uv,wx Unit number

m,k Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

ddd FROM Channel numbers

001-024

2.048 Mbit/s Termination

001-031* Primary NPCs grown as Channel Associated Signaling (CAS)

001-031 Primary NPCs grown as Non Signaling Associated (NSA)

*Circuits involving CAS channel 31 can only be tested individually.

The FROM channel ddd will be --- for circuits not involved in this test session. For unmapped TO channel(s) or a BBL without return, ddd is 000 in the corresponding channel position(s). If TO channel is mapped to a channel 000, the circuit can only be tested as N = 1, the corresponding FROM channel ddd is 000.

RDC Red circuit

CUS Customer

The cross-connection tested is a customer-controlled circuit.

TLA Terminate and leave active

m Direction of the circuit to be terminated

F FROM side is terminated

T TO side is terminated

B BOTH sides are terminated

s Termination state of the circuit

F One or more FROM channel is terminated

T One or more TO channel is terminated

B One or more of FROM and TO channels are terminated

UMPD Unmapped
COND cc Condition code
cc Hexadecimal condition code

cc	<i>Explanation</i>
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
E0	ETSI not equipped, not in service, or failed
44	Invalid direction specified for NTST TLA/TLR
49	test group unequipped
54	invalid mode for TLA/TLR

cc	<i>Explanation</i>
55	circuit already terminated
5A	NPC unequipped, out of service or failed
AB	TLA/TLR invalid with ITS test groups

TWO-WAY TEST ACCESS

Explanation of Command

This message is used to modify the Terminate and Leave Release status of one or both ends of the cross-connected channels associated with the specified test port. This message will be denied if the specified test port is not in the monitor or split mode or if the tested circuit is already in the specified termination release state. When used with the Subrate Feature for a circuit termination, the system response will be STST TLA TP or STST TLA MPTM TP. When used with the Subrate Feature for a circuit termination, the system response will be DISC TACC TS RLS or DISC TACC TS RLS MJU.

Command

Nonhierarchical

[I.25501]

TTST:[FRM xy][,SEQ ww]:TLR m[,NOT [t]rstvvv],TP kk!

Hierarchical

[I.25501]

TTST:[FRM xy][,SEQ ww]:TLR m[,NOT uvmnpvvv],TP kk!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.25501]

M hh:mm:ss xy,ww n[vv] TTST TLR m [s]abcddd,[t]ghijjj TP kk \\
2 LN MSG:
[NOT [t]rstvvv][RDC][CUS] TLR s COMPL

Hierarchical

[O.25501]

M hh:mm:ss xy,ww n[vv] TTST TLR m edhfgddd,wxkqrjjj TP kk \\
2 LN MSG:
[NOT uvmnpvvv] [RDC] [CUS] TLR s COMPL

Denial Message

Nonhierarchical

[O.25501.02]

M hh:mm:ss xy,ww n[vv] TTST TLR m [t]ghijjj TP kk T UASGN DNY

[O.25501.03]

M hh:mm:ss xy,ww n[vv] TTST TLR m [s]abcddd,[t]ghijjj TP kk \
<reason> DNY

[O.25501.04]

M hh:mm:ss xy,ww n[vv] TTST TLR m [s]abcddd,[t]ghijjj TP kk \
TLR s NTLA DNY

Hierarchical

[O.25501.02]

M hh:mm:ss xy,ww n[vv] TTST TLR m wxkqrjjj TP kk T UASGN DNY

[O.25501.03]

M hh:mm:ss xy,ww n[vv] TTST TLR m edhfgddd,wxkqrjjj TP kk \
<reason> DNY

[O.25501.04]

M hh:mm:ss xy,ww n[vv] TTST TLR m edhfgddd,wxkqrjjj TP kk \
TLR s NTLA DNY

Common

[O.25501.01]

M hh:mm:ss xy,ww n[vv] TTST TLR m TP kk <reason> DNY

Explanation of Parameters

TLR

Terminate and leave release

m

The end of the tested circuit that must be put into the terminate
and leave release state.

Set m to one of the values listed below:

- F** Apply TLR to the FROM end
- T** Apply TLR to the TO end
- B** Apply TLR to BOTH ends

	The following apply only to multipoint circuits
	L Apply TLR on all legs towards facilities
	G Apply TLR on all legs towards bridge
	A Apply TLR on all legs in both directions
NOT	Not NOT means that the termination number following the NOT keyword is not to be affected by this command. This field is only valid for m values L, G, or A.
TP	Test port
kk	Test port number (01 through 96) The test port is mapped to predesignated channels of a network processing circuit for test ports (NPCTP) during the provisioning of that test port. All domestic nonSLC NPC types can be provisioned as NPCTP. For the mapping between the test ports and the channels of the test NPCs, see the GRTH::TP message.
[t]rst	The 3- or 4-digit Nonhierarchical NPC number of a termination that must not be affected by the command. For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number of a termination that must not be affected by this command uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
vvv	Channel or conference number Channel numbers 001-024 001-047 Odd only (SLC 96 [®] Carrier, Mode 3, DGA) 049-095 Odd only (SLC 96 Carrier, Mode 3, DGC) 001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA) 025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB) 049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)

	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
	000-030	CEPT type NPCs grown as CAS
	000-031	CEPT type NPCs grown as NSA
		Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.
		Conference numbers
	001-085	(MB NPC)
	001-500	(Virtual NPC)
[s]abc		The 3- or 4-digit nonhierarchical FROM NPC number with the same valid values as [t]rst.
[t]ghi		The 3- or 4-digit nonhierarchical TO NPC number with the same valid values as [t]rst.
wxkqr		The hierarchical NPC number of the TO termination of the circuit assigned to the test port with the same valid values as uvmnp.
edhfg		The hierarchical NPC number of the FROM termination of the circuit assigned to the test port. If the test port is assigned to an unmapped termination, this field is all zeros (with the same valid values as uvmnp).
	ed,wx	Unit number
	h,k	Module number
	fg,qr	NPC number
jjj		TO channel with the same valid values as vvv
ddd		FROM channel with the same valid values as vvv
CUS		Customer
		The circuit is a Customer-controlled Circuit
RDC		Red circuit

	The tested circuit is a protected circuit
s	Termination state of the circuit
F	FROM side is terminated
T	TO side is terminated
B	BOTH sides are terminated
R	Neither side is terminated
T UASGN	The test port is assigned to an unmapped termination
NTLA	The requested TLA state is the present TLR (RLS) state
reason	Denial reason

NX64Kbit/s TWO-WAY TEST ACCESS, TERMINATE- AND-LEAVE-RELEASE

Explanation of Command

This command releases one or both ends of an Nx64Kbit/s cross-connection associated with the specified test-access group. The circuit to be released must be a terminated, mapped one-way or two-way circuit, that is currently in the Monitor or Split test access mode. Upon release, normal data transmission is restored in the direction specified in the command.

Command

[I.25521]
TTST:[FRM xy][,SEQ ww]:TLR m,TG mmm!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.25521]
M hh:mm:ss xy,ww n[vv] TTST TLR m TG mmm FROM [s]abc TO [t]ghi \\
5 LN MSG:
TLA s[RDC][CUS][ONEWAY]
ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd COMPL

Hierarchical

[O.25521]
M hh:mm:ss xy,ww n[vv] TTST TLR m TG mmm FROM uvmpn TO wxkqr \\
5 LN MSG:
TLA s[RDC][CUS][ONEWAY]
ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.25521]

```
M hh:mm:ss xy,ww n[vv] TTST TLR m TG mmm FROM [s]abc TO [t]ghi \
6 LN MSG:
TLA s[ RDC][ CUS][ ONEWAY]
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL
```

Hierarchical

[O.25521]

```
M hh:mm:ss xy,ww n[vv] TTST TLR m TG mmm FROM uvmnp TO wxkqr \
6 LN MSG:
TLA s[ RDC][ CUS][ ONEWAY]
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd
ddd ddd ddd ddd ddd ddd ddd ddd COMPL
```

Denial Message

[O.25521.01]

```
M hh:mm:ss xy,ww n[vv] TTST TLR m TG mmm COND cc DNY
```

Explanation of Parameters

TG	Test-access group
mmm	Test-access Group number (001 through 400) The TG is designated as in message 31421
[s]abc	3- or 4-digit nonhierarchical FROM NPC number
[t]ghi	3- or 4-digit nonhierarchical TO NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number
wxkqr	Hierarchical TO NPC number
uv,wx	Unit number
m,k	Module number

np,q NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

ddd FROM Channel number

001-024

2.048 Mbit/s Termination

001-031* Primary NPCs grown as Channel Associated Signaling (CAS)

001-031 Primary NPCs grown as Non Signaling Associated (NSA)

*Circuits involving CAS channel 31 can only be tested individually.

The FROM channel ddd is --- for circuits not involved in this test session. For unmapped TO channel(s) or a BBL without return, ddd will be '000' in the corresponding channel position(s). If TO channel is mapped to a channel 000, the circuit can only be tested as N = 1, the corresponding FROM channel ddd is 000.

RDC Red circuit

CUS Customer

The cross-connection tested is a customer-controlled circuit.

TLR Terminate and leave released

m Direction of the circuit to be released

F FROM side is released

T TO side is released

B BOTH sides are released

TLA Terminate and leave active

s Termination state of the circuit

R All channels are released

F One or more FROM channel is terminated

T One or more TO channel is terminated

UMPD Unmapped

COND cc Condition code

cc Hexadecimal condition code

cc	<i>Explanation</i>
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
14	CCB not eqd, not IS, or failed or inactive side CCB not eqd or not IS
15	FTMI not equipped, not in service, or failed
16	FC not eqd, not IS, or failed or inactive side FC not eqd or not IS
17	TSI not eqd, not IS, or failed or inactive side TSI not eqd or not IS
18	DSPI not in service, or failed
1A	Required FLI not equipped, not in service, or failed
1B	Required MXR not equipped, not in service, or failed
1C	FMT not eqd, not IS, or failed, or inact side FMT not eqd, or not IS
1D	Required MIU not equipped, not in service, or failed
1E	Required OI not equipped, not in service, or failed
1F	Required MPR not equipped, not in service, or failed
E0	ETSI not equipped, not in service, or failed
44	Invalid direction specified for NTST TLA/TLR
49	test group unequipped
56	circuit not terminated
5A	NPC unequipped, out of service or failed
AB	TLA/TLR invalid with ITS test groups

ITEST PORT RELEASE

Explanation of Command

This command requests that all test ports set up by the link on which this command is input be restored to the released mode. An individual output message is received for each test port released (see TTST,TPR,TP,OOS)

isThis output message is received after all test ports have been released.

Subrate test sessions are also released by this command.

Command

1.544 Mbit/s Termination

[I.27002]

TTST:[FRM xy][,SEQ ww]:TPR,ALL[,OOS]!

2.048 Mbit/s Termination

[I.27002]

TTST:[FRM xy][,SEQ ww]:TPR,ALL[,OOS]!

Completion Message

1.544 Mbit/s Termination

[O.27002]

M hh:mm:ss xy,ww n[vv] TTST TPR ALL COND cc COMPL

2.048 Mbit/s Termination

[O.27002]

M hh:mm:ss xy,ww n[vv] TTST TPR ALL COND cc COMPL

**Autonomous
Message**

1.544 Mbit/s Termination

[O.27002]

I hh:mm:ss xy,ww TTST TPR ALL COND cc COMPL

2.048 Mbit/s Termination

[O.27002]

I hh:mm:ss xy,ww TTST TPR ALL COND cc COMPL

**Explanation of
Parameters**

TPR	Test Port Release
ALL	All
OOS	Out-of-service The OOS keyword is used to release test ports on an out-of-service circuit. Any test port, regardless of the type of circuit accessed, will be released.
COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
01	No test ports were activated by link n
02	One or more test ports could not be released

mmmm	<i>Explanation</i>
NCON	No conditions
SARL	No test ports were activated by link n
SNVS	One or more test ports could not be released

TWO-WAY TEST ACCESS

Explanation of Command

This command allows a circuit under test to be put in the release mode and to be restored to its mapped (terminated or normal) state. When the Subrate Feature is used for a circuit termination, the system response is a Subrate test port release message.

The FRC keyword is only used for an emergency disconnect of a test port from a DSP Platform application in the unlikely event that an application cannot disconnect the test port itself using an application command. The FRC keyword may only be used by users who have the RMON (Restricted Maintenance privilege ON) privilege. The UTL::QRY,CMAP command (I.52011) should be used to find the appropriate pair of application channel numbers **before** this command is used to take the test port down.

Command

[I.27001]
TTST:[FRM xy][, SEQ ww]:TPR,TP kk[, OOS][, FRC]!

Completion Message

Nonhierarchical

[O.27001]
M hh:mm:ss xy,ww n[vv] TTST TPR [s]abcddd,[t]ghijjj \
[RDC][CUS] TP kk[TLA s][OOS][FRC] [NTR] COMPL

Hierarchical

[O.27001]
M hh:mm:ss xy,ww n[vv] TTST TPR wxkqrddd,uvmnpjjj \
[RDC][CUS] TP kk[TLA s][OOS][FRC] [NTR] COMPL

Denial Message

[O.27001.02]

Nonhierarchical

M hh:mm:ss xy,ww n[vv] TTST TPR [s]abcddd,[t]ghijjj \
TP kk <reason> DNY

Hierarchical

[O.27001.02]

M hh:mm:ss xy,ww n[vv] TTST TPR wxkqrddd,uvmnpjjj \
TP kk <reason> DNY

Common

[O.27001.01]

M hh:mm:ss xy,ww n[vv] TTST TPR TP kk <reason> DNY

**Autonomous
Message**

Nonhierarchical

[O.27001]

I hh:mm:ss xy,ww TTST TPR [s]abcddd,[t]ghijjj \
[RDC][CUS] TP kk[TLA s][OOS] [NTR] COMPL

[O.27001.02]

I hh:mm:ss xy,ww TTST TPR [s]abcddd,[t]ghijjj \
TP kk <reason> DNY

Hierarchical

[O.27001]

I hh:mm:ss xy,ww TTST TPR wxkqrddd,uvmnpjjj \
[RDC][CUS] TP kk[TLA s][OOS] [NTR] COMPL

[O.27001.02]

I hh:mm:ss xy,ww TTST TPR wxkqrddd,uvmnpjjj TP kk <reason> DNY

Common

[O.27001.01]

I hh:mm:ss xy,ww TTST TPR TP kk <reason> DNY

Explanation of Parameters	TP	Test port
	kk	Test port number (01 through 96)
	OOS	Out-of-service
		Used to release test ports on an out-of-service circuit.
	FRC	Force the disconnect
		This keyword is used only in an emergency, when a DSP Platform application (such as DDS Subrate, X.50 Subrate, or DMB) running on a TG193B circuit pack cannot disestablish a test port via an application command. This keyword is also restricted to users with the RMON privilege.
	[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number
	[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number
		For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	uvmnp	Hierarchical TO NPC number of the circuit assigned to the test port
	wxkqr	Hierarchical FROM NPC number of the circuit assigned to the test port
		If the test port is assigned to an unmapped termination, this field is all zeroes
	uv,wx	Unit number
	m,k	Module number
	np,qr	NPC number within the module
		For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	ddd	FROM channel or conference number
	jjj	TO channel or conference number
		Channel numbers
	001-024	
	001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)

001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)

025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)

049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

000-030 CEPT type NPCs grown as CAS

000-031 CEPT type NPCs grown as NSA

Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.

Conference numbers 001-085 (MB NPC)

001-500 (Virtual NPC)

TPR Test port release

TLA Terminate and leave active

s Termination state of the circuit

R RELEASED. Neither side is terminated

F FROM side is terminated

T TO side is terminated

B Both sides are terminated

RDC Red circuit

CUS Customer

Customer-controlled circuit

NTR No transmit

NX64Kbit/s TWO-WAY TEST ACCESS, INTEGRATED TEST SIGNAL GENERATION

Explanation of Command

This command is used to turn on or turn off integrated test signal generation on one bundle of a test-access group (TG) currently in split, looped, or hub mode. The integrated test signal generation function is provided by the TG193 circuit pack. No external test sets are required. The test group NPC (NPCTG) must be provisioned as an Integrated Test Set (type ST1yz) to allow integrated test signal generation.

When turning on test signal generation a test pattern, and which bundle to transmit the pattern on must be specified. A background pattern (all ones) will be transmitted in the data bits on the unspecified bundle. The optional keyword SIG is added to allow the user to specify the 4 bit signaling word to be transmitted with the test pattern.

When an administrative link fails or is dropped for whatever reason (including a hard reset or a restoral of the main controller), all test-access groups associated with that link will be turned off automatically.



NOTE:

Only one test-access group bundle per TG193 card can be in test signal generation mode at a time. No other test-access group on that test-access group NPC (NPCTG), or on its mate NPC, can be generating a test signal at the same time.

Command

[I.22021]

TTST:[FRM xy][,SEQ ww]:TSG {ON|OFF},TG \
mmm[,<pattern>,{EAST|WEST}[,SIG abcd]]!

Completion Message

[O.22021]

M hh:mm:ss xy,ww n[vv] TTST TSG {ON|OFF} TG mmm[<pattern> \
{EAST|WEST} SIG abcd] COMPL

Denial Message

[O.22021.01]

M hh:mm:ss xy,ww n[vv] TTST TSG {ON|OFF} TG mmm COND cc DNY

Autonomous Message

[O.22021]

I hh:mm:ss xy,ww TTST TSG OFF TG mmm COMPL

Explanation of Parameters

TG	Test-access group
mmm	Test-access Group number (001 through 400) The TG is designated as in command I.31421
TSG	Test Signal Generation
ON	Initiate test signal generation
OFF	Stop test signal generation
<pattern>	Test pattern to be transmitted
PATT X'ef	8 bit user-defined pattern (in hexadecimal notation)
Examples:	
	PATT X'00 all zeros pattern (permanent space)
	PATT X'FF all ones pattern (permanent mark)
	PATT X'55 or PATT X'AA alternating mark/space (1:1 ratio)
	511PRBS 511 bit pseudo-random bit sequence
	2047PRBS 2047 bit pseudo-random bit sequence
EAST	Generated signal to be transmitted on East bundle of TG
WEST	Generated signal to be transmitted on West bundle of TG
abcd	4 bit signaling word to be transmitted with pattern If not specified, the signaling word defaults to 0101
cc	Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
15	FTMI not equipped, not in service, or failed
49	test group unequipped
59	Invalid TC specification
AF	Invalid bundle specified, EAST not connected for unmapped TG
70	ITS TG Already Generating
71	ITS TG Not Generating
76	ITS NPC Hardware Error
77	TG in TSM ON mode

NX64Kbit/s TWO WAY TEST ACCESS, INTEGRATED TEST SIGNAL MONITORING

Explanation of Command

This command is used to turn on or turn off integrated test signal monitoring on one bundle of a test-access group(TG) currently, in test signal generation mode. The integrated test signal monitoring function counts logical bet errors based on discrepancies between the transmitted and received bit streams. Logical bit errors are used to calculate error performance statistics based on ITU Recommendation G.821. These statistics are calculated and displayed i response to a separate user query (I.53041).

The integrated test signal monitoring function is provided by the TG193 circuit pack. No external test sets are required. The test group NPC (NPCTG) must be provisioned as an Integrated Test Set (type ST1yz) to allow integrated test signal monitoring. Also, if the test group specified is not in test signal generation mode when this command is entered, it will be denied.

When turning on integrated test signal monitoring, the test group bundle to be used to monitor the received pattern must be specified. The optional keyword TINT is added to allow the user to specify the duration of the test in minutes. After this test interval has expired, an autonomous message will be output indicating that test signal monitoring was turned off.

When an administrative link fails or is dropped for whatever reason (including a hard reset or a restoral of the main controller), all test-access groups associated with that link will be released automatically. Prior to the release of the test groups, any active integrated test signal generation and monitoring on any test group associated with that link will be turned of automatically.

⇒ NOTE:

Only one test-access group bundle per TG193 card can be in test signal monitor mode at a time. No other test access group on that test-access group NPC (NPCTG), or on its mate NPC, can be monitoring a test signal at the same time.

Command	[I.22421] TTST:[FRM xy][,SEQ WW]:TSM {ON OFF},TG mmm \ [, {EAST WEST}[,TINT nnn]]!	
Completion Message	[O.22421] M hh:mm:ss xy,ww n[vv] TTST TSM {ON OFF} TG mmm \ [{EAST WEST}[TINT nnn]] COMPL	
Denial Message	[O.22421.01] M hh:mm:ss xy,ww n[vv] TTST TSM {ON OFF} TG mmm COND cc DNY	
Autonomous Message	[O.22421] I hh:mm:ss xy,ww TTST TSM OFF TG mmm COMPL	
Explanation of Parameters	TG	Test-access group
	mmm	Test-access Group number (001 through 400) The TG is designated as in command I.31421
	TSM	Test Signal Monitor
	ON	Initiate test signal monitoring
	OFF	Stop test signal monitoring
	EAST	Monitor the signal received on East bundle of TG
	WEST	Monitor the signal received on West bundle of TG
	TINT	Test interval
	nnn	Duration of test in minutes (acceptable range of 1-120) If not specified, the test interval is open-ended
	cc	Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
15	FTMI not equipped, not in service, or failed
49	test group unequipped
71	ITS TG Not Generating
72	TG not in TSG ON mode
73	ITS TG Already Monitoring
74	ITS TG Not Monitoring
76	ITS NPC Hardware Error

Lucent Technologies
Bell Labs Innovations



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Command and Message Manual
(Release 9.1.3 PDS)

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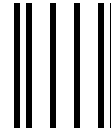
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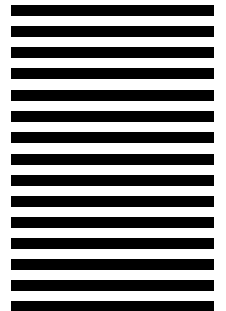
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GL

Glossary

V4



Contents

About This Manual

Background

Purpose

The *DACS II Release 9.1.3 Command and Message Manual* describes the input commands and output messages of Release 9.1.3 of the Digital Access and Cross-Connect System II (DACS II). In addition, it provides full support for previous product releases.



NOTE:

Those customers using this manual with Releases 3 through 7.0.3 software should be aware that all features of a particular message shown for Release 9.1.3 may or may not apply to previous releases.

Reason for Issue

The *DACS II Release 9.1.3 Command and Message Manual* has been issued to include updated and new commands applicable to Release 9.1.3.

Background (Continued)

Intended Audiences

This manual is a catalog of messages intended for reference by a technician or craftperson who needs additional details about a message. It provides the user with supplemental information for the Digital Access and Cross-Connect System II (DACS II) that is programmed in the HuMan-Machine Language (MML) Program Documentation Standards (PDS) language. An example of a user is someone performing a task from an operation and maintenance manual who needs the definition of a specific keyword to complete the task.

Manual Contents

Volume Breakdown

This manual consists of four volumes as follows:

- **Volume I** - This volume contains general information about the document, a detailed introduction that defines DACS II messages, relates how to communicate with DACS II, introduces the administrative links, and discusses in detail NPC addressing, on-line help feature, system configuration and features a listing of related documentation. Message listings in this volume include alphabetical and numerical, summary list of input commands and a list of autonomous messages. A comprehensive presentation of input commands and output messages (ABT through CTST) concludes this volume.
 - **Volume II, III, and IV** - These three volumes contain input commands and output messages in the following order:
 - **Volume II** - DCH through OPR
 - **Volume III** - REPT through TTST
 - **Volume IV** - UTL and the Glossary
-

Manual Conventions

Special Font Used This manual uses special fonts to differentiate computer input/output. The constant width font indicates message formats and messages as they would appear on a DACS II terminal screen.

Notes Notes inform users of special considerations, situations, or items to remember. An example of a Note is shown below:



NOTE:

Terminated connection for DMB concatenation is not allowed.

Safety Label

Cautions indicate the presence of a hazard that will or can cause a frame alarm or property damage if hazard is not avoided. An example of a Caution is shown below:



CAUTION:

The UMC is inserted towards the direction that is terminated, potentially causing a loss of service.

Related Documentation

Related DACS II Documents

The following documents support the DACS II:

- DACS II Installation Manual
 - IPH903 (DACS II CEF)
 - IPH903I (DACS II ESBF).

Audience: Customers planning to install the equipment

Content: Customer installation instructions.

- DACS II Release 7.0 Product Description Manuals:
 - 365-353-085 (24 Channel)
 - 365-353-086 (30 Channel).

Audience: Network planners, engineers, and others that need to know how the DACS II works and fits into the network

Content: Features, applications, and description and other reference information.

- DACS II Release 9.0 Operations and Maintenance:
 - 365-353-261(1.544 PDS)
 - 365-353-271 (1.544 MML)
 - 365-353-281(2.048 PDS)
 - 365-353-291 (2.048 MML)

Audience: End-user maintenance personnel

Contents: Procedures to operate and maintain the DACS II.

- DACS II Release 9.1.3 Feature Guide:
 - 365-353-298 (PDS)
 - 365-353-297 (MML)

Audience: End-user maintenance personnel

Content: Information and procedures for this new feature.

(Continued on next page)

Related Documentation (Continued)

Related DACS II Documents, Continued

- DACS II Release 9.1.3 Command and Message Manuals:

- 365-359-212 (PDS)
- 365-359-211 (MML)

Audience: End-user maintenance personnel

Content: Description of each software input message and its response along with a description of each system output report.

- X.50/X.57 Subrate Application
Release 1.0.3 for DACS II/Release 1.0.4 for DACS II ISX
MML 2.048 Mbit/s Interface User's Manual

- 365-350-101 (MML).

Audience: End-user maintenance personnel

Content: Complete manual describing how to install and operate the X.50/X.57 Subrate application on the DACS II or DACS II ISX. Commands and messages describing how to perform subrate cross-connects and subrate test access are included.

- DDS Subrate and MJU Application
Release 1.0.4 for DACS II/Release 1.0.5 for DACS II ISX
User's Manual

- 365-350-110 (PDS)
- 365-350-111 (MML).

Audience: End-user maintenance personnel

Content: Complete manual describing how to install and operate the DDS Subrate and MJU application on the DACS II or DACS II ISX. Commands and messages describing how to perform DDS subrate cross-connects, subrate test access, and subrate MJU operations are included.

(Continued on next page)

Related Documentation (Continued)

Related DACS II Documents, Continued

- Digital Multipoint Bridge (DMB)
DSP Platform Application
Release 1.0.2 for DACS II/Release 1.0.3 for DACS II ISX
User's Manual
 - 365-353-144 (PDS)
 - 365-353-154 (MML).

Audience: End-user maintenance personnel

Content: Complete manual describing how to install and operate the DMB application on the DACS II or DACS II ISX. Commands and messages describing how to perform DMB cross-connects and DMB test access operations are included.

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Overview

Documentation for DACS II and DACS II ISX is now available in electronic form, on CD-ROM (compact disk, read-only memory). CD-ROM has many advantages over traditional paper documentation, including cost savings, search and retrieve capability, and the assurance of the most current documentation.

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For technical information, call the DACS II Documentation Coordinator: (1-732-949-5989).

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ALARM CUTOFF

Explanation of Command

This command executes an audible alarm cutoff (ACO), silencing any currently active central office audible frame alarms. DACS II also illuminates the green ACO LED on the front status panel. The ACO remains active and the green LED remains illuminated until all frame alarms are retired or a new alarm appears on the system.

Note that executing an ACO **does not** inhibit subsequent audible alarms from being generated for additional failures. In addition, the ACO does not retire local or remote **visible** indications and does not cause the system to issue an alarm clear notification. Executing an ACO by inputting this command is equivalent to pressing the status panel ACO push-button. When the ACO push-button is pressed, a message indicating that the ACO has been activated is generated by the system.

Command

```
[I.51111]
UTL:[FRM xy][,SEQ ww]:ACO!
```

Completion Message

```
[O.51111]
pahh:mm:ss xy,ww n[vv] UTL ACO {ACTIVE|INACT} COMPL
```

Explanation of Parameters

ACO	Alarm cutoff
ACTIVE	Active alarm
	The appearance of this keyword indicates that the audible alarm cutoff has been activated in the system.
INACT	Inactive alarm
	The appearance of this keyword indicates that there were no alarms on the system and the audible alarm cutoff was not activated.

RETRIEVE INTERVENTION LEVEL STATUS

Explanation of Command

This command retrieves the current status of the Intervention Level Feature; that is, whether or not the feature is ON or OFF.

Command

[I.53351]
UTL: [FRM xy][, SEQ ww]:QRY,ALM,INTV!

Completion Message

[O.53351]
M hh:mm:ss xy,ww n[vv] UTL QRY ALM INTV {ON|OFF} COMPL

Explanation of Parameters

INTV	Intervention
ON	Intervention Level Feature ON
OFF	Intervention Level Feature OFF
cc	Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions

RETRIEVE ALARM SEVERITY STATUS

Explanation of Command

This command retrieves the current status of the Alarm Severity Feature; that is whether or not the feature is ON or OFF.

Command

[I.53321]
UTL: [FRM xy][, SEQ ww]:QRY,ALM,SEV!

Completion Message

[O.53321]
M hh:mm:ss xy,ww n[vv] UTL QRY ALM SEV {ON|OFF} COMPL

Explanation of Parameters

SEV	Severity
ON	Alarm Severity Feature ON
OFF	Alarm Severity Feature OFF
cc	Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions

BACKUP MEMORY TRANSFER

Explanation of Command

This command performs the following functions:

1. When the MC is in-service, it may be used to request a transfer of database information from random access memory (RAM) to the memory device (MEM) or devices that are in-service. The Primary Memory (PMEM) device is always in-service. The Secondary Memory (SMEM) device may or may not be in-service. If SMEM is in-service, then a transfer of database information is performed from RAM to SMEM.
2. When the MC is in maintenance condition (MCOND), it may be used to request a transfer of executables or database information between PMEM and SMEM or between SMEM and PMEM. If the optional EXCT keyword is **not** used, only database information is transferred. If the EXCT keyword **is** used, only executables are transferred.
3. During a release upgrade procedure, when in MCOND, it transfers the database and DSP Platform Applications, if any, from SMEM to PMEM. The UPRD keyword must be used in that case. Note that the UPRD keyword is only available to user DAX with the frame in MCOND.

Restricted maintenance privilege is required for transfers of executables or database information from SMEM to PMEM.

Every ten minutes the state of the frame is checked to look for changes in provisioning and/or cross connections. If a change has occurred within that period, an autonomous request is made to transfer data base information from RAM to MEM.

If the user issues a command transferring database information or executables from PMEM to SMEM, the command is executed immediately; however, if the transfer occurs from SMEM to PMEM the following message appears (see the following when the UPRD keyword is used):

ARE YOU SURE? (YES/NO)

Only if the answer is YES, is the command executed. If the answer is not YES or the user does not respond within 60 seconds, the following is displayed:

COMMAND ABORTED

When transferring executables between PMEM and SMEM in either direction, Digital Signal Processing Platform (DSPP) application executables (if present) are treated as follows:

1. If executables for a particular application are on the source card, but not on the destination card, the transfer of those application executables takes place.
2. If executables for a particular application are on the destination card, but not on the source card, the application executables are not erased, even if executables for another application are copied from source to destination card.
3. If executables of the same application (the x in SDxyz is the same) that have the same version identifiers are on both the source and the destination card, then both executables remain untouched and no transfer takes place for that application.
4. If different versions of the executables of the same application are on the source and the destination card respectively, then this command is denied. The user must invoke the INSTALL command to first list and then remove one or the other version of the application before invoking this command again.

The **UPGRD** keyword must only be used during an upgrade procedure for the purpose of copying the database and previously installed DSP Platform Applications from SMEM to PMEM. The following restrictions apply for the use of the UPGRD keyword.

1. Only a copy from SMEM to PMEM is allowed.
2. The EXCT keyword is not allowed.
3. The INCL keyword is not allowed.
4. The Main Controller must be in Maintenance Condition (MCOND).
5. The user must be user DAX.
6. The release identifier for the executables on the PMEM card must refer to a newer release than the release identifier of the database on the SMEM card; i.e., this must be a genuine upgrade situation.

At the beginning of the invocation of this utility with the UPGRD keyword the following message appears:

**WARNING — YOU HAVE INVOKED THE "UPGRD" KEYWORD.
THE "UPGRD" KEYWORD SHOULD ONLY BE USED DURING A GENERIC
UPGRADE.
DO YOU WISH TO CONTINUE? (YES/NO)**

The user should respond with a **YES** if and only if an upgrade for the DACS II generic is to be done.

During the execution of this copy utility during an upgrade procedure (i.e., with the UPGRD keyword), the database is copied from SMEM to PMEM and a retrofit of the size of the database takes place if needed. In addition, all the applications residing on SMEM, if any, are copied to PMEM.

New PMEM cards with new DACS II executable software should **not** have any application software on them. Therefore, if for some reason, a different version of the same application resides on the PMEM card that resides on the SMEM card, then this command is denied.

Command

Hierarchical

[I.55701]

UTL:[FRM xy][,SEQ] ww:BMTR, FROM <from>, TO \
<to>[, {EXCT|INCL|UPGRD}]!

Completion Message

Hierarchical

[O.55701]

M hh:mm:ss xy,ww n[vv] UTL BMTR FROM <from> TO <to> \
[{EXCT|INCL|UPGRD}] COMPL

[O.55702]

M hh:mm:ss xy ww n[vv] UTL BMTR IN PROGRESS

Denial Message

Hierarchical

[O.55701.01]

M hh:mm:ss xy,ww n[vv] UTL BMTR FROM <from> TO <to> \
[{EXCT|INCL|UPGRD}] COND cc DNY

Autonomous Message

Hierarchical

[O.55701]

A hh:mm:ss xy,ww UTL BMTR FROM <from> TO <to>[EXCT] COMPL

[O.55701.01]

A hh:mm:ss xy,ww UTL BMTR FROM <from> TO <to>[EXCT] \
COND cc DNY

Explanation of Parameters

BMTR	Backup memory transfer
FROM	From
from	Source for backup memory transfer
TO	To
to	Destination for backup memory transfer
RAM	Random access memory
WKG	Working (Random access memory)
PMEM	Primary memory device
SMEM	Secondary memory device
MEMPMEM	SMEM or both

The only permissible combinations are listed as follows:

from	to
WKG	MEM
PMEM	MEM
SMEM	PMEM

EXCT	Executable Transfer generic executable software only. May not be used when transferring memory contents from RAM to MEM. Frame must be in maintenance condition state (MCOND) when transferring executable software from PMEM to SMEM or SMEM to PMEM. Additionally, SMEM to PMEM requires restricted maintenance (RMON) privileges.
INCL	Inclusive The INCL keyword is used to request that the data base on PMEM be transferred to SMEM excluding the generic journal

files. This keyword cannot be combined with the EXCT keyword. INCL may not be used when transferring RAM to MEM.

The INCL keyword is used only as a preparatory step before starting a generic upgrade. It makes sure that the database residing on the SMEM card has no journal files before the upgrade is started. This is different from an invocation of this utility to copy from RAM to MEM, which converts the journals to the database leaving the journal files empty, but which does not remove the journal files.

UPGRD

Upgrade

The UPGRD keyword must be used only during a DACS II Release upgrade for the purpose of copying the database and any previously installed DSP Platform Applications from SMEM to PMEM. It is an assumption that the PMEM card has the new executables and nothing else, while the SMEM card contains the old executables, all installed DSPP Applications, and a complete database with no remaining journal entries. Only user DAX may use this keyword; also, the MC must be in MCOND.

cc

Hexadecimal condition code

cc	<i>Explanation</i>
8C	DB MP or units ram error
8D	DB PMEM error OP-CL-RD-WR-SK
8E	DB can't send or receive mail
8F	Can't lock or unlock ram database
90	DB can't get the slave mail box
95	Invalid option, mailbox or flag
96	Unit(s) OOS, and additional backup required
97	Entity can't be addressed in this configuration
98	Checksums verification failed
20	Software Identification Block is not readable
21	Software Identification Block failed comparison
A5	FPI on SMEM does not match one on PMEM
84	Problem occurred while accessing SMEM or unformatted SMEM
85	Problem occurred while accessing PMEM

cc	<i>Explanation</i>
86	Source does not contain requested information
87	Old_tape is a special install tape
88	SMEM is a normal SMEM
89	Problem occurred while accessing BOTH_MEM
90	Can't mount or unmount BOTH_MEM
91	Can't mount or unmount SMEM
92	Can't mount or unmount PMEM
93	SMEM is not present
94	SMEM unit is not restored
E6	DB SMEM error OP-CL-RD-WR-SK
E7	PMEM not restored
B4	Can't copy executables
B8	Application version mismatch
F0	SSC Diagnostic Failure
F7	Can't mount or unmount old_tape
F8	Old_tape is not present
F9	Old_tape unit is not restored
FA	Bad old_tape DB generic
FB	Old_tape with journal
FC	Invalid executable on card
FD	Problem occurred while accessing old_tape
FE	Fail transfer DB from old_tape to SMEM
FF	DB retrofit fail

UTILITY BOOT

Explanation of Command

This command transfers the data base from the primary memory (PMEM) to the random access memory (RAM).



NOTE:

No hardware circuit packs or memory cards should be removed from or inserted into the frame while a boot or reset is in progress.

The optional CLR keyword is unnecessary but it is allowed for compatibility with older software releases.

Command

[I.58001]

UTL: [FRM xy][, SEQ ww]:BOOT, FRAME[, CLR]!

Completion Message

[O.58001]

M hh:mm:ss xy,ww n[vv] UTL BOOT FRAME[CLR] COND cc COMPL

[O.58002]

M hh:mm:ss xy,ww n[vv] UTL BOOT FRAME IN PROGRESS

Denial Message

[O.58001.01]

M hh:mm:ss xy,ww n[vv] UTL BOOT FRAME[CLR] COND cc DNY

Explanation of Parameters

CLR

Clear

The optional CLR keyword is unnecessary but it is allowed for compatibility with older software releases.

PMEM

Primary memory card

cc

Hexadecimal condition code

cc	<i>Explanation</i>
4C	Failed to boot CI
51	General boot failure (vanilla flavor)
18	DSPI not in service, or failed
52	Database is empty
92	Can't mount or unmount PMEM
46	Failed to boot CONF file
47	Failed to boot DB
48	Failed to boot journal--recurrence indicates database corruption
49	Failed to boot unit

UTILITY CLEAR

Explanation of Command

This message requests a clear of the counters or state on a specified facility performance parameter for all in-service network processing circuits (NPCs) which have the specified parameter.

DACS II will silently skip NPCs which can not be cleared.

Command

[I.56011]

UTL:FRM xy,SEQ ww:CLR,<parameter>,ALL!

Completion Message

[O.56011]

M hh:mm:ss xy,ww n UTL CLR <parameter> ALL COMPL

Denial Message

[O.56011.01]

M hh:mm:ss xy,ww n UTL CLR <parameter> ALL COND cc DNY

Explanation of Parameters

CLR	Clear
parameter	Facility performance monitoring parameter
	1.544 Mbit/s Termination
BER	Bit error rate
BPV	Bipolar violation
COFA	Change of frame alignment
CRC	Cyclic redundancy code
ER	Error rate (same as BER for D4 framing)
ERS	Errored seconds
FRER	Framing error

OOF Out of frame
SERS Severely errored seconds
SLIP Slip count
SAFE SAFE count
SANE SANE count

2.048 Mbit/s Termination

The addition to this message requests a clear of the counters or state of the facility performance PM 24 hour, PM previous 15 minute and PM current 15 minute or the total since "local midnight" for the parameters listed below for all in-service PB and or PC type NPCs.

CRC CRC-4 check block error events
FRER Framing error events
LOFA Loss of frame alignment events
MER Multiframe error alignment events (time slot 16)
PM Performance monitoring. Clears the following registers:
 DM - Degraded Minutes
 ERS - Errored Seconds
 SERS - Severely Errored Seconds
 SLIP - Slip Events
 US - Unavailable Seconds

cc Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
14	FTMI is out of service
15	NPC is unequipped

cc	<i>Explanation</i>
1F	FTMI is in service but failed
24	Unit type error
26	NPC type error
46	NPC Failed or Out of Service
47	IU/TI type NPC
7E	Bank id number not found
A0	No SAFE alarm for DGP
A1	The parameter specified does not match with the NPC type

UTILITY CLEAR HARDWARE/SOFTWARE ERROR RECOVERY LOG FILE

Explanation of Command

This command clears the DACS II error rate (ERR) recovery log. The log is a file that contains the history of the recovery events.

Command

[I.56061]
UTL: [FRM xy][, SEQ ww]:CLR,ERR,{HWER|SWER}!

Completion Message

[O.56061]
M hh:mm:ss xy,ww n[vv] UTL CLR ERR {HWER|SWER} COMPL

Denial Message

[O.56061.01]
M hh:mm:ss xy,ww n[vv] UTL CLR ERR {HWER|SWER} COND cc DNY

Explanation of Parameters

CLR	Clear
ERR	Error rate recovery
HWER	Hardware error recovery log file
SWER	Software error recovery log file
cc	Hexadecimal condition code
cc	<i>Explanation</i>
F1	File has already been cleared

CLEAR MESSAGE LOG

Explanation of Command

This command clears the Message Log. Using this command does not automatically reset the message log counter to 1. An option is provided to allow the counter to be reset.



NOTE:

This command is restricted to those with superuser permissions.

Command

[I.57031]
UTL:[FRM xy][[,SEQ ww]:CLR,MSGLOG[,RSTNUM]!

Completion Message

[O.57031]
M hh:mm:ss xy,ww n[vv] UTL CLR MSGLOG[,RSTNUM] COMPL

Denial Message

[O.57031.01]
M hh:mm:ss xy.ww n[vv] UTL CLR MSGLOG[,RSTNUM] COND cc DNY

Explanation of Parameters

MSGLOG	Message Log
CLR	Clear
RSTNUM	Reset the message log counter to 1
cc	Hexadecimal condition code
cc	<i>Explanation</i>
06	Feature is (already) off

UTILITY CLEAR DA/TA/SA/PA/TH/SH NPC PARAMETERS

Explanation of Command

This command clears the facility performance monitoring parameter counts of DA, TA, SA, TH, PA and SH type NPCs.

This command handles NPC addressing in the input command as follows: If only a single NPC is addressed in the input command, then either a completion or denial response is generated for the addressed NPC. DACS II always denies invalid commands to specifically addressed NPCs.

If a range of NPCs is addressed or the ALL NPC keyword is used and the feature applies to one or more NPCs within the range, DACS II performs the operation on the NPCs in the range that support the requested feature, but skip the NPCs which do not support the requested feature. DACS II provides a variety of line termination types which support different features and can be randomly mixed within the frame. If at least one of the NPCs in the addressed range supports the requested feature, DACS II generates a completion response for the entire range of NPCs; individual denial responses are not generated for NPCs within the range which do not support the feature. If *none* of the NPCs in the addressed range support the requested feature, DACS II generates a range denial response.

If an NPC range is specified in the input command, the following floating window rules apply:

1. Unequipped NPCs within the requested range are skipped.
2. If a CEPT gap is within the requested range, the NPCs in the gap are skipped.
3. If an endpoint of the requested range is in a CEPT gap, then the command is denied.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.56071]

```
UTL:[FRM xy][,SEQ ww]:CLR,{NPC [s]abc[-[t]def]|ALL},<parameter> \
[,AI aaaaa] [,LOCN locn][,MONDAT dddd][,MONTIM tttt]!
```

Hierarchical

[I.56071]

UTL:[FRM xy][,SEQ ww]:CLR,{NPC uvmnp[-wxkqr]|ALL},<parameter> \\
[,AI aaaaa][,LOCN locn][,MONDAT dddd][,MONTIM tttt]!

2.048 Mbit/s Termination

Nonhierarchical

[I.56071]

UTL:[FRM xy][,SEQ ww]:CLR,{NPC [s]abc[-[t]def]|ALL},<parameter>, \\
AI aaaaa [,MONDAT dddd][,MONTIM tttt]!

Hierarchical

[I.56071]

UTL:[FRM xy][,SEQ ww]:CLR,{NPC uvmnp[-wxkqr]|ALL},<parameter>, \\
AI aaaaa [,MONDAT dddd][,MONTIM tttt]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

If the output message requires less than 80 characters:

[O.56071]

M hh:mm:ss xy,ww n[vv] UTL CLR {NPC [s]abc[-[t]def]|ALL} \\
<parameter> [AI aaaaa][LOCN locn][MONDAT dddd][MONTIM tttt] \\
COMPL

If the output message requires more than 80 characters:

[O.56071]

M hh:mm:ss xy,ww n[vv] UTL CLR {NPC [s]abc[-[t]def]|ALL} \\
<parameter> 2 LN MSG:
[AI aaaaa][LOCN locn][MONDAT dddd][MONTIM tttt]COMPL

Hierarchical

If the output message requires less than 80 characters:

[O.56071]

```
M hh:mm:ss xy,ww n[vv] UTL CLR {NPC uvmnp[-wxkqr]|ALL} \
<parameter>
[AI aaaaa ][LOCN locn ][MONDAT dddd ][MONTIM tttt ]COMPL
```

If the output message requires more than 80 characters:

[O.56071]

```
M hh:mm:ss xy,ww n[vv] UTL CLR {NPC uvmnp[-wxkqr]|ALL} \
<parameter> 2 LN MSG:
[AI aaaaa ][LOCN locn ][MONDAT dddd ][MONTIM tttt ]COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

[O.56071]

```
M hh:mm:ss xy,ww n[vv] UTL CLR {NPC [s]abc[-[t]def]|ALL} \
<parameter> AI aaaaa [MONDAT dddd ][MONTIM tttt ]COMPL
```

Hierarchical

[O.56071]

```
M hh:mm:ss xy,ww n[vv] UTL CLR {NPC uvmnp[-wxkqr]|ALL} \
<parameter> AI aaaaa [MONDAT dddd ][MONTIM tttt ]COMPL
```

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

If the output message requires less than 80 characters:

[O.56071.01]

```
M hh:mm:ss xy,ww n[vv] UTL CLR {NPC [s]abc[-[t]def]|ALL} \
<parameter> [AI aaaaa ][LOCN locn ][MONDAT dddd ][MONTIM tttt ] \
COND cc DNY
```

If the output message requires more than 80 characters:

[O.56071.01]

```
M hh:mm:ss xy,ww n[vv] UTL CLR {NPC [s]abc[-[t]def]|ALL} \
<parameter> 2 LN MSG:
[AI aaaaa ][LOCN locn ][MONDAT dddd ][MONTIM tttt ]COND cc DNY
```

Hierarchical

If the output message requires less than 80 characters:

[O.56071.01]

```
M hh:mm:ss xy,ww n[vv] UTL CLR {NPC uvmnp[-wxkqr]|ALL} \  
<parameter>  [AI aaaaa ][LOCN locn ][MONDAT dddd ][MONTIM tttt] \  
COND cc DNY
```

If the output message requires more than 80 characters:

[O.56071.01]

```
M hh:mm:ss xy,ww n[vv] UTL CLR {NPC uvmnp[-wxkqr]|ALL} \  
<parameter>  2 LN MSG:  
[AI aaaaa ][LOCN locn ][MONDAT dddd ][MONTIM tttt ]COND cc DNY
```

2.048 Mbit/s Termination

Nonhierarchical

If the output message requires less than 80 characters:

[O.56071.01]

```
M hh:mm:ss xy,ww n[vv] UTL CLR {NPC [s]abc[-[t]def]|ALL} \  
<parameter>  AI aaaaa [MONDAT dddd ][MONTIM tttt ]COND cc DNY
```

If the output message requires more than 80 characters:

[O.56071.01]

```
M hh:mm:ss xy,ww n[vv] UTL CLR {NPC [s]abc[-[t]def]|ALL} \  
<parameter>  2 LN MSG:  
AI aaaaa [MONDAT dddd ][MONTIM tttt ]COND cc DNY
```

Hierarchical

If the output message requires less than 80 characters:

[O.56071.01]

```
M hh:mm:ss xy,ww n[vv] UTL CLR {NPC uvmnp[-wxkqr]|ALL} \  
<parameter>  AI aaaaa [MONDAT dddd ][MONTIM tttt ]COND cc DNY
```

If the output message requires more than 80 characters:

[O.56071.01]

M hh:mm:ss xy,ww n[vv] UTL CLR {NPC uvmnp[-wxkqr]|ALL} \
<parameter> 2 LN MSG:
AI aaaaa [MONDAT dddd][MONTIM tttt]COND cc DNY

Explanation of Parameters

NPC Network processing circuit

1.544 Mbit/s Termination

ALL All

This keyword is a valid option for NPCs rather than specifying a single or range of NPCs. It is used to clear a single parameter on all ANSI NPCs. If the ALL NPC option is selected, the input command must specify only a single facility parameter. An input command with the ALL NPC key word and any facility parameter groupings is denied.

[s]abc The 3- or 4-digit nonhierarchical NPC number

[t]def The 3- or 4-digit nonhierarchical NPC number

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp Hierarchical NPC number

wxkqr Hierarchical NPC number

uv,wx Unit number

m,k Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

1.544 Mbit/s Termination

parameter Parameter name

The type of monitored parameter accumulation registers which are to be reset. If only a single NPC is specified in the input command, all types of its parameter accumulators may be reset (possibly restricted by the choices of other input parameters) by selecting the value ALLPAR in the <parameter> field. If more than one NPC is specified in the input command, then ALLPAR, ALLL, and ALLP are not valid values for parameter.

The values ALLL and ALLP may be selected only if MONDAT and MONTIM are set to a value of HIST to clear a set of

historical registers. They are used to clear all historical 15-minute and daily line parameters and path parameters, respectively, as a group. The AI parameter must not be entered on the input command line. (The value ALLPAR may also be selected if the MONDAT and MONTIM parameters are programmed to clear a set of historical registers. It is used to clear the group of all historical line and path parameters.)

ALLL All line parameters listed below

ALLP All path parameters listed below

ALLPAR All parameters listed below

CSSP Path Controlled Slip Seconds

CVL Line Coding Violations

CVP Path Coding Violations

ESL Line Errored Seconds

ESP Path Errored Seconds

SEFS Path Severely Errored Framing Seconds

SESL Line Severely Errored Seconds

SESP Path Severely Errored Seconds

UASP Path Unavailable Seconds

AI Accumulation interval

aaaaa The accumulation time period for the specified parameter

This parameter must be specified in the input command line unless MONDAT and MONTIM are programmed to reset a group of historical performance parameters. When a group of historical parameters is reset, both the 15-minute and daily accumulators are reset.

15MIN Parameter count from a 15-minute accumulator

DAILY Parameter count from a daily accumulator

LOCN Location

locn Facility location

The facility location which corresponds to the set of performance monitoring registers which are to be reset. If this optional parameter is not present in the input command, it defaults to a value of NEND.

ALL Near-end and Far-end

FEND Far-end

	NEND	Near-end
MONDAT	Monitored Date	
dddd	Performance monitoring period begin date	
	The date of the beginning of the performance monitoring period to reset (specified in the AI parameter) as MMDD, where MM is the month (01-12) and DD is the day (01-31) of the month. If this optional input parameter is not present in the command, it defaults to a value of CURD, the current date. The value HIST is an option for input commands. The value HIST provides a group reset of near-end and/or far-end historical 15-minute and daily accumulators on a per-line and per-path basis. If the value HIST is selected for MONDAT, it must also be selected for MONTIM. The only valid options for <parameter> in this case are {ALLPAR ALLL ALLP} and the valid options for LOCN are {NEND FEND ALL}. The AI parameter must not be entered on the input command line. {01-12}{01-31} Month of Year/Day of Month Format	
	CURD	Current Date
	HIST	All historical accumulators
MONTIM	Monitored Time	
tttt	Performance monitoring period begin time	
	The beginning time of day of the performance monitoring period to reset (specified in the AI parameter) as HHMM, where HH is the hour (00-23) and MM is the minute {00,15,30,45} of the hour. If this optional input parameter is not present in the command, it defaults to a value of CURT, the current time. The value HIST is an option for input commands. The value HIST provides a group reset of near-end and/or far-end historical 15-minute and daily accumulators on a per-line and per-path basis. If the value HIST is selected for MONTIM, it must also be selected for MONDAT. The only valid options for <parameter> in this case are {ALLPAR ALLL ALLP} and the valid options for LOCN are {NEND FEND ALL}. The AI parameter must not be entered on the input command line. This parameter must not appear in input commands which specify daily accumulation intervals (AI = DAILY). {00-23}{00,15,30,45} Hour of Day/Minute of Hour	

HIST All historical accumulators
CURT Current Time

2.048 Mbit/s Termination

ALL All

This keyword is a valid option for NPCs rather than specifying a single or range of NPCs. It is used to clear a single parameter on all PA/TH/SH type NPCs. If the ALL NPC option is selected, the input command must specify only a single facility parameter. An input command with the ALL NPC key word and any facility parameter groupings, i.e., ALLPM, ALLE or ALLF, is denied.

[s]abc The 3- or 4-digit nonhierarchical NPC number

[t]def The 3- or 4-digit nonhierarchical NPC number

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp Hierarchical NPC number

wxkqr Hierarchical NPC number

uv,wx Unit number

m,k Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

parameter Parameter name

The type of monitored parameter accumulation registers which are to be reset. If only a single NPC is specified in the input command, all types of its parameter accumulators may be reset (possibly restricted by the choices of other input parameters) by selecting the value ALLPM in the <parameter> field. If more than one NPC is specified in the input command, then ALLPM, ALLE, and ALLF are not valid values for parameter.

The values ALLE or ALLF may be selected to clear all Near-end or all Far-end parameters, respectively, as a group. The far-end parameters are: FEBE, FES, FSES, and FUAS. All other parameters are near-end parameters. **Note that parameters FEBE, FES, FSES and FUAS are not applicable for the TH type NPCs.**

ALLE All Near-end parameters listed below

ALLF All Far-end parameters listed below

	ALLPM	All parameters listed below
	CRC	CRC Block Errors
	CSS	Controlled Slip Seconds
	CV	Coding Violations
	ES	Errored Seconds
	FEBE	Far End Block Errors
	FES	Far End Errored Seconds
	FRER	Framing Errors
	FSES	Far End Severely Errored Seconds
	FUAS	Far End Unavailable Seconds
	MER	Multiframe Errors
	OFS	Out of Frame Seconds
	SES	Severely Errored Seconds
	UAS	Unavailable Seconds
	UATC	Unavailable Time Count
AI		Accumulation interval
aaaaa		The accumulation time period for the specified parameter
		If the ALLAI option is specified, the command is applied to all 15-minute and daily accumulators. That is, all accumulators are reset.
	15MIN	Parameter count from a 15-minute accumulator
	ALLAI	Parameter counts from both 15-minute and daily accumulators
	DAILY	Parameter count from a daily accumulator
MONDAT		Monitored Date
dddd		Specifies the performance monitoring period to be reset.
		It is used to allow users to specify the counts of which 24-hour period (current or previous) are to be cleared. Therefore, this option is applicable only if the AI option is entered with DAILY. If the AI DAILY option is entered without this MONDAT field, both the current and previous 24-hour counts are cleared. The MONDAT option cannot be specified with the AI option being 15MIN or ALLAI.
	CURD	Current day
	HIST	Previous 24-hour period

MONTIM Monitored Time

tttt Specifies the performance monitoring period to be reset and can be entered.

It is used to allow users to specify the counts of which 15-minute period (current or previous) are to be cleared. Therefore, this option is applicable only if the AI option is entered with 15MIN. If the AI 15MIN option is entered without this MONTIM field, both the current and previous 15-minute counts are cleared. The MONTIM option cannot be specified with the AI option being DAILY or ALLAI.

CURT Current 15-minute period

HIST Previous 15-minute period

cc Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
11	UC is out of service
12	UC is in service but failed
14	FTMI is out of service
15	NPC is unequipped
1F	FTMI is in service but failed
26	NPC type error
0C	The MONDAT and MONTIM parameters can not both be specified
B7	The associated MXR is In-Service but pested
A1	The parameter specified does not match with the NPC type
17	Command did not execute for any entity specified in the command
1B	Historical data can not be specified
1E	Monitored Date field is not allowed
20	Only DAILY for accumulation interval is allowed
21	Only 15MIN for accumulation interval is allowed

cc	<i>Explanation</i>
22	FTMI is PESTED
23	No PM data available
24	Monitored Time field is not allowed
25	Accumulation Interval field is missing
27	Only historical data can be specified
31	Accumulation Interval field is not allowed
89	Interval is not valid/not available

CLEAR FACILITY PERFORMANCE PARAMETERS

Explanation of Command

1.544 Mbit/s Termination

This message requests the facility performance parameters be cleared of the values or state for one network processing circuit (NPC).

This command does not clear the parameters on a digital interface unit (DIU) NPC.

2.048 Mbit/s Termination

This message requests the facility performance parameters be cleared of the values or state for one network processing circuit (NPC).

This message clears all facility performance parameters except the loss of frame alignment (LOFA) parameter on one CEPT PB or PC type NPC.

Command

Nonhierarchical

[I.56051]

UTL:[FRM xy][,SEQ ww]:CLR,NPC [s]abc,PARAMS!

Hierarchical

[I.56051]

UTL:[FRM xy][,SEQ ww]:CLR,NPC uvmnp,PARAMS!

Completion Message

Nonhierarchical

[O.56051]

M hh:mm:ss xy,ww n[vv] UTL CLR NPC [s]abc PARAMS COMPL

Hierarchical

[O.56051]

M hh:mm:ss xy,ww n[vv] UTL CLR NPC uvmnp PARAMS COMPL

Denial Message

Nonhierarchical

[O.56051.01]

M hh:mm:ss xy,ww n[vv] UTL CLR NPC [s]abc PARAMS COND cc DNY

Hierarchical

[O.56051.01]

M hh:mm:ss xy,ww n[vv] UTL CLR NPC uvmnp PARAMS COND cc DNY

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
CLR	Clear
PARAMS	Parameters

1.544 Mbit/s Termination

For domestic NPCs, the parameters which are cleared with this command are

BER	Bit Error Rate
BPV	Bipolar Violation
COFA	Change Of Frame Alignment
CRC	Cyclic Redundancy Code
ER	Error Rate (same as BER for D4 framing)
ERS	Errored Seconds
FRER	Framing Error

OOF	Out Of Frame
SERS	Severely Errored Seconds
SLIP	Slip count
SAFE	Shelf Alarm Far End count
SANE	Shelf Alarm Near End count

2.048 Mbit/s Termination

For CEPT NPCs, the parameters which are cleared with this command are

CRC	Cyclic Redundancy Code
FRER	Framing Error
MER	Multiframe Alignment Error Events (time slot 16)
DM	Degraded minutes
ERS	Errored Seconds
SERS	Severe Errored Seconds
US	Unavailable seconds
SLIP	Slip count



NOTE:

BER condition is not clearable for CEPT type NPCs, even though it is clearable for domestic type NPCs.

cc Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
1F	FTMI is in service but failed
45	IU/TI type NPC failed

cc	<i>Explanation</i>
46	NPC Failed or Out of Service
47	IU/TI type NPC
B7	The associated MXR is In-Service but pested

UTILITY CLEAR

Explanation of Command

1.544 Mbit/s Termination

This message requests a given facility performance parameter be cleared of the count or state for a single network processing circuit (NPC) or a range of circuits in a facility terminating unit (FTU) or a DS3 unit or an HSU.

If the remote terminal (RT) or the digital carrier line unit (DL) option is specified during input, the specified parameter clears the count on all digroups in that bank which have the specified parameter.

2.048 Mbit/s Termination

This message requests a given facility performance parameter be cleared of the count or state for a single network processing circuit (NPC) or a range of circuits in a facility terminating unit (FTU) or a Hybrid DS3 unit (HDS3U) or an HSU.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.56001]

UTL:[FRM xy][,SEQ ww]:CLR,<parameter>, \ {NPC [s]abc[-[t]def]}| RT ffff |DL ffff}!

Hierarchical

[I.56001]

UTL:[FRM xy][,SEQ ww]:CLR,<parameter>,{NPC uvmnp[-wxkqr]}| \ RT ffff|DL ffff}!

2.048 Mbit/s Termination

Nonhierarchical

[I.56001]

UTL:[FRM xy][,SEQ ww]:CLR,<parameter>,NPC [s]abc[-[t]def]!

Hierarchical

[I.56001]

UTL:[FRM xy][,SEQ ww]:CLR,<parameter>,NPC uvmnp[-wxkqr]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.56001]

M hh:mm:ss xy,ww n UTL CLR <parameter>
{NPC [s]abc[-[t]def][NONE]|{RT|DL} ffff MD [g]g} COMPL

Hierarchical

[O.56001]

M hh:mm:ss xy,ww n UTL CLR <parameter> {NPC uvmnp[-wxkqr] \
[NONE]|{RT|DL} ffff MD [g]g} COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.56001]

M hh:mm:ss xy,ww n UTL CLR <parameter> NPC [s]abc[-[t]def] \
[NONE] COMPL

Hierarchical

[O.56001]

M hh:mm:ss xy,ww n UTL CLR <parameter> NPC uvmnp[-wxkqr] \
[NONE] COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.56001.01]

M hh:mm:ss xy,ww n UTL CLR <parameter> NPC [s]abc[-[t]def] \
{UEQD|BADNPC} DNY

[O.56001.02]

M hh:mm:ss xy,ww n UTL CLR <parameter>[NPC [s]abc] \
[{RT|DL} ffff] COND cc DNY

Hierarchical

[O.56001.01]

M hh:mm:ss xy,ww n UTL CLR <parameter> NPC uvmnp[-wxkqr] \
{UEQD|BADNPC} DNY

[O.56001.02]

M hh:mm:ss xy,ww n UTL CLR <parameter>[NPC uvmnp] \
[{RT|DL} ffff] COND cc DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.56001.01]

M hh:mm:ss xy,ww n UTL CLR <parameter> NPC [s]abc[-[t]def] \
{UEQD|BADNPC} DNY

[O.56001.02]

M hh:mm:ss xy,ww n UTL CLR <parameter>[NPC [s]abc] COND cc DNY

Hierarchical

[O.56001.01]

M hh:mm:ss xy,ww n UTL CLR <parameter> NPC uvmnp[-wxkqr] \
{UEQD|BADNPC} DNY

[O.56001.02]

M hh:mm:ss xy,ww n UTL CLR <parameter>[NPC uvmnp] COND cc DNY

Explanation of Parameters

CLR	Clear
NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number, the first NPC number of a range
[t]def	The 3- or 4-digit nonhierarchical NPC number, the last NPC number of a range

	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number, the first NPC number of a range
wxkqr	Hierarchical NPC number, the last NPC number of a range
uv,wx	Unit number
m,k	Module number
np,qr	NPC number
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
parameter	One chosen from the list below:
BER	Bit Error Rate
BPV	Bipolar Violation
COFA	Change Of Frame Alignment
CRC	Cyclic redundancy (CR) code
	1.544 Mbit/s Termination
	CR checksum errors (CRC-6) in ESF mode
	2.048 Mbit/s Termination
	CR check block error events (CRC-4)
ER	Error Rate (same as BER for D4 framing)
ERS	Errored Seconds
FRER	Framing Error
LOFA	Loss of Frame Alignment Events
OOF	Out Of Frame
SERS	Severely Errored Seconds
SLIP	Slip count
	1.544 Mbit/s Termination
SAFE	Shelf Alarm Far End count
SANE	Shelf Alarm Near End count
	2.048 Mbit/s Termination
MER	Multiframe Alignment Error Events (Time slot 16)
PM	Clears the following registers (CEPT):
	DM - Degraded Minutes

SERS - Severely Errored Seconds

ERS - Errored Seconds

US - Unavailable Seconds

SLIP - Slip count



NOTE:

Only the BER and SLIP parameters are allowed for Clear-DS1 NPCs.
SERS, ERS, and SLIP are only individually clearable for domestic NPCs.
For CEPT NPCs they are cleared by the PM parameter.

UEQD Unequipped

BADNPC Bad NPC

The selected parameter is not valid for this NPC.

1.544 Mbit/s Termination

RT Remote terminal (SLC[®] carrier system)

DL Digital carrier line unit (SLC carrier system)

ffff Bank identification number (0000 through 9999) (SLC carrier system)

MD Mode

[g]g Mode of operation

1 SLC 96 Carrier Mode 1

3 SLC 96 Carrier Mode 3

C SLC Series 5 Carrier (Feature Package C)

cc Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service

cc	<i>Explanation</i>
1F	FTMI is in service but failed
24	Unit type error
26	NPC type error
0B	Invalid CEPT NPC
46	NPC Failed or Out of Service
47	IU/TI type NPC
7E	Bank id number not found
A0	No SAFE alarm for DGP
0E	The specified parameter is not applicable to operation mode of the RT
A1	The parameter specified does not match with the NPC type

CLEAR POWER SUPPLY OR BACKUP FAILURE

Explanation of Command

This command clears alarms caused by a power supply failure.

Command

[I.56052]
UTL:[FRM xy][,SEQ ww]:CLR,PWR pp!

Completion Message

[O.56052]
M hh:mm:ss xy,,ww n[vv] UTL CLR PWR pp COMPL

Denial Message

[O.56052.01]
M hh:mm:ss xy,,ww n[vv] UTL CLR PWR pp COND cc DNY

Explanation of Parameters

CLR	Clear
PWR	Power
pp	Power supply identifier
00	All power supplies
01	Unit Controller (UC) 1
02	UC 2
03	UC 3
04	UC 4
05	UC 5
06	UC 6
07	Synchronizer (SYNC) 0
08	SYNC 1
09	Expanded cross-connect network (ECCN) 0

	10	CCN/ECCN 1
	11	UC 7
	12	UC 8
	13	UC 9
	14	UC 10
	15	UC 11
	16	UC 12
	17	UC 13
	18	UC 14
	19	UC 15
	20	UC 16
cc		Hexadecimal condition code
	cc	<i>Explanation</i>
	96	Subject PWR to be cleared is not failed

CLEAR PERFORMANCE MONITORING DATA FOR HYBRID DS3S

Explanation of Command

This command clears (sets to zero) the facility performance monitoring parameter counts for Hybrid DS3 facilities on KCR8 circuit packs. This command is denied for DS3 facilities provisioned on KCR1 or KCR5 circuit packs.

The current or all historical counts may be cleared for one of the two accumulation intervals (DAILY or 15MIN) as follows:

- The current count is cleared for an individual parameter and an individual DS3 by specifying
 - the individual DS3 and UNIT number,
 - the individual parameter,
 - the Accumulation Interval (AI) equal to DAILY or 15MIN,
 - and if AI=DAILY, MONDAT=CURD, or if AI=15MIN, MONTIM=CURT.
- The current counts are cleared for all parameters on an individual DS3 by specifying
 - the individual DS3 and UNIT number,
 - ALLPAR for the parameter,
 - the accumulation interval DAILY or 15MIN,
 - and if AI=DAILY, MONDAT=CURD, or if AI=15MIN, MONTIM=CURT.
- The current counts are cleared for an individual parameter on all Hybrid DS3s by specifying
 - ALLDS3 in place of DS3 and UNIT number,
 - the individual parameter,
 - the accumulation interval DAILY or 15MIN,
 - and if AI=DAILY, MONDAT=CURD, or if AI=15MIN, MONTIM=CURT.
- All historical counts (i.e., all but the current count) for an individual parameter for an individual DS3 may be cleared by specifying
 - the individual DS3 and UNIT number,
 - the individual parameter,
 - the accumulation interval DAILY or 15MIN,

- and if AI=DAILY, MONDAT=HIST, or if AI=15MIN, MONTIM=HIST.
- All historical counts (i.e., all but the current counts) for all parameters on an individual DS3 may be cleared by specifying
 - the individual DS3 and UNIT number,
 - ALLPAR for the parameter,
 - the accumulation interval DAILY or 15MIN,
 - and if AI=DAILY, MONDAT=HIST, or if AI=15MIN, MONTIM=HIST.
- All historical counts (i.e., all but the current counts) for an individual parameter on all Hybrid DS3s may be cleared by specifying
 - ALLDS3 in place of the DS3 number and UNIT number,
 - the particular performance parameter,
 - the accumulation interval DAILY or 15MIN,
 - and if AI=DAILY, MONDAT=HIST, or if AI=15MIN, MONTIM=HIST.

Specifying a range of DS3 facilities within the same UNIT follows the same rules as specifying ALLDS3 for all Hybrid DS3s within the frame.

Command

1.544 Mbit/s Termination

[I.56101]

UTL:[FRM xy][,SEQ ww]:CLR,{UNIT [q]q,DS3 c[-d]|ALLDS3}, \\
<parameter> ,AI aaaaa[,MONDAT dddd][,MONTIM tttt]!

Completion Message

1.544 Mbit/s Termination

[O.56101]

M hh:mm:ss xy,ww n[vv] UTL CLR {UNIT [q]q DS3 c[-d]|ALLDS3} \\
<parameter> 2 LN MSG:
AI aaaaa [MONDAT dddd][MONTIM tttt]COMPL

Denial Message 1.544 Mbit/s Termination

[O.56101.01]

M hh:mm:ss xy,ww n[vv] UTL CLR {UNIT [q]q DS3 c[-d]|ALLDS3} \\
<parameter> 2 LN MSG:
AI aaaaa [MONDAT dddd][MONTIM tttt]COND cc DNY

Explanation of Parameters

UNIT	Peripheral unit housing the DS3s																				
[q]q	Number of unit ranging between 1 and 16																				
DS3	Hybrid DS3 circuit																				
c	The DS3 facility in the unit or the first DS3 of a range of DS3s in the unit																				
d	The last DS3 facility of a range of DS3s in the unit If a range of DS3s within the same UNIT is specified, then the ALLPAR parameter is not allowed.																				
ALLDS3	All Hybrid DS3s that are in service are selected. When ALLDS3 is coded in place of the UNIT number and DS3 number, then only an individual performance parameter must be coded. The value ALLPAR for parameter is not allowed.																				
<parameter>	Parameter name The parameter names and their meanings are listed as follows: <table> <tr> <td>CVL</td><td>Code Violation for the DS3 Line</td></tr> <tr> <td>ESL</td><td>Errored Seconds for the DS3 Line</td></tr> <tr> <td>SESL</td><td>Severely Errored Seconds for the DS3 Line</td></tr> <tr> <td>CVP</td><td>Code Violation for the DS3 Path</td></tr> <tr> <td>FMP</td><td>F- or M-bit errors for the DS3 Path</td></tr> <tr> <td>ESP</td><td>Errored Seconds for the DS3 Path</td></tr> <tr> <td>SESP</td><td>Severely Errored Seconds for the DS3 Path</td></tr> <tr> <td>FSESP</td><td>Far End Severely Errored Seconds for the DS3 Path</td></tr> <tr> <td>UASP</td><td>Unavailable Seconds for the DS3 Path</td></tr> <tr> <td>ALLPAR</td><td>Causes all parameters within an accumulation interval to be cleared.</td></tr> </table>	CVL	Code Violation for the DS3 Line	ESL	Errored Seconds for the DS3 Line	SESL	Severely Errored Seconds for the DS3 Line	CVP	Code Violation for the DS3 Path	FMP	F- or M-bit errors for the DS3 Path	ESP	Errored Seconds for the DS3 Path	SESP	Severely Errored Seconds for the DS3 Path	FSESP	Far End Severely Errored Seconds for the DS3 Path	UASP	Unavailable Seconds for the DS3 Path	ALLPAR	Causes all parameters within an accumulation interval to be cleared.
CVL	Code Violation for the DS3 Line																				
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ESP	Errored Seconds for the DS3 Path																				
SESP	Severely Errored Seconds for the DS3 Path																				
FSESP	Far End Severely Errored Seconds for the DS3 Path																				
UASP	Unavailable Seconds for the DS3 Path																				
ALLPAR	Causes all parameters within an accumulation interval to be cleared.																				

The following is a more detailed description for each parameter:

The **CVL** parameter keeps a count of Bipolar Violations (BPV) and Excessive Zero (EXC) counts. This count may get quite large. If one assumes an error rate of 1 bit per thousand, then a daily count may get as large as 100 million.

The **ESL** parameter counts the number of seconds that have one or more BPVs, one or more EXZs, or one or more LOS defect. This parameter is limited to the number of seconds in the measurement interval, which is 900 in 15 minutes and 86,400 in 24 hours.

The **SESL** parameter counts the number of seconds that have more than 44 BPVs and EXZs, or one or more LOS defects. This parameter is limited to the number of seconds in the measurement interval.

The **CVP** parameter keeps a count of P-bit parity errors. This count may get quite large. If one assumes an error rate of 1 bit per thousand, then a daily count may get as large as 100 million.

The **FMP** parameters keeps a count of F- and M-bit errors. This count may get quite large. If one assumes an error rate of 1 bit per thousand, then a daily count may get as large as 100 million.

The **ESP** parameter counts the number of seconds containing one or more F- and/or M-bit errors, one or more OOF (Out-of-Frame) defects, or one or more AIS defects. This parameter is limited to the number of seconds in the measurement interval.

The **SESP** parameters counts the number of seconds containing more than 44 F- and M-bit errors, one or more OOF defects, or one or more AIS defects. This parameter is limited to the number of seconds in the measurement interval.

The **FSESP** parameter counts the number of seconds that have a Remote Alarm Indication (RAI), i.e., the X-bits transmitted from the Far-End indicate RAI. This parameter is not counted if the DS3 facility has an LOS or OOF defect. This parameter is limited to the number of seconds in the measurement interval.

The **UASP** parameter counts the number of seconds that the DS3 facility is unavailable. The DS3 is declared unavailable, if the DS3 path experiences 10 consecutive seconds of SESP. The DS3 is also declared unavailable, if the DS3 line experiences 10 consecutive seconds of SESL. This parameter is limited to the number of seconds in the measurement interval.

None of the other parameters accumulate counts if the Hybrid DS3 facility is unavailable.

If **ALLPAR** is specified, then the command must specify only a single Hybrid DS3 facility, ranges are not allowed. Nor is it

	permitted to specify ALLDS3 for all Hybrid DS3s within the frame.
AI	Accumulation interval
aaaaa	The accumulation time period for the specified parameter.
	15MIN Parameter count for a 15-minute accumulator
	DAILY Parameter count for a daily accumulator
MONDAT	Monitored Date
dddd	Begin date of a performance monitoring period
	This parameter is only allowed if the AI parameter has been specified as DAILY.
	The following are the values for MONDAT:
	HIST All previous 24-hour accumulators
	CURD Current 24-hour accumulators (default)
	If MONDAT is a legal option and not present in the command, then it defaults to a value of CURD.
	Note that the meaning of the value HIST for MONDAT is different from its meaning in command I.56111, where it means the previous and not all previous counts.
MONTIM	Monitored Time
tttt	Begin time of the performance monitoring period
	This parameter is only allowed if the AI parameter has been specified as 15MIN.
	The following are the values for MONTIM:
	HIST All previous 15-minute accumulators
	CURT Current 15-minute accumulators (default)
	If MONTIM is a legal option and not present in the command, then it defaults to a value of CURT.
	Note that the meaning of the value HIST for MONTIM is different from its meaning in command I.56111, where it means the previous and not all previous counts.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
11	UC is out of service
12	UC is in service but failed
0C	The MONDAT and MONTIM parameters can not both be specified
B7	The associated MXR is In-Service but pested
17	Command did not execute for any entity specified in the command
1B	Historical data can not be specified
1E	Monitored Date field is not allowed
20	Only DAILY for accumulation interval is allowed
21	Only 15MIN for accumulation interval is allowed
23	No PM data available
24	Monitored Time field is not allowed
25	Accumulation Interval field is missing
27	Only historical data can be specified
89	Interval is not valid/not available

SET DATE

Explanation of Command

This command sets the date (month-day-year or day-month-year) and the interval at which it will be printed for the DACS II clock.

Command

[I.51021]
UTL:[FRM]xy[,SEQ] ww:DATE <new-date>[,FORMAT ggg][,INT ii]!

Completion Message

[O.51021]
M hh:mm:ss xy,ww n[vv] UTL DATE aa/bb/cc FORMAT ggg INT ii COMPL

Denial Message

Not Applicable

Explanation of Parameters

DATE	Date
new-date	Date specified in one of the following formats:
	new-date Date format
	moda[ce]yr ,Month followed by day, followed by year mo[ce]yr
	mo[ce]yr Day, followed by month, followed by year
mo	month
da	day
ce	century
yr	year

The 2-digit century (ce) field is optional. If the user enters a 2-digit number for the year field, DACS II assumes a default value of 19 for the century for the range of years between 86 and 99 and a default value of 20 for the century for the range between 00 and 85.

Any 4-digit century-year entry from 1986 onward is also acceptable.

cc

Hexadecimal condition code

cc	Explanation
6C	NPC number does not point to application card

UTILITIES, ALARM REPORTING

Explanation of Command

This command sets the DACS II audio/visual alarm reporting method to either remote only (a = 2) or to local and remote (a = 3).

Command

[I.51101]
UTL:[FRM xy][,SEQ ww]:INIT,ALM a!

Completion Message

[O.51101]
M hh:mm:ss xy,ww n[vv] UTL INIT ALM a COMPL

Denial Message

[O.51101.01]
M hh:mm:ss xy,ww n[vv] UTL INIT ALM a COND cc DNY

Explanation of Parameters

INIT	Initialize
ALM	Alarm
a	Alarm reporting method
2	Remote
3	Local and Remote
cc	Hexadecimal condition code
cc	<i>Explanation</i>
03	Subject entity is in service
11	UC is out of service
12	UC is in service but failed
14	FTMI is out of service

cc	<i>Explanation</i>
15	NPC is unequipped
1F	FTMI is in service but failed
0B	Invalid CEPT NPC
44	NPC not IU/TI type
46	NPC Failed or Out of Service

UTILITIES, SET IP ADDRESS

Explanation of Command

This message sets the Internet Address or the subnetwork mask (IP mask) for a DACS II system. This message shall only be entered by the frame administrator.



NOTE:

These address modifications take effect only after a frame reset.

The following command must be performed prior to a Hard Reset:

[I.55701] UTL::BMTR, FROM RAM, TO MEM

Command

[I.56411]

UTL: [FRM xy][, SEQ ww]:INIT, {{IP|GATEWAY|IPMASK} x.x.x.x|TCPDB}!

Completion Message

[O.56411]

M hh:mm:ss xy,ww n[vv] UTL INIT {{IP|GATEWAY|IPMASK} x.x.x.x|TCPDB}
COMPL

Denial Message

1.544 Mbit/s Termination

[O.56411.01]

M hh:mm:ss xy,ww n[vv] UTL INIT {IP|GATEWAY|IPMASK} x.x.x.x \
COND cc DNY

2.048 Mbit/s Termination

[O.564156411.01]

M hh:mm:ss xy,ww n[vv] UTL INIT {IP|GATEWAY|IPMASK} x.x.x.x \
COND cc DNY

**Explanation of
Parameters**

INIT	Initialize
IP	Internet Address
GATEWAY	Gateway Address
IPMASK	Subnetwork Mask
x	The valid value is from 0 through 255.
TCPDB	Retrieve the network information from the data base
cc	Hexadecimal condition code

cc	<i>Explanation</i>
E5	gateway-ip address inconsistency

UTILITY LOCATION

Explanation of Command

This message requests a printout of the physical location of a plug-in entity using the equipment location (EQL) method. A similar method must be used if nonplug-in entities must be located, such as a network processing circuit, main controller, cross-connect network, etc.

Command

[I.56401]
UTL:[FRM xy][,SEQ ww]:LOC,<entity>!

Completion Message

[O.56401]
M hh:mm:ss xy,ww n[vv] UTL LOC <entity>
b[-[q]q]-vv hhh[,c[-[q]q]-uu iii] COMPL

Denial Message

[O.56401.01]
M hh:mm:ss xy,ww n[vv] UTL LOC <entity> COND cc DNY

Explanation of Parameters

LOC	Location Physical location
entity	Plug-in equipment entity Main Controller Entities:
MC	Main controller
CPU	Central processing unit
EBX	Expanded bus extender (ESBF)
EMTC	Expanded maintenance circuit pack (ESBF)
CI	Communications interface
PMEM	Primary Memory Card, within CPU board

DISK Secondary Memory Card, plugs into the CPU board
STATUS
PANEL (See Note)



NOTE:

The location of this entity is not on the designation strip. The approximate location is returned in the output message.

The entity CPU cannot be used with UNIT to query the Unit Controller; instead only the entity UC can be used.

SYNC 0 Synchronizer, Side 0

SYNC 1 Synchronizer, Side 1

SYNC 0, TB Synchronizer Time Base, Side 0

SYNC 1, TB Synchronizer Time Base, Side 1

SYNC 0,TLI 1 Synchronizer Timing Link Interface

SYNC 0,TLI 2

SYNC 0,TLI 3

SYNC 0,TLI 4

SYNC 1,TLI 1

SYNC 1,TLI 2

SYNC 1,TLI 3

SYNC 1,TLI 4

SYNC,TLI 3,CRO Synchronizer Clock Reference Oscillator)



NOTE:

The location of the CRO is not on the designation strip. It is a Time Base application for TLI slots 3 and 4 on sides 0 and 1.

Cross-Connect entities:

ECCN 0 Expanded cross-connect network

ECCN 1

CCI 0 Clock and control interface

CCI 1

BT 01 Bus terminator

BT 02

BT 11

BT 12

2.048 Mbit/s Termination

Time-Slot Interchange entities: (SBF/ESBF)

TSI-011	TSI-111	TSI-041	TSI-141
TSI-012	TSI-112	TSI-042	TSI-142
TSI-013	TSI-113	TSI-043	TSI-143
TSI-014	TSI-114	TSI-044	TSI-144
TSI-015	TSI-115	TSI-045	TSI-145
TSI-016	TSI-116	TSI-046	TSI-146
TSI-021	TSI-121	TSI-051	TSI-151
TSI-022	TSI-122	TSI-052	TSI-152
TSI-023	TSI-123	TSI-053	TSI-153
TSI-024	TSI-124	TSI-054	TSI-154
TSI-025	TSI-125	TSI-055	TSI-155
TSI-026	TSI-126	TSI-056	TSI-156
TSI-031	TSI-131	TSI-061	TSI-161
TSI-032	TSI-132	TSI-062	TSI-162
TSI-033	TSI-133	TSI-063	TSI-163
TSI-034	TSI-134	TSI-064	TSI-164
TSI-035	TSI-135	TSI-065	TSI-165
TSI-036	TSI-136	TSI-066	TSI-166

Either Termination

ETSI 001 Expanded Time Slot Interchanger

ETSI 002

ETSI 003

ETSI 004

ETSI 005

ETSI 006

ETSI 007

ETSI 008
ETSI 009
ETSI 010
ETSI 011
ETSI 012
ETSI 013
ETSI 014
ETSI 015
ETSI 016

ETSI 101 Expanded Time Slot Interchanger

ETSI 102
ETSI 103
ETSI 104
ETSI 105
ETSI 106
ETSI 107
ETSI 108
ETSI 109
ETSI 110
ETSI 111
ETSI 112
ETSI 113
ETSI 114
ETSI 115
ETSI 116

1.544 Mbit/s Termination

UNIT Common Equipment entities:

UNIT 01 NPC 0001
UNIT 02 NPC 0161
UNIT 03 NPC 0321
UNIT 04 NPC 0481
UNIT 05 NPC 0641
UNIT 06 NPC 0801
UNIT 07 NPC 0961
UNIT 08 NPC 1121
UNIT 09 NPC 1281
UNIT 10 NPC 1441
UNIT 11 NPC 1601

UNIT 12 NPC 1761
UNIT 13 NPC 1921
UNIT 14 NPC 2081
UNIT 15 NPC 2241
UNIT 16 NPC 2401

UNIT [q]q,UC	Unit controller

Either Termination

FTU/IFTU/IFTU2 entities:

UNIT [q]q,UBX	Unit bus extender
UNIT [q]q,FTMI b	Facility terminating module interface (b = 1 through 4)
UNIT [q]q,FC 0b	Format converter
UNIT [q]q,FC 1b	

DSPU entities:

UNIT [q]q,DSPI	Digital signal processing interface

If the unit is equipped as a DS3 Unit or a Hybrid DS3 Unit:

UNIT Common Equipment entities:

UNIT[q]q	Unit [q]q's Protection MXR (1 through 16)
UNIT [q]q,UC	Unit Controller
UNIT [q]q,MXR d	Multiplexer/Hybrid Multiplexer (d = P,1 through 6)
UNIT [q]q,MIU d	Multiple Interface Unit
UNIT [q]q,FLI k	Facility Line Interface (k = S or P)
UNIT [q]q,FMT s	Formatter/Hybrid Formatter (s = 0 or 1)

If the unit is equipped as a High Speed Unit (HSU):

UNIT Common Equipment entities:

UNIT[q]q	Unit [q]q's Protection MXR (1 through 16)
UNIT [q]q,UC	Unit Controller
UNIT [q]q,MPR d	Mapper (d = P,1 through 6)
UNIT [q]q,OI nk	Optical Interface (n=1 or 2, k = S or P)
UNIT [q]q,FMT s	Formatter/Hybrid Formatter (s = 0 or 1)

Network Processing Circuit entities of an FTU:

NPC [s]abc[-[t]def]	Nonhierarchical NPC number
NPC uvmpnp[-wxkqr]	Hierarchical NPC number

1.544 Mbit/s Termination

Network Processing Circuit entities of a DS3U or HSU:

NPC-[s]abc[&&-[t]def]	Nonhierarchical NPC number
NPC uvmpnp[-wxkqr]	Hierarchical NPC number

Either Termination

uv,wx Unit number

m,k Module number

np,qr NPC number within the module

If an NPC is in an FTU, the command will return the location of the Dual Digroup Card that processes the NPC.

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

If an NPC is in a DS3/HDS3/HSU Unit, the command will return the location of the Service MXR/HMXR/MPR that processes the NPC.

Network Processing Circuit entities of a DSPU:

NPC [s]abc[-[t]def],SIDE-s

NPC uvmnp[-wxkqr],SIDE-s

uv,wx Unit number
m,k Module number
np,qr NPC number within the module

As shown above, the command will return the location of the DSPC pack including the side information, the value of "s" can be either 0 or 1.

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

b,c

Bay number (1 through 7)

[q]q Unit number (1 through 16)

vv,uu Entity height, in inches

For an FTU, the value is the number of inches from the bottom of the unit shelf to the center of the entity. The possible vv and uu values are: 02, 06, 10, 14, and 18 inches.

For a DSPU, DS3U/HDS3U, or an HSU, the value of variables vv and uu can only be 06.

hhh,iii Entity horizontal location in inches

Entity horizontal distance from the left front side of the bay, approximately 1-1/4 inches to the right of the bay upright, in 1/8 inch increments, to the center of the circuit pack slot of the entity (000 through 158).

The values for any entity will be the same as those shown on the designation strips for that entity, located above the entity. Note, however, that for duplicated entities the side (0 or 1) value precedes the name on the designation strip.

cc

Hexadecimal condition code

cc *Explanation*

97 Entity can't be addressed in this configuration

QUERY ALL COMMON EQUIPMENT

Explanation of Command

This message is used to request reports on the out-of-service, fail, or pest status of the common frame equipment. Common frame equipment includes the administrative links, cross-connects, clock and control interfaces or cross-connect network interfaces, synchronizers, clock reference oscillator, timing link interfaces, time slot interchangers and expanded time slot interchangers.

Command

```
[I.53104]
UTL:[FRM xy][,SEQ ww]:QRY,ALL,COMMON!
;
```

Completion Message

```
[O.53104]
M hh:mm:ss xy,ww n[vv] UTL QRY ALL COMMON 4 LN MSG:
OOS g h i j k l m n o p
FAIL g h i j k l m n o p
PEST g h i j k l m n o p EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ALL COMMON 4 LN MSG:
SYNC ofp o'f'p' CRO ofp
TLI ofp ofp ofp ofp ofp ofp ofp ofp o'f'p' o'f'p' o'f'p' o'f'p' \
o'f'p' o'f'p' o'f'p' o'f'p'
a b c d e f g h i j k l m n o \
p EOM
```

The next segment(s) describes the CCN hardware:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL TOTAL ETSIS tt oo ff pp 5 LN
MSG:
01 ofp o'f'p' 02 ofp o'f'p' 03 ofp o'f'p' 04 ofp o'f'p'
05 ofp o'f'p' 06 ofp o'f'p' 07 ofp o'f'p' 08 ofp o'f'p'
09 ofp o'f'p' 10 ofp o'f'p' 11 ofp o'f'p' 12 ofp o'f'p'
13 ofp o'f'p' 14 ofp o'f'p' 15 ofp o'f'p' 16 ofp o'f'p' EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ALL COMMON COMPL
```

Explanation of Parameters

ALL	All
COMMON	Common
OOS	Out of service
FAIL	Fail
PEST	Pest

For the OOS, FAIL and PEST keywords, variables g through p each represent a frame entity. The values of these variables give the OOS, FAIL, or PEST status of the associated entity. Values are interpreted using the table below. The entity associated with a given variable is given following the explanation of PEST below.

Value	OOS	FAIL	PEST
1	out of service	failed	pested
0	in service	not failed	unpested
-	not applicable	not applicable	not applicable

For example, an unequipped circuit would display a "-" in the position of its OOS, FAIL and PEST indicators g through p.

The keyword PEST is used to indicate that error reporting is disabled. Out-of-service (OOS) entities and entities related to a side that is out of service are pested to prevent error messages from being reported to the main controller. Error reporting is undesirable if an entity is OOS since it would interrupt normal operations by repeatedly interrupting the microprocessor.

g	Link1
h	Link 2
i	Link 3
j	Link 4
k	Link 5
l	Link 6
m	XC0 (cross-connect 0)
n	XC1 (cross-connect 1)
o	CCI 0 (clock and control interface 0)
p	CCI 1 (clock and control interface 1)
SYNC	Synchronizer

ofp Side 0 synchronizer status

o Out of service

f Fail

p Pest

o'f'p' Side 1 synchronizer status

o' Out of service

f' Fail

p' Pest

CRO Clock reference oscillator

ofp CRO status

o Out of service

f Fail

p Pest

To aid in interpreting the variables associated with the timing link interface the following lines from the message are printed here for reference.

|<----- Side 0 ----->|<----- Side 1 ----->|

TLI ofp ofp ofp ofp ofp ofp ofp ofp o'f'p' o'f'p' o'f'p' o'f'p' o'f'p' o'f'p' o'f'p'

o'f'p'

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	
p	EOM															
	1	1	2	2	3	3	4	4	1	1	2	2	3	3	4	4
TLI No.																
	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
SSP No.																

TLI Timing link interface

ofp Side 0 TLI status

o' Out of service

f' Fail

p' Pest

TLI Timing link interface

There are four TLIs in each synchronizer side and each TLI has two synchronizer synchronization ports (SSP) for a total of eight SSPs per side. Variables a through p represent these SSPs and are associated with each TLI as shown below. The values of a through p give the priority of each SSP as a synchronization source. Priorities range in value from 1 through 8 and are interpreted as shown below.

1	Highest priority
8	Lowest priority
a	TLI 1 SSP 0 priority
b	TLI 1 SSP 1 priority
c	TLI 2 SSP 0 priority
d	TLI 2 SSP 1 priority
e	TLI 3 SSP 0 priority
f	TLI 4 SSP 1 priority
g	TLI 4 SSP 0 priority
h	TLI 4 SSP 1 priority
i	TLI 1 SSP 0 priority
j	TLI 1 SSP 1 priority
m	TLI 3 SSP 0 priority
n	TLI 3 SSP 1 priority
o	TLI 4 SSP 0 priority
p	TLI 4 SSP 1 priority
TSI	Time slot interchanger
ETSI	Expanded time slot interchanger
f	FROM unit (1 through 6)
t	TO Unit (1 through 6)
ofp	Side 0 TLI status
o	Out of service
f	Fail
p	Pest
o'f'p'	Side 1 TLI status
o'	Out of service

	f'	Fail
	p'	Pest
TSIS		Time slot interchanger
ETIS		Expanded time slot interchangers
tt		Total number of equipped TSIs or ETISs
oo		Total number of out-of-service TSIs or ETISs
ff		Total number of failed TSIs or ETISs
pp		Total number of pested TSIs or ETISs

QUERY ALL

Explanation of Command

This command requests reports on the out-of-service, failed, or pested status of the entire DACS II frame, including the common frame equipment, or the equipment in a specific unit.

The text of the output message varies depending on the input message format and immediately follows the input format.

The UNIT option is specified to query that unit only. The UNIT field must be omitted if the command is used for the entire frame. If the UNIT option is specified, only the information related to the equipment in that unit is generated.

NOTE 1: The odd and even DSPU NPCs do not have independent service states.

NOTE 2: The DS3U message segment applies to both the DS3 unit and the Hybrid DS3 unit (HDS3U). Also, the MXR portion of the message applies to both MXR and Hybrid MXR.

Command

[I.53101]

UTL: [FRM xy][, SEQ ww]:QRY, ALL[, UNIT [q]q]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.53101]

For UTL::QRY,ALL:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL COMMON 4 LN MSG:
OOS g h i j k l m n o p
FAIL g h i j k l m n o p
PEST g h i j k l m n o p EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL COMMON 4 LN MSG:
SYNC ofp rst CRO ofp
TLI ofp ofp ofp ofp ofp ofp ofp ofp rst rst rst rst rst rst \
rst rst
```

a b c d e f g h i j k l m n o p EOM

The following segment describes the ECCN hardware:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL TOTAL ETSIS tt oo ff pp \
5 LN MSG:
01 ofp rst 02 ofp rst 03 ofp rst 04 ofp rst
05 ofp rst 06 ofp rst 07 ofp rst 08 ofp rst
09 ofp rst 10 ofp rst 11 ofp rst 12 ofp rst
13 ofp rst 14 ofp rst 15 ofp rst 16 ofp rst EOM
```

If one or more FTU (IFTU or IFTU2) is equipped, the FTU segment shown following is output:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL FTU 3 LN MSG:
UNIT [q]q UC ofp FTMI ofp ofp ofp ofp [CCB ofp rst]
FC ofp rst ofp rst ofp rst ofp rst EOM
```

If one or more DS3U or Hybrid DS3U is equipped, the DS3U or HDS3U segment shown following is output:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL DS3U 3 LN MSG:
UNIT [q]q UC ofp FLI ofp rst FMT ofp rst [CCB ofp rst]
MXR ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp EOM
```

If one or more HSU units is equipped, the HSU segment shown following is output for each unit which is equivalent to an IFTU or DS3U:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL HSU 3 LN MSG:
UNIT [q]q UC ofp OI ofp rst lmn wxy FMT ofp rst
MPR ofp ofp ofp ofp ofp ofp ofp ofp EOM
```

If one or more DSPU is equipped, the DSPU segment shown following is output:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q UC ofp DSPI ofp \
[CCB ofp rst] EOM
```

Then, the output message continues with information about individual NPCs. One output segment is printed for each FTM, each MXR or HMXR, each MPR or each unit in the case of a DSPU.

If an equipped FTM has at least one NPC in the PEST, FAIL, or OOS state, the output segment for a DS1 FTM, shown following, is generated. If any of the odd NPCs have been provisioned with a Digital Signal Processing Platform (DSPP) application (TG193), then the even NPCs following them do not exist and dashes are shown in their place:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL FTU NPCS [s]aaa-[t]bbb tt \
5 LN MSG:
ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp OOS oo FAIL ff PEST pp
ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp EOM
```

If a DS3U MXR or Hybrid DS3U HMXR has at least one NPC in the PEST, FAIL, or OOS state, the output segment for a DS3U MXR or HDS3U HMXR, shown following, is generated. If one or more DS2s in an HMXR have been provisioned with E1 NPCs, then the fourth NPC positions in those DS2s do not exist and are represented by dashes in the output:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL DS3U NPCS [s]aaa-[t]bbb tt \
5 LN MSG:
ofp ofp ofp ofp ofp ofp ofp ofp OOS oo FAIL ff PEST pp
ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp EOM
```

If an HSU MPR has at least one NPC in the PEST, FAIL, or OOS state, the output segment for a DS3U MXR or HDS3U HMXR, shown following, is generated.

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL HSU NPCS [s]aaa-[t]bbb tt \
5 LN MSG:
ofp ofp ofp ofp ofp ofp ofp ofp OOS oo FAIL ff PEST pp
ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp EOM
```

If a DSPU has at least one NPC in the PEST, FAIL, or OOS state, the output segment for DSPU NPCs, shown following, is generated:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL DSPU NPCS [s]aaa-[t]bbb \
3 LN MSG:
[z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst
[z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst EOM
```

For an equipped FTM/MXR or HMXR/DSPU/MPR with no equipped NPC in PEST, FAIL and/or OOS state, the following output segment is generated:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL {FTU|DS3U|DSPU|HSU} NPCS \
[s]aaa-[t]bbb tt 2 LN MSG:
OOS 00 FAIL 00 PEST 00 EOM
```



NOTE:

If an FTM/MXR or HMXR/DSPU/MPR is not equipped or if it is equipped but has no NPCs equipped, the message segment for that FTM/MXR or HMXR/DSPUMPR does not appear.

The following segment is output to complete the message:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL COMPL
```

For UTL::QRY,ALL,UNIT:

For an FTU, IFTU, or IFTU2:

[O.53101]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL FTU UNIT [q]q 3 LN MSG:
UC ofp FTMI ofp ofp ofp ofp [CCB ofp rst]
FC ofp rst ofp rst ofp rst ofp rst EOM
```

This message is followed by up to 4 of the following segments depending on the FTM equipage. If any of the odd NPCs have been provisioned with a Digital Signal Processing Platform (DSPP) application (TG193), then the even NPCs following them do not exist and dashes are shown in their place:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q FTU NPCS \
[s]aaa-[t]bbb tt 5 LN MSG:
ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp OOS oo FAIL ff PEST pp
ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp EOM
```

For a DS3U or HDS3U:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL DS3U UNIT [q]q 3 LN MSG:
UC ofp FLI ofp rst FMT ofp rst [CCB ofp rst]
```

MXR ofp ofp ofp ofp ofp ofp ofp ofp MIU ofp ofp ofp ofp ofp ofp ofp EOM

This message is followed by up to 7 of the following segments depending on the MXR or HMXR equipage. If one or more DS2s in an HMXR have been provisioned with E1 NPCs, then the fourth NPC positions in those DS2s do not exist and are represented by dashes in the output:

M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q DS3U NPCS \
[s]aaa-[t]bbb tt 5 LN MSG:
ofp ofp ofp ofp ofp ofp ofp 00S oo FAIL ff PEST pp
ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp EOM

For an HSU unit:

M hh:mm:ss xy,ww n[vv] UTL QRY ALL HSU UNIT [q]q 3 LN MSG:
UC ofp OI ofp rst lmn wxy FMT ofp rst
MPR ofp ofp ofp ofp ofp ofp ofp ofp EOM

This message is followed by up to 6 of the following segments depending on the MPR equipage.

M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q HSU NPCS \
[s]aaa-[t]bbb tt 5 LN MSG:
ofp ofp ofp ofp ofp ofp ofp 00S oo FAIL ff PEST pp
ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp EOM

For a Digital Signal Processing Unit (DSPU):

M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q UC opf DSPI opf \
[CCB opf rst] EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q DSPU NPCS \
[s]aaa-[t]bbb tt 3 LN MSG:
[z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst
[z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst EOM

For an equipped FTM/MXR or HMXR/DSPU/MPR with no equipped NPC in PEST, FAIL and/or OOS state, the following segment is generated:

M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q {FTU|DS3U|DSPU|HSU} \
NPCS [s]aaa-[t]bbb

```
tt 2 LN MSG:
00S 00 FAIL 00 PEST 00 EOM
```

If an FTM/MXR or HMXR/DSPU/MPR is not equipped or if it is equipped but has no NPCs equipped, the message segment for that FTM/MXR or HMXR/DSPU does not appear.

The following segment is output to complete the message:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q COMPL
```

Hierarchical

[O.53101]

For UTL::QRY ALL:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL COMMON 4 LN MSG:
00S g h i j k l m n o p
FAIL g h i j k l m n o p
PEST g h i j k l m n o p EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL COMMON 4 LN MSG:
SYNC ofp rst CRO ofp
TLI ofp ofp ofp ofp ofp ofp ofp ofp rst rst rst rst rst rst \
rst rst
      a b c d e f g h i j k l m \
n o p EOM
```

The next segment describes the ECCN hardware:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL TOTAL ETSIS tt oo ff pp \
5 LN MSG:
01 ofp rst 02 ofp rst 03 ofp rst 04 ofp rst
05 ofp rst 06 ofp rst 07 ofp rst 08 ofp rst
09 ofp rst 10 ofp rst 11 ofp rst 12 ofp rst
13 ofp rst 14 ofp rst 15 ofp rst 16 ofp rst EOM
```

The output then continues with segments about the common equipment in the units. One module is generated per unit, in ascending order by number. The unit equipped for a given unit number determines the output segment printed.

The output segment for an FTU, IFTU, or IFTU2:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL FTU 3 LN MSG:
UNIT [q]q UC ofp FTMI ofp ofp ofp ofp [CCB ofp rst]
FC ofp rst ofp rst ofp rst ofp rst EOM
```

The output segment for a DS3 or HDS3 Unit:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL DS3U 3 LN MSG:
UNIT [q]q UC ofp FLI ofp rst FMT ofp rst [CCB ofp rst]
MXR ofp ofp ofp ofp ofp ofp ofp ofp MIU ofp ofp ofp ofp ofp ofp ofp EOM
```

The output segment for an HSU unit:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL HSU 3 LN MSG:
UNIT [q]q UC ofp OI ofp rst lmn wxy FMT ofp rst
MPR ofp ofp ofp ofp ofp ofp ofp ofp EOM
```

The output segment for a DSPU:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q UC ofp DSPI ofp \
[CCB ofp rst] EOM
```

Then, the output continues with information about individual NPCs. One output message is printed for each FTM (Facility Terminating Module), each MXR (Multiplexer) or Hybrid MXR, each HSU MPR or each unit in the case of a DSPU.

The output segment for a DS1 FTM. If any of the odd NPCs have been provisioned with a Digital Signal Processing Platform (DSPP) application (TG193), then the even NPCs following them do not exist and dashes are shown in their place:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL FTU NPCS uvmnp-uxkqr tt \
5 LN MSG:
ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp 00S oo FAIL ff PEST pp
ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp EOM
```

The output segment for NPCs of a DS3U MXR or HDS3U HMXR. If one or more DS2s in an HMXR have been provisioned with E1 NPCs, then the fourth NPC positions in those DS2s do not exist and are represented by dashes in the output:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL DS3U NPCS uvmnp-uxkqr tt \
5 LN MSG:
ofp ofp ofp ofp ofp ofp ofp ofp 00S oo FAIL ff PEST pp
```

```

ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp EOM

```

The output segment for NPCs of an HSU MPR:

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALL HSU NPCS uvmnp-uxkqr tt \
5 LN MSG:
ofp ofp ofp ofp ofp ofp ofp 00S oo FAIL ff PEST pp
ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp EOM

```

The output segment for NPCs of a DSPU:

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALL DSPU NPCS uvmnp-uxkqr 3 LN MSG:
uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst
uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst EOM

```

The output segment for an equipped FTM/MXR or HMXR/DSPU/MPR with no NPC in FAIL, PEST and/or OOS state:

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALL {FTU|DS3U|DSPU|HSU} NPCS \
uvmnp-uxkqr tt 2 LN MSG:
00S 00 FAIL 00 PEST 00 EOM

```

If an FTM/MXR HMXR/DSPU/MPR is not equipped or if it is equipped but has no NPC equipped, then the message segment for that FTM does not appear.

The following segment is output to complete the message:

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALL COMPL

```

For UTL::QRY ALL UNIT:

The output segment for an FTU, IFTU, or IFTU2:

[O.53101]

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALL FTU UNIT [q]q 3 LN MSG:
UC ofp FTMI ofp ofp ofp ofp [CCB ofp rst]
FC ofp rst ofp rst ofp rst ofp rst EOM

```


This message is followed by up to 4 of the following segments depending on the FTM equipage. If any of the odd NPCs have been provisioned with a Digital Signal Processing Platform (DSPP) application (TG193), then the even NPCs following them do not exist and dashes are shown in their place:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL FTU NPCS uvmnp-uxkqr tt \
5 LN MSG:
ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp 00S oo FAIL ff PEST pp
ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp EOM
```

The output segment for a DS3U or a HDS3U:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL DS3U UNIT [q]q 3 LN MSG:
UC ofp FLI ofp rst FMT ofp rst [CCB ofp rst]
MXR ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp ofp EOM
```

This message is followed by up to 7 of the following segments depending on the MXR or HMXR equipage. If one or more DS2s in an HMXR have been provisioned with E1 NPCs, then the fourth NPC positions in those DS2s do not exist and are represented by dashes in the output:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q DS3U NPCS \
uvmnp-uxkqr tt 5 LN MSG:
ofp ofp ofp ofp ofp ofp ofp ofp 00S oo FAIL ff PEST pp
ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp EOM
```

The output segment for an HSU unit:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL HSU UNIT [q]q 3 LN MSG:
UC ofp OI ofp rst lmn wxyFMT ofp rst
MPR ofp ofp ofp ofp ofp ofp ofp ofp EOM
```

This message is followed by up to 7 of the following segments depending on the MPR equipage.

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q HSU NPCS \
uvmnp-uxkqr tt 5 LN MSG:
ofp ofp ofp ofp ofp ofp ofp ofp 00S oo FAIL ff PEST pp
ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp EOM
```

The output segment format for a DSPU:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q UC ofp DSPI ofp\
[CCB ofp rst] EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q DSPU NPCS \
uvmnp-uxkqr tt 3 LN MSG:
uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst
uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst EOM
```

The output segment for an equipped FTM/MXR or HMXR/DSPU/MPR with no NPC in FAIL, PEST and/or OOS state:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q {FTU|DS3U|DSPU|HSU} \
NPCS uvmnp-uxkqr tt 2 LN MSG:
OOS 00 FAIL 00 PEST 00 EOM
```

If an FTM/MXR or HMXR/DSPU/MPR is not equipped or if it is equipped but has no NPC equipped, then the message segment for that FTM does not appear.

The following segment is output to complete the message:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

[O.53101]

For UTL::QRY ALL:

The output message starts:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL COMMON 4 LN MSG:
OOS g h i j k l m n o p
FAIL g h i j k l m n o p
PEST g h i j k l m n o p EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL COMMON 4 LN MSG:
SYNC ofp rst CRO ofp
TLI ofp ofp ofp ofp ofp ofp ofp ofp rst rst rst rst rst rst \
rst rst
a b c d e f g h i j k l m n o \
p EOM
```

The next segment describes the ECCN hardware:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL TOTAL ETSIS tt oo ff pp \
5 LN MSG:
01 ofp rst 02 ofp rst 03 ofp rst 04 ofp rst
05 ofp rst 06 ofp rst 07 ofp rst 08 ofp rst
09 ofp rst 10 ofp rst 11 ofp rst 12 ofp rst
13 ofp rst 14 ofp rst 15 ofp rst 16 ofp rst EOM
```

The output then continues with segments about the common equipment in the units. One module is generated per unit, in ascending order by number. The unit equipped for a given unit number determines the output message printed.

The output segment for an FTU, IFTU, or IFTU2:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL FTU 3 LN MSG:
UNIT [q]q UC ofp FTMI ofp ofp ofp ofp [CCB ofp rst]
FC ofp rst ofp rst ofp rst ofp rst EOM
```

The output segment for a DSPU:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q UC ofp DSPI opf \
[CCB opf rst] EOM
```

Then, the output continues with information about individual NPCs. One output message is printed for each equipped FTM (Facility Terminating Module) or unit in the case of a DSPU.

The output segment for a CEPT FTM is as follows. If any of the odd NPCs have been provisioned with a Digital Signal Processing Platform (DSPP) application (TG193), then the even NPCs following them do not exist and dashes are shown in their place:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL FTU NPCS [s]aaa-[t]bbb tt \
5 LN MSG:
ofp ofp ofp ofp ofp ofp ofp ofp 00S oo FAIL ff PEST pp
ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp EOM
```

The output segment for a DSPU:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL DSPU NPCS [s]aaa-[t]bbb tt \
3 LN MSG:
```

```
[z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst
[z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst EOM
```

The output segment for an equipped FTM or DSPU with no failed, pested or out-of-service NPCs:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL {FTU|DSPU} NPCS [s]aaa-[t]bbb \
tt 2 LN MSG:
00S 00 FAIL 00 PEST 00 EOM
```

The following segment is output to complete the message:

[O.53101]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL COMPL
```

For UTL::QRY ALL UNIT:

For an FTU, IFTU, or IFTU2:

[O.53101]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL FTU UNIT [q]q 3 LN MSG:
UC ofp FTMI ofp ofp ofp ofp [CCB ofp rst]
FC ofp rst ofp rst ofp rst ofp rst EOM
```

The preceding message is followed by up to 4 of the following segments depending on the CEPT FTM equipage. If any of the odd NPCs have been provisioned with a Digital Signal Processing Platform (DSPP) application (TG193), then the even NPCs following them do not exist and dashes are shown in their place:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q FTU NPCS \
[s]aaa-[t]bbb tt 5 LN MSG:
ofp ofp ofp ofp ofp ofp ofp ofp 00S oo FAIL ff PEST pp
ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp EOM
```

For a DSPU:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q UC ofp DSPI ofp \
[CCB ofp rst] EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q DSPU NPCS \
[s]aaa-[t]bbb tt 3 LN MSG:
[z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst
[z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst EOM
```

The output segment for an equipped FTM or DSPU with no failed, pested or out-of-service NPCs:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q {FTU|DSPU} NPCS \
[s]aaa-[t]bbb tt 2 LN MSG:
OOS 00 FAIL 00 PEST 00 EOM
```

The following segment is output to complete the message:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q COMPL
```

Hierarchical

[O.53101]

For UTL::QRY ALL:

The output message starts:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL COMMON 4 LN MSG:
OOS g h i j k l m n o p
FAIL g h i j k l m n o p
PEST g h i j k l m n o p EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ALL COMMON 4 LN MSG:
SYNC ofp rst CRO ofp
TLI ofp ofp ofp ofp ofp ofp ofp ofp rst rst rst rst rst rst \
rst rst
a b c d e f g h i j k l m n o \
p EOM
```

The next segment describes the ECCN hardware:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL TOTAL ETSIS tt oo ff pp \
5 LN MSG:
01 ofp rst 02 ofp rst 03 ofp rst 04 ofp rst
05 ofp rst 06 ofp rst 07 ofp rst 08 ofp rst
09 ofp rst 10 ofp rst 11 ofp rst 12 ofp rst
```

13 ofp rst 14 ofp rst 15 ofp rst 16 ofp rst EOM

The output then continues with segments about the common equipment in the units. One module is generated per unit, in ascending order by number. The unit equipped for a given unit number determines the output message printed.

The output segment for an FTU, IFTU, or IFTU2:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL FTU 3 LN MSG:
UNIT [q]q UC ofp FTMI ofp ofp ofp ofp [CCB ofp rst]
FC ofp rst ofp rst ofp rst ofp rst EOM
```

The output segment for a DSPU:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q UC ofp DSPI ofp \
[CCB ofp rst] EOM
```

The output then continues with segments about the NPCs equipped in an FTM or a DSPU:

The output segment for NPCs in a CEPT FTM is as follows. If any of the odd NPCs have been provisioned with a Digital Signal Processing Platform (DSPP) application (TG193), then the even NPCs following them do not exist and dashes are shown in their place:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL FTU NPCS uvmnp-uxkqr tt \
5 LN MSG:
ofp ofp ofp ofp ofp ofp ofp ofp 00S oo FAIL ff PEST pp
ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp EOM
```

The output message for NPCs in a DSPU:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL DSPU NPCS uvmnp-uxkqr tt \
3 LN MSG:
uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst
uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst EOM
```

The output segment for an equipped CEPT FTM or DSPU with no failing, pested or out-of-service NPCs using hierarchical addressing:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL {FTU|DS3U|DSPU} NPCS \
uvmnp-uxkqr tt 2 LN MSG:
```

00S 00 FAIL 00 PEST 00 EOM

If an FTM or DSPU is not equipped, or if it is equipped but has no NPCs, then the message segment for that FTM or DSPU does not appear.

The following segment is output to complete the message:

M hh:mm:ss xy,ww n[vv] UTL QRY ALL COMPL

For UTL::QRY ALL UNIT:

For an FTU, IFTU, or IFTU2:

[O.53101]

M hh:mm:ss xy,ww n[vv] UTL QRY ALL FTU UNIT [q]q 3 LN MSG:
UC ofp FTMI ofp ofp ofp ofp [CCB ofp rst]
FC ofp rst ofp rst ofp rst ofp rst EOM

This output segment is followed by up to 4 additional segments for each CEPT FTM depending on the FTM equipage as follows. If any of the odd NPCs have been provisioned with a Digital Signal Processing Platform (DSPP) application (TG193), then the even NPCs following them do not exist and dashes are shown in their place:

M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q FTU NPCS \
uvmnp-uxkqr tt 5 LN MSG:
ofp ofp ofp ofp ofp ofp ofp ofp 00S oo FAIL ff PEST pp
ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp
ofp ofp ofp ofp ofp ofp ofp ofp EOM

For a DSPU:

M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q UC ofp DSPI ofp \
[CCB ofp rst] EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q DSPU NPCS \
uvmnp-uxkqr tt 3 LN MSG:
uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst
uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst EOM

If the CEPT FTM or DSPU has no failing, pested or out-of-service NPCs the following segment is output:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q {FTU|DSPU} NPCS \
uvmnp-uxkqr tt 2 LN MSG:
OOS 00 FAIL 00 PEST 00 EOM
```

If the FTM/DSPU is not equipped, or if it is equipped but has no NPCs, then the message segment for that FTM/DSPU does not appear.

The following segment is output to complete the message:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q COMPL
```

Denial Message

[O.53101.01]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL UNIT [q]q COND cc DNY
```

Explanation of Parameters

To aid referencing the parameters listed for a given message in a number of cases, the line containing the parameters is listed for those cases just before the explanation of that particular set of parameters is given.

ALL	All
UNIT	Unit
[q]q	Unit number (1 through 16) The UNIT option is specified to query that unit. The UNIT field is null when the command is used for the entire frame. If the UNIT option is specified, only the information related to the equipment in that unit is generated.
OOS	Out of service
FAIL	Failed
PEST	Pested For the OOS, FAIL and PEST keywords, variables g through p each represent a frame entity. The values of these variables give the OOS, FAIL, or PEST status of the associated entity. Values are interpreted using the following table. The entity associated with a given variable is given after the following explanation of PEST:

Value	OOS	FAIL	PEST
1	out-of -service	failed	pested
0	in service	not failed	unpested
-	not applicable	not applicable	not applicable

As shown in the preceding table, a hyphen (-) indicates the parameter is not applicable to the particular entity. For example, an unequipped entity would display a (-) in the position of its OOS, FAIL and PEST indicators g through p.

The keyword PEST is used to indicate that error reporting is disabled. Out-of-service (OOS) entities and entities related to a side that is out of service are pested to prevent error messages from being reported to the main controller. Error reporting is undesirable if an entity is OOS since it would interrupt normal operations by repeatedly interrupting the microprocessor.

OOS g h i j k l m n o p (message line for reference)
 FAIL g h i j k l m n o p "
 PEST g h i j k l m n o p EOM "

The DACS II entities and their status fields are as follows:

g Link 1
 h Link 2
 i Link 3
 j Link 4
 k Link 5
 l Link 6
 m XC0 (Cross-Connect 0)
 n XC1 (Cross-Connect 1)
 o CCI 0 (Clock and Control Interface 0)
 p CCI 1 (Clock and Control Interface 1)
 SYNC ofp rst CRO ofp (message line for reference)

SYNC Synchronizer
 ofp Side 0 sync status
 rst Side 1 sync status
 o, r Out of service

	f, s	Failed
	p, t	Pested
CRO		Clock reference oscillator
ofp		CRO status
	o	Out of service
	f	Failed
	p	Pested

To aid in interpreting the variables associated with the timing link interface, two lines from the message are provided following for reference. These lines have been marked with identifying information.

| <----- Side 0 -----> | <----- Side 1 -----> |

TLI	ofp	ofp	ofp	ofp	ofp	ofp	ofp	ofp	ofp	rst	rst	rst	rst	rst	rst	rst	rst	
	a	b	c	d	e	f	g	h		i	j	k	l	m	n	o	p	EOM

TLI No.	1	1	2	2	3	3	4	4		1	1	2	2	3	3	4	4
SSP No.	0	1	0	1	0	1	0	1		0	1	0	1	0	1	0	1

TLI		Timing link interface
ofp		Side 0 TLI status
	o	Out of service
	f	Failed
	p	Pested
rst		Side 1 TLI status
	r	Out of service
	s	Failed
	t	Pested

There are four TLIs in each synchronizer side and each TLI has two synchronizer synchronization ports (SSP) for a total of eight SSPs per side. Variables a through p represent these SSPs and are associated with each TLI as shown following. The values of a through p give the priority of each SSP as a synchronization source. Priorities range in value from 1 through 8 and are interpreted as follows.

1	Highest priority

	8	Lowest priority
a	TLI 1 SSP 0 priority	
b	TLI 1 SSP 1 priority	
c	TLI 2 SSP 0 priority	
d	TLI 2 SSP 1 priority	
e	TLI 3 SSP 0 priority	
f	TLI 4 SSP 1 priority	
g	TLI 4 SSP 0 priority	
h	TLI 4 SSP 1 priority	
i	TLI 1 SSP 0 priority	
j	TLI 1 SSP 1 priority	
k	TLI 2 SSP 0 priority	
l	TLI 2 SSP 1 priority	
m	TLI 3 SSP 0 priority	
n	TLI 3 SSP 1 priority	
o	TLI 4 SSP 0 priority	
p	TLI 4 SSP 1 priority	
UTL QRY ALL TOTAL TSIS tt oo ff pp		(message line for reference)
UTL QRY ALL TOTAL ETSIS tt oo ff pp		(message line for reference)
TOTAL	Total	
ET SIS	Expanded time slot interchangers CEF	
tt	Total number of equipped TSIS or ETSIS	
oo	Total number of equipped but out-of-service TSIS or ETSIS	

ff Total number of equipped but failed TSIS or ETSIS
pp Total number of equipped but pested TSIS or ETSIS

The following message lines are provided for reference.

UNIT [q]q UC ofp FTMI ofp ofp ofp ofp [CCB ofp rst]

FTM number 1 2 3 4

FC ofp rst ofp rst ofp rst ofp rst EOM

FTM No. 1 1 2 2 3 3 4 4

Side No. 0 1 0 1 0 1 0 1

UC Unit controller
FTMI Facility terminating module interface
FC Format converter
o, r Out of service
f, s Failed
p, t Pested

The following line is a message line for reference.

UNIT [q]q UC ofp FLI ofp rst FMT ofp rst [CCB ofp rst]

FLI ID. S P
FMT Side No. 0 1

The following line is a message line for reference.

"UC-ofp:FLI-ofp,rst:FMT-ofp,rst:CCB-ofp,rst"

FLI ID. S P
FMT Side No. 0 1

1.544 Mbit/s Termination

FLI	Facility line interface
FMT	Formatter or Hybrid Formatter
ofp	Service (S) FLI
rst	Protection (P) FLI
o, r	Out of service
f, s	Failed
p, t	Pested

1.544 Mbit/s Termination

The following line is a message line for reference.

MXR ofp ofp ofp ofp ofp ofp ofp ofp MIU ofp ofp ofp ofp ofp ofp ofp

No. P 1 2 3 4 5 6 P 1 2 3 4 5 6

The following line is a message line for reference.

UNIT [q]q UC ofp OI ofp rst lmn wxy FMT ofp rst [CCB ofp rst]

OI ID. S1 P1 S2 P2
FMT Side No. 0 1

1.544 Mbit/s Termination

OI	Optical Interface (OC3 or STM-1)
FMT	Formatter or Hybrid Formatter
ofp	OI Facility 1 on Service Pack
rst	OI Facility 1 on Protection Pack
lmn	OI Facility 2 on Service Pack
wxy	OI Facility 2 on Protection Pack
o, r, l, w	Out of service
f, s, m, x	Failed
p, t, n, y	Pested

1.544 Mbit/s Termination

The following line is a message line for reference.

MPR ofp ofp ofp ofp ofp ofp ofp

No.	P	1	2	3	4	5	6
MPR		Mapper					
		The MPR are identified following the reference message line. P stands for Protection.					
FTU		Facility terminating unit					
		The term FTU represents the original facility terminating unit as well as the Integrated facility terminating units (IFTU or IFTU2) that have been delivered as part of a DACS II.					
DS3U		DS3 unit or Hybrid DS3 unit					
DSPU		Digital signal processing unit					
HSU		High Speed Unit (consists of 2 units)					

UC ofp DSPI ofp [CCB ofp, rst] (message line for reference)

DSPI	Digital signal processing interface		
ofp	UC, DSPI		
rst	What goes here??		
	o, r	Out of service	
	f, s	Failed	
	p, t	Pested	

The following lines are message lines for reference.

[z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst [z]zzz ofp rst EOM

uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst uvmnp ofp rst EOM

ofp	Refers to side 0 DSPU NPC		
rst	Refers to side 1 DSPU NPC		
	o, r	Out of service	
	f, s	Failed	
	p, t	Pested	

[s]aaa	The first 3- or 4-digit nonhierarchical NPC number of an FTM, MXR, or DSPU
[t]bbb	The last 3- or 4-digit nonhierarchical NPC number of an FTM, MXR, or DSPU
[z]zzz	The 3- or 4-digit nonhierarchical DSPU NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	The first hierarchical NPC number of an FTM, MXR, or DSPU
uxkqr	The last hierarchical NPC number of an FTM, MXR, or DSPU
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
t	Total number of equipped NPCs
oo	Total number of equipped but out-of-service NPCs
ff	Total number of equipped but failed NPCs
pp	Total number of equipped but pested NPCs
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped

UTILITY QUERY ALL

Explanation of Command

This message requests a printout on a specified facility performance parameter for all Network Processing Circuits (NPCs).

Note that DS3U message segment applies to both DS3 unit and Hybrid DS3 unit (HDS3U). The MXR applies to both MXR and Hybrid MXR.

Command

[I.56031]
UTL:[FRM xy][, SEQ ww]:QRY,<parameter>,ALL!

Completion Message

1.544 Mbit/s Termination Nonhierarchical

[O.56031]
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> ALL \
NPCS [s]abc-[t]def[RESET] TOT nnnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM

 **NOTE:**
The preceding message applies to a Facility Terminating Module (FTM) and parameter other than ER and BER.

[O.56031]
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> ALL \
NPCS [s]abc-[t]def[RESET] TOT nnnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM



NOTE:

The preceding message applies to a DS3, Hybrid DS3 or HSU module (that is, a MXR, a HMXR or a MPR) and parameter other than ER and BER.

[O.56032]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BER ALL NPCS [s]abc-[t]def \
[ RESET] TOT nnnn 5 LN MSG:
xx xx xx xx xx  xx xx xx xx xx
xx xx xx xx xx  xx xx xx xx xx
xx xx xx xx xx  xx xx xx xx xx
xx xx xx xx xx  xx xx xx xx xx EOM
```



NOTE:

The preceding message applies to a Facility Terminating Module (FTM) and either parameter ER or BER.

[O.56032]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BER ALL NPCS [s]abc-[t]def \
[ RESET] TOT nnnn 5 LN MSG:
xx xx xx xx xx  xx xx
xx xx xx xx xx  xx xx
xx xx xx xx xx  xx xx
xx xx xx xx xx  xx xx EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> ALL COMPL
```



NOTE:

The preceding message applies to a DS3, a HDS3 or an HSU module (that is, a MXR, a HMXR or a MPR) and either parameter ER or BER.

Hierarchical

[O.56031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> ALL NPCS uvmnp-uvmqr \
[ RESET] TOT nnnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
```



NOTE:

The preceding message applies to a Facility Terminating Module (FTM) and parameter other than ER and BER.

[O.56031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> ALL NPCS uvmnp-uvmqr \
[ RESET] TOT nnnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
```



NOTE:

The preceding message applies to a DS3, a HDS3 or an HSU module (that is, a MXR, a HMXR, or a MPR) and parameter other than ER and BER.

[O.56032]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BER ALL NPCS uvmnp-uvmqr [ RESET] \
TOT nnnn 5 LN MSG:
xx xx xx xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx xx xx xx EOM
```



NOTE:

The preceding message applies to a Facility Terminating Module (FTM) and either parameter ER or BER.

[O.56032]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BER ALL NPCS uvmnp-uvmqr [ RESET] \
TOT nnnn 5 LN MSG:
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> ALL COMPL
```



NOTE:

The preceding message applies to a DS3, a HDS3 or an HSU module (that is, a MXR, a HMXR or a MPR) and either parameter ER or BER.

[O.56033]

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> ALL NPCS TOT 0000 COMPL
```

[O.56034]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BER ALL NPCS TOT 0000 COMPL
```

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Nonhierarchical

[O.56031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> ALL \
NPCS [s]abc-[t]def[ RESET] TOT nnnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx COMPL
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> ALL COMPL
```



NOTE:

The preceding message applies to parameters other than BER.

[O.56031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> ALL \
NPCS [s]abc-[t]def[ RESET] TOT nnnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
```



NOTE:

The preceding message applies to a DS3, a HDS3 or an HSU module (that is, a MXR, a HMXR or a MPR) and parameter other than ER and BER.

[O.56032]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BER ALL NPCS [s]abc-[t]def \
[ RESET] TOT nnnn 5 LN MSG:
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx EOM
```

Hierarchical

[O.56031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> ALL NPCS uvmnp-uvmqr \
[ RESET] TOT nnnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
```

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> ALL COMPL



NOTE:

The preceding message applies to parameters other than BER.

[O.56031]

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> ALL NPCS uvmnp-uvmqr \[RESET] TOT nnnn 5 LN MSG:

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM



NOTE:

The preceding message applies to a DS3, a HDS3 or an HSU module (that is, a MXR, a HMXR or a MPR) and parameter other than ER and BER.

[O.56032]

M hh:mm:ss xy,ww n[vv] UTL QRY BER ALL NPCS uvmnp-uvmqr[RESET] \TOT nnnn 5 LN MSG:

xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx EOM

**Explanation of
Parameters**

**ALL
parameter**

All

Facility performance parameter

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The parameter and its period of measurement are chosen from the following set:

parameter	Explanation	Period of measurement
BER	Bit Error Rate	Total since local midnight
BPV	Bipolar Violation	Total since local midnight

COFA	Change Of Frame Alignment	Total since local midnight
CGA	Carrier Group Alarm	Total since local midnight
CRC	Cyclic Redundancy Code	Total since local midnight
ER	Error Rate (same as BER for D4 framing)	Previous 24-hour total
ERS	Errored Seconds	Previous 24-hour total
FRER	Framing Error	Total since local midnight
OOF	Out Of Frame	Total since local midnight
SERS	Severely Errored Seconds	Previous 24-hour total
SLIP	Slip count	Previous 24-hour total
SAFE	Shelf Alarm Far End count	Total since local midnight
SANE	Shelf Alarm Near End count	Total since local midnight


NOTE:

If the frame contains NPCs that are provisioned with D4 framing, only the ER parameter should be used; the BER parameter should not be used.

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The parameter values listed below are applicable only to PB or PC type NPCs. If there are PA, TH or SH NPCs in the FTM, dashes (-) are output in the position of these NPCs:

DM	Degraded minutes
SERS	Severely errored seconds
ERS	Errored seconds
US	Unavailable seconds
SLIP	Slip events
CRC	Cyclic redundancy check-4 check block error events
FRER	Framing error events
LOFA	Loss of frame alignment events

MER Multiframe alignment error events (Time slot 16)



NOTE:

If the parameter reports threshold alarms (DM, SERS, ERS, US, or SLIP), the count represents the total for the last 24 hours (a rolling 24-hour count). The other parameter counts represent the total since local midnight. The parameter value below is applicable to all CEPT NPC types, that is, PA, PB, PC TH and SH:

BER Bit Error Rate

(Also MBER/RBER for NPCs with MBER feature)
For BER and RBER, the message reports NPCs that are currently in the BER state

Both Terminations

A message segment is omitted for:

- Unequipped FTMs

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- DS3 modules in the case of BPV request

Both Terminations

- Equipped FTM with no equipped NPC
- Equipped FTM with all NPCs having zero value of <parameter>
- Equipped CEPT FTM with all NPCs being PA type but with a parameter other than BER.

xxxxx Parameter count values

Dashes (-) are output for NPCs that are not equipped or are provisioned with a type unapplicable to the parameter. If an entire FTM is unequipped or all its NPCs are dashes, the segment is skipped.

xx BER states

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MJ Major

MN Minor

ER Error

CL Clear (a facility type NPC without errors)

-- Unequipped NPC

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xx represents a combination of the excessive error rate (EER), bit error rate (BER), and remote bit error rate (RBER). It is interpreted as either a prompt maintenance alarm-major (PMA), deferred maintenance alarm-minor (DMA), prompt maintenance alarm-critical (PMC), or clear.

xx	EER/BER state	RBER state
CR	PMC	
MJ	EER/PMA	Not applicable
MN	DMA	Inactive
RN	DMA	Active
CL	Clear*	Inactive
RL	Clear*	Active
--	NPC unequipped or out of service	

* Clear refers to a Facility type NPC whose received error rate is less than the Minor BER threshold.

without CRC (\$ 10 sup -5 \$)

with CRC (\$ 10 sup -6 \$)



NOTE:

EER has priority over the BER/RBER states. EER does not coexist with them; however, BER and RBER coexist with each other.

Unless the CHG::NPC,TS0 command is used to redefine the active value of bit 4 of CTS 0, the RBER values are:

1 Inactive

0 Active

NPC(S)

Network processing circuit(s)

[s]abc

The first 3- or 4-digit nonhierarchical NPC number in a module

[t]def

The last 3- or 4-digit nonhierarchical NPC number in a module

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical NPC number of the first NPC in a module

uvmqr

Hierarchical NPC number of the last NPC in a module

uv, Unit number

m, Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

The parameter value for the first NPC is listed in the first position (upper left corner) of the first line of each message segment. The value for the last NPC occurs in the last position (lower right corner).

TOT Total

nnnn Cumulative count of NPCs returning nonzero states or values

The last nnnn, the one printed out in the last message module, gives the total number of NPCs with nonzero states or values in the frame.

RESET Reset

Indicates that one or more autonomous resets have occurred.

QUERY DS2 ALARMS

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination interface only.

This command queries the state of the facility alarm on all DS3 and Hybrid DS3 facilities. In addition, if the respective bit has been enabled in Message 51011, this command generates an autonomous message and appends it to the midnight output message.

For Hybrid DS3 facilities the Remote Alarm Indications (RAI) that are carried by the X-bits of the DS3 signal are reported also.

Command

[I.56331]

UTL: [FRM xy][, SEQ ww]:QRY, ALM, DS3!

Completion Message

Nonhierarchical

[O.56331]

This output message applies to DS3s in regular DS3 Units

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALM DS3 TOT ppp e LN MSG:
[UNIT [q]q xxlobai xxlobai xxlobai xxlobai xxlobai xxlobai]
[UNIT [q]q xxlobai xxlobai xxlobai xxlobai xxlobai xxlobai]
[UNIT [q]q xxlobai xxlobai xxlobai xxlobai xxlobai xxlobai]
UNIT [q]q xxlobai xxlobai xxlobai xxlobai xxlobai xxlobai \
{EOM|COMPL}

.
.
.

[M hh:mm:ss xy,ww n[vv] UTL QRY ALM DS3 TOT ppp e LN MSG:]
[UNIT [q]q xxlobai xxlobai xxlobai xxlobai xxlobai xxlobai]
[UNIT [q]q xxlobai xxlobai xxlobai xxlobai xxlobai xxlobai]
[UNIT [q]q xxlobai xxlobai xxlobai xxlobai xxlobai xxlobai]
[UNIT [q]q xxlobai xxlobai xxlobai xxlobai xxlobai xxlobai COMPL]
```

[O.56332]

M hh:mm:ss xy,ww n[vv] UTL QRY ALM DS3 TOT 000 COMPL

This output applies to DS3s in Hybrid DS3 Units

[O.56333]

M hh:mm:ss xy,ww n[vv] UTL QRY ALM DS3 TOT ppp e LN MSG:
[UNIT [q]q xxlobair xxlobair xxlobair xxlobair xxlobair xxlobair]
[UNIT [q]q xxlobair xxlobair xxlobair xxlobair xxlobair xxlobair]
[UNIT [q]q xxlobair xxlobair xxlobair xxlobair xxlobair xxlobair]
UNIT [q]q xxlobair xxlobair xxlobair xxlobair xxlobair xxlobair \
{EOM|COMPL}

.
.
.

[M hh:mm:ss xy,ww n[vv] UTL QRY ALM DS3 TOT ppp e LN MSG:]
[UNIT [q]q xxlobair xxlobair xxlobair xxlobair xxlobair xxlobair]
[UNIT [q]q xxlobair xxlobair xxlobair xxlobair xxlobair xxlobair]
[UNIT [q]q xxlobair xxlobair xxlobair xxlobair xxlobair xxlobair]
[UNIT [q]q xxlobair xxlobair xxlobair xxlobair xxlobair xxlobair \
COMPL]

[O.56332]

M hh:mm:ss xy,ww n[vv] UTL QRY ALM DS3 TOT 000 COMPL

**Autonomous
Message**

This output message applies to DS3s in regular DS3 Units

[O.56331]

I hh:mm:ss xy,ww n[vv] UTL QRY ALM DS3 TOT ppp e LN MSG:
[UNIT [q]q xxlobai xxlobai xxlobai xxlobai xxlobai xxlobai]
[UNIT [q]q xxlobai xxlobai xxlobai xxlobai xxlobai xxlobai]
[UNIT [q]q xxlobai xxlobai xxlobai xxlobai xxlobai xxlobai]
UNIT [q]q xxlobai xxlobai xxlobai xxlobai xxlobai xxlobai \
{EOM|COMPL}

.
.
.

[I hh:mm:ss xy,ww n[vv] UTL QRY ALM DS3 TOT ppp e LN MSG:]
[UNIT [q]q xxlobai xxlobai xxlobai xxlobai xxlobai xxlobai]

```
[UNIT [q]q xxlobai xxlobai xxlobai xxlobai xxlobai xxlobai]
[UNIT [q]q xxlobai xxlobai xxlobai xxlobai xxlobai xxlobai]
[UNIT [q]q xxlobai xxlobai xxlobai xxlobai xxlobai xxlobai COMPL]
```

[O.56332]

I hh:mm:ss xy,ww n[vv] UTL QRY ALM DS3 TOT 000 COMPL

This output applies to DS3s in Hybrid DS3 Units

[O.56333]

```
I hh:mm:ss xy,ww n[vv] UTL QRY ALM DS3 TOT ppp e LN MSG:
[UNIT [q]q xxlobair xxlobair xxlobair xxlobair xxlobair xxlobair]
[UNIT [q]q xxlobair xxlobair xxlobair xxlobair xxlobair xxlobair]
[UNIT [q]q xxlobair xxlobair xxlobair xxlobair xxlobair xxlobair]
UNIT [q]q xxlobair xxlobair xxlobair xxlobair xxlobair xxlobair \
{EOM|COMPL}
```

.
.
.

```
[I hh:mm:ss xy,ww n[vv] UTL QRY ALM DS3 TOT ppp e LN MSG:]
[UNIT [q]q xxlobair xxlobair xxlobair xxlobair xxlobair xxlobair]
[UNIT [q]q xxlobair xxlobair xxlobair xxlobair xxlobair xxlobair]
[UNIT [q]q xxlobair xxlobair xxlobair xxlobair xxlobair xxlobair]
[UNIT [q]q xxlobair xxlobair xxlobair xxlobair xxlobair xxlobair \
COMPL]
```

[O.56332]

I hh:mm:ss xy,ww n[vv] UTL QRY ALM DS3 TOT 000 COMPL

Explanation of Parameters

ALM	Alarm
TOT	Total number of facilities reporting alarms
ppp	The total number of DS3 facilities in the output segment that are reporting critical and major facility alarms
UNIT	Unit
[q]q	Unit number (1 through 16)
LOS	Loss of signal
OOF	Out of frame

BER	Bit error rate
AIS	Alarm indication signal
IDLE	Idle signal
RAI	Remote Alarm Indication (Hybrid DS3s only)
xx	The facility alarm status of the DS3
CR	Critical alarm
MJ	Major alarm for RAI (Hybrid DS3s only)
--	The DS3 is unequipped
ER	Error (either the MMFG selected to serve the facility is Out of Service or In Service_Pested, or the FLI selected to serve the facility is In Service_Pested)
CL	Clear (no alarm, no AIS or IDLE condition)
UX	The unit is out of service, data unavailable
IN	Informational alarm (either AIS or IDLE)
I	The loss of signal alarm status for a DS3 facility:
0	The loss of signal alarm is clear
1	The loss of signal alarm is active
-	The xx field is either UX, ER or --
o	The out of frame alarm status for a DS3 facility:
0	The out of frame alarm is clear
1	The out of frame alarm is active
-	The xx field is either UX, ER or --
b	The high bit error rate alarm status for a DS3 facility:
0	The high BER alarm is clear
1	The high BER alarm is active
-	The xx field is either UX, ER or --
a	The alarm indication signal (AIS) alarm status for a DS3 facility:
0	The AIS alarm is clear
1	The AIS alarm is active
-	The xx field is either UX, ER or --
i	The idle signal alarm status for a DS3 facility:
0	The idle signal alarm is clear

	1	The idle signal alarm is active
	-	The xx field is either UX, ER or --
r		The Remote Alarm Indication (RAI) for a Hybrid DS3 facility:
	0	The RAI alarm is clear
	1	The RAI alarm is active
	-	The xx field is either CR, UX, ER, or --
e		Number of lines in each segment (2 to 5)

QUERY HSU ALARMS

Explanation of Command

This command queries the state of the facility alarm on all OI facilities. In addition, if the respective bit has been enabled in Message 51011, this command generates an autonomous message and appends it to the midnight output message.

Command

```
[I.56831]
UTL:[FRM xy][, SEQ ww]:QRY,ALM,OI!
```

Completion Message

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```
[O.56831]
M hh:mm:ss xy,ww n[vv] UTL QRY ALM OI e LN MSG:
UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba
MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
{EOM|COMPL}

[M hh:mm:ss xy,ww n[vv] UTL QRY ALM OI e LN MSG:]
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut \
EOM]

[O.56832]
M hh:mm:ss xy,ww n[vv] UTL QRY ALM OI NO ALM COMPL
```

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[O.56831]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALM OI e LN MSG:
UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba
MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
{EOM|COMPL}
```

```
[M hh:mm:ss xy,ww n[vv] UTL QRY ALM OI e LN MSG:]
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut \
EOM]
```

[O.56832]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALM OI NO ALM COMPL
```

Autonomous Message

1.544 Mbit/s Termination

[O.56831]

```
I hh:mm:ss xy,ww n[vv] UTL QRY ALM OI e LN MSG:
UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba
MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
{EOM|COMPL}
```

```
[I hh:mm:ss xy,ww n[vv] UTL QRY ALM OI e LN MSG:]
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q OI1S xxloba OI2S xxloba OI1P xxloba OI2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
```

```
[UNIT [q]q 0I1S xxloba 0I2S xxloba 0I1P xxloba 0I2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q 0I1S xxloba 0I2S xxloba 0I1P xxloba 0I2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut \
EOM]
```

[O.56832]

I hh:mm:ss xy,ww n[vv] UTL QRY ALM OI NO ALM COMPL

2.048 Mbit/s Termination

[O.56831]

```
I hh:mm:ss xy,ww n[vv] UTL QRY ALM OI e LN MSG:
UNIT [q]q 0I1S xxloba 0I2S xxloba 0I1P xxloba 0I2P xxloba
MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut
[UNIT [q]q 0I1S xxloba 0I2S xxloba 0I1P xxloba 0I2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q 0I1S xxloba 0I2S xxloba 0I1P xxloba 0I2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q 0I1S xxloba 0I2S xxloba 0I1P xxloba 0I2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
{EOM|COMPL}
```

```
[I hh:mm:ss xy,ww n[vv] UTL QRY ALM OI e LN MSG:]
[UNIT [q]q 0I1S xxloba 0I2S xxloba 0I1P xxloba 0I2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q 0I1S xxloba 0I2S xxloba 0I1P xxloba 0I2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q 0I1S xxloba 0I2S xxloba 0I1P xxloba 0I2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut]
[UNIT [q]q 0I1S xxloba 0I2S xxloba 0I1P xxloba 0I2P xxloba]
[MPR(1-6) xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut xxapfmut \
EOM]
```

[O.56832]

I hh:mm:ss xy,ww n[vv] UTL QRY ALM OI NO ALM COMPL

Explanation of Parameters

ALM	Alarm
UNIT	Unit
[q]q	Unit number (1 through 16)
LOS	Loss of signal
LOF	Loss of frame
BERF	Bit error rate failure

AIS	Alarm indication signal
RFI	Remote Failure Indication
LOP	Loss of Pointer
PLM	Payload Mismatch
UNEQ	Unequipped
TIM	Path Trace Mismatch
OI	Optical Interface facility (OC-3/STM-1)
xx	The facility alarm status of the OI or STS-1:
CR	Critical alarm
MJ	Major alarm
--	The OI or MPR is unequipped
ER	The OI or MPR is Out of Service or Inservice Pested
PR	The MPR is being protected
CL	Clear (no alarm)
UX	The unit controller is out of service, data unavailable
I	The loss of signal alarm status for a OI facility:
0	The loss of signal alarm is clear
1	The loss of signal alarm is active
-	The xx field is either UX, ER or --
o	The Loss of frame alarm status for a OI facility:
0	The LOF alarm is clear
1	The LOF alarm is active
-	The xx field is either UX, ER or --
b	The bit error rate failure alarm status for a OI facility:
0	The BERF alarm is clear
1	The BERF alarm is active
-	The xx field is either UX, ER or --
a	The alarm indication signal (AIS) alarm status for a OI or STS-1 facility:
	If associated with the OI, it is an AIS Line condition
	If associated with the MPR, it is an AIS Path condition

	0	The AIS alarm is clear
	1	The AIS alarm is active
	-	The xx field is either UX, ER or --
p		The loss of pointer alarm status for a STS-1 facility:
	0	The LOP alarm is clear
	1	The LOP alarm is active
	-	The xx field is either UX, ER or --
f		The Remote Failure Indication (RFI) for a STS-1 facility:
	0	The RFI alarm is clear
	1	The RFI alarm is active
	-	The xx field is either UX, ER or --
m		The payload mismatch alarm status for a STS-1 facility:
	0	The PLM alarm is clear
	1	The PLM alarm is active
	-	The xx field is either UX, ER or --
u		The unequipped alarm status for a STS-1 facility:
	0	The UNEQ alarm is clear
	1	The UNEQ alarm is active
	-	The xx field is either UX, ER or --
t		The path trace alarm status for a STS-1 facility:
	0	The TIM alarm is clear
	1	The TIM alarm is active
	-	The xx field is either UX, ER or --
e		Number of lines in each segment (2 to 5)
cc		Hexadecimal condition code

UTILITY QUERY, ALARM OPTION, AIS

Explanation of Command

This command requests alarm indication signal (AIS) information for one or more facility terminating unit (FTU/IFTU/IFTU2), DS3 unit (DS3U), Hybrid DS3 Unit (HDS3U) or HSU network processing circuits. The range can cross the unit boundary, and the two NPCs entered can be from different types of units. This command is not applicable to digital signal processing unit (DSPU) NPCs. DSPU NPCs are skipped in the output message if they are within the range.

Digital Signal Processing Platform (DSPP) NPCs and the even numbered NPCs immediately following the actual DSPP NPCs are skipped in the output by using dashes if they are within the range of this command.

ST type NPCs will be skipped in the output by using dashes if they are within the range of this command.

Command

Nonhierarchical

[I.56021]

UTL:[FRM xy][,SEQ ww]:QRY,ALMOPT,NPC [s]abc[-[v]ghi],AIS!

Hierarchical

[I.56021]

UTL:[FRM xy][,SEQ ww]:QRY,ALMOPT,NPC uvmnp[-wxkqr],AIS!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.56021]

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPC [s]abc-[t]def AIS \

TOT nnn e LN MSG:

tttt tttt tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt tttt tttt

tttt tttt tttt tttt tttt tttt tttt tttt tttt tttt EOM

.
.
 .

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS [u]jkl-[v]ghi AIS \
 TOT nnn e LN MSG:
 tttt tttt tttt tttt tttt tttt tttt tttt tttt tttt
 tttt tttt tttt tttt tttt tttt tttt tttt tttt tttt
 tttt tttt tttt tttt tttt tttt tttt tttt tttt tttt
 tttt tttt tttt tttt tttt tttt tttt tttt tttt tttt EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS [s]abc-[v]ghi AIS COMPL

⇒ NOTE:
 The preceding message applies to FTU, IFTU, or IFTU2 units.

[O.56022]

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS [s]abc-[t]def AIS \
 TOT nnn e LN MSG:
 tttt tttt tttt tttt tttt tttt tttt
 tttt tttt tttt tttt tttt tttt tttt
 tttt tttt tttt tttt tttt tttt tttt
 tttt tttt tttt tttt tttt tttt tttt EOM

.
.
 .

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS [u]jkl-[v]ghi AIS \
 TOT nnn e LN MSG:
 tttt tttt tttt tttt tttt tttt tttt
 tttt tttt tttt tttt tttt tttt tttt
 tttt tttt tttt tttt tttt tttt tttt
 tttt tttt tttt tttt tttt tttt tttt EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS [s]abc-[v]ghi AIS COMPL

⇒ NOTE:
 The preceding message applies to DS3 or HDS3 or HSU units.

Hierarchical

[O.56021]

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS uvmnp-defgh AIS \
 TOT nnn e LN MSG:
 tttt tttt tttt tttt tttt tttt tttt tttt tttt tttt

tttt tttt tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt tttt tttt EOM

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M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS ijklm-wxkqr AIS \
TOT nnn e LN MSG:

tttt tttt tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt tttt tttt EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS uvmnp-wxkqr AIS COMPL



NOTE:

The preceding message applies to FTU, IFTU, or IFTU2 units.

[O.56022]

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS uvmnp-defgh AIS \
TOT nnn e LN MSG:

tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt EOM

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M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS ijklm-wxkqr AIS \
TOT nnn e LN MSG:

tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS uvmnp-wxkqr AIS COMPL



NOTE:

The preceding message applies to DS3 or HDS3 or HSU units.

2.048 Mbit/s Termination

Nonhierarchical

[O.56021]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS [s]abc-[t]def AIS \
TOT nnn e LN MSG:
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt EOM

.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS [u]jkl-[v]ghi AIS \
TOT nnn e LN MSG:
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS [s]abc-[v]ghi AIS COMPL
```



NOTE:

The preceding message applies to FTU, IFTU, or IFTU2 units.

[O.56022]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS [s]abc-[t]def AIS \
TOT nnn e LN MSG:
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt EOM

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.
.
M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS [u]jkl-[v]ghi AIS \
TOT nnn e LN MSG:
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS [s]abc-[v]ghi AIS COMPL
```



NOTE:
The preceding message applies to HSU units.

Hierarchical

[O.56021]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS uvmnp-defgh AIS \
TOT nnn e LN MSG:
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt EOM
```

.
.
.

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS ijklm-wxkqr AIS \
TOT nnn e LN MSG:
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS uvmnp-wxkqr AIS COMPL
```



NOTE:
The preceding message applies to FTU, IFTU, or IFTU2 units.

[O.56022]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS uvmnp-defgh AIS \
TOT nnn e LN MSG:
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt EOM
```

.
.
.

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS ijklm-wxkqr AIS \
TOT nnn e LN MSG:
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt
tttt tttt tttt tttt tttt tttt tttt tttt EOM
```

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPCS uvmnp-wxkqr AIS COMPL



NOTE:
The preceding message applies to HSU units.

Denial Message

Nonhierarchical

[O.56021.01]

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPC [t]def[-[u]jkl] AIS \
UEQD DNY

[O.56021.02]

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPC [t]def[-[u]jkl] AIS \
COND cc DNY

Hierarchical

[O.56021.01]

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPC defgh[-ijklm] AIS \
UEQD DNY

[O.56021.02]

M hh:mm:ss xy,ww n[vv] UTL QRY ALMOPT NPC defgh[-ijklm] AIS \
COND cc DNY

Explanation of Parameters

ALMOPT	Alarm option
NPC	Network processing circuit
[s]abc	The 3- or 4-digit starting nonhierarchical NPC number
[v]ghi	The 3- or 4-digit ending nonhierarchical NPC number
uvmnp	Starting hierarchical NPC number
wxkqr	Ending hierarchical NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module

	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
[t]def	The 3- or 4-digit nonhierarchical NPC number ([s]abc through [u]jkl)
[u]jkl	The 3- or 4-digit nonhierarchical NPC number ([t]def through [v]ghi)
edfgh	Hierarchical NPC number (uvmnp through ijklm)
ijklm	Hierarchical NPC number (edfgh through wxkqr)
ed	Unit number (uv through wx)
f	Module number
gh	NPC number
e	Number of lines in message
	The number of lines in the message depends on the number of equipped NPCs to be reported.
nnn	Total number of NPCs in the output segment
TOT	Total
ttt	AIS Alarm option programmed for the NPC
INFO	Information message (for all domestic NPCs)
MJ	Major alarm (for all domestic NPCs)
MN	Minor alarm (for domestic non-SLC type NPCs)
-	Unequipped
	2.048 Mbit/s Termination
MI	Information message
PMA	Prompt maintenance alarm major
PMC	Prompt maintenance critical alarm
DMA	Deferred maintenance minor alarm
	Digital Signal Processing Platform NPCs that run applications also cause dashes to be produced for tttt.
UEQD	Unequipped
cc	Hexadecimal condition code

cc	<i>Explanation</i>
0B	Invalid CEPT NPC
60	Selectable AIS not valid for specified NPC(s) type
61	All NPC(s) are either not valid or not grown

UTILITY QUERY ALARMS

Explanation of Command

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This command reports the following alarms:

- Critical frame alarms caused by duplex failures.
- Failed or out-of-service alarms for the FTU/IFTU/IFTU2 NPCs. This includes Digital Signal Processing Platform (DSPP) NPCs.

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This command reports the following alarms:

- Critical frame alarms caused by duplex failures.
- Buffer overflow alarm on each of the eight C-bit processor (CPR) packs.
- Failed or out-of-service alarms for the FTU/IFTU/IFTU2 NPCs. This includes Digital Signal Processing Platform (DSPP) NPCs.
- Primary block failure alarm(s).
- Received time slot zero (TS0) failure for Transmic 1G.

Command

[I.53151]
UTL:[FRM xy][,SEQ ww]:QRY,ALMS,DBASE!

Completion Message

Nonhierarchical

[O.53151]
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS c EOM

[M hh:mm:ss xy,ww n[vv] UTL QRY ALMS CB NPC BOFL 2 LN MSG:]
[[s]ghi [s]ghi [s]ghi [s]ghi [s]ghi [s]ghi [s]ghi [s]ghi EOM]

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS FTU NPC A00S e LN MSG:
[s]abc [s]abc [s]abc [s]abc [s]abc [s]abc [s]abc [s]abc
.

```

.
[s]abc [s]abc [s]abc [s]abc [s]abc [s]abc [s]abc [s]abc EOM
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS FTU NPC A00S e LN MSG:
[s]abc [s]abc [s]abc [s]abc [s]abc [s]abc [s]abc [s]abc
.
.
[s]abc [s]abc [s]abc [s]abc [s]abc [s]abc [s]abc [s]abc EOM
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS CGA [s]abc k[l[m[...]]] EOM
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS CGA [t]def k[l[m[...]]] EOM
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS NPC [s]abc[ PBA k[l[m[...]]]]
[ TS0 abcdefgh] EOM
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS NPC [t]def[ PBA k[l[m[...]]]
[ TS0 abcdefgh] EOM
M hh:mm:ss xy,mm n[vv] UTL QRY ALMS DBASE COMPL

```

Hierarchical

[O.53151]

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS c EOM

[M hh:mm:ss xy,ww n[vv] UTL QRY ALMS CB NPC BOFL 2 LN MSG:]
[edfgh edfgh edfgh edfgh edfgh edfgh edfgh edfgh EOM]

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS FTU NPC A00S e LN MSG:
uvmnp uvmnp uvmnp uvmnp uvmnp uvmnp uvmnp uvmnp
.
.
uvmnp uvmnp uvmnp uvmnp uvmnp uvmnp uvmnp uvmnp EOM
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS FTU NPC A00S e LN MSG:
uvmnp uvmnp uvmnp uvmnp uvmnp uvmnp uvmnp uvmnp
.
.
uvmnp uvmnp uvmnp uvmnp uvmnp uvmnp uvmnp uvmnp EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS CGA uvmnp k[l[m[...]] EOM
.
.
.

```

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS CGA wxkqr k[l[m]...] EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS NPC uvmnp[ PBA k[l[m]...]] \
[ TS0 abcdefgh] EOM
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS NPC wxkqr[ PBA k[l[m]...]] \
[ TS0 abcdefgh] EOM

M hh:mm:ss xy,mm n[vv] UTL QRY ALMS DBASE COMPL

```

Explanation of Parameters

ALM(S)	Alarm(s)
DBASE	Data base Used to provide the output necessary to verify data base coherence between DACS II and the DACS controller.
c	Duplex frame alarm status 1 Duplex frame alarm 0 No Duplex frame alarm

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CB	C-bit
NPC	Network processing circuit

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BOFL	Buffer overflow The section of the message reporting buffer overflow is optional. It will only appear if there are C-bit Processor (CPR) circuit packs exhibiting a buffer overflow condition.
e	Number of lines in message (from 1 to 5 lines)
FTU	Facility terminating unit Only alarmed FTU NPCs (including DSPP NPCs) will be reported. Hence the number of NPCs in the message and the number of lines is variable.

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[s]ghi	The 3- or 4-digit nonhierarchical CB type NPC number. For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

[s]abc, [t]def The 3- or 4-digit nonhierarchical NPC numbers.
For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

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edfgh Hierarchical CB-type NPC number
ed Unit number
f Module number
gh NPC number
For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp Hierarchical FTU NPC number

wxkqr Hierarchical FTU NPC number
uv,wx Unit number
m,k Module number
np,qr NPC number within the module
For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

BOFL Buffer overflow

AOOS Autonomous out-of-service (autonomous removal)

1.544 Mbit/s Termination

CGA Carrier group alarm

k,l,m,... Representation for multiple alarms
A AIS - Alarm Indication Signal; also known as All Ones Signal or Blue Signal
B Both - Yellow and Red (Note: B is valid only for SLC[®] Series 5 NPCs)
L LMA - Local Multiframe Alarm
M RMA - Remote Multiframe Alarm
R Red
Y Yellow

PBA Primary block alarm

The primary block alarms are output only for those FTU NPCs for which the alarms have been reported and without regard for how the NPC is provisioned.

k,l,m,...

Representation for multiple alarms

For PA type NPCs:

A	Primary AIS	AIS received in all 32 time slots
B	BER	Bit error rate detected in received signal
C	LCMA	Loss of CRC4 multiframe alignment in TS0
E	RBER	Remote bit error rate detected in TS0 bit 4
F	LOF	Loss of Frame type Primary block failure
G	FLCMA	Far-end Loss of CRC4 multiframe alignment in TS0
I	RAIS	Remote AIS detected in TS0 bit 4
L	LMA	Loss of multiframe alignment in CAS TS16
M	R16	RAI received in TS16 bit 6 of frame 0
P	PFWOOF	TS0 Pseudo Frame Word Out-Of-Frame
R	LOS	Loss of Signal type Primary block failure
S	SFI	Synchronization failure indication in TS0 bit 5
V	A16	AIS received in CAS TS16
X	EER	Excessive error rate
Y	RAI	Remote alarm indication received in TS0 bit 3
Z	RPSFI	Remote Power Supply Failure Indicator

For PB and PC type NPCs:

A	Primary AIS	AIS received in all 32 time slots
B	BER	Bit error rate detected in received signal
E	RBER	Remote bit error rate detected in TS0 bit 4
I	RAIS	Remote AIS detected in TS0 bit 4
L	LMA	Loss of multiframe alignment in CAS TS16
M	R16	RAI received in TS16 bit 6 of frame 0
R	PBF	Primary block failure caused by LOS or LOF
S	SFI	Synchronization failure indication in TS0 bit 5
V	A16	AIS received in CAS TS16
X	EER	Excessive error rate
Y	RAI	Remote alarm indication received in TS0 bit 3
Z	RPSFI	Remote Power Supply Failure Indicator

TS0 Time slot 0

abcdefgh Spare bits in TS0

TS0-abcdefgh will only appear in the message for NPCs that are provisioned for Transmic 1G.

ab Spare international bits S_i

If the NPC is not provisioned for the CRC multiframe format, bits a and b shall represent the S_i bits in the Frame Word (FW) and the Non Frame Word (NFW), respectively.

If the NPC is provisioned for the CRC multiframe format, a and b shall represent the S_i bits in frames 13 and 15 of the CRC multiframe in the NFW, respectively.

c Remote Alarm Indication must be - (hyphen).

de Two spare national bits S_4 through S_5 in the NFW.

f RPSFI (Remote Power Supply Failure Indicator) bit in the NFW if provisioned for RPSFI otherwise spare national bit.

gh Two spare national bits S_7 through S_8 in the NFW

Valid values for a through h are described below:

- 0** Transmitted bit set to binary 0
 - 1** Transmitted bit set to binary 1
 - P** Pass-through: the received bit will be cross-connected unchanged.
-

UTILITY QUERY ALARMS

Explanation of Command



NOTE:

This command applies to 1.544 Mbit/s Termination only.

This message retrieves the information of nondigroup-associated alarm(s) declared for a SLC[®] carrier remote terminal. Two completion output formats, O.53141 and O.53142, are employed for this message. Message O.53141 is used to present SLC[®] Series 5 carrier Feature Package C (FPC) related alarms, and message O.53142 is used for SLC 96 carrier-related alarms.

Command

[I.53141]

UTL: [FRM xy][, SEQ ww]:QRY, ALMS, {RT|DL} ffff!

Completion Message

[O.53141]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS {RT|DL} ffff MD g[g] 3 LN MSG:
DLF  MISC1  MISC2  PWR  COMP  EEPROM  RGF  {RT|DL}
tuu  uu      uu      uu   uu    uu      uu   uu      COMPL
```

[O.53142]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS {RT|DL} ffff MD g[g][ SWMN x] \
3 LN MSG:
PWR  MISC  {RT|DL}
uu   uu    uu    COMPL
```

Denial Message

[O.53141.01]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS {RT|DL} ffff[ MD g[g]] \
COND cc DNY
```

Explanation of Parameters

ALMS	Alarm
RT	Remote terminal

DL	Digital carrier line unit (DCLU)
ffff	Remote Terminal ID number (0000 through 9999)
MD	Mode
g[g]	Operation Mode of a SLC [®] carrier bank
1	SLC 96 carrier Mode 1
3	SLC 96 carrier Mode 3
C	SLC Series 5 carrier FPC
DLF	Data link failure
tuu	DLF states
AMN	DLF on Digroup A causes minor alarm
PMN	DLF on Digroup P causes minor alarm
---	No DLF
MISC1	Miscellaneous alarm 1
MISC2	Miscellaneous alarm 2
PWR	Power alarm
COMP	Compatibility alarm
EEPROM	EEPROM Alarm
RGF	Ringing generator failure
uu	States for other alarms
MJ	Major alarm
MN	Minor alarm
MM	Major alarm and Minor alarm coexisting
--	No alarm
SWMN	Protection switch related minor alarm
x	Protection switch related minor alarm handling setting
R	Declare locally and send MN via data link to the DCLU
L	Declare locally only
cc	Hexadecimal condition code

cc	<i>Explanation</i>
11	UC is out of service
12	UC is in service but failed
7E	Bank id number not found
FA	The mode of the RT is not applicable

UTILITY QUERY ALARMS

Explanation of Command

This command reports the source of all alarms currently on the DACS II frame. For each entity that has been autonomously removed, the resulting alarm state is given.

If there are no alarms to report, a short line message is output indicating that the total number of alarms is 000.

Note that the DS3U message segment applies to both the DS3 unit and the Hybrid DS3 unit (HDS3U). The MXR message applies to both MXR and Hybrid MXR.



NOTE:

The HSU is made up of two units and each unit can consist of two OI circuits. The OI circuit can either be an OC3 or STM-1 interface.

Separate message segments are shown for the "Alarm Severity - Intervention Level - Message Logging" feature as appropriate.

Command

[I.53111]

UTL:[FRM xy][,SEQ ww]:QRY,ALMS!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

When there are no alarms active on the frame, the following output appears

[O.53111]

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS TOTAL 000 COMPL


```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS 3 LN MSG:
SYNC x y CRO x
TLI a b c d e f g h a b c d e f g h EOM
```

With the alarm severity, intervention level, and message logging feature present:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS 9 LN MSG:
SYNC x y CRO x
      y y      y
      z z      z
      u u      u
TLI a b c d e f g h a b c d e f g h
    y y y y y y y y y y y y y y
    z z z z z z z z z z z z z z
    u u u u u u u u u u u u u u EOM
```

9. Summary line showing cross-connect (ECCN) entity alarm status.

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS TOTAL ETSIS tt nn 3 LN MSG:
01 x y 02 x y 03 x y 04 x y 05 x y 06 x y 07 x y 08 x y
09 x y 10 x y 11 x y 12 x y 13 x y 14 x y 15 x y 16 x y EOM
```

10. Alarm status of the common equipment within each unit, in unit number order. (Only those units which are equipped are shown in the output; for example, if only two units are equipped, only two data lines appear).

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS e LN MSG:
<data line for first equipped unit>
<data line for second equipped unit>
<data line for third equipped unit>
<data line for fourth equipped unit> EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS e LN MSG:
<data line for fifth equipped unit>
<data line for sixth equipped unit>
<data line for seventh equipped unit>
<data line for eighth equipped unit> EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS e LN MSG:
<data line for ninth equipped unit>
<data line for tenth equipped unit>
<data line for eleventh equipped unit>
<data line for twelfth equipped unit> EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS e LN MSG:
<data line for thirteenth equipped unit>
<data line for fourteenth equipped unit>
<data line for fifteenth equipped unit>
```

<data line for sixteenth equipped unit> EOM

Data Lines For Summary Alarm Information On A Unit (FTU/IFTU/IFTU2, DSPU, DS3U, HSU)

Data line for a unit equipped as an FTU/IFTU/IFTU2:

UNIT [q]q UC a FTMI b c d e FC f g h i j k l m [CCB r s] [00S]

Data line for a unit equipped as a DS3U or an HDS3U:

UNIT [q]q UC a FLI b c FMT l m MXR d e f g h i j MIU n o p q u v w \
DU <aa> [CCB r s] [00S]

Data line for a unit equipped as an HSU unit:

UNIT [q]q UC a OI b c d e FMT l m MPR f g h i j n o \
DU <aa> [CCB r s] [00S]

Data line for a unit equipped as a DSPU:

UNIT [q]q UC a DSPI b [CCB r s] [00S]

11. DS3, HDS3 facility alarm segment (only shown if DS3 or HDS3 units are equipped and in alarm)

For DS3U or HDS3U:

Up to 4 five-line output segments can be printed, depending on the number of DS3 or HSU Units equipped (1-16). For an HSU unit:

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS OI rr e LN MSG:
UNIT q y y ALMS gg
UNIT q y y
UNIT q y y
UNIT q y y EOM

Up to 4 five-line output segments can be printed, depending on the number of HSU units equipped (1-16).

12. RT alarm segment (only shown if RT is provisioned and in alarm)

[M hh:mm:ss xy,ww n[vv] UTL QRY ALMS {RT|DL} ffff x EOM]

13. NPC alarm data per unit (FTU/IFTU/IFTU2, DS3U, HDS3U, DSPU,HSU), shown in unit order (1,2,...). If a unit or module is unequipped or there are no NPC alarms, the corresponding message segment is skipped:

For a DS1 Facility Terminating Module (FTM) **without** the alarm severity, intervention level, and message logging feature present, or if present, with intervention levels turned off:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS FTU NPCS [s]aaa-[t]bbb \
tt[ 00S] 5 LN MSG:
x x x x x x x x x x ALMS nn
x x x x x x x x x x
x x x x x x x x x x
x x x x x x x x x x EOM
```



NOTE:

If any odd NPC has been provisioned as a Digital Signal Processing Platform application NPC (SD-type), then the even NPC following it does not exist and dashes are shown in its place.

For a DS1 Facility Terminating Module (FTM) **with** the alarm severity, intervention level, and message logging feature present and intervention levels turned on:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS FTU NPCS [s]aaa-[t]bbb \
tt[ 00S] 5 LN MSG:
[s]ccc-[t]ddd
x x x x x x x x x x
y y y y y y y y y y
z z z z z z z z z z
u u u u u u u u u u
[s]ccc-[t]ddd
x x x x x x x x x x
y y y y y y y y y y
z z z z z z z z z z
u u u u u u u u u u
[s]ccc-[t]ddd
x x x x x x x x x x
y y y y y y y y y y
z z z z z z z z z z
u u u u u u u u u u
[s]ccc-[t]ddd
x x x x x x x x x x
y y y y y y y y y y
z z z z z z z z z z
```

```
u u u u u   u u u u u
ALMS nn      EOM
```

⇒ NOTE:
If any odd NPC has been provisioned as a Digital Signal Processing Platform application NPC (SD-type), then the even NPC following it does not exist and dashes are shown in its place.

For a DS3 or an HDS3U module:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS DS3U NPCS [s]aaa-[t]bbb tt \
[ 00S]  5 LN MSG:
x x x x x x x ALMS nn
x x x x x x x
x x x x x x x
x x x x x x x EOM
```

For an OI module:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS HSU NPCS [s]aaa-[t]bbb tt \
[ 00S]  5 LN MSG:
x x x x x x x ALMS nn
x x x x x x x
x x x x x x x
x x x x x x x EOM
```

For a DSPU:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS UNIT [q]q DSPU NPCS \
[ 00S]  3 LN MSG:
[s]zzz x y [s]zzz x y [s]zzz x y [s]zzz x y ALMS nn
[s]zzz x y [s]zzz x y [s]zzz x y [s]zzz x y EOM
```

14. Completion line

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS COMPL
```

Hierarchical

When there are no alarms active on the frame, the following output appears:

[O.53112]

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS TOTAL 000 COMPL

When there are alarms active on the frame, the following output appears:

The individual message segments are shown in the order they appear.
Explanatory text accompanies each message segment.

[O.53111]

1. The following segment appears only if the alarm severity, intervention level, and message logging features are present.

M hh:mm:ss xy,ww n[vv] Alarm Severity Feature is {ON|OFF}
M hh:mm:ss xy,ww n[vv] Intervention Level Feature is {ON|OFF}

2. Summary line showing status of CR, MJ, MN, MC, and PWR alarms.

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS SUMMARY CR t MJ u MN v \\
MC w PWR z EOM

3. Summary line showing alarm status of the various power units within each FTU/IFTU/IFTU2/DSPU/DS3U,HSU, the Synchronizer, the Main Controller, and ECCN.

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS PWR 2 LN MSG:
w w w w w w w w w w w w w w w w w w EOM

4. Summary line showing status of alarms on the main controller and switch complex (ECCN).

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS a b c d e f g h i j k l m
n o p q r s EOM

For DACS II frames **with** the alarm severity, intervention level, and message logging feature present.

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS a b c d e f g h i j k l m
n o p q r s
                                     y - - - y - - - - - y
y y y y y y
                                     z - - - z - - - - - z
z z z z z z
                                     u - - - u - - - - - u
u u u u u u EOM

```

5. Summary line showing synchronizer entities alarm status.

Without the alarm severity, intervention level, and message logging feature present.

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS 3 LN MSG:
SYNC x y CRO x
TLI a b c d e f g h a b c d e f g h EOM

```

With the alarm severity, intervention level, and message logging feature present.

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS 9 LN MSG:
SYNC x y CRO x
      y y      y
      z z      z
      u u      u
TLI a b c d e f g h a b c d e f g h
    y y y y y y y y y y y y y y
    z z z z z z z z z z z z z z
    u u u u u u u u u u u u u u EOM

```

6. Summary line showing cross-connect (CCN/ECCN) entity alarm status.

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS TOTAL ETSIS tt nn 3 LN MSG:
01 x y 02 x y 03 x y 04 x y 05 x y 06 x y 07 x y 08 x y
09 x y 10 x y 11 x y 12 x y 13 x y 14 x y 15 x y 16 x y EOM

```

7. Alarm status of the common equipment within each unit, in unit number order (Only those units which are equipped will be shown in the output; for example, if only two units are equipped, only two data lines will appear).

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS e LN MSG:
<data line for first equipped unit>
<data line for second equipped unit>
<data line for third equipped unit>
<data line for fourth equipped unit> EOM

```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS e LN MSG:
<data line for fifth   equipped unit>
<data line for sixth   equipped unit>
<data line for seventh equipped unit>
<data line for eighth  equipped unit> EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS e LN MSG:
<data line for ninth   equipped unit>
<data line for tenth   equipped unit>
<data line for eleventh equipped unit>
<data line for twelfth equipped unit> EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS e LN MSG:
<data line for thirteenth equipped unit>
<data line for fourteenth equipped unit>
<data line for fifteenth  equipped unit>
<data line for sixteenth  equipped unit> EOM
```

Data Lines For Summary Alarm Information On A Unit (FTU/IFTU/IFTU2, DSPU, DS3U, HSU)

Data line for a unit equipped as an FTU/IFTU/IFTU2:

```
UNIT [q]q UC a FTMI b c d e FC f g h i j k l m[ CCB r s][ 00S]
```

Data line for a unit equipped as a DS3U or an HDS3U:

```
UNIT [q]q UC a FLI b c FMT l m MXR d e f g h i j MIU n o p q u v w \
DU <aa> [CCB r s][ 00S]
```

Data line for a unit equipped as an HSU unit:

```
UNIT [q]q UC a OI b c d e FMT l m MPR f g h i j n o \
DU <aa> [CCB r s][ 00S]
```

Data line for a unit equipped as a DSPU:

```
UNIT [q]q UC a DSPI b [CCB r s][ 00S]
```

8. DS3 or HDS3U or HSU facility alarm segment (only shown if DS3 or HDS3 or HSU units are equipped and in alarm)

For DS3U or HDS3U:

Up to 4 five-line output segments can be printed, depending on the number of DS3 Units equipped (1-16).

For HSU:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS {DS3|HSU} rr e LN MSG:
UNIT q y y ALMS gg
UNIT q y y
UNIT q y y
UNIT q y y EOM
```

Up to 4 five-line output segments can be printed, depending on the number of HSU Units equipped (1-16).

9. RT alarm segment (only shown if RT is provisioned and in alarm)

```
[M hh:mm:ss xy,ww n[vv] UTL QRY ALMS {RT|DL} ffff x EOM]
```

10. NPC alarm data per unit (FTU/IFTU/IFTU2, DS3U, HDS3U, DSPU), shown in unit order (1,2,...). If a unit or module is unequipped or there are no NPC alarms, the corresponding message segment is skipped:

For a DS1 Facility Terminating Module (FTM) **without** the alarm severity, intervention level, and message logging feature present, or if present, with intervention levels turned off:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS FTU NPCS uvmnp-wxkqr tt
[ OOS] 5 LN MSG:
x x x x x x x x x x ALMS nn
x x x x x x x x x x
x x x x x x x x x x
x x x x x x x x x x EOM
```



NOTE:

If any odd NPC has been provisioned as a Digital Signal Processing Platform application NPC (SD-type), then the even NPC following it does not exist and dashes are shown in its place.

For a DS1 Facility Terminating Module (FTM) **with** the alarm severity, intervention level, and message logging feature present and intervention levels turned on:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS FTU NPCS uvmnp-wxkqr tt \
[ OOS] 5 LN MSG:
uvmnp-wxkqr
x x x x x x x x x x
y y y y y y y y y y
```

```

z z z z z z z z z z
u u u u u u u u u u
uvmnp-wxkqr
x x x x x x x x x x
y y y y y y y y y y
z z z z z z z z z z
u u u u u u u u u u
uvmnp-wxkqr
x x x x x x x x x x
y y y y y y y y y y
z z z z z z z z z z
u u u u u u u u u u
uvmnp-wxkqr
x x x x x x x x x x
y y y y y y y y y y
z z z z z z z z z z
u u u u u u u u u u
ALMS nn EOM

```

⇒ NOTE:
If any odd NPC has been provisioned as a Digital Signal Processing Platform application NPC (SD-type), then the even NPC following it does not exist and dashes are shown in its place.

For a DS3 or a HDS3U module

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS DS3U NPCS uvmnp-wxkqr tt \
[ OOS] 5 LN MSG:
x x x x x x x ALMS nn
x x x x x x x
x x x x x x x
x x x x x x x EOM

```

For a OI module

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS HSU NPCS uvmnp-wxkqr tt \
[ OOS] 5 LN MSG:
x x x x x x x ALMS nn
x x x x x x x
x x x x x x x
x x x x x x x EOM

```

For a DSPU

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS UNIT [q]q DSPU NPCS \
[ OOS] 3 LN MSG:

```

uvmnp x y uvmnp x y uvmnp x y uvmnp x y ALMS nn
uvmnp x y uvmnp x y uvmnp x y uvmnp x y EOM

11. Completion line

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS COMPL

2.048 Mbit/s Termination

Nonhierarchical

When there are no alarms active on the frame, the following output appears:

[O.53111.01]

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS TOTAL 000 COMPL

When there are alarms active on the frame, the following output appears:

The individual message segments are shown in the order they appear.
Explanatory text accompanies each message segment.

[O.53111]

1. The following segment appears only if the alarm severity, intervention level, and message logging features are present.

M hh:mm:ss xy,ww n[vv] Alarm Severity Feature is {ON|OFF}
M hh:mm:ss xy,ww n[vv] Intervention Level Feature is {ON|OFF}

2. Summary line showing status of CR, MJ, MN, MC, and PWR alarms.

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS SUMMARY CR t MJ u MN v
MC w PWR z EOM

3. Summary line showing alarm status of the various power units within each FTU/IFTU/IFTU2/DSPU, the Synchronizer, the Main Controller, and ECCN.

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS PWR 2 LN MSG:
w w w w w w w w w w w w w w w w w w EOM

4. Summary line showing status of alarms on the main controller and switch complex (ECCN).

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS a b c d e f g h i j k l m
n o p q r s EOM
```

For DACS II frames (ECCN) **with** the alarm severity, intervention level, and message logging feature present.

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS a b c d e f g h i j k l m
n o p q r s
y - - - y - - - - - y
y y y y y y
z - - - z - - - - - z
z z z z z z
u - - - u - - - - - u
u u u u u EOM
```

5. Summary line showing synchronizer entities alarm status.

Without the alarm severity, intervention level, and message logging feature present.

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS 3 LN MSG:
SYNC x y CRO x
TLI a b c d e f g h _a _b _c _d _e _f _g _h EOM
```

With the alarm severity, intervention level, and message logging feature present.

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS 9 LN MSG:
SYNC x y CRO x
y y y
z z z
u u u
TLI a b c d e f g h _a _b _c _d _e _f _g _h
y y y y y y y y y y y y y y y y
z z z z z z z z z z z z z z z z
u u u u u u u u u u u u u u EOM
```

6. Summary line showing cross-connect (ECCN) entity alarm status.

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS TOTAL ETSIS tt nn 3 LN MSG:
01 x y 02 x y 03 x y 04 x y 05 x y 06 x y 07 x y 08 x y
09 x y 10 x y 11 x y 12 x y 13 x y 14 x y 15 x y 16 x y EOM
```

7. Alarm status of the common equipment within each unit, in unit number order. (Only those units which are equipped are shown in the output; for example, if only two units are equipped, only two data lines appear.)

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS e LN MSG:
<data line for first  equipped unit>
<data line for second equipped unit>
<data line for third  equipped unit>
<data line for fourth equipped unit> EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS e LN MSG:
<data line for fifth  equipped unit>
<data line for sixth  equipped unit>
<data line for seventh equipped unit>
<data line for eighth equipped unit> EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS e LN MSG:
<data line for ninth  equipped unit>
<data line for tenth  equipped unit>
<data line for eleventh equipped unit>
<data line for twelfth equipped unit> EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS e LN MSG:
<data line for thirteenth equipped unit>
<data line for fourteenth equipped unit>
<data line for fifteenth  equipped unit>
<data line for sixteenth  equipped unit> EOM
```

Data Lines For Summary Alarm Information On A Unit (FTU/IFTU/IFTU2, DSPU)

Data line for a unit equipped as an FTU/IFTU/IFTU2:

```
UNIT [q]q UC a FTMI b c d e FC f g h i j k l m[ CCB r s][ 00S]
```

Data line for a unit equipped as a DSPU:

```
UNIT [q]q UC a DSPI b [CCB r s][ 00S]
```

8. NPC alarm data per unit (FTU/IFTU/IFTU2, DSPU), shown in unit order (1,2,...). If a unit or module is unequipped or there are no NPC alarms, the corresponding message segment is skipped:

For a DS1 Facility Terminating Module (FTM) **without** the alarm severity, intervention level, and message logging feature present, or if present, with intervention levels turned off:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS FTU NPCS [s]aaa-[t]bbb \
tt[ 00S] 5 LN MSG:
x x x x x x x x x x ALMS nn
x x x x x x x x x x
x x x x x x x x x x
x x x x x x x x x x EOM
```

⇒ NOTE:
If any odd NPC has been provisioned as a Digital Signal Processing Platform application NPC (SD-type), then the even NPC following it does not exist and dashes are shown in its place.

For a DS1 Facility Terminating Module (FTM) **with** the alarm severity, intervention level, and message logging feature present and intervention levels turned on:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS FTU NPCS [s]aaa-[t]bbb \
tt[ 00S] 5 LN MSG:
[s]ccc-[t]ddd
x x x x x x x x x x
y y y y y y y y y y
z z z z z z z z z z
u u u u u u u u u u
[s]ccc-[t]ddd
x x x x x x x x x x
y y y y y y y y y y
z z z z z z z z z z
u u u u u u u u u u
[s]ccc-[t]ddd
x x x x x x x x x x
y y y y y y y y y y
z z z z z z z z z z
u u u u u u u u u u
[s]ccc-[t]ddd
x x x x x x x x x x
y y y y y y y y y y
z z z z z z z z z z
u u u u u u u u u u
ALMS nn EOM
```

⇒ NOTE:
If any odd NPC has been provisioned as a Digital Signal Processing Platform application NPC (SD-type), then the even NPC following it does not exist and dashes are shown in its place.

For a DSPU

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS UNIT [q]q DSPU NPCS
[ 00S] 3 LN MSG:
[s]zzz x y [s]zzz x y [s]zzz x y [s]zzz x y ALMS nn
[s]zzz x y [s]zzz x y [s]zzz x y [s]zzz x y EOM
```

9. Completion line

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS COMPL
```

Hierarchical

When there are no alarms active on the frame, the following output appears:

```
[O.53111.01]
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS TOTAL 000 COMPL
```

When there are alarms active on the frame, the following output appears:

The individual message segments are shown in the order they appear.
Explanatory text accompanies each message segment.

```
[O.53111]
```

1. The following segment appears only if the alarm severity, intervention level, and message logging features are present.

```
M hh:mm:ss xy,ww n[vv] Alarm Severity Feature is {ON|OFF}
M hh:mm:ss xy,ww n[vv] Intervention Level Feature is {ON|OFF}
```

2. Summary line showing status of CR, MJ, MN, MC, and PWR alarms.

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS SUMMARY CR t MJ u MN v
MC w PWR z EOM
```

3. Summary line showing alarm status of the various power units within each FTU/IFTU/IFTU2/DSPU, the Synchronizer, the Main Controller, and ECCN.

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS PWR 2 LN MSG:
W W W W W W W W W W W W W W W W W W EOM
```

4. Summary line showing status of alarms on the main controller and switch complex (ECCN).

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS a b c d e f g h i j k l m
n o p q r s EOM
```

For DACS II frames (ECCN) **with** the alarm severity, intervention level, and message logging feature present.

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS a b c d e f g h i j k l m
n o p q r s
y - - - y - - - - - y
y y y y y y
z - - - z - - - - - z
z z z z z z
u - - - u - - - - - u
u u u u u u EOM
```

5. Summary line showing synchronizer entities' alarm status.

Without the alarm severity, intervention level, and message logging feature present.

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS 3 LN MSG:
SYNC x y CRO x
TLI a b c d e f g h a b c d e f g h EOM
```

With the alarm severity, intervention level, and message logging feature present.

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS 9 LN MSG:
SYNC x y CRO x
y y y
z z z
u u u
TLI a b c d e f g h a b c d e f g h
y y y y y y y y y y y y y
z z z z z z z z z z z z z
u u u u u u u u u u u u u EOM
```

6. Summary line showing cross-connect (ECCN) entity alarm status.

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS TOTAL ETSIS tt nn 3 LN MSG:
01 x y 02 x y 03 x y 04 x y 05 x y 06 x y 07 x y 08 x y
```

09 x y 10 x y 11 x y 12 x y 13 x y 14 x y 15 x y 16 x y EOM

7. Alarm status of the common equipment within each unit, in unit number order. (Only those units which are equipped will be shown in the output; for example, if only two units are equipped, only two data lines will appear.)

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS e LN MSG:
<data line for first equipped unit>
<data line for second equipped unit>
<data line for third equipped unit>
<data line for fourth equipped unit> EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS e LN MSG:
<data line for fifth equipped unit>
<data line for sixth equipped unit>
<data line for seventh equipped unit>
<data line for eighth equipped unit> EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS e LN MSG:
<data line for ninth equipped unit>
<data line for tenth equipped unit>
<data line for eleventh equipped unit>
<data line for twelfth equipped unit> EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS e LN MSG:
<data line for thirteenth equipped unit>
<data line for fourteenth equipped unit>
<data line for fifteenth equipped unit>
<data line for sixteenth equipped unit> EOM

Data Lines For Summary Alarm Information On A Unit (FTU/IFTU/IFTU2, DSPU)

Data line for a unit equipped as an FTU/IFTU/IFTU2:

UNIT [q]q UC a FTMI b c d e FC f g h i j k l m[CCB r s][OOS]

Data line for a unit equipped as a DSPU:

UNIT [q]q UC a DSPI b [CCB r s][OOS]

8. NPC alarm data per unit (FTU/IFTU/IFTU2, DSPU), shown in unit order (1,2,...). If a unit or module is unequipped or there are no NPC alarms, the corresponding message segment is skipped:

For a DS1 Facility Terminating Module (FTM) **without** the alarm severity, intervention level, and message logging feature present, or if present, with intervention levels turned off:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS FTU NPCS uvmnp-wxkqr tt \
[ OOS] 5 LN MSG:
x x x x x x x x x x ALMS nn
x x x x x x x x x x
x x x x x x x x x x
x x x x x x x x x x EOM
```



NOTE:

If any odd NPC has been provisioned as a Digital Signal Processing Platform application NPC (SD-type), then the even NPC following it does not exist and dashes are shown in its place.

For a DS1 Facility Terminating Module (FTM) **with** the alarm severity, intervention level, and message logging feature present and intervention levels turned on:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALMS FTU NPCS uvmnp-wxkqr tt \
[ OOS] 5 LN MSG:
uvmnp-wxkqr
x x x x x x x x x x
y y y y y y y y y y
z z z z z z z z z z
u u u u u u u u u u
uvmnp-wxkqr
x x x x x x x x x x
y y y y y y y y y y
z z z z z z z z z z
u u u u u u u u u u
uvmnp-wxkqr
x x x x x x x x x x
y y y y y y y y y y
z z z z z z z z z z
u u u u u u u u u u
uvmnp-wxkqr
x x x x x x x x x x
y y y y y y y y y y
z z z z z z z z z z
u u u u u u u u u u
ALMS nn EOM
```



NOTE:

If any odd NPC has been provisioned as a Digital Signal Processing Platform application NPC (SD-type), then the even NPC following it does not exist and dashes are shown in its place.

For a DSPU

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS UNIT [q]q DSPU NPCS \\
[00S] 3 LN MSG:
uvmnp x y uvmnp x y uvmnp x y uvmnp x y ALMS nn
uvmnp x y uvmnp x y uvmnp x y uvmnp x y EOM

9. Completion line

M hh:mm:ss xy,ww n[vv] UTL QRY ALMS COMPL

Explanation of Parameters

To aid referencing the parameters listed for a given message, the line containing the parameters is listed below just before the explanation of that particular set of parameters is given.

When an FTM module has been provisioned as CEPT, then there are 32 NPCs per Facility Terminating Module (FTM).

The DACS II frame alarm state summary is given at the beginning of the alarm report for these variables:

CR t MJ u MN v MC w PWR z

CR	Critical
t	Critical alarm status
MJ	Major
u	Major alarm status
MN	Minor
v	Minor alarm status
MC	Main controller
w	Main controller alarm status
PWR	Power
z	Power alarm status

The value of variables t, u, v, w, and z determines the alarm status. These values and their meaning are given below for t through z.

1	Active
0	Not active

w	Power failure indicator

Each w in the output message corresponds to a particular power unit in the frame. The w's are numbered from left to right beginning with 1. The w's will end with 20.

Determine the number associated with the w of interest then use the table below to determine the affected power unit. The value of w determines the status of the power unit.

w	Power unit status
M	Power failure (Major)
-	No power failure
1	Power unit of unit 1
2	Power unit of unit 2
3	Power unit of unit 3
4	Power unit of unit 4
5	Power unit of unit 5
6	Power unit of unit 6
7	Synchronizer (SYNC) 0
8	SYNC
9	Cross-Connect Network (ECCN) 0
10	ECCN 1
11	power unit of unit 7
12	power unit of unit 8
13	power unit of unit 9
14	power unit of unit 10
15	power unit of unit 11
16	power unit of unit 12
17	power unit of unit 13
18	power unit of unit 14
19	power unit of unit 15
20	power unit of unit 16

x Alarm Severity

a	Autonomously removed
-	Does not apply, or part of a larger failure group
*	Minor alarm

- M** Major alarm
- C** Critical alarm
- 2.048 Mbit/s Termination**
- I** Information

The following y, z, and u parameters are printed only if the Intervention Level feature is ON.

- y** Intervention level setting (1-6)
- z** Intervention Level
 - z** Intervention Level
 - IMA** (Immediate Maintenance Action)
 - DMA** (Deferred Maintenance Action)
 - NI** (No Intervention)
 - Not applicable
- u** New Individual Alarm Status effected by Intervention Level
 - No alarm or unprovisioned
 - I** Information
 - M** Major alarm
 - C** Critical

ALMS a b c d e f g h i j k l m n o p q r s **ALMS** Alarms

Each of the letters a through s following the keyword ALMS represents an entity in the DACS II frame. The entities are listed following this paragraph by the letter used to represent them. The values these letters assume give the alarm status of the particular entity. These values are listed immediately following the entity listing. Some entities do not use the full range of values but their values are separately described in the list of entities.

- a** MC (Main controller)
- b** MP (Main processor)
- c** CI/ECI (Communications interface)
- d** SCC (Secondary source controller)
- e** PMEM
- f** SMEM

g	Link 1
h	Link 2
i	Link 3
j	Link 4
k	Link 5
l	Link 6
m	XC0 (Cross-Connect 0)
n	XC0 (Cross-Connect 1)
o	CCI 0 (Clock and Control Interface 0 for CEF frame) CCI 1 (Clock and Control Interface 1 for CEF frame)
q	TOD (Time of Day) reset
r	TOD (Time of Day) reset
s	SMEM OOS

Valid values are as follows:

a	Autonomously removed
-	Does not apply, or part of a larger failure group
*	Minor alarm
M	Major alarm
C	Critical alarm
I	Information

"I" reports maintenance information for E1 signals. This state exists for the conditions listed below:

AIS	Alarm indication signal
RAI	Remote alarm indication
RBER	Remote bit error rate indication
RAIS	Remote alarm indication signal
SFI	Synchronization failure indication
A16	AIS in CTS 16
R16	RAI in CTS 16

The value "I" appears in reports for E1s where performance monitoring thresholds have been exceeded if those thresholds were provisioned at the maintenance information (MI) level.

The value "*" appears in reports of a BER alarm on CEPT NPCs (E1s), in addition to reporting all the minor alarm conditions supported in previous releases.

If the embedded signals within a DS3 or a Hybrid DS3 signal are in AIS (Alarm Indication Signal), then an "I" is shown for that signal.

In addition, when the entire DS3 or Hybrid DS3 is receiving AIS the embedded DS1 and E1 signals shows an "I".

Where a failure group includes more than one circuit pack and individual circuit pack information is available, the character "a" is used to indicate removal or attempted removal of that pack.

A hyphen (-) indicates the alarm state is not applicable to the particular circuit. For example, an unequipped circuit would display a "-" in its status field.

1.544 Mbit/s Termination

DS3U/HDS3U equipment entities:

Failure of a circuit pack might set the alarm bits of related circuit packs. Alarm bits a through s are set according to the following rules:

- All DS3 or HDS3U circuit pack entities can be in either state "a" or "-".
- A multiplexer-multiplexer interface unit functional group (MMFG) or an incoming DS3 signal failure puts the associated NPCs in the state "-".
- A failure of a multiplexer (MXR) does not cause the multiplexer interface unit (MIU) pair to be marked "a", even though the failure may cause the attempt to remove that MIU. If only the MXR fails, the MIU is still be in state "-".
- A failure of an MIU will not cause the MXR pair to be marked "a", even though the failure may cause the attempt to remove that MXR. If only the MIU fails, the MXR will still be in state "-".
- A manual removal of a DS3 facility removes any alarm that might exist on its associated MXR/HMXR or MIU.
- Because of protection switching in the DS3U or HDS3U, autonomous removal indications (a) for DS3U or HDS3U circuit packs are preserved across a frame boot. The boot operation is required to configure the unit to the protection state maintained in the data base. Data base consistency requires preservation of the "a" state.

Either Termination

HSU equipment entities:

Failure of a circuit pack might set the alarm bits of related circuit packs. Alarm bits are set according to the following rules:

- All HSU unit circuit pack entities can be in either state "a" or "-".
- A MPR or an incoming OI signal failure puts the associated NPCs in the state "-".
- A manual removal of a OI facility removes any alarm that might exist on its associated MPR.

Because of protection switching in the HSU unit, autonomous removal indications (a) for HSU circuit packs are preserved across a frame boot. The boot operation is required to configure the unit to the protection state maintained in the data base. Data base consistency requires preservation of the "a" state.

SLC carrier equipment entities:

Alarm bits a through s are set according to the following rule:

Because of protection switching for SLC carrier NPCs, an autonomous removal of a SLC carrier NPC is preserved across a frame boot. The boot operation is required to configure SLC carrier circuits to the protection state maintained in the data base. Data base consistency requires preservation of the "a" state.

SYNC	Synchronizer
x	Side 0 alarm status of the synchronizer
y	Side 1 alarm status of the synchronizer
	Variables x and y can assume one of the two alarm status values given below.
a	Autonomously removed
-	Does not apply, or part of a larger failure group
*	Minor alarm
M	Major alarm
C	Critical alarm
	2.048 Mbit/s Termination
I	Information
CRO	Clock reference oscillator
x	Side 0 alarm status of the oscillator
a	Autonomously removed
-	Does not apply, or part of a larger failure group

* Minor alarm
M Major alarm
C Critical alarm
2.048 Mbit/s Termination
I Information

TLI a b c d e f g h a b c d e f g h

TLI Timing link interface

a TLI 1 or Synchronizer sync port (SSP) 0 of TLI 1 side 0
b SSP 1 of TLI 1 side 0
c TLI 2 or SSP 0 of TLI 2 side 0
d SSP 1 of TLI 2 side 0
e TLI 3 or SSP 0 of TLI 3 side 0
f SSP 1 of TLI 3 side 0
g TLI 4 or SSP 0 of TLI 4 side 0
h SSP 1 of TLI 4 side 0
a TLI 1 or SSP 0 of TLI 1 side 1
b SSP 1 of TLI 1 side 1
c TLI 2 or SSP 0 of TLI 2 side 1
d SSP 1 of TLI 2 side 1
f SSP 1 of TLI 3 side 1
g TLI 4 or SSP 0 of TLI 4 side 1
h SSP 1 of TLI 4 side 1

See the ALMS section given previously for the alarm status values.

ETSIIS tt nn

ETSIIS Expanded timeslot interchangers

tt Total number. of equipped ETSIs (01 through 32)
nn Total number of alarming ETSIs (01 through 32)

UNIT [q]q UC a FTMI b c d e FC f g h i j k l m[CCB r s][OOS]

UC Unit controller

a UC status

The UC status values are the same as those given previously for entities a through s in the explanation of ALMS. This table follows the explanation of variable s.

FTMI b c d e

FTMI Facility terminating module interface

b Status for FTMI 1 of specified unit

c Status of FTMI 2 of specified unit

d Status of FTMI 3 of specified unit

e Status of FTMI 4 of specified unit

See the ALMS section given previously for the alarm status values.

FC f g h i j k l m

FC Format converter

f Status for FC 01 of specified FTU

g Status for FC 11 of specified FTU

h Status for FC 02 of specified FTU

i Status for FC 12 of specified FTU

j Status for FC 03 of specified FTU

k Status for FC 13 of specified FTU

l Status for FC 04 of specified FTU

m Status for FC 14 of specified FTU

See the ALMS section given previously for the alarm status values.

OOS Out of service

The OOS state applies to the Unit Controller.

1.544 Mbit/s Termination

FMT l m

l Status for FMT 0 of specified DS3 unit or HDS3 unit

m Status for FMT 1 of specified DS3 unit or HDS3 unit

See the ALMS section given previously for the alarm status values.

FLI b c

FLI

Facility line interface

b Status for service FLI of specified DS3 or HDS3 unit

c Status for protection FLI of specified DS3 or HDS3 unit

See the ALMS section given previously for the alarm status values.

FMT l m

FMT

Formatter for HSU unit

l Status for FMT 0 of specified HSU unit

m Status for FMT 1 of specified HSU unit

See the ALMS section given previously for the alarm status values.

OI b c

OI

HSU Optical Interface

b Status for service OI 1 of specified HSU unit

c Status for protection OI 1 of specified HSU unit

d Status for service OI 2 of specified HSU unit

e Status for protection OI 2 of specified HSU unit

See the ALMS section given previously for the alarm status values.

MPR f g h i j n o

MPR

Mapper

f Status for protection MPR of specified HSU unit

g Status for MPR 1 of specified HSU unit

h Status for MPR 2 of specified HSU unit

i Status for MPR 3 of specified HSU unit

j Status for MPR 4 of specified HSU unit

n Status for MPR 5 of specified HSU unit

- o** Status for MPR 6 of specified HSU unit
See the ALMS section given previously for the alarm status values.

DSPI b

DSPI Digital signal processing interface

- b** Status for DSPI (digital signal processing interface) of specified DSPU

See the ALMS section given previously for the alarm status values.

DS3 OR HDS3 UNPROTECTED ALARM

aa Status of alarm

See the ALMS section given previously for the alarm status values.

DS3 or HDS3 FACILITY ALARMS

ALMS DS3 rr

DS3 Digital signal 3 (44.736 Mb/s rate)

rr Total number of **equipped** DS3 or HDS3 facilities in the frame (1 through 96)

UNIT [q]q y y y y y y ALMS gg

y DS3 facility alarm status.

The DS3 facility is in a critical alarm if the incoming facility is in LOS, OOF, or BER. The DS3 facility is in a major alarm if the incoming facility has a Remote Alarm Indication (RAI). There is an informational "I" alarm, if AIS is received on the DS3 facility.

gg Total number of alarming DS3 facilities in the frame (01 through 96)

Either Termination

OI FACILITY ALARMS

ALMS OI rr

OI Optical Interface (either OC3 or STM-1)

rr	Total number of equipped OI facilities in the frame (01 through 96)
UNIT [q]q y y ALMS gg	
y	OI facility alarm status. The OI facility is in a critical alarm if the incoming facility is in LOS, OOF, or BER. The OI facility is in a major alarm if the incoming facility has a Remote Alarm Indication (RAI). There is an informational, minor, major or critical alarm, if AIS is received on the OI facility. The severity of the alarm is determined by the severity chosen for AIS when the OI is grown.
gg	Total number of alarming OI facilities in the frame (1 through 96)

1.544 Mbit/s Termination

SLC CARRIER ALARMS

ffff	RT or DCLU Bank Identification Number (0000 through 9999)
x	Status of RT or DCLU alarm See the ALMS section given previously for the alarm status values.

Either Termination:

FOR FTU AND DS3U/HDS3U AND HSU NPC ALARM DATA LINES

[s]aaa	The 3- or 4-digit nonhierarchical number of the first NPC in the module
[t]bbb	The 3- or 4-digit nonhierarchical number of the last NPC in the module
[s]ccc	The 3- or 4-digit nonhierarchical number of the last NPC in the module
[t]ddd	The 3- or 4-digit nonhierarchical number of the last NPC in the module The SA and SE types used in the HSU will have the same NPC numbering as the TE and TA types. For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical number of the first NPC in the module
wxkqr	Hierarchical number of the last NPC in the module

	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	The SA and SE types used in the HSU will have the same NPC numbering as the TE and TA types.
tt	Total number of equipped NPCs
	1.544 Mbit/s Termination
	01 through 40
	2.048 Mbit/s Termination
	01 through 32
nn	Total number of alarming NPCs
	1.544 Mbit/s Termination
	01 through 40
	2.048 Mbit/s Termination
	01 through 32

FOR DSPU NPC ALARM DATA LINE

[s]zzz The 3- or 4-digit nonhierarchical DSPU NPC number

RETRIEVE CROSS-CONNECT INFORMATION BETWEEN PLATFORM APPLICATIONS

Explanation of Command

This command retrieves the cross-connect information between platform application cards either for all application cards grown in the frame or for an individual application card.

The Output Message

The output message identifies:

1. The pseudo channel number for an individual connection that is used in the application-to-application cross-connect commands to identify the connection.
2. The NPC number and application assigned channel number for the first (FROM) application that is part of the connection.
3. The NPC number and application assigned channel number for the second (TO) application if available that is part of the connection.
4. The status of the connection, which is either:
 - Fully connected, or
 - Reserved.

A reserved connection can be identified by the missing channel number for the application that has not yet requested the connection or the application that has already disconnected the connection. A missing channel number is represented by "---".

Pseudo Channel Numbers

Pseudo channel numbers are not real channel numbers; instead, they identify table entries in DACS II that contain the pairs of application channels that are cross-connected to each other. Each cross-connection between application card channels has a unique pseudo channel number that identifies it. Cross-connections between application cards are established by using the NPC number of the other application card that the first application card expects to be cross-connected to and the pseudo channel number.

A command to each of the two applications referring to the other application in the command is required. DACS II matches the requests from the two applications that have requested to be cross-connected by matching the pseudo channel

numbers in both requests. For further information, see the manual(s) for the application(s) that you are using.

Cross-Connections

A cross-connection between applications is considered to be in the "reserved" state if at the time of executing this utility:

1. Only one application has made a request for the connection, or
2. One of the applications has already disconnected, but the other has not.

An actual physical cross-connect is only made when both applications have made matching requests. Also, the physical cross-connection between applications is taken down when the first of the two applications issues a disconnect command.

Command

Nonhierarchical

[I.51201]

UTL:[FRM xy][,SEQ ww]:QRY,APPL,{NPC [s]abc|ALL}!

Hierarchical

[I.51201]

UTL:[FRM xy][,SEQ ww]:QRY,APPL,{NPC uvmnp|ALL}!

Completion Message

Nonhierarchical

[O.51201]

M hh:mm:ss xy,ww n[vv] UTL QRY APPL {NPC [s]abc|ALL} e LN MSG:
PCHAN APPL1 CHAN1 APPL2 CHAN2
ddd [s]abc eee [v]ghi jjj

.

.

.

ddd [s]abc eee [v]ghi jjj EOM

.

.

.

[M hh:mm:ss xy,ww n[vv] UTL QRY APPL {NPC [s]abc|ALL} e LN MSG:]
[PCHAN APPL1 CHAN1 APPL2 CHAN2]
[ddd [s]abc eee [v]ghi jjj]

[.]
[.]

[.]
[ddd [s]abc eee [v]ghi jjj EOM]

UTL QRY APPL COMPL

Hierarchical

[O.51201]
M hh:mm:ss xy,ww n[vv] UTL QRY APPL {NPC uvmnp|ALL} e LN MSG:
PCHAN APPL1 CHAN1 APPL2 CHAN2
ddd uvmnp eee wxkqr jjj
.
.
.
ddd uvmnp eee wxkqr jjj EOM
.
.
.
[M hh:mm:ss xy,ww n[vv] UTL QRY APPL {NPC uvmnp|ALL} e LN MSG:]
[PCHAN APPL1 CHAN1 APPL2 CHAN2]
[ddd uvmnp eee wxkqr jjj]
[.]
[.]
[.]
[ddd uvmnp eee wxkqr jjj EOM]

UTL QRY APPL COMPL

Denial Message

Nonhierarchical

[O.51201]
M hh:mm:ss xy,ww n[vv] UTL QRY APPL {NPC [s]abc|ALL} COND cc DNY

Hierarchical

[O.51201.01]
M hh:mm:ss xy,ww n[vv] UTL QRY APPL {NPC uvmnp|ALL} COND cc DNY

**Explanation of
Parameters**

APPL This utility refers to application cards
The following are currently available applications:
SD111 X.50/X.57 Subrate Application
SD311 Digital Multipoint Bridge (DMB) Application

	SD411	DDS Subrate and MJU Application
	SDxyz	Any other application created after issuing this manual
NPC		This command refers to an NPC of the application type
[s]abc		NPC number for the application card (3- or 4-digit), which must always be odd.
uvmnp		NPC number for the application card (hierarchical), "np" must always be odd. If the NPC number is coded, then the command generates output for only those application-to-application cross-connections that connect to that application card. For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters." For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	ALL	Output of the entire application-to-application card cross-connect table is requested.
e		number of lines in message (maximum of 10)
PCHAN		Pseudo Channel number column
ddd		Pseudo channel number for this connection, range 1-999
APPL1		Column for NPC number(s) of first application
[s]abc		NPC number of first application (3- or 4-digit)
uvmnp		NPC number of first application (hierarchical)
CHAN1		Column for channel number(s) assigned by first application
eee		Channel number assigned by first application If the channel number is not present because the first application has already disconnected, then three dashes are shown as channel number.
APPL2		Column for NPC number(s) of second application
[v]ghi		NPC number of second application (3- or 4-digit)
wxkqr		NPC number of second application (hierarchical)
CHAN2		Column for channel number(s) assigned by second application
jjj		Channel number assigned by second application

If the channel number is not present because the second application has not yet requested the connection or the second application has already disconnected, then three dashes are shown as channel number.

cc Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
6A	No application NPCs grown in the frame
6B	No application-to-application connections present in the frame
6D	This application card does not connect to another application card

QUERY BIT-C NPC

Explanation of Command



NOTE:

This command applies to the 2.048 Mbit/s Termination interface only.

This command queries the C-bit state and the pattern for all CAS-type channels for a network processing circuit (NPC), a range of NPCs or all NPCs.

Command

Nonhierarchical

[I.56351]

UTL:[FRM xy][,SEQ ww]:QRY,BC s,{NPC [s]abc[-[t]def]|ALL}!

Hierarchical

[I.56351]

UTL:[FRM xy][,SEQ ww]:QRY,BC s,{NPC uvmp[-wxkqr]|ALL}!

Completion Message

Nonhierarchical

[O.56351]

M hh:mm:ss xy,ww n[vv] UTL QRY BC s [s]abc 001-015 4 LN MSG:
{xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz}
{xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz}
{xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} \

EOM

M hh:mm:ss xy,ww n[vv] UTL QRY BC s [s]abc 016-030 4 LN MSG:
{xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz}
{xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz}
{xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} \

COMPL

.
.
.

[M hh:mm:ss xy,ww n[vv] UTL QRY BC s [t]def 001-015 4 LN MSG:]
[{xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz}]
[{xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz}]

[{xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} \ EOM]

[M hh:mm:ss xy,ww n[vv] UTL QRY BC s [t]def 016-030 4 LN MSG:]
[xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz}]
[xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz}]
[xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} \ COMPL]

[M hh:mm:ss xy,ww n[vv] UTL QRY BC s [s]abc-[t]def COMPL]

[O.56352]

M hh:mm:ss xy,ww n[vv] UTL QRY BC D n LN MSG:
abcddd {xxxx|zz} abcdde {xxxx|zz} abcdde {xxxx|zz}
abcdde {xxxx|zz} abcdde {xxxx|zz} abcdde {xxxx|zz}
.
.
.
abcdde {xxxx|zz} abcdde {xxxx|zz} abcdde {xxxx|zz}
abcdde {xxxx|zz} abcdde {xxxx|zz} abcdde {xxxx|zz} \ EOM

[M hh:mm:ss xy,ww n[vv] UTL QRY BC D n LN MSG:]
[defddd {xxxx|zz} defddd {xxxx|zz} defddd {xxxx|zz}]
defddd {xxxx|zz} defddd {xxxx|zz} defddd {xxxx|zz}]
.
.
.
[defddd {xxxx|zz} defddd {xxxx|zz} defddd {xxxx|zz}
defddd {xxxx|zz} defddd {xxxx|zz} defddd {xxxx|zz} \ EOM]

[M hh:mm:ss xy,ww n[vv] UTL QRY BC D ALL COMPL]

Hierarchical

[O.56351]

M hh:mm:ss xy,ww n[vv] UTL QRY BC s uvmnp 001-015 4 LN MSG:
{xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz}
{xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz}
{xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} \ EOM
M hh:mm:ss xy,ww n[vv] UTL QRY BC s uvmnp 016-030 4 LN MSG:
{xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz}
{xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz}
{xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} {xxxxxx|zz} \ COMPL

[M hh:mm:ss xy,ww n[vv] UTL QRY BC D ALL COMPL]

Nonhierarchical

M hh:mm:ss xy,ww n[vv] UTL QRY BC s {[t]ghi|ALL} COND cc DNY

M hh:mm:ss xy,ww n[vv] UTL QRY BC s {edhfg|ALL} COND cc DNY

Explanation of Parameters	NPC	Network processing circuit
	[s]abc	The 3- or 4-digit starting nonhierarchical NPC number
	[t]def	The 3- or 4-digit ending nonhierarchical NPC number
		For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	uvmnp	Starting hierarchical NPC number
	wxkqr	Ending hierarchical NPC number
	uv,wx	Unit number
	m,k	Module number
	np,qr	NPC number within the module
		For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	BC	Bit-C
	s	Direction of c-bit pattern to be queried
	D	To query the c-bit state Received by the CPR pack in the condensed format of output message O.56352
	R	To query the c-bit state Received by the CPR pack
	T	To query the c-bit state Transmitted by the CPR pack
		When "BC D" is specified in the input command, then the output message will provide the c-bit pattern for all NPCs without regard to the Unit they reside in.
		If "BC D" is specified in the input command then the ALL keyword is required.
		When "BC R" or "BC T" is specified in the input command, then the NPC number(s) are required.
	ALL	All NPCs
		Valid only when s=D.
	[t]ghi	The 3- or 4-digit nonhierarchical NPC number that caused the denial ($[s]abc \leq [t]ghi \leq [t]def$)
	edhfg	Hierarchical NPC number that caused the denial ($uvmnp \leq edhfg \leq wxkqr$)
	xxxxxx	c-bit pattern being transmitted or received in the form X'abcd

xxxx	c-bit pattern being transmitted or received in the form abcd Hexadecimal number output for those channels on which the c-bit pattern is present.
zz	State of c-bit processing for the channel
for s = D or R	
ZO	Zero Received c-bit channel is ALL 0s including the framing bits.
NA	Network Alarm Framing pattern can not be established and is not ALL 0s.
UN	Undetermined CPR hardware has not reported an initial c-bit pattern.
for s = R or T	
UP	Unprovisioned Not provisioned for Monitoring or Transmit. The UN state can be due to the fact that the CPR has just been provisioned to monitor a c-bit and the network timer (NT) value can be as high as 4600 milliseconds and the state of that bit has not yet been found.
cc	Hexadecimal condition code
cc	<i>Explanation</i>
10	Unit is not equipped
15	NPC is unequipped
0B	Invalid CEPT NPC
54	Cross-connect to CPR is required
F1	Parameter only valid with PA, PB, or PC type NPCs

UTILITY QUERY BIT-C TO

Explanation of Command



NOTE:

This command applies to the 2.048 Mbit/s Termination interface only.

This command queries the C-bit state and the pattern for a specified network processing circuit (NPC) and channel.

Command

Nonhierarchical

[I.56353]

UTL: [FRM xy][, SEQ ww]:QRY, BC s, TO [s]abcddd!

Hierarchical

[I.56353]

UTL: [FRM xy][, SEQ ww]:QRY, BC s, TO uvmnpddd!

Completion Message

Nonhierarchical

[O.56353]

M hh:mm:ss xy, ww n UTL QRY BC s TO [s]abcddd {X'abcd|Z0|NA|UN|UP} \ COMPL

Hierarchical

[O.56353]

M hh:mm:ss xy, ww n UTL QRY BC s TO uvmnpddd {X'abcd|Z0|NA|UN|UP} \ COMPL

Denial Message

Nonhierarchical

[O.56353.01]

M hh:mm:ss xy, ww n UTL QRY BC s [s]abc COND cc DNY

Hierarchical

[O.56353.01]

M hh:mm:ss xy,ww n UTL QRY BC s uvmnp COND cc DNY

Explanation of Parameters

TO	NPC identifier keyword
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number 000-030 CEPT type NPCs grown as CAS 000-031 CEPT type NPCs grown as NSA Channel 031 of a CAS NPC (TS16) can only be cross-connected to another channel 031 of a CAS NPC (TS16) or one-way cross-connected to another channel. Also these two channels cannot be part of any conference.
BC	Bit-C keyword
s	Direction of c-bit pattern to be queried D To query the c-bit state Received by the CPR pack in the condensed format of output message O.56352 R To query the c-bit state Received by the CPR pack T To query the c-bit state Transmitted by the CPR pack When "BC D" is specified in the input command, then the output message will provide the c-bit pattern for all NPCs without regard to the Unit they reside in. If "BC D" is specified in the input command then the ALL keyword is required.

	When "BC R" or "BC T" is specified in the input command, then the NPC number(s) are required.	
abcd	C-bit pattern (Hexadecimal) being transmitted or received by the CPR pack	
zz	C-bit status	
	NA	Received pattern is the network alarm
	UN	Received pattern is undetermined
		The UN state can be due to the fact that the CPR has just been provisioned to monitor a c-bit and because the NT value can be as high as 4600 milliseconds and the state of that bit has not yet been found.
	UP	Unprovisioned
	ZO	Received pattern is all zeros
cc	Hexadecimal condition code	
	cc	<i>Explanation</i>
	02	Subject entity is not equipped
	10	Unit is not equipped
	15	NPC is unequipped
	0B	Invalid CEPT NPC
	54	Cross-connect to CPR is required
	F1	Parameter only valid with PA, PB, or PC type NPCs

QUERY BROADCAST ALL

Explanation of Command

This message requests a source listing for all the FROM terminations or for the clear DS1 network processing circuits that are associated with broadcast connections.

The ABT command may be used to stop the output of this message.

Command

1.544 Mbit/s Termination

[I.52101]

UTL : : QRY, BCAST, ALL !

2.048 Mbit/s Termination

[I.52101]

UTL : : QRY, BCAST, ALL !

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.52101]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BCAST ALL xx e LN MSG:
[[s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj \
[s]rstjjj [s]rstjjj]
[[s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj \
[s]rstjjj [s]rstjjj]
[[s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj \
[s]rstjjj [s]rstjjj]
[s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj \
[s]rstjjj [s]rstjjj EOM
M hh:mm:ss xy,ww n[vv] UTL QRY BCAST ALL xx e LN MSG:
[[s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj \
[s]rstjjj [s]rstjjj]
[[s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj \
[s]rstjjj [s]rstjjj]
[[s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj \
```

```
[s]rstjjj [s]rstjjj
[[s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj \
[s]rstjjj [s]rstjjj COMPL
```

Hierarchical

[O.52101]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BCAST ALL xx e LN MSG:
[uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj]
[uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj]
[uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj]
[uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj]
uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj \
{EOM|COMPL}
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY BCAST ALL xx e LN MSG:
[uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj]
[uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj]
[uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj]
[uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj]
uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj COMPL
```

Common

If there is no broadcast connection:

[O.52101]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BCAST ALL 000 COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

[O.52101]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BCAST ALL xx e LN MSG:
[[s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj \
[s]rstjjj [s]rstjjj]
[[s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj \
[s]rstjjj [s]rstjjj]
[[s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj \
[s]rstjjj [s]rstjjj]
[s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj \
[s]rstjjj [s]rstjjj EOM
M hh:mm:ss xy,ww n[vv] UTL QRY BCAST ALL xx e LN MSG:
[[s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj \
[s]rstjjj [s]rstjjj]
[[s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj \
[s]rstjjj [s]rstjjj]
[[s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj \
```

```
[s]rstjjj [s]rstjjj
[[s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj [s]rstjjj \
[s]rstjjj [s]rstjjj COMPL
```

Hierarchical

[O.52101]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BCAST ALL xx e LN MSG:
[uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj]
[uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj]
[uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj]
[uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj]
uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj \
{EOM|COMPL}
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY BCAST ALL xx e LN MSG:
[uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj]
[uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj]
[uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj]
[uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj]
uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj uvmpnjjj COMPL
```

Common

If there is no broadcast connection:

[O.52101]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BCAST ALL 000 COMPL
```

Explanation of Parameters

BCAST	Broadcast
ALL	All (NPCs)
xx	Number of data fields (terminations) in a segment (01 through 32)
e	Number of lines in a message segment (2 through 5)
[s]rstjjj	Nonhierarchical termination number of a broadcast source The termination number is output as 0000000 if there is no source information for the termination.
[s]rst	The 3- or 4-digit nonhierarchical NPC number belonging to FTU, DS3U, HDS3U, HSU
jjj	Source channel number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnpjjj	Hierarchical NPC number of a broadcast source The termination number is output as 0000000 if there is no source information for the termination. uv Unit number m Module number np NPC number within the module jjj Source channel number For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
jjj	Source channel number 001-024 001-047 Odd only (SLC 96[®] Carrier, Mode 3, DGA) 049-095 Odd only (SLC 96 Carrier, Mode 3, DGC) 001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA) 025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB) 049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC) 073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD) 001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA) 025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB) 049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC) 073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD) 000-031 (CEPT)

UTILITY QUERY BROADCAST

Explanation of Command

This command requests a listing of the tributaries (TO) connected to a specified broadcast type source (FROM).

The output message header line lists the full tributary, and the data lines list all the tributaries (TOs) connected to a broadcast type circuit with the specified source (FROM). Other TOs appear in following lines, with sufficient lines to report all of the TOs involved, six per line. The last line of the message is filled with zeros if less than eight TOs (or a multiple thereof) are connected.

You must enter the first channel of the broadcast source for this command.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.52111]

UTL: [FRM xy][, SEQ ww]:QRY, BCAST, FROM [s]abcddd!

Hierarchical

[I.52111]

UTL: [FRM xy][, SEQ ww]:QRY, BCAST, FROM uvmnpddd!

2.048 Mbit/s Termination

Nonhierarchical

[I.52111]

UTL: [FRM xy][, SEQ ww]:QRY, BCAST, FROM [s]abcddd!

Hierarchical

[I.52111]

UTL: [FRM xy][, SEQ ww]:QRY, BCAST, FROM uvmnpddd!

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.52111]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM [s]abcddd-eee TO \
[t]ghijjj xx e LN MSG:
[[t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu \
[t]rstuuu [t]rstuuu]
[[t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu \
[t]rstuuu [t]rstuuu]
[[t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu \
[t]rstuuu [t]rstuuu]
[t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu \
[t]rstuuu [t]rstuuu COMPL
```

Hierarchical

[O.52111]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM uvmnpddd-eee TO \
wxkqrjjj xx e LN MSG:
[edhfguuu edhfguuu edhfguuu edhfguuu edhfguuu edhfguuu \
edhfguuu edhfguuu]
[edhfguuu edhfguuu edhfguuu edhfguuu edhfguuu edhfguuu \
edhfguuu edhfguuu]
[edhfguuu edhfguuu edhfguuu edhfguuu edhfguuu edhfguuu \
edhfguuu edhfguuu]
edhfguuu edhfguuu edhfguuu edhfguuu edhfguuu edhfguuu \
edhfguuu edhfguuu COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

[O.52111]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM [s]abcddd-eee TO \
[t]ghijjj xx e LN MSG:
[[t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu \
[t]rstuuu [t]rstuuu]
[[t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu \
[t]rstuuu [t]rstuuu]
[[t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu \
[t]rstuuu [t]rstuuu]
[t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu [t]rstuuu \
[t]rstuuu [t]rstuuu COMPL
```

Hierarchical

[O.52111]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM uvmnpddd-eee TO \wxkqrjjj xx e LN MSG:
[edhfguuu edhfguuu edhfguuu edhfguuu edhfguuu edhfguuu \
edhfguuu edhfguuu]
[edhfguuu edhfguuu edhfguuu edhfguuu edhfguuu edhfguuu \
edhfguuu edhfguuu]
[edhfguuu edhfguuu edhfguuu edhfguuu edhfguuu edhfguuu \
edhfguuu edhfguuu]
edhfguuu edhfguuu edhfguuu edhfguuu edhfguuu edhfguuu \
edhfguuu edhfguuu COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.52111.01]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM [s]abcddd UEQD DNY

[O.52111.02]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM [s]abcddd NOBBL DNY

[O.52111.03]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM [s]abcddd RT ffff MD \g[g] [t]aaa COND cc DNY

[O.52111.04]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM [s]abcddd COND cc DNY

Hierarchical

[O.52111.01]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM uvmnpddd UEQD DNY

[O.52111.02]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM uvmnpddd NOBBL DNY

[O.52111.03]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM uvmnpddd RT ffff MD g[g] \wxjaa COND cc DNY

[O.52111.04]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM uvmnpddd COND cc DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.52111.01]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM [s]abcddd UEQD DNY

[O.52111.02]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM [s]abcddd NOBBL DNY

[O.52111.03]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM [s]abcddd RT ffff MD \ g[g] [t]aaa COND cc DNY

[O.52111.04]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM [s]abcddd COND cc DNY

Hierarchical

[O.52111.01]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM uvmnpddd UEQD DNY

[O.52111.02]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM uvmnpddd NOBBL DNY

[O.52111.03]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM uvmnpddd RT ffff MD g[g] \ wxjaa COND cc DNY

[O.52111.04]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM uvmnpddd COND cc DNY

Explanation of Parameters

[s]abcddd	Nonhierarchical FROM termination number
[s]abc	The 3- or 4-digit nonhierarchical FROM NPC number belonging to FTU (FT type), DS3U (DT type), HDS3U (HT type)
ddd	Channel number denoting the first channel of a channel range specification

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical FROM termination number

uv Unit number

m Module number

np NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

1.544 Mbit/s Termination

001-024 (Domestic)

001-047 Odd only (SLC 96[®] Carrier, Mode 3, DGA)

049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)

001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)

025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)

049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)

073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)

001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)

025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)

049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

000-031 (CEPT)

If a data line contains fewer tributaries than data fields, the data fields without corresponding tributary information are filled with zeros. [t]ghijj Nonhierarchical termination number

[t]ghi The 3- or 4-digit nonhierarchical NPC number of the full tributary with the same valid values as [s]abc.

jjj Channel number of the full tributary with the same valid values as ddd.

[t]rstuuu

Nonhierarchical termination number

[t]rst	The 3- or 4-digit nonhierarchical NPC number of additional tributaries with the same valid values as [s]abc.
uuu	Channel number of additional tributaries with the same valid values as ddd.

1.544 Mbit/s Termination

[t]aaa	The 3- or 4-digit nonhierarchical TO NPC number of an RT/DL Digroup A with the same valid values as [s]abc.
wxkqr	Hierarchical TO termination number with the same valid values as uvmnp.
edhfg	Hierarchical TO termination number with the same valid values as uvmnp.

1.544 Mbit/s Termination

wxjaa	Hierarchical TO termination number of an RT/DL Digroup A with the same valid values as uvmnp.
eee	Channel number denoting the last channel of a range specification with the same valid values as ddd.
xx	Number of data fields in the current message segment (01 through 32)
e	Number of lines in the message (2 through 5)
UEQD	Unequipped
NOBBL	No backbone leg
	The requested printout of all the tributaries connected to the DACS II broadcast source abcd was denied because the source NPC was not a backbone leg.
RT	Remote terminal
fff	Bank identification number (0000 through 9999)

1.544 Mbit/s Termination

MD	Mode
[g]g	Mode of operation
1	SLC 96 Carrier Mode 1
3	SLC 96 Carrier Mode 3
C	SLC Series 5 Carrier (Feature Package C)
COND	Condition

cc Hexadecimal condition code

cc	<i>Explanation</i>
0B	Invalid CEPT NPC
62	Invalid channel number
63	NPC is a DGP
7F	NPC is not added
F7	Corresponding NPC for virtual channel is not provisioned
70	NPC invalid type

UTILITY QUERY BROADCAST FROM

Explanation of Command

This command lists the tributary network processing circuits that are associated with a nonchannelized digital signal broadcast connection.

Command

Nonhierarchical

[I.52121]

UTL: [FRM xy][, SEQ ww]:QRY, BCAST, FROM [s]abc!

Hierarchical

[I.52121]

UTL: [FRM xy][, SEQ ww]:QRY, BCAST, FROM uvmnp!

Completion Message

Nonhierarchical

[O.52121]

M hh:mm:ss xy, ww n[vv] UTL QRY BCAST FROM [s]abc \

TO [t]ghi xxx e LN MSG:

```
[t]rst [t]rst [t]rst [t]rst    [t]rst [t]rst [t]rst [t]rst
[t]rst [t]rst [t]rst [t]rst    [t]rst [t]rst [t]rst [t]rst
[t]rst [t]rst [t]rst [t]rst    [t]rst [t]rst [t]rst [t]rst
[t]rst [t]rst [t]rst [t]rst    [t]rst [t]rst [t]rst [t]rst EOM
```

..
..
..

M hh:mm:ss xy, ww n[vv] UTL QRY BCAST FROM [s]abc \

TO [t]ghi xxx e LN MSG:

```
[t]rst [t]rst [t]rst [t]rst    [t]rst [t]rst [t]rst [t]rst
[t]rst [t]rst [t]rst [t]rst    [t]rst [t]rst [t]rst [t]rst
[t]rst [t]rst [t]rst [t]rst    [t]rst [t]rst [t]rst [t]rst
[t]rst [t]rst [t]rst [t]rst    [t]rst [t]rst [t]rst [t]rst COMPL
```

OR

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM [s]abc 000 COMPL

Hierarchical

[O.52121]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM uvmnp \
TO ghijk xxx e LN MSG:
wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr
wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr
wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr
wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr EOM

.
.
.

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM uvmnp \
TO ghijk xxx e LN MSG:
wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr
wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr
wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr
wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr wxxqr COMPL

OR

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM uvmnp 000 COMPL

Denial Message

Nonhierarchical

[O.52121.01]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM [s]abc COND cc DNY

Hierarchical

[O.52121.01]

M hh:mm:ss xy,ww n[vv] UTL QRY BCAST FROM uvmnp COND cc DNY

Explanation of Parameters

BCAST	Broadcast
FROM	From
	Source network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical nonchannelized source (FROM) NPC Number, whose tributaries will be listed

[t]ghi	The 3- or 4-digit full tributary (TO) NPC number
[t]rst	The 3- or 4-digit tributary (TO) NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical number of source (FROM) NPC
ghijk	Hierarchical number of full tributary (TO) NPC
wxkqr	Hierarchical number of tributary (TO) NPC
	uv,gh,wx Unit number
	m,i,k Module number
	np,jk,qr NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
TO	To
	Tributary
e	Number of lines in each message segment (2 through 5)
xxx	Number of tributary NPCs in the broadcast connection
cc	Hexadecimal condition code

cc	<i>Explanation</i>
15	NPC is unequipped
AD	No BBL leg
0B	Invalid CEPT NPC
B4	NPC is channelized type

QUERY PARTIAL CROSS-CONNECT MAP

Explanation of Command

1.544 Mbit/s Termination

This command requests a printout of the DACS II cross-connect map for a single network processing circuit (NPC) or a range of NPCs in a facility terminating unit (FTU, IFTU, or IFTU2), digital signal processing unit (DSPU), DS3 unit (DS3U), Hybrid DS3 Unit (HDS3U).

If a range of NPCs is specified in this command, DACS II outputs the cross-connect maps for only those NPCs that are equipped and have at least one cross-connected channel.

The execution of the command and the generation of the output are aborted by entering ABT.

If the NPCs are unmapped, the TO NPC number is omitted.

For NPCTPs and NPCTGs, the FROM and TO terminations under test are displayed by the corresponding active test access channels.

For 1.544-Mb/s interfaces nonchannelized test access, the FROM and TO NPCs of the circuit under test are listed, and if only one NPC is actually under test, it is listed first.

For broadcast circuits that map to multiple channels, only one of the channels is shown. The user should use command UTL::QRY,BCAST,FROM (I.52111) to get a complete listing of all the tributaries for a broadcast circuit.

No range is allowed for virtual NPCs.

This command is invalid for DSPU Subrate NPCs.

2.048 Mbit/s Termination

This command requests a printout of the DACS II cross-connect map for a single network processing circuit (NPC) or a range of NPCs in a facility terminating unit (FTU, IFTU, IFTU2), digital signal processing unit (DSPU).

If a range of NPCs is specified in this command, DACS II outputs the cross-connect maps for only those NPCs that are equipped and have at least one cross-connected channel.

The execution of the command and the generation of the output are aborted by entering ABT.

If the NPCs are unmapped, the TO NPC number is omitted.

For 64 kbit/s test access, the FROM and TO terminations under test by the corresponding active testport channels are displayed rather than far-end mapped terminations.

For nonchannelized digital signal test access, the FROM and TO NPCs of the circuit under test are listed, and if only one NPC is actually under test, it is listed first.

 **NOTE:**
No range is allowed for virtual NPCs.

Both Terminations

This command also generates cross-connect maps for application cards that have the type SDxyz (where xyz is a set of hexadecimal numbers that define a particular application). The actual channel numbers of application cards are assigned by the application and not by the user; therefore, during normal circuit management, the user should utilize the SD application queries rather than this command.

If an SDxyz application is provisioned in a North American module of an FTU, IFTU, or IFTU2, the number of channels available to the application is 48. If an SDxyz application is provisioned in an international module of an FTU, IFTU, or IFTU2, the number of channels available to the application is 64. The output of this command reflects this difference. Please note that individual modules in an FTU, IFTU, or IFTU2 may be provisioned as international modules, even though the other three modules are provisioned as North American modules.

For application-to-application type cross-connects the user should issue command UTL::QRY,APPL (I.51201) to generate the correlation between pseudo channels that the user refers to in commands and the actual channels assigned by the application.

Command

Nonhierarchical

[I.52011]

UTL: [FRM xy][, SEQ ww]: QRY, CMAP [s]abc[-[t]def]!

Hierarchical

[I.52011]

UTL: [FRM xy][, SEQ ww]: QRY, CMAP uvmnp[-wxkqr]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

The following message segments are output for each DE, DS, DA, TE, TA, and ST110 NPC.

If the 3-digit nonhierarchical NPC number is used, the following message segment is output for each 24-channel NPC. Each segment shall contain eight terminations per line as shown below, where ghi is the nonhierarchical NPC number:

If the header line has 80 or less characters:

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP abc mnxyz ccc-ddd \
[ {ACTPL|NACTPL} ]
[ kkk][ {SWMR|SWAR}][ FDL tlmndddr][ {NPCTP|NPCTG|ROLL} ] \
4 LN MSG:
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \ tghijjrr
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \ tghijjrr
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \ tghijjrr
tghijjrr {EOM|COMPL}
```

If the header line is longer than 80 characters:

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP def mnxyz ccc-ddd \
[ {ACTPL|NACTPL} ] [ kkk][ {SWMR|SWAR} ] 5 LN MSG:
[ FDL tlmndddr][ {NPCTP|NPCTG|ROLL} ]
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \ tghijjrr
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \ tghijjrr
```

```
tghijjrr  
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \ tghijjrr  
tghijjrr {EOM|COMPL}
```

If the 3-digit nonhierarchical NPC number is used, the following message segment is output for each Clear-DS1 NPC.

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP jkl mnxyz[ {FAD \  
<tmode>|ROLL}]  
[t]ghi[r][ ghi] {EOM|COMPL}
```

If the 4-digit nonhierarchical NPC number is used, the following message segment is output for each 24-channel NPC. Each segment shall contain six terminations per line as shown below, where the vghi is the nonhierarchical NPC number.

If the header line has 80 or less characters:

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP sabc mnxyz ccc-ddd \  
[ {ACTPL|NACTPL}]  
[ tkkk][ {SWMR|SWAR}][ FDL tulmndddr][ {NPCTP|NPCTG|ROLL}] \ 5 LN  
MSG:  
tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr  
tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr  
tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr  
tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr \  
tvghijjrr {EOM|COMPL}
```

If the header line is longer than 80 characters:

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP sabc mnxyz ccc-ddd \  
[ {ACTPL|NACTPL}] [ tkkk][ {SWMR|SWAR}] 6 LN MSG:  
[FDL tulmndddr][ {NPCTP|NPCTG|ROLL}]  
tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr  
tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr  
tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr  
tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr \  
tvghijjrr {EOM|COMPL}
```

If the 4-digit nonhierarchical NPC number is used, the following message segment is output for each Clear-DS1 NPC.

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP sjkl mnxyz[ {FAD \
<tmode>|ROLL}]
[t]vghi[r][ vghi] {EOM|COMPL}
```

The following four message segments are output for each SDxyz-type NPC:

If an SDxyz-type NPC is located in a North American module, then only 48 of the total 64 channels are usable. In that case the [v]ghijj field for channels 4, 8, 12, 16, ..., 64 appears as unmapped ([0]000000).

[O.52012]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]abc SDxyz 001-016 \
5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]abc SDxyz 017-032 \
5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]abc SDxyz 033-048 \
5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]abc SDxyz 049-064 \
5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr {EOM|COMPL}
```

The following two message segments are output for each MB NPC.

[O.52013]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]mbn MB100 001-064 \
DPLX 5 LN MSG:
lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll
lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll
```

```

lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll
lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll EOM

```

```

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]mbn MB100 065-085 \
DPLX 3 LN MSG:
lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll
lll lll lll lll lll {EOM|COMPL}

```

The following message segment is output as many times as needed for each VI NPC.

[O.52014]

```

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]vnp VI100 xx e LN \ MSG:
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn]
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn]
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn]
tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn {EOM|COMPL}

```

For the case when multiple NPCs are queried, the following completion message segment is output after all other NPC segments have been output.

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP COMPL
```

Hierarchical

The following message segment is output for each DE, DS, DA, TE, TA, and ST110 NPC.

If the header line has 80 or less characters:

[O.52011]

```

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP uvmnp mxyz ccc-ddd \
[ {ACTPL|NACTPL}]
[ uvkkk][ {SWMR|SWAR}][ FDL tjklmndddr] \
[ {NPCTP|NPCTG|ROLL}] 7 LN MSG:
tghikljjr tghikljjr tghikljjr tghikljjr
tghikljjr tghikljjr tghikljjr tghikljjr
tghikljjr tghikljjr tghikljjr tghikljjr
tghikljjr tghikljjr tghikljjr tghikljjr

```

```
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r {EOM|COMPL}
```

If the header line is longer than 80 characters:

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP uvmnp mnxyz ccc-ddd \
[ {ACTPL|NACTPL}] [ uvkkk][ {SWMR|SWAR}] 8 LN MSG:
[FDL t j k l m n d d d r][ {NPCTP|NPCTG|ROLL}]
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r {EOM|COMPL}
```

The following message segment is output for each Clear-DS1 NPC.

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP edhfg mnxyz[ {FAD \
<tmode>|ROLL}]
[t]ghikl[r][ ghikl] {EOM|COMPL}
```

The following four message segments are output for each SDxyz-type NPC:

If an SDxyz-type NPC is located in a North American module, then only 48 of the total 64 channels are usable. In that case the ghikljij field for channels 4, 8, 12, 16, ..., 64 appears as unmapped (00000000).

[O.52012]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP uvmnp SDxyz 001-016 \
5 LN MSG:
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP uvmnp SDxyz 017-032 \
5 LN MSG:
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP uvmnp SDxyz 033-048 \
5 LN MSG:
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r
tghiklj j j j r tghiklj j j j r tghiklj j j j r tghiklj j j j r
```

tghikljrr tghikljrr tghikljrr tghikljrr EOM

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP uvmnp SDxyz 049-064 \
5 LN MSG:
tghikljrr tghikljrr tghikljrr tghikljrr
tghikljrr tghikljrr tghikljrr tghikljrr
tghikljrr tghikljrr tghikljrr tghikljrr
tghikljrr tghikljrr tghikljrr tghikljrr {EOM|COMPL}

The following two message segments are output for each MB NPC.

[O.52013]

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP mbnop MB100 001-064 \
DPLX 5 LN MSG:
lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll EOM

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP mbnop MB100 065-085 \
DPLX 3 LN MSG:
lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll {EOM|COMPL}

The following message segment is output as many times as needed for each VI NPC.

[O.52014]

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP vnprs VI100 xx \
e LN MSG:
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \
tnnn]
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \
tnnn]
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \
tnnn]
tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \
tnnn {EOM|COMPL}

For the case when multiple NPCs are queried, the following completion message segment is output after all other NPC segments have been output.

[O.52011]

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP COMPL

Nonhierarchical

The following two message segments are output for each PA, PB, PC, and ST100 NPC.

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]abc mnxyz 000-015 \
[ {NPCTP|NPCTG|ROLL}] 5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]abc mnxyz 016-031 \
[ {NPCTP|NPCTG|ROLL}] 5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr {EOM|COMPL}
```

The following message segment is output for each Clear-E1 NPC.

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]jkl mnxyz[ {FAD \
<tmode>|ROLL}]
[t][v]ghi[r][ [v]ghi] {EOM|COMPL}
```

The following four message segments are output for each SDxyz-type NPC in an international module:

[O.52012]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]abc SDxyz 001-016 \
5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]abc SDxyz 017-032 \
5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]abc SDxyz 033-048 \
5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
```

```
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]abc SDxyz 049-064 \
5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr {EOM|COMPL}
```

The following two message segments are output for each MB NPC.

[O.52013]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]mbn MB100 001-064 \
DPLX 5 LN MSG:
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]mbn MB100 065-085 \
DPLX 3 LN MSG:
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll
lll lll lll lll lll {EOM|COMPL}
```

The following four message segments are output for each CB NPC.

[O.52016]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]cbn CB10z 000-031 \
DPLX 5 LN MSG:
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]cbn CB10z 032-063 \
DPLX 5 LN MSG:
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]cbn CB10z 064-095 \
DPLX 5 LN MSG:
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
```



```
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]cbn CB10Z 096-127 \
DPLX 5 LN MSG:
```

```
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
{EOM|COMPL}
```

The following message segment is output as many times as needed for each VI NPC.

[O.52014]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]vnp VI100 xx e LN \ MSG:
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn]
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn]
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn]
tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn {EOM|COMPL}
```

For the case when multiple NPCs are queried, the following completion message segment is output after all other NPC segments have been output.

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP COMPL
```

Hierarchical

The following two message segments are output for each PA, PB, PC, and ST100 NPC.

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP uvmnp mnxyz 000-015 \
[ {NPCTP|NPCTG|ROLL}] 5 LN MSG:
tghikljjr tghikljjr tghikljjr tghikljjr
tghikljjr tghikljjr tghikljjr tghikljjr
tghikljjr tghikljjr tghikljjr tghikljjr
tghikljjr tghikljjr tghikljjr tghikljjr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP uvmnp mnxyz 016-031 \
[ {NPCTP|NPCTG|ROLL}] 5 LN MSG:
tghikljjr tghikljjr tghikljjr tghikljjr
tghikljjr tghikljjr tghikljjr tghikljjr
```

```
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr {EOM|COMPL}
```

The following message segment is output for each Clear-E1 NPC.

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP edhfg mnxyz[ {FAD \
<tmode>|ROLL}]
[t]ghikl[r][ ghikl] {EOM|COMPL}
```

The following four message segments are output for each SDxyz-type NPC in an international module:

[O.52012]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP uvmnp SDxyz 001-016 \
5 LN MSG:
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP uvmnp SDxyz 017-032 \
5 LN MSG:
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP uvmnp SDxyz 033-048 \
5 LN MSG:
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP uvmnp SDxyz 049-064 \
5 LN MSG:
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr {EOM|COMPL}
```

The following two message segments are output for each MB NPC.

[O.52013]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP mbnop MB100 001-064 \
DPLX 5 LN MSG:
lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
```

```

lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll EOM

```

```

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP mbnop MB100 065-085 \
DPLX 3 LN MSG:
lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll {EOM|COMPL}

```

The following four message segments are output for each CB NPC.

[O.52016]

```

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP cbnpq CB10z 000-031 \
DPLX 5 LN MSG:
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx EOM

```

```

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP cbnpq CB10z 032-063 \
DPLX 5 LN MSG:
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx EOM

```

```

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP cbnpq CB10z 064-095 \
DPLX 5 LN MSG:
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx EOM

```

```

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP cbnpq CB10z 096-127 \
DPLX 5 LN MSG:
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx {EOM|COMPL}

```

The following message segment is output as many times as needed for each VI NPC.

[O.52014]

```

M hh:mm:ss xy,ww n[vv] UTL QRY CMAP vnprs VI100 xx \
e LN MSG:

```

```
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn]
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn]
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn]
tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn {EOM|COMPL}
```

For the case when multiple NPCs are queried, the following completion message segment is output after all other NPC segments have been output.

[O.52011]

M hh:mm ss xy,ww n[vv] UTL QRY CMAP COMPL

Both Terminations

Nonhierarchical



NOTE:

The following two message segments are output for each TH NPC.

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]abc mnxyz 000-015 \
[ {NPCTP|NPCTG|ROLL}] 5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]abc mnxyz 016-031 \
[ {NPCTP|NPCTG|ROLL}] 5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr \ {EOM|COMPL}
```



NOTE:

The following message segment is output for each Clear-E1 TH type NPC.

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]jkl mnxyz[ {FAD \
<tmode>|ROLL}]
[t][v]ghi[r][ [v]ghi] {EOM|COMPL}
```

Hierarchical

The following two message segments are output for each TH type NPC.

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP uvmnp mnxyz 000-015 \  
[ {NPCTP|NPCTG|ROLL}] 5 LN MSG:  
tghikljjjr tghikljjjr tghikljjjr tghikljjjr  
tghikljjjr tghikljjjr tghikljjjr tghikljjjr  
tghikljjjr tghikljjjr tghikljjjr tghikljjjr  
tghikljjjr tghikljjjr tghikljjjr tghikljjjr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP uvmnp mnxyz 016-031 \  
[ {NPCTP|NPCTG|ROLL}] 5 LN MSG:  
tghikljjjr tghikljjjr tghikljjjr tghikljjjr  
tghikljjjr tghikljjjr tghikljjjr tghikljjjr  
tghikljjjr tghikljjjr tghikljjjr tghikljjjr  
tghikljjjr tghikljjjr tghikljjjr tghikljjjr {EOM|COMPL}
```

The following message segment is output for each Clear-E1 TH type NPC.

[O.52011]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP edhfg mnxyz[ {FAD \  
<tmode>|ROLL}]  
[t]ghikl[r][ ghikl] {EOM|COMPL}
```

Denial Message

Nonhierarchical

[O.52011.01]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [w]mno UEQD DNY
```

[O.52011.02]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP [s]abc[-[t]def] COND cc \ DNY
```

Hierarchical

[O.52011.01]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP edmno UEQD DNY
```

[O.52011.02]

```
M hh:mm:ss xy,ww n[vv] UTL QRY CMAP uvmnp[-wxkqr] COND cc DNY
```

Explanation of Parameters	C M A P	Cross-connect map
	[s] a b c	The 3- or 4-digit nonhierarchical NPC number, the first number of a range
	[t] d e f	The 3- or 4-digit nonhierarchical NPC number, the last number of a range
		For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	u v m n p	Hierarchical NPC number, the first number of a range
	w x k q r	Hierarchical NPC number, the last number of a range
	u v , w x	Unit number
	m , k	Module number
	n p , q r	NPC number within the module
		For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	[s] j k l	Nonhierarchical nonchannelized NPC number in range [s]abc-[s]def
	e d h f g	Hierarchical nonchannelized NPC number in range uvmnp-wxkqr
		For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	D A	Dual digroup ANSI NPC
	D E	Dual digroup NPC
	D S	SLC [®] carrier NPC
		The mn value is identified for the SDxyz application type NPCs.
	S D	Digital Signal Processing Application Circuit Pack
	S T	Digital Signal Processing Circuit Pack (2 NPCs per card)
	P A	CEPT NPC (75 or 120 ohm)
	P B	CEPT NPC (120-ohm twisted pair)
	P C	CEPT NPC (75-ohm coaxial)
	T A	DS3U ANSI NPC
	T E	DS3U or HDS3U Noninterface unit NPC
	T H	Hybrid DS3U CEPT NPC

MB Digital multipoint bridge NPC

CB C-bit processor (CPR) NPC

VI Virtual NPC

For a listing of the NPC parameters, refer to Chapter 2,
"NPC Numbering and XYZ Parameters."

DPLX

Duplex

Duplex equipped

ST Digital Signal Processing Circuit Pack
(2 NPCs per card)

ccc-ddd

Channel number range

The channel number range varies with the NPC type.

It is not printed for nonchannelized NPCs.

1.544 Mbit/s Termination

001-024 Channel range for type DExyz and DAXyz NPC

001-024 Channel range for type TExyz and TAXyz NPC

001-024 Channel range for type ST110 NPC

For DSxyz-type NPC (SLC[®] carrier interface digroup)

001-047 Odd only (SLC 96[®] Carrier, Mode 3, DGA)

049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)

001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)

025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)

049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)

073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)

001-024 Odd and Even (SLC Series 5 Carrier, Feature
Package C, DGA)

025-048 Odd and Even (SLC Series 5 Carrier, Feature
Package C, DGB)

049-072 Odd and Even (SLC Series 5 Carrier, Feature
Package C, DGC)

073-096 Odd and Even (SLC Series 5 Carrier, Feature
Package C, DGD)

Conference numbers

001-085 (MB NPC)

1.544 Mbit/s Termination

SWMR	Switch manually requested Protection switch manually requested for SLC carrier NPC
SWAR	Switch automatically requested Protection switch automatically requested for SLC carrier NPC
ACTPL	Active protection line Queried SLC carrier NPC is a protection line which is active
NACTPL	Nonactive protection line Queried SLC carrier NPC is a protection line which is not active
[t]kkk	Nonhierarchical corresponding SLC carrier Digroup A (DGA) NPC number (with the same valid values as [s]abc)
uvkkk	Hierarchical SLC carrier Digroup A (DGA) NPC number
FDL	Facility data link Only for DE-type NPCs
[u]lmnddd	Nonhierarchical termination number to which the FDL is mapped
jklmnddd	Hierarchical termination number to which the FDL is mapped

Both Terminations

[u]lmn	The 3- or 4-digit nonhierarchical NPC number (with the same valid values as [s]abc)
t	type of connection
*	One-way
" "	Two-way (a blank)
B	Broadcast (BCON)
R	Roll
T	Test Access*
C	Conference of the Switched Teleconferencing feature
P	DSP Platform Application connection, two-way
Q	DSP Platform Application connection, one-way

* T is not displayed for mapped terminations.

NPCTP	Network processing circuit for test port 1.544 Mbit/s Termination DExyz or TExyz type NPC for DS0 Test Ports 2.048 Mbit/s Termination PBxyz or PCxyz type NPC for DS0 Test Ports
ROLL	Roll Bridged facility in Roll procedure

1.544 Mbit/s Termination

FAD	Facility access digroup Nonchannelized test NPC

In a segment containing information for a FAD type NPC, the NPCs under test are listed without the type of the connection they are in.

tmode	Test mode of nonchannelized test NPC
HUB	Hub
LOOPE	Loop E
LOOPF	Loop F
LPBKT	Terminal Loopback
MONE	Monitor E (FROM)
MONEF	Monitor E and F
MONF	Monitor F (TO)
SPLTA	Split A
SPLTAB	Split A and B
SPLTB	Split B
SPLTE	Split E
SPLTEF	Split E and F
SPLTF	Split F

Both Terminations

[v]ghijj	Nonhierarchical number of NPC and channel or conference port number/circuit ID. For a nonchannelized cross-connect, the channel number jjj is not shown.
[v]ghi	Nonhierarchical NPC with the same valid values as [s]abc.

For an FAD, the tested NPC is listed first if only one of the two mapped NPCs is under test.

1.544 Mbit/s Termination

jjj Channel number (If [v]ghi is MB type, the range for jjj is 001 to 085.)

Both Terminations

Some examples of [v]ghijjj are listed below:

[0]000000 Unmapped channel

[v]ghi000 Mapped channel connected to an FDL of NPC [v]ghi

1.544 Mbit/s Termination

[-]-SECH- Mapped channel connected to a Subrate (SR) or MJ-type NPC.

[v]ghijjj Mapped channel NOT connected to an FDL, SR or MJ channel

r Termination status

T Terminated

blank Not Terminated

ghi Conference port number (Switched Teleconferencing) (001 through 500)

jjj Conference circuit identifier (Switched Teleconferencing) (001 through 150)

ghikljjj Hierarchical number of NPC and channel or conference port number/circuit ID. For a nonchannelized cross-connection, the channel number jjj is not shown.

00000000 Unmapped channel

1.544 Mbit/s Termination

ghikl000 Mapped channel connected to an FDL of NPC ghikl

ghikljjj Mapped channel NOT connected to an FDL, SR and MJ channel

jjj Channel number

If ghikl is an MB type, the range for jjj is 001 to 085.

If the channel is connected to a conference (Switched Teleconferencing), uvmnpjjjr (uv-m-nppjjr) is in the "uvmnpj--" format.

uvm Conference port number (001 through 500)
npj Conference circuit identifier (001 through 150)

Both Terminations

[s]cbn The 3- or 4-digit nonhierarchical CB type NPC number.

2.048 Mbit/s Termination

cbnpq Hierarchical CB type NPC number.

cb Unit number
n Module number
pq NPC number

[v]opq The 3- or 4-digit nonhierarchical PA or PB or PC type NPC number

opqrx Hierarchical PA or PB or PC type NPC number

op Unit number
q Module number
rx NPC number

Both Terminations

[s]mbn The 3- or 4-digit nonhierarchical MB type NPC number

mbnop Hierarchical MB type NPC number

mb Unit number
n Module number
op NPC number

[v]opq The 3- or 4-digit nonhierarchical TH type NPC number

opqrx Hierarchical TH type NPC number

op Unit number
q Module number
rx NPC number

III Number of legs for the multipoint termination (003 through 256)

[s]vnp The 3- or 4-digit nonhierarchical virtual NPC number

vnprs Hierarchical virtual NPC number

vn Unit number
p Module number

	rs	NPC number
xx		Number of conferences reported in the segment (01 through 48)
e		Number of lines in the segment
tnnn		Virtual conference type and number
	t	Virtual conference type
	*	One-way
	" "	Two-way (a blank)
	nnn	Virtual conference number (001 through 500)
[w]mno		The 3- or 4-digit nonhierarchical NPC number that caused the denial ([s]abc through [t]def)
edmno		Hierarchical NPC number that caused the denial (uvmnp through wxkqr)
cc		Hexadecimal condition code
	cc	<i>Explanation</i>
	0B	Invalid CEPT NPC
	7F	NPC is not added
	91	SR NPC was specified - not allowed

UTILITY QUERY CONFIGURE

Explanation of Command

This command requests information about the configuration of a DACS II frame.

Command

```
[I.51091]
UTL: [FRM xy][, SEQ ww]:QRY, CNFGR!
```

Completion Message

```
[O.51091]
M hh:mm:ss xy,ww n[vv] UTL QRY CNFGR 4 LN MSG:
ID xy UID <uid> SS <ssn>
BAY aa TYPE fff-fff UNITS bb CCN c HG d
UNIT a a a a a a a a a a a a a a a a
NPCAD[ E][ X] H COMPL
```

Explanation of Parameters

ID	Identifier (frame)
XY	Frame identifier (00 through ZZ)
UID	Unique identifier
uid	Unique (frame) identifier (1 to 20 alphanumeric characters)
ss	Software serial number
	The software serial number may be assigned by the user to identify a particular software package. This would eliminate problems in an office where the user has multiple frames and more than one software package is in use.
BAY	Bay
aa	Total number of bays, in decimal (01 through 07)
TYPE	Type
fff-fff	Bay types (-, 1, or 2)
	Variable fff-fff gives the bay type assigned to each bay in the frame. Bays are numbered from 1 through 7. When viewed from the front of the frame the bays are positioned in the frame in the

same order as the bay numbers shown below. Consult this table to determine the bay associated with the position of a given f.

Bay numbers	6	4	1	2	3	5	7
Assignment	f	f	f	-	f	f	f
	-	Not configured or the Switch Bay (Bay 2)					
	1	Original Interface Bay					
	2	Flexible Interface Bay					
	3	HSU Bay 1 (Five HSU shelves)					
	4	HSU Bay 2 (3 HSU shelves+1 IFTU)					
UNITS	Units						
bb	Number of equipped units, in decimal (01 through 16)						
CCN	Cross-connect network						
c	Cross-connect network type						
	1	Multibay CCN					
	2	Single-bay CCN					
	E	ECCN					
HG	Height						
d	Height of bay						
	0	7'0" (2133mm)					
	1	11'6" (3505mm)					
	2	7'2.6" (2200mm)					
UNIT	Unit						
a	Unit type						
	-	Not configured					
	1	FTU					
	2	DSPU					
	3	DS3U (or HDS3U)					
	4	IFTU					
	5	IFTU2					
	6	HDS3U					
	7	HSU					



NOTE:

The Unit type of 3 indicates DS3U or HDS3U because if the Unit is configured but not grown, it can be either. If it is grown as a DS3U, the unit type is 3. If it is grown as an HDS3U, the unit type is 6.

NPCAD	Network processing circuit addressing
E	The 3-digit nonhierarchical (Extended) addressing scheme
X	The 4-digit nonhierarchical (Extended) addressing scheme
H	Hierarchical addressing scheme

UTILITY QUERY CIRCUIT STATUS, NPC

Explanation of Command

This command requests the Circuit Status (CS) of an ANSI type Network Processing Circuit (NPC). The response to this query displays the ANSI NPC's Near-end and Far-end Alarm/Status bytes. ANSI capability is supported by DA-type NPCs in a DACS II Facility Terminating Unit or TA-type NPCs in a DACS II DS3 Unit.



NOTE:

This message is denied if the NPC is not equipped as a DA/TA type NPC.

Command

Nonhierarchical

[I.53121]

UTL:[FRM xy][,SEQ ww]:QRY,CS,NPC [s]abc!

Hierarchical

[I.53121]

UTL:[FRM xy][,SEQ ww]:QRY,CS,NPC uvmnp!

Completion Message

Nonhierarchical

[O.53121]

M hh:mm:ss xy,ww n[vv] UTL QRY CS NPC [s]abc 2 LN MSG:
furyatlo fumcablo COMPL

Hierarchical

[O.53121]

M hh:mm:ss xy,ww n[vv] UTL QRY CS NPC uvmnp 2 LN MSG:
furyatlo fumcablo COMPL

Denial Message

Nonhierarchical

[O.53121.01]

M hh:mm:ss xy,ww n[vv] UTL QRY CS NPC [s]abc COND cc DNY

Hierarchical

[O.53121.01]

M hh:mm:ss xy,ww n[vv] UTL QRY CS NPC uvmnp COND cc DNY

Explanation of Parameters

CS	Circuit status
NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within Unit For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
furyatlo	Near-end circuit status. The bits in the near-end byte identify the following alarm/status conditions: f f=1 if u or r or y or a or t or l or o = 1 u u=1 if an unavailable signal status exists r r=1 if a Red-CGA exists a a=1 if an AIS-CGA exists t t=0 (unused) l l=1 if a payload loopback or test signal is active o o=0 (unused)
fumcablo	Far-end circuit status. The bits in the far-end byte identify the following alarm/status conditions: f f=1 if u or m or c or a or b or l or o = 1 u u=1 if a far-end unavailable signal status exists

m	m=1 if no ANSI PRMs or RAI has been received for 4.5 seconds
c	c=1 if loopback retention code is being received
a	a=1 if a far-end AIS-CGA or Red-CGA exists
b	b=1 if loopback retention code is being transmitted
l	l=1 if a far-end payload loopback is active
o	o=0 (unused)
cc	Hexadecimal condition code
cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
24	Unit type error
0B	Invalid CEPT NPC
44	NPC not IU/TI type
46	NPC Failed or Out of Service
BF	MIU is not equipped
AF	MIU is failed
CF	MIU is out of service
33	NPC not DA or TA type.

QUERY DATE

Explanation of Command

This command prints out the current date (month, day, year) and the time interval at which DACS II prints the date.

Command

```
[I.51031]
UTL: [FRM xy][, SEQ] ww:QRY, DATE!
```

Completion Message

```
[O.51031]
M hh:mm:ss xy,ww n[vv] UTL QRY DATE aa/bb/cc FORMAT ggg INT ii \
COMPL
```

Autonomous Message

```
[O.51031]
I hh:mm:ss xy,ww UTL QRY DATE aa/bb/cc FORMAT ggg INT ii COMPL
```

Explanation of Parameters

INT	Interval
ii	Interval at which DACS II will print the date.
01	Every hour on the hour
02	Every even hour on the hour
04	Every fourth hour on the hour: 04, 08, 12, 16, 20, 24
06	Every sixth hour on the hour: 06, 12, 18, 24
08	Every eighth hour on the hour: 08, 16, 24
12	Twice daily on the hour: 12, 24
24	Once daily at midnight (default)
DATE	Date
aa	Month or day

bb	Day or month
cc	Year (2 or 4 digits)
	The DATE is displayed in the International format
FORMAT	Format
ggg	Date format
ggg	Date format
MDY	Month/Day/Year (USA format)
DMY	Day/Month/Year (International format)

UTILITY QUERY DIRECTOR DACS NPC

Explanation of Command



NOTE:

This command applies to the 2.048 Mbit/s Termination interface only

This command queries a network processing circuit (NPC) or a range of circuits which are provisioned as the Director of DACS.

The output completion message shows the provisioning for 15 channels on the second line and channels 16 through 30 on the third line.

Command

Nonhierarchical

[I.56343]

UTL: [FRM xy][, SEQ ww]:QRY, {DD, NPC [s]abc[-[t]def]|DDCT, ALL}!

Hierarchical

[I.56343]

UTL: [FRM xy][, SEQ ww]:QRY, {DD, NPC uvmpn[-wxkqr]|DDCT, ALL}!

Completion Message

Nonhierarchical

[O.56343]

M hh:mm:ss xy, ww n[vv] UTL QRY DD NPC [s]abc 3 LN MSG:
mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw
mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw COMPL

.
.
.

[M hh:mm:ss xy, ww n[vv] UTL QRY DD NPC [t]def 3 LN MSG:]
[mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw]
[mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw COMPL]

M hh:mm:ss xy, ww n[vv] UTL QRY DD NPC [s]abc[-[t]def] COMPL

[O.56344]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DDCT NPC [s]abc 5 LN MSG:
mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw
mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw
xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx \
xxxx xxxx xxxx
xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx \
xxxx xxxx xxxx EOM
```

.

.

.

```
M hh:mm:ss xy,ww n[vv] UTL QRY DDCT NPC [t]def 5 LN MSG:
mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw
mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw
xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx \
xxxx xxxx xxxx
xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx \
xxxx xxxx xxxx COMPL
```

M hh:mm:ss xy,ww n[vv] UTL QRY DDCT ALL COMPL

Hierarchical

[O.56343]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DD NPC uvmnp 3 LN MSG:
mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw
mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw COMPL
```

.

.

.

```
[M hh:mm:ss xy,ww n[vv] UTL QRY DD NPC wxkqr 3 LN MSG:]
[mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw]
[mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw COMPL]
```

M hh:mm:ss xy,ww n[vv] UTL QRY DD NPC uvmnp[-wxkqr] COMPL

[O.56344]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DDCT NPC uvmnp 5 LN MSG:
mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw
mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw
xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx \
xxxx xxxx xxxx
xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx \
xxxx xxxx xxxx EOM
```

.

.

.

```
M hh:mm:ss xy,ww n[vv] UTL QRY DDCT NPC wxkqr 5 LN MSG:
mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw
```

mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw
xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx \
xxxx xxxx xxxx
xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx \
xxxx xxxx xxxx COMPL

M hh:mm:ss xy,ww n[vv] UTL QRY DDCT ALL COMPL

Denial Message

Nonhierarchical

[O.56343.01]

M hh:mm:ss xy,ww n[vv] UTL QRY DD [t]ghi COND cc DNY

Hierarchical

[O.56343.01]

M hh:mm:ss xy,ww n[vv] UTL QRY DD edhfg COND cc DNY

Explanation of
Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit starting nonhierarchical NPC number
[t]def	The 3- or 4-digit ending nonhierarchical NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Starting hierarchical NPC number
wxkqr	Ending hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
DD	Director DACS
DDCT	Director DACS with data base coherence feature.
[t]ghi	The 3- or 4-digit nonhierarchical NPC number that caused the denial ($[s]abc \leq [t]ghi \leq [t]def$)
edhfg	Hierarchical NPC number that caused the denial ($uvmnp \leq edhfg \leq wxkqr$)

ALL	Query All NPCs
m	Status of Director DACS setting for a given channel
0	Not provisioned for monitor
1	Provisioned for Monitor
-	Channel was not specified
w	Status of Director DACS setting for a given channel
0	Not provisioned for write
1	Provisioned for write
-	Channel was not specified
xxxx	Bit pattern sent on a c-bit. xxxx is a the hexadecimal representation of the 14 bit pattern sent on a c-bit (abcd efgh ijkl mnop). Bits a and b are always 0. Bits cdefghijklmnop are sent on a c-bit. For those channels in which no bit pattern is transmitted, the xxxx field contains ----.
cc	Hexadecimal condition code
cc	<i>Explanation</i>
10	Unit is not equipped
15	NPC is unequipped
0B	Invalid CEPT NPC
54	Cross-connect to CPR is required
F1	Parameter only valid with PA, PB, or PC type NPCs

UTILITY QUERY DIRECTOR DACS II

Explanation of Command



NOTE:

This command applies to the 2.048 Mbit/s Termination interface only.

This command queries all the C-bits that are provisioned for the Director DACS on the addressed network processing circuit.

Command

Nonhierarchical

[I.56341]

UTL:[FRM xy][,SEQ ww]:QRY,DD [s]abcddd[-fff]!

Hierarchical

[I.56341]

UTL:[FRM xy][,SEQ ww]:QRY,DD uvmnpddd[-fff]!

Completion Message

Nonhierarchical

[O.56341]

M hh:mm:ss xy,ww n[vv] UTL QRY DD [s]abcddd[-fff] 3 LN MSG:
mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw
mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw COMPL

Hierarchical

[O.56341]

M hh:mm:ss xy,ww n[vv] UTL QRY DD uvmnpddd[-fff] 3 LN MSG:
mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw
mw mw mw mw mw mw mw mw mw mw mw mw mw mw mw COMPL

Denial Message

Nonhierarchical

[O.56341.01]

M hh:mm:ss xy,ww n[vv] UTL QRY DD [s]abcddd[-fff] COND cc DNY

Hierarchical

[O.56341.01]

M hh:mm:ss xy,ww n[vv] UTL QRY DD uvmnpddd[-fff] COND cc DNY

Explanation of Parameters

DD	Director DACS						
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."						
uvmnp	Hierarchical NPC number For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."						
ddd	Channel number for beginning of channel range						
fff	Channel number for end of channel range 001-030 (CEPT type NPCs grown as CAS)						
m	Monitor <table> <tr> <td>0</td><td>c-bit not provisioned as a DD for Monitor (default)</td></tr> <tr> <td>1</td><td>c-bit provisioned as a DD for Monitor</td></tr> <tr> <td>-</td><td>Channel was not specified</td></tr> </table>	0	c-bit not provisioned as a DD for Monitor (default)	1	c-bit provisioned as a DD for Monitor	-	Channel was not specified
0	c-bit not provisioned as a DD for Monitor (default)						
1	c-bit provisioned as a DD for Monitor						
-	Channel was not specified						
w	Write <table> <tr> <td>0</td><td>c-bit not provisioned as a DD for Write (default)</td></tr> <tr> <td>1</td><td>c-bit provisioned as a DD for Write</td></tr> <tr> <td>-</td><td>Channel was not specified</td></tr> </table> The output completion message shows provisioning for 15 channels per line, numbered 1 through 15 on the second line and 16 through 30 on the third line. For those channels which have not been encompassed in the range ddd through fff, the (-) (dash) is output.	0	c-bit not provisioned as a DD for Write (default)	1	c-bit provisioned as a DD for Write	-	Channel was not specified
0	c-bit not provisioned as a DD for Write (default)						
1	c-bit provisioned as a DD for Write						
-	Channel was not specified						
cc	Hexadecimal condition code						

cc	<i>Explanation</i>
10	Unit is not equipped
15	NPC is unequipped
0B	Invalid CEPT NPC
54	Cross-connect to CPR is required
F1	Parameter only valid with PA, PB, or PC type NPCs

QUERY FULL CROSS-CONNECT MAP

Explanation of Command

This command requests a printout of the DACS II map on ALL cross-connected channels.

The output lists all FROM and TO side identifiers for all equipped network processing circuits (NPCs). Unequipped and fully unassigned Network Processing Circuits are not listed. The outputs are similar to the UTL::QRY,CMAP output. This command may produce a large volume of output. To terminate the output enter the ABT command.

Command

[I.52031]
UTL:[FRM xy][, SEQ ww]:QRY,DMAP!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

The following message segments are output for each DE, DS, DA, TE, TA, and ST110 NPC.

If the 3-digit nonhierarchical NPC number is used, the following message segment is output for each 24-channel NPC. Each segment shall contain eight terminations per line as shown below, where ghi is the nonhierarchical NPC number.

If the header line has 80 or less characters:

```
[O.52031]
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP abc mnxyz ccc-ddd \
[ {ACTPL|NACTPL}] [ kkk][ {SWMR|SWAR}][ FDL tlmndddr] \
[ {NPCTP|NPCTG|ROLL}] 4 LN MSG:
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \ tghijjrr
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \ tghijjrr
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \ tghijjrr
tghijjrr EOM
```

If the header line is longer than 80 characters:

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP def mnxyz ccc-ddd \
[ {ACTPL|NACTPL}] [ kkk][ {SWMR|SWAR}] 5 LN MSG:
[ FDL tlmndddr][ {NPCTP|NPCTG|ROLL}]
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \ tghijjrr
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \ tghijjrr
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \ tghijjrr
tghijjrr EOM
```

If the 3-digit nonhierarchical NPC number is used, the following message segment is output for each Clear-DS1 NPC.

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP jkl mnxyz[ {FAD \
<tmode>|ROLL}]
[t]ghi[r][ ghi] EOM
```

If the 4-digit nonhierarchical NPC number is used, the following message segment is output for each 24-channel NPC. Each segment shall contain six terminations per line as shown below, where the vghi is the nonhierarchical NPC number.

If the header line has 80 or less characters:

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP sabc mnxyz ccc-ddd \
[ {ACTPL|NACTPL}]
[ tkkk][ {SWMR|SWAR}][ FDL tulmndddr][ {NPCTP|NPCTG|ROLL}] \ 5 LN
MSG:
tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr
tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr
tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr
tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr EOM
```

If the header line is longer than 80 characters:

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP sabc mnxyz ccc-ddd \
[ {ACTPL|NACTPL}] [ tkkk][ {SWMR|SWAR}] 6 LN MSG:
[FDL tulmndddr][ {NPCTP|NPCTG|ROLL}]
tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr
tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr
tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr
tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr tvghijjrr EOM
```

If the 4-digit nonhierarchical NPC number is used, the following message segment is output for each Clear-DS1 NPC.

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP sjkl mnxyz[ {FAD \
<tmode>|ROLL}] [t]vghi[r][ vghi] EOM
```

The following four message segments are output for each SDxyz-type NPC:

If an SDxyz-type NPC is located in a North American module, then only 48 of the total 64 channels are usable. In that case the [v]ghijj field for channels 4, 8, 12, 16, ..., 64 appears as unmapped ([0]000000).

[O.52032]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]abc SDxyz 001-016 \
5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]abc SDxyz 017-032 \
5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]abc SDxyz 033-048 \
5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]abc SDxyz 049-064 \
5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
```

The following two message segments are output for each MB NPC.

[O.52033]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]mbn MB100 001-064 \
DPLX 5 LN MSG:
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll lll lll lll lll lll lll lll lll \
```

```

lll lll lll
lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll EOM

```

```

M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]mbn MB100 065-085 \
DPLX 3 LN MSG:
lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll lll lll lll lll lll EOM

```

The following message segment is output as many times as needed for each VI NPC.

[O.52034]

```

M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]vnp VI100 xx \
e LN MSG:
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn]
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn]
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn]
tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn EOM

```

The following completion message segment is output after all other NPC segments have been output.

[O.52031]

```

M hh:mm:ss xy,ww n[vv] UTL QRY DMAP COMPL

```

Hierarchical

The following message segment is output for each DE, DS, DA, TE, TA, and ST110 NPC.

If the header line has 80 or less characters:

[O.52031]

```

M hh:mm:ss xy,ww n[vv] UTL QRY DMAP uvmnp mnxyz ccc-ddd \
[ {ACTPL|NACTPL}] [ uvkkk][ {SWMR|SWAR}][ FDL tjklmndddr] \
[ {NPCTP|NPCTG|ROLL}] 7 LN MSG:
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr EOM

```

If the header line is longer than 80 characters:

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP uvmnp mnxyz ccc-ddd \
[ {ACTPL|NACTPL}] [ uvkkk][ {SWMR|SWAR}] 8 LN MSG:
[FDL tjklnmdddr][ {NPCTP|NPCTG|ROLL}]
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr EOM
```

The following message segment is output for each Clear-DS1 NPC.

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP edhfg mnxyz[ {FAD \
<tmode>|ROLL}] 2 LN MSG:
[t]ghikl[r][ ghikl] EOM
```

The following four message segments are output for each SDxyz-type NPC:

If an SDxyz-type NPC is located in a North American module, then only 48 of the total 64 channels are usable. In that case the ghikljj field for channels 4, 8, 12, 16, ..., 64 appears as unmapped (00000000).

[O.52032]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP uvmnp SDxyz 001-016 \
5 LN MSG:
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP uvmnp SDxyz 017-032 \
5 LN MSG:
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP uvmnp SDxyz 033-048 \
5 LN MSG:
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
```



```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP uvmnp SDxyz 049-064 \
5 LN MSG:
tghikljrr tghikljrr tghikljrr tghikljrr
tghikljrr tghikljrr tghikljrr tghikljrr
tghikljrr tghikljrr tghikljrr tghikljrr
tghikljrr tghikljrr tghikljrr tghikljrr EOM
```

The following two message segments are output for each MB NPC.

[O.52033]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP mbnop MB100 001-064 \
DPLX 5 LN MSG:
lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP mbnop MB100 065-085 \
DPLX 3 LN MSG:
lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll lll lll lll lll lll EOM
```

The following message segment is output as many times as needed for each VI NPC.

[O.52034]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP vnprs VI100 xx \
e LN MSG:
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn]
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn]
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn]
tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \ tnnn
tnnn EOM
```

The following completion message segment is output after all other NPC segments have been output.

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

The following two message segments are output for each PA, PB, PC, and ST100 NPC.

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]abc mnxyz 000-015 \
[ {NPCTP|NPCTG|ROLL}} 5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]abc mnxyz 016-031 \
[ {NPCTP|NPCTG|ROLL}} 5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
```

The following message segment is output for each Clear-E1 NPC.

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]jkl mnxyz[ {FAD \
<tmode>|ROLL}}
[t][v]ghi[r][ [v]ghi] EOM
```

The following four message segments are output for each SDxyz-type NPC in an international module:

[O.52032]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]abc SDxyz 001-016 \
5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]abc SDxyz 017-032 \
5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]abc SDxyz 033-048 \
5 LN MSG:
```

```
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]abc SDxyz 049-064 \
5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
```

The following two message segments are output for each MB NPC.

[O.52033]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]mbn MB100 001-064 \
DPLX 5 LN MSG:
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]mbn MB100 065-085 \
DPLX 3 LN MSG:
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll EOM
```

The following four message segments are output for each CB NPC.

[O.52036]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]cbn CB10z 000-031 \
DPLX 5 LN MSG:
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq EOM

M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]cbn CB10z 032-063 \
DPLX 5 LN MSG:
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]cbn CB10z 064-095 \
DPLX 5 LN MSG:
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]cbn CB10z 096-127 \
DPLX 5 LN MSG:
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq
[v]opq [v]opq [v]opq [v]opq [v]opq [v]opq [v]opq \ [v]opq EOM
```

The following message segment is output as many times as needed for each VI NPC.

[O.52034]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]vnp VI100 xx \
e LN MSG:
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \
tnnn tnnn tnnn tnnn]
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \
tnnn tnnn tnnn tnnn]
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \
tnnn tnnn tnnn tnnn]
tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \
tnnn tnnn tnnn tnnn EOM
```

The following completion message segment is output after all other NPC segments have been output.

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP COMPL
```

Hierarchical

The following two message segments are output for each PA, PB, PC, and ST110 NPC.

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP uvmnp mnxyz 000-015 \
[ {NPCTP|NPCTG|ROLL}] 5 LN MSG:
tghikljjr tghikljjr tghikljjr tghikljjr
tghikljjr tghikljjr tghikljjr tghikljjr
tghikljjr tghikljjr tghikljjr tghikljjr
tghikljjr tghikljjr tghikljjr tghikljjr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP uvmnp mnxyz 016-031 \
[ {NPCTP|NPCTG|ROLL}} 5 LN MSG:
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr EOM
```

The following message segment is output for each Clear-E1 NPC.

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP edhfg mnxyz[ {FAD \
<tmode>|ROLL}} 2 LN MSG:
[t]ghikl[r][ ghikl] EOM
```

The following four message segments are output for each SDxyz-type NPC in an international module:

[O.52032]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP uvmnp SDxyz 001-016 \
5 LN MSG:
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP uvmnp SDxyz 017-032 \
5 LN MSG:
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP uvmnp SDxyz 033-048 \
5 LN MSG:
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP uvmnp SDxyz 049-064 \
5 LN MSG:
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr EOM
```

The following two message segments are output for each MB NPC.

[O.52033]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP mbnop MB100 001-064 \
DPLX 5 LN MSG:
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP mbnop MB100 065-085 \
DPLX 3 LN MSG:
lll lll lll lll lll lll lll lll lll lll lll lll lll \
lll lll lll
lll lll lll lll lll EOM
```

The following four message segments are output for each CB NPC.

[O.52036]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP cbnpq CB10z 000-031 \
DPLX 5 LN MSG:
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP cbnpq CB10z 032-063 \
DPLX 5 LN MSG:
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP cbnpq CB10z 064-095 \
DPLX 5 LN MSG:
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP cbnpq CB10z 096-127 \
DPLX 5 LN MSG:
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx
opqrx opqrx opqrx opqrx opqrx opqrx opqrx opqrx EOM
```

The following message segment is output as many times as needed for each VI NPC.

[O.52034]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP vnprs VI100 xx \
e LN MSG:
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \
tnnn tnnn tnnn]
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \
tnnn tnnn tnnn]
[tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \
tnnn tnnn tnnn]
tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn tnnn \
tnnn tnnn tnnn EOM
```

The following completion message segment is output after all other NPC segments have been output.

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP COMPL
```

Both Terminations

Nonhierarchical

The following two message segments are output for each TH NPC.

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]abc mnxyz 000-015 \
[ {NPCTP|NPCTG|ROLL}] 5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]abc mnxyz 016-031 \
[ {NPCTP|NPCTG|ROLL}] 5 LN MSG:
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr
t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr t[v]ghijjrr EOM
```

The following message segment is output for each Clear-E1 TH type NPC.

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP [s]jkl mnxyz[ {FAD \
<tmode>|ROLL}]
[t][v]ghi[r][ [v]ghi] EOM
```

Hierarchical

The following two message segments are output for each TH type NPC.

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP uvmnp mnxyz 000-015 \
[ {NPCTP|NPCTG|ROLL}] 5 LN MSG:
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP uvmnp mnxyz 016-031 \
[ {NPCTP|NPCTG|ROLL}] 5 LN MSG:
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr
tghikljjjr tghikljjjr tghikljjjr tghikljjjr EOM
```

The following message segment is output for each Clear-E1 TH type NPC.

[O.52031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY DMAP edhfg mnxyz[ {FAD \
<tmode>|ROLL}] 2 LN MSG:
[t]ghikl[r][ ghikl] EOM
```

Explanation of Parameters

DMAP	Digroup map
NPC	Network processing circuit
MAP	Map
[s]abc	The 3- or 4-digit nonhierarchical NPC number For FT NPCs excluding nonchannelized NPCs. For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

DA Dual digroup ANSI NPC

DE Dual digroup NPC

DS SLC[®] carrier NPC

The mn value is identified for the SDxyz application type NPCs.

SD Digital Signal Processing Application Circuit Pack

ST Digital Signal Processing Circuit Pack

(2 NPCs per card)

MB Digital multipoint bridge NPC

PA CEPT NPC (75- or 120-ohm)

PB CEPT NPC (120-ohm twisted pair)

PC CEPT NPC (75-ohm coaxial)

CB C-bit processor (CPR) NPC

TA DS3U ANSI NPC

TE DS3U or HDS3U Noninterface unit NPC

TH Hybrid DS3U CEPT NPC

1.544 Mb/s Termination

SE HSU Type NPC

SA HSU Type NPC

2.048 Mb/s Termination

SH HSU Type NPC

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

ccc Starting channel or conference number

ddd Ending channel or conference number

Channel numbers

1.544 Mbit/s Termination

001 through 024 for DA, DE, TA, TE, and ST110 type
NPCs

Both Terminations

000-031 (CEPT)

	001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
	001-085	(MB NPC)
FDL		Facility data link; only for DE type NPCs
		The FDL is mapped to the following termination:
t[u]lmnddr		Nonhierarchical termination number and state
	t	Type of connection
	[u]lmn	The 3- or 4-digit nonhierarchical NPC number
	ddd	Channel number
	r	Termination state
	Both Terminations	
tjklmnddr		Hierarchical termination number
	t	Type of connection
	jk	Unit number
	l	Module number
	mn	NPC number within the module
	ddd	Channel number
	r	Termination state
	T	Terminated
	blank	Not Terminated
NPCTP		NPC for DS0 Test Ports

NPCTG	NPC for Nx64 kbit/s Test-access Groups
ROLL	bridged facility in Roll procedure
t[v]ghijjr	Nonhierarchical termination number and state
t	Type of connection
[v]ghi	Nonhierarchical NPC number
jjj	Channel/conference number
r	Termination state
*	One-way
blank	Two-way
B	Broadcast
C	Conference of the Switched Teleconferencing feature
R	Bridged (from Roll)
T	Test access
P	DSP Platform Application connection, two-way
Q	DSP Platform Application connection, one-way
[v]ghijjj	Nonhierarchical termination number
	Number of NPC and channel or conference port number/circuit ID.
[0]000000	Unmapped termination number
	1.544 Mbit/s Termination
[v]ghi000	Mapped termination number connected to an FDL
[-]-SECH-	Mapped termination connected to a Subrate (SR) or Multijunction (MJ) type NPC.
ghi	Conference port number (Switched Teleconferencing) (001 through 500)
jjj	Conference circuit identifier (Switched Teleconferencing) (001 through 150)
T	Terminated
blank	Not Terminated
tghikljrr	Hierarchical termination number and state
t	Type of connection
gh	Unit number

	i	Module number
	kl	NPC number
	jjj	Channel/conference number
	r	Termination state
	ghikljjj	Hierarchical termination number
	00000000	Unmapped termination number
	ghikl000	Mapped termination number connected to an FDL
		1.544 Mbit/s Termination
	---SECH---	Mapped termination connected to a Subrate (SR) or Multijunction (MJ) type NPC.
		If the channel is connected to a conference (Switched Teleconferencing), uvmnpjjr (uv-m-npjjr) is in the "uvmnpj--" format.
uvm		Conference port number (Switched Teleconferencing) (001 through 500)
npj		Conference circuit identifier (Switched Teleconferencing) (001 through 150)
[s]mbn		The 3- or 4-digit nonhierarchical MB type NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
mbnop		Hierarchical MB type NPC number
	mb	Unit number
	n	Module number
	op	NPC number
		For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
III		Number of legs involved in the multipoint conference (000 through 256)
[s]vnp		The 3- or 4-digit nonhierarchical virtual NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
vnprs		Hierarchical virtual NPC number
	vn	Unit number
	p	Module number
	rs	NPC number

	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
xx	Number of conferences reported in the message segment (01 through 48)
e	Number of lines in the message segment
tnnn	Virtual conference type and number
t	Virtual conference type
nnn	Virtual conference number (001 through 500)
*	one-way
blankt	wo-way
DPLX	Duplex
	Duplex equipped

1.544 Mbit/s Termination

ACTPL	Active protection line
	Queried SLC carrier NPC is a protection line which is active
NACTPL-	Nonactive protection line
	Queried SLC carrier NPC is a protection line which is not active
[t]kkk	The 3- or 4-digit nonhierarchical NPC number; corresponding SLC carrier Digroup A (DGA) NPC number
	Valid values are identical to [s]abc.
uvkkk	Hierarchical NPC number
	SLC carrier digroup A (DGA) NPC number
SWMR	Switch manually requested
	Protection switch manually requested for SLC carrier NPC.
SWAR	Switch automatically requested
	Protection switch automatically requested for SLC carrier NPC.
FAD	Facility access digroup
	Nonchannelized Test NPC

 **NOTE:**
In a message segment containing information for an FAD type NPC, the NPCs under test are listed without the type of the connection they are in.

tmode	Nonchannelized test mode

	E-end	Equipment end
	F-end	Facility end
	MONE	Monitor signal from E-end NPC to F-end NPC of unmapped or one-/two-way mapped test session
	MONF	Monitor signal from F-end NPC to E-end NPC of a two-way mapped test session
	MONEF	Monitor a two-way mapped connection in both directions Two FADs are connected for the test session, and test mode can only be changed to SPLTEF.
	SPLTA	Split the A signal from the E-end NPC to the F-end NPC of one-/two-way mapped test session
	SPLTB	Split the B signal from the F-end NPC to the E-end NPC of a mapped two-way test session
	SPLTAB	Split a two-way mapped circuit in both directions
	SPLTE	Split the input and output ports of E-end NPC of an unmapped or two-way mapped test session
	SPLTF	Split the input and output ports of F-end NPC of a two-way mapped test session
	SPLTE	Split a two-way mapped test session in both directions Two FADs are connected for the test session, and test mode can only be changed to MONEF
	LOOPE	Loop the E-end input port to the output port, and connect the looped signal to the FAD The test session may include an unmapped or two-way mapped connection.
	LOOPF	Loop the F-end input port to the output port, and connect the looped signal to the FAD Only for a two-way mapped test session; not allowed for one-way broadcast tributaries.
[s]jkl	The 3- or 4-digit nonhierarchical NPC number; for Clear DS1 NPCs Values are identical to [s]abc.	
edhfg	Hierarchical NPC number	
	ed	Unit number
	h	Module number

	fg	NPC number within the module Valid values are identical to uvmnp.
[t][v]ghi[r]		Nonhierarchical termination number and state
	t	Type of connection
	[v]ghi	The 3- or 4- digit nonhierarchical NPC number
	r	Termination state Valid values are identical to abc.
[t]ghikl[r]		Hierarchical termination number and state
	t	Type of connection
	gh	Unit number
	i	Module number
	kl	NPC number
	r	Termination state Valid values are identical to uvmnp.


NOTE:

For an FAD, the tested NPC is listed first if only one of the two mapped NPCs is under test.

2.048 Mbit/s Termination

[s]jkl		The 3- or 4-digit nonhierarchical nonchannelized NPC number Values are identical to [s]abc.
edhfg		Hierarchical nonchannelized NPC number
	ed	Unit number
	h	Module number
	fg	NPC number within the module Valid values are identical to uvmnp.
[t][v]ghi[r]		Nonhierarchical termination number and state
	t	Type of connection
	[v]ghi	The 3- or 4- digit nonhierarchical NPC number
	r	Termination state Valid values are identical to [s]abc.
[t]ghikl[r]		Hierarchical termination number and state

	t	Type of connection
	gh	Unit number
	i	Module number
	kl-	NPC number
	r	Termination state
		Valid values are identical to uvmnp.
		For a nonchannelized PTN that is under test, the tested NPC is listed first if only one of the two mapped NPCs is under test.
[s]cbn		The 3- or 4-digit nonhierarchical NPC number
		For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
cbnpq-		Hierarchical NPC number
	cb	Unit number
	n	Module number
	pq	NPC number
		For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
[v]opq		The 3- or 4-digit nonhierarchical NPC number
opqrx		Hierarchical NPC number
	op	Unit number
	q	Module number
	rx	NPC number

UTILITY QUERY DS3 BIT ERROR RATE

Explanation of Command

This command requests the bit error rate calculation method and the bit error rate threshold setting for the DS3 facilities in a DS3 or Hybrid DS3 (HDS3) unit or for all of the DS3 units, including HDS3U, in a DACS II frame.

Command

[I.53221]
UTL:[FRM xy][,SEQ ww]:QRY,DS3,BERMT[,UNIT [q]q]!

Completion Message

If the UNIT keyword is not specified, DACS II generates one completion segment for every unit that is equipped as a DS3 or Hybrid DS3 (HDS3) Unit and has at least one equipped Service MXR or Hybrid MXR (HMXR). Units that are not equipped as a DS3U or HDS3U, or DS3U or HDS3U equipped units with no equipped Service MXR or HMXR are skipped. If no Service MXR or HMXR is equipped in the whole frame, [O.53222] is generated. If the UNIT keyword is specified, and the unit is not equipped as a DS3 or HDS3 Unit, a denial message is generated.

[O.53221]
M hh:mm:ss xy,ww n[vv] UTL QRY DS3 BERMT UNIT [q]q 3 LN MSG:
BERM m₁ . . . m₆
BERT t₁ . . . t₆ EOM

M hh:mm:ss xy,ww n[vv] UTL QRY DS3 BERMT COMPL

[O.53222]
M hh:mm:ss xy,ww n[vv] UTL QRY DS3 BERMT NONE COMPL

Denial Message

[O.53221.01]
M hh:mm:ss xy,ww n[vv] UTL QRY DS3 BERMT UNIT [q]q COND cc DNY

QUERY DS3 LINE BUILD OUT

Explanation of Command

This command reports the line buildout (LBO) settings for the DS3 facilities on the DACS II frame. Output is printed only for DS3 units, including DS3 Hybrid units, that are equipped.

Command

```
[I.53231]
UTL: [FRM xy][, SEQ ww]:QRY, DS3, LBO!
```

Completion Message

```
[O.53231]
M hh:mm:ss xy,ww n[vv] UTL QRY DS3 LBO e LN MSG:
UNIT [q]q 1bbb 2bbb 3bbb 4bbb 5bbb 6bbb
      .      .      .
UNIT [q]q 1bbb 2bbb 3bbb 4bbb 5bbb 6bbb COMPL
```

The following message is generated if no service MXR is equipped in the DACS frame.

```
[O.53232]
M hh:mm:ss xy,ww n[vv] UTL QRY DS3 LBO NONE COMPL
```

Explanation of Parameters

DS3	Digital signal 3 (44.736 Mb/s rate)
e	Number of lines in the segment (2 through 5)
UNIT	Unit
[q]q	Unit number (1 through 16)
LBO	The line buildout setting provisioned per DS3 facility.
bbb	LBO setting for each DS3 facility
ON	Line buildout is turned on
OFF	Line build out is turned off

--- Service MXR or HMXR corresponding to the DS3
or Hybrid DS3 is not equipped

LBO is required as shown in the following table.

734A Cabling to DSX-3	KS-19224,L2 Cabling to DSX-3	LBO
0 to 225 feet	0 to 75 feet	ON
225 to 450 feet	75 to 150 feet	OFF

QUERY DS3 ALARMS DELAY TIME AND DS1 ALARMS SUPPRESSION STATUS IN DS3Us

Explanation of Command

1.544 Mbit Termination Only

This message queries the delay time setting for the Hybrid/DS3 facility alarm messages output and queries the status of alarm messages suppression for DS1s in DS3 units.

Command

[I.56333]

UTL: [FRM xy][, SEQ ww]:QRY, DS3ALM!

Completion Message

[O.56333]

M hh:mm:ss xy, ww n[vv] UTL QRY DS3ALM 2 LN MSG:
[x]x {ON|OFF} COMPL

Explanation of Parameters

DS3ALM	DS3 Alarm Activate Integration Time and Message Suppression Status
[x]x	Delay time which may be 2, 3, 4, 5, 6, 7, 8, 9, or 10 seconds.
ON	The alarm messages suppression for DS1s in DS3 units is turned on.
OFF	The alarm messages suppression for DS1s in DS3 units is turned off.

QUERY ERROR CORRECTION LOCATION

Explanation of Command

This Subrate message requests the current setting of the error correction location (ECLOC) functions. The ECLOC is the type of Subrate circuit pack to which all new error correction functions will be allocated. Such resources are allocated for channels requiring parity channel error correction and for circuits with Subrate error correction that do not connect to a Subrate multiplexer or a multipoint junction unit.

The ECLOC is set using the CHG, FROM, TO, NOT or CHG, FROM, TO, TLP commands.

Command

[I.51511]
UTL: [FRM xy] [, SEQ ww]:QRY, ECLOC!

Completion Message

[O.51511]
M hh:mm:ss xy, ww v[nn] UTL QRY ECLOC TYPE sss COMPL

Explanation of Parameters

ECLOC	Error correction location
TYPE	Type
sss	Subrate NPC type
SRM	Subrate multiplexer
MJU	Multipoint junction unit (default)

UTILITY QUERY EQUIPAGE, COMMON

Explanation of Command

This command reports the equipage of common equipment in the frame.

In the output message, each entity is represented by a single character alphabetic variable. The value of this variable gives the equipage status of the entity represented by the variable.

Command

[I.53109]

UTL: [FRM xy][, SEQ ww]:QRY, EQD, COMMON!

Completion Message

[O.53109]

M hh:mm:ss xy, ww n[vv] UTL QRY EQD g h i j k l m n o p EOM

M hh:mm:ss xy, ww n[vv] UTL QRY EQD 3 LN MSG:

SYNC x y CRO x

TLI x x x x x x x x y y y y y y y y EOM

This segment describes the ECCN hardware:

M hh:mm:ss xy, ww n[vv] UTL QRY EQD TOTAL ETSIS tt 3 LN MSG:

01 x y 02 x y 03 x y 04 x y 05 x y 06 x y 07 x y 08 x y

09 x y 10 x y 11 x y 12 x y 13 x y 14 x y 15 x y 16 x y EOM

M hh:mm:ss xy, ww n[vv] UTL QRY EQD COMMON COMPL

Explanation of Parameters

EQD

Equipped

The equipage status of an entity is given as follows:

1 Equipped

0 Unequipped

The DACS II entities and their status fields are as follows:

	g	Link1
	h	Link 2
	i	Link 3
	j	Link 4
	k	Link 5
	l	Link 6
	m	XC0 (cross-connect 0)
	n	XC1 (cross-connect 1)
	o	CCI 0 (clock and control interface 0)
	p	CCI 1 (clock and control interface 1)
TLI		Timing link interface
x		Side 0
y		Side 1
		The TLI entities are listed, in the messages, from left to right in the following order:
		TLI 1, SSP 0
		TLI 1, SSP 1
		TLI 2, SSP 0
		TLI 2, SSP 1
		TLI 3, SSP 0
		TLI 3, SSP 1
		TLI 4, SSP 0
		TLI 4, SSP 1
		TLI 1, SSP 0
		TLI 1, SSP 1
		TLI 2, SSP 0
		TLI 2, SSP 1
		TLI 3, SSP 0
		TLI 3, SSP 1
		TLI 4, SSP 0
		TLI 4, SSP 1
ETIS		Expanded time slot interchangers
	f	FROM unit (1 through 6)
	t	TO Unit (1 through 6)
SYNC		Synchronizer
	x	Side 0 synchronizer equipage status
	y	Side 1 synchronizer equipage status

CRO	Clock reference oscillator
x	CRO equipage status
tt	Total number of equipped ETSIs

UTILITY QUERY, EQUIPMENT CONNECTIVITY

Explanation of Command

1.544 Mbit/s Termination

This command requests a printout of an interunit connectivity matrix. A 1 indicates cross-connections are made between the two units listed in the row and column. A 0 indicates no connectivity between the two units. The 6 X 6 matrix is shown in halves in the PDS output message.

2.048 Mbit/s Termination

This message requests a printout of all units that are equipped. This message provides a connectivity matrix showing a "1" at the intersection of rows and columns of units for which time slot cross-connections can be made. A "0" is shown where there is no connectivity. The matrix is thus also an equipage map of the time slot interchange on each side of the cross-connect network.

Command

[I.53031]

UTL: [FRM xy][, SEQ ww]:QRY, EQD, CONN!

Completion Message

[O.53031]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD CONN 5 LN MSG:
UNITS 1 2 3 4 5 6 UNITS 1 2 3 4 5 6
      1 x x x x x x      4 x x x x x x
      2 x x x x x x      5 x x x x x x
      3 x x x x x x      6 x x x x x x COMPL
```

Explanation of Parameters

EQD	Request equipage status
CONN	Request information on connectivity between units
x	Interunit connectivity
1	Connectivity
0	No connectivity

UTILITIES, ETSIS

Explanation of Command	This command requests equipage information for all expanded time slot interchange circuit packs.		
Command	[I.53022] UTL: [FRM xy][, SEQ ww]:QRY, EQD, ETSIS!		
Completion Message	[O.53022] M hh:mm:ss xy, ww n[vv] UTL QRY EQD ETSIS 4 LN MSG: TOTAL ETSIS tt 0qq 1qq 0qq 1qq 0qq 1qq 0qq 1qq 0qq 1qq 0qq 1qq 0qq 1qq 0qq 1qq 0qq 1qq 0qq 1qq 0qq 1qq 0qq 1qq 0qq 1qq 0qq 1qq 1qq COMPL		
Explanation of Parameters	EQD	Request equipage status	
	ETSI	Request information on ETSI circuit packs	
	tt	Total number of equipped ETSIs (00 through 32)	
	qq	Unit number (01 through 16)	
		If the ETSI pack is not equipped, the number 00 is shown in the qq field. The 0 or 1 shown before the qq is the side number.	

QUERY EQUIPPED MULTIPLEXER INTERFACE UNITS

Explanation of Command



NOTE:

This command applies to 1.544 Mbit/s Termination only.

This command queries the equipage of the Multiplexer Interface Units (MIUs) in a DACS II frame.

Command

[I.53201]

UTL: [FRM xy][, SEQ ww]:QRY, EQD, MIUS!

Completion Message

[O.53201]

M hh:mm:ss xy, ww n[vv] UTL QRY EQD MIUS ttt e LN MSG:
UNIT [q]q Pmnxyz 1mnxyz 2mnxyz 3mnxyz 4mnxyz 5mnxyz 6mnxyz \
TOTAL a
UNIT [q]q Pmnxyz 1mnxyz 2mnxyz 3mnxyz 4mnxyz 5mnxyz 6mnxyz \
TOTAL a COMPL

This message is generated if no MIUs are equipped in the DACS II frame:

[O.53202]

M hh:mm:ss xy, ww n[vv] UTL QRY EQD MIUS TOTAL 000 COMPL

Explanation of Parameters

1.544 Mbit/s Termination

EQD

Equipped state

MIUS

Multiplexer interface units

Only units that are equipped as DS3 units have corresponding output lines.

ttt

Total number of equipped MIUs in the DACS frame (001 through 112) (including protection MIUs)

e	Number of lines in a message segment (2 through 5)
UNIT	Unit
[q]q	Unit number (1 through 16)
TOTAL	Total
a	The number of equipped MIUs in a unit (1 through 7)
mnxyz	For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
MI100	Multiplexer interface unit ----- Unequipped
	Variable xyz always has the value 100.

UTILITIES, QUERY, EQUIPPED, MULTIPLEXERS

Explanation of Command

This command queries the equipment of the Multiplexers (MXRs) or Hybrid Multiplexers (HMXRs) in the DS3 or Hybrid DS3 (HDS3) Unit Service slots of the DACS II frame.

Command

[I.53211]
UTL: [FRM xy][, SEQ ww]:QRY, EQD, MXRS!

Completion Message

[O.53211]
M hh:mm:ss xy, ww n[vv] UTL QRY EQD MXRS tt e LN MSG:
UNIT [q]q 1mnxyz 2mnxyz 3mnxyz 4mnxyz 5mnxyz 6mnxyz TOTAL a

UNIT [q]q 1mnxyz 2mnxyz 3mnxyz 4mnxyz 5mnxyz 6mnxyz TOTAL a COMPL

This message is generated if no MXRs are equipped in the DACS II frame:

[O.53212]
M hh:mm:ss xy, ww n[vv] UTL QRY EQD MXRS TOTAL 00 COMPL

Explanation of Parameters

EQD	Equipped state
MXRS	Service Multiplexers (MXR or HMXR)
Only units that are equipped as DS3 or HDS3 Units have corresponding output lines.	
tt	Total number of equipped MXRs or HMXRs in the DACS frame (01 through 96) (not including Protection MXRs or HMXRs)
e	Number of lines in a segment (2 through 5)
a	The number of equipped Service MXRs or HMXRs in a unit (1 through 6)
mnxyz	The DS3 format processed by the MXR:

mn

DS3 type

MX The original R4.0 DS3 facility type supported by the Multiplexer (MXR) circuit pack (KCR-1)

EX The enhanced R6.0 DS3 facility type supported by the Enhanced Multiplexer (EMXR) circuit pack (KCR-5)

HX The hybrid facility type supported by the Hybrid Multiplexer (HMXR) circuit pack (KCR-8)

If the unit is a regular DS3U of unit type DT100, then the default is the MX type for backward compatibility. If the unit is a Hybrid DS3U of unit type HT100, then the default is HX.

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

If a particular MXR or HMXR is not equipped, five hyphens (-----) occupy the mnxyz field.

QUERY EQUIPPED NPCS

Explanation of Command

This command reports the equipage state for each of the network processing circuits (NPCs) on the DACS II frame and can provide the total number of circuits that are equipped in the facility terminating units (FTU/IFTU/IFTU2), DS3 units (DS3U), Hybrid DS3 units (HDS3U), and digital signal processing units (DSPU).

DSPP NPCs

Digital Signal Processing Platform (DSPP) NPCs that are provisioned within an FTU, IFTU, or IFTU2 will be displayed in the output message or will be counted in the total number of circuits as appropriate. One NPC will count as one circuit even though one NPC occupies a physical slot that normally is occupied by two NPCs.

Output Message

The results of the output message are in fragment sequence starting with the lowest unit number and ending with the highest unit number.

Within a fragment, the information is listed in NPC number sequence, starting with the lowest number at the top left and increasing to the right. The next line starts with the next highest NPC number.

Rules

The output of a partially equipped frame should conform to these rules:

- Omit the output message fragments for half of facility terminating module (FTM) for which there are no equipped NPCs.
- In nonhierarchical addressing, omit the output message fragment for one DS3 or HDS3 FTM (MXR or HMXR) for which there are no equipped NPCs.
- In hierarchical addressing, omit the output message fragment for half a DS3 or HDS3 FTM (MXR or HMXR) for which there are no equipped NPCs.
- Unequipped unit or module will not be reported
- The output will report on NPCs in increasing unit number order, regardless of whether the units are equipped as FTU, DS3U, HDS3U, or DSPU.
- If there are no DSPUs, the DSPU part is omitted.

- If there are no equipped FTUs, DS3Us, HDS3Us, and DSPU NPCs, the output is given in message 53043.
- The DS3U or HDS3U keyword will only be generated in message 53043 if the DS3 feature bit is enabled in the software.
- The range of NPCs in one FTM will be spanned in two output segments.
- The range of nonhierarchical NPCs in one DS3 or HDS3 FTM will be spanned in one output segment.
- The range of hierarchical NPCs in one DS3 or HDS3 FTM will be spanned in two output segments.
- The range of NPCs in one DSPU will be spanned by one output segment.

Equipage State

This command reports the equipage state of each of the network processing circuit slots on the DACS II frame and the sixteen slots (eight duplicated pairs) in each of the two DACS II DSPUs. In the output message, the fields **mnxyz** are set to "-----" if the slot is unequipped or to the 5-character external type identifier of the NPC that occupies the slot if it is equipped.

Command

[I.53041]
 UTL:[FRM xy][,SEQ ww]:QRY,EQD,NPCS[, {TOTAL|UNIT [q]q}]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.53041]

Output message fragment for NPCs in one DS1 FTM:

M hh:mm:ss xy,ww n[vv] UTL QRY EQD FTU NPCS [UNIT [q]q] tt 5 LN
 MSG:

```
[c]cccmnxyz [c]cccmnxyz [c]cccmnxyz [c]cccmnxyz [c]cccmnxyz
[c]cccmnxyz [c]cccmnxyz [c]cccmnxyz [c]cccmnxyz [c]cccmnxyz
[c]cccmnxyz [c]cccmnxyz [c]cccmnxyz [c]cccmnxyz [c]cccmnxyz
[c]cccmnxyz [c]cccmnxyz [c]cccmnxyz [c]cccmnxyz [c]cccmnxyz EOM
```

M hh:mm:ss xy,ww n[vv] UTL QRY EQD FTU NPCS [UNIT [q]q] tt 5 LN
 MSG:

```
[c]cccmnxyz [c]cccmnxyz [c]cccmnxyz [c]cccmnxyz [c]cccmnxyz
[c]cccmnxyz [c]cccmnxyz [c]cccmnxyz [c]cccmnxyz [c]cccmnxyz
[c]cccmnxyz [c]cccmnxyz [c]cccmnxyz [c]cccmnxyz [c]cccmnxyz
[c]cccmnxyz [c]cccmnxyz [c]cccmnxyz [c]cccmnxyz [c]cccmnxyz EOM
```

[O.53041]

Output message fragment for NPCs in one DS3 or HDS3 FTM (NPCs served by one MXR or HMXR):

M hh:mm:ss xy,ww n[vv] UTL QRY EQD H/DS3U NPCS [UNIT [q]q] tt 5 LN
MSG:

```
[d]dddmnxyz [d]dddmnxyz [d]dddmnxyz [d]dddmnxyz [d]dddmnxyz \
[d]dddmnxyz [d]dddmnxyz
[d]dddmnxyz [d]dddmnxyz [d]dddmnxyz [d]dddmnxyz [d]dddmnxyz \
[d]dddmnxyz [d]dddmnxyz
[d]dddmnxyz [d]dddmnxyz [d]dddmnxyz [d]dddmnxyz [d]dddmnxyz \
[d]dddmnxyz [d]dddmnxyz
[d]dddmnxyz [d]dddmnxyz [d]dddmnxyz [d]dddmnxyz [d]dddmnxyz
[d]dddmnxyz [d]dddmnxyz EOM
```

[O.53041]

Output message fragment for 3 digit nonhierarchical NPCs in one DSP unit:

M hh:mm:ss xy,ww n[vv] UTL QRY EQD DSPU NPCS [UNIT [q]q] tt 2 LN
MSG:

```
aaamnxyz aaamnxyz aaamnxyz aaamnxyz aaamnxyz aaamnxyz\
aaamnxyz aaamnxyz EOM
```

[O.53041]

Output message fragment for 4-digit nonhierarchical NPCs in one DSP unit:

M hh:mm:ss xy,ww n[vv] UTL QRY EQD DSPU NPCS [UNIT [q]q] tt 3 LN
MSG:

```
[a]aaamnxyz [a]aaamnxyz [a]aaamnxyz [a]aaamnxyz
[a]aaamnxyz [a]aaamnxyz [a]aaamnxyz [a]aaamnxyz EOM
```

Hierarchical

[O.53041]

Output message fragment for NPCs in one DS1 FTM:

M hh:mm:ss xy,ww n[vv] UTL QRY EQD FTU NPCS [UNIT [q]q] tt 5 LN
MSG:

```
uvmnppmnxyz uvmnppmnxyz uvmnppmnxyz uvmnppmnxyz uvmnppmnxyz
```

uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz
uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz
uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz EOM

M hh:mm:ss xy,ww n[vv] UTL QRY EQD FTU NPCS [UNIT [q]q] tt 5 LN
MSG:

uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz
uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz
uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz
uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz EOM

[O.53041]

Output message fragment for NPCS in one DS3 or HDS3 FTM (NPCS
served by one MXR or HMXR):

M hh:mm:ss xy,ww n[vv] UTL QRY EQD H/DS3U NPCS [UNIT [q]q] tt 5 LN
MSG:

uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz
uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz
uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz
uvmnpxyz uvmnpxyz EOM

M hh:mm:ss xy,ww n[vv] UTL QRY EQD H/DS3U NPCS [UNIT [q]q] tt 5 LN
MSG:

uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz
uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz
uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz
uvmnpxyz uvmnpxyz EOM

[O.53041]

Output message fragment for NPCS in one DSP unit:

M hh:mm:ss xy,ww n[vv] UTL QRY EQD DSPU NPCS [UNIT [q]q] tt e LN
MSG:

uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz
uvmnpxyz uvmnpxyz uvmnpxyz uvmnpxyz EOM

Common North American PDS

[O.53042]

Output message when the TOTAL keyword is specified:

M hh:mm:ss xy,ww n[vv] UTL QRY EQD NPCS TOTAL e LN MSG:

```
FTU  nnnn fff fff fff fff fff fff fff fff fff fff fff \
fff fff fff fff
H/DS3U hhhh ggg ggg ggg ggg ggg ggg ggg ggg ggg ggg \
ggg ggg ggg ggg
DSPU pppp qq qqq qq qqq qq qqq qq qqq qq qqq qq \
qq qq qq qq COMPL
```

[O.53043]

Output message when there are no equipped NPCs on the frame:

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD NPCS [UNIT [q]q] [FTU 0000]
[ H/DS3U 0000][ DSPU 000] COMPL
```

[O.53041]

Overall completion message:

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD NPCS [UNIT [q]q] COMPL
```

Common North American MML

2.048 Mbit/s Termination

Nonhierarchical

[O.53041]

Output message fragment for NPCs in one FTM:

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD FTU NPCS [UNIT [q]q] tt 5 LN
MSG:
```

```
[e]eeemxyz [e]eeemxyz [e]eeemxyz [e]eeemxyz
[e]eeemxyz [e]eeemxyz [e]eeemxyz [e]eeemxyz
[e]eeemxyz [e]eeemxyz [e]eeemxyz [e]eeemxyz
[e]eeemxyz [e]eeemxyz [e]eeemxyz [e]eeemxyz EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD FTU NPCS [UNIT [q]q] tt 5 LN
MSG:
```

```
[e]eeemxyz [e]eeemxyz [e]eeemxyz [e]eeemxyz
[e]eeemxyz [e]eeemxyz [e]eeemxyz [e]eeemxyz
[e]eeemxyz [e]eeemxyz [e]eeemxyz [e]eeemxyz
[e]eeemxyz [e]eeemxyz [e]eeemxyz [e]eeemxyz EOM
```

[O.53041]

Output message fragment for 3 digit nonhierarchical NPCs in one DSP unit:

M hh:mm:ss xy,ww n[vv] UTL QRY EQD DSPU NPCS [UNIT [q]q] tt 2 LN
MSG:
aaamxyz aaamxyz aaamxyz aaamxyz aaamxyz aaamxyz
aaamxyz aaamxyz EOM

[O.53041]

Output message fragment for 4-digit nonhierarchical NPCs in one DSP unit:

M hh:mm:ss xy,ww n[vv] UTL QRY EQD DSPU NPCS [UNIT [q]q] tt 3 LN MSG:
[a]aaamxyz [a]aaamxyz [a]aaamxyz [a]aaamxyz
[a]aaamxyz [a]aaamxyz [a]aaamxyz [a]aaamxyz EOM

Hierarchical

[O.53041]

Output message fragment for NPCs in one FTM:

M hh:mm:ss xy,ww n[vv] UTL QRY EQD FTU NPCS [UNIT [q]q] tt 5 LN
MSG:
uvmnpmxyz uvmnpmxyz uvmnpmxyz uvmnpmxyz
uvmnpmxyz uvmnpmxyz uvmnpmxyz uvmnpmxyz
uvmnpmxyz uvmnpmxyz uvmnpmxyz uvmnpmxyz
uvmnpmxyz uvmnpmxyz uvmnpmxyz uvmnpmxyz EOM

M hh:mm:ss xy,ww n[vv] UTL QRY EQD FTU NPCS [UNIT [q]q] tt 5 LN
MSG:
uvmnpmxyz uvmnpmxyz uvmnpmxyz uvmnpmxyz
uvmnpmxyz uvmnpmxyz uvmnpmxyz uvmnpmxyz
uvmnpmxyz uvmnpmxyz uvmnpmxyz uvmnpmxyz
uvmnpmxyz uvmnpmxyz uvmnpmxyz uvmnpmxyz EOM

[O.53041]

Output message fragment for NPCs in one DSP unit:

M hh:mm:ss xy,ww n[vv] UTL QRY EQD DSPU NPCS [UNIT [q]q] tt e LN MSG:
uvmnpmxyz uvmnpmxyz uvmnpmxyz uvmnpmxyz
uvmnpmxyz uvmnpmxyz uvmnpmxyz uvmnpmxyz EOM

Denial Message [O.53041.01]

M hh:mm:ss xy,ww n[vv] UTL QRY EQD NPCS UNIT [q]q COND cc DNY

Explanation of Parameters

EQD	Equipped Request equipage status
NPCS	Network processing circuits Request information on NPCs
UNIT	Unit
[q]q	Unit number (1 through 16)
TOTAL	Total Request summary information
tt	Total number of NPCs in a segment
mnxyz	The equipage state and type of the NPCs
mnxyz	<i>Explanation</i>
----	Not equipped
mn	The type of NPC Valid values are listed below:
mn	<i>Explanation</i>
DA	Dual digroup ANSI NPC
DE	Dual digroup NPC
DS	SLC [®] carrier NPC
MB	Digital multipoint bridge NPC
MJ	Multipoint junction unit NPC
SR	Subrate multiplexer unit NPC
CB	C-bit processor (CPR) NPC
TA	DS3U ANSI NPC

	TE	DS3U or HDS3U Noninterface unit NPC
	TH	Hybrid DS3U CEPT NPC
	The mn value is identified for the SDxyz application type NPCs.	
	SD	Digital Signal Processing Application Circuit Pack
	ST	Digital Signal Processing Circuit Pack (2 NPCs per card)
	1.544 Mb/s Termination	
	SE	HSU Type NPC
	SA	HSU Type NPC
	2.048 Mb/s Termination	
	SH	HSU Type NPC
xyz	The parameters used to provision the NPC. See GRTH,NPC,TYPE and GRTH,NPC,TYPE,OPTS,IW,X,AIS,INFO,MJ,MN for values.	
SDxyz	Digital Signal Processing Platform (DSPP) Applications	
	SDxyz	Type of Application
	SD111	X.50/X.57 International Subrate Application
	SD311	Digital Multipoint Bridge (DMB) Application
	SD411	DDS Subrate and MJU Application
	SDxyz	Future applications with specific values for x, y, and z
[a]aaa	The 3- or 4-digit nonhierarchical NPC number for DSPU NPCs Valid values are listed below (or ---). For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."	
uvmnp	Hierarchical NPC number On either DS1 FTM, DS3 FTM, HDS3 FTM, or DSP unit. On either CEPT FTM, or DSP unit.	
	uv	Unit number

m	Module number
np	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
nnnn	Total number of FTU NPCs on the frame. Dashes (----) will be shown if no unit is grown. (0000 through 2560, for domestic) (0000 through 2048, for international)
fff	Total number of NPCs on each FTU. Dashes (---) will be shown if the unit is not grown or is not grown as an FTU. (000 through 160, for domestic) (000 through 128, for international)
pppp	Total number of DSPU NPCs on the frame. Dashes (----) will be shown if no unit is equipped. (0000 through 0128)
qqq	Total number of NPCs on each DSPU. Dashes (---) will be shown if the unit is not grown or is not grown as a DSPU. (000 through 008)
e	Number of lines in a segment
[c]ccc	The 3- or 4-digit nonhierarchical NPC number for FTM For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
[d]ddd	The 3- or 4-digit nonhierarchical NPC number for DS3U or HDS3U NPCs For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
hhhh	Total number of DS3U or HDS3U NPCs on the frame. Dashes (----) will be shown if no unit is grown. (0000 through 2688)
ggg	Total number of NPCs on each DS3U or HDS3U.

Dashes (---) will be shown if the unit is not grown or is not grown
as a DS3U or HDS3U.

(000 through 168)

cc

Hexadecimal condition code

cc	Explanation
10	Unit is not equipped

UTILITY QUERY EQUIPPED

Explanation of Command

This message requests a printout for all the equipped time slot interchange (TSI) circuit packs.

A fully equipped Enclosed Single Bay Frame (ESBF) shows the following TSI equipage status: 11 15 51 55

A fully equipped non-ESBF frame shows the following TSI equipage status:

11 12 13 14 15 16 41 42 43 44 45 46

21 22 23 24 25 26 51 52 53 54 55 56

31 32 33 34 35 36 61 62 63 64 65 66

Command

[I.53021]

UTL: [FRM xy][, SEQ ww]:QRY, EQD, TSIS!

Completion Message

[O.53021]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD TSIS 5 LN MSG: TOTAL TSIS tt
ft ft ft ft ft ft      ft ft ft ft ft ft
ft ft ft ft ft ft      ft ft ft ft ft ft
ft ft ft ft ft ft      ft ft ft ft ft ft COMPL
```

Explanation of Parameters

EQD	Request equipage status
TSIS	Request information on TSI circuit packs
tt	Total number of equipped TSIs on the in-service side. The total number of equipped TSIs in the frame is twice this number.
ft	TSI equipage status:
00	Unequipped

TSI

No. Equipped

UTILITY QUERY ENTITY EQUIPAGE

Explanation of Message

This command is used to retrieve the state information associated with equipment.

The UNIT option is specified only when the EQPT modifier is used to query that unit. The UNIT field will be null when the command is used to query the whole frame.

Command

[I.53108]

UTL: [FRM xy][, SEQ ww]:QRY, EQD[, UNIT [q]q]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

If the unit number is not entered, the following output messages will be generated:

The output message starts with:

[O.53108]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD g h i j k l m n o p EOM \
M hh:mm:ss xy,ww n[vv] UTL QRY EQD 3 LN MSG: SYNC x x' CRO x \
TLI x x x x x x x x x' x' x' x' x' x' x' x' EOM
```

This segment describes the ECCN hardware:

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD TOTAL ETSIS tt 3 LN MSG: \
01 x 02 x 03 x 04 x 05 x 06 x 07 x 08 x \
09 x 10 x 11 x 12 x 13 x 14 x 15 x 16 x EOM
```

The output then continues with segments that contain information about common equipment in the equipped units. If more than 4 units are equipped, the unit equipage output will be divided into multiple segments.

[O.53108]

```
[M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNITS e LN MSG:]
[<data line for common equipment in the 1st equipped unit>]
[<data line for common equipment in the 2nd equipped unit>]
[<data line for common equipment in the 3rd equipped unit>]
[<data line for common equipment in the 4th equipped unit> EOM]
[M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNITS e LN MSG:]
[<data line for common equipment in the 5th equipped unit>]
[<data line for common equipment in the 6th equipped unit>]
[<data line for common equipment in the 7th equipped unit>]
[<data line for common equipment in the 8th equipped unit> EOM]
[M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNITS e LN MSG:]
[<data line for common equipment in the 9th equipped unit>]
[<data line for common equipment in the 10th equipped unit>]
[<data line for common equipment in the 11th equipped unit>]
[<data line for common equipment in the 12th equipped unit> EOM]
[M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNITS e LN MSG:]
[<data line for common equipment in the 13th equipped unit>]
[<data line for common equipment in the 14th equipped unit>]
[<data line for common equipment in the 15th equipped unit>]
[<data line for common equipment in the 16th equipped unit> EOM]
```

Data line for a unit equipped as a DS1 FTU:

```
UNIT [q]q UC a FTMI b c d e FC f g h j k m p q[ CCB r s]
```

Data line for a unit equipped as a DS3U/HDS3U:

```
UNIT [q]q UC a FLI b c FMT l m MXR d e f g h j k \
MIU n o p q u v w[ CCB r s]
```

Data line for a unit equipped as a DSPU:

```
UNIT [q]q UC a DSPI b[ CCB r s]
```

The output message then lists the NPC numbers of equipped NPCs in each FTM/ MXR/HMXR/DSPU. Output messages will be generated successively in ascending order by NPC number. If an FTM/MXR/HMXR/DSPU has no NPC equipped, the segment for that FTM/MXR/HMXR/DSPU will not be output.

Output message for equipage of NPCs in a DS1 FTM.

Note: If any of the odd NPCs have been provisioned as a Digital Signal Processing Platform application NPC (SD-type), then the even NPC following it does not exist and dashes will be shown in its place.

[O.53108]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD FTU NPCS \
[a]aaa-[b]bbb tt 5 LN MSG:
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx \
```

```
[x]xxx [x]xxx
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx \
[x]xxx [x]xxx
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx \
[x]xxx [x]xxx
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx \
[x]xxx [x]xxx EOM
```

Output message for equipage of NPCs in a DSPU:

[O.53108]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD DSPU NPCS [a]aaa-[b]bbb \
tt 2 LN MSG:
[z]zzz [z]zzz [z]zzz [z]zzz [z]zzz [z]zzz [z]zzz [z]zzz EOM
```

After the above information is output, the following format will be generated to complete the output response:

[O.53108]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD COMPL
```

If the unit number is specified in the input, the following output messages will be generated:

Output message format for an FTU:

[O.53108]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD 2 LN MSG: \
UNIT [q]q UC a FTMI b c d e FC f g h j k m p q[ CCB r s] EOM
```

The output then continues with up to 4 of the following segment; one for each FTM:

Note: If any of the odd NPCs have been provisioned as a Digital Signal Processing Platform application NPC (SD-type), then the even NPC following it does not exist and dashes will be shown in its place.

[O.53108]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT qq FTU NPCS \
[a]aaa-[b]bbb tt 5 LN MSG:
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx \
[x]xxx [x]xxx
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx \
[x]xxx [x]xxx
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx \
[x]xxx [x]xxx
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx \
```

[x]xxx [x]xxx EOM

Output message format for a DS3U/HDS3U:

[O.53108]

M hh:mm:ss xy,ww n[vv] UTL QRY EQD 2 LN MSG: UNIT [q]q UC a \
 FLI b c FMT l m MXR d e f g h j k MIU n o p q u v w[CCB r s] EOM

The output message then continues with up to 7 of the following segment; one for each MXR or HMXR:

[O.53108]

M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT qq DS3U NPCS \
 [a]aaa-[b]bbb tt 5 LN MSG: \
 [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx
 [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx
 [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx
 [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx EOM

Output message format for a DSPU:

[O.53108]

M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q UC a \
 DSPI b[CCB r s] EOM
 M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q DSPU \
 NPCS [a]aaa-[b]bbb tt 2 LN MSG:
 [z]zzz [z]zzz [z]zzz [z]zzz [z]zzz [z]zzz [z]zzz [z]zzz EOM

After the above information is output, the following message will be generated to complete the response:

[O.53108] M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q COMPL

Hierarchical

If the unit number is not entered, the following output messages will be generated:

The output message starts with:

[O.53108]

M hh:mm:ss xy,ww n[vv] UTL QRY EQD g h i j k l m n o p EOM
 M hh:mm:ss xy,ww n[vv] UTL QRY EQD 3 LN MSG: SYNC x x' CRO x
 TLI x x x x x x x x x' x' x' x' x' x' x' x' x' EOM

This segment describes the ECCN hardware:

M hh:mm:ss xy,ww n[vv] UTL QRY EQD TOTAL ETSIS tt 3 LN MSG:


```
01 x 02 x 03 x 04 x 05 x 06 x 07 x 08 x
09 x 10 x 11 x 12 x 13 x 14 x 15 x 16 x EOM
```

The output then continues with segments that contain information about common equipment in the equipped units. If more than 4 units are equipped, the unit equipage output will be divided into multiple segments.

[O.53108]

```
[M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNITS e LN MSG:]
[<data line for common equipment in the first equipped unit>]
[<data line for common equipment in the second equipped unit>]
[<data line for common equipment in the third equipped unit>]
[<data line for common equipment in the fourth equipped unit> EOM]
[M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNITS e LN MSG:]
[<data line for common equipment in the fifth equipped unit>]
[<data line for common equipment in the sixth equipped unit>]
[<data line for common equipment in the seventh equipped unit>]
[<data line for common equipment in the eighth equipped unit> EOM]
[M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNITS e LN MSG:]
[<data line for common equipment in the ninth equipped unit>]
[<data line for common equipment in the tenth equipped unit>]
[<data line for common equipment in the eleventh equipped unit>]
[<data line for common equipment in the twelfth equipped unit> EOM]
[M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNITS e LN MSG:]
[<data line for common equipment in the thirteenth equipped unit>]
[<data line for common equipment in the fourteenth equipped unit>]
[<data line for common equipment in the fifteenth equipped unit>]
[<data line for common equipment in the sixteenth equipped unit>
EOM]
```

Data line for a unit equipped as a DS1 FTU:

```
UNIT [q]q UC a FTMI b c d e FC f g h j k m p q[ CCB r s]
```

Data line for a unit equipped as a DS3U/HDS3U:

```
UNIT [q]q UC a FLI b c FMT l m MXR d e f g h j k \
MIU n o p q u v w [ CCB r s]
```

Data line for a unit equipped as a DSPU:

```
UNIT [q]q UC a DSPI b[ CCB r s]
```

Output message for equipage of NPCs in a DS1 FTM:

Note: If any of the odd NPCs have been provisioned as a Digital Signal Processing Platform application NPC (SD-type), then the even NPC following it does not exist and dashes will be shown in its place.

[O.53108]

M hh:mm:ss xy,ww n[vv] UTL QRY EQD FTU NPCS uvmnp-uxkqr tt 5 LN
MSG:

```

xxxxx xxxxx xxxxx xxxxx xxxxx      xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx      xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx      xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx      xxxxx xxxxx xxxxx xxxxx xxxxx EOM

```

Output message for equipage of NPCs in a DS3U MXR/HDS3U HMXR :

[O.53108]

M hh:mm:ss xy,ww n[vv] UTL QRY EQD DS3U} NPCS uvmnp-uxkqr tt \ 5 LN
MSG:

```

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM

```

Output message for equipage of NPCs in a DSPU:

[O.53108]

M hh:mm:ss xy,ww n[vv] UTL QRY EQD DSPU NPCS uvmnp-uxkqr tt \
2 LN MSG:
zzzzz zzzzz zzzzz zzzzz zzzzz zzzzz zzzzz zzzzz EOM

After the above information is output, the following format will be generated to complete the output response:

[O.53108]

M hh:mm:ss xy,ww n[vv] UTL QRY EQD COMPL

If the unit number is specified in the input, the following output messages will be generated:

Output message format for an FTU:

[O.53108]

M hh:mm:ss xy,ww n[vv] UTL QRY EQD 2 LN MSG: \
UNIT [q]q UC a FTMI b c d e FC f g h j k m p q[CCB r s] EOM

The output then continues with up to 4 of the following segment; one for each FTM:

Note: If any of the odd NPCs have been provisioned as a Digital Signal Processing Platform application NPC (SD-type), then the even NPC following it does not exist and dashes will be shown in its place.

[O.53108]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q FTU NPCS \
uvmnp-uxkqr tt 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
```

Output message format for a DS3U/HDS3U:

[O.53108]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD 2 LN MSG: \
UNIT [q]q UC a FLI b c FMT l m MXR d e f g h j k \
MIU n o p q u v w[ CCB r s] EOM
```

The output message then continues with up to seven of the following segment;
one for each MXR or HMXR:

[O.53108]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q DS3U \
NPCS uvmnp-uxkqr tt 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
```

Output message format for a DSPU:

[O.53108]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q UC a DSPI b CCB r s EOM
M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q DSPU NPCS \
uvmnp-uxkqr tt 2 LN MSG:
zzzzz zzzzz zzzzz zzzzz zzzzz zzzzz zzzzz zzzzz EOM
```

After the above information is output, the following message will be generated to
complete the response:

```
[O.53108]
M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

If the unit number is not entered, the following output messages will be
generated:

The output message starts with:

[O.53108]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD g h i j k l m n o p EOM \
M hh:mm:ss xy,ww n[vv] UTL QRY EQD 3 LN MSG: SYNC x x' CRO x \
TLI x x x x x x x x x' x' x' x' x' x' x' x' EOM
```

This segment describes the ECCN hardware:

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD TOTAL ETSIS tt 3 LN MSG:
01 x 02 x 03 x 04 x 05 x 06 x 07 x 08 x
09 x 10 x 11 x 12 x 13 x 14 x 15 x 16 x EOM
```

The output then continues with segments that contain information about common equipment in the equipped units. If more than 4 units are equipped, the unit equipage output will be divided into multiple segments.

[O.53108]

```
[M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNITS e LN MSG:]
[<data line for common equipment in the first equipped unit>]
[<data line for common equipment in the second equipped unit>]
[<data line for common equipment in the third equipped unit>]
[<data line for common equipment in the fourth equipped unit> EOM]
[M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNITS e LN MSG:]
[<data line for common equipment in the fifth equipped unit>]
[<data line for common equipment in the sixth equipped unit>]
[<data line for common equipment in the seventh equipped unit>]
[<data line for common equipment in the eighth equipped unit> EOM]
[M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNITS e LN MSG:]
[<data line for common equipment in the ninth equipped unit>]
[<data line for common equipment in the tenth equipped unit>]
[<data line for common equipment in the eleventh equipped unit>]
[<data line for common equipment in the twelfth equipped unit> EOM]
[M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNITS e LN MSG:]
[<data line for common equipment in the thirteenth equipped unit>]
[<data line for common equipment in the fourteenth equipped unit>]
[<data line for common equipment in the fifteenth equipped unit>]
[<data line for common equipment in the sixteenth equipped unit>
EOM]
```

Data line for a unit equipped as a DS1 FTU:

```
UNIT [q]q UC a FTMI b c d e FC f g h j k m p q[ CCB r s]
```

Data line for a unit equipped as a DSPU:

```
UNIT [q]q UC a DSPI b[ CCB r s]
```

The output message then lists the NPC numbers of equipped NPCs in each FTM/ DS3U/HDS3U/DSPU. Output messages will be generated successively in

ascending order by NPC number. If an FTM/DS3U/HDS3U/DSPU has no NPC equipped, the segment for that FTM/DS3U/HDS3U/DSPU will not be output.

Output message for equipage of NPCs in a CEPT FTM:



NOTE:

If any of the odd NPCs have been provisioned as a Digital Signal Processing Platform application NPC (SD-type), then the even NPC following it does not exist and dashes will be shown in its place.

```
[O.53108]
M hh:mm:ss xy,ww n[vv] UTL QRY EQD FTU NPCS [a]aaa-[b]bbb tt 5 \
LN MSG:
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx EOM
```

Output message for equipage of NPCs in a DSPU:

```
[O.53108]
M hh:mm:ss xy,ww n[vv] UTL QRY EQD DSPU NPCS [a]aaa-[b]bbb tt 2 \
LN MSG:
[z]zzz [z]zzz [z]zvzz [z]zzz [z]zzz [z]zzz [z]zzz [z]zzz EOM
```

After the above information is output, the following format will be generated to complete the output response:

```
[O.53108]
M hh:mm:ss xy,ww n[vv] UTL QRY EQD COMPL
```

If the unit number is specified in the input, the following output messages will be generated:

Output message format for an FTU:

```
[O.53108]
M hh:mm:ss xy,ww n[vv] UTL QRY EQD 2 LN MSG: \
UNIT [q]q UC a FTMI b c d e FC f g h j k m p q[ CCB r s] EOM
```

The output then continues with up to 4 of the following segment; one for each FTM:



NOTE:

If any of the odd NPCs have been provisioned as a Digital Signal Processing Platform application NPC (SD-type), then the even NPC following it does not exist and dashes will be shown in its place.

[O.53108]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q FTU NPCS \
[a]aaa-[b]bbb tt 5 LN MSG:
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx EOM
```

Output message format for a DSPU:

[O.53108]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q UC a \
DSPI b[ CCB r s] EOM
M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q DSPU NPCS \
[a]aaa-[b]bbb tt 2 LN MSG:
[z]zzz [z]zzz [z]zzz [z]zzz [z]zzz [z]zzz [z]zzz [z]zzz EOM
```

After the above information is output, the following message will be generated to complete the response:

[O.53108]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q COMPL
```

Hierarchical

If the unit number is not entered, the following output messages will be generated:

The output message starts with:

[O.53108]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD g h i j k l m n o p EOM
M hh:mm:ss xy,ww n[vv] UTL QRY EQD 3 LN MSG: SYNC x x' CRO x \
TLI x x x x x x x x x' x' x' x' x' x' x' x' x' EOM
```

This segment describes the ECCN hardware:

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD TOTAL ETIS tt 3 LN MSG:
01 x 02 x 03 x 04 x 05 x 06 x 07 x 08 x
09 x 10 x 11 x 12 x 13 x 14 x 15 x 16 x EOM
```

The output then continues with segments that contain information about common equipment in the equipped units. If more than 4 units are equipped, the unit equipage output will be divided into multiple segments.

[O.53108]

```
[M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNITS e LN MSG:]
[<data line for common equipment in the first equipped unit>]
[<data line for common equipment in the second equipped unit>]
[<data line for common equipment in the third equipped unit>]
[<data line for common equipment in the fourth equipped unit> EOM]
[M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNITS e LN MSG:]
[<data line for common equipment in the fifth equipped unit>]
[<data line for common equipment in the sixth equipped unit>]
[<data line for common equipment in the seventh equipped unit>]
[<data line for common equipment in the eighth equipped unit> EOM]
[M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNITS e LN MSG:]
[<data line for common equipment in the ninth equipped unit>]
[<data line for common equipment in the tenth equipped unit>]
[<data line for common equipment in the eleventh equipped unit>]
[<data line for common equipment in the twelfth equipped unit> EOM]
[M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNITS e LN MSG:]
[<data line for common equipment in the thirteenth equipped unit>]
[<data line for common equipment in the fourteenth equipped unit>]
[<data line for common equipment in the fifteenth equipped unit>]
[<data line for common equipment in the sixteenth equipped unit>
EOM]
```

Data line for a unit equipped as an FTU:

```
UNIT [q]q UC a FTMI b c d e FC f g h j k m p q[ CCB r s]
```

Data line for a unit equipped as a DSPU:

```
UNIT [q]q UC a DSPI b[ CCB r s]
```

The output message then lists the NPC numbers of equipped NPCs in each FTM/DS3U/HDS3U/DSPU. Output messages will be generated successively in ascending order by NPC number. If an FTM/DS3U/HDS3U/DSPU has no NPC equipped, the segment for that FTM/DS3U/HDS3U/DSPU will not be output.

Output message for equipage of NPCs in a CEPT FTM:

Note: If any of the odd NPCs have been provisioned as a Digital Signal Processing Platform application NPC (SD-type), then the even NPC following it does not exist and dashes will be shown in its place.

[O.53108]

```
M hh:mm:ss xy,ww n[vv] UTL QRY EQD FTU NPCS uvmnp-uxkqr tt 5 \
LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
```

```

xxxxx xxxxx xxxxx xxxxx   xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx   xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx   xxxxx xxxxx xxxxx xxxxx EOM

```

Output message for equpage of NPCs in a DSPU:

[O.53108]

```

M hh:mm:ss xy,ww n[vv] UTL QRY EQD DSPU NPCS uvmnp-uxkqr tt 2 \
LN MSG:
zzzzz zzzzz zzzzz zzzzz   zzzzz zzzzz zzzzz zzzzz EOM

```

After the above information is output, the following format will be generated to complete the output response:

[O.53108]

```

M hh:mm:ss xy,ww n[vv] UTL QRY EQD COMPL

```

If the unit number is specified in the input, the following output messages will be generated:

Output message format for an FTU:

[O.53108]

```

M hh:mm:ss xy,ww n[vv] UTL QRY EQD 2 LN MSG:
UNIT [q]q UC a FTMI b c d e FC f g h j k m p q[ CCB r s] EOM

```

The output then continues with up to 4 of the following segment; one for each FTM:

Note: If any of the odd NPCs have been provisioned as a Digital Signal Processing Platform application NPC (SD-type), then the even NPC following it does not exist and dashes will be shown in its place.

[O.53108]

```

M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q FTU \
NPCS uvmnp-uxkqr tt 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx   xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx   xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx   xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx   xxxxx xxxxx xxxxx xxxxx EOM

```

Output message format for a DSPU:

[O.53108]

```

M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q UC a \
DSPI b[ CCB r s] EOM

```


M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q DSPU \
 NPCS uvmnp-uxkqr tt 2 LN MSG:
 zzzz zzzz zzzz zzzz zzzz zzzz zzzz zzzz EOM

After the above information is output, the following message will be generated to complete the response:

[O.53108]
 M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q COMPL

Denial Message

[O.53108.01]
 M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT [q]q COND cc DNY

Explanation of
 Parameters

EQD	Equipped
UNIT	Unit
[q]q	Unit number (1 through 16)
	The UNIT option is specified to query that unit. The UNIT field will be null when the command is used for the entire frame. If the UNIT option is specified, only the information related to the equipment in that unit is generated.
	For the equipped query, each entity in the DACS II frame is represented by a single character variable. This variable can have a value of 1 or 0 indicating the following status:
Value	EQD or EQPD
1	equipped
0	unequipped
	The DACS II entities and their status fields are as follows:
g	Link 1
h	Link 2
i	Link 3
j	Link 4
k	Link 5
l	Link 6
m	XC0 (cross-connect 0)

	n	XC1 (cross-connect 1)
	o	CCI 0 (clock and control interface 0 for CEF frame)
	p	CCI 1 (clock and control interface 1 for CEF frame)
SYNC		Synchronizer
CRO		Clock reference oscillator
TLI		Timing link interface
		The TLI entities are reported in the following order:
		TLI 1, SSP 0, Side 0
		TLI 1, SSP 1, Side 0
		TLI 2, SSP 0, Side 0
		TLI 2, SSP 1, Side 0
		TLI 3, SSP 0, Side 0
		TLI 3, SSP 1, Side 0
		TLI 4, SSP 0, Side 0
		TLI 4, SSP 1, Side 0
		TLI 1, SSP 0, Side 1
		TLI 1, SSP 1, Side 1
		TLI 2, SSP 0, Side 1
		TLI 2, SSP 1, Side 1
		TLI 3, SSP 0, Side 1
		TLI 3, SSP 1, Side 1
		TLI 4, SSP 0, Side 1
		TLI 4, SSP 1, Side 1
TSIS		Time slot interchangers (NonCEF)
ET SIS		Expanded time slot interchangers (CEF)
f		FROM unit (1 through 6)
t		TO Unit (1 through 6)
x		Equipage indication of an entity or of a side 0 entity if duplicated.
x'		Equipage indication of a side 1 entity.
UC		Unit controller
FTMI		Facility terminating module interface
FC		Format converter
FLI		Facility line interface
FMT		Formatter or Hybrid Formatter
MXR		Multiplexer or Hybrid Multiplexer
MIU		Multiple interface unit
DSPI		Digital signal processing interface

[a]aaa	The first 3- or 4-digit nonhierarchical NPC number of anFTM/MXR/HMXR/DSPU.
[b]bbb	The last 3- or 4-digit nonhierarchical NPC number of an FTM/MXR/HMXR/DSPU. For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
[z]zzz	The 3- or 4-digit nonhierarchical DSPU NPC number, the span refers to the odd DSPU circuit pack NPCs, and the total is the number of NPC pairs equipped.
uvmnp	The first hierarchical NPC number of an FTM/MXR/HMXR/DSPU or a hierarchical DSPU NPC number.
uxkqr	The last hierarchical NPC number of an FTM/MXR/HMXR/DSPU For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
tt	Total number of equipped NPCs

For FTU Entities:

a	Status for UC
b	Status for FTMI 1 of specified Unit
c	Status for FTMI 2 of specified Unit
d	Status for FTMI 3 of specified Unit
e	Status for FTMI 4 of specified Unit
f	Status for FC 01 of specified Unit
g	Status for FC 11 of specified Unit
h	Status for FC 02 of specified Unit
j	Status for FC 12 of specified Unit
k	Status for FC 03 of specified Unit
m	Status for FC 13 of specified Unit
p	Status for FC 04 of specified Unit
q	Status for FC 14 of specified Unit

For DS3U/HDS3U Entities:

a	Status for UC
l	Status for FMT/HFMT 0 of specified DS3U/HDS3U
m	Status for FMT/HFMT 1 of specified DS3U/HDS3U

b	Status for service FLI of specified DS3U/HDS3U
c	Status for protection FLI of specified DS3U/HDS3U
d	Status for protection MXR of specified DS3U/HDS3U
e	Status for MXR/HMXR 1 of specified DS3U/HDS3U
f	Status for MXR/HMXR 2 of specified DS3U/HDS3U
g	Status for MXR/HMXR 3 of specified DS3U/HDS3U
h	Status for MXR/HMXR 4 of specified DS3U/HDS3U
j	Status for MXR/HMXR 5 of specified DS3U/HDS3U
k	Status for MXR/HMXR 6 of specified DS3U/HDS3U
n	Status for protection MIU of specified DS3 Unit
o	Status for MIU 1 of specified DS3 Unit
p	Status for MIU 2 of specified DS3 Unit
q	Status for MIU 3 of specified DS3 Unit
u	Status for MIU 4 of specified DS3 Unit
v	Status for MIU 5 of specified DS3 Unit
w	Status for MIU 6 of specified DS3 Unit

For DSPU Entities:

a	Status for UC
b	Status of DSPI for specified unit
	[x]xxx- The 3- or 4-digit nonhierarchical FTU/DS3U/HDS3U NPC number ([a]aaa through [b]bbb)
xxxxx	Hierarchical FTU/DS3U/HDS3U NPC number (uvmnp through uxkqr)
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped

UTILITIES, EQUIPAGE STATUS

Explanation of Command

This command requests a printout of all units that are equipped.

Command

[I.53011]
UTL: [FRM xy][, SEQ ww]:QRY,EQD,UNITS!

Completion Message

[O.53011]
M hh:mm:ss xy,ww n[vv] UTL QRY EQD UNIT 2 LN MSG:
aa bb cc dd ee ff gg hh ii jj kk ll mm nn oo pp COMPL

Explanation of Parameters

EQD	Request equipage status
UNITS	Request information on units
aa	Equipage status of Unit number 01
bb	Equipage status of Unit number 02
cc	Equipage status of Unit number 03
dd	Equipage status of Unit number 04
ee	Equipage status of Unit number 05
ff	Equipage status of Unit number 06
gg	Equipage status of Unit number 07
hh	Equipage status of Unit number 08
ii	Equipage status of Unit number 09
jj	Equipage status of Unit number 10
kk	Equipage status of Unit number 11
ll	Equipage status of Unit number 12
mm	Equipage status of Unit number 13
nn	Equipage status of Unit number 14

oo	Equipage status of Unit number 15
pp	Equipage status of Unit number 16
	If the unit is equipped, the unit number is shown in its corresponding position. If the unit is not equipped, the number 00 will be shown.

QUERY SOFTWARE/HARDWARE ERROR RECOVERY

Explanation of Command

This message requests a printout of the contents of the error recovery log file. The log file contains the past history of error recovery events and can be very large. Therefore, the printout can be aborted. Because the printout is of a technical nature, assistance may be necessary for interpretation.

At least one option must be specified in the input command or it will be denied.



NOTE:

Both the USA date format and international date format are supported by this command. The date format is set by the UTL::DATE, FORMAT, INT command and this message must use the same format. The date format shown in the output for this command will match the current setting.



NOTE:

In the 8-character Block number 10 output of the hardware error log file, the first 4 numbers display the unit number while the second four numbers equate to the NPC number. For the hardware error log, the number of NPCs per unit is 170 instead of 160. This is because the DACS II supports a flexible frame configuration. In each DS3 unit and HSU, there are 168 NPCs. To obtain the NPC number, convert the hexadecimal number to decimal and add 1 and then subtract 10 from the result for the the NPCs in Unit 2, subtract 20 from the result for the NPCs in Unit 3, . . . , subtract 150 from the result for the NPCs in Unit 16. For example, the first NPC in Unit 1 (NPC 1) will be displayed as 0 (not 1) in hexadecimal format, the first NPC in Unit 2 (NPC 161) will be displayed as 170 (not 161) in hexadecimal format, the first NPC in Unit 3 (NPC 321) will be displayed as 340 (not 321) in hexadecimal format, and so on.

Therefore, the output for the hardware log will be:

```
00000000 thru 000000a7 for NPC 001 thru 16H \
(1 - 160, 16A - 16H)
000100aa thru 00010151 for NPC 161 thru 32H \
(161 - 320, 32A - 32H)
00020154 thru 000201fb for NPC 321 thru 48H \
(321 - 480, 48A - 48H)
000301fe thru 000302a5 for NPC 481 thru 64H \
(481 - 640, 64A - 64H)
000402a8 thru 0004034f for NPC 641 thru 80H \
(641 - 800, 80A - 80H)
```

00050352 thru 000503f9 for NPC 801 thru 96H \
(801 - 960, 96A - 96H)
000603fc thru 000604a3 for NPC 961 thru 112H \
(961 - 1120, 112A - 112H)
000704a6 thru 0007054d for NPC 1121 thru 128H \
(1121 - 1280, 128A - 128H)
00080550 thru 000805f7 for NPC 1281 thru 144H \
(1281 - 1440, 144A - 144H)
000905fa thru 000906a1 for NPC 1441 thru 160H \
(1441 - 1600, 160A - 160H)
000a06a4 thru 000a074b for NPC 1601 thru 176H \
(1601 - 1760, 176A - 176H)
000b074e thru 000b07f5 for NPC 1761 thru 192H \
(1761 - 1920, 192A - 192H)
000c07f8 thru 000c089f for NPC 1921 thru 208H \
(1921 - 2080, 208A - 208H)
000d08a2 thru 000d0949 for NPC 2081 thru 224H \
(2081 - 2240, 224A - 224H)
000e094c thru 000e09f3 for NPC 2241 thru 240H \
(2241 - 2400, 240A - 240H)
000f09f6 thru 000f0a9d for NPC 2401 thru 256H \
(2401 - 2560, 256A - 256H)

Command

[I.55011]

UTL:FRM xy,SEQ ww:QRY,ERR,{{SWER|HWER} \
[, {INT mn|[DATE moda[ce]yr,] TOD hrmsc}]
[, TN X'dddd][, EVENT X'eeee][, ERCL{HARD|TRANS|APPINT}] \
[, ENTY <entity>]|ALL]!

Completion Message

[O.55011]

M hh:mm:ss xy,ww n[vv] UTL QRY ERR SWER mo/da/yr hr:mn:sc \
3 LN MSG:
ENTITY=xxxxxx ERROR=xxxxxx SOURCE=xxxxxx DP=xx
TN=xxxx PID=xxxxxxx RC=xxxxxxx MID=xxxx PROC=xxxxxx EOM
M hh:mm:ss xy,ww n[vv] UTL QRY ERR SWER TROUBLE SHOOTING ARGS \
3 LN MSG:
TSARGSxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx
FAUDTIME xxxxxxxx FACyxxxx FATNxxxx ISPExxxx xxxxxxxx EOM
M hh:mm:ss xy,ww n[vv] UTL QRY ERR SWER STACK TRACE ONE 5 LN MSG:
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx EOM


```
M hh:mm:ss xy,ww n[vv] UTL QRY ERR SWER STACK TRACE TWO \
5 LN MSG:
XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX
XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX
XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX
XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX {EOM|COMPL}
```

[O.55012]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ERR HWER mo/da/yr hr:mn:sc 5 LN MSG:
HOSTxxxx ENTxxxx ERRCxxxx ERRTxxxx TRANxxxx EVENxxxx
XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX
XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX
XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX {EOM|COMPL}
```

[O.55013]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ERR SWER BACKGROUND AUDITS \
3 LN MSG: MSGTYP=<1000> SOURCE=<2000> ADD1=<400000> ADD2=xx \
DATA=<5000> CHKACT=<6000> CHKCOM=<7000> COMMT0=<8000> \
{EOM|COMPL}
```

[O.55014]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ERR {{SWER|HWER}|ALL} COMPL
```

Denial Message

[O.55011.01]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ERR HWER ENTY <entity> cc DNY
```

Explanation of Parameters

ALL	Output the entire hardware and software log file. The ALL keyword will cause the entire log file, both hardware and software log messages, to be output. The user should understand that this keyword may generate a large volume of output. No other optional keywords should be coded together with the ALL keyword.
ERR	Error recovery Refers to the error recovery log file
SWER	Software error Query the software error log file.
HWER	Hardware error Query the hardware error log file.
INT	Time interval

The user may retrieve entries by specifying a past interval of time. This interval may be specified as the last 59 minutes or less or as the interval beginning at a specified date and time of day (see DATE and TOD keywords). If the time but not the optional date is specified, DACS II assumes the present date.

During a system boot the time on the system clock defaults to the time 00:00:00 and the date 12/31/1999 until the clock is initialized. Errors occurring during the boot process consequently are logged as though they occurred in the future when actually they occurred in the past. Because of this behavior a user requesting the errors over one of the intervals mentioned above may experience a large volume of error output listing errors that will (seemingly) occur in the future. These errors actually occurred before the system clock was initialized and should be interpreted as such.

mn	minutes (00 to 59)
DATE	date
	moda[ce]yr
mo	Month (01 through 12)
da	Day (01 through 31)
ce	Century (19 or 20)
yr	Year (00 through 99)
TOD	time of day
hrmns	Hours, minutes, seconds
hr	hour (00 through 23)
mn	Minutes (00 through 59)
sc	seconds (00 through 59)
TN	Transaction
X	Hexadecimal
dddd	Transaction number
EVENT	Event
eeee	Event number
ERCL	Error class

This keyword applies only to queries of the hardware error log file (HWER option). It is not applicable to queries of the software error log file (SWER option) and it returns no data for

	the software case. The hardware log file may be queried for errors of either the hardware or transient error class.
HARD	Hard Hardware error detected by Error Recovery
TRANS	Transient Transient error detected by Error Recovery
APPINT	Application interrupt Hardware error detected by applications
ENTY	Entity (hardware) This keyword applies only to queries of the hardware error log file (HWER option). It is not applicable to queries of the software error log file (SWER option) and it returns no data for the software case. The hardware log file may be queried for entries related to particular DACS II hardware entities.
entity	Entity type
BX	Bus extender
CCB	Cross-connect buffer
CCNI	Cross-connect network interface
CCI	Clock and control interface
CI	Communications interface
CPR	C-bit processor
CRO	Clock reference oscillator
DDC	Dual digroup circuit
DISK	Hard disk
DMB	Digital multipoint bridge
DSPI	Digital signal processor interface
EBX	Expanded bus extender
EMTC	Expanded maintenance circuit
ETSI	Expanded time slot interchanger
FC	Format converter
FLI	Facility line interface
FMT	Formatter
FTMI	Facility terminating module interface

	LINK	Administrative link
	MC	Main controller
	MIU	Multiplexer interface unit
	MJU	Multipoint junction unit
	MP	Main processor
	MTC	Maintenance circuit
	MPR	HSU Mapper
	MXR	Multiplexer
	NPC	Network processing circuit
	OI	HSU Optical Interface
	SRM	Subrate multiplexer
	SSC	Secondary storage controller
	SYNC	Synchronizers (DPLL, TB)
	TAPE	Tape drive
	TL	Timing link
	TLI	Timing link interface
	TSI	Time slot interchange
	UBX	Unit bus extender
	UC	Unit controller
ENTITY		Entity
ERROR		Error
SOURCE		Source
DP		Decision point
PID		Process identification
RC		Return code (of function in which the error occurred)
MID		Mbox identification
PROC		Process
TSARGS		Trouble shooting arguments
FAUDTIME		Frame audit time
FACY		Frame audits cycle number when the error occurred
FATN		Frame audits test number when the error occurred
ISPE		ISPerr LAN error count

HOST

Host

Controller (sub-system) on which the error occurred

0000 UC1
0001 UC2
0002 UC3
0003 UC4
0004 UC5
0005 UC6
0006 UC7
0007 UC8
0008 UC9
0009 UC10
000a UC11
000b UC12
000c UC13
000d UC14
000e UC15
000f UC16
0010 CI
0011 MP

ENTT

Hardware entity for hardware error recovery

0001 Unit UC
0002 UBX
0003 EBX
0004 FTMI
0005 FC
0006 DDC
0007 DSPI
0008 DMB
0009 CCNI
000A CCB
000B TSI

	000C	SSC
	000D	EMTC
	000E	SYNC
	000F	TLI
	0010	Timing Link
	0011	DISK
	0012	TAPE
	0013	MP
	0014	CI
	0015	LINK
	0016	NPC
	0017	MC
	0018	MJU
	0019	SRM
	001A	DS3U MXR
	001B	DS3U FLI
	001C	DS3U FMT
	001D	DS3U MIU
	001E	PR
	001F	ECCN CCI
	0020	EBX
	0021	CCI
	0022	ETSI
	0023	HSU OI
	0024	HSU MPR
	0025	HSU FMT
ERRC	Error class	
xxxx	Error identification	
	0001	Hardware Error
	0002	Transient Error
	0003	Power Failure
	0004	Error Sanity Bit Error

	0005	CI Link related errors
	0006	Sync mode switch
	0007	Software error recovery
	0008E	error not found
	0009	Sync booted message from boot
	000A	Sync timing link errors
	000B	Background audits
	000C	Facility errors
	000D	Disk log of errors from HARDERR()
	000E	Error detected from Frame Audits
ERRT		Error type
TRAN		Transaction number (software)
EVEN		Event number (software)
MSGTYP		Message type
ADD1		Address 1
		First address of failed range
ADD2		Address 2
		Second address of failed range
DATA		Data
CHKACT		Actual check
CHKCOM		Computed check
COMMTO		Communication to (lost)
MEMORY DATA		Memory data
READY QUEUE		Ready queue
PAUSE QUEUE		Pause queue
LOCAL STACK		Local stack
STACK TRACE		Stack trace

cc	Hexadecimal condition code
cc	<i>Explanation</i>
97	Entity can't be addressed in this configuration
F3	No matching records found

QUERY ECCN ERROR SOURCE REGISTER

Explanation of Command

This command requests a printout of the contents of the Expanded Cross-Connect Network Error Source Register.

Command

[I.55411]
UTL: [FRM xy][, SEQ ww]:QRY, ESR, ECCN s!

Completion Message

[O.55411]
M hh:mm:ss xy,ww n[vv] UTL QRY ESR ECCN s 4 LN MSG:
CCI wd02 wd01 wd00
aaaa bbbb cccc dddd eeee ffff gggg hhhh
iiii jjjj kkkk llll mmmm nnnn oooo pppp {EOM|COMPL}

[M hh:mm:ss xy,ww n[vv] UTL QRY ESR ECCN s e LN MSG:]
[ETSI sqq wd05 wd04 wd03 wd02 wd01 wd00]
[ETSI sqq wd05 wd04 wd03 wd02 wd01 wd00]
[ETSI sqq wd05 wd04 wd03 wd02 wd01 wd00]
[ETSI sqq wd05 wd04 wd03 wd02 wd01 wd00 EOM]

[M hh:mm:ss xy,ww n[vv] UTL QRY ESR ECCN s e LN MSG:]
[ETSI sqq wd05 wd04 wd03 wd02 wd01 wd00]
[ETSI sqq wd05 wd04 wd03 wd02 wd01 wd00]
[ETSI sqq wd05 wd04 wd03 wd02 wd01 wd00]
[ETSI sqq wd05 wd04 wd03 wd02 wd01 wd00 {EOM|COMPL}]

Denial Message

[O.55411.01]
M hh:mm:ss xy,ww n[vv] UTL QRY ESR ECCN s COND cc DNY

Explanation of Parameters

ESR Error source register
e Number of lines in the segment (2 through 5)
ECCN Expanded cross-connect network

s	ECCN side (0 or 1)
qq	Unit number (01 through 16)
ETSI	Expanded Time Slot Interchanger
	The ESR data for a ETSI will be shown only if the ETSI is restored. If no ETSI in the ECCN side is restored, only the ESR data of the CCI is shown.
CCI	Clock and Control Interface
wd02, wd01, wd00	Error source register data words for the CCI. Each word is a 4-digit hexadecimal number.
wd00	CCI System Status Register
wd01	CCI Status Register
wd02	CCI Bus Status Register

 **NOTE:**
wd02 shows the active side; therefore, it is normal to have a nonzero value.

aaaa, bbbb, cccc, dddd CCI register for ETSI alarm information

This 16 bit register is shown as four 4-bit binary numbers. Each bit represents one ETSI. The ETSIs are arranged by unit number in descending order from left to right. That is, the left-most bit reports alarm information for the unit 16 ETSI, while the right-most bit reports alarm information for the unit 1 ETSI.

Descending order-->

aaaa bbbb cccc dddd

^

^

| Unit 1 ETSI

Unit 16 ETSI

eeee, ffff, gggg, hhhh CCI register for ETSI equipage information

See the explanation given for aaaa-dddd above.

iiii, jjjj, kkkk, llll CCI register for ETSI ready timeout information

See the explanation given for aaaa-dddd above.

mmmm, nnnn, oooo, pppp CCI register for ETSI read high information

	See the explanation given for aaaa-dddd above.
sqq	Combined ECCN side and unit number
	See the definitions of s and qq above.
wd05, wd04, ..., wd00	Error source register data words for the ETSI
	Each word is a 4-digit hexadecimal number representing the contents of the error source register listed in the table below.
wd00	Circuit Pack Summary Register
wd01	Receive Status Register
wd02	Transmit Status Register
wd03	Control RAM Status Register
wd04	Control RAM Port Alarm Register
wd05	Control RAM Data RAM Alarm Register

QUERY ERROR SOURCE REGISTER MAIN PROCESSOR

Explanation of Command

This command requests a printout of the 40-bit error source register (ESR) for the main processor (MP).

Command

[I.55111]
UTL: [FRM xy][, SEQ ww]:QRY,ESR,MP!

Completion Message

[O.55111]
M hh:mm:ss xy,ww n[vv] UTL QRY ESR MP 2 LN MSG:
aa bb cc dd ee[ff gg hh ii] COMPL

Explanation of Parameters

ESR	Error source register
MP	Main Processor
	Variables aa, bb, cc, dd, ee, ff, gg, hh, and ii are two-digit hexadecimal numbers representing error source registers. The bits in these registers are numbered as follows:
	hex hh = bbbbbbbb binary
	76543210 Bit numbering
aa	Error Source Bit (ESB) group (hexadecimal)
a0	SYNC 0 power supply ESB
a1	SYNC 1 power supply ESB
a2	ECCN 0 power supply ESB
a3	ECCN 1 power supply ESB
a4	Spare
a5	Spare
a6	Spare

	a7	Spare
bb	Error Source Bit (ESB) group (hexadecimal)	
	b0	UC 01 power supply ESB
	b1	UC 02 power supply ESB
	b2	UC 03 power supply ESB
	b3	UC 04 power supply ESB
	b4	UC 05 power supply ESB
	b5	UC 06 power supply ESB
	b6	UC 07 power supply ESB for CEF
	b7	Spare
cc	Error Source Bit (ESB) group (hexadecimal)	
	c0	UC 01 ESB
	c1	UC 02 ESB
	c2	UC 03 ESB
	c3	UC 04 ESB
	c4	UC 05 ESB
	c5	UC 06 ESB
	c6	UC 07 ESB
	c7	UC 08 ESB
dd	Error Source Bit (ESB) group (hexadecimal)	
	d0	MC CPU ESB
	d1	MC CI ESB
	d2	MC SSC ESB
	d3	Spare
	d4	MC power supply 0 ESB
	d5	MC power supply 1 ESB
	d6	Spare
	d7	Spare
ee	Error Source Bit (ESB) group (hexadecimal)	
	e0	Parity over Low Data Byte
	e1	Parity over High Data Byte
	e2	Error from Side 0 Bus Extension

	e3	Error from Side 1 Bus Extension
	e4	ECCN side 0 circuit not present for CEF
	e5	ECCN side 1 circuit not present for CEF
	e6	Write parity error over low byte data for CEF
	e7	Write parity error over high byte data for CEF
ff	Error Source Bit (ESB) group (hexadecimal)	
	f0	UC 08 power supply ESB
	f1	UC 09 power supply ESB
	f2	UC 10 power supply ESB
	f3	UC 11 power supply ESB
	f4	UC 12 power supply ESB
	f5	Spare
	f6	Spare
	f7	Spare
gg	Error Source Bit (ESB) group (hexadecimal)	
	g0	UC 13 power supply ESB
	g1	UC 14 power supply ESB
	g2	UC 15 power supply ESB
	g3	UC 16 power supply ESB
	g4	Spare
	g5	Spare
	g6	Spare
	g7	Spare
hh	Error Source Bit (ESB) group (hexadecimal)	
	h0	UC 09 ESB
	h1	UC 10 ESB
	h2	UC 11 ESB
	h3	UC 12 ESB
	h4	Spare
	h5	Spare
	h6	Spare
	h7	Spare

ii	Error Source Bit (ESB) group (hexadecimal)	
	i0	UC 13 ESB
	i1	UC 14 ESB
	i2	UC 15 ESB
	i3	UC 16 ESB
	i4	Spare
	i5	Spare
	i6	Spare
	i7	Spare

UTILITY QUERY ESR FOR FTU OR SUBRATE NPC

Explanation of Command

This command requests a print out of the error source register for a particular network processing circuit (NPC) or Subrate circuit pack. Any attempt to input the command for an NPC in a DS3 unit is denied. Instead, input the command for the error source register for a multiplexer (MXR), a multiplexer interface unit (MIU), or a facility line interface (FLI).

This message requests a print out of the error source register for a particular network processing circuit (NPC).

Command

Nonhierarchical

[I.55601]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,NPC [s]abc[,SIDE s]!

Hierarchical

[I.55601]

UTL:[FRM xy][,SEQ ww]:QRY,ESR,NPC uvmnp[,SIDE s]!

Completion Message

Nonhierarchical

[O.55601]

M hh:mm:ss xy,ww n[vv] UTL QRY ESR NPC [s]abc 2 LN MSG:
aa bb cc dd ee ff gg hh ii jj COMPL



NOTE:

The preceding message applies if the side is not specified.

[O.55602]

M hh:mm:ss xy,ww n[vv] UTL QRY ESR NPC [s]abc SIDE s \
TYPE mnxyz 2 LN MSG:
defghijk lmnopqrs COMPL

⇒ **NOTE:**
The preceding message applies if the side is specified.

⇒ **NOTE:**
The preceding message applies if the side is not specified.

⇒ **NOTE:**
The preceding message applies if the side is specified.

Hierarchical

[O.55601]

M hh:mm:ss xy,ww n[vv] UTL QRY ESR NPC uvmnp 2 LN MSG:
aa bb cc dd ee ff gg hh ii jj COMPL

⇒ **NOTE:**
The preceding message applies if the side is not specified.

[O.55602]

M hh:mm:ss xy,ww n[vv] UTL QRY ESR NPC uvmnp SIDE s \
TYPE mnxyz 2 LN MSG:
defghijk lmnopqrs COMPL

⇒ **NOTE:**
The preceding message applies if the side is specified.

⇒ **NOTE:**
The preceding message applies if the side is not specified.

⇒ **NOTE:**
The preceding message applies if the side is not specified.

Denial Message

Nonhierarchical

[O.55601.01]

M hh:mm:ss xy,ww n[vv] UTL QRY ESR NPC [s]abc[SIDE s] COND cc DNY

Hierarchical

[O.55601.01]

M hh:mm:ss xy,ww n[vv] UTL QRY ESR NPC uvmnp[SIDE s] COND cc DNY

Explanation of Parameters

ESR	Error source register
NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
SIDE	Side
s	Side number (0 or 1) Subrate type circuit packs are duplicated; therefore, the side must be specified in order to request the contents of the error source register. The side must not be specified when the NPC is a facility terminating NPC
uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."



NOTE:

In the error source register listings below, the bits are each shown set individually (bit value = 1). In actual practice the bits may be set in combination. For example a value of 0C for register dd would be interpreted as follows: X'0C = 00001100 binary

Bits 2 and 3 are set to one. An examination of the bits for register dd shows that X'0C means RAM diagnostic complete and power up ready.

aa	Communications Interface ESR 1 (Hexadecimal)
bb	Not used
cc	Channel Controller ESR (Hexadecimal)
dd	Hardware error data from DDC shared RAM (Hexadecimal) (Not applicable to SD and ST type NPCs)

Bit	Value	Bit Definition
0	1	Channel controller error
1	1	Unassigned
2	1	Chip identification parity error
3	1	Sync error
4	1	Facility processor sanity error
5	1	Hardware error
6	1	Transceiver A error (bit not used for SD and ST types)
7	1	Transceiver B error (bit not used for SD and ST types)

Bit	Value	Bit Definition
0	1	Exercise indicator
1	1	Receive data parity error
2	1	Transmit data parity error
3	1	Instruction RAM parity error
4	1	Configuration register parity error
5	1	Processor error
6	1	Sync error
7	1	Loss of clock (8 MHz)

Bit	Value	Bit Definition
0	1	Not used
1	1	Not used
2	1	RAM diagnostic complete
3	1	Power up ready
4	1	Not used
5	1	Not used
6	1	RAM diagnostic failure
7	1	ROM checksum failure

dd Hardware error data for SD and ST type NPCs only
(Hexadecimal)

Bit	Value	Bit Definition
0	1	Not used
1	1	Firmware error
2	1	Hardware error queue overflow
3	1	System receive parity error
4	1	System transmit parity error
5	1	DSP error
6	1	Download program error
7	1	Not used

ee Transceiver A ESR (framer alarms) (Hexadecimal)
(This register is not used for SD and ST type NPCs)

Bit	Value	Bit Definition
0	1	Device error Remote Frame Alignment
1	1	Device error Remote Multiframe Alignment
2	1	Device error Loss of Multiframe Alignment
3	1	Device error Framing Bit Error
4	1	Not used
5	1	Not used
6	1	Not used
7	1	Not used

ff Transceiver A ESR (receive sync alarms) (Hexadecimal)

(This register is not used for SD and ST type NPCs)

Bit	Value	Bit Definition
0	1	STOMP block device error
1	1	ALU block device error
2	1	ALU block device error
3	1	Data link
4	1	Missing receive synchronizer sync
5	1	Signaling RAM parity error
6	1	PCM RAM parity error
7	1	E signaling bit error
gg		Transceiver A ESR (transmitter alarms) (Hexadecimal) (This register is not used for SD and ST type NPCs)

Bit	Value	Bit Definition
0	1	Transmit framing bit generator circuit
1	1	Transmitter SLIP
2	1	Internal parity error
3	1	Missing transmit sync
4	1	Misaligned transmit sync
5	1	Transmit SLC [®] -96 carrier framer device alarm
6	1	Missing SLC 96 carrier Fs superframe sync
7	1	Misaligned SLC 96 carrier Fs superframe sync
hh		Transceiver A ESR (framer alarms) (Hexadecimal) Values and explanations are the same as ee (This register is not used for SD and ST type NPCs)
ii		Transceiver B ESR (receive sync alarms) (Hexadecimal) Values and explanations are the same as ff (This register is not used for SD and ST type NPCs)
jj		Transceiver B ESR (transmitter alarms) (Hexadecimal)

Values and explanations are the same as gg
(This register is not used for SD and ST type NPCs)

1.544 Mbit/s Termination

mnxyz NPC type

MJ100 Multipoint junction unit

SR100 Subrate multiplexer unit

The meaning of the bits for types MJ100 and SR100 depends upon the type reported in the output message.

Both Terminations

TYPE SR100

defghijk First 8 bits of Subrate circuit pack error source register

Bit	Value	Fault
d	1	Parallel interface between the DSPU processor and the SR100
e	1	Data interface between the DSPU backplane and the SR100
f	1	Data path internal to the SR100 including the Error Correction Device (ECD)
g	1	Data interface between the DSPU backplane and the SR100, or data path internal to the SR100 including the ECD, or PROM5 device
h	1	Output block of SR100, or bus feeding the output block
i	1	Internal data RAM
j	1	Multiplexer state machine, or bus feeding the output block
k	1	Clock circuitry

lmnopqrs Second 8 bits of Subrate circuit pack error source register

Bit	Value	Fault
l	1	Built-in self test on ECD
m-s	0	Unused

TYPE MJ100
defghijk First 8 bits of Subrate circuit pack error source register

Bit	Value	Fault
d	1	Parallel interface Device (PID), or parallel control bus
e	1	Data interface between the ETSI and the MJ100
f	1	ECD data input, or ECD
g	1	MJU control memory parity
h	1	Data path to the output block, or output data interface block, or control code state machine, or FTU time slot parity correction PROM
i	1	MJU control signal PROM
j	1	Overwrite state machine, or secondary channel state machine, or ECD control memory

lmnopqrs Second 8 bits of Subrate circuit pack error source register

Bit	Value	Fault
l	1	Built-in self test on ECD
m-s	0	Unused

cc Hexadecimal condition code

cc	Explanation
02	Subject entity is not equipped
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
14	FTMI is out of service
26	NPC type error
37	DSPI out-of-service

cc	<i>Explanation</i>
3E	DSPI failed
0B	Invalid CEPT NPC
0F	Side specified for non-duplicated NPC
2A	Incorrect pack type in slot
57	SIDE must be specified for substrate NPC

QUERY ERROR SOURCE REGISTER

Explanation of Command This command prints out the contents of the error source register for the digital signal processing interface (DSPI) in a digital signal processing unit (DSPU).

Command [I.55531]
UTL: [FRM xy][, SEQ ww]:QRY, ESR, UNIT [q]q, DSPI!

Completion Message [O.55531]
M hh:mm:ss xy, ww n[vv] UTL QRY ESR UNIT [q]q DSPI 2 LN MSG:
SIDE 0: p1p2p3p4p5p6p7p8 SIDE 1: p1p2p3p4p5p6p7p8 COMPL

Denial Message [O.55531.01]
M hh:mm:ss xy, ww n[vv] UTL QRY ESR UNIT [q]q DSPI 2 LN MSG:
<reason> DNY

Explanation of Parameters	ESR	Error source register
	UNIT	Unit
	[q]q	Unit number (1 through 16)
	DSPI	Digital signal processing interface
	p1,...,p8	Register data bits
	p1	1
	p2	2
	p3	3
	p4	4
	p5	5
	p6	6

	p7	7
	p8	8
reason	Reason for denial	
cc	Hexadecimal condition code	

QUERY ERROR SOURCE REGISTER

Explanation of Command

This command prints out the contents of the error source register for a format converter (FC) in a particular unit.

Command

[I.55521]
UTL: [FRM xy][, SEQ ww]:QRY, ESR, UNIT [q]q, FC sb!

Completion Message

[O.55521]
M hh:mm:ss xy, ww n[vv] UTL QRY ESR UNIT [q]q FC sb 2 LN MSG:
aa bb cc dd ee COMPL

Denial Message

[O.55521.01]
M hh:mm:ss xy, ww n[vv] UTL QRY ESR UNIT [q]q FC sb COND cc DNY

Explanation of Parameters

ESR	Error source register
UNIT	Unit
[q]q	Unit number (1 through 16)
FC	Format converter
s	Side (0 or 1)
b	Format converter number (1 through 4)



NOTE:

Data bytes aa through gg must be converted from hexadecimal to binary before the following tables can be used to interpret the data byte values.

Each hexdigit converts to 4 binary digits. Bits are numbered from right to left starting from 0 as follows: 76543210.

For example: If aa = 01, the binary equivalent of this is 0000 0001. The aa explanation in the following table indicates there is an alarm on the Communications interface device C.

	0	Indicates NO error or alarm
	1	Indicates an error or alarm
aa	FTMI error status register	
	0	Error summary bit from Communications interface device C (CIC) (look at bytes bb and ee for details)
	1	Error summary bit from CIB (look at bytes bc and ff for details)
	2	Error summary bit from CIA (look at bytes dd and gg for details)
	3	Bus error alarm
	4-7	Not used
bb	Communications interface (CI) device A error source register	
	0	Chip identification comparison failed
	1	Address parity error was detected
	2	Data Strobe signal was not presented
	3	Loss of timing alarm on the device
	4-7	Not used
cc	CI device B error source register	
	0	Chip identification comparison failed
	1	Address parity error was detected
	2	Data Strobe signal was not presented
	3	Loss of timing alarm on the device
	4-7	Not used
dd	CI device C error source register	
	0	Chip identification comparison failed
	1	Address parity error was detected
	2	Data Strobe signal was not presented
	3	Loss of timing alarm on the device

	4-7	Not used
ee		CI device B error source register
	0	Error summary bit, Link 1
	1	Error summary bit, Link 2
	2	Error summary bit, Link 3
	3	Error summary bit, Link 4
	4	Error summary bit, Link 5
	5	Error summary bit, Link 6
	6	Error summary bit, Link 7
	7	Error summary bit, Link 8
ff		CI device A error source register
	0	Error summary bit, Link 1
	1	Error summary bit, Link 2
	2	Error summary bit, Link 3
	3	Error summary bit, Link 4
	4	Error summary bit, Link 5
	5	Error summary bit, Link 6
	6	Error summary bit, Link 7
	7	Error summary bit, Link 8
gg		CI device C error source register
	0	Error summary bit, Link 1
	1	Error summary bit, Link 2
	2	Error summary bit, Link 3
	3	Error summary bit, Link 4
	4	Error summary bit, Link 5
	5	Error summary bit, Link 6
	6	Error summary bit, Link 7
	7	Error summary bit, Link 8
cc		Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service

QUERY ERROR SOURCE REGISTER

Explanation of Command This command prints out the contents of the error source register for a format converter (FC) in a particular unit.

Command [I.55521]
UTL: [FRM xy][, SEQ ww]:QRY, ESR, UNIT [q]q, FC sb!

Completion Message [O.55521]
M hh:mm:ss xy, ww n[vv] UTL QRY ESR UNIT [q]q FC sb 2 LN MSG:
aa bb cc dd ee COMPL

Denial Message [O.55521.01]
M hh:mm:ss xy, ww n[vv] UTL QRY ESR UNIT [q]q FC sb COND cc DNY

Explanation of Parameters

ESR	Error source register
UNIT	Unit
[q]q	Unit number (1 through 16)
FC	Format converter
s	Side (0 or 1)
b	Format converter number (1 through 4)

 **NOTE:**
Data bytes aa through gg must be converted from hexadecimal to binary before the following tables can be used to interpret the data byte values.

Each hex digit converts to 4 binary digits. Bits are numbered from right to left starting from 0 as follows; 76543210.

For example, if aa = 01 the binary equivalent of this is 0000 0001. Using the following table for aa, this indicates that there is an alarm on the Receive formatter.

	0	Indicates NO error or alarm
	1	Indicates an error or alarm
aa	Communications interface (CI) error source register 0 (ESR0) (hexadecimal)	
	0	Receive formatter summary (look at bytes bb, cc, dd, and ee for details)
	1	Transmit formatter summary (look at byte ee for details)
	2	Circuit ID error
	3	Timing error
	4-7	Not used
bb	Receive Formatter (RF) device ESR0 (hexadecimal)	
	0	Port 0 alarm
	1	Port 1 alarm
	2	Port 2 alarm
	3	Port 3 alarm
	4	Port 4 alarm
	5	Port 5 alarm
	6	Port 6 alarm
	7	Port 7 alarm
cc	RF device ESR1 (hexadecimal)	
	8	Port 8 alarm
	9	Port 9 alarm
	10	Port 10 alarm
	11	Port 11 alarm
	12	Port 12 alarm
	13	Port 13 alarm
	14	Port 14 alarm

dd	15	Port 15 alarm
	RF device ESR2 (hexadecimal)	
	0	Port 17 alarm
	1	Port 18 alarm
	2	Port 19 alarm
	3	Port 20 alarm
	4-7	Not used
ee	RF/Transmitter Formatter (TF) device status register (hexadecimal)	
	0	Domestic/CEPT mode (Domestic = 0, CEPT = 1)
	1	Network data error
	2	Frame sync error
	3	Clock error
	4	Microprocessor bus error
	5-7	Not used
cc	Hexadecimal condition code	
	cc	<i>Explanation</i>
	04	Subject entity is out of service
	10	Unit is not equipped
	11	UC is out of service
	13	FTMI is not equipped
	14	FTMI is out of service

QUERY ERROR SOURCE REGISTER FACILITY LINE INTERFACE

Explanation of Command This command requests a printout of the error source register (ESR) on one facility line interface (FLI) circuit pack.

Command [I.55801]
UTL: [FRM xy][, SEQ ww]:QRY, ESR, UNIT [q]q, FLI k!

Completion Message [O.55801]
M hh:mm:ss xy, ww n[vv] UTL QRY ESR UNIT [q]q FLI k 2 LN MSG:
aa bb ee dd COMPL

Denial Message [O.55801.01]
M hh:mm:ss xy, ww n[vv] UTL QRY ESR UNIT [q]q FLI k COND cc DNY

Explanation of Parameters

FLI	Facility line interface
k	The identifier of the FLI:
S	Service FLI
P	Protection
ESR	Error source register
aa, bb, ee, dd	The error register of the queried circuit pack
	Variables aa, bb, ee, and dd are two-digit hexadecimal numbers representing error source registers. The bits in these registers are numbered as follows:
	76543210 Bit numbering
	Bit values have the following meaning:

	0	No error
	1	Error
aa	Communication Interface (CI) ESR 1	
	0	Summary of facility line interface (FLI) ESR 1
	1	Summary of FLI ESR 2
	2	Chip identification parity error indicator
	3	Sync absence or internal counter error indicator
	4-7	Not used (set to zero)

Example:

aa = 05 (= 00000101 binary). At least one bit in the FLI ESR 1 is set, and a chip ID error has been identified.



NOTE:

In practice, the bits may be set in combination.

bb	CI ESR 2	
	0	Address Parity Error
	1-7	Not Used
ee	FLI ESR 1	

Bit	Value	Explanation
0	1	The LOC alarm for DS-3 # 1 is activated
1	1	The LOC alarm for DS-3 # 2 is activated
2	1	The LOC alarm for DS-3 # 3 is activated
3	1	The LOC alarm for DS-3 # 4 is activated
4	1	The LOC alarm for DS-3 # 5 is activated
5	1	The LOC alarm for DS-3 # 6 is activated
6,7		Not used

dd	FLI ESR 2
cc	Hexadecimal condition code

Bit	Value	Explanation
0	1	The LOS alarm for DS-3 # 1 is activated
1	1	The LOS alarm for DS-3 # 2 is activated
2	1	The LOS alarm for DS-3 # 3 is activated
3	1	The LOS alarm for DS-3 # 4 is activated
4	1	The LOS alarm for DS-3 # 5 is activated
5	1	The LOS alarm for DS-3 # 6 is activated
6,7		Not used

cc	Explanation
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
B0	FLI is out of service

QUERY ERROR SOURCE REGISTER MULTIPLEXER INTERFACE UNIT

Explanation of Command

This command requests a printout of the error source register (ESR) for one Multiplexer Interface Unit (MIU) circuit pack.

Command

[I.55831]
UTL: [FRM xy][, SEQ ww]:QRY, ESR, UNIT [q]q, MIU c!

Completion Message

[O.55831]
M hh:mm:ss xy, ww n[vv] UTL QRY ESR UNIT [q]q MIU c 2 LN MSG:
aa bb COMPL

Denial Message

[O.55831.01]
M hh:mm:ss xy, ww n[vv] UTL QRY ESR UNIT [q]q MIU c COND cc DNY

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
MIU	Multiplexer interface unit
c	The number of the MIU within the unit (P, 1 through 6)
ESR	Error source register
aa, bb	The error register of the queried circuit pack in hexadecimal format
aa	EMIU ESR

The two hexadecimal digits of aa or bb may be converted to an eight-bit binary word. The eight bits of this word are interpreted as shown in the following table. Bit numbering is as follows:
76543210 (left to right)

Bit	Value	Bit Definition
0	1	EMIU interrupt from Unit Controller
1-2		Not Used
3	1	Reset in progress
4	1	The EMIU was reset
5	1	Facility threshold exception
6	1	ESF data link message response received
7	1	Hardware and firmware error
bb		EMIU error code (set only when bit 7 of the ESR is set)
cc		Hexadecimal condition code
	cc	<i>Explanation</i>
	10	Unit is not equipped
	11	UC is out of service
	12	UC is in service but failed
	BF	MIU is not equipped
	CF	MIU is out of service

QUERY ERROR SOURCE REGISTER MPR

Explanation of Command This message requests a printout of the error source register (ESR) for one Mapper (MPR) circuit pack of the HSU.

Command [I.55891]
UTL: [FRM xy][, SEQ ww]:QRY, ESR, UNIT [q]q, MPR z!

Completion Message [O.55891]
M hh:mm:ss xy, ww n[vv] UTL QRY ESR UNIT [q]q MPR z 2 LN MSG:
a b c d e f g h i j k l COMPL

Denial Message [O.55891.01]
M hh:mm:ss xy, ww n[vv] UTL QRY ESR UNIT [q]q MPR z COND cc DNY

Explanation of Parameters	UNIT	Unit
	[q]q	Unit number (1 through 16)
	MPR	Mapper
	z	The number of the MPR circuit pack (1-6, P)
	ESR	Error source register
	a,b,c,d,e,f,g,h,i,j,k,l	The error register of the queried circuit pack. (Hexadecimal format)
	a	MPR UC ESR 1
	b	MPR UC ESR 2
	c	MPR UC ESR 3
	d	MPR UC ESR 4

Bit	Value	Bit definition
0	1	Soft Reset
1	1	FP Interrupt
2	1	UC Bus Error
3	1	Local Bus Error
4	1	Cross-connect Selected State Side 1 Event
5	1	UC Select Event
6	1	Hardware Summary 1
7	1	Hardware Summary 2

Bit	Value	Bit definition
0	1	Reserved
1	1	Reserved
2	1	Loss of lock 1, low speed clock
3	1	Loss of lock 2, low speed clock
4	1	Loss of system sync, side 0
5	1	Loss of 16.384 MHz clock, side 0
6	1	Loss of system sync, side 1
7	1	Loss of 16.384 MHz clock, side 1

Bit	Value	Bit definition
0	1	Data Parity error from PSW, Service OI input
1	1	Data Parity error from PSW, Protection OI input
2	1	Loss of receive clock from PSW, Service OI
3	1	Loss of receive clock from PSW, Protection OI
4	1	Loss of transmit clock from PSW, Service OI

Bit	Value	Bit definition
5	1	Loss of transmit clock from PSW, Protection OI
6	1	Loss of PSW elastic store transmit data
7	1	Reserved

Bit	Value	Bit definition
0	1	Second event from Framer 1
1	1	Second event from Framer 2
2	1	Second event from Framer 3
3	1	Second event from Framer 4
4	1	Loss of receive line clock from Framer 1
5	1	Loss of receive line clock from Framer 2
6	1	Loss of receive line clock from Framer 3
7	1	Loss of receive line clock from Framer 4

e MPR UC ESR 5

Bit	Value	Bit definition
0	1	Framer 1 error
1	1	Framer 2 error
2	1	Framer 3 error
3	1	Framer 4 error
4	1	Channel Controller 1 error
5	1	Channel Controller 2 error
6	1	Channel Controller 3 error
7	1	TMPR error

f MPR UC ESR 6

Bit	Value	Bit definition
0	1	Reserved
1	1	Reserved
2	1	Reserved
3	1	Reserved
4	1	Reserved
5	1	Reserved
6	1	Reserved
7	1	Reserved

g MPR FP ESR 1

Bit	Value	Bit definition
0	1	Reserved
1	1	Reserved
2	1	UC Bus Error
3	1	Local Bus Error
4	1	Cross Connect Selected State Side 1 Event
5	1	UC Select Event
6	1	Reserved
7	1	Reserved

h MPR FP ESR 2

Bit	Value	Bit definition
0	1	Reserved
1	1	Reserved
2	1	Loss of Lock, low speed transmit clock # 1
3	1	Loss of Lock, low speed transmit clock # 2
4	1	Loss of System Sync, side 0

Bit	Value	Bit definition
5	1	Loss of 16.384 system clock, side 0
6	1	Loss of system Sync, side 1
7	1	Loss of 16.384 system clock, side 1

i MPR FP ESR 3

Bit	Value	Bit definition
0	1	Data parity error from PSW, Service OI input
1	1	Data parity error from PSW, Protection OI input
2	1	Receive Clock error from PSW, Service OI input
3	1	Receive Clock error from PSW, Protection OI input
4	1	Transmit Clock error from PSW, Service OI input
5	1	Transmit Clock error from PSW, Protection OI input
6	1	Loss of PSW Elastic Store Transmit Data
7	1	Reserved

j MPR FP ESR 4

Bit	Value	Bit definition
0	1	Second event from Framer 1
1	1	Second event from Framer 2
2	1	Second event from Framer 3
3	1	Second event from Framer 4
4	1	Loss of receive line clock from Framer 1

Bit	Value	Bit definition
5	1	Loss of receive line clock from Framer 2
6	1	Loss of receive line clock from Framer 3
7	1	Loss of receive line clock from Framer 4

k MPR FP ESR 5

Bit	Value	Bit definition
0	1	Framer 1 error
1	1	Framer 2 error
2	1	Framer 3 error
3	1	Framer 4 error
4	1	Channel Controller 1 error
5	1	Channel Controller 2 error
6	1	Channel Controller 3 error
7	1	TMPR error

I MPR FP ESR 6

Bit	Value	Bit definition
0	1	Reserved
1	1	Reserved
2	1	Reserved
3	1	Reserved
4	1	Reserved
5	1	Reserved
6	1	Reserved
7	1	Reserved

QUERY ERROR SOURCE REGISTER MULTIPLEXER

Explanation of Command

This command requests a printout of the error source register (ESR) for one multiplexer (MXR) or Hybrid MXR (HMXR) circuit pack.

Command

[I.55821]
UTL:[FRM xy][,SEQ ww]:QRY,ESR,UNIT [q]q,MXR c!

Completion Message

[O.55821]
M hh:mm:ss xy,ww n[vv] UTL QRY ESR UNIT [q]q MXR c 2 LN MSG:
aa bb dd ee ff COMPL

[O.55822]
M hh:mm:ss xy,ww n[vv] UTL QRY ESR UNIT [q]q HMXR c 2 LN MSG:
gg ii jj kk ll nn oo COMPL

Denial Message

[O.55821.01]
M hh:mm:ss xy,ww n[vv] UTL QRY ESR UNIT [q]q MXR c COND cc DNY

[O.55822.01]
M hh:mm:ss xy,ww n[vv] UTL QRY ESR UNIT [q]q HMXR c COND cc DNY

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
MXR	Multiplexer
HMXR	Hybrid Multiplexer
c	The number of the MXR or HMXR within the unit (P,1 through 6)
ESR	Error source register

aa,bb,dd,ee,ff,gg,ii,jj,kk,nn,oo

The error register of the queried circuit pack (hexadecimal format)

aa MXR ESR 1

Bit	Value	Bit Definition
0	1	DS3 LOS / OOF detected
1	1	CC device #7 Error
2	1	CC device #6 Error
3	1	CC device #5 Error
4	1	CC device #4 Error
5	1	CC device #3 Error
6	1	CC device #2 Error
7	1	CC device #1 Error

bb MXR ESR 2

Bit	Value	Bit Definition
0	1	Facility Processor detected Hardwared Error
1	1	CC device #14 Error
2	1	CC device #13 Error
3	1	CC device #12 Error
4	1	CC device #11 Error
5	1	CC device #10 Error
6	1	CC device #9 Error
7	1	CC device #8 Error

dd MXR ESR 3

Bit	Value	Bit Definition
0	1	Facility Processor detected Facility Error
1	1	MXR Reset
2	1	PIF Bus Parity Error

Bit	Value	Bit Definition
3	1	LOC DS3 Clock from the unselected FLI
4	1	LOC DS3 N Rail from the unselected FLI
5	1	LOC DS3 P Rail from the unselected FLI
6	1	45 MHz Clock Out of Lock
7		Not Used

ee Hardware summary byte 1

Bit	Value	Bit Definition
0	1	HSCC error
1	1	Firmware failure
2	1	PIF I/O error
3	1	M13 error
4	1	XCVR error
5	1	Program error
6	1	RAM error
7	1	ROM error

ff Hardware summary byte 2

Bit	Value	Bit Definition
0-5		Not used
6	1	Logic Cell Array Error
7	1	Queue overflow

gg HMXR ESR 1

Bit	Value	Bit Definition
0	1	Bus Error
1	1	T1 CC device #7 Error
2	1	T1 CC device #6 Error
3	1	T1 CC device #5 Error

Bit	Value	Bit Definition
4	1	T1 CC device #4 Error
5	1	T1 CC device #3 Error
6	1	T1 CC device #2 Error
7	1	T1 CC device #1 Error

ii HMXR ESR 2

Bit	Value	Bit Definition
0	1	Facility Processor detected Hardwared Error
1	1	T1 CC device #14 Error
2	1	T1 CC device #13 Error
3	1	T1 CC device #12 Error
4	1	T1 CC device #11 Error
5	1	T1 CC device #10 Error
6	1	T1 CC device #9 Error
7	1	T1 CC device #8 Error

jj HMXR ESR 3

Bit	Value	Bit Definition
0	1	Facility Processor detected Facility Error
1	1	LOC DS3 Clock from the unselected FLI
2	1	LOC DS3 N Rail from the unselected FLI
3	1	LOC DS3 P Rail from the unselected FLI
4	1	Side 1 SY240T Sync Pulse Failure
5	1	Side 1 loss of 8.192 MHz System Clock
6	1	Side 0 SY240T Sync Pulse Failure
7	1	Side 0 Loss of 8.192 MHz System Clock

kk HMXR ESR 4

ll HMXR ESR 5

nn Hardware summary byte 1

oo Hardware summary byte 2

cc Hexadecimal condition code

Bit	Value	Bit Definition
0	1	M13 Multiplexer Interrupt
1	1	E1 CC device #7 Error
2	1	E1 CC device #6 Error
3	1	E1 CC device #5 Error
4	1	E1 CC device #4 Error
5	1	E1 CC device #3 Error
6	1	E1 CC device #2 Error
7	1	E1 CC device #1 Error

Bit	Value	Bit Definition
0		Not used
1	1	E1 CC device #14 Error
2	1	E1 CC device #13 Error
3	1	E1 CC device #12 Error
4	1	E1 CC device #11 Error
5	1	E1 CC device #10 Error
6	1	E1 CC device #9 Error
7	1	E1 CC device #8 Error

Bit	Value	Bit definition
0	1	HSCC error
1	1	FPGA Failure
2	1	E1 XCVR error
3	1	M13 error
4	1	T1 XCVR error
5	1	Program error
6	1	RAM error
7	1	ROM error

Bit	Value	Bit Definition
0-6		Not Used
7	1	HMXR SW error

cc	Explanation
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
B2	MXR is out of service
51	The pair MXR is not equipped

UTILITY QUERY ERROR SOURCE REGISTER

Explanation of Command

This command prints out the contents of the error source register for a facility terminating unit (FTU), DS3 unit (DS3U), or Hybrid DS3 unit (HDS3U).

Command

[I.55501]
UTL: [FRM xy][, SEQ ww]:QRY, ESR, UNIT [q]q!

Completion Message

[O.55501]
For an FTU:
M hh:mm:ss xy, ww n[vv] UTL QRY ESR UNIT [q]q aa COMPL

For a DS3 unit:
[O.55501]
M hh:mm:ss xy, ww n[vv] UTL QRY ESR UNIT [q]q bbbb cccc dddd \
eeee COMPL

Denial Message

[O.55501.01]
M hh:mm:ss xy, ww n[vv] UTL QRY ESR UNIT [q]q COND cc DNY

Explanation of Parameters

ESR	Error source register
UNIT	Unit
[q]q	Unit number (1 through 16)
aa	FTU ESR
A2	Error from FTMI 1
A4	Error from FTMI 2

A5 Error from FTMI 3

A6 Error from FTMI 4

bbbb DS3U or HDS3U Interrupt holding register 0. Hexadecimal digits are numbered 3210 in left to right order.

hex digit	Bit	Value	Definition
0	0	1	Ram Parity Error
0	1	1	Internal Bus Error
0	2	1	Parallel Bus Parity Error
0	3	1	Series Bus Parity Error
1-3	4-15		Unused

cccc DS3U or HDS3U Interrupt holding register 1. Hexadecimal digits are numbered 3210 in left to right order.

hex digit	Bit	Value	Definition
0	0	1	MXR1 Power Loss Interrupt
0	1	1	MXR2 Power Loss Interrupt
0	2	1	MXR3 Power Loss Interrupt
0	3	1	MXR4 Power Loss Interrupt
1	4	1	MXR5 Power Loss Interrupt
1	5	1	MXR6 Power Loss Interrupt
1	6	1	MXRP Power Loss Interrupt
1	7	1	SFLI Power Loss Interrupt
2	8	1	MIU1 Power Loss Interrupt
2	9	1	MIU2 Power Loss Interrupt
2	10	1	MIU3 Power Loss Interrupt
2	11	1	MIU4 Power Loss Interrupt
3	12	1	MIU5 Power Loss Interrupt
3	13	1	MIU6 Power Loss Interrupt
3	14	1	MIUP Power Loss Interrupt
3	15	1	PFLI Power Loss Interrupt

dddd DS3U or HDS3U Interrupt holding register 2 (hexadecimal).
Hexadecimal digits are numbered 3210 in left to right order.

hex digit	Bit	Value	Definition
0	0	1	MXR1 Interrupt
0	1	1	MXR2 Interrupt
0	2	1	MXR3 Interrupt
0	3	1	MXR4 Interrupt
1	4	1	MXR5 Interrupt
1	5	1	MXR6 Interrupt
1	6	1	MXRP Interrupt
1	7	1	0FMT Power Loss Interrupt
2	8	1	MIU1 Interrupt
2	9	1	MIU2 Interrupt
2	10	1	MIU3 Interrupt
2	11	1	MIU4 Interrupt
3	12	1	MIU5 Interrupt
3	13	1	MIU6 Interrupt
3	14	1	MIUP Interrupt
3	15	1	1FMT Power Loss Interrupt

eeee DS3U or HDS3U CI error source register (hexadecimal).
Hexadecimal digits are numbered 3210 in left to right order.

hex digit	Bit	Value	Definition
0	0	1	Link 1 Error
0	1	1	Link 2 Error
0	2	1	Link 3 Error
0	3	1	Link 4 Error
1	4	1	Link 5 Error
1	5	1	Link 6 Error
1	6	1	Link 7 Error
1	7	1	Link 8 Error

hex digit	Bit	Value	Definition
2	8	1	CI device ID Error
2	9	1	Address Parity Error
2	10	1	Data Strobe Error
2	11	1	Loss of Timing Error
3	12-15		Not Used

cc Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped
04	Subject entity is out of service

RETRIEVE FACILITY ALARM SEVERITY

Explanation of Command

This command retrieves the current system alarm severity for a single facility alarm or for all the facility alarms. This command is denied if the Alarm Severity feature is turned OFF. (I.38355 turns the feature ON and OFF. This command does not check the validity of the facility alarm for the type specified. It assumes all facility alarms are available for all types.)

Command

[I.53311]
UTL: [FRM xy][, SEQ ww]:QRY, FALMS, TYPE {mn[xyz]|ALL}, {<falm>|ALL}!

Completion Message

If a single facility alarm is requested for a specific NPC type:

[O.53311]
M hh:mm:ss xy, ww n[vv] UTL QRY FALMS TYPE mnxyz <falm> sev COMPL

If a single facility alarm is requested for an NPC type:

[O.53311]
M hh:mm:ss xy, ww n[vv] UTL QRY FALMS TYPE mn DEFAULT <falm> \
sev COMPL

If ALL facility alarms are requested for an NPC specific type:

[O.53311]
M hh:mm:ss xy, ww n[vv] UTL QRY FALMS TYPE mnxyz 6 lines
LOS sev RBER sev LOF sev EER sev
BER sev LCMA sev FLC sev RAI sev
SFI sev RAIS sev AIS sev POF sev
TAI sev LMA sev RABS sev RPSFI sev
PBF sev COMPL

If ALL facility alarms are requested for an NPC type:

[O.53311]

```
M hh:mm:ss xy,ww n[vv] UTL QRY FALMS TYPE mn DEFAULT 6 lines
LOS sev    RBER sev    LOF  sev    EER    sev
BER sev    LCMA sev    FLC  sev    RAI    sev
SFI sev    RAIS sev    AIS  sev    POF    sev
TAI sev    LMA  sev    RABS sev    RPSFI sev
PBF sev                                COMPL
```

If the ALL type option is chosen, the message gives the current default for each PA, PB, or PC type and any changes from the default for specific xyz types.

If a single facility alarm is requested:

[O.53311]

```
M hh:mm:ss xy,ww n[vv] UTL QRY FALMS TYPE PA DEFAULT <falm> sev
M hh:mm:ss xy,ww n[vv] UTL QRY FALMS TYPE PB DEFAULT <falm> sev
M hh:mm:ss xy,ww n[vv] UTL QRY FALMS TYPE PC DEFAULT <falm> \
sev [COMPL]
[M hh:mm:ss xy,ww n[vv] UTL QRY FALMS TYPE mnxyz <falm> \
sev [COMPL]]
.
.
.
[M hh:mm:ss xy,ww n[vv] UTL QRY FALMS TYPE mnxyz <falm> sev COMPL]
```

If ALL facility alarms were requested:

[O.53311]

```
M hh:mm:ss xy,ww n[vv] UTL QRY FALMS TYPE PA DEFAULT 6 lines
LOS sev    RBER sev    LOF  sev    EER    sev
BER sev    LCMA sev    FLC  sev    RAI    sev
SFI sev    RAIS sev    AIS  sev    POF    sev
TAI sev    LMA  sev    RABS sev    RPSFI sev
PBF sev
M hh:mm:ss xy,ww n[vv] UTL QRY FALMS TYPE PB DEFAULT 6 lines
LOS sev    RBER sev    LOF  sev    EER    sev
BER sev    LCMA sev    FLC  sev    RAI    sev
SFI sev    RAIS sev    AIS  sev    POF    sev
TAI sev    LMA  sev    RABS sev    RPSFI sev
PBF sev
M hh:mm:ss xy,ww n[vv] UTL QRY FALMS TYPE PC DEFAULT 6 lines
LOS sev    RBER sev    LOF  sev    EER    sev
BER sev    LCMA sev    FLC  sev    RAI    sev
SFI sev    RAIS sev    AIS  sev    POF    sev
TAI sev    LMA  sev    RABS sev    RPSFI sev
PBF sev                                [COMPL]
[M hh:mm:ss xy,ww n[vv] UTL QRY FALMS TYPE mnxyz 6 lines]
[LOS sev    RBER sev    LOF  sev    EER    sev]
[BER sev    LCMA sev    FLC  sev    RAI    sev]
```

```
[SFI sev  RAIS sev  AIS  sev  POF  sev]
[TAI sev  LMA  sev  RABS sev  RPSFI sev]
[PBF sev                                     [COMPL]]
.
.
.

[M hh:mm:ss xy,ww n[vv] UTL QRY FALMS TYPE mnxyz 6 lines]
[LOS sev  RBER sev  LOF  sev  EER  sev]
[BER sev  LCMA sev  FLC  sev  RAI  sev]
[SFI sev  RAIS sev  AIS  sev  POF  sev]
[TAI sev  LMA  sev  RABS sev  RPSFI sev]
[PBF sev                                     COMPL]
```

Denial Message

[O.53311.01]

M hh:mm:ss xy,ww n[vv] UTL QRY FALMS TYPE {ALL|mn[xyz]} \
{falm|ALL} COND cc DNY

Explanation of Parameters

falm	Facility Alarms
RPSFI	Remote Power Supply Failure Indicator
LOS	Loss of Signal
LOF	Loss of Frame
AIS	Alarm Indication Signal
EER	Excessive Error Rate
BER	Bit Error Rate
LCMA	Loss of CRC multiframe alignment
FLC	Far End Loss of CRC Multiframe Alignment
RAI	Remote Alarm Indication
RAIS	Remote AIS
RBER	Remote Bit Error Rate
SFI	Sync Failure Indication
POF	Pseudo Frame Word Out of Frame
TAI	Ts-16 All Ones Alarm
LMA	Loss of Multiframe Alignment
RABS	Remote Alarm bit 6, TS16

sev	ALL	ALL above identified shelf alarms
	Severity	
	PMACR	Prompt Maintenance Action CRITICAL alarm severity
	PMAMJ	Prompt Maintenance Action MAJOR alarm severity
	DMAMN	Deferred Maintenance Action MINOR alarm severity
TYPE	MI	MESSAGE INFORMATION alarm severity
	Type	
	PA	PA NPC Type
	PB	PB NPC Type
	PC	PC NPC Type
	For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."	
cc	Hexadecimal condition code	

cc	<i>Explanation</i>
00	No conditions
26	NPC type error
34	NPC type option xyz is unassigned, or invalid for feature package
31	NPC not provisioned for NSA
BB	Timeslot channel numbering not allowed with CAS
A3	Transmic 1G NPC designated as SYNC source invalid
A4	Firmware timing invalid for Transmic 1G NPC
7E	Framed/Unframed clear 2Mbit/s NPC invalid for Automatic CRC-4
7F	Unframed clear 2Mbit/s NPC invalid for TS0 processing
80	Framed/Unframed clear 2Mbit/s NPC invalid for Transmic 1G, 2G

cc	<i>Explanation</i>
81	Framed/Unframed clear 2Mbit/s NPC invalid for Firmware Timing
82	Unframed clear 2Mbit/s NPC invalid for Bit 4 used as RA IS/RBER
F7	Alarm Severity Feature (already) OFF

QUERY FEATURE PACKAGE

Explanation of Command

This command lists the installed features and the feature package identification code.

Command

```
[I.51121]
UTL:[FRM xy][,SEQ ww]:QRY,FPKG!
```

Completion Message

```
[O.51121]
M hh:mm:ss xy,ww n[vv] UTL QRY FPKG kkttuuvv DACSIgg.pp r \
e LN MSG:
[BASIC DS1 TERMINATIONS]
[BASIC CEPT TERMINATIONS]
[SUBRATE]
[DIRECT SLC TERMINATIONS] [{EOM|COMPL}]

[M hh:mm:ss xy,ww n[vv] UTL QRY FPKG kkttuuvv DACSIgg.pp r \
e LN MSG:]
[DS3 TERMINATIONS]
[ENHANCED CEPT-C-BIT,C-BIT FILTERING,RPSFI]
[SWITCHED TELECONFERENCING]
[CAPACITY EXPANSION FRAME] [{EOM|COMPL}]

[M hh:mm:ss xy,ww n[vv] UTL QRY FPKG kkttuuvv DACSIgg.pp r \
e LN MSG:]
[ENHANCED DS1 PERFORMANCE MONITORING]
[DS0/DS1 SERVICE ROLL FEATURE]
[AT&T SECURITY WARNING MESSAGE]
[NX64KBIT TEST ACCESS] [{EOM|COMPL}]

[M hh:mm:ss xy,ww n[vv] UTL QRY FPKG kkttuuvv DACSIgg.pp r \
e LN MSG:]
[CLEAR 2MB/S INTERFACE]
[TS0 TO NON-TS0 XCON]
[2MB/S ROLL FEATURE]
[INTERVENTION LEVEL] [{EOM|COMPL}]

[M hh:mm:ss xy,ww n[vv] UTL QRY FPKG kkttuuvv DACSIgg.pp r \
```

e LN MSG:]
[DS3 HYBRID] [COMPL]

Explanation of Parameters

e The number of lines in an output segment (2 through 6)

FPKG Feature Package
Output includes a list of DACS II optional features.

kkttuuvv Feature package identification code

00000001 DS1

00000002 CEPT

00000004 Subrate

00000008 Direct SLC® 96 and Series 5 Carrier Interface

00000010 DS3 Terminations

00000020 Enhanced CEPT

C-bit
C-bit filtering
RPSFI

00000040 Switched Teleconferencing

00000080 CEF

00000100 Enhanced DS1 Performance Monitoring

00000200 DS0/DS1 Roll

00000400 AT&T Security Warning Message

00000800 Nx64kbit Test Access

00001000 Clear 2MB/s Interface

00002000 TS0 to Non TS0 Cross-connection

00004000 2MB/S Roll

00008000 SPARE

00010000 TRT/FT Features

Intervention Level

00020000 DS3 Hybrid

In general, a feature package identification code is a combination of several individual feature package numbers. To determine the individual features that make up a feature

package, decode the feature package identification code. This code is an eight digit hexadecimal number. Each hexadecimal number represents a four-bit binary number. Within this binary number each feature is associated with one particular bit. Consequently to determine the feature list from a feature package identification code it is necessary to convert each hexadecimal digit to its binary equivalent and look up the features in the preceding list. For example, the feature package identification code 0000000F can be converted to the following binary number working from left to right one hex digit at a time.

0000 0000 0000 0000 0000 0000 0000 1111

This number contains eight binary numbers each representing one of the hexadecimal numbers in the feature package identification code 0000000F. The rightmost number of the code contains four features since there are four bits set to one. This would be decoded as follows using the preceding table of features.

Binary	Hex	Feature
0001	1	DS1
0010	2	CEPT
0100	4	Subrate
1000	8	Direct SLC
Total:		
1111	F	DS1 + CEPT + Subrate + SLC

gg

DACS II software release number

pp

DACS II software release point number

r

DACS II software PDI number

UTILITY QUERY FROM

Explanation of Command

1.544 Mbit/s Termination

This command is used to query the FROM side of a one-way cross-connected circuit or a range of similar circuits. For a SLC[®] carrier denial message relating to terminating digroups, the bank identification number, the operation mode, and the digroup A network processing circuit (NPC) number are reported. The normal response, if the NPC is a SLC NPC currently under protection, shows the protection digroup NPC number.

2.048 Mbit/s Termination

This command is used to query the FROM side of a one-way cross-connected circuit or a range of similar circuits. The results depend on (1) whether the termination is assigned, and (2) whether it is a test port termination. A test port termination requires the NPC type of this termination and the far-end it is mapped to (if any).

For this utility, DACS II terminations can be divided into two categories:

- Multipoint termination, which is a multipoint circuit on a real digital multipoint bridge (DMB) in the digital signal processing unit (DSPU), or on a virtual network processing circuit.
- All other terminations.

Command

Nonhierarchical

[I.52051]

UTL:[FRM xy][,SEQ ww]:QRY,FROM [s]abcd[-eee]!

Hierarchical

[I.52051]

UTL:[FRM xy][,SEQ ww]:QRY,FROM uvmpddd[-eee]!

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.52051]

M hh:mm:ss xy,ww n[vv] UTL QRY FROM [s]abcddd TYPE mnxyz\
[DGP [t]ppp] 2 LN MSG:
[t]ghijjj ppqqq <tc>[CUS][RDC][UTST {TP kk|TG mmm}][TLA T] EOM
.
.
.

M hh:mm:ss xy,ww n[vv] UTL QRY FROM [s]abceee TYPE mnxyz\
[DGP [t]ppp] 2 LN MSG:
[t]ghijjj ppqqq <tc>[CUS][RDC][UTST {TP kk|TG mmm}]\
[TLA T] COMPL

[O.52052]

M hh:mm:ss xy,ww n[vv] UTL QRY FROM [s]abcddd TYPE mnxyz 2 LN MSG:
UASGN[<tc> DCC][CUS][UTST {TP kk|TG mmm}][cc] {EOM|COMPL}

[O.52053]

M hh:mm:ss xy,ww n[vv] UTL QRY FROM [s]abcddd TYPE mnxyz NOT OCON
{EOM|COMPL}

[O.52051]

M hh:mm:ss xy,ww n[vv] UTL QRY FROM uvmnpddd TYPE mnxyz \
[DGP wxkqr] 2 LN MSG:
edhfgjjj ppqqq <tc>[CUS][RDC][UTST {TP kk|TG mmm}][TLA T] EOM
.
.
.

M hh:mm:ss xy,ww n[vv] UTL QRY FROM uvmnpeee TYPE mnxyz \
[DGP wxkqr] 2 LN MSG:
edhfgjjj ppqqq <tc>[CUS][RDC][UTST {TP kk|TG mmm}][TLA T] COMPL

[O.52052]

M hh:mm:ss xy,ww n[vv] UTL QRY FROM uvmnpddd TYPE mnxyz 2 LN MSG:
UASGN[<tc>][DCC][CUS][UTST {TP kk|TG mmm}][cc] {EOM|COMPL}

[O.52053]

M hh:mm:ss xy,ww n[vv] UTL QRY FROM uvmnpddd TYPE mnxyz \
NOT OCON {EOM|COMPL}

2.048 Mbit/s Termination

Nonhierarchical

[O.52051]

```
M hh:mm:ss xy,ww n[vv] UTL QRY FROM [s]abcddd TYPE mnxyz 2 LN MSG:
[t]ghijjj ppqqq <tc>[ CUS][ RDC][ UTST {TP kk|TG mmm}][ TLA T] EOM
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY FROM [s]abceee TYPE mnxyz 2 LN MSG:
[t]ghijjj ppqqq <tc>[ CUS][ RDC][ UTST {TP kk|TG mmm}][ TLA T]
COMPL
```

[O.52052]

```
M hh:mm:ss xy,ww n[vv] UTL QRY FROM [s]abcddd TYPE mnxyz 2 LN MSG:
UASGN[ <tc> DCC][ CUS][ UTST {TP kk|TG mmm}][ cc] {EOM|COMPL}
```

[O.52053]

```
M hh:mm:ss xy,ww n[vv] UTL QRY FROM [s]abcddd TYPE mnxyz \
NOT OCON {EOM|COMPL}
```

Hierarchical

[O.52051]

```
M hh:mm:ss xy,ww n[vv] UTL QRY FROM uvmnpddd TYPE mnxyz 2 LN MSG:
edhfgjjj ppqqq <tc>[ CUS][ RDC][ UTST {TP kk|TG mmm}][ TLA T] EOM
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY FROM uvmnpeee TYPE mnxyz 2 LN MSG:
edhfgjjj ppqqq <tc>[ CUS][ RDC][ UTST {TP kk|TG mmm}][ TLA T] COMPL
```

[O.52052]

```
M hh:mm:ss xy,ww n[vv] UTL QRY FROM uvmnpddd TYPE mnxyz 2 LN MSG:
UASGN[ <tc> ][DCC][ CUS][ UTST {TP kk|TG mmm}][ cc] {EOM|COMPL}
```

[O.52053]

```
M hh:mm:ss xy,ww n[vv] UTL QRY FROM uvmnpddd TYPE mnxyz \
NOT OCON {EOM|COMPL}
```

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.52051.01]

M hh:mm:ss xy,ww n[vv] UTL QRY FROM [s]abcddd[-eee][{RT|DL} \
ffff MD g[g] [t]aaa] [UEQD] COND cc DNY

[O.52051.02]

M hh:mm:ss xy,ww n[vv] UTL QRY FROM [s]abcddd[-eee] \
TYPE mnxyz RNGIE DNY

Hierarchical

[O.52051.01]

M hh:mm:ss xy,ww n[vv] UTL QRY FROM uvmnpddd[-eee][{RT|DL} \
ffff MD g[g] uvjkl] [UEQD] COND cc DNY

[O.52051.02]

M hh:mm:ss xy,ww n[vv] UTL QRY FROM uvmnpddd[-eee] \
TYPE mnxyz RNGIE DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.52051.01]

M hh:mm:ss xy,ww n[vv] UTL QRY FROM [s]abcddd[-eee][UEQD] \
COND cc DNY

[O.52051.02]

M hh:mm:ss xy,ww n[vv] UTL QRY FROM [s]abcddd[-eee] \
TYPE mnxyz RNGIE DNY

Hierarchical

[O.52051.01]

M hh:mm:ss xy,ww n[vv] UTL QRY FROM uvmnpddd[-eee][UEQD] \
COND cc DNY

[O.52051.02]

M hh:mm:ss xy,ww n[vv] UTL QRY FROM uvmnpddd[-eee] \
TYPE mnxyz RNGIE DNY

Explanation of Parameters	[s]abc	The 3- or 4-digit non-hierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	ddd	Starting channel number
	ddd	Starting conference number
	eee	Channel number denoting the end of the range.
	eee	Conference number denoting the end of the range. The valid values are listed below: Channel numbers 000-031 (CEPT) 001-024 001-047 Odd only (SLC 96® Carrier, Mode 3, DGA) 049-095 Odd only (SLC 96 Carrier, Mode 3, DGC) 001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA) 025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB) 049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC) 073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD) 001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA) 025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB) 049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC) 073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD) Conference numbers 001-085 (MB NPC) 001-500 (Virtual NPC) TYPE Type

mnxyz	FROM termination NPC information
mn	FROM termination NPC type
	Valid values are::
DA	Dual digroup ANSI NPC
DE	Dual digroup NPC
DS	SLC [®] carrier NPC
PA	CEPT NPC (75- or 120-ohm)
PB	CEPT NPC (120-ohm twisted pair)
PC	CEPT NPC (75-ohm coaxial)
TA	DS3U ANSI NPC
TE	DS3U or HDS3U Noninterface unit NPC
TH	Hybrid DS3U CEPT NPC
xyz	Options and formats for NPCs
	For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	1.544 Mbit/s Termination
DGP	SLC carrier digroup P (protection)
	Both Terminations
[t]ppp	The 3- or 4-digit nonhierarchical SLC carrier digroup P NPC number.
	Valid values are identical to those for [s]abc.
[t]ghi	The 3- or 4-digit nonhierarchical TO NPC number.
	Valid values are identical to those for [s]abc.
	1.544 Mbit/s Termination
wxkqr	Hierarchical SLC carrier digroup P NPC number
	Valid values are identical to those for uvmnp
edhfg	Hierarchical TO NPC number
	Valid values are identical to those for uvmnp
jjj, kkk	TO channel numbers
jjj, kkk	TO conference numbers
	Valid values are identical to those for ddd.
ppqqq	TO termination NPC information

pp TO termination NPC type

Valid values are:

DA Dual digroup ANSI NPC

DE Dual digroup NPC

TA DS3U ANSI NPC

TE DS3U or HDS3U Noninterface unit NPC

TH Hybrid DS3U CEPT NPC

PA CEPT NPC (75- or 120-ohm)

PB CEPT NPC (120-ohm twisted pair)

PC CEPT NPC (75-ohm coaxial)

DS SLC[®] carrier NPC

MB Digital multipoint bridge NPC

VI Virtual NPC

qqq See xyz above for definition and values.

tc Trunk conditioning

Represents the desired cross-connected signaling and insertion word applied when a failure occurs. A trunk conditioning specification consists of a combination of a signaling specification followed by an insertion word specification.

pq is a user specified insertion word. The binary pattern corresponding to the hexadecimal value of pq will be inserted in the downstream direction of a failure on either line.

1.544 Mbit/s Termination

TC(X'--,X'cd),TRB

TC(X'--,X'cd),IW X'pq

TC(----,mnop),TRB

TC(----,mnop),IW X'pq

TRSP,TRB

TRSP,MUX

TRSP,IW X'pq

TRSP(DMB to DMB)

Both Terminations



NOTE:

Because there is no signal from the FROM direction, ijkl is replaced by ---- in the specification TC(ijkl,mnop) and ab is replaced by -- in the specification TC(X'ab,X'cd).

1.544 Mbit/s Termination



NOTE:

If the channel being connected is an FDL (Facility Data Link), then ddd is 000 and trunk conditioning should be of type TC(----,mnop).

The FDL is not supported by the DS-type NPC.

2.048 Mbit/s Termination

TC(ijkl,mnop)
TC(efghijkl,mnopqrst)
TC(X'ab,X'cd)
TRSP(DMB to DMB)
Omitted



NOTE:

If tc is omitted, defaults to TC(X'FF,X'FF) if both terminations are channel associated signaling type. TC defaults to TRSP if one of the terminations is nonsignaling associated type.

Both Terminations

The following insertion word options are allowed:

IW X'pq The 8-bit pattern corresponding to the hexadecimal value of pq will be inserted in the downstream direction of a failure on either line.
Omitted Will default to IW X'FF.

RDC	Red circuit
CUS	Customer-controlled circuit
UTST	Given termination is under test
TP	Test Port
kk	Test port number (01-96)
TG	Test Group
mmm	Test group number (001-400)
TLA	Terminate and leave active
T	To
	TO termination is in the terminate and leave state
DCC	Disconnect code

1.544 Mbit/s Termination

RT	Remote terminal
DL	Digital carrier line unit (DCLU)
fff	RT or DL bank identification (0000 through 9999)
MD	Mode
g[g]	RT or DL operation mode
	1 SLC 96 carrier Mode I
	3 SLC 96 carrier Mode III
	C SLC Series 5 carrier FPC
[t]aaa	Nonhierarchical RT or DL digroup A NPC number with the same valid values as [s]abc.
	Both Terminations
UEQD	Unequipped
	1.544 Mbit/s Termination
uvjkl	Hierarchical RT or DL digroup A NPC number with the same valid values as uvmnp.
	Both Terminations
NOT	Not
COND	Condition
RNGIE	Range input error
UASGN	Unassigned
cc	Hexadecimal condition code

cc	<i>Explanation</i>
E3	One way unassigned channel/NPC in QRY, TO
0B	Invalid CEPT NPC
62	Invalid channel number
63	NPC is a DGP
7F	NPC is not added

cc	<i>Explanation</i>
91	SR NPC was specified - not allowed
97	Invalid NPC type
F7	Corresponding NPC for virtual channel is not provisioned

UTILITY QUERY FROM

Explanation of Command

This message requests provisioning information for a specific FROM non-channelized network processing circuit of a one-way connection.

Command

Nonhierarchical

[I.52071]

UTL: [FRM xy][, SEQ ww]:QRY, FROM [s]abc!

Hierarchical

[I.52071]

UTL: [FRM xy][, SEQ ww]:QRY, FROM uvmnp!

Completion Message

Nonhierarchical

[O.52071]

M hh:mm:ss xy, ww n[vv] UTL QRY FROM [s]abc TYPE mnxyz 2 LN MSG:
[t]ghi mnxyz AIS[CUS][RDC][UTST][TLA T] COMPL

Hierarchical

[O.52071]

M hh:mm:ss xy, ww n[vv] UTL QRY FROM uvmnp TYPE mnxyz 2 LN MSG:
wxkqr mnxyz AIS[CUS][RDC][UTST][TLA T] COMPL

Denial Message

Nonhierarchical

[O.52071.01]

M hh:mm:ss xy, ww n[vv] UTL QRY FROM [s]abc TYPE mnxyz COND cc DNY

Hierarchical

[O.52071.01]

M hh:mm:ss xy,ww n[vv] UTL QRY FROM uvmnp TYPE mnxyz COND cc DNY

Explanation of Parameters

FROM	From
[s]abc	The 3- or 4-digit nonhierarchical nonchannelized FROM NPC For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number of nonchannelized FROM NPC uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
[t]ghi	The 3- or 4-digit nonhierarchical number of TO NPC mapped to the FROM NPC
wxkqr	Hierarchical number of TO NPC mapped to the FROM NPC
TYPE	NPC type
mnxyz	NPC type of TO or FROM NPC ----- Unequipped NPC 1.544 Mb/s Termination: DAxyz FTU NPC DExyz FTU NPC TAxyz DS3U NPC TExyz DS3U or HDS3U NPC 2.048 Mb/s Termination: PAxyz FTU NPC PBxyz FTU NPC PCxyz FTU NPC THxyz DS3U NPC
AIS	Alarm indication signal is the idle code for nonchannelized digital signal cross-connection.

CUS	Customer controlled circuit
RDC	Red circuit
UTST	Under test
TLA T	Terminate and leave activate TO Connection is terminated in the TO direction
cc	Hexadecimal condition code

cc	<i>Explanation</i>
15	NPC is unequipped
0B	Invalid CEPT NPC
62	Invalid channel number
B4	NPC is channelized type
4F	NPC is not part of a one-way connection

UTILITY QUERY HUB IDENTIFIER

Explanation of Command This command requests the current setting of the DACS II hub identification code (HUBID).

Command [I.51501]
UTL: [FRM xy][, SEQ ww]:QRY, HUBID!

Completion Message [O.51501]
M hh:mm:ss xy, ww n[vv] UTL QRY HUBID O'ab COMPL

Denial Message [O.51501.01]
M hh:mm:ss xy, ww n[vv] UTL QRY HUBID 2 LN MSG:
<Reason> DNY

Explanation of Parameters

HUBID	HUB Identification Code
O'ab	MJU hub identification code represented in Octal digits (O'00 through O'77)
reason	Reason for denial
	Reason
	HUBID HAS NOT BEEN SET

ALARM INHIBIT SUMMARY QUERY

Explanation of Command

The following command is used to query an alarm inhibit summary on an NPC, range of NPCs, or all NPCs. The query will provide system start-up with elapsed time and for each port will provide the port number, service state, and port start-up time interval.

Command

Nonhierarchical

[I.53341]

UTL: [FRM xy][, SEQ ww]:QRY, INH, {NPC [s]abc[-[t]def]}|ALL}!

Hierarchical

[I.53341]

UTL: [FRM xy][, SEQ ww]:QRY, INH, {NPC uvmnp[-wxkqr]}|ALL}!

Completion Message

Nonhierarchical

Output for one NPC:

[O.53341]

M hh:mm:ss [xy, ww] n[vv] UTL QRY INH NPC [s]abc 3 LN MSG:
NPC STATE INHTIM ELAPSED
abc{-|OOS|INH|NOINH} [hrmn cdd]

M hh:mm:ss [xy, ww] n[vv] UTL QRY INH NPC [s]abc[COND cc] 2 LN MSG:
SYSTEM INHTIM hh HOURS COMPL

Output for a range of NPCs [treatment by FTMI]

[O.53341]

M hh:mm:ss [xy, ww] n[vv] UTL QRY INH NPC [u]ghi-[u]jkl [COND cc] \
z2 LN MSG:
NPC STATE INHTIM ELAPSED

```

ghi{-|00S|INH|NOINH} [hrmn  ccdd]
... ..
jkl{-|00S|INH|NOINH} [hrmn  ccdd]EOM

... ..
... ..

M hh:mm:ss [xy,ww] n[vv] UTL QRY INH NPC [v]mno-[v]pqr [COND cc] \
z2 LN MSG:
NPC      STATE      INHTIM      ELAPSED
mno{-|00S|INH|NOINH} [hrmn  ccdd]
... ..

pqr{-|00S|INH|NOINH} [hrmn  ccdd]EOM

M hh:mm:ss [xy,ww] n[vv] UTL QRY INH NPC [v]mno-[v]pqr [COND cc] \
z2 LN MSG:
SYSTEM INHTIM hh HOURS COMPL

```

Output for all NPCs of the frame [reatment by FTMI]

[O.53341]

```

M hh:mm:ss [xy,ww] n[vv] UTL QRY INH NPC ALL [COND cc] z2 LN MSG:
NPC      STATE      INHTIM      ELAPSED
ghi{-|00S|INH|NOINH} [hrmn  ccdd]
... ..
jkl{-|00S|INH|NOINH} [hrmn  ccdd]EOM

... ..
... ..
... ..

M hh:mm:ss [xy,ww] n[vv] UTL QRY INH NPC [v]mno-[v]pqr [COND cc] \
z2 LN MSG:
NPC      STATE      INHTIM      ELAPSED
mno{-|00S|INH|NOINH} [hrmn  ccdd]
... ..

pqr{-|00S|INH|NOINH} [hrmn  ccdd]EOM

M hh:mm:ss [xy,ww] n[vv] UTL QRY INH NPC ALL [COND cc] z2 LN MSG:
SYSTEM INHTIM hh HOURS COMPL

```

Hierarchical

Output for one NPC

[O.53341]

M hh:mm:ss [xy,ww] n[vv] UTL QRY INH NPC uvmnp 3 LN MSG:
NPC STATE INHTIM ELAPSED
uvmnp{-|OOS|INH|NOINH} [hrmn ccdd]

M hh:mm:ss [xy,ww] n[vv] UTL QRY INH NPC uvmnp[COND cc] 2 LN MSG:
SYSTEM INHTIM hh HOURS COMPL

Output for a range of NPCs [treatment by FTMI]

[O.53341]

M hh:mm:ss [xy,ww] n[vv] UTL QRY INH NPC uvmaa-uvmbb [COND cc] \
z2 LN MSG:
NPC STATE INHTIM ELAPSED
uvmaa{-|OOS|INH|NOINH} [hrmn ccdd]
... ..
uvmbb{-|OOS|INH|NOINH} [hrmn ccdd]EOM

... ..
... ..
... ..

M hh:mm:ss [xy,ww] n[vv] UTL QRY INH NPC wxkaa-wxkbb [COND cc] \
z2 LN MSG:
NPC STATE INHTIM ELAPSED
wxkaa{-|OOS|INH|NOINH} [hrmn ccdd]
... ..
wxkbb{-|OOS|INH|NOINH} [hrmn ccdd]EOM

M hh:mm:ss [xy,ww] n[vv] UTL QRY INH NPC uvmnp-wxkqr [COND cc] \
z2 LN MSG:
SYSTEM INHTIM hh HOURS COMPL

Output for all NPCs of the frame [reatment by FTMI]

[O.53341]

M hh:mm:ss [xy,ww] n[vv] UTL QRY INH NPC ALL [COND cc] z2 LN MSG:
NPC STATE INHTIM ELAPSED
uvmaa{-|OOS|INH|NOINH} [hrmn ccdd]
... ..
uvmbb{-|OOS|INH|NOINH} [hrmn ccdd]EOM

... ..
... ..
... ..

M hh:mm:ss [xy,ww] n[vv] UTL QRY INH NPC wxkaa-wxkbb [COND cc] \
z2 LN MSG:


```

z2 LN MSG:
NPC      STATE      INHTIM      ELAPSED
wxkaa{-|OOS|INH|NOINH} [hrmn  ccdd]
      ...      ...      ...

wxkbb{-|OOS|INH|NOINH} [hrmn  ccdd]EOM

M hh:mm:ss [xy,ww] n[vv] UTL QRY INH NPC ALL [COND cc] z2 LN MSG:
SYSTEM INHTIM hh HOURS COMPL

```

Denial Message

Nonhierarchical

[O.53341.01]

M hh:mm:ss [xy,ww] n[vv] UTL QRY INH {NPC [s]abc [-[t]def]|ALL}\
COND cc DENY

Hierarchical

[O.53341.01]

M hh:mm:ss [xy,ww] n[vv] UTL QRY INH {NPC uvmpn[-wxkqr]|ALL}\
COND cc DENY

Explanation of Parameters

INH	Inhibit timer
NPC	Network processing circuit
	Unequipped NPCs within the requested range will not be skipped
OOS	NPC is out of service, Port timer may be displayed. Elapsed time is shown as not applicable
INH	NPC is in service but in inhibit or start-up state. Port timer and elapsed time may be displayed
NOINH	NPC is in service and neither in inhibit nor start-up substate. Port timer may be displayed. Elapsed time is shown as not applicable.
hr	hour 00-48
mn	minute 00-59
cc	elapsed hour 00-48
dd	elapsed minute 00-59

	hrmn :
	If port start-up time interval is undefined, hrmn is not applicable and is equal to ---- otherwise (0001<=hrmn<=4800)
	ccdd :
	If port service state different from start-up state ccdd is not applicable and equal to ---- otherwise (0000<=ccdd<=4800)
z2	Defines the length of the message depending on the FTM for IFTUs if T1: z2=2+40 if E1: z2=2+32 for DS3Us (T1) z2=2+28 for HDS3Us if T1 or E1: z2=2+28 /*one NPC out of 4 is not available if E1 is presented*/
[s]abc	The 3- or 4-digit nonhierarchical NPC number, start of NPC range
[t]def	The 3- or 4-digit nonhierarchical NPC number, end of NPC range
[u]ghi	Lowest numbered NPC in the FTM that contains NPC [s]abc
[v]mno	Lowest numbered NPC in the FTM that contains NPC [t]def
[u]jkl	Highest numbered NPC in the FTM that contains NPC [s]abc
[v]pqr	Highest numbered NPC in the FTM that contains NPC [t]def
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number for beginning of NPC range
wxkqr	Hierarchical NPC number for end of NPC range
uvmaa	Lowest numbered NPC in the FTM that contains NPC uvmnp The parameter value for NPC aa is in the first position, first line of the message
uvmbb	Highest numbered NPC in the FTM that contains NPC uvmnp The parameter value for NPC bb is just before EOM or COMPL
wxkaa	Lowest numbered NPC in the FTM that contains NPC wxkqr The parameter value for NPC aa is in the first position, first line of the message.
wxkbb	Highest numbered NPC in the FTM that contains NPC wxkqr The parameter value for NPC bb is just before EOM or COMPL
	uv,wx Unit number

m,k Module number

np,qr,aa,bb NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

cc Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
13	FTMI is not equipped
24	Unit type error
F2	Invalid NPC number specified
A0	MIU OOS
9B	MXR is not equipped
B2	MXR OOS
B7	MXR IS but pested

RETRIEVE INTERVENTION LEVEL SETTING

Explanation of Command

This command retrieves the current intervention level setting for system resources.

Command

Nonhierarchical

[I.53331]

UTL: [FRM xy][, SEQ ww]:QRY, INTV, {NPC {[s]abc[-[t]def]|ALL}| \ TLI m|CCN|SYNC|ALL}!

Hierarchical

[I.53331]

UTL: [FRM xy][, SEQ ww]:QRY, INTV, {NPC {uvmpn-uvkqr|ALL}| \ TLI m|CCN|SYNC|ALL}!

Completion Message

[O.53331]

If a single NPC is requested:

M hh:mm:ss xy,ww n[vv] UTL QRY INTV NPC [s]abc LEV r COMPL

If a range of NPCs is requested:

```
M hh:mm:ss xy,ww n[vv] UTL QRY INTV NPC [s]abc-[t]def 9 LN MSG:
X X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X {EOM|COMPL}
.
.
.
[M hh:mm:ss xy,ww n[vv] UTL QRY INTV NPC [s]abc-[t]def 9 LN MSG:]
[X X X X X X X X X X X X X X X X X X]
```

```
[x x x x x x x x x x x x x x x x]
[x x x x x x x x x x x x x x x x]
[x x x x x x x x x x x x x x x x]
[x x x x x x x x x x x x x x x x]
[x x x x x x x x x x x x x x x x]
[x x x x x x x x x x x x x x x x]
[x x x x x x x x x x x x x x x x]
[x x x x x x x x x x x x x x x COMPL]
```

If ALL NPCs are requested:

```
M hh:mm:ss xy,ww n[vv] UTL QRY INTV NPC [s]abc-[t]def 9 LN MSG:
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x EOM
.
.
.
[M hh:mm:ss xy,ww n[vv] UTL QRY INTV NPC [s]abc-[t]def 9 LN MSG:]
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x COMPL
```

The output for a TLI:

```
M hh:mm:ss xy,ww n[vv] UTL QRY INTV TLI m LEV r COMPL
```

The output for CCN:

```
M 17:54:31 00,00 1 UTL QRY INTV CCN0 LEV 2 CCN1 LEV 2 COMPL
```

The output for SYNC:

```
M 17:54:31 00,00 1 UTL QRY INTV SYNC 0 LEV 2 SYNC 1 LEV 2 COMPL
```

The output for ALL resources:

```
M hh:mm:ss xy,ww n[vv] UTL QRY INTV NPC [s]abc-[t]def 9 LN MSG:
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
```

```

X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X EOM
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY INTV NPC [s]abc-[t]def 9 LN MSG:
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X COMPL

M hh:mm:ss xy,ww n[vv] UTL QRY INTV ALL 5 LN MSG:
TLI 001 LEV r
TLI 002 LEV r
TLI 003 LEV r
TLI 004 LEV r EOM

M hh:mm:ss xy,ww n[vv] UTL QRY INTV ALL 3 LN MSG:
CCN 000 LEV r
CCN 001 LEV r EOM

M hh:mm:ss xy,ww n[vv] UTL QRY INTV ALL 3 LN MSG:
SYNC 000 LEV r
SYNC 001 LEV r COMPL

```

Hierarchical

[O.53331]

If a single NPC is requested:

```
M hh:mm:ss xy,ww n[vv] UTL QRY INTV NPC uvmnp LEV r COMPL
```

If a range of NPCs is requested:

```

M hh:mm:ss xy,ww n[vv] UTL QRY INTV NPC uvmnp-uvkqr 9 LN MSG:
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X {EOM|COMPL}
.
.
.
[M hh:mm:ss xy,ww n[vv] UTL QRY INTV NPC uvmnp-uvkqr 9 LN MSG:]

```

```
[x x x x x x x x x x x x x x x x]
[x x x x x x x x x x x x x x x x]
[x x x x x x x x x x x x x x x x]
[x x x x x x x x x x x x x x x x]
[x x x x x x x x x x x x x x x x]
[x x x x x x x x x x x x x x x x]
[x x x x x x x x x x x x x x x x]
[x x x x x x x x x x x x x x x x]
[x x x x x x x x x x x x x x x COMPL]
```

If ALL NPCs are requested:

```
M hh:mm:ss xy,ww n[vv] UTL QRY INTV NPC uvmnp-uvkqr 9 LN MSG:
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x EOM
.
.
.
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY INTV NPC uvmnp-uvkqr 9 LN MSG:
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x COMPL
```

The output for a TLI:

```
M hh:mm:ss xy,ww n[vv] UTL QRY INTV TLI m LEV r COMPL
```

The output for CCN:

```
M 17:54:31 00,00 1 UTL QRY INTV CCN0 LEV 2 CCN1 LEV 2 COMPL
```

The output for SYNC:

```
M 17:54:31 00,00 1 UTL QRY INTV SYNC 0 LEV 2 SYNC 1 LEV 2 COMPL
```

The output for ALL resources:

```
M hh:mm:ss xy,ww n[vv] UTL QRY INTV NPC uvmnp-uvkqr 9 LN MSG:
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
x x x x x x x x x x x x x x x x
```

```

X X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X EOM
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY INTV NPC uvmnp-uvkqr 9 LN MSG:
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X
X X X X X X X X X X X X X X X X X X COMPL

M hh:mm:ss xy,ww n[vv] UTL QRY INTV ALL 5 LN MSG:
TLI 001 LEV r
TLI 002 LEV r
TLI 003 LEV r
TLI 004 LEV r EOM

M hh:mm:ss xy,ww n[vv] UTL QRY INTV ALL 3 LN MSG:
CCN 000 LEV r
CCN 001 LEV r EOM

M hh:mm:ss xy,ww n[vv] UTL QRY INTV ALL 3 LN MSG:
SYNC 000 LEV r
SYNC 001 LEV r COMPL

```

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number, the first NPC of a range specification.
 NOTE: The NPC range is not valid for DSPU NPCs. If a range is specified for DSPU NPCs the command is denied.	
[t]def	The 3- or 4-digit nonhierarchical NPC number, the last NPC of a range specification. For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number, the first NPC of a range specification.
uvkqr	Hierarchical NPC number, the last NPC of a range specification.

	uv	Unit number
	m,k	Module number
	np,q	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."	
ALL	ALL NPCs	
TLI	Timing Link Interface	
m	TLI number (1 - 4)	
CCN	Cross-connect Network	
SYNC	Synchronizer	
ALL	All resources	
LEV	Level	
r	Intervention Level (1-6)	
x	NPC Intervention Level (1-6) or NPC intervention level not requested	
cc	Hexadecimal condition code	
	cc	<i>Explanation</i>
	00	No conditions

UTILITY QUERY LIST MACRO

Explanation of Message

This command lists the contents of individual or public macros. Only the frame administrator can list all macros, whether owned by an individual or by the public.

Command

[I.54131]
UTL:FRM xy,SEQ ww:QRY,LIST,MACRO <macro name>
[,USER <user id>]!

Completion Message

[O.54131]
M hh:mm:ss xy,ww n[vv] UTL QRY LIST MACRO <macro name>
[USER <user id>] e LN MSG:
 l <first 70 characters of lth component command line text>
 <remaining characters of lth component command line text>
 .
 .
 .
 m <first 70 characters of mth component command line text>
 <remaining characters of mth component command line text>
{EOM|COMPL}

M hh:mm:ss xy,ww n[vv] UTL QRY LIST MACRO <macro name>
[USER <user id>] e LN MSG:
 n <first 70 characters of nth component command line text>
 <remaining characters of nth component command line text>
 .
 .
 .
 s <first 70 characters of sth component command line text>
 <remaining characters of sth component command line text>
COMPL

[O.54132]
M hh:mm:ss xy,ww n[vv] UTL QRY LIST MACRO <macro name> \
[USER <user id>] NONE COMPL

Denial Message

[0.54131.01]
M hh:mm:ss xy,ww n[vv] UTL QRY LIST MACRO <macro name> \
[USER <user id>] COND cc DNY

Explanation of Parameters

LIST	List
MACRO	Macro
macro name	Macro name (seven characters maximum length) The name of a collection of DACS II commands executed as a group. A macro name is a string of capitalized alphanumeric characters. There are two type of macros; public and private. A private macros is created by a user in space allocated to the user by the system administrator. Only the user that created it can execute or read (LIST) a private macro. A public macro is created by the system administrator and is executable and readable by all users. A public macro name must start with the letter "P". A private macro name must not start with the letter "P".
USER	User
user id	User identifier (two to eight alphabetic characters) User login identification A user can query their own macros but only the frame administrator can use the command to query macros owned by other users. The frame administrator must specify the user id to query other users' macros.
l, m, n, s	Macro command line numbers
NONE	The macro contains no commands
cc	Hexadecimal condition code

cc	<i>Explanation</i>
62	File is being accessed
64	File doesn't exist/can't be accessed
D0	Command is Frame administrator (DAX) only.
D3	User does not exist
D5	No user is logged in on the link/vc

UTILITY QUERY LIST MAP

Explanation of Command

This message lists the user's own login on which link and at what time.

Any user can query his/her own login identification but only the frame administrator can query a login owned by another user.

Command

[I.54101]
UTL:[FRM xy][, SEQ ww]:QRY, LIST, MAP <name>[, USER <user id>]!

Completion Message

[O.54101]
M hh:mm:ss xy, ww n[vv] UTL QRY LIST MAP <name>[USER <user id>] \
STATS ab e LN MSG:
<TCON ... format ...
. . .
<TCON ... format ... EOM

M hh:mm:ss xy, ww n[vv] UTL QRY LIST MAP <name>[USER <user id>] \
STATS ab e LN MSG:
<TCON ... format ... >
. . .
<TCON ... format ... > COMPL

[O.54102]
M hh:mm:ss xy, ww n[vv] UTL QRY LIST MAP <name> \
[USER <user id>] NONE COMPL

Denial Message

[O.54101.01]
M hh:mm:ss xy, ww n[vv] UTL QRY LIST MAP <name> \
[USER <user id>] COND cc DNY

Explanation of Parameters

MAP	Alternate MAP
name	Name of the specified alternate MAP. A MAP name may have up to 7 alphanumeric characters. The first character of a MAP name must be an alphabetic character. All alphabetic characters of a MAP name must be capitalized.
USER	User
user id	User login identification is 2 to 8 alphabetic characters
STATS	Status
ab	Status field
00	Map is valid (can be activated)
01	Map is not valid (contains conflicting circuits and thus cannot be activated)
D0	USER <id> is not your login name and you are not the frame administrator
D3	USER <id> does not exist
D5	The command cannot be entered without logging in
e	Number of lines in the output segment
cc	Hexadecimal condition code
cc	<i>Explanation</i>
62	File is being accessed
64	File doesn't exist/can't be accessed
D0	Command is Frame administrator (DAX) only.
D3	User does not exist
D5	No user is logged in on the link/vc

UTILITY QUERY, LOAD

Explanation of Command



NOTE:

This command applies to the 1.544 Mb/s Termination Interface only.

This Subrate message requests allocation information on one circuit pack or on all circuit packs in the frame.

Command

Nonhierarchical

[I.52581]

UTL:[FRM xy][,SEQ ww]:QRY,LOAD,{NPC [s]abc|TOTAL}!

Hierarchical

[I.52581]

UTL:[FRM xy][,SEQ ww]:QRY,LOAD,{NPC uvmpn|TOTAL}!

Completion Message

Nonhierarchical

If the NPC is a subrate multiplexer circuit pack:

[O.52581]

M hh:mm:ss xy,ww n[vv] UTL QRY LOAD NPC [s]abc TYPE SR100 4 LN MSG:
TOTAL TIME SLOTS: ALLOCATED ttt FREE vv
ALLOCATED BLOCKS: PEC ppp SEC eee TEST ACCESS SEC aa
5CHAN ss 10CHAN qq 20CHAN rr COMPL

If the NPC is a multi-junction unit circuit pack:

[O.52582]

M hh:mm:ss xy,ww n[vv] UTL QRY LOAD NPC [s]abc TYPE MJ100 4 LN MSG:
TOTAL TIME SLOTS: ALLOCATED ttt FREE vv

ALLOCATED BLOCKS: PEC ppp SEC eee TEST ACCESS SEC aa
RATE24 jjj RATE48 kkk RATE96 lll RATE56 nnn COMPL

Hierarchical

If the NPC is a substrate multiplexer circuit pack:

[O.52581]

M hh:mm:ss xy,ww n[vv] UTL QRY LOAD NPC uvmnp TYPE SR100 4 LN MSG:
TOTAL TIME SLOTS: ALLOCATED ttt FREE vvv
ALLOCATED BLOCKS: PEC ppp SEC eee TEST ACCESS SEC aa
5CHAN ss 10CHAN qq 20CHAN rr COMPL

If the NPC is a multijunction unit circuit pack:

[O.52582]

M hh:mm:ss xy,ww n[vv] UTL QRY LOAD NPC uvmnp TYPE MJ100 4 LN MSG:
TOTAL TIME SLOTS: ALLOCATED ttt FREE vvv
ALLOCATED BLOCKS: PEC ppp SEC eee TEST ACCESS SEC aa
RATE24 jjj RATE48 kkk RATE96 lll RATE56 nnn COMPL

If the TOTAL keyword is specified:

[O.52583]

M hh:mm:ss xy,ww n[vv] UTL QRY LOAD TOTAL 5 LN MSG:
TOTAL TIME SLOTS: ALLOCATED ttttt FREE vvvvv
ALLOCATED BLOCKS: PEC ppppp SEC eeeee TEST ACCESS SEC aa
SRM - 5CHAN ssss 10CHAN qqqq 20CHAN rrrr
MJU - RATE24 jjjj RATE48 kkkk RATE96 llll RATE56 nnnn COMPL

Denial Message

Nonhierarchical

[O.52581.01]

M hh:mm:ss xy,ww n[vv] UTL QRY LOAD {NPC [s]abc|TOTAL} 2 LN MSG:
<reason> DNY

Hierarchical

[O.52581.01]

M hh:mm:ss xy,ww n[vv] UTL QRY LOAD {NPC uvmnp|TOTAL} 2 LN MSG:
<reason> DNY

Explanation of Parameters	LOAD	Request information concerning resource utilization in subrate circuit packs. Current valid circuit packs are: SR100 subrate multiplexer MJ100 multijunction unit
	NPC	Network processing circuit Request resource information for the subrate circuit pack specified.
	[s]abc	The 3- or 4-digit nonhierarchical Subrate or Multijunction NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	uvmnp	Hierarchical NPC number For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	TOTAL	Request summarized resource information for all subrate circuit packs.
	MJU	Multipoint junction unit
	ALLOCATED	Allocated time slots
	ttt	Number of time slots allocated
	FREE	Free time slots
	vvv	Number of free time slots
	PEC	Parity channel error correctors
	ppp	Number of parity channel error correctors
	SEC	Subrate error correctors
	eee	Number of subrate error correctors allocated to cross-connected circuits
	aa	Number of subrate error correctors allocated to test access
	ss	Number of 5-channel subrate multiplexer channels
	qq	Number of 10-channel subrate multiplexer channels
	rr	Number of 20-channel subrate multiplexer channels
	jjj	Number of 2.4-kb/s Multipoint Junction Unit (MJU) channels
	kkk	Number of 4.8-kb/s MJU channels
	lll	Number of 9.6-kb/s MJU channels
	nnn	Number of 56-kb/s MJU channels

ttttt	Total number of time slots allocated on the frame
vvvvv	Total number of free time slots allocated on the frame
ppppp	Total number of parity channel error correctors on the frame
eeeeee	Total number of subrate error correctors allocated to cross-connected circuits on the frame
ssss	Total number of 5-channel subrate multiplexer channels on the frame
qqqqq	Total number of 10-channel subrate multiplexer channels on the frame
rrrr	Total number of 20-channel subrate multiplexer channels on the frame
jjjj	Total number of 2.4-kb/s MJU channels on the frame
kkkk	Total number of 4.8-kb/s MJU channels on the frame
llll	Total number of 9.6-kb/s MJU channels on the frame
nnnn	Total number of 56-kb/s MJU channels on the frame
reason	Reason for denial

QUERY LOG

Explanation of Command

This command is used to query DACS II for the link, user identifier, and date and time of login of the user issuing the command. The frame administrator uses the ALL keyword to list information on all current users.

Output from this command is sent only to the link on which the command was input.

Command

```
[I.54011]
UTL: [FRM xy][, SEQ ww]:QRY, LOG[, ALL]!
```

Completion Message

```
[O.54011]
M hh:mm:ss xy,ww n[vv] UTL QRY LOG e LN MSG:
LINK j[mm] USER <user id> {DATE mm/dd/yy FORMAT MDY| \
DATE dd/mm/yy FORMAT DMY} TOD hh:mm:ss COMPL

[O.54011]
M hh:mm:ss xy,ww n[vv] UTL QRY LOG ALL e LN MSG:
LINK j[mm] USER <user id> {DATE mm/dd/yy FORMAT MDY| \
DATE dd/mm/yy FORMAT DMY} TOD hh:mm:ss
.
.
.
LINK j[mm] USER <user id> {DATE mm/dd/yy FORMAT MDY| \
DATE dd/mm/yy FORMAT DMY} TOD hh:mm:ss {EOM|COMPL}

M hh:mm:ss xy,ww n[vv] UTL QRY LOG ALL e LN MSG:
LINK j[mm] USER <user id> {DATE mm/dd/yy FORMAT MDY| \
DATE dd/mm/yy FORMAT DMY} TOD hh:mm:ss
.
.
.
LINK j[mm] USER <user id> {DATE mm/dd/yy FORMAT MDY| \
DATE dd/mm/yy FORMAT DMY} TOD hh:mm:ss COMPL
```

[O.54012]

M hh:mm:ss xx,yy n[vv] UTL QRY LOG[ALL] NONE COMPL

Denial Message

[O.54011.01]

M hh:mm:ss xy,ww n[vv] UTL QRY LOG[ALL] COND cc DNY

Explanation of Parameters

LOG	Login
ALL	All
	All user logins. Used only by the frame administrator.
USER	User
user id	User identifier (2 to 8 alphabetic characters)
	User login identification
LINK	Link
j[mm]	The link number the user is logged onto
j	Administrative link number (1 through 7)
mm	Virtual link/session number (1 through 16 when j is 5, 6, or 7)
DATE	Date
mm/dd/yy,dd/mm/yy	
	Date, current
mm	Month number (01 through 12)
dd	Day number (01 through 31)
yy	Year number (00 through 99)
FORMAT	Date format
MDY	Month/Day/Year format
DMY	Day/Month/Year format
TOD	Time of day
hh:mm:ss	Time of day in hours, minutes, and seconds
hh	Hours number (00 through 23)
mm	Minutes number (00 through 59)
ss	Seconds number (00 through 59)

NONE No user is logged in to DACS II

cc Hexadecimal condition code

cc *Explanation*

D0 Command is Frame administrator (DAX) only.

D3 User does not exist

D7 Cannot execute privileged command

DF Command and protocol are inconsistent

UTILITY QUERY LOOPBACK

Explanation of Command

This command requests a report indicating which Network Processing Circuits are in the loopback state. The message applies to DA and TA type NPCs or to TE and TH type NPCs on Hybrid DS3Us. If the first NPC in a range of NPCs is a DA, and TA type NPC, then only DA, and TA type NPCs are reported on. If the first NPC in a range of NPCs is a TE or TH type NPC on a Hybrid DS3U then only those NPC types are reported on.

For DA and TA type NPCs, loopbacks being executed by far-end equipment as well as loopbacks being executed by DACS II are reported. For TE and TH type NPCs on Hybrid DS3Us, local line loopback towards the facility is the only type of loopback that is supported.

This command requests a report indicating which Network Processing Circuits are in the loopback state. The message applies to PA, PB, and PC type NPCs. If other NPC types are encountered in a range of NPCs, these other NPC types are skipped.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.53131]

UTL:[FRM xy][,SEQ ww]:QRY,LPBK,NPC [s]abc[-[t]def]!

Hierarchical

[I.53131]

UTL:[FRM xy][,SEQ ww]:QRY,LPBK,NPC uvmnp[-wxkqr]!

2.048 Mbit/s Termination

Nonhierarchical

[I.53131]

UTL:[FRM xy][,SEQ ww]:QRY,LPBK,NPC [s]abc[-[t]def]!

Hierarchical

[I.53131]

UTL: [FRM xy][, SEQ ww]: QRY, LPBK, NPC uvmnp[-wxkqr]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

Output for DA and TA type NPCs

[O.53133]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC [u]ghi-[u]jkl TOT nnn \
[COND cc] 5 LN MSG:
spp spp spp spp spp spp spp [spp spp spp]
spp spp spp spp spp spp spp [spp spp spp]
spp spp spp spp spp spp spp [spp spp spp]
spp spp spp spp spp spp spp [spp spp spp] EOM

...	...	...
...	...	...
...	...	...

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC [v]mno-[v]pqr TOT nnn \
[COND cc] 5 LN MSG:
spp spp spp spp spp spp spp [spp spp spp]
spp spp spp spp spp spp spp [spp spp spp]
spp spp spp spp spp spp spp [spp spp spp]
spp spp spp spp spp spp spp [spp spp spp] EOM

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC [s]abc-[t]def \
[COND cc] COMPL

[O.53134]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC [s]abc spp COMPL

Output for TE, TH, and SE type NPCs on Hybrid DS3Us

[O.53135]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC [u]ghi-[u]jkl TOT nnn \
[COND cc] 8 LN MSG:
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq

opq opq opq opq
opq opq opq opq EOM

...
...
...

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC [v]mno-[v]pqr TOT nnn \
[COND cc] 8 LN MSG:
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq EOM

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC [s]abc-[t]def \
[COND cc] COMPL

[O.53136]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC [s]abc opq COMPL

Hierarchical

[O.53133]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC uvmaa-uvmbb TOT nnn \
[COND cc] 5 LN MSG:
spp spp spp spp spp spp spp [spp spp spp]
spp spp spp spp spp spp spp [spp spp spp]
spp spp spp spp spp spp spp [spp spp spp]
spp spp spp spp spp spp spp [spp spp spp] EOM

...
...
...

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC wxkaa-wxkbb TOT nnn \
[COND cc] 5 LN MSG:
spp spp spp spp spp spp spp [spp spp spp]
spp spp spp spp spp spp spp [spp spp spp]
spp spp spp spp spp spp spp [spp spp spp]
spp spp spp spp spp spp spp [spp spp spp] EOM

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC uvmnp-wxkqr \
[COND cc] COMPL

[O.53134]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC uvmnp spp COMPL

Output for TE and TH type NPCs on Hybrid DS3Us and SE type on HSUs

[O.53135]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC uvmaa-uvmbb TOT nnn \
[COND cc] 8 LN MSG:
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq EOM

...
...
...

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC wxkaa-wxkbb TOT nnn \
[COND cc] 8 LN MSG:
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq
opq opq opq opq EOM

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC uvmnp-wxkqr \
[COND cc] COMPL

[O.53136]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC uvmnp opq COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.53131]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC [u]ghi-[u]jkl TOT nnn \
[COND cc] 5 LN MSG:
[d]t [d]t [d]t [d]t [d]t [d]t [d]t [d]t
[d]t [d]t [d]t [d]t [d]t [d]t [d]t [d]t
[d]t [d]t [d]t [d]t [d]t [d]t [d]t [d]t

[d]t [d]t [d]t [d]t [d]t [d]t [d]t [d]t EOM

...
...
...

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC [v]mno-[v]pqr TOT nnn \
[COND cc] 5 LN MSG:
[d]t [d]t [d]t [d]t [d]t [d]t [d]t [d]t
[d]t [d]t [d]t [d]t [d]t [d]t [d]t [d]t
[d]t [d]t [d]t [d]t [d]t [d]t [d]t [d]t
[d]t [d]t [d]t [d]t [d]t [d]t [d]t [d]t COMPL

[O.53132]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC [s]abc [d]t COMPL

Hierarchical

[O.53131]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC uvmaa-uvmbb TOT nnn \
[COND cc] 5 LN MSG:
[d]t [d]t [d]t [d]t [d]t [d]t [d]t [d]t
[d]t [d]t [d]t [d]t [d]t [d]t [d]t [d]t
[d]t [d]t [d]t [d]t [d]t [d]t [d]t [d]t
[d]t [d]t [d]t [d]t [d]t [d]t [d]t [d]t EOM

...
...
...

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC wxkaa-wxkbb TOT nnn \
[COND cc] 5 LN MSG:
[d]t [d]t [d]t [d]t [d]t [d]t [d]t [d]t
[d]t [d]t [d]t [d]t [d]t [d]t [d]t [d]t
[d]t [d]t [d]t [d]t [d]t [d]t [d]t [d]t
[d]t [d]t [d]t [d]t [d]t [d]t [d]t [d]t COMPL

[O.53132]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC uvmnp [d]t COMPL

Denial Message 1.544 Mbit/s Termination

Nonhierarchical

[O.53131.01]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC [s]abc[-[t]def] \

COND cc DNY

Hierarchical

[O.53131.01]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC uvmnp[-wxkqr] \

COND cc DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.53131.01]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC [s]abc[-[t]def] \

COND cc DNY

Hierarchical

[O.53131.01]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK NPC uvmnp[-wxkqr] \

COND cc DNY

Explanation of Parameters

LPBK Loopback

NPC Network processing circuit

If an NPC range is specified in the input command, the following floating window rules apply:

1. Unequipped NPCs within the requested range are skipped.
2. If the first NPC in the range is a DA and TA type NPC, only those NPC types are reported on.
3. If the first NPC in the range is a TE or TH type NPC on a Hybrid DS3U, or SE type on a HSU, then only those type of NPCs are reported on.

4. If the first NPC in the range is a PA, PB, or PC type NPC, then only those NPC types are reported on.

TOT	Total
nnn	Total Number of NPCs in the module that are in the loopback state
COND	Condition
[s]abc	The 3- or 4-digit nonhierarchical NPC number, start of NPC range
[t]def	The 3- or 4-digit nonhierarchical NPC number, end of NPC range
[u]ghi	Lowest numbered NPC in the FTM that contains NPC [s]abct
[v]mno	Lowest numbered NPC in the FTM that contains NPC [t]def
[u]jkl	Highest numbered NPC in the FTM that contains NPC [s]abc
[v]pqr	Highest numbered NPC in the FTM that contains NPC [t]def
	FTM is an acronym for Facility Terminating Module. For FTMs in FTUs or IFTUs, each row contains 10 values of output. For FTMs within DS3Us each row contains 7 values. For FTMs within HDS3Us each row contains 4 values.
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number for beginning of NPC range
uv-m-np	
wxkqr	Hierarchical NPC number for end of NPC range
uvmaa	Lowest numbered NPC in the FTM that contains NPC uvmnp
	FTM is an acronym for Facility Terminating Module. The parameter value for NPC aa is in the first position, first line of the message.
uvmbb	Highest numbered NPC in the FTM that contains NPC uvmnp
	The parameter value for NPC bb is just before EOM or COMPL.
wxkaa	Lowest numbered NPC in the FTM that contains NPC wxkqr
	The parameter value for NPC aa is in the first position, first line of the message.
wxkbb	Highest numbered NPC in the FTM that contains NPC wxkqr

The parameter value for NPC bb is just before EOM or COMPL.

For FTMs in FTUs or IFTUs, each row contains 10 values of output.

For FTMs within DS3Us each row contains 7 values.

For FTMs within HDS3Us each row contains 4 values.

uv,wx

Unit number

m,k

Module number

np,q,aa,bb

NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

The range of NPCs in the denial messages will be given either as module or unit boundaries depending upon the reason for the denial.

1.544 Mbit/s Termination:

spp

Loopback Type

Values of "spp" are presented in NPC order, grouped within messages by Facility Terminating Module (FTM). For FTMs in Facility Terminating Units, each row of output contains 10 values. For FTMs in DS3 Units, each row of output contains 7 values.

The variable "s" may have the following values:

s Explanation

***** Loopback enabled

' Loopback disabled (The "s" character is a "space.")

The variable "pp" may have the following values:

NP Near-end payload loopback active (ANSI - DA/TA type NPCs)

FP ANSI Far-end payload loopback active

FL ANSI Far-end line loopback active

FN ANSI Far-end network loopback active

NN No loopback active

00 NPC not specified in input range command

-- NPC not equipped, or non-ANSI type

opq

Loopback Type

Values of "opq" are presented in NPC order, grouped within messages by DS2s. Since there are seven DS2s within a Hybrid

DS3, seven rows are generated in the output message, one for each DS2. Each DS2 may either carry four DS1 circuits or three E1 circuits. If a DS2 carries E1 circuits, then the fourth position in each row does not show any data. It shows dashes instead.

FA	Line loopback towards facility active with AIS insertion
FN	Line loopback towards facility active without AIS insertion
00	NPC not specified in input range command
--	NPC not equipped or provisioned.

2.048 Mbit/s Termination:

d Loopback direction specifier

The optional "d" is only output for PA NPCs. For PDS output, a "blank" space in the "d" position is used for PB/PC NPCs to line-up the output if at least one PA type NPC is within the specified range. Otherwise, no "blank" space at the "d" position is used for PB/PC NPCs.

F	Facility loopback, the F type loops the incoming 2 Mbit/s bipolar signal back to the facility.
E	Equipment loopback, the E type loops the outgoing 2 Mbit/s signal back to DACS II equipment. This type is not applicable to PB or PC type NPCs.
N	Not in a loopback state
-	NPC not equipped
0	NPC not specified in the input command, valid for range commands only

t Signal transmission and PM processing specifier for loopback

Values of "t" are presented in NPC order, grouped within messages by Facility Terminating Module:

A	Loopback with AIS downstream/upstream and facility Performance Monitoring (PM) turned off.
B	Loopback with AIS downstream/upstream and PM turned on.
C	Loopback with pass-through and PM turned off.
T	Loopback with pass-through and PM turned on.
N	Not in a loopback state
-	NPC not equipped

0	NPC not specified in the input command, valid for range commands only

cc	Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
13	FTMI is not equipped
25	FTMI type error
26	NPC type error
0B	Invalid CEPT NPC

UTILITY QUERY HYBRID DS3 LOOPBACK

Explanation of Command

This message is used to request a report indicating which Hybrid Multiplexer (HMXR) in a Hybrid DS3 Unit (HDS3U) are in the loopback state. Following HDS3U and DS3U convention the HMXR is addressed as an MXR/MIU Functional Group (MMFG).

Command

1.544 Mbit/s Termination

[I.53181]

UTL:[FRM xy][,SEQ ww]:QRY,LPBK,UNIT [q]q!

Completion Message

1.544 Mbit/s Termination



NOTE:

The first "dt" value refers to the protection hybrid multiplexer. All other "dt" values refer to hybrid multiplexer 1 through 6. The "dt" value for the protection hybrid multiplexer only is valid if a DS3 is being protected. Similarly, a regular hybrid multiplexer shows the values "--", if the DS3 it serves is running on the protection multiplexer.

[O.53181]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK UNIT [q]q \
[COND cc] 2 LN MSG:
dt dt dt dt dt dt dt COMPL

Denial Message

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[O.53181.01]

M hh:mm:ss xy,ww n[vv] UTL QRY LPBK UNIT [q]q COND cc DNY

Explanation of Parameters	UNIT	Unit
	[q]q	Unit number (1 through 16)
	LPBK	Loopback
	COND	Condition
		d Loopback direction specifier
		E Equipment loopback (diagnostic local loopback), the outgoing DS3 signal is looped back towards the DACS II equipment.
		F Facility loopback (line local loopback), the incoming DS3 signal is looped back towards the facility.
		N Not in a loopback state
		- MMFG not equipped, out-of-service, or equipped with nonhybrid multiplexer
	t	Loopback signal transmission specifier
		A Loopback with AIS upstream
		N Loopback without AIS upstream
		- MMFG not equipped, out-of-service, equipped with nonhybrid multiplexer, no loopback active, or AIS setting not appropriate

QUERY MACRO ATTRIBUTES

Explanation of Command

This message queries the macro attributes associated with all personally-owned macros and any public macros. The frame administrator can query ALL the macro attributes of any macro, public or private.

For each macro, DACS II lists:

- The macro name
- The user who owns the macro
- The number of parameters in the macro
- The language used
- The amount of space used by the macro.

Command

[I.54211]
UTL:FRM xy, SEQ ww:QRY, MACRO, ATTR[, {USER <user id>|ALL}]!

Completion Message

[O.54211]
M hh:mm:ss xy, ww n[vv] UTL QRY MACRO ATTR [{USER <user id>|ALL}] \
e LN MSG: USER <user id> MACRO <name> PRMTR tt LANG {P|M} \
SPACE nnn
NPCAD {E|X|H}
.....
.....
USER <user id> MACRO <name> PRMTR tt LANG {P|M} SPACE nnn \
NPCAD {E|X|H} {EOM|COMPL}

M hh:mm:ss xy, ww n[vv] UTL QRY MACRO ATTR [{USER <user id>|ALL}] \
e LN MSG: USER <user id> MACRO <name> PRMTR tt LANG {P|M} \
SPACE nnn NPCAD {E|X|H}
.....
USER <user id> MACRO <name> PRMTR tt LANG {P|M} SPACE nnn \
NPCAD {E|X|H} COMPL

[O.54212]
M hh:mm:ss xy, ww n[vv] UTL QRY MACRO ATTR \
[{USER <user id>|ALL}] NONE COMPL

Denial Message

```
[0.54211.01]
M hh:mm:ss xy,ww n[vv] UTL QRY MACRO ATTR \
[ {USER <user id>|ALL}] COND cc DNY
```

Explanation of Parameters

ATTR	Attributes
user id	Query the specified user's private and public macro attributes User login identification is two to eight alphabetic characters.
ALL	Query all private and public macros' attributes (used by the frame administrator only)
MACRO	The keyword used to indicate that the "name" shown is a macro name. A Macro is a collection of DACS II commands that can be executed as a group.
name	The macro name which is a string of uppercase alphanumeric characters from one to seven characters long. The first character must be an alphabetic character. A macro name start with the character "P" is a public macro. Only the frame administrator is allowed to create a public macro.
LANG	Language
M	Man-Machine Language
P	Program Documentation Standard
PRMTR	Macro parameters
tt	Total number of macro parameters used (01 - 10)
SPACE	Macro space
nnn	Macro space used by the macro in percentage of the user macro space allocation (000 - 100)
NPCAD	NPC addressing scheme
E	3-digit extended (nonhierarchical) NPC addressing scheme
X	4-digit extended (nonhierarchical) NPC addressing scheme
H	Hierarchical NPC addressing scheme, i.e., address the NPC by using the unit number, module number, and NPC number within the module.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
D0	Command is Frame administrator (DAX) only.
D3	User does not exist
D5	No user is logged in on the link/vc

mmmm	<i>Explanation</i>
SNVS	Command is Frame administrator (DAX) only.
SNVS	User does not exist
SNVS	No user is logged in on the link/vc

UTILITY QUERY MACRO/MAP SPACE

Explanation of Command

This message requests the amount of space that the user's alternate map or macro requires and how much space is still available.

The frame administrator can query for all user's macro or alternate map space requirements and for the system space requirements and allocation.

In summary, a user can query his/her own alternate map or macro space, but only the frame administrator can use the ALL and SYSTEM options of the command to query space owned by another user.

Command

[I.54221]

UTL:FRM xy, SEQ ww:QRY, {MACRO|MAP}, SPACE[, {USER <user id>|ALL| \ SYSTEM}]!

Completion Message

[O.54221]

M hh:mm:ss xy,ww n[vv] UTL QRY {MACRO|MAP} SPACE nnn AVAIL xxx \
[{USER <user id>|SYSTEM}] COMPL

[O.54222]

M hh:mm:ss xy,ww n[vv] UTL QRY {MACRO|MAP} SPACE nnn ALL e LN MSG:
USER <user id> AVAIL xxx
USER <user id> AVAIL xxx
....
USER <user id> AVAIL xxx {EOM|COMPL}

M hh:mm:ss xy,ww n[vv] UTL QRY {MACRO|MAP} SPACE nnn ALL \
e LN MSG:
USER <user id> AVAIL xxx
USER <user id> AVAIL xxx
....
USER <user id> AVAIL xxx {EOM|COMPL}

....
M hh:mm:ss xy,ww n[vv] UTL QRY {MACRO|MAP} SPACE nnn ALL
e LN MSG:
USER <user id> AVAIL xxx
USER <user id> AVAIL xxx

USER <user id> AVAIL xxx COMPL

Denial Message

[O.54221.01]

M hh:mm:ss xy,ww n[vv] UTL QRY {MACRO|MAP} SPACE
[{USER <user id>|ALL|SYSTEM}] COND cc DNY

Explanation of Parameters

MAP	Map
MACRO	Macro
USER	User
user id	query the specified user's macro/map space status. User login identification is two to eight alphabetic characters.
ALL	query all users' macro/map space status.
SYSTEM	query the system macro/map space status.
nnn	percentage of macro/map space allocated (000 to 100%). If user ID or ALL option is used, nnn is the user macro/map space allocation percentage. If SYSTEM option is used, nnn is the percentage of system macro/map space allocated, and it is always 100 (i.e., 100%).
AVAIL	Percentage of space available.
xxx	percentage of user or system macro/map space still available (000 to 100%)
cc	Hexadecimal condition code

UTILITY QUERY MACRO

Explanation of Message

This command is used to query the attributes of a macro including the language, the number of macro parameters, the amount of user macro space used by the macro, the NPC addressing scheme used by the macro, and the total number of macro command lines in the macro.

A user can query his or her own macros but only the frame administrator can query macros owned by another user.

Command

[I.54121]
UTL:FRM xy, SEQ ww:QRY, MACRO <name>[, USER <user id>]!

Completion Message

[O.54121]
M hh:mm:ss xy, ww n[vv] UTL QRY MACRO <name>[USER <user id>] 2 \
LN MSG:
LANG {M|P} PRMTR jk SPACE sss NPCAD {E|X|H} \
TOTAL <line total> COMPL

Denial Message

[O.54121.01]
M hh:mm:ss xy, ww n[vv] UTL QRY MACRO <name>[USER <user id>] \
COND cc DNY

Explanation of Parameters

MACRO	Macro
name	The macro name (seven characters maximum length) The name of a collection of DACS II commands executed as a group. A macro name is a string of capitalized alphanumeric characters. There are two type of macros; public and private. A private macros is created by a user in space allocated to the user by the system administrator. Only the user that created it

can execute or read (LIST) a private macro. A public macro is created by the system administrator and is executable and readable by all users. A public macro name must start with the letter "P". A private macro name must not start with the letter "P".

USER	User
user id	User identifier (two to eight alphabetic characters) User login identification A user can query their own macros but only the frame administrator can use the command to query macros owned by other users. The frame administrator must specify the user id to query other users' macros.
LANG	Language
M	Man-Machine language
P	Program documentation standards
PRMTR	Parameter
jk	Total number of macro parameters used (01 through 10)
SPACE	Space
sss	User macro or map space allocation (000 through 100 percent) Variable sss represents the space allocated to user macros or maps for the entire DACS II system as a percentage of the system macro space.
TOTAL	Total
line total	Total number of macro command lines in the macro
NPCAD	NPC addressing scheme
E	3-digit extended (non-hierarchical) NPC addressing scheme
X	4-digit extended (non-hierarchical) NPC addressing scheme
H	Hierarchical NPC addressing scheme, that is, address the NPC by using the unit number, module number, and NPC number within the module.
cc	Hexadecimal condition code

cc	<i>Explanation</i>
64	File doesn't exist/can't be accessed

cc	<i>Explanation</i>
D0	Command is Frame administrator (DAX) only.
D3	User does not exist
D5	No user is logged in on the link/vc

UTILITY QUERY MAP

Explanation of Message

This message requests the following information on the user's alternate map:

- User identifier
- Status of the map
- Amount of space used by the map.

Only the administrator can request information on other users or request ALL alternate maps on the DACS II frame. A user can query his or her own maps but only the frame administrator can use the command to query maps owned by other users.

Command

[I.54201]

UTL:FRM xy,SEQ ww:QRY,MAP,ATTR[, {ALL|USER <user id>|MAPNM <name>}]!



NOTE:

Only the DACS II frame administrator can use the ALL option.

Completion Message

[O.54201]

```
M hh:mm:ss xy,ww n[vv] UTL QRY MAP,ATTR[ {ALL|USER <user id>| \
MAPNM <name>}] e LN MSG: USER <user id> MAP <name> STATS bb \
SPACE nnn
```

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```

```
USER <user id> MAP <name> STATS bb SPACE nnn EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY MAP,ATTR[ {ALL|USER <user id>| \
MAPNM <name>}] e LN MSG: USER <user id> MAP <name> STATS bb \
SPACE nnn
```

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```

```
USER <user id> MAP <name> STATS bb SPACE nnn COMPL
```

[O.54202]

M hh:mm:ss xy,ww n[vv] UTL QRY MAP,ATTR[{ALL|USER <user id>| \ MAPNM <name>}] NONE COMPL

Denial Message

[O.54201.01]

M hh:mm:ss xy,ww n[vv] UTL QRY MAP,ATTR[{ALL|USER <user id>| \ MAPNM <name>}] COND cc DNY

Explanation of Parameters

MAP	Map
ATTR	Attributes
ALL	All
USER	User
user id	User identifier
	User login identification is two to eight alphabetic characters.
	The USER option is available to a regular DACS II user to query his or her own maps. Only the administrator can use the option to request information on other users or ALL alternate maps on the DACS II frame.
MAPNM	Alternate map name
name	The alternate map name which is a string of uppercase alphanumeric characters from one to seven characters long. The first character must be an alphabetic character.
STATS	Status of the alternate map
bb	Map Status
	00 Map is valid (can be activated)
	01 Map is not valid (it contains conflicting circuits and therefore cannot be activated)
SPACE	Alternate map space
nnn	Alternate Map space used by the alternate map in percentage of the user alternate map space allocation (000 - 100)
cc	Hexadecimal condition code

cc	<i>Explanation</i>
64	File doesn't exist/can't be accessed
D0	Command is Frame administrator (DAX) only.
D3	User does not exist
D5	No user is logged in on the link/vc

UTILITY QUERY MARKINGS

Explanation of Command

This command is used to query a single or a range of network processing circuits (NPCs) in a facility terminating unit, a digital signal processing unit, a DS3 or a HDS3 unit, or an HSU. DSP Application circuit packs provisioned in a facility terminating unit are supported. This command can be aborted before the entire printout has completed.

Single NPC

When specifying a single NPC, the channel and conference or nonchannelized circuit with markings (red circuit and/or customer controlled) are listed. The output for a channel or conference with markings is skipped. When the circuit does not contain markings, the output message indicates this with the NONE keyword. A denial message is printed when the NPC is unequipped.

Range of NPCs

When specifying a range of NPCs, the channel and conference or non-channelized circuit with markings (red circuit and/or customer controlled) are listed for each equipped NPC. The output for an unequipped or unmarked channel and conference or nonchannelized NPC is skipped.

Nonchannelized Circuit With Markings

For a nonchannelized circuit with markings, a one-line output message segment is printed for each NPC marked, but the channel or conference information is not printed.

Disconnected Channel with CUS Marking

For a disconnected channel which was previously used in both two-way and/or one-way cross-connections, the CUS marking is retained for the two-way cross-connection and output by default.

Outputs are skipped under the following conditions:

- NPC is unequipped
- Channel or conference point has no RDC or CUS marking

Command

Nonhierarchical

[I.52201]

UTL: [FRM xy][, SEQ ww]: QRY, MARK [s]abc[-[t]def]!

Hierarchical

[I.52201]

UTL: [FRM xy][, SEQ ww]: QRY, MARK uvmnp[-wxkqr]!

Completion Message

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Nonhierarchical

[O.52201]

M hh:mm:ss xy, ww n[vv] UTL QRY MARK [s]abc TYPE mnxyz\
[FDL t000ccccrrr] xx e LN MSG:
[tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr]
[tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr]
[tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr]
tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr \
EOM

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[M hh:mm:ss xy, ww n[vv] UTL QRY MARK [t]jkl TYPE mn9y9 tccccrrr EOM]

M hh:mm:ss xy, ww n[vv] UTL QRY MARK [t]def TYPE mnxyz\
[FDL t000ccccrrr] xx e LN MSG:
[tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr]
[tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr]
[tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr]
tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr tnnnccccrrr \
EOM

M hh:mm:ss xy, ww n[vv] UTL QRY MARK [s]abc[-[t]def] COMPL



NOTE:

The preceding format assumes all 24 DS0 channels in each NPC are marked.
Only NPCs with markings are listed.

Hierarchical

[O.52201]

```
M hh:mm:ss xy,ww n[vv] UTL QRY MARK uvmnp TYPE mnxyz \
[FDL t000cccr] xx e LN MSG:
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr]
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr]
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr]
tnnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr \
EOM
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[M hh:mm:ss xy,ww n[vv] UTL QRY MARK edhfg TYPE mnxyz \
tccrrr EOM]
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```
M hh:mm:ss xy,ww n[vv] UTL QRY MARK wxkqr TYPE mnxyz\
[FDL t000cccr] xx e LN MSG:
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr]
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr]
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr]
tnnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr \
EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY MARK uvmnp[-wxkqr] COMPL
```



NOTE:

The preceding format assumes all 24 DS0 channels in each NPC are marked.
Only NPCs with markings are listed.

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Nonhierarchical

[O.52201]

```
M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abc TYPE mnxyz\
[FDL t000cccr] xx e LN MSG:
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr]
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr]
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr]
tnnnccrrr tnnccrrr tnnccrrr tnnccrrr EOM
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[M hh:mm:ss xy,ww n[vv] UTL QRY MARK [t]jkl TYPE mnxyz tccrrr EOM]

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M hh:mm:ss xy,ww n[vv] UTL QRY MARK [t]def TYPE mnxyz\
[FDL t000ccrrr] xx e LN MSG:
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr]
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr]
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr]
tnnnccrrr tnnccrrr tnnccrrr tnnccrrr EOM
M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abc[-[t]def] COMPL



NOTE:

The preceding format assumes all 24 DS0 channels in each NPC are marked.

Only NPCs with markings are listed.

[O.52203]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK uvmnp[-wxkqr] [NONE] COMPL

Hierarchical

[O.52201]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK uvmnp TYPE mnxyz \
[FDL t000ccrrr] xx e LN MSG:
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr]
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr]
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr]
tnnnccrrr tnnccrrr tnnccrrr tnnccrrr EOM

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[M hh:mm:ss xy,ww n[vv] UTL QRY MARK edhfg TYPE mnxyz tccrrr EOM]

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M hh:mm:ss xy,ww n[vv] UTL QRY MARK wxkqr TYPE mnxyz\
[FDL t000ccrrr] xx e LN MSG:
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr]
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr]
[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr]
tnnnccrrr tnnccrrr tnnccrrr tnnccrrr EOM

M hh:mm:ss xy,ww n[vv] UTL QRY MARK uvmnp[-wxkqr] COMPL



NOTE:
The preceding format assumes all 24 DS0 channels in each NPC are marked.
Only NPCs with markings are listed.

[O.52203]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK uvmnp[-wxkqr] [NONE] COMPL

Denial Message

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Nonhierarchical

[O.52201.01]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abc TYPE ----- UEQD DNY

[O.52201.02]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abc[-[t]def] TYPE mnxyz\
COND cc DNY

Hierarchical

[O.52201.01]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK uvmnp TYPE ----- UEQD DNY

[O.52201.02]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK uvmnp[-wxkqr] TYPE \
mnxyz COND cc DNY

Explanation of Parameters

MARK	Mark
RDC	Red circuit
CUS	Customer-controlled circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number denoting beginning of range specification
[t]def	The 3- or 4-digit nonhierarchical NPC number denoting end of range specification
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp	Hierarchical NPC number denoting beginning of range specification
wxkqr	Hierarchical NPC number denoting end of range specification
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
[t]jkl	The 3- or 4-digit NPC number in range [s]abc-[t]def, of a nonchannelized NPC.
edhfg	Hierarchical nonchannelized NPC number in range uvmnp-wxkqr
TYPE	Type
mnxyz	NPC type
SDxyz	DSP Application
ST100	Integrated Test Set provisioned for International FTM
ST110	Integrated Test Set provisioned for North American FTM
VIxyz	Virtual circuit
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DAxyz	FTU DS1 ANSI NPC type
DExyz	FTU NPC
DSxyz	SLC [®] carrier interface
MB100	Digital Multipoint Bridge
MJ100	Multipoint Junction
TAxyz	DS3U DS1 ANSI NPC type
TExyz	DS3U or HDS3U NPC
SExyz	HSU NPC
SAxyz	HSU ANSI NPC
SR100	Subrate Multiplexer
THxyz	HDS3U CEPT NPC
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CB10z	C-bit Processor

	PAxyz	Enhanced 2Mbit/s primary interface
	PBxyz	CEPT primary interface (twisted pair termination)
	PCxyz	CEPT primary interface (coaxial termination)
xx		Total number of marked channels in the message segment
		1.544 Mbit/s Termination
		(01 through 24)
		2.048 Mbit/s Termination
		(01 through 16)
FDL		Facility data link
t		Cross-connection type
	B	For broadcast cross-connection
	D	For disconnection
	*	For one-way cross-connection
	''	Blank for two-way cross-connection
	T	A Facility Access Digroup (FAD) or a Test Port (TP) channel
nnn		Channel or conference number
ccc		CUS if customer controlled or --- if not customer controlled
rrr		RDC if red circuit or --- if not red circuit
UEQD		Unequipped
----		Unknown NPC type
cc		Hexadecimal condition code
	cc	<i>Explanation</i>
	0B	Invalid CEPT NPC

QUERY CHANNEL MARKS

Explanation of Command

This command is used to query a network processing circuit for the channel and conference points that are **MARKed** as red or customer controlled circuits.

The command can be entered to request a listing for a group of channels or conference points or for a single channel or conference point. This command can be aborted before the entire printout has completed.

For a disconnected channel which was previously used in both two-way and one-way cross-connections, the CUS marking retained for the two-way cross-connection is output by default.

Outputs are skipped under the following conditions:

- Unequipped NPC
- Channel/conference point has no red circuit or customer controlled marking.

Command

Nonhierarchical

[I.52211]

UTL:[FRM xy][,SEQ ww]:QRY,MARK [s]abcjjj[-kkk]!

Hierarchical

[I.52211]

UTL:[FRM xy][,SEQ ww]:QRY,MARK uvmnpjjj[-kkk]!

**Completion
Message**

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Nonhierarchical

Single channel or conference point

[O.52211]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abcjjj TYPE mnxyz \
tjjjccrrr COMPL

[O.52211]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abc000 TYPE DExyz FDL \
t000ccrrr COMPL

Range of channels or conference points

[O.52211]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abcjjj-kkk TYPE mnxyz xx \
e LN MSG:

[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr]

[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr]

[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr]

tnnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr

EOM

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M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abcjjj-kkk TYPE mnxyz xx \
e LN MSG:

[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr]

[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr]

[tnnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr]

tnnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr tnnccrrr

EOM

M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abcjjj[-kkk] COMPL

No channel or conference points are marked

[O.52213]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abcjjj[-kkk] NONE COMPL

Hierarchical

Single channel or conference point

[O.52211]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK uvmnpjjj TYPE mnxyz \
tjjjccerrr COMPL

[O.52211]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK uvmnpjjj TYPE DExyz \
FDL tnnnccerrr COMPL

Range of channels or conference points

[O.52211]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK uvmnpjjj-kkk TYPE mnxyz xx \
e LN MSG:
[tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr]
[tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr]
[tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr]
tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr
EOM

.
. .

M hh:mm:ss xy,ww n[vv] UTL QRY MARK uvmnpjjj-kkk TYPE mnxyz xx \
e LN MSG:
[tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr]
[tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr]
[tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr]
tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr tnnnccerrr
EOM
M hh:mm:ss xy,ww n[vv] UTL QRY MARK uvmnpjjj-kkk COMPL

No channels or conference points are marked.

[O.52213]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK uvmnpjjj[-kkk] NONE COMPL

2.048 Mbit/s Termination

Nonhierarchical

Single channel or conference point

[O.52211]

```
M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abcjjj TYPE mnxyz \
tjjjccrrr COMPL
```

Range of channels or conference points

[O.52211]

```
M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abcjjj-kkk TYPE mnxyz xx \
e LN MSG:
[tnnnrrr tnnrrrr tnnrrrr tnnrrrr]
[tnnnrrr tnnrrrr tnnrrrr tnnrrrr]
[tnnnrrr tnnrrrr tnnrrrr tnnrrrr]
tnnnrrr tnnrrrr tnnrrrr tnnrrrr EOM
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abcjjj-kkk TYPE mnxyz xx \
e LN MSG:
[tnnnrrr tnnrrrr tnnrrrr tnnrrrr]
[tnnnrrr tnnrrrr tnnrrrr tnnrrrr]
[tnnnrrr tnnrrrr tnnrrrr tnnrrrr]
tnnnrrr tnnrrrr tnnrrrr tnnrrrr EOM
M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abcjjj[-kkk] COMPL
```

No channel or conference points are marked.

[O.52213]

```
M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abcjjj[-kkk] NONE COMPL
```

Hierarchical

Single channel or conference point

[O.52211]

```
M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abcjjj TYPE mnxyz \
tjjjccrrr COMPL
```


Range of channels or conference points

[O.52211]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abcjjj-kkk TYPE mnxyz xx \
e LN MSG:
[tnnnrrr tnnrrrr tnnrrrr tnnrrrr]
[tnnnrrr tnnrrrr tnnrrrr tnnrrrr]
[tnnnrrr tnnrrrr tnnrrrr tnnrrrr]
tnnnrrr tnnrrrr tnnrrrr tnnrrrr EOM

.
.
 .

M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]abcjjj-kkk TYPE mnxyz xx \
e LN MSG:
[tnnnrrr tnnrrrr tnnrrrr tnnrrrr]
[tnnnrrr tnnrrrr tnnrrrr tnnrrrr]
[tnnnrrr tnnrrrr tnnrrrr tnnrrrr]
tnnnrrr tnnrrrr tnnrrrr tnnrrrr EOM
M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]uvmnpjjj[-kkk] COMPL

No channel or conference points are marked.

[O.52213]

M hh:mm:ss xy,ww n[vv] UTL QRY MARK [s]uvmnpjjj[-kkk] NONE COMPL

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.52211.01]

M hh:mm:ss xy,ww n[vv] QRY MARK [s]abc TYPE ----- UEQD DNY

[O.52211.02]

M hh:mm:ss xy,ww n[vv] QRY MARK [s]abcjjj[-kkk] [{RT|DL} ffff \
MD g[g] [t]aaa] COND cc DNY

Hierarchical

[O.52211.01]

M hh:mm:ss xy,ww n[vv] QRY MARK uvmnp TYPE ----- UEQD DNY

[O.52211.02]

M hh:mm:ss xy,ww n[vv] QRY MARK uvmnpjjj[-kkk] [{RT|DL} ffff
MD g[g] uvkqr] COND cc DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.52211.01]

M hh:mm:ss xy,ww n[vv] QRY MARK [s]abc TYPE ----- UEQD DNY

[O.52211.02]

M hh:mm:ss xy,ww n[vv] QRY MARK [s]abcjjj[-kkk] COND cc DNY

Hierarchical

[O.52211.01]

M hh:mm:ss xy,ww n[vv] QRY MARK uvmnp TYPE ----- UEQD DNY

[O.52211.02]

M hh:mm:ss xy,ww n[vv] QRY MARK uvmnpjjj[-kkk] COND cc DNY

Explanation of Parameters

MARK	Mark Red circuit and customer controlled MARKings
NONE	None This keyword indicates that no channel or conference point is marked as a red and/or customer controlled circuit.
[s]abcjjj	Termination number [s]abc The 3- or 4-digit nonhierarchical NPC number jjj Channel or conference point number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
jjj	Channel or conference point number
kkk	Channel or conference point number

1.544 Mbit/s Termination:

Channel numbers

001-024

001-047 Odd only (SLC 96[®] Carrier, Mode 3, DGA)

049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)

001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)

025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)

049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)

073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)

001-024 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)

025-048 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)

049-072 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)

073-096 Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)

2.048 Mbit/s Termination:

Conference numbers

001-085 (MB NPC)

001-500 (Virtual NPC)

tnnnccrrr

Channel or conference information

t

Cross-connection type

***** One-way cross-connection

B Broadcast cross-connection

(Blank) Two-way cross-connection

D Disconnection

nnn

Channel or conference point number (jjj through kkk)

ccc

Customer controlled marking

CUS Customer controlled

--- Not customer controlled

rrr

Red circuit marking

rrr [Explanation](#)

	RDC	Red circuit
	---	Not red circuit
xx	Total number of data fields in the segment	
	1.544 Mbit/s Termination:	
	(01 through 24)	
	2.048 Mbit/s Termination:	
	(01 through 16)	
UEQD	Unequipped	
TYPE	Type	
mnxyz	NPC type	
	-----	Unknown NPC type
	MBxyz	Multipoint bridge
	SDxyz	DSP Application
	1.544 Mb/s Termination:	
	DAxyz	FTU DS1 ANSI NPC type
	DExyz	Enhanced digroup
	DSxyz	SLC carrier interface
	TAxyz	DS3U DS1 ANSI NPC type
	TExyz	DS3U noninterface unit
	TIxyz	DS3U interface unit
	VIxyz	Virtual circuit
	2.048 Mb/s Termination:	
	PAxyz	CEPT NPC (75-ohm or 120-ohm)
	PBxyz	CEPT NPC (120-ohm twisted pair)
	PCxyz	CEPT NPC (75-ohm coaxial)
	THxyz	HDS3U CEPT NPC type
FDL	Facility data link (1.544 Mbit/s Termination)	
COND	Condition	
	1.544 Mbit/s Termination:	
RT	Remote terminal	
	SLC [®] carrier remote terminal	
DL	Digital carrier line unit	

ffff	SLC carrier RT or DCLU Bank identification number (0000 through 9999)	
MD	Mode	
g[g]	Mode of operation	
	<i>g[g]</i>	<i>Explanation</i>
	1	SLC 96 carrier Mode I
	3	SLC 96 carrier Mode III
	C	SLC Series 5 carrier Feature Package C
[t]aaa	The 3- or 4-digit nonhierarchical SLC carrier digroup A NPC number.	
uvkqr	Hierarchical SLC carrier digroup A NPC number.	
	uv	Unit number
	k	module number
	qr	NPC number
cc	Hexadecimal condition code	
	cc	<i>Explanation</i>
	01	Invalid range for specified NPC type
	0B	Invalid CEPT NPC
	62	Invalid channel number
	63	NPC is a DGP
	7F	NPC is not added
	91	SR NPC was specified - not allowed
	B5	CPR circuit pack specified in the command
	F7	Corresponding NPC for virtual channel is not provisioned
	70	NPC invalid type

RETRIEVE MEMORY STATUS

Explanation of Command

This command identifies the current contents of the system memory devices. A separate line of information is provided for the Main Controller random access memory (RAM), Primary Memory Card (PMEM) and Secondary Memory Card (SMEM). The message response provides the following information for each particular memory device that can be accessed:

- Software Release of the Executable Program
- Software Release of the Database
- Date and Time Stamps of the Database
- Frame ID and Unique ID
- Feature Package ID
- Serial number of the database
- Serial number of the SunDisk card (PMEM and SMEM only)
- Service state of the card (PMEM and SMEM) and the service state of the RAM as it corresponds to the state of the MC. If the MC is in-service, RAM is in-service; if the MC is in maintenance condition, RAM is out-of-service.

In addition information about applications that reside on the memory cards is given as follows:

- The type of the application in the form SDx, where x indicates the type.
- The generic, issue, and release numbers that identify the version of the application
- The date when this version of the application was generated.

The output format depends on what the MEMSTAT command finds on each memory card and whether a memory card is in its respective slot as follows:

- Applications are listed separately in the output of the command. An application section is only created in the output command if applications actually reside on the memory cards.
- The output for an application does not contain any information about an executable or a database, because it does not apply. The version information identifies the application.
- If no memory card is in a particular slot, then the output for that slot generates dashes for the data.

- If the SMEM slot contains an application card (the PMEM slot should never have an application card), then SMEM is not mentioned in the main section of the output, but is mentioned only in the application section of the output message. In addition, the type field in the output for an application card has an asterisk at its end to identify the card as an application card.

This message may be executed either while the Main Controller is In-Service or in Maintenance Condition.

Command

[I.51001]

UTL: [FRM xy][, SEQ ww]:QRY, MEMSTAT!

Completion Message

In the normal case, with no platform application card in SMEM and no applications residing on PMEM or SMEM, only the main section (plus the feature package section) is generated; no application section is generated.

[O.51001]

```
M hh:mm:ss xy,ww n[vv] UTL QRY MEMSTAT 5 LN MSG:
DEV  EXCT  DBASE  DATE    TIME    FID  UID
RAM   gg.pp.rr dd.rr.v aa/bb/yr hr:mn:sc fg  <uid>
PMEM  gg.pp.rr dd.rr.v aa/bb/yr hr:mn:sc fg  <uid>
SMEM  gg.pp.rr dd.rr.v aa/bb/yr hr:mn:sc fg  <uid> EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY MEMSTAT 5 LN MSG:
FPKG      DBSN      FCSN      STATE
nnnnnnnn 0000000000 qqqqqqqqqqqqqqqqqqqq <state>
nnnnnnnn 0000000000 qqqqqqqqqqqqqqqqqqqq <state>
nnnnnnnn 0000000000 qqqqqqqqqqqqqqqqqqqq <state> COMPL
```

In a normal case with no platform application card in SMEM, but applications residing on PMEM and SMEM, both a main section and an application section (plus a feature package section) are generated.

[O.51001]

```
M hh:mm:ss xy,ww n[vv] UTL QRY MEMSTAT e LN MSG:
DEV  EXCT  DBASE  DATE    TIME    FID  UID
RAM   gg.pp.rr dd.rr.v aa/bb/yr hr:mn:sc fg  <uid>
PMEM  gg.pp.rr dd.rr.v aa/bb/yr hr:mn:sc fg  <uid>
SMEM  gg.pp.rr dd.rr.v aa/bb/yr hr:mn:sc fg  <uid>
DEV  APPLICATION TYPE  DATE    VERSION
PMEM SDx                aa/bb/yr  gen.iss.rel
      .
      .
```

```
[PMEM SDx          aa/bb/yr gen.iss.rel]
SMEM SDx          aa/bb/yr gen.iss.rel
.
.
[SMEM SDx          aa/bb/yr gen.iss.rel] EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY MEMSTAT 5 LN MSG:
FPKG      DBSN      FCSN      STATE
nnnnnnnn 0000000000 qqqqqqqqqqqqqqqqqqqq <state>
nnnnnnnn 0000000000 qqqqqqqqqqqqqqqqqqqq <state>
nnnnnnnn 0000000000 qqqqqqqqqqqqqqqqqqqq <state> COMPL
```

In a case with no card in SMEM slot and platform applications residing on PMEM, both a main section and an application section (plus feature package section) are generated.

[O.51001]

```
M hh:mm:ss xy,ww n[vv] UTL QRY MEMSTAT e LN MSG:
DEV EXCT DBASE DATE TIME FID UID
RAM gg.pp.rr dd.rr.v aa/bb/yr hr:mn:sc fg <uid>
PMEM gg.pp.rr dd.rr.v aa/bb/yr hr:mn:sc fg <uid>
SMEM ---.-.- ---.-.- --/--/-- --:--:-- -- ---
DEV APPLICATION TYPE DATE VERSION
PMEM SDx          aa/bb/yr gen.iss.rel
.
.
[PMEM SDx          aa/bb/yr gen.iss.rel] EOM

M hh:mm:ss xy,ww n[vv] UTL QRY MEMSTAT 5 LN MSG:
FPKG      DBSN      FCSN      STATE
nnnnnnnn 0000000000 qqqqqqqqqqqqqqqqqqqq <state>
nnnnnnnn 0000000000 qqqqqqqqqqqqqqqqqqqq <state>
nnnnnnnn 0000000000 qqqqqqqqqqqqqqqqqqqq <state> COMPL
```

With a platform application card in SMEM and one application residing on PMEM and SMEM, both a main section and an application section (plus feature package section) are generated.

[O.51001]

```
M hh:mm:ss xy,ww n[vv] UTL QRY MEMSTAT e LN MSG:
DEV EXCT DBASE DATE TIME FID UID
RAM gg.pp.rr dd.rr.v aa/bb/yr hr:mn:sc fg <uid>
PMEM gg.pp.rr dd.rr.v aa/bb/yr hr:mn:sc fg <uid>
DEV APPLICATION TYPE DATE VERSION
PMEM SDx          aa/bb/yr gen.iss.rel
SMEM SDx*         aa/bb/yr gen.iss.rel EOM

M hh:mm:ss xy,ww n[vv] UTL QRY MEMSTAT 5 LN MSG:
FPKG      DBSN      FCSN      STATE
nnnnnnnn 0000000000 qqqqqqqqqqqqqqqqqqqq <state>
```



```
nnnnnnnn 0000000000 qqqqqqqqqqqqqqqqqqqq <state>
nnnnnnnn 0000000000 qqqqqqqqqqqqqqqqqqqq <state>  COMPL
```



NOTE:

The asterisk (*) following the application type SDx in the application section of the message indicates that SMEM is an application card and not a regular 40 Mbyte memory card. Application cards are used for distributing applications to the customer.

**Explanation of
Parameters**

MEMSTAT	Memory Status						
e	Number of lines in message						
DEV	Device						
EXCT	Executables						
gg.pp.rr	Software release identifier This field identifies the software release of the executable program that is stored in the memory device. The software release ID is a three part number composed of a release number, a point number, and a version number. This field appears as a set of dashes if no executable program can be found on the memory device. The software release number "gg.pp.rr" is composed of: <table> <tr> <td>gg</td><td>Software release number</td></tr> <tr> <td>pp</td><td>Point release number</td></tr> <tr> <td>rr</td><td>Version number</td></tr> </table> from 0 to 9, the system will display only 1 digit : r above 9, the system will display 2 digits : rr	gg	Software release number	pp	Point release number	rr	Version number
gg	Software release number						
pp	Point release number						
rr	Version number						
DBASE	Database						
dd.rr.v	Database release identifier. This field identifies the release of executable program that the database stored in the memory device is formatted for. The release ID is a three part number composed of a release number, a point number and a version number. This field appears as a set of dashes if no database can be found on the memory device. The database release number "dd.rr.v" is composed of: <table> <tr> <td>dd</td><td>Release number</td></tr> <tr> <td>rr</td><td>Point release number</td></tr> </table>	dd	Release number	rr	Point release number		
dd	Release number						
rr	Point release number						

	v	Version number
DATE		Date
aa/bb/yr		Date of last update to the database
		This field identifies the date that the database was created or last updated. In the RAM data line, this field shows the current system date. For the PMEM and SMEM data lines, this field shows the date that the most recent database backup to the Flash Card occurred. The date field appears as a set of dashes if no database can be found on the memory device. The date may be generated in either the month-day or the day-month format, depending on how the user has provisioned it using command I.51021, UTL::DATE.
aa		Month or Day, depending on selected date format.
bb		Day or Month, depending on selected date format.
yr		Year
TIME		Time
hr:mn:sc		Time of last update to the database.
		This field identifies the time that the database was created or last updated. In the RAM memory data line, this field shows the current system time. In the PMEM and SMEM data lines, this field shows the time of day that the most recent database backup to the Flash Card occurred. This field appears as a set of dashes if no database can be found on the memory device.
	hr	Hour (00 through 23)
	mn	Minute (00 through 59)
	sc	Second (00 through 59)
FID		Frame ID
tg		Frame identifier of the memory device.
		This field displays the two alphanumeric character frame identifier "fg" of the memory device. In the RAM memory line, the frame ID shown is that of the DACS II system. For the flash cards, PMEM and/or SMEM, the frame ID identifies the system that the memory card belongs to. This field is shown as dashes if no frame ID can be found on the memory device.
UID		Unique ID
<uid>		Unique identifier of the memory device.

This field displays the unique identifier <uid>, up to 20 alphanumeric characters, of the memory device. In the RAM memory line, the unique ID shown is that of the DACS II system. For the flash cards, PMEM and/or SMEM, the unique ID identifies the system that the flash card belongs to. This field is shown as dashes if no unique ID can be found on the memory device.

APPLICATION TYPE

Application Type

This field identifies the type of application SDx that resides on the application card, where x is a hexadecimal number that designates the application as shown in the list.

- SD1** X.50/X.57 Subrate application
- SD3** Digital Multipoint Bridge application
- SD4** DDS Subrate and Multipoint Junction application
- SDx** Future application with a specific x value

VERSION

Version

This field identifies the version number of an application. The version number is subdivided into three fields as follows:

- gen** Generic number of the application
- iss** Issue number of the application
- rel** Release number of the application

FPKG

Feature Package ID

nnnnnnnn

Feature package identifier.

This field displays the eight character hexadecimal identifier of the feature package. In the RAM memory line, the feature package ID shown is that of the DACS II system. For the flash cards, PMEM and/or SMEM, the feature package ID identifies the system that the flash card belongs to. This field is shown as dashes if no feature package ID can be found on the memory device.

DBSN

Database Serial Number

oooooooo

Database serial number

This field displays the ten character alphanumeric identifier of the serial number of the database which is set when the frame is configured (default=1234567890). In the RAM memory line, the database serial number shown is that of the DACS II system. For the flash cards, PMEM and/or SMEM, the database serial number identifies the system that the flash card belongs to. This

field is shown as dashes if no serial number can be found on the memory device. This field may be up to ten characters in length. This field is padded with blanks if necessary.

FCSN Flash Card

qqqqqqqqqqqqqqqqqqqqqq

Flash card serial number.

This field displays the 20 character alpha-numeric serial number of the flash card. In the RAM memory line, dashes will be displayed (instead of the DBSN). For the flash cards, PMEM and/or SMEM, the serial number identifies the system that the flash card belongs to. This field is shown as dashes if no serial number can be found on the memory device.

This field is padded with blanks if necessary.

STATE Service State

<state> Identifies the state of the memory device

This field displays the service state of the memory device. The valid states are

IS In State

OOS Out of Service

QUERY IP AND ETHERNET ADDRESSES

Explanation of Command

This command requests the Internet address, the Ethernet address and the Subnetwork Mask of the DACS II system.

Command

1.544 Mbit/s Termination

[I.56391]

UTL: [FRM xy][, SEQ ww]:QRY, NETADDR!

Completion Message

1.544 Mbit/s Termination

[O.56391]

M hh:mm:ss xy, ww n[vv] UTL QRY NETADDR 4 LN MSG:
INTERNET ADDR- x.x.x.x
GATEWAY ADDR- x.x.x.x
SUBNETWORK MASK- x.x.x.x
ETHERNET ADDR- yy:yy:yy:yy:yy:yy

Denial Message

1.544 Mbit/s Termination

[O.56391.01]

M hh:mm:ss xy, ww n[vv] UTL QRY NETADDR COND cc DNY

Explanation of Parameters

IP ADDR Internet Address
GATEWAY ADDR
Gateway Address
SUBNETWORK MASK
Subnetwork Mask

x One of the 4 numbers of the internet address (0 through 255)

ETHERNET ADDR

Ethernet Address

yy One of the 6 numbers of the Ethernet address (00 through FF)

QUERY NPC NON FRAME-WORD SETTING

Explanation of Command

This command displays the non Frame-Word Setting (NFS) of the spare international and national bits that are being cross-connected from a timeslot 0 (TS0) to a non TS0 timeslot. These bits are bit 1 of the Frame Word (FW) and bits 1-8 of the non Frame Word (NFW). The request can be made for the TS0 on one or a range of Network Processing Circuits (NPCs).

Command

Nonhierarchical

[I.56324]

UTL:[FRM xy][,SEQ ww]:QRY,NFS,NPC [s]abc[-[t]def]!

Hierarchical

[I.56324]

UTL:[FRM xy][,SEQ ww]:QRY,NFS,NPC uvmnp[-wxkqr]!

Completion Message

Nonhierarchical

[O.56324]

M hh:mm:ss xy,ww n[vv] UTL QRY NFS NPC [s]abc abcdefghi COMPL

.
.

.

[M hh:mm:ss xy,ww n[vv] UTL QRY NFS NPC [t]def abcdefghi COMPL]

[M hh:mm:ss xy,ww n[vv] UTL QRY NFS NPC [s]abc-[t]def COMPL]

Hierarchical

[O.56324]

M hh:mm:ss xy,ww n[vv] UTL QRY NFS NPC uvmnp abcdefghi COMPL

.
.

.

[M hh:mm:ss xy,ww n[vv] UTL QRY NFS NPC wxkqr abcdefghi COMPL]

[M hh:mm:ss xy,ww n[vv] UTL QRY NFS NPC uvmnp-wxkqr COMPL]

Denial Message

Nonhierarchical

[O.56324.01]

M hh:mm:ss xy,ww n[vv] UTL QRY NFS NPC [[u]ghi[-[v]jkl]] COND cc\
DNY

Hierarchical

[O.56324.01]

M hh:mm:ss xy,ww n[vv] UTL QRY NFS NPC [edhfg[-opjst]] COND cc DNY

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number, start of range
[t]def	The 3- or 4-digit nonhierarchical NPC number, end of range
[u]ghi	The 3- or 4-digit nonhierarchical NPC number ([s]abc through [t]def)
[v]jkl	The 3- or 4-digit nonhierarchical NPC number ([s]abc through [t]def)
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number, start of range
wxkqr	Hierarchical NPC number, end of range
edhfg	Hierarchical NPC number (uvmnp through wxkqr)
opjst	Hierarchical NPC number (uvmnp through wxkqr)
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
NFS	Non Frame-Word Setting
abcdefghi	Variables representing the TS0 bits to which NFS is applied
	For Clear-2Mbit/s NPCs, dashes (-----) are shown in place of NFS bits.

- a** Bit 1 of Frame Word (FW) - International spare bit
- b** Bit 1 of Non Frame Word (NFW) - International spare bit
- c** Bit 2 of NFW
- d** Bit 3 of NFW - Remote Alarm Indicator
- e-f** Bits 4-5 of Non Frame Word, National spare bits
- g** Bit 6 of Non Frame Word, RPSFI bit if provisioned for RPSFI otherwise National spare bit
- h-i** Bits 7-8 of Non Frame Word, National spare bits

Variable Action on corresponding TS0 bit:

- "0" or "1"** Set TS0 bit to this value
- "V"** Received bit is inverted and passed through
- "P"** Received bit is passed through unchanged
- "-"** Not applicable

cc Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
13	FTMI is not equipped
14	FTMI is out of service
15	NPC is unequipped
25	FTMI type error
26	NPC type error
0B	Invalid CEPT NPC
46	NPC Failed or Out of Service
3A	Invalid FPI value

QUERY PERFORMANCE MONITORING DATA FOR DA, TA,TH, AND PA TYPE NPCS

Explanation of Command

This message retrieves current and/or historical DS1 performance monitoring data from DA, TA, and TH type NPCs. The message response is output in two distinct formats depending on whether the input command is applied to ALL NPCs on the frame or a set of specifically addressed NPCs.

ALL NPCs

When the command is applied to ALL NPCs, DACS II responds with the current parameter counts of a single specified performance parameter for ALL NPCs. No output level thresholding is performed and all counts, whether they are zero or greater, are output. The output is formatted on a module-by-module basis for Facility Terminating Units, DS3, Hybrid DS3 Units. If a particular NPC within a module is not a DA, TA, TH or PA type NPC, its accumulator count is printed as a string of dashes. Also for TH type NPCs in a hybrid DS3 unit the fourth NPC, which does not exist is printed as dashes.

Specifically Addressed NPCs

When a single NPC or range of NPCs is specifically addressed in the input command, all of the optionally entered user parameters are programmable. DACS II outputs the requested data in a different format, which accommodates the various user options.

This command handles NPC addressing as follows: If only a single NPC is addressed in the input command, then either a completion or denial response is generated for the addressed NPC. DACS II always denies invalid commands to specifically addressed NPCs.

If a range of NPCs is addressed and the feature applies to one or more NPCs within the range, DACS II performs the command on the NPCs in the range that support the requested feature, but skip the NPCs which do not support the requested feature. DACS II does not output denial responses for a range of NPCs.

Restrictions on Options

Restrictions are placed on the use of the "ALL" options for various keywords to constrain the amount of data that is output for a single command. In particular,

- If all parameters are requested, the input command is restricted to specifying a single NPC and a single monitored date and/or historical accumulation interval (monitored time).
- If all daily accumulation registers are requested, the input command is restricted to specifying a single NPC and a single parameter.

If all 15-minute accumulation registers are requested, the input command is restricted to specifying a single NPC and a single parameter.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.56091]

```
UTL:[FRM xy][,SEQ ww]:QRY,{NPC [s]abc[-[t]def]|ALL},<parameter>, \
AI aaaaa [,LV llllllllll][,LOCN locn][,MONDAT dddd][,MONTIM \
tttt]!
```

Hierarchical

[I.56091]

```
UTL:[FRM xy][,SEQ ww]:QRY,{NPC uvmnp[-wxkqr]|ALL},<parameter>, \
AI aaaaa [,LV llllllllll][,LOCN locn][,MONDAT dddd][,MONTIM tttt]!
```

2.048 Mbit/s Termination

Nonhierarchical

[I.56091]

```
UTL:[FRM xy][,SEQ ww]:QRY,{NPC [s]abc[-[t]def]|ALL},<parameter>, \
AI aaaaa [,LV llllllllll][,MONDAT dddd][,MONTIM tttt]!
```

Hierarchical

[I.56091]

```
UTL:[FRM xy][,SEQ ww]:QRY,{NPC uvmnp[-wxkqr]|ALL},<parameter>,AI \
aaaaa [,LV llllllllll][,MONDAT dddd][,MONTIM tttt]!
```

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

Output message when the ALL keyword is used for NPCs, retrieving the current counter values of a single specified parameter from all DA and TA type NPCs:

The following segment applies to a Facility Terminating Module.

[O.56091]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL NPCS [s]abc-[t]def <parameter> \
8 LN MSG:
AI aaaaa[ LOCN locn]
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx \
xxxxxxxx
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx \
xxxxxxxx
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx \
xxxxxxxx
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx \
xxxxxxxx
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx \
xxxxxxxx
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx \
xxxxxxxx
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx EOM
```

The following segment applies to a DS3 or Hybrid DS3 Module.

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL NPCS [s]abc-[t]def <parameter> \
6 LN MSG:
AI aaaaa[ LOCN locn]
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx \
xxxxxxxx
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx \
xxxxxxxx
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx \
xxxxxxxx
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx \
xxxxxxxx
xxxxxxxx EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL <parameter> \
AI aaaaa[ LOCN locn] COMPL
```

Output message when the ALL keyword is not used for NPCs.

For DA and TA type NPCs:

[O.56092]

```

M hh:mm:ss xy,ww n[vv] UTL QRY NPCS <parameter> e LN MSG:
AI aaaaa [LV llllllllll ][LOCN locn ][MONDAT dddd ][MONTIM tttt ] \
  NPC   PARAM   COUNT   VLDTY MONDAT MONTIM
[s]abc  pppp  ccccccccc  v    dddd  tttt
.       pppp  ccccccccc  v    dddd  tttt
.       pppp  ccccccccc  v    dddd  tttt
.       pppp  ccccccccc  v    dddd  tttt
.       pppp  ccccccccc  v    dddd  tttt
.       pppp  ccccccccc  v    dddd  tttt
.       pppp  ccccccccc  v    dddd  tttt
.       pppp  ccccccccc  v    dddd  tttt
[v]ghi  pppp  ccccccccc  v    dddd  tttt EOM

```

```

M hh:mm:ss xy,ww n[vv] UTL QRY NPCS <parameter> e LN MSG:
AI aaaaa [LV llllllllll ][LOCN locn ][MONDAT dddd ][MONTIM tttt ] \
  NPC   PARAM   COUNT   VLDTY MONDAT MONTIM
[u]jkl  pppp  ccccccccc  v    dddd  tttt
.       pppp  ccccccccc  v    dddd  tttt
.       pppp  ccccccccc  v    dddd  tttt
.       pppp  ccccccccc  v    dddd  tttt
.       pppp  ccccccccc  v    dddd  tttt
.       pppp  ccccccccc  v    dddd  tttt
.       pppp  ccccccccc  v    dddd  tttt
.       pppp  ccccccccc  v    dddd  tttt
[t]def  pppp  ccccccccc  v    dddd  tttt EOM

```

```

M hh:mm:ss xy,ww n[vv] UTL QRY NPCS [s]abc[-[t]def] <parameter> \
2 LN MSG:
AI aaaaa [LV llllllllll ][LOCN locn ][MONDAT dddd ][MONTIM  \
tttt]COMPL

```

Hierarchical

Output message when the ALL keyword is used for NPCs, retrieving the current counter values of a single specified parameter from all DA and TA type NPCs:

The following segment applies to a Facility Terminating Module.

[O.56091]

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALL NPCS uvmnp-uvmqr <parameter> \
8 LN MSG:
AI aaaaa[ LOCN locn]
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx \
xxxxxxxx
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx \
xxxxxxxx
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx \
xxxxxxxx

```

```

XXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX \
XXXXXXXXX
XXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX \
XXXXXXXXX
XXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX EOM

```

The following segment applies to a DS3 or Hybrid DS3 Module.

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALL NPCS uvmnp-uvmqr <parameter> \
6 LN MSG:
AI aaaaa[ LOCN locn]
XXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX \
XXXXXXXXX
XXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX \
XXXXXXXXX
XXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX \
XXXXXXXXX
XXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX \
XXXXXXXXX EOM

```

```

M hh:mm:ss xy,ww n[vv] UTL QRY ALL <parameter> \
AI aaaaa[ LOCN locn] COMPL

```

Output message when the ALL keyword is not used for NPCs.

For DA and TA type NPCs:

[O.56092]

```

M hh:mm:ss xy,ww n[vv] UTL QRY NPCS <parameter> e LN MSG:
AI aaaaa [LV llllllllll ][LOCN locn ][MONDAT dddd ][MONTIM tttt ] \
  NPC   PARAM   COUNT   VLDTY MONDAT MONTIM
uvmnp   pppp   cccccccc   v    dddd   tttt
.       pppp   cccccccc   v    dddd   tttt
.       pppp   cccccccc   v    dddd   tttt
.       pppp   cccccccc   v    dddd   tttt
.       pppp   cccccccc   v    dddd   tttt
.       pppp   cccccccc   v    dddd   tttt
.       pppp   cccccccc   v    dddd   tttt
.       pppp   cccccccc   v    dddd   tttt
.       pppp   cccccccc   v    dddd   tttt
edhfg   pppp   cccccccc   v    dddd   tttt EOM

M hh:mm:ss xy,ww n[vv] UTL QRY NPCS <parameter> e LN MSG:
AI aaaaa [LV llllllllll ][LOCN locn ][MONDAT dddd ][MONTIM tttt ] \
  NPC   PARAM   COUNT   VLDTY MONDAT MONTIM
opjst   pppp   cccccccc   v    dddd   tttt
.       pppp   cccccccc   v    dddd   tttt
.       pppp   cccccccc   v    dddd   tttt
.       pppp   cccccccc   v    dddd   tttt
.       pppp   cccccccc   v    dddd   tttt

```

```
M hh:mm:ss xy,ww n[vv] UTL QRY NPCS uvmnp[-wxkqr] <parameter> \
2 LN MSG:
AI aaaaa [LV llllllllll ][LOCN locn ][MONDAT dddd ] \
[MONTIM tttt ]COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

Output message when the ALL keyword is used for NPCs, retrieving the current counter values of a single specified parameter from all PA type NPCs:

The following segment applies to a Facility Terminating Module.

[O.56091]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL NPCS [s]abc-[t]def <parameter> \
AI aaaaa 6 LN MSG:
xxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx \
xxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx \
xxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx \
xxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx \
xxxxxxxxxx
xxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx EOM
```

M hh:mm:ss xy,ww n[vv] UTL QRY ALL <parameter> AI aaaaa COMPL

Output message when the ALL keyword is not used for NPCs

[O.56092]

[illegible]

Issue 1.0, Release 9.1.3 March 2001 **21-453**

Output message when the ALL keyword is not used for NPCs.

For TH type NPCs:

[O.56092]

```
M hh:mm:ss xy,ww n[vv] UTL QRY NPCS <parameter> e LN MSG:
AI aaaaa [LV llllllllll ][MONDAT dddd ][MONTIM tttt] \
  NPC   PARAM   COUNT   MONDAT MONTIM THMODE
[s]abc  pppp  ccccccccc dddd   tttt   hhh
.       pppp  ccccccccc dddd   tttt   hhh
.       pppp  ccccccccc dddd   tttt   hhh
.       pppp  ccccccccc dddd   tttt   hhh
.       pppp  ccccccccc dddd   tttt   hhh
.       pppp  ccccccccc dddd   tttt   hhh
.       pppp  ccccccccc dddd   tttt   hhh
.       pppp  ccccccccc dddd   tttt   hhh
[v]ghi  pppp  ccccccccc dddd   tttt   hhh   EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY NPCS <parameter> e LN MSG:
AI aaaaa [LV llllllllll ][MONDAT dddd ][MONTIM tttt] \
  NPC   PARAM   COUNT   MONDAT MONTIM THMODE
[u]jkl  pppp  ccccccccc dddd   tttt   hhh
.       pppp  ccccccccc dddd   tttt   hhh
.       pppp  ccccccccc dddd   tttt   hhh
.       pppp  ccccccccc dddd   tttt   hhh
.       pppp  ccccccccc dddd   tttt   hhh
.       pppp  ccccccccc dddd   tttt   hhh
.       pppp  ccccccccc dddd   tttt   hhh
.       pppp  ccccccccc dddd   tttt   hhh
[t]def  pppp  ccccccccc dddd   tttt   hhh   EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY NPCS [s]abc[-[t]def] <parameter> \
2 LN MSG:
AI aaaaa [LV llllllllll ][MONDAT dddd ][MONTIM tttt] COMPL
```

Hierarchical

Output message when the ALL keyword is used for NPCs, retrieving the current counter values of a single specified parameter from all TH type NPCs:

The following segment applies to a Facility Terminating Module.

[O.56091]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ALL NPCS uvmnp-uvmqr <parameter> \
8 LN MSG:
AI aaaaa[ LOCN locn]
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx \
xxxxxxxx
xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx \
xxxxxxxx
```

```

XXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX \
XXXXXXXXX
XXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX \
XXXXXXXXX
XXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX \
XXXXXXXXX
XXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX EOM

```

Output message when the ALL keyword is not used for NPCs.

For TH type NPCs:

[O.56092]

M hh:mm:ss xy,ww n[vv] UTL QRY NPC <parameter> e LN MSG:
 AI aaaaa [LV llllllllll][MONDAT dddd][MONTIM tttt] \

NPC	PARAM	COUNT	MONDAT	MONTIM	THMODE
uvmnp	pppp	cccccccc	dddd	tttt	hhh
.	pppp	cccccccc	dddd	tttt	hhh
.	pppp	cccccccc	dddd	tttt	hhh
.	pppp	cccccccc	dddd	tttt	hhh
.	pppp	cccccccc	dddd	tttt	hhh
.	pppp	cccccccc	dddd	tttt	hhh
.	pppp	cccccccc	dddd	tttt	hhh
edhfg	pppp	cccccccc	dddd	tttt	hhh EOM

M hh:mm:ss xy,ww n[vv] UTL QRY NPC <parameter> e LN MSG:
 AI aaaaa [LV llllllllll][MONDAT dddd][MONTIM tttt] \

NPC	PARAM	COUNT	MONDAT	MONTIM	THMODE
opjst	pppp	cccccccc	dddd	tttt	hhh
.	pppp	cccccccc	dddd	tttt	hhh
.	pppp	cccccccc	dddd	tttt	hhh
.	pppp	cccccccc	dddd	tttt	hhh
.	pppp	cccccccc	dddd	tttt	hhh
.	pppp	cccccccc	dddd	tttt	hhh
.	pppp	cccccccc	dddd	tttt	hhh
wxkqr	pppp	cccccccc	dddd	tttt	hhh EOM

M hh:mm:ss xy,ww n[vv] UTL QRY NPC uvmnp[-wxkqr] <parameter> \
 2 LN MSG:
 AI aaaaa [LV llllllllll][MONDAT dddd][MONTIM tttt] COMPL

Denial Message 1.544 Mbit/s Termination

Nonhierarchical

[O.56091.01]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {NPC [s]abc[-[t]def]|ALL} \
<parameter> 2 LN MSG:
AI aaaaa[ LV llllllllll][ LOCN locn][ MONDAT dddd][ MONTIM tttt] \
COND cc DNY
```

Hierarchical

[O.56091.01]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {NPC uvmnp[-wxkqr]|ALL} \
<parameter> 2 LN MSG:
AI aaaaa[ LV llllllllll][ LOCN locn][ MONDAT dddd][ MONTIM tttt] \
COND cc DNY
```

2.048 Mbit/s Termination

Nonhierarchical

[O.56091.01]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {NPC [s]abc[-[t]def]|ALL} \
<parameter> 2 LN MSG:
AI aaaaa[ LV llllllllll][ MONDAT dddd][ MONTIM tttt] COND cc DNY
```

Hierarchical

[O.56091.01]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {NPC uvmnp[-wxkqr]|ALL} \
<parameter> 2 LN MSG:
AI aaaaa[ LV llllllllll][ MONDAT dddd][ MONTIM tttt] COND cc DNY
```

Explanation of Parameters

NPC	Network processing circuit
NPCS	Network processing circuits

If an NPC range is specified in the input command, the following rules apply:

- Unequipped NPCs within the requested range are skipped.
- A range across a unit boundary between a FTU and a DS3U (or HDS3U) is denied.

- A range across a FTU (or IFTU) boundary is allowed, but if the range starts with a DA type NPC, then the PA type NPCs are skipped. Similiarly, a range that starts with a PA type NPC skips DA type NPCs.

[s]abc The 3- or 4-digit nonhierarchical NPC number

[v]ghi The 3- or 4-digit nonhierarchical NPC number

[u]jkl The 3- or 4-digit nonhierarchical NPC number

[t]def The 3- or 4-digit nonhierarchical NPC number

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp Hierarchical NPC number

uvmqr Hierarchical NPC number

edhfg Hierarchical NPC number

opjst Hierarchical NPC number

wxkqr Hierarchical NPC number

For a listing of the hierarchical numbering scheme, refer

uv,ed,op,wx Unit number

m,h,j,k Module number

np,fg,st,qr NPC number within the module

to Chapter 2, "NPC Numbering and XYZ Parameters."

e Number of lines in the message

ALL All

PARAM Parameter

parameter Parameter name

pppp Parameter value

1.544 Mbit/s Termination

For DA and TA type NPCs:

The parameter whose value is requested and/or reported. The parameter ALLPAR is an input parameter only. If ALLPAR is specified, the following restrictions apply to the input command:

- The command must specify only a single NPC; ranges are not allowed.
- The MONTIM input parameter may not have a value of ALL.
- The MONDAT input parameter may not have a value of ALL.

- The optional LV input parameter must not be present in the command; it defaults to a value of 1-Up and parameter counts of zero are not shown.

- The parameters CVL, ESL, and SESL do not apply to TA type NPCs.

CVP Path Coding Violations

CVL Line Coding Violations

ESP Path Errored Seconds

ESL Line Errored Seconds

SESP Path Severely Errored Seconds

SESL Line Severely Errored Seconds

SEFS Path Severely Errored Framing Seconds

CSSP Path Controlled Slip Seconds

UASP Path Unavailable Seconds

ALLPAR All parameters listed above

2.048 Mbit/s Termination

For PA type NPCs:

The parameter whose value is requested and/or reported. The parameters ALLPM, ALLE and ALLF are input parameters only. If ALLPM, ALLE, or ALLF is specified on input then the following restrictions apply to the input command:

- The command must specify only a single NPC; ranges, including the ALL option, are not allowed.

- The MONTIM input parameter may not have a value of ALL.

- The MONDAT input parameter may not have a value of ALL.

- The optional LV input parameter must not be present in the command; it defaults to a value of 1-Up and parameter counts of zero are not shown.

CRC CRC Block Errors

FRER Framing Errors

OFS Out of Frame Seconds

ES Errored Seconds

SES Severely Errored Seconds

CSS Controlled Slip Seconds

CV Coding Violations

UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors
FEBE	Far End Block Errors*
FES	Far End Errored Seconds*
FSES	Far End Severely Errored Seconds*
FUAS	Far End Unavailable Seconds*
ALLPM	All parameters listed above
ALLE	All Near-end parameters listed above
ALLF	All Far-end parameters (marked by *) listed above

Both Terminations

For TH type NPCs:

The parameter whose value is requested and/or reported. The parameters ALLPM, ALLE and ALLF are input parameters only. If ALLPM, ALLE, or ALLF is specified on input then the following restrictions apply to the input command:

- The command must specify only a single NPC; ranges, including the ALL option, are not allowed.
- The MONTIM input parameter may not have a value of ALL.
- The MONDAT input parameter may not have a value of ALL.
- The optional LV input parameter must not be present in the command; it defaults to a value of 1-Up and parameter counts of zero are not shown.

CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors
ALLPM	All parameters listed above
ALLE	All Near-end parameters listed above

ALLF All Far-end parameters (marked by *) listed above

LV Level

IIIIIIII The discriminating level for the requested parameter

If **IIIIIIII** is not specified in the input command, it defaults to a value of 1-Up.

If "ALL" is specified in the input command a default value of 0-Up is applied. This provides the current counts (zero included, unfiltered) of the specified parameter for all NPCs on the frame.

Keywords LV and ALL are mutually exclusive.

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{000000000-134217728}U Discriminating Level-Up Direction
 {000000000-134217728}D Discriminating Level-Down Direction

2.048 Mbit/s Termination

{000000000-345600000}U Discriminating Level-Up Direction
 {000000000-345600000}D Discriminating Level-Down Direction

Both Terminations

Up Parameters with values equal to or greater than the specified "discriminating level" are reported.

Down Parameters with values equal to or less than the specified "discriminating level" are reported.

1.544 Mbit/s Termination

LOCN Location

locn The location being performance monitored

If this optional parameter is not present in the input command, it defaults to a value of NEND.

NEND Near-end

FEND Far-end

Both Terminations

AI Accumulation interval

aaaaa The accumulation time period for the specified parameter

15MIN Parameter count from a 15-minute accumulator

	DAILY	Parameter count from a daily accumulator
COUNT	Count	
cccccccc	The accumulated value of a monitored parameter (nine digits)	
	1.544 Mbit/s Termination	
	This parameter is meaningless if the VLDTY parameter indicates that data is not available for the interval.	
	All leading 0s are output.	
	{000000000-134217728}	Range of parameter counts
	2.048 Mbit/s Termination	
	{000000000-345600000}	Range of parameter counts
1.544 Mbit/s Termination		
VLDTY	Validity	
v	Validity indicator	
	This parameter indicates whether the information for the specified accumulation interval was accumulated over the entire interval or some portion of it.	
	A	Adjusted, data was manually initialized
	C	Complete, data was accumulated over the entire interval
	L	Long, data was accumulated longer than the interval period
	P	Partial, data was accumulated over only part of the interval
MONDAT	Monitored Date	
dddd	Begin date of performance monitoring period	
	As an input parameter, this specifies the date of the beginning of the performance monitoring period (specified in the AI parameter) as MMDD, where MM is the month (01-12) and DD is the day (01-31) of the month. If this optional input parameter is not present in the command, it defaults to a value of CURD.	
	The value ALL is an option only for input commands. If the value ALL is selected, all of the daily accumulation registers are retrieved. If the value ALL is selected, only a single NPC can be specified in the input command. The input command must also	

select the value of DAILY for the AI parameter, and must not contain the MONTIM parameter.

The following restriction applies to the use of MONDAT in input commands:

This parameter must not appear in input commands which select AI = 15MIN and MONTIM = ALL.

As an output parameter, this specifies the date of the beginning of the performance monitoring period as MMDD, where MM is the month (01-12) and DD is the day (01-31) of the month.

{01-12}{01-31}	Month of Year/Day of Month Format
ALL	All daily accumulators (historical and current)
CURD	Current Date

MONTIM

Monitored Time

tttt

Begin time of the performance monitoring period

This parameter specifies the beginning time of day of the requested performance monitoring period (specified in the AI parameter) as HHMM, where HH is the hour (00-23) and MM is the minute {00,15,30,45} of the hour. If this optional input parameter is not present in the command, it defaults to a value of CURT.

The value ALL is an option only for input commands. Selecting the value ALL retrieves all 97 (historical and current) 15-minute accumulation registers of the selected NPC for DA or TA type NPCs. Selecting the value ALL retrieves all 17 (current and historical) 15-minute accumulation registers of the selected NPC for TH type NPCs. If the value ALL is selected, only a single NPC can be specified in the input command. The input command must also select the value of 15MIN for the AI parameter. In addition, an input command which specifies parameter = ALLPAR can not also select MONTIM = ALL.

The following restriction applies to the use of MONTIM in input commands:

This parameter must not appear in input commands which specify daily accumulation intervals (AI = DAILY).

Both Terminations

{00-23}{00,15,30,45} Hour of Day/Minute of Hour
ALL All 15-minute accumulators
CURT Current Time

COND Condition

2.048 Mbit/s Termination

AI Accumulation interval

aaaaa The accumulation time period for the specified parameter

15MIN Parameter count from a 15-minute accumulator

DAILY Parameter count from a daily accumulator

hxxxxxxxx Threshold mode and parameter value

h PA NPC thresholding mode

xxxxxxxx Accumulated value of a monitored parameter.

Nine digit field. All leading 0s are output.

(000000000-345600000)

I Inhibited

A Allowed

MONDAT Monitored date

dddd Performance monitoring period (24 hour)

This parameter specifies the requested 24-hour performance monitoring period. If this optional input parameter is not present in the command, it defaults to a value of CURD.

The value ALL is an option only for input commands. Selecting the value ALL retrieves both previous and current 24-hour accumulation registers of the selected NPC. If the value ALL is selected, only a single NPC can be specified in the input command. This parameter must not appear in input commands which specify 15-minute accumulation intervals (AI = 15MIN). When the parameter ALLPM, ALLE or ALLF is specified, MONTIM and MONDAT cannot be ALL.

HIST Previous 24-hour accumulators

CURD Current 24-hour accumulators

ALL ALL Current and previous daily accumulators

MONTIM Monitored Time

tttt Performance monitoring period (15 minute)

This parameter specifies the requested 15-minute performance monitoring period. If this optional input parameter is not present in the command, it defaults to a value of CURT.

The value ALL is an option only for input commands. Selecting the value ALL retrieves both previous and current 15-minute accumulation registers of the selected NPC. If the value ALL is selected, only a single NPC can be specified in the input command. This parameter must not appear in input commands which specify daily accumulation intervals (AI = DAILY). When the parameter ALLPAR, ALLE or ALLF is specified, MONTIM and MONDAT cannot be ALL.

HIST Previous 15-minute accumulators

CURT Current 15-minute accumulators

ALL All Current and previous 15-minute accumulators

THMODE Thresholding Mode

hhh This output keyword indicates the thresholding mode of the PA NPC.

INH Inhibited

ALW Allowed

cc Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
11	UC is out of service
12	UC is in service but failed
14	FTMI is out of service
15	NPC is unequipped
1F	FTMI is in service but failed
26	NPC type error
0B	Invalid CEPT NPC
0C	The MONDAT and MONTIM parameters can not both be specified
A0	The selected MXR associated with the NPC is Out-Of-Service
A1	The selected MXR associated with the NPC is In-Service but failed

cc	<i>Explanation</i>
B7	The associated MXR is In-Service but pested
A1	The parameter specified does not match with the NPC type
0E	Only one parameter is allowed
1B	Historical data can not be specified
1D	Level field is not allowed
1E	Monitored Date field is not allowed
20	Only DAILY for accumulation interval is allowed
21	Only 15MIN for accumulation interval is allowed
22	FTMI is PESTED
23	No PM data available
24	Monitored Time field is not allowed
89	Interval is not valid/not available
9E	MONDAT set to ALL is not allowed
9F	MONTIM set to ALL is not allowed

RETRIEVE C-BIT TIMER TIMEOUT VALUE

Explanation of Command



NOTE:

This command applies to 2.048 Mbit/s Termination only.

This command retrieves the current setting of the C-bit message timer for an NPC or range of NPCs. NPCs with type CB10z or cept NPCs cross-connected to NPCs with CB10z type can be specified. The timeout value return for an NPC value applies to all the timeslots served by the NPC. Valid settings for the timer 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 seconds

Command

Nonhierarchical

[I.53171]

UTL:[FRM xy][,SEQ ww]:QRY,NPC [s]abc[-[t]def],CBTIMER!

Hierarchical

[I.53171]

UTL:[FRM xy][,SEQ ww]:QRY,NPC uvmnp[-uvkqr],CBTIMER!

Completion Message

Nonhierarchical

[O.53171]

M hh:mm:ss xy,ww UTL QRY NPC [s]abc CBTIMER [t]v EOM

M hh:mm:ss xy,ww UTL QRY NPC [t]def CBTIMER [t]v EOM

Hierarchical

[O.53171]

M hh:mm:ss xy,ww UTL QRY NPC uvmnp CBTIMER [t]v COMPL

M hh:mm:ss xy,ww UTL QRY NPC uvkqr CBTIMER [t]v COMPL

Denial Message

Nonhierarchical

[O.53171.01]

M hh:mm:ss xy,ww UTL QRY NPC [s]abc[-[t]def] CBTIMER COND cc DNY

Hierarchical

[O.53171.01]

M hh:mm:ss xy,ww UTL QRY NPC uvmnp[-uvkqr] CBTIMER COND cc DNY

Explanation of Parameters

NPC	Network Processing Number
[s]abc	NPC number Nonhierarchical
[t]def	NPC number Nonhierarchical
uvmnp	NPC number Hierarchical
uvkqr	NPC number Hierarchical
CBTIMER	C-Bit Message Filter Timer
[t]v	Values (0-10) of CBTIMER for all channels of NPC
cc	Hexadecimal condition code

cc	<i>Explanation</i>
15	NPC is unequipped
54	Cross-connect to CPR is required
F1	Parameter only valid with PA, PB, or PC type NPCs

UTILITY QUERY NPC MAP

Explanation of Message

This message lists all network processing circuits (NPCs) added to the alternate map except for the two-point, two-way cross-connect circuits (TCONS).

A user can query their own maps or macros but only the frame administrator can query maps or macros owned by another user.

Command

[I.54111]
UTL:FRM xy,SEQ ww:QRY,NPC,MAP <name>[,USER <user id>]!

Completion Message

Nonhierarchical

[O.54111]
M hh:mm:ss xy,ww n[vv] UTL QRY NPC MAP <name> \
[USER <user id>] e LN MSG:
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx
. .
. .
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx EOM

M hh:mm:ss xy,ww n[vv] UTL QRY NPC MAP <name> \
[USER <user id>] e LN MSG:
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx
. .
. .
[x]xxx [x]xxx [x]xxx [x]xxx [x]xxx [x]xxx EOM

M hh:mm:ss xy,ww n[vv] UTL QRY NPC MAP <name> \
[USER <user id>] COMPL

[O.54112]
M hh:mm:ss xy,ww n[vv] UTL QRY NPC MAP <name> \
[USER <user id>] NONE COMPL

Hierarchical

[O.54111]

M hh:mm:ss xy,ww n[vv] UTL QRY NPC MAP <name> \
[USER <user id>] e LN MSG:
uvmnp uvmnp uvmnp uvmnp uvmnp uvmnp

. .
. .
. .

uvmnp uvmnp uvmnp uvmnp uvmnp uvmnp EOM

M hh:mm:ss xy,ww n[vv] UTL QRY NPC MAP <name> \
[USER <user id>] e LN MSG:
uvmnp uvmnp uvmnp uvmnp uvmnp uvmnp

. .
. .
. .

uvmnp uvmnp uvmnp uvmnp uvmnp uvmnp EOM

M hh:mm:ss xy,ww n[vv] UTL QRY NPC MAP <name> \
[USER <user id>] COMPL

[O.54112]

M hh:mm:ss xy,ww n[vv] UTL QRY NPC MAP <name> \
[USER <user id>] NONE COMPL

Denial Message

[O.54111.01]

M hh:mm:ss xy,ww n[vv] UTL QRY NPC MAP <name> \
[USER <user id>] COND cc DNY

Explanation of Parameters

NPC	Network processing circuit
MAP	Alternate Map
name	The alternate map name which is a string of uppercase alphanumeric characters from one to seven characters long. The first character must be an alphabetic character.
USER	User
user id	User login identification is two to eight alphabetic characters. A user can query his or her own maps but only the frame administrator can use the command to query maps owned by other users. To do so, the optional USER field must be entered.

[x]xxx	The 3- or 4-digit nonhierarchical NPC Number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC Number For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
cc	Hexadecimal condition code
cc	<i>Explanation</i>
62	File is being accessed
64	File doesn't exist/can't be accessed
D0	Command is Frame administrator (DAX) only.
D3	User does not exist
D5	No user is logged in on the link/vc

QUERY NETWORK PROCESSING CIRCUIT PARAMETER

Explanation of Command

This message requests a printout of the values for a specified facility performance parameter for a single network processing circuit (NPC), a range of circuits, or a SLC[®] carrier remote terminal or Digital Carrier Line Unit.

These values may be cleared at any time by using the UTL,CLR,ALL command. This message requests a printout of the values for a specified facility performance parameter for a single network processing circuit (NPC) or a range of circuits.

These values may be cleared at any time by using the INIT,REG,ALL command. This message also reports on the CEPT BER status of NPCs. The responses generated by this command are determined by the number of NPCs addressed in the command:

- If a single NPC is addressed in the input command, then one message, either a completion or denial, is generated for the addressed NPC. DACS II always denies invalid commands to specifically addressed NPCs.
- If a range of NPCs is addressed in the input command, no denial response is generated.

Command

1.544 Mbit/s Termination

Nonhierarchical

[I.56041]

UTL:[FRM xy][,SEQ ww]:QRY,<parameter>,{NPC [s]abc[-[t]def]}| \ RT ffff|DL ffff}!

Hierarchical

[I.56041]

UTL:[FRM xy][,SEQ ww]:QRY,<parameter>,{NPC uvmnp[-wxkqr]}| \ RT ffff|DL ffff}!

2.048 Mbit/s Termination

Nonhierarchical

[I.56041]

UTL: [FRM xy][, SEQ ww]: QRY, <parameter>, NPC [s]abc[-[t]def]!

Hierarchical

[I.56041]

UTL: [FRM xy][, SEQ ww]: QRY, <parameter>, NPC uvmnp[-wxkqr]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.56041]

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> \
NPCS [s]jjj[-[t]kkk][ RESET] TOT nnnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> \
NPCS [s]ooo[-[t]ppp][ RESET] TOT nnnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
```

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPC [s]abc-[t]def COMPL

The preceding message applies to domestic Facility Terminating Module (FTM) and parameters other than ER and BER.

[O.56041]

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> \
NPCS [s]jjj[-[t]kkk][ RESET] TOT nnnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> \
NPCS [s]ooo[-[t]ppp][ RESET] TOT nnnn 5 LN MSG:
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM
```

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPC [s]abc-[t]def COMPL

The preceding message applies to DS3/HDS3 modules (i.e., a MXR/HMXR) and parameter other than ER and BER.

[O.56041]

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> {RT|DL} ffff MD g[g] \
[ RESET] 3 LN MSG:
[DGA [s]aaa] [DGB [s]bbb] [DGC [s]ccc] [DGD [s]ddd] \
[DGP [s]ppp] \
[xxxxx] [xxxxx] [xxxxx] [xxxxx] \
[xxxxx] COMPL
```

The preceding message applies to SLC[®] Carrier Remote Terminal (RT) or Digital Carrier Line Interface (DCLU) and parameter other than ER and BER.

[O.56042]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS [s]jjj[-[t]kkk] \
[ RESET] TOT nnnn 5 LN MSG:
xx xx xx xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx xx xx xx EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS [s]ooo[-[t]ppp] \
[ RESET] TOT nnnn 5 LN MSG:
xx xx xx xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx xx xx xx
xx xx xx xx xx xx xx xx xx xx xx EOM
```

M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS [s]abc[-[t]def] \
COMPL

The preceding message applies to domestic Facility Terminating Module (FTM) and either parameter ER or BER.

[O.56042]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS [s]jjj[-[t]kkk] \
[ RESET] TOT nnnn 5 LN MSG:
xx xx xx xx xx xx xx
xx xx xx xx xx xx xx
```

```
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS [s]ooo[-[t]ppp] \
[ RESET] TOT nnnn 5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS [s]abc[-[t]kkk] \
COMPL
```

The preceding message applies to DS3/HDS3 modules (i.e., a MXR/HMXR) and either parameter ER or BER.

[O.56042]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} {RT|DL} ffff MD g[g] \
[ RESET] 3 LN MSG:
[DGA [s]aaa] [DGB [s]bbb] [DGC [s]ccc] [DGD [s]ddd] \
[DGP [s]ppp] \
[xx] [xx] [xx] [xx] \
[xx] COMPL
```

The preceding message applies to SLC[®] Carrier Remote Terminal (RT) or Digital Carrier Line Interface (DCLU) and either parameter ER or BER.

[O.56043]

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> \
NPCS [s]jjj[-[t]kkk][ RESET] TOT 0000 COMPL
```

[O.56044]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS [s]jjj[-[t]kkk] \
[ RESET] TOT 0000 COMPL
```

Hierarchical

[O.56041]

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPCS uvmkl[-uvmpq] \
[ RESET] TOT nnnn 5 LN MSG:
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPCS wxkfg[-wxkst] \
[ RESET] TOT nnnn 5 LN MSG:
```

```

XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
EOM

```

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPC uvmnp-wxkqr COMPL

The preceding message applies to domestic Facility Terminating Module (FTM) and parameter other than ER and BER.

[O.56041]

```

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPCS uvmkl[-uvmpq] \
[ RESET] TOT nnnn 5 LN MSG:
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX EOM

```

```

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPCS wxkfg[-wxkst] \
[ RESET] TOT nnnn 5 LN MSG:
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX EOM

```

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPC uvmnp-wxkqr COMPL

The preceding message applies to DS3/HDS3 modules (i.e., a MXR/HMXR) and parameter other than ER and BER.

[O.56041]

```

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> {RT|DL} ffff MD g[g] \
[ RESET] 3 LN MSG:
[DGA uvmaa]      [DGB uvmbb]      [DGC uvmcc]      [DGD uv added]      \
[DGP uvmpq]
[xxxxx]          [xxxxx]          [xxxxx]          [xxxxx]          \
[xxxxx] COMPL

```

The preceding message applies to SLC Carrier Remote Terminal (RT) or Digital Carrier Line Interface (DCLU) and parameter other than ER or BER.

[O.56042]

```

M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS uvmkl[-uvmpq] \
[ RESET] TOT nnnn 5 LN MSG:
xx xx xx xx xx  xx xx xx xx xx
xx xx xx xx xx  xx xx xx xx xx
xx xx xx xx xx  xx xx xx xx xx

```

XX XX XX XX XX XX XX XX XX XX EOM

M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS wxkfg[-wxkst] \
[RESET] TOT nnnn 5 LN MSG:
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX XX XX EOM

M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPC uvmnp-wxkqr COMPL

The preceding message applies to domestic Facility Terminating Module (FTM) and either parameter ER or BER.

[O.56042]

M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS uvmkl[-unmpq] \
[RESET] TOT nnnn 5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX EOM

M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS wxkfg[-wxkst] \
[RESET] TOT nnnn 5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX EOM

M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPC uvmnp-wxkqr COMPL

The preceding message applies to DS3/HDS3 modules (i.e., a MXR/HMXR) and either parameter ER or BER.

[O.56042]

M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} {RT|DL} ffff MD g[g] \
[RESET] 3 LN MSG:
[DGA uvmaa] [DGB uvmbb] [DGC uvmcc] [DGD uv added] \
[DGP uv added]
[xx] [xx] [xx] [xx] [xx]
COMPL

The preceding message applies to SLC Carrier Remote Terminal (RT) or Digital Carrier Line Interface (DCLU) and either parameter ER or BER.

[O.56043]

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPCS uvmkl[-uvmpq] \
[RESET] TOT 0000 COMPL

[O.56044]

M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS uvmkl[-uvmpq] \
[RESET] TOT 0000 COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.56041]

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> \
NPCS [s]jjj[-[t]kkk][RESET] TOT nnnn 5 LN MSG:
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX EOM

.
.
.

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> \
NPCS [s]ooo[-[t]ppp][RESET] TOT nnnn 5 LN MSG:
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX EOM

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPC [s]abc-[t]def COMPL

The preceding message applies to CEPT Facility Terminating Module (FTM) and parameter other than BER.

[O.56041]

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> \
NPCS [s]jjj[-[t]kkk][RESET] TOT nnnn 5 LN MSG:
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX EOM

.
.
.

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> \
NPCS [s]ooo[-[t]ppp][RESET] TOT nnnn 5 LN MSG:
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX
XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX EOM

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPC [s]abc-[t]def COMPL

The preceding message applies to DS3/HDS3 modules (i.e., a MXR/HMXR) and parameter other than ER and BER.

[O.56042]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BER NPCS [s]jjj[-[t]kkk] \
[ RESET] TOT nnnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX EOM
```

.
.
.

```
M hh:mm:ss xy,ww n[vv] UTL QRY BER NPCS [s]ooo[-[t]ppp] \
[ RESET] TOT nnnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY BER NPC [s]abc-[t]def COMPL
```

The preceding message applies to CEPT Facility Terminating Module (FTM) and parameter BER.

[O.56042]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS [s]jjj[-[t]kkk] \
[ RESET] TOT nnnn 5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX EOM
```

.
.
.

```
M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS [s]ooo[-[t]ppp] \
[ RESET] TOT nnnn 5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS [s]abc[-[t]kkk] COMPL
```

The preceding message applies to DS3/HDS3 modules (i.e., a MXR/HMXR) and either parameter ER or BER.

Hierarchical

[O.56041]

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPCS uvmkl[-uvmpq] \
[RESET] TOT nnnn 5 LN MSG:

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM

.
.
.

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPCS wxkfg[-wxkst] \
[RESET] TOT nnnn 5 LN MSG:

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPC uvmnp-wxkqr COMPL

The preceding message applies to CEPT Facility Terminating Module (FTM) and parameter other than BER.

[O.56041]

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPCS uvmkl[-uvmpq] \
[RESET] TOT nnnn 5 LN MSG:

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM

.
.
.

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPCS wxkfg[-wxkst] \
[RESET]

TOT nnnn 5 LN MSG:

xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx EOM

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> NPC uvmnp-wxkqr COMPL

The preceding message applies to DS3/HDS3 modules (i.e., a MXR/HMXR) and parameter other than ER and BER.

[O.56042]

```
M hh:mm:ss xy,ww n[vv] UTL QRY BER NPCS uvmkl[-uvm pq] \
[ RESET] TOT nnnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX EOM
```

.
.
.

```
M hh:mm:ss xy,ww n[vv] UTL QRY BER NPCS wxkfg[-wxkst] \
[ RESET] TOT nnnn 5 LN MSG:
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX
XX XX XX XX XX XX XX XX EOM
```

M hh:mm:ss xy,ww n[vv] UTL QRY BER NPC uvmnp-wxkqr COMPL

The preceding message applies to CEPT Facility Terminating Module (FTM) and parameter BER.

[O.56042]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS uvmkl[-unmpq] \
[ RESET] TOT nnnn 5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX EOM
```

.
.
.

```
M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPCS wxkfg[-wxkst] \
[ RESET] TOT nnnn 5 LN MSG:
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX
XX XX XX XX XX XX XX EOM
```

M hh:mm:ss xy,ww n[vv] UTL QRY {ER|BER} NPC uvmnp-wxkqr COMPL

The preceding message applies to DS3/HDS3 modules (i.e., a MXR/HMXR) and either parameter ER or BER.

Denial Message 1.544 Mbit/s Termination

Nonhierarchical

[O.56041.01]

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> \ {NPC [s]abc[-[t]def]|RT ffff|DL ffff} COND cc DNY

Hierarchical

[O.56041.01]

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> \ {NPC uvmnp[-wxkqr]|RT ffff|DL ffff} COND cc DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.56041.01]

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> \ NPC [s]abc[-[t]def] COND cc DNY

Hierarchical

[O.56041.01]

M hh:mm:ss xy,ww n[vv] UTL QRY <parameter> \ NPC uvmnp[-wxkqr] COND cc DNY

Explanation of Parameters

[s]abc	The 3- or 4-digit nonhierarchical NPC number, the first number of a range
[t]def	The 3- or 4-digit nonhierarchical NPC number, the last number of a range
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number, the first NPC number of a range
wxkqr	Hierarchical NPC number denoting end of an NPC range
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

parameter

Facility performance parameter

1.544 Mbit/s Termination

For domestic frames, the parameter and its period of measurement are chosen from the list below:

Parameter	Explanation	Period of measurement
BER	Bit Error Rate	Total since "local midnight"
BPV	Bipolar Violation	Total since "local midnight"
COFA	Change Of Frame Alignment	Total since "local midnight"
CRC	Cyclic Redundancy Code	Total since "local midnight"
ER	Error Rate	Previous 24-hour total (same as BER for D4 framing)
ERS	Errored Seconds	Previous 24-hour total
FRER	Framing Error	Total since "local midnight"
OOF	Out Of Frame	Total since "local midnight"
SERS	Severe Errored Seconds	Previous 24-hour total
SLIP	Slip count	Previous 24-hour total
SAFE	Shelf Alarm Far End count	Total since "local midnight"
SANE	Shelf Alarm Near End count	Total since "local midnight"

⇒ NOTE:

If the frame contains NPCs that are provisioned with D4 framing only the ER parameter should be used; the BER parameter should not be used.

2.048 Mbit/s Termination

For CEPT frames, the parameter variable listed below are only applicable to PB or PC type NPCs. If there are PA NPCs in the FTM, dashes (-) are output in the position of these NPCs:

DM Degraded Minutes

SERS	Severely Errored Seconds
ERS	Errored Seconds
US	Unavailable Seconds
SLIP	Slip Events
CRC	CRC-4 Check Block Error Events
FRER	Framing Error Events
LOFA	Loss of Frame Alignment Events
MER	Multiframe Alignment Error Events (Time slot 16)

⇒ NOTE:
If the parameter reports threshold alarms (DM, SERS, ERS, US, or SLIP), the count represents the total for the last 24 hours (a rolling 24-hour count). The other parameter counts represent the total since local midnight.

For CEPT frames, the parameter variable below is applicable to all CEPT NPC types, i.e., PA, PB, and PC:

BER Excessive Error Rate
(Also MBER/RBER for NPCs with MBER feature)

⇒ NOTE:
For BER and RBER, the message reports NPCs that are currently in the BER state.

Both Terminations

A message segment is omitted for

- Unequipped FTMs
- Equipped FTMs having no NPCs
- Equipped FTMs with NPCs having zero parameter values.
- DS3/HDS3 modules in case of BPV request
- Equipped CEPT FTM with all NPCs being PA type but with a parameter other than BER.

xxxxx Parameter count values

Note that dashes (-) are output for NPCs that are not equipped or are provisioned with a type inapplicable to the parameter. If an entire FTM is unequipped or all its NPCs are dashes, the segment is skipped.

xx BER states

1.544 Mbit/s Termination

For xx representing North American BER states:

--	Unequipped NPC
CL	Clear (a facility type NPC without errors)
ER	Error state
MJ	Major state
MN	Minor state

2.048 Mbit/s Termination

For xx representing CEPT BER/RBER states, the state represents a combination of the Excessive Bit Error Rate (EER), Bit Error Rate (BER), and Remote Bit Error Rate (RBER). It is interpreted as either a Prompt Maintenance Alarm (PMA), Deferred Maintenance Alarm (DMA), or Clear.

xx	EER/BER state	RBER state
MJ	EER/PMA	Not applicable
MN	DMA	Inactive
RN	DMA	Active
CL	Clear*	Inactive
RL	Clear*	Active
--	NPC unequipped or out of service	

* Clear refers to the Facility type NPC whose received error rate is less than the Minor BER threshold.

without CRC (10^{-5})

with CRC (10^{-6})

Note that EER has priority over the BER/RBER states. EER does not coexist with them; however, BER and RBER coexist with each other.

Unless the active value of bit 4 of channel time slot 0 has been redefined by use of the CHG::NPC,TS0 (I.38321) command, the RBER values are:

1	Inactive
0	Active

Both Terminations

[s]jjj	The Lowest 3- or 4-digit nonhierarchical NPC number in the FTM/MXR/HMXR that contains NPC [s]abc
[t]kkk	The Highest 3- or 4-digit nonhierarchical NPC number in the FTM/MXR/HMXR that contains NPC [s]abc
[s]ooo	The Lowest 3- or 4-digit nonhierarchical NPC number in the FTM/MXR/HMXR that contains NPC [t]def
[t]ppp	The Highest 3- or 4-digit nonhierarchical NPC number in the FTM/MXR/HMXR that contains NPC [t]def
uvmkl	Lowest hierarchical NPC number in the FTM/MXR/HMXR that contains NPC uvmnp
uvmpq	Highest hierarchical NPC number in the FTM/MXR/HMXR that contains NPC uvmnp
wxkfg	Lowest hierarchical NPC number in the FTM/MXR/HMXR that contains NPC wxkqr
wxkst	Highest hierarchical NPC number in the FTM/MXR/HMXR that contains NPC wxkqr
RESET	Reset. Indicates that one of more autonomous resets have occurred

The parameter value for the first NPC is in the first position (upper left corner); first line of the message. The parameter value for the last NPC is located in the lower right corner.

nnnn	Cumulative count of NPCs returning nonzero states or values. The last nnnn, the one printed out in the message concluding with COMPL gives the total number of NPCs with nonzero states or values over the specified range.

1.544 Mbit/s Termination

If NPCs are in a single FTM, then only one 5-line message is printed.

DGA	Digroup A
DGB	Digroup B
DGC	Digroup C
DGD	Digroup D
DGP	Digroup P, the protection digroup
[s]aaa	The 3- or 4-digit nonhierarchical digroup A NPC number
[s]bbb	The 3- or 4-digit nonhierarchical digroup B NPC number
[s]ccc	The 3- or 4-digit nonhierarchical digroup C NPC number

[s]ddd	The 3- or 4-digit nonhierarchical digroup D NPC number
[s]ppp	The 3- or 4-digit nonhierarchical digroup P NPC number
fff	SLC carrier bank identification number (0000 through 9999)
g[g]	Mode of Operation
1	SLC 96 carrier Mode 1
3	SLC 96 carrier Mode 3
C	SLC Series 5 carrier (Feature Package C)
cc	Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
15	NPC is unequipped
1F	FTMI is in service but failed
24	Unit type error
0B	Invalid CEPT NPC
46	NPC Failed or Out of Service
7E	Bank id number not found
A0	No SAFE alarm for DGP
0E	The specified parameter is not applicable to operation mode of the RT
A1	The parameter specified does not match with the NPC type

UTILITY QUERY TEST-ACCESS GROUP NPC

Explanation of Command

This command requests information regarding one or more network processing circuits used for test-access groups (NPCTGs). The following information is provided for each designated NPCTG:

- All test-access groups (TGs)
- TG width
- The bundle being supported (east or west)
- The channel assignment on the NPCTG

The TGs are listed in the order of bandwidth assignment.

Command

```
[I.53091]
UTL:[FRM xy][,SEQ ww]:QRY,NPCTG rrr[-sss]!
```

Completion Message

Nonhierarchical

```
[O.53091]
M hh:mm:ss xy,ww n[vv] UTL QRY NPCTG rrr NPC [s]abc p LN MSG:
TG mmm NN {E|W} aa-bb[ TG mmm NN {E|W} aa-bb]\
[ TG mmm NN {E|W}aa-bb]
[ TG mmm NN {E|W} aa-bb[ TG mmm NN {E|W} aa-bb]\
[ TG mmm NN {E|W} aa-bb]]
[ TG mmm NN {E|W} aa-bb[ TG mmm NN {E|W} aa-bb]\
[ TG mmm NN {E|W} aa-bb]]
      ..... {EOM|COMPL}
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY NPCTG rrr[-sss] UEQD {EOM|COMPL}
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY NPCTG rrr NPC [s]abc UASGN\
{EOM|COMPL}
.
.
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY NPCTG sss NPC [t]def p LN MSG:
TG mmm NN {E|W} aa-bb[ TG mmm NN {E|W} aa-bb]\
[ TG mmm NN {E|W} aa-bb]
[ TG mmm NN {E|W} aa-bb[ TG mmm NN {E|W} aa-bb]\
[ TG mmm NN {E|W} aa-bb]]
[ TG mmm NN {E|W} aa-bb[ TG mmm NN {E|W} aa-bb]\
[ TG mmm NN {E|W} aa-bb]]
..... {EOM|COMPL}
```

Hierarchical

[O.53091]

```
M hh:mm:ss xy,ww n[vv] UTL QRY NPCTG rrr NPC uvmnp p LN MSG:
TG mmm NN {E|W} aa-bb[ TG mmm NN {E|W} aa-bb]\
[ TG mmm NN {E|W} aa-bb]
[ TG mmm NN {E|W} aa-bb[ TG mmm NN {E|W} aa-bb]\
[ TG mmm NN {E|W} aa-bb]]
[ TG mmm NN {E|W} aa-bb[ TG mmm NN {E|W} aa-bb]\
[ TG mmm NN {E|W} aa-bb]]
..... {EOM|COMPL}

.
.
M hh:mm:ss xy,ww n[vv] UTL QRY NPCTG rrr[-sss] UEQD {EOM|COMPL}
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY NPCTG rrr NPC uvmnp UASGN\
{EOM|COMPL}
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY NPCTG sss NPC wxkqr p LN MSG:
TG mmm NN {E|W} aa-bb[ TG mmm NN {E|W} aa-bb]\
[ TG mmm NN {E|W} aa-bb]
[ TG mmm NN {E|W} aa-bb[ TG mmm NN {E|W} aa-bb]\
[ TG mmm NN {E|W} aa-bb]]
[ TG mmm NN {E|W} aa-bb[ TG mmm NN {E|W} aa-bb]\
[ TG mmm NN {E|W} aa-bb]]
..... {EOM|COMPL}
```

Denial Message

[O.53091.01]

```
M hh:mm:ss xy,ww n[vv] UTL QRY NPCTG rrr[-sss] COND cc DNY
```

Explanation of Parameters

TG	Test (access) group
mmm	TG number (001 through 400)
NPCTG	NPC (for) test group

rrr	TG number (001 through 400)
sss	TG number (001 through 400, must be greater than rrr) Variable sss is used to specify the end of an NPCTG range
[s]abc	3- or 4-digit nonhierarchical NPC number designated as NPCTG rrr
[t]def	3- or 4-digit nonhierarchical NPC number designated as NPCTG sss For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number designated as NPCTG rrr
wxkqr	Hierarchical NPC number designated as NPCTG sss uv,wx Unit number m,k Module number np,qr NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
E	East East bundle of the TG
W	West West bundle of the TG
UEQD	Unequipped
UASGN	Unassigned No TG assigned to this NPCTG

1.544 Mbit/s Termination

NN	TG width (01 through 24)
aa	Starting channel for the bundle (01 through 24)
bb	Ending channel for the bundle (02 through 24); for NN = 1, bb is '--'

2.048 Mbit/s Termination

NN	TG width (01 through 31)
aa	Starting channel for the bundle (01 through 31)
bb	Ending channel for the bundle (02 through 31) for NN = 1, bb is '--'

cc

Hexadecimal condition code

cc

Explanation

62

None of the designated NPCTG(s) are
equipped

UTILITY QUERY NUM

Explanation of Command

This command recovers the load number of the generic. This command is not issued in the Command and Message Manual, because the customers should not be interested in the load number for a generic. The output for this command is very similar to the UTL::QRY,WHO (I.51041) command, except that the feature package designation has been replaced by the load number and the CEF or NONCEF keywords are displayed in the first line of the output.

Command

```
[I.51051]  
UTL: [FRM xy][, SEQ ww]:QRY, NUM!
```

Completion Message

```
[O.51051]  
M hh:mm:ss xy,ww n[vv] UTL QRY NUM {CEF|NONCEF} 2 LN MSG:  
RELEASE DACSIigg POINT pp VERSION r LOAD dddd COMPL
```

Explanation of Parameters

NUM	Load number for a the generic on the frame
NONCEF	The frame is a NON-CEF frame
CEF	The frame is a CEF frame
gg	DACS II software release (generic) number
pp	DACS II software release (generic) number
r	PDI Version number of the release point
dddd	Four-digit load number for the generic

RETRIEVE LOGGED MESSAGES

Explanation of Command

This message enables the user to retrieve logged messages from the Message Log. The user needs to specify a Message Log number or a range of Message Log numbers. The logged messages will be outputted autonomously with O.83001 at the start of the messages and O.83011 at the end.

Command

Completion Message

Denial Message

Explanation of Parameters

MSGLOG	Message Log /* pds */
MSG	Message Log /* mml */
NUM	Numbers of the logged message[s] to be retrieved
a	First number of a range of messages to be retrieved from log.
b	Requested last number of a range of messages to be retrieved from log.
c	Actual last number of the range to be retrieved from log. If the requested number is larger than the actual last number, the actual last number is given.

UTILITY QUERY OPTIONS NPCS

Explanation of Command

This command requests a printout of the parameter threshold values for NPC types stored in the DACS II threshold data base.

If an NPC type is specified, the output message shows the threshold values for all parameters associated with the designated NPC type. If the ALL keyword is entered, the output message shows the threshold values for the parameters and all NPC types.

Command

[I.53051]
UTL: [FRM xy][, SEQ ww]:QRY, OPT[, {TYPE mn|ALL}], NPCS!

Completion Message

1.544 Mbit/s Termination

[O.53051]

Usage: DE or TE type

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn NPCS 5 LN MSG:
OPT 01 00255 bbbbbb ccccc ddddd MJ SLIP
OPT 02 00004 bbbbbb ccccc ddddd MN SLIP
OPT 03 00003 bbbbbb ccccc ddddd MJ BER
OPT 04 00006 bbbbbb ccccc ddddd MN BER EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE DE TRSP NPCS 2 LN MSG:
OPT 03 00004 bbbbbb ccccc ddddd MJ BER EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn NPCS 5 LN MSG:
OPT 05 00864 bbbbbb ccccc ddddd ERS
OPT 06 00225 bbbbbb ccccc ddddd SERS
OPT 07 00511 bbbbbb ccccc ddddd MJ COFA
OPT 08 00017 bbbbbb ccccc ddddd MN COFA {COMPL|EOM}
```

[O.53051]

Usage: DS type

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE DS NPCS 5 LN MSG:
OPT 01 00255 bbbbbb ccccc ddddd MJ SLIP
OPT 02 00004 bbbbbb ccccc ddddd MN SLIP
OPT 03 00004 bbbbbb ccccc ddddd MJ BER
OPT 04 00006 bbbbbb ccccc ddddd MN BER EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE DS NPCS 5 LN MSG:
OPT 05 00864 bbbbbb ccccc ddddd ERS
OPT 06 00225 bbbbbb ccccc ddddd SERS
OPT 07 00511 bbbbbb ccccc ddddd MJ COFA
OPT 08 00017 bbbbbb ccccc ddddd MN COFA EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE DS NPCS 3 LN MSG:
OPT 09 00000 bbbbbb ccccc ddddd SANE
OPT 10 00000 bbbbbb ccccc ddddd SAFE {EOM|COMPL}
```

[O.53051]

Usage: DA or TA type

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn NPCS 9 LN MSG:
OPT 41 000132960/000000691 bbbbbb ccccccc dddddddd CVP,DN
OPT 42 00648 bbbbbb ccccc ddddd ESP,DN
OPT 43 00100 bbbbbb ccccc ddddd SESP,DN
OPT 44 00017 bbbbbb ccccc ddddd SEFS,DN
OPT 45 00004 bbbbbb ccccc ddddd CSSP,DN
OPT 46 00010 bbbbbb ccccc ddddd UASP,DN
OPT 47 000133400 bbbbbb ccccccc dddddddd CVL,DN
OPT 48 00648 bbbbbb ccccc ddddd ESL,DN EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn NPCS 9 LN MSG:
OPT 49 00100 bbbbbb ccccc ddddd SESL,DN
OPT 50 000132960/000000691 bbbbbb ccccccc dddddddd CVP,DF
OPT 51 00648 bbbbbb ccccc ddddd ESP,DF
OPT 52 00100 bbbbbb ccccc ddddd SESP,DF
OPT 53 00017 bbbbbb ccccc ddddd SEFS,DF
OPT 54 00004 bbbbbb ccccc ddddd CSSP,DF
OPT 55 00010 bbbbbb ccccc ddddd UASP,DF
OPT 56 00648 bbbbbb ccccc ddddd ESL,DF EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn NPCS 9 LN MSG:
OPT 57 0013296/0000072 bbbbbb ccccccc ddddddd CVP,QN
OPT 58 00065 bbbbbb ccccc ddddd ESP,QN
OPT 59 00010 bbbbbb ccccc ddddd SESP,QN
OPT 60 00002 bbbbbb ccccc ddddd SEFS,QN
OPT 61 00001 bbbbbb ccccc ddddd CSSP,QN
OPT 62 00010 bbbbbb ccccc ddddd UASP,QN
OPT 63 0013340 bbbbbb ccccccc ddddddd CVL,QN
OPT 64 00065 bbbbbb ccccc ddddd ESL,QN EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn NPCS 9 LN MSG:
OPT 65 00010 bbbbbb ccccc dddd SESL, QN
OPT 66 0013296/0000072 bbbbbbb ccccccc ddddddd CVP, QF
OPT 67 00065 bbbbbb ccccc dddd ESP, QF
OPT 68 00010 bbbbbb ccccc dddd SESP, QF
OPT 69 00002 bbbbbb ccccc dddd SEFS, QF
OPT 70 00001 bbbbbb ccccc dddd CSSP, QF
OPT 71 00010 bbbbbb ccccc dddd UASP, QF
OPT 72 00065 bbbbbb ccccc dddd ESL, QF {COMPL|EOM}
```

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[O.53051]

Usage: PB or PC type

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn 5 LN MSG:
OPT 31 00060 bbbbbb ccccc dddd DM, 1 hour
OPT 32 01440 bbbbbb ccccc dddd DM, 24 hours
OPT 33 00900 bbbbbb ccccc dddd SERS, 15 Min.
OPT 34 65535 bbbbbb ccccc dddd SERS, 24 Hrs.
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn 5 LN MSG:
OPT 35 00900 bbbbbb ccccc dddd ERS, 15 Min.
OPT 36 65535 bbbbbb ccccc dddd ERS, 24 Hrs.
OPT 37 00900 bbbbbb ccccc dddd US, 15 Min.
OPT 38 65535 bbbbbb ccccc dddd US, 24 Hrs.
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn 3 LN MSG:
OPT 39 00900 bbbbbb ccccc dddd SLIPS, 15 Min.
OPT 40 65535 bbbbbb ccccc dddd SLIPS, 24 Hrs. COMPL
```

[O.53051]

Usage: PA type

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn 8 LN MSG:
OPT 11 000176947 bbbbbbbbbb cccccccc dddddddd CRC, DAILY
OPT 12 000176947 bbbbbbbbbb cccccccc dddddddd FRER, DAILY
OPT 13 000000004 bbbbbbbbbb cccccccc dddddddd OFS, DAILY
OPT 14 000004320 bbbbbbbbbb cccccccc dddddddd ES, DAILY
OPT 15 000000090 bbbbbbbbbb cccccccc dddddddd SES, DAILY
OPT 16 000000004 bbbbbbbbbb cccccccc dddddddd CSS, DAILY
OPT 17 000176947 bbbbbbbbbb cccccccc dddddddd CV, DAILY EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn 8 LN MSG:
OPT 18 000000090 bbbbbbbbbb cccccccc dddddddd UAS, DAILY
OPT 19 000000009 bbbbbbbbbb cccccccc dddddddd UATC, DAILY
OPT 20 000004095 bbbbbbbbbb cccccccc dddddddd MER, DAILY
OPT 21 000176947 bbbbbbbbbb cccccccc dddddddd FEBE, DAILY
```

```
OPT 22 000004320 bbbbbbbbbb cccccccc dddddddd FES, DAILY
OPT 23 000000090 bbbbbbbbbb cccccccc dddddddd FSES, DAILY
OPT 24 000000090 bbbbbbbbbb cccccccc dddddddd FUAS, DAILY EOM
```

M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn 8 LN MSG:

```
OPT 81 0018432 bbbbbbbb ccccccc ddddddd CRC, 15MIN
OPT 82 0018432 bbbbbbbb ccccccc ddddddd FRER, 15MIN
OPT 83 0000004 bbbbbbbb ccccccc ddddddd OFS, 15MIN
OPT 84 0000300 bbbbbbbb ccccccc ddddddd ES, 15MIN
OPT 85 0000030 bbbbbbbb ccccccc ddddddd SES, 15MIN
OPT 86 0000001 bbbbbbbb ccccccc ddddddd CSS, 15MIN
OPT 87 0018432 bbbbbbbb ccccccc ddddddd CV, 15MIN EOM
```

M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn 8 LN MSG:

```
OPT 88 0000030 bbbbbbbb ccccccc ddddddd UAS, 15MIN
OPT 89 0000003 bbbbbbbb ccccccc ddddddd UATC, 15MIN
OPT 90 0000255 bbbbbbbb ccccccc ddddddd MER, 15MIN
OPT 91 0018432 bbbbbbbb ccccccc ddddddd FEBE, 15MIN
OPT 92 0000300 bbbbbbbb ccccccc ddddddd FES, 15MIN
OPT 93 0000030 bbbbbbbb ccccccc ddddddd FSES, 15MIN
OPT 94 0000030 bbbbbbbb ccccccc ddddddd FUAS, 15MIN COMPL
```

Both Terminations

[O.53051]

Usage: TH type

M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn 8 LN MSG:

```
OPT 11 000176947 bbbbbbbbbb cccccccc dddddddd CRC, DAILY
OPT 12 000176947 bbbbbbbbbb cccccccc dddddddd FRER, DAILY
OPT 13 000000004 bbbbbbbbbb cccccccc dddddddd OFS, DAILY
OPT 14 000004320 bbbbbbbbbb cccccccc dddddddd ES, DAILY
OPT 15 000000090 bbbbbbbbbb cccccccc dddddddd SES, DAILY
OPT 16 000000004 bbbbbbbbbb cccccccc dddddddd CSS, DAILY
OPT 17 ----- ----- ----- ----- CV, DAILY EOM
```

M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn 8 LN MSG:

```
OPT 18 000000090 bbbbbbbbbb cccccccc dddddddd UAS, DAILY
OPT 19 000000009 bbbbbbbbbb cccccccc dddddddd UATC, DAILY
OPT 20 000004095 bbbbbbbbbb cccccccc dddddddd MER, DAILY
OPT 21 ----- ----- ----- ----- FEBE, DAILY
OPT 22 ----- ----- ----- ----- FES, DAILY
OPT 23 ----- ----- ----- ----- FSES, DAILY
OPT 24 ----- ----- ----- ----- FUAS, DAILY EOM
```

M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn 8 LN MSG:

```
OPT 81 0018432 bbbbbbbb ccccccc ddddddd CRC, 15MIN
OPT 82 0018432 bbbbbbbb ccccccc ddddddd FRER, 15MIN
OPT 83 0000004 bbbbbbbb ccccccc ddddddd OFS, 15MIN
OPT 84 0000300 bbbbbbbb ccccccc ddddddd ES, 15MIN
```

```

OPT 85 0000030 bbbbbbb cccccc dddddd SES, 15MIN
OPT 86 0000001 bbbbbbb cccccc dddddd CSS, 15MIN
OPT 87 - - - - - - - - - - - - - - - - CV, 15MIN EOM

M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn 8 LN MSG:
OPT 88 0000030 bbbbbbb cccccc dddddd UAS, 15MIN
OPT 89 0000003 bbbbbbb cccccc dddddd UATC, 15MIN
OPT 90 0000255 bbbbbbb cccccc dddddd MER, 15MIN
OPT 91 - - - - - - - - - - - - - - - - FEBE, 15MIN
OPT 92 - - - - - - - - - - - - - - - - FES, 15MIN
OPT 93 - - - - - - - - - - - - - - - - FSES, 15MIN
OPT 94 - - - - - - - - - - - - - - - - FUAS, 15MIN COMPL

```

⇒ NOTE:
Parameters FEBE, FES, FSES and FUAS are not supported for TH type NPCs; but the entries are shown in order to be compatible with the output message for PA type NPCs. For similar reasons the entry for line code violations (CV) is shown, even though line code violations do not apply to TH type NPCs, because line code violations are taken care of at the DS3 level.

Explanation of Parameters

OPT	Option
	In the output messages, the first value shown following the keyword OPT is the option number. The value immediately following the option number is the default alarm threshold value. The next three fields show user-programmed values. Any user-programmed values that have not been initialized in the DACS II data base are shown as "----[----]". Until they are initialized, user-programmable values cannot be used as valid alarm thresholds.
	1.544 Mbit/s Termination
	For ANSI NPC types (DA and TA type NPCs), a programmed alarm threshold value of zero for any parameter disables threshold crossing alert messages for that parameter.
	For the Major Slip and Minor Slip parameters (1.544 Mbit/s Termination OPT 01 and 02, respectively) a programmed threshold value of zero disables the respective threshold crossing alarms.
TYPE	Type
mn	NPC type
	TH Hybrid DS3 Unit CEPT NPC type

	1.544 Mbit/s Termination
DA	Facility Terminating Unit (FTU) ANSI NPC type
DE	Facility Terminating Unit (FTU) NPC type
DS	SLC [®] carrier NPC type
TA	DS3 Unit ANSI DS1 NPC type
TE	DS3 Unit or Hybrid DS3 Unit NPC type
	2.048 Mbit/s Termination
PA	Enhanced CEPT NPC type for 120/75 ohm impedance
PB	CEPT NPC type for 120 ohm impedance
PC	CEPT NPC type for 75 ohm impedance
ALL	Indicates all NPC types associated with the features being turned on in the frame
	If neither an NPC type nor the ALL keyword are specified, the default NPC type is DE.
	1.544 Mbit/s Termination
	If neither an NPC type nor the ALL keyword are specified, the default NPC type is PB.
	If the frame is a Gateway frame, the default NPC type is DE.
NPCS	Network processing circuits
MJ	Major
MN	Minor
DE	Facility Terminating Unit (FTU) NPC type
1.544 Mbit/s Termination	
SLIP	Slip
BER	Bit Error Rate
ERS	Errored Seconds
SERS	Severely Errored Seconds
COFA	Change of Frame Alignment
SAFE	Shelf Alarm Far End
SANE	Shelf Alarm Near End
Threshold parameters for ANSI NPC types	
CVP	Coding Violations, Path

CVL	Coding Violations, Line
ESP	Errored Seconds, Path
ESL	Errored Seconds, Line
SESP	Severely Errored Seconds, Path
SESL	Severely Errored Seconds, Line
SEFS	Severely Errored Framing Seconds
CSSP	Controlled Slip Seconds, Path
UASP	Unavailable Seconds, Path
D	Daily
Q	15 minute
N	Near-end
F	Far-end

Both Terminations

Threshold parameters for TH type NPCs

DAILY	Daily
CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors
15MIN	Fifteen minute
CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds

UAS Unavailable Seconds

UATC Unavailable Time Count

MER Multiframe Errors

TRSP Transparent

This keyword indicates that the message contains the BER alarm threshold options for clear-DS1 NPCs. User-defined options with values other than 4, 5 or 6 are shown as '-----'

User-programmed alarm threshold values

bbbbbb[bbbb] First

cccccc[cccc] Second

dddddd[dddd] Third

2.048 Mbit/s Termination

Threshold parameters for PB/PC type NPCs

DM Degraded minutes

SERS Severely Errored Seconds

ERS Errored Seconds

US Unavailable Seconds

SLIPS Slips

Threshold parameters for PA type NPCs

DAILY Daily

CRC CRC Block Errors

FRER Framing Errors

OFS Out of Frame Seconds

ES Errored Seconds

SES Severely Errored Seconds

CSS Controlled Slip Seconds

CV Coding Violations

UAS Unavailable Seconds

UATC Unavailable Time Count

MER Multiframe Errors

FEBE Far End Block Errors

FES	Far End Errored Seconds
FSES	Far End Severely Errored Seconds
FUAS	Far End Unavailable Seconds
15MIN	Fifteen minute
CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
CV	Coding Violations
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors
FEBE	Far End Block Errors
FES	Far End Errored Seconds
FSES	Far End Severely Errored Seconds
FUAS	Far End Unavailable Seconds

User-programmed PA NPC daily alarm threshold values

bbbbbbbbb	First
cccccccc	Second
ddddddddd	Third
bbbbbbb	First
cccccc	Second
ddddddd	Third

UTILITY QUERY OPTIONS NPCS

Explanation of Command

This command is used to request a printout of the performance parameter threshold values for Hybrid DS3 facilities that are stored in the threshold data base.

Command

1.544 Mbit/s Termination

[I.53053]

UTL:[FRM xy][,SEQ ww]:QRY,OPT,TYPE mn!

Completion Message

1.544 Mbit/s Termination

[O.53053]

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn 8 LN MSG:
OPT 101 0003867523 bbbbbbbbbb ccccccccc dddddddddd CVL, DAILY
OPT 102 0000004320 bbbbbbbbbb ccccccccc dddddddddd ESL, DAILY
OPT 103 0000000090 bbbbbbbbbb ccccccccc dddddddddd SESL, DAILY
OPT 104 0003867523 bbbbbbbbbb ccccccccc dddddddddd CVP, DAILY
OPT 105 0000176947 bbbbbbbbbb ccccccccc dddddddddd FMP, DAILY
OPT 106 0000004320 bbbbbbbbbb ccccccccc dddddddddd ESP, DAILY
OPT 107 0000000090 bbbbbbbbbb ccccccccc dddddddddd SESP, DAILY
OPT 108 0000000090 bbbbbbbbbb ccccccccc dddddddddd FSESP, DAILY
OPT 109 0000000000 bbbbbbbbbb ccccccccc dddddddddd UASP, DAILY
EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY OPT TYPE mn 8 LN MSG:
OPT 111 00402867 bbbbbbbb cccccccc dddddddd CVL, 15MIN
OPT 112 00000300 bbbbbbbb cccccccc dddddddd ESL, 15MIN
OPT 113 00000030 bbbbbbbb cccccccc dddddddd SESL, 15MIN
OPT 114 00402867 bbbbbbbb cccccccc dddddddd CVP, 15MIN
OPT 115 00018432 bbbbbbbb cccccccc dddddddd FMP, 15MIN
OPT 116 00000300 bbbbbbbb cccccccc dddddddd ESP, 15MIN
OPT 117 00000030 bbbbbbbb cccccccc dddddddd SESP, 15MIN
OPT 118 00000030 bbbbbbbb cccccccc dddddddd FSESP, 15MIN
OPT 119 00000000 bbbbbbbb cccccccc dddddddd UASP, 15MIN COMPL
```

**Explanation of
Parameters**

OPT

Option

In the output messages, the first value shown following the keyword **OPT** is the option number. The value immediately following the option number is the default alarm threshold value. The next three fields show user-programmed values. Any user-programmed values that have not been initialized in the DACS II data base are shown as <----->. Until they are initialized, user-programmable values cannot be used as valid alarm thresholds.

For Hybrid DS3 facilities (HX type), a programmed alarm threshold value of zero for any performance parameter disables threshold crossing alert messages for that parameter.

TYPE

Type

mn

NPC type

HX Hybrid DS3 Facility type

CVL Code Violation for the DS3 Line

ESL Errored Seconds for the DS3 Line

SESL Severely Errored Seconds for the DS3 Line

CVP Code Violation for the DS3 Path

FMP F- or M-bit errors for the DS3 Path

ESP Errored Seconds for the DS3 Path

SESP Severely Errored Seconds for the DS3 Path

FSESP Far End Severely Errored Seconds for the DS3 Path

UASP Unavailable Seconds for the DS3 Path

<bbbbbb> First user-programmed alarm threshold values

<cccccc> Second user-programmed alarm threshold values

<dddddd> Third user-programmed alarm threshold values

UTILITY QUERY STATUS COMMON EQUIPMENT

Explanation of Command

This command reports on one of the following parameters:

- PEST Pest states
- FAIL Failed components
- OOS Out-of-service components

The output message reports the status of the requested parameter on common equipment of the frame.

Command

```
[I.53105]
UTL: [FRM xy][, SEQ ww]:QRY, {PEST|FAIL|OOS}, COMMON!
```

Completion Message

```
[O.53105]
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} \
g h i j k l m n o p EOM

M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} 3 LN MSG:
SYNC x x' CRO x
TLI x x x x x x x x x' x' x' x' x'\
x' x' x' x' EOM
```

This segment describes the ECCN hardware:

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} TOTAL \
ETSIIS tt nn 3 LN MSG:
01 x x' 02 x x' 03 x x' 04 x x' 05 x x' 06 x x'\
07 x x' 08 x x'
09 x x' 10 x x' 11 x x' 12 x x' 13 x x' 14 x x'\
15 x x' 16 x x' EOM

M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} COMMON COMPL
```

**Explanation of
Parameters**

PEST
FAIL
OOS

Pested
Failed
Out of service

For the PEST, FAIL and OOS indications, each entity in the DACS II frame is represented by a single character variable. This variable can have the value of 1, 0 or - indicating the following status:

Value	OSS	FAIL	PEST
1	out of service	failed	pested
0	in service	not failed	unpested
-	not applicable	not applicable	not applicable

A hyphen (-) indicates the parameter is not applicable to the particular entity. For example, an unequipped circuit displays a - for its OOS, FAIL and PEST indicators.

The DACS II entities and their status fields are as follows:

g	Link 1
h	Link 2
i	Link 3
j	Link 4
k	Link 5
l	Link 6
m	XC0 (cross-connect 0)
n	XC1 (cross-connect 1)
o	Clock and control interface 0
p	Clock and control interface 1
SYNC	Synchronizer
CRO	Clock reference oscillator
TLI	Timing link interface
x	TLI status, side 0
x'	TLI status, side 1

TLI information is listed in the message from left to right, starting with status information for TLI 1, SSP 0, Side 0 in the first

position and ending with status information for TLI 4, SSP1, Side 1 in the last position. The entities for which status is reported are listed below in the order they appear in the output message.

Side 0

TLI 1, SSP 0
TLI 1, SSP 1
TLI 2, SSP 0
TLI 2, SSP 1
TLI 3, SSP 0
TLI 3, SSP 1
TLI 4, SSP 0
TLI 4, SSP 1

Side 1

TLI 1, SSP 0
TLI 1, SSP 1
TLI 2, SSP 0
TLI 2, SSP 1
TLI 3, SSP 0
TLI 3, SSP 1
TLI 4, SSP 0
TLI 4, SSP 1

The status is represented by the variable x or x'.

0 Unpested, in-service, or not failed
1 Pestted, out-of-service, or failed

TSI

Time slot interchange

f FROM unit (1 through 6)

t TO Unit (1 through 6)

ETSI

Expanded time slot interchanger

x

Status indication for the entity or for the side 0 entity if duplicated

x'

Status indication for side 1 entity

tt

Total number of equipped ETSIs.

nn

Total number of equipped ETSIs having the requested status

UTILITY QUERY STATUS OF ENTITIES/EQUIPMENT

Explanation of Command

This message requests reports on any one of the following parameters:

- PEST Pested components
- FAIL Failed components
- OOS Out-of-service components

These reports may be generated for the entire DACS II frame or for a particular unit. The UNIT parameter must be specified in the command to query for a particular unit. The UNIT parameter must be omitted to generate a report for the entire frame.

Command

[I.53103]
UTL: [FRM] xy[, SEQ] ww:QRY, {PEST|FAIL|OOS}[, UNIT [q]q]!

Completion Message

Nonhierarchical

If the optional unit number is not entered, the following output segments will be generated:

The output starts out with

[O.53103]

M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} \
g h i j k l m n o p EOM

M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} 3 LN MSG:
SYNC x y CRO x
TLI x x x x x x x x y y y y y y y y EOM

This segment covers the ECCN hardware:

M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} TOTAL \
ETSIIS tt nn 3 LN MSG:

```
01 x y 02 x y 03 x y 04 x y 05 x y 06 x y 07 x y 08 x y
09 x y 10 x y 11 x y 12 x y 13 x y 14 x y 15 x y 16 x y EOM
```

The output then continues with information about the common equipment in the units. The data line will only appear for units that are equipped. If more than four units are equipped, the output for the equipment of the units will be divided into multiple segments.

```
[M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNITS e LN MSG:]
[<data line for the common equipment in the first equipped unit>]
[<data line for the common equipment in the second equipped unit>]
[<data line for the common equipment in the third equipped unit>]
[<data line for the common equipment in the fourth equipped unit> \
EOM]
```

```
[M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNITS e LN MSG:]
[<data line for the common equipment in the fifth equipped unit>]
[<data line for the common equipment in the sixth equipped unit>]
[<data line for the common equipment in the seventh equipped unit>]
[<data line for the common equipment in the eighth equipped unit> \
EOM]
```

```
[M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNITS e LN MSG:]
[<data line for the common equipment in the ninth equipped unit>]
[<data line for the common equipment in the tenth equipped unit>]
[<data line for the common equipment in the 11th equipped unit>]
[<data line for the common equipment in the 12th equipped unit> \
EOM]
```

```
[M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNITS e LN MSG:]
[<data line for the common equipment in the 13th equipped unit>]
[<data line for the common equipment in the 14th equipped unit>]
[<data line for the common equipment in the 15th equipped unit>]
[<data line for the common equipment in the 16th equipped unit> \
EOM]
```

Data line for a unit equipped as DS1 FTU, IFTU or IFTU2:

```
UNIT [q]q UC a FTMI b c d e FC f g h j k m p q
```

Data line for a unit equipped as a DS3U or HDS3U:

```
UNIT [q]q UC a FLI b c FMT l m MXR d e f g h j k MIU n o p q u v w
```

Data line for a unit equipped as a DSPU:

```
UNIT [q]q UC a DSPI b
```

Then the output message continues with information about individual NPCs. For each FTM/MXR/HMXR/MPR/DSPU, one output message is printed.

Output message for PEST, FAIL, or OOS status of NPCs on an equipped DS1 FTM:

Please note, if any of the odd NPCs has been provisioned with a Digital Signal Processing Platform (DSPP) application (TG193), then the even NPC following it does not exist and a dash is shown in its place:

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} FTU \
NPCS [a]aaa-[b]bbb tt 5 LN MSG:
x x x x x x x x x x {PEST|FAIL|OOS} nn
x x x x x x x x x x
x x x x x x x x x x
x x x x x x x x x x EOM
```

Output message for PEST, FAIL, or OOS status of NPCs on an equipped E1 (CEPT) FTM:

Please note, if any of the odd NPCs has been provisioned with a Digital Signal Processing Platform (DSPP) application (TG193), then the even NPC following it does not exist and a dash is shown in its place:

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} FTU \
NPCS [a]aaa-[b]bbb tt 5 LN MSG:
x x x x x x x x x x {PEST|FAIL|OOS} nn
x x x x x x x x x x
x x x x x x x x x x
x x x x x x x x x x EOM
```

Output message for PEST, FAIL, or OOS status of NPCs on an equipped DS3 MXR or HMXR:

Please note, if one or more DS2s in an HMXR have been provisioned with E1 NPCs, then the fourth NPC positions in those DS2s do not exist and will be represented by dashes in the output.

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} DS3U \
NPCS [a]aaa-[b]bbb tt 5 LN MSG:
x x x x x x x x x x {PEST|FAIL|OOS} nn
x x x x x x x x x x
x x x x x x x x x x
x x x x x x x x x x EOM
```

Output message for PEST, FAIL, or OOS status of NPCs on an equipped DSP Unit:

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} DSPU \
NPCS [a]aaa-[b]bbb tt 3 LN MSG:
[z]zzz x y [z]zzz x y [z]zzz x y [z]zzz x y
[z]zzz x y [z]zzz x y [z]zzz x y [z]zzz x y {PEST|FAIL|OOS} nn EOM
```

Output message for NPCs on an equipped FTM/MXR/HMXR/MPR/DSPU with no NPC in the PEST, FAIL, or OOS state:

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} \
{FTU|DS3U|DSPU} NPCS [a]aaa-[b]bbb tt 2 LN MSG: {PEST|FAIL|OOS} 00
EOM
```

After the above information is output, the following message will be generated to complete the response:

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} COMPL
```

If the unit number is specified, the following output segments will be generated:

For entities in an FTU, IFTU or IFTU2:

[O.53103]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} 2 LN MSG:
UNIT [q]q UC a FTMI b c d e FC f g h j k m p q EOM
```

The output then continues with up to four of the following segments depending on the FTM equipage. The segments have a DS1 form and an E1 (CEPT) form.

Please note, if any of the odd NPCs has been provisioned with a Digital Signal Processing Platform (DSPP) application (TG193), then the even NPC following it does not exist and a dash is shown in its place.

Message form if FTM is provisioned for DS1s.

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNIT [q]q FTU \
NPCS [a]aaa-[b]bbb tt 5 LN MSG:
x x x x x x x x x x {PEST|FAIL|OOS} nn
x x x x x x x x x x
x x x x x x x x x x
x x x x x x x x x x EOM
```

Message form if FTM is provisioned for E1s.

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNIT [q]q FTU \
NPCS [a]aaa-[b]bbb tt 5 LN MSG:
x x x x x x x x {PEST|FAIL|OOS} nn
x x x x x x x x
x x x x x x x x
x x x x x x x x EOM
```

For entities in a DS3U or HDS3U:

[O.53103]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} 2 LN MSG:
UNIT [q]q UC a FLI b c FMT l m MXR d e f g h j k MIU n o p q u v w \
EOM
```

The output then continues with up to seven of the following segments depending on the MXR or HMXR equipage:

Please note, if one or more DS2s in an HMXR have been provisioned with E1 NPCs, then the fourth NPC positions in those DS2s do not exist and will be represented by dashes in the output.

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNIT [q]q DS3U \
NPCS [a]aaa-[b]bbb tt 5 LN MSG:
x x x x x x x x {PEST|FAIL|OOS} nn
x x x x x x x x
x x x x x x x x
x x x x x x x x EOM
```

For entities in a DSPU:

[O.53103]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNIT [q]q UC a \
DSPU b EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNIT [q]q \
DSPU NPCS [a]aaa-[b]bbb tt 3 LN MSG:
[z]zzz x y [z]zzz x y [z]zzz x y [z]zzz x y
[z]zzz x y [z]zzz x y [z]zzz x y [z]zzz x y {PEST|FAIL|OOS} EOM
```

Output message for NPCs on an equipped FTM/MXR/HMXR/DSPU with no NPC in PEST, FAIL, or OOS state:

[O.53103]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} \
{FTU|DS3U|DSPU} NPCS [a]aaa-[b]bbb tt 2 LN MSG:
{PEST|FAIL|OOS} 00 EOM
```

After the above information is output, the following message is generated to complete the response:

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNIT [q]q COMPL
```

Hierarchical

If the unit number is not entered, the following output segments will be generated:

The output starts out with

[O.53103]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} \
g h i j k l m n o p EOM

M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} 3 LN MSG:
SYNC x y CRO x
TLI x x x x x x x x y y y y y y y y EOM
```

This segment covers the ECCN hardware:

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} TOTAL \
ETSIIS tt nn 3 LN MSG:
01 x y 02 x y 03 x y 04 x y 05 x y 06 x y 07 x y 08 x y
09 x y 10 x y 11 x y 12 x y 13 x y 14 x y 15 x y 16 x y EOM
```

The output then continues with information about the common equipment in the units. The data line will only appear for units that are equipped. If more than four units are equipped, the output for the equipage of the units will be divided into multiple messages.

```
[M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNITS e LN MSG:]
[<data line for the common equipment in the first equipped unit>]
[<data line for the common equipment in the second equipped unit>]
[<data line for the common equipment in the third equipped unit>]
[<data line for the common equipment in the fourth equipped unit> \
EOM]
```

```
[M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNITS e LN MSG:]
[<data line for the common equipment in the fifth equipped unit>]
[<data line for the common equipment in the sixth equipped unit>]
[<data line for the common equipment in the seventh equipped unit>]
[<data line for the common equipment in the eighth equipped unit> \
EOM]
```

```
[M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNITS e LN MSG:]
[<data line for the common equipment in the ninth equipped unit>]
[<data line for the common equipment in the tenth equipped unit>]
[<data line for the common equipment in the 11th equipped unit>]
[<data line for the common equipment in the 12th equipped unit> \
EOM]
```

```
[M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNITS e LN MSG:]
[<data line for the common equipment in the 13th equipped unit>]
[<data line for the common equipment in the 14th equipped unit>]
[<data line for the common equipment in the 15th equipped unit>]
[<data line for the common equipment in the 16th equipped unit>
EOM]
```

Data line for a unit equipped as DS1 FTU, IFTU or IFTU2:

```
UNIT [q]q UC a FTMI b c d e FC f g h j k m p q
```

Data line for a unit equipped as a DS3U or HDS3U:

```
UNIT [q]q UC a FLI b c FMT l m MXR d e f g h j k \
MIU n o p q u v w
```

Data line for a unit equipped as a DSPU:

```
UNIT [q]q UC a DSPI b
```

Then the output message continues with information about individual NPCs. For each FTM/MXR/HMXR/MPR/DSPU, one output message will be printed.

For PEST, FAIL, or OOS status of NPCs on an equipped DS1 FTM:

Please note, if any of the odd NPCs has been provisioned with a Digital Signal Processing Platform (DSPP) application (TG193), then the even NPC following it does not exist and a dash will be shown in its place:

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} FTU
NPCS uvmnp-uxkqr tt 5 LN MSG:
x x x x x x x x x x {PEST|FAIL|OOS} nn
x x x x x x x x x x
x x x x x x x x x x
x x x x x x x x x x EOM
```

For PEST, FAIL, or OOS status of NPCs on an equipped E1 FTM:

Please note, if any of the odd NPCs has been provisioned with a Digital Signal Processing Platform (DSPP) application (TG193), then the even NPC following it does not exist and a dash will be shown in its place:

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} FTU
NPCS uvmnp-uxkqr tt 5 LN MSG:
x x x x x x x x x x {PEST|FAIL|OOS} nn
x x x x x x x x x x
x x x x x x x x x x
x x x x x x x x x x EOM
```

For PEST, FAIL, or OOS status of NPCs on an equipped DS3 MXR or HMXR:

Please note, if one or more DS2s in an HMXR have been provisioned with E1 NPCs, then the fourth NPC positions in those DS2s do not exist and will be represented by dashes in the output.

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} DS3U
NPCS uvmnp-uxkqr tt 5 LN MSG:
x x x x x x x x x x {PEST|FAIL|OOS} nn
x x x x x x x x x x
x x x x x x x x x x
x x x x x x x x x x EOM
```

For PEST, FAIL, or OOS status of NPCs on an equipped DSP unit:

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} DSPU
NPCS uvmnp-uxkqr tt 3 LN MSG:
uvmnp x y uvmnp x y uvmnp x y uvmnp x y
uvmnp x y uvmnp x y uvmnp x y uvmnp x y {PEST|FAIL|OOS} nn EOM
```

Output message for an equipped FTM/MXR/HMXR/DSPU with no NPC having the PEST, FAIL, or OOS status:

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} \
{FTU|DS3U|DSPU} NPCS uvmnp-uxkqr tt 2 LN MSG:
{PEST|FAIL|OOS} 00 EOM
```

After the above information is output, the following message will be generated to complete the response:

M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} COMPL

If the unit number is specified, the following output segments will be generated:

For entities in an FTU:

[O.53103]

M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} 2 LN MSG:
UNIT [q]q UC a FTMI b c d e FC f g h j k m p q EOM

The output then continues with up to four of the following segments for NPCs in an FTM. The segments have a DS1 form and an E1 (CEPT) form. If an FTM is not equipped, the segment for this FTM will not be output:

Please note, if any of the odd NPCs has been provisioned with a Digital Signal Processing Platform (DSPP) application (TG193), then the even NPC following it does not exist and a dash will be shown in its place:

Message form if FTM is provisioned for DS1s.

M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNIT [q]q FTU \
NPCS uvmnp-uxkqr tt 5 LN MSG:
x x x x x x x x x x {PEST|FAIL|OOS} nn
x x x x x x x x x x
x x x x x x x x x x
x x x x x x x x x x EOM

Message form if FTM is provisioned for E1s.

M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNIT [q]q FTU \
NPCS uvmnp-uxkqr tt 5 LN MSG:
x x x x x x x x x x {PEST|FAIL|OOS} nn
x x x x x x x x x x
x x x x x x x x x x
x x x x x x x x x x EOM

For entities in a DS3U or HDS3U:

[O.53103]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} 2 LN MSG:
UNIT [q]q UC a FLI b c FMT l m MXR d e f g h j k \
MIU n o p q u v w EOM
```

The output then continues with up to seven of the following segment for NPCs in an MXR or HMXR. If an MXR or HMXR is not equipped, the segment for this MXR or HMXR will not be output:

Please note, if one or more DS2s in an HMXR have been provisioned with E1 NPCs, then the fourth NPC positions in those DS2s do not exist and will be represented by dashes in the output.

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNIT [q]q
DS3U NPCS uvmnp-uxkqr tt 5 LN MSG:
x x x x x x {PEST|FAIL|OOS} nn
x x x x x x
x x x x x x
x x x x x x EOM
```

For entities in a DSPU:

[O.53103]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNIT [q]q UC a
DSPI b EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNIT [q]q
DSPU NPCS uvmnp-uxkqr tt 3 LN MSG:
uvmnp x y uvmnp x y uvmnp x y uvmnp x y
uvmnp x y uvmnp x y uvmnp x y uvmnp x y {PEST|FAIL|OOS} nn EOM
```

Output message for an equipped FTM/MXR/HMXR/DSPU with no NPC having the PEST, FAIL, or OOS status:

[O.53103]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} {FTU|DS3U|DSPU} NPCS
uvmnp-uxkqr tt 2 LN MSG:
{PEST|FAIL|OOS} 00 EOM
```

After the above information is output, the following message will be generated to complete the response:

[O.53103]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNIT [q]q COMPL
```


Denial Message

[O.53103.01]

M hh:mm:ss xy,ww n[vv] UTL QRY {PEST|FAIL|OOS} UNIT [q]q COND cc \ DNY

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16) The UNIT option must be specified to query a particular unit. The UNIT option must be omitted to query the entire frame. If the UNIT option is specified, only the information related to the equipment in that unit will be generated.
OOS	Applied to a component it means the component is Out-of-Service
FAIL	Applied to a component it means the component has Failed
PEST	Applied to a component it means the Component has been Pested. A component is in the pested state if all the hardware and facility interrupts associated with that component have been disabled.

For the OOS, FAIL and PEST indications, each entity in the DACS II frame is represented by a single character variable. This variable can have the value of 1, 0 or "-" indicating the following status:

Value	OSS	FAIL	PEST
1	out of service	failed	pested
0	in service	not failed	not pested
-	not applicable	not applicable	not applicable

A hyphen (-) indicates the parameter is not applicable to the particular entity. For example, an unequipped circuit displays a "-" for its OOS, FAIL and PEST indicators.

The DACS II entities and their status fields are as follows:

g	Link1
h	Link 2
i	Link 3
j	Link 4

	k	Link 5
	l	Link 6
	m	XC0 (cross-connect 0)
	n	XC1 (cross-connect 1)
	o	CCI 0 (clock and control interface 0)
	p	CCI 1 (clock and control interface 1)
SYNC		Synchronizer
CRO		Clock reference oscillator
TLI		Timing link interface
		The order of the TLI presented in the output follows:
		TLI 1, SSP 0, Side 0
		TLI 1, SSP 1, Side 0
		TLI 2, SSP 0, Side 0
		TLI 2, SSP 1, Side 0
		TLI 3, SSP 0, Side 0
		TLI 3, SSP 1, Side 0
		TLI 4, SSP 0, Side 0
		TLI 4, SSP 1, Side 0
		TLI 1, SSP 0, Side 1
		TLI 1, SSP 1, Side 1
		TLI 2, SSP 0, Side 1
		TLI 2, SSP 1, Side 1
		TLI 3, SSP 0, Side 1
		TLI 3, SSP 1, Side 1
		TLI 4, SSP 0, Side 1
		TLI 4, SSP 1, Side 1
ET SIS		Expanded time slot interchangers
x		Status of the entity or the side 0 entity if the entity is duplicated
y		Status of the side 1 entity
tt		Total number of equipped entities
nn		Total number of entities having the requested status
UC		Unit controller
FTM		Facility Terminating Module
FTMI		Facility terminating module interface
FC		Format converter

For an FTU/IFTU/IFTU2 equipment output, the definition of each character follows:

a	status of UC
b	status of FTMI 1
c	status of FTMI 2
d	status of FTMI 3
e	status of FTMI 4
f	status of FC 01
g	status of FC 11
h	status of FC 02
j	status of FC 12
k	status of FC 03
m	status of FC 13
p	status of FC 04
q	status of FC 14

FLI	Facility line interface for DS3 or Hybrid DS3 Units
FMT	Formatter or Hybrid Formatter for DS3 or Hybrid DS3 Units
MXR	Multiplexer or Hybrid Multiplexer for DS3 or Hybrid DS3 Units
MIU	Multiple interface unit for DS3 Units

For a DS3U or HDS3U equipment output, the definition of each character follows:

a	status of UC
b	status of service FLI
c	status of protection FLI
l	status of side 0 FMT or HFMT
m	status of side 1 FMT or HFMT
d	status of protection MXR or HMXR
e	status of MXR or HMXR 1
f	status of MXR or HMXR 2
g	status of MXR or HMXR 3
h	status of MXR or HMXR 4
j	status of MXR or HMXR 5

k status of MXR or HMXr 6
n status of protection MIU
o status of MIU 1
p status of MIU 2
q status of MIU 3
u status of MIU 4
v status of MIU 5
w status of MIU 6

FMT Formatter

DSPI Digital signal processing interface

For a DSPU equipment output, the definition of each character follows:

a status of UC
b status of DSPI

[a]aaa The first 3- or 4-digit nonhierarchical NPC number of an FTM, MXR, HMXR or MPR
[b]bbb The last 3- or 4-digit nonhierarchical NPC number for an FTM, MXR, or HMXR
[z]zzz The 3- or 4-digit nonhierarchical DSPU NPC number.
uvmnp The first hierarchical NPC number for an FTM, MXR, HMXR, MPR or DSPU
uxkqr The last hierarchical NPC number for an FTM, MXR, HMXR, MPR or DSPU
cc Hexadecimal condition code

cc	Explanation
02	Subject entity is not equipped

QUERY DS1 PERFORMANCE MONITORING REPORT SCHEDULE

Explanation of Command

This command retrieves information on the user-programmed schedule of autonomous performance monitoring reports, which DACS II generates for DA and TA type NPCs. The user may retrieve the PM report schedule information for a single, a range or all applicable NPCs on the frame.

NPC Addressing

This command handles NPC addressing in the input command as follows:

- If only a single NPC is addressed in the input command, and it is of an applicable type, then a completion response is generated. The choice of completion response depends on if any scheduled report exists for that NPC. If the NPC type is not applicable, DACS II always denies invalid commands to a specifically addressed NPC.
- If a range of NPCs is addressed, and one or more NPCs within the range is of applicable types, DACS II retrieves the information for each of the NPCs in the range that support this feature, but skips the NPCs which do not support this feature.

DACS II provides a variety of line termination types which support different features and can be randomly mixed within the frame. If at least one of the NPCs in the addressed range supports this feature, DACS II generates a completion response with one output segment containing the information for each applicable NPC in the range; individual denial responses are not generated for NPCs within the range which do not support the feature. If *none* of the NPCs in the addressed range supports the requested feature, DACS II generates a range denial response.

The ALL Option

If the 'ALL' option is used, and there is one or more PM report schedule(s) on the frame, DACS II responds by echoing all the PM report data as they were entered when the report was scheduled, with the current NI and RT values, and omitting the inhibit information. The output information is necessary for a PM report to be deleted. If there are no applicable NPC types on the DACS II frame, the response is a denial.

Command

Nonhierarchical

[I.51151]

UTL:[FRM xy][,SEQ ww]:QRY,PMSCHED,{NPC [s]abc[-[t]def]|ALL}!

Hierarchical

[I.51151]

UTL:[FRM xy][,SEQ ww]:QRY,PMSCHED,{NPC uvmnp[-wxkqr]|ALL}!

Completion Message

Nonhierarchical

Output message when there are no scheduled reports for the addressed NPCs:

[O.51151]

M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED {NPC [s]abc[-[t]def]|ALL} \
000 COMPL

Output message for one or a range of NPCs, and there is at least one schedule to report:

[O.51151]

M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC [v]ghi RI rrrrr 3 LN MSG:
RD dddd RT cccc NI nn <parameter> LV llllllllll LOCN locn AI aaaaa \
TOF ttttt[-ooooo] IM iii[LK p[vv][q[vv]]] EOM

.
.
.

[M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC [u]jkl RI rrrrr \
3 LN MSG:]

[RD dddd RT cccc NI nn <parameter> LV llllllllll LOCN locn \
AI aaaaa]

[TOF ttttt[-ooooo] IM iii[LK p[vv][q[vv]]] EOM]

M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC [s]abc[-[t]def] COMPL

Output message for ALL NPCs, and there is at least one schedule to report:

[O.51151]

M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC [v]ghi[-[u]jkl] \
RI rrrrr 3 LN MSG:

RD dddd RT cccc NI nn <parameter> LV llllllllll LOCN locn AI aaaaa \
TOF ttttt[-ooooo][LK p[vv][q[vv]]] EOM

.
.
.

```
[M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC [v]ghi[-[u]jkl] \
RI rrrrr 3 LN MSG:]
[RD dddd RT cccc NI nn <parameter> LV llllllllll LOCN locn \
AI aaaaa]
[TOF ttttt[-ooooo][ LK p[vv][ q[vv]]] EOM]
M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED ALL COMPL
```

Hierarchical

Output message when there are no scheduled reports for the addressed NPCs:

[O.51151]

```
M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED {NPC uvmnp[-wxkqr]|ALL} \
000 COMPL
```

Output message for one or a range of NPCs, and there is at least one schedule to report:

[O.51151]

```
M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC edhfg RI rrrrr 3 LN MSG:
RD dddd RT cccc NI nn <parameter> LV llllllllll LOCN locn AI aaaaa \
TOF ttttt[-ooooo] IM iii[ LK p[vv][ q[vv]]] EOM
.
.
.
[M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC opjst RI rrrrr \
3 LN MSG:]
[RD dddd RT cccc NI nn <parameter> LV llllllllll LOCN locn \
AI aaaaa]
[TOF ttttt[-ooooo] IM iii[ LK p[vv][ q[vv]]] EOM]
M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC uvmnp[-wxkqr] COMPL
```

Output message for ALL NPCs, and there is at least one schedule to report:

[O.51151]

```
M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC edhfg[-opjst] RI rrrrr \
3 LN MSG:
RD dddd RT cccc NI nn <parameter> LV llllllllll LOCN locn AI aaaaa \
TOF ttttt[-ooooo][ LK p[vv][ q[vv]]] EOM
.
.
.
[M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED NPC edhfg[-opjst] \
RI rrrrr 3 LN MSG:]
[RD dddd RT cccc NI nn <parameter> LV llllllllll LOCN locn \
AI aaaaa]
[TOF ttttt[-ooooo][ LK p[vv][ q[vv]]] EOM]
M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED ALL COMPL
```

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.51151.01]

M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED {NPC [s]abc[-[t]def]|ALL} \
 COND cc DNY

Hierarchical

[O.51151.01]

M hh:mm:ss xy,ww n[vv] UTL QRY PMSCHED {NPC uvmnp[-wxkqr]|ALL} \
 COND cc DNY

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical starting NPC number
[t]def	The 3- or 4-digit nonhierarchical ending NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical starting NPC number
wxkqr	Hierarchical ending NPC number
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ALL	All report schedules are queried for all NPCs.
	Each scheduled report is displayed with its range of NPCs.
[v]ghi	The 3- or 4-digit nonhierarchical NPC number ([s]abc through [u]jkl)
[u]jkl	The 3- or 4-digit nonhierarchical NPC number ([v]ghi through [t]def); or range of NPCs for a scheduled report, if ALL NPCs are queried.
edhfg	Hierarchical NPC number (uvmnp through opjst)

opjst	Hierarchical NPC number (edhfg through wxkqr); or range of NPCs for a scheduled report, if ALL NPCs are queried.
ed,op	Unit number (uv through wx)
h,j	Module number
fg,st	NPC number within the module
RI	Report interval
rrrrr	The interval between performance monitoring reports
	{0001-1440}M Report interval in minutes
	{0001-0024}H Report interval in hours
	{0001-0007}D Report interval in days
RD	Report date
dddd	The date for the next performance monitoring report.
	{01-12} {01-31} Month of Year/Day of Month Format
RT	Report time
cccc	The time of day for the next performance monitoring report.
	{00-23} {00-59} Hour of Day/Minute of Hour Format
NI	Number of intervals
nn	The remaining number of intervals over which performance monitoring is to be reported. If this parameter is CT, the performance monitoring schedule remains in effect until the schedule is canceled using another Schedule PM Report command.
	{01-96} Finite number of scheduled reports
CT	Continuous reports until cancelled
parameter	The parameter for which reporting is being scheduled.
	CVP Path Coding Violations
	CVL Line Coding Violations
	ESP Path Errored Seconds
	ESL Line Errored Seconds
	SESP Path Severely Errored Seconds

	SESL	Line Severely Errored Seconds
	SEFS	Path Severely Errored Framing Seconds
	CSS	Path Controlled Slip Seconds
	UAS	Path Unavailable Seconds
	ALLPAR	All listed parameters
LV		Level
IIIIIIII		The discriminating level for the requested parameter.
	{000000000-134217728}U	Discriminating Level-Up Direction
	{000000000-134217728}D	Discriminating Level-Down Direction
Up		Parameters with values equal to or greater than the discriminating level specified are reported.
Down		Parameters with values equal to or less than the discriminating level specified are reported.
LOCN		Location
locn		The location being performance monitored.
	NEND	Near-end
	FEND	Far-end
AI		Accumulation interval
aaaaa		The accumulation time period for the specified parameter.
	15MIN	Parameter count from a 15-minute accumulator
	DAILY	Parameter count from a daily accumulator
TOF		Time offset
ttttt		The age of the requested data registers(s) at the reporting time, measured backwards in time from the end of last completed accumulation interval to the beginning of the requested interval.
ooooo		If the report interval is an integral number of accumulation intervals, this parameter specifies a range of up to four historical data registers per scheduled report.
	{0-7}{00-23}	
	{00,15,30,45,60}	Day/Hour/Minute
		If the value 7 is given for day, then Hour and Minute must be zero.

To produce reports that contain historical data of completed accumulation intervals, the scheduled report times (set up with start time and report interval) usually coincide with the end of accumulation intervals, and the time offset must be an integral number of accumulation intervals.

A time offset value of 00000 or any value less than the accumulation interval produces a report that contains data from the current register.

IM

Inhibit Mode

iii

Indicates whether the reporting of performance monitoring data for the facility is currently inhibited or enabled. This information is omitted for the ALL case.

ALW

Performance monitoring reporting is allowed

INH

Performance monitoring reporting is inhibited

LK

Link

p[vv],q[vv]

Up to two administrative links to which the scheduled report output q[vv] are transmitted. The user may omit these optional parameters, specify a single link, or specify two links which both receive all output generated by this scheduled report. If these optional parameters are omitted, the scheduled report output by default is transmitted only to the link that the schedule command was received on.

cc

Hexadecimal condition code

cc

Explanation

15

NPC is unequipped

26

NPC type error

A1

The parameter specified does not match with the NPC type

0F

Frame time is not set

1F

Scheduled reporting for this npc is inhibited

QUERY UNIT PROTECTION STATE

Explanation of Command

This command reports the maintenance and protection state for the facility line interface (FLI) circuit pack and for the multiplexer multiple-line interface functional group (MMFG) pack in a DS3 unit (DS3U) or a Hybrid DS3 unit (HDS3U). It also indicates whether alarm generation for unprotected DS3 (due to manual commands) is enabled or disabled. The enabling/disabling of alarm generation applies to all DS3Us and HDS3Us in the DACS frame. It is not on a per DS3U or HDS3U basis.

Command

[I.56511]
UTL: [FRM xy][, SEQ ww]:QRY, PSTATE, UNIT [q]q!

Completion Message

[O.56511]
M hh:mm:ss xy,ww n[vv] UTL QRY PSTATE UNIT [q]q FLI 4 LN MSG:
S P
<vvv> <vvv>
<zzzz> <zzzz> EOM

M hh:mm:ss xy,ww n[vv] UTL QRY PSTATE UNIT [q]q MMFG P-6 6 LN MSG:
<xxxx> <xxxx> <xxxx> <xxxx> <xxxx> <xxxx> <xxxx>
<yyyy> <yyyy> <yyyy> <yyyy> <yyyy> <yyyy> <yyyy>
<bbbb> <aaaa> <aaaa> <aaaa> <aaaa> <aaaa> <aaaa>
ccc ccc ccc ccc ccc ccc ccc
DS3UNPROTALM <dd> COMPL

Denial Message

[O.56511.01]
M hh:mm:ss xy,ww n[vv] UTL QRY PSTATE UNIT [q]q COND cc DNY

Explanation of Parameters

PSTATE Protection state
S Service

P	Protection
FLI	Facility line interface
vvv	FLI maintenance state
S	In-service
SF	In-service failed or pested
OOS	Out-of-service
zzzz	FLI protection state
SLT	Selected (designated to carry service)
USLT	Unselected (not designated to carry service)
MMFG	Multiplexer-multiplexer interface unit functional group
xxxx	Multiplexer (MXR) or Hybrid MXR (HMXR) maintenance state
S	In service
SF	In service Failed/Pested
OOS	Out of service
UEQD	Not equipped (not possible for a protection MXR)
yyyy	Multiplexer Interface Unit (MIU) or Hybrid MIU (HMIU) maintenance state
S	In service
SF	In service failed/pested
OOS	Out of service
UEQD	Not equipped
aaaaa	In service failed/pested
SALW	The service MMFG is selected to carry service, and protection switching is ALLOWED
SINH	The service MMFG is selected to carry service, and AUTOMATIC protection switching is INHIBITED. Manual switching is permitted.
MPALW	The facility on this MMFG is being served by the protection pack as a result of a manual switch command, and automatic switchback is ALLOWED
APALW	The facility on this MMFG is being served by the protection pack as a result of an automatic switch, and automatic switchback is ALLOWED

	MPINH	The facility on this MMFG is being served by the protection pack as a result of a manual switch command, and automatic switchback is INHIBITED
	APINH	The facility on this MMFG is being served by the protection pack as a result of an automatic switch, and automatic switchback is INHIBITED
-----	The service MXR is not equipped	
bbbb	Selection status of the protection MMFG	
	SLT	Selected (designated to carry service)
	USLT	Unselected (not designated to carry service)
ccc	Availability of protection switch in case of failure:	
	AVL	Protection switch available
	NVL	Protection switch not available (if the aaaa field is SINH, MPINH or APINH, this field will always be NVL)
	---	The MMFG is not selected
COND	Condition	
DS3UNPROTALM	DS3 Unprotected Alarm	
	ON	Enabled
		Alarm will be generated when DS3 service is unprotected due to manual commands.
	OFF	Disabled
		Alarm will not be generated when DS3 service is unprotected due to manual commands.
cc	Hexadecimal condition code	
	cc	<i>Explanation</i>
	02	Subject entity is not equipped

RETRIEVE MESSAGE LOG RANGE

Explanation of Command

This command displays the range of the Message Log numbers as well as the total number of messages currently in the Message Log. This information is constantly changing.

Command

[I.57001]
UTL: [FRM xy][, SEQ ww]:QRY, MSGLOG, RANGE!

Completion Message

[O.57001]
M hh:mm:ss xy, ww n[vv] UTL QRY MSGLOG RANGE <a>- total COMPL

Denial Message

[O.57001.01]
M hh:mm:ss xy, ww n[vv] UTL QRY MSGLOG RANGE COND cc DNY

Explanation of Parameters

MSGLOG	Message Log
RANGE	Message Range
	The range of messages stored in the Message Log
a	Number of first message stored in the Message Log
b	Number of last message stored in the Message Log
total	Total number of messages existing in the Message Log
cc	Hexadecimal condition code

cc	<i>Explanation</i>
02	Subject entity is not equipped

UTILITY QUERY ROLL DS0

Explanation of Command

This command is used to request a report on the roll status of all of the channels in a network processing circuit (NPC). The roll status request may be for a single NPC, a range of NPCs, all NPCs in a unit, or all NPCs in the DACS II frame.

The output message shows the correspondence between the bridge and service legs of the Roll procedure. Original Service and Original Bridged leg refer to the service and bridged leg designations created by the Bridge step of the Roll procedure. New Service and New Bridged leg refer to the service and bridged leg designations created by the Roll step of the Roll procedure.

1.544 Mbit/s Termination

The output message displays the roll status of each of the 24 channels of an NPC. The top left position corresponds to channel one of the NPC and the bottom right position corresponds to channel twenty-four of the NPC. All dashes are displayed if neither a Service leg nor a Bridged leg is associated with a channel.

2.048 Mbit/s Termination

The output message displays the roll status of each of the 32 channels of an NPC. The top left position corresponds to telephone channel 0 of the NPC and the last item corresponds to telephone channel 31 of the NPC. Note that telephone channel 0 (Channel Timeslot 0) and telephone channel 31 (Channel Timeslot 16) in the Channel Associated Signaling mode cannot be rolled.

All dashes are displayed if there is neither a Service leg nor a Bridged leg associated with a channel. Telephone channel 0 and telephone channel 31 in the Channel Associated Signaling mode have all dashes.

The display is repeated for each NPC in the range. If there are no rolled channels on an NPC within a range, then no roll status output is generated for that NPC.



NOTE:

The processing time to query the roll status of a fully equipped frame could exceed 9 minutes.

1.544 Mbit/s Termination

The specified NPC range can cross a unit boundary and is applicable to facility terminating unit (FTU) and DS3 unit (DS3U) types.

2.048 Mbit/s Termination

The specified NPC range can cross a unit boundary.

Command

Nonhierarchical

[I.52081]

UTL: [FRM xy][, SEQ ww]:QRY, ROLL, DS0, {NPC [s]abc[-[t]def]|ALL \[, UNIT [q]q}}!

Hierarchical

[I.52081]

UTL: [FRM xy][, SEQ ww]:QRY, ROLL, DS0, {NPC uvmnp[-wxkqr]|ALL \[, UNIT [q]q}}!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

The output message in nonhierarchical PDS form spans one output segment per NPC.

If the 3- or 4-digit nonhierarchical NPC number is used, the output is six channels per line as follows:

[O.52081]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS0 NPC [s]abc 5 LN MSG:
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj EOM
```

```
[M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS0 NPC [t]def 5 LN MSG:
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj EOM]
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS0 {NPC [s]abc[-[t]def]} \
ALL[ UNIT [q]q]} COMPL
```

Hierarchical

The output message in hierarchical PDS form spans one output segment per NPC.

If a hierarchical NPC number is used, the output is six channels per line as follows:

[O.52081]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS0 NPC uvmnp 5 LN MSG:
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
EOM
```

```
[M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS0 NPC wxkqr 5 LN MSG:
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
EOM]
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS0 {NPC uvmnp[-wxkqr]} \
ALL[ UNIT [q]q]} COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

The output message in nonhierarchical PDS form spans one output segment per NPC.

If the 3- or 4-digit nonhierarchical NPC number is used, the output is six channels per line (except for the last line) as follows:

[O.52081]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS0 NPC [s]abc 7 LN MSG:
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj
rr[u]ghijjj rr[u]ghijjj EOM
```

```
[M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS0 NPC [t]def 7 LN MSG:
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj
rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj rr[u]ghijjj \
rr[u]ghijjj
rr[u]ghijjj rr[u]ghijjj EOM]
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS0 {NPC [s]abc[-[t]def]} \
ALL[ UNIT [q]q]} COMPL
```

Hierarchical

The output message in hierarchical PDS form spans one output segment per NPC.

If a hierarchical NPC number is used, the output is six channels per line (except for the last line) as follows:

[O.52081]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS0 NPC uvmpn 7 LN MSG:
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
rrghikljjj rrghikljjj EOM
```

```
[M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS0 NPC wxkqr 6 LN MSG:
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
```

```
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj rrghikljjj
rrghikljjj rrghikljjj EOM]
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS0 {NPC uvmnp[-wxkqr]} \
ALL[ UNIT [q]q]} COMPL
```

Explanation of Parameters

[s]abc	3- or 4-digit nonhierarchical NPC number, the first number of a range or a single NPC number.								
[t]def	3- or 4-digit nonhierarchical NPC number, the last number of a range.								
ALL	All Keyword indicating that all NPCs in the frame are being queried for Roll status.								
UNIT	Unit								
[q]q	Unit number (1 through 16) Keyword used to limit query to all NPCs in a Unit.								
[u]ghi	The 3- or 4-digit nonhierarchical NPC number of the Service or Bridged channel associated with the queried NPC.								
ghikl	Hierarchical NPC number of the Service or Bridged leg associated with the queried NPC								
jjj	Channel number of the Service or Bridged leg associated with the queried NPC								
rr	The Roll status of a channel interpreted as follows: <table> <tr> <td>OS</td><td>Indicates that channel [u]ghijjj or ghikljjj is the Original Service leg and the corresponding channel is the Original Bridged leg.</td></tr> <tr> <td>NS</td><td>Indicates that channel [u]ghijjj or ghikljjj is the New Service leg and the corresponding channel is the New Bridged leg.</td></tr> <tr> <td>OB</td><td>Indicates that channel [u]ghijjj or ghikljjj is the Original Bridged leg and the corresponding channel is the Original Service leg.</td></tr> <tr> <td>NB</td><td>Indicates that channel [u]ghijjj or ghikljjj is the New Bridged leg and the corresponding channel is the New Service leg.</td></tr> </table>	OS	Indicates that channel [u]ghijjj or ghikljjj is the Original Service leg and the corresponding channel is the Original Bridged leg.	NS	Indicates that channel [u]ghijjj or ghikljjj is the New Service leg and the corresponding channel is the New Bridged leg.	OB	Indicates that channel [u]ghijjj or ghikljjj is the Original Bridged leg and the corresponding channel is the Original Service leg.	NB	Indicates that channel [u]ghijjj or ghikljjj is the New Bridged leg and the corresponding channel is the New Service leg.
OS	Indicates that channel [u]ghijjj or ghikljjj is the Original Service leg and the corresponding channel is the Original Bridged leg.								
NS	Indicates that channel [u]ghijjj or ghikljjj is the New Service leg and the corresponding channel is the New Bridged leg.								
OB	Indicates that channel [u]ghijjj or ghikljjj is the Original Bridged leg and the corresponding channel is the Original Service leg.								
NB	Indicates that channel [u]ghijjj or ghikljjj is the New Bridged leg and the corresponding channel is the New Service leg.								

--	Indicates that the channel is not a Service or Bridged leg
uvmnp	Hierarchical NPC number, the first number of a range or a single NPC number
wxkqr	Hierarchical NPC number, the last number of a range
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module

1.544 Mbit/s Termination

Valid NPC types for DS0 Roll are DExyz (except DE9y9), TExyz (except TE9y9), DAxyz (except DAxy9), and TAxzy (except TAxzy9).

2.048 Mbit/s Termination

Valid NPC types for 64kbps Roll are PAxyz, PBxyz and PCxyz, except for the following conditions:

- Either NPC is of type PAxyz where y=C or y=D
- The old NPC supports Channel Associated Signaling (CAS) and the new NPC does not.
- The old NPC supports Non-Signaling Associated, the new NPC supports CAS, and CTS16 is being rolled to CTS16.

Because CTS0 and CTS16 (when Channel Associated Signaling is used) are not rolled at the 64kbps level, the status for these channels is displayed with "-". If NSA (Non-Signaling Associated) mode is used, CTS16 can be rolled. The appropriate roll status is displayed for this channel.

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

UTILITY QUERY ROLL DS1

Explanation of Command

1.544 Mbit/s Termination

This command is used to request a report on the roll status of DS1 facilities.

2.048 Mbit/s Termination

This command is used to request a report on the roll status of 2Mbit/s facilities.

The roll status request may be for a single network processing circuit (NPC), a range of NPCs, all NPCs in a unit, or all NPCs in the DACS II frame.

The output message shows the correspondence between the bridge and service facilities of the Roll procedure. Original Service and Original Bridged facility refer to the service and bridged facility designations created by the Bridge step of the Roll procedure. New Service and New Bridged facility refer to the service and bridged facility designations created by the Roll step of the Roll procedure.

1.544 Mbit/s Termination

The output message displays the roll status of each of the NPCs in a Facility Terminating Module (FTM) or DS3. The top left position corresponds to the first NPC in the FTM or DS3 and the bottom right position corresponds to the last NPC in that FTM or DS3. All dashes are displayed if there is neither a Service facility nor a Bridged facility associated with an NPC. The display is repeated for each FTM or DS3 in the range.

If the range queried in the input message is a subset of an FTM or DS3, all NPCs of that FTM or DS3 are still displayed. If there are no rolled channels in an FTM or DS3, then no roll status output is generated for that FTM or DS3.

The specified NPC range can cross a unit boundary and is applicable to facility terminating unit (FTU) and DS3 unit (DS3U) types.

2.048 Mbit/s Termination

The output message displays the roll status of each of the NPCs in a Facility Terminating Module (FTM). The top left position corresponds to the first NPC in the FTM and the bottom right position corresponds to the last NPC in that FTM. All dashes are displayed if there is neither a Service facility nor a Bridged facility associated with an NPC. The display is repeated for each FTM in the range.

If the range queried in the input message is a subset of a FTM, all NPCs of that FTM are still displayed. If there are no rolled channels in a FTM, then no roll status output is generated for that FTM.

The specified NPC range can cross a unit boundary and is applicable to facility terminating unit (FTU) types.

If only one NPC is queried, then the output display is one line with the roll status information for the requested NPC.

Command

Nonhierarchical

[I.52091]

UTL:[FRM xy][,SEQ ww]:QRY,ROLL,DS1,{NPC [s]abc[-[t]def]|ALL \[,UNIT [q]q]}!

Hierarchical

[I.52091]

UTL:[FRM xy][,SEQ ww]:QRY,ROLL,DS1,{NPC uvmnp[-wxkqr]|ALL \[,UNIT [q]q]}!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

The output message in nonhierarchical PDS form spans one output segment per FTM for FTU NPC ranges, one output segment per DS3 for DS3U NPC ranges, and one line for a single FTU or DS3U NPC.

If the 3- or 4-digit nonhierarchical NPC number in an FTU range is used, the output is ten NPCs per line as follows:

[O.52091]

M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS1 FTU NPC [a]aaa-[b]bbb \5 LN MSG:
rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi \rr[u]ghi
rr[u]ghi rr[u]ghi
rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi \rr[u]ghi
rr[u]ghi rr[u]ghi
rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi \


```
rr[u]ghi
rr[u]ghi rr[u]ghi
rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi \
rr[u]ghi
rr[u]ghi rr[u]ghi EOM
```

```
      .      .      .
      .      .      .
      .      .      .
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS1 {NPC [s]abc-[t]def| \
ALL[ UNIT [q]q]} COMPL
```

If the 3- or 4-digit nonhierarchical NPC number in a DS3U range is used, the output is seven NPCs per line as follows:

[O.52091]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS1 DS3U NPC [a]aaa-[b]bbb \
5 LN MSG:
rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi
rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi
rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi
rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi EOM
```

```
      .      .      .
      .      .      .
      .      .      .
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS1 {NPC [s]abc-[t]def| \
ALL[ UNIT [q]q]} COMPL
```

If a single 3- or 4-digit nonhierarchical NPC number in an FTU or DS3U is used, the output is one line as follows:

[O.52091]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS1 {FTU|DS3U} NPC [s]abc \
rr[u]ghi COMPL
```

Hierarchical

The output message in hierarchical PDS form spans two output segments per FTM for FTU NPC ranges, one output segment per DS3 for DS3U NPC ranges, and one line for a single FTU or DS3U NPC.

If the hierarchical NPC number in an FTU range is used, each output segment displays five NPCs per line as follows:

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS1 {FTU|DS3U} NPC uvmp \
rrghikl COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

The output message in nonhierarchical PDS form spans one output segment per FTM for FTU NPC ranges, and one line for a single FTU NPC.

If the 3- or 4-digit nonhierarchical NPC number in an FTU range is used, the output is eight NPCs per line as follows:

[O.52091]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS1 FTU NPC [a]aaa-[b]bbb \
5 LN MSG:
rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi \
rr[u]ghi
rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi \
rr[u]ghi
rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi \
rr[u]ghi
rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi rr[u]ghi \
rr[u]ghi
EOM
```

```
      .      .      .
      .      .      .
      .      .      .
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS1 {NPC [s]abc-[t]def} \
ALL[ UNIT [q]q]} COMPL
```

If a single 3- or 4-digit nonhierarchical NPC number in a FTU used, the output is one line as follows:

[O.52091]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS1 NPC [s]abc rr[u]ghi COMPL
```

Hierarchical

The output message in hierarchical PDS form spans two output segments per FTM for FTU NPC ranges, and one line for a single FTU NPC.

If the hierarchical NPC number in a FTU range is used, each output segment displays four NPCs per line as follows:

[O.52091]

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS1 FTU NPC bcdef-edhfg \
5 LN MSG:
rrghikl rrghikl rrghikl rrghikl
rrghikl rrghikl rrghikl rrghikl
```

```
rrghikl rrghikl rrghikl rrghikl
rrghikl rrghikl rrghikl rrghikl EOM

M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS1 FTU NPC fhjrk-stxyz \
5 LN MSG:
rrghikl rrghikl rrghikl rrghikl
rrghikl rrghikl rrghikl rrghikl
rrghikl rrghikl rrghikl rrghikl
rrghikl rrghikl rrghikl rrghikl EOM

      .      .      .
      .      .      .
      .      .      .
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS1 {NPC uvmnp-wxkqr} \
ALL[ UNIT [q]q]} COMPL
```

If a single 3- or 4-digit hierarchical NPC number in a FTU is used, the output is one line as follows:

```
[O.52091]

M hh:mm:ss xy,ww n[vv] UTL QRY ROLL DS1 NPC uvmnp rrghikl COMPL
```

Explanation of Parameters

[s]abc	3- or 4-digit nonhierarchical NPC number, the first number of a range or a single NPC number.
[t]def	3- or 4-digit nonhierarchical NPC number, the last number of a range.
ALL	All Keyword indicating that all NPCs in the frame are being queried for Roll status.
UNIT	Unit
[q]q	Unit number (1 through 16) Keyword used to limit query to all NPCs in a Unit.
[q]q	The 1- or 2-digit Unit number

1.544 Mbit/s Termination

[a]aaa	3- or 4-digit nonhierarchical NPC number, the first NPC number of an FTM or DS3.

2.048 Mbit/s Termination

[a]aaa	3- or 4-digit nonhierarchical NPC number, the first NPC number of a FTM.

1.544 Mbit/s Termination

[b]bbb 3- or 4-digit nonhierarchical NPC number, the last NPC number of an FTM or DS3.

2.048 Mbit/s Termination

[b]bbb 3- or 4-digit nonhierarchical NPC number, the last NPC number of a FTM.

[u]ghi The 3- or 4-digit nonhierarchical NPC number of the Service or Bridged facility associated with the queried NPC.

ghikl Hierarchical NPC number of the Service or Bridged facility associated with the queried NPC.

rr NPC Roll status interpreted as follows:

- OS** Indicates that NPC [u]ghi or ghikl is the Original Service facility and the corresponding NPC is the Original Bridged facility.
- NS** Indicates that NPC [u]ghi or ghikl is the New Service facility and the corresponding NPC is the New Bridged facility.
- OB** Indicates that NPC [u]ghi or ghikl is the Original Bridged facility and the corresponding NPC is the Original Service facility.
- NB** Indicates that NPC [u]ghi or ghikl is the New Bridged facility and the corresponding NPC is the New Service facility.
- Indicates that the NPC is not a Service or Bridged facility.

1.544 Mbit/s Termination

bcdef Hierarchical NPC number, the first NPC number of an FTM or DS3

2.048 Mbit/s Termination

bcdef Hierarchical NPC number, the first NPC number of a FTM

edhfg Hierarchical NPC number, the last NPC number of an FTM output segment

fhjrk Hierarchical NPC number, the first NPC number of an FTM output segment

1.544 Mbit/s Termination

stxyz Hierarchical NPC number, the last NPC number of an FTM or DS3

2.048 Mbit/s Termination

stxyz Hierarchical NPC number, the last NPC number of a FTM

uvmnp Hierarchical NPC number, the first NPC number of a range or a single NPC number

wxkqr Hierarchical NPC number, the last NPC number of a range

1.544 Mbit/s Termination

2.048 Mbit/s Termination

1.544 Mbit/s Termination

2.048 Mbit/s Termination

uv,wx,bc,st,fh,ed

Unit number

m,k,d,x,j,h

Module number

np,qr,ef,yz,rk,fg

NPC number within the module

1.544 Mbit/s Termination

Valid NPC types for DS1 Roll are DExyz, DAxyz, TExyz and TAxyz.

2.048 Mbit/s Termination

Valid NPC types for 2Mbit/s Roll are PAxyz, PBxyz, PCxyz. However, Roll is denied when rolling from a PAxyz type FTU NPC to a PBxyz/PCxyz type FTU NPC. Also, the xyz values between the old and the new NPCs have to be the same or equivalent (in the case of rolling from PBxyz/PCxyz to PAxyz).

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

RETRIEVE E1 NPCs WITH RPSFI CONDITION

Explanation of Command

2.048 Mbit/s Termination

This message retrieves all the E1 NPCs that have the RPSFI (Remote Power Supply Failure Indication) condition active.

Command

[I.56326]
UTL: [FRM xy][, SEQ ww]:QRY, RPSFI!

Completion Message

Nonhierarchical

[O.56326]
M hh:mm:ss xy, ww n[vv] UTL QRY NPC [s]abc RPSFI COMPL
.
.
.
M hh:mm:ss xy, ww n[vv] UTL QRY NPC [s]abc RPSFI COMPL
M hh:mm:ss xy, ww n[vv] UTL QRY RPSFI COMPL

Hierarchical

[O.56326]
M hh:mm:ss xy, ww n[vv] UTL QRY NPC uvmp RPSFI COMPL
.
.
.
M hh:mm:ss xy, ww n[vv] UTL QRY NPC uvmp RPSFI COMPL
M hh:mm:ss xy, ww n[vv] UTL QRY RPSFI COMPL

Denial Message

[O.56326.01]
M hh:mm:ss xy, ww n[vv] UTL QRY RPSFI COND cc DNY

Explanation of Parameters	NPC	Network processing circuit
	[s]abc	The 3- or 4-digit nonhierarchical NPC number
		For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	uvmnp	Hierarchical NPC number
	uv	Unit number
	m	Module number
	np	NPC number within the module
		For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	RPSFI	Remote Power Supply Failure Indicator
	cc	Hexadecimal condition code

UTILITY QUERY, RTMAP, DLMAP

Explanation of Command

This message shows all connections on a specific remote terminal (RT) or data link (DL) for a digital carrier line unit or shows all cross-connections for all of the RTs or DLs terminated on the frame provided the bank identification option is not present on the input.

On output, the SWMR or SWAR network processing circuit shows only the digroup which is switch protected. Bank identification numbers are listed in ascending order.

Command

```
[I.52311]
UTL:[FRM xy][,SEQ ww]:QRY,{RTMAP|DLMAP}[ ffff]!
```

Completion Message

```
[O.52311]

If the 3-digit nonhierarchical NPC numbering scheme is used by the link/user the
following output is generated:

M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} ffff MD g[g] 5 LN MSG:
DGA aaa[ {SWMR|SWAR} DGP ppp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr EOM
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} ffff MD g[g] 5 LN MSG:
DGx bbb[ {SWMR|SWAR} DGP ppp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr EOM
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} ffff COMPL
```

If the 4-digit nonhierarchical NPC numbering scheme is used by the link/user, the following output is generated:

```
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} ffff MD g[g] 6 LN MSG:
DGA aaaa[ {SWMR|SWAR} DGP pppp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr \
EOM
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} ffff MD g[g] 6 LN MSG:
DGx bbbb[ {SWMR|SWAR} DGP pppp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr \
EOM
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} ffff COMPL
```

For each RTMAP/DLMAP, if the 3-digit nonhierarchical NPC number is used by the link/user, the following output is generated:

[O.52312]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} kkk {EOM|COMPL}
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} ffff MD g[g] 5 LN MSG:
DGA aaa[ {SWMR|SWAR} DGP ppp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr EOM
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} ffff MD g[g] 5 LN MSG:
DGx bbb[ {SWMR|SWAR} DGP ppp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr EOM
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} hhhh MD g[g] 5 LN MSG:
DGA aaa[ {SWMR|SWAR} DGP ppp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
```

```
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr EOM
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} hhhh MD g[g] 5 LN MSG:
DGx bbb[ {SWMR|SWAR} DGP ppp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr
tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr tghijjrr \
tghijjrr EOM
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} COMPL
```

For each RTMAP/DLMAP, if the 4-digit nonhierarchical NPC number is used by the link/user, the following output is generated:

[O.52312]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} kkk {EOM|COMPL}
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} ffff MD g[g] 6 LN MSG:
DGA aaaa[ {SWMR|SWAR} DGP pppp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr \
EOM

M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} ffff MD g[g] 6 LN MSG:
DGx bbbb[ {SWMR|SWAR} DGP pppp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr \
EOM

.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} hhhh MD g[g] 6 LN MSG:
DGA aaaa[ {SWMR|SWAR} DGP pppp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr \
EOM

M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} hhhh MD g[g] 6 LN MSG:
DGx bbbb[ {SWMR|SWAR} DGP pppp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
```

```
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr
tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr tsghijjrr \
EOM
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} COMPL
```

Hierarchical

[O.52311]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} ffff MD g[g] 6 LN MSG:
DGA uvjaa[ {SWMR|SWAR} DGP uvjpp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr \
tuvmnpjjrr
tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr \
tuvmnpjjrr
tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr \
tuvmnpjjrr
tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr \
tuvmnpjjrr EOM
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} ffff MD g[g] 6 LN MSG:
DGx uvkbb[ {SWMR|SWAR} DGP uvjpp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr \
tuvmnpjjrr
tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr \
tuvmnpjjrr
tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr \
tuvmnpjjrr
tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr \
tuvmnpjjrr EOM
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} ffff COMPL
```

[O.52312]

```
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} kkk {EOM|COMPL}
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} ffff MD g[g] 6 LN MSG:
DGA uvjaa[ {SWMR|SWAR} DGP uvjpp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr \
tuvmnpjjrr
tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr \
tuvmnpjjrr
tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr \
tuvmnpjjrr
tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr tuvmnpjjrr \
tuvmnpjjrr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} ffff MD g[g] 6 LN MSG:
DGx uvkbb[ {SWMR|SWAR} DGP uvjpp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tuvmnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr \
tuvmpnpjjjr
tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr \
tuvmpnpjjjr
tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr \
tuvmpnpjjjr
tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr \
tuvmpnpjjjr EOM
```

.
.
.
.

```
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} hhhh MD g[g] 6 LN MSG:
DGA wxlaa[ {SWMR|SWAR} DGP wxlpp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tuvmnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr \
tuvmpnpjjjr
tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr \
tuvmpnpjjjr
tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr \
tuvmpnpjjjr
tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr \
tuvmpnpjjjr EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} hhhh MD g[g] 6 LN MSG:
DGx wxmbb[ {SWMR|SWAR} DGP wxlpp] DSxyz ccc-ddd[ {sss|NDL|RTF}]
tuvmnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr \
tuvmpnpjjjr
tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr \
tuvmpnpjjjr
tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr \
tuvmpnpjjjr
tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr tuvmpnpjjjr \
tuvmpnpjjjr EOM
```

.
.
.
.

M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} COMPL

[O.52313]

M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP}[ffff] COMPL

Denial Message

[O.52311.01]

M hh:mm:ss xy,ww n[vv] UTL QRY {RTMAP|DLMAP} ffff COND cc DNY

Explanation of Parameters	RTMAP	Remote terminal (RT) channel map (SLC [®] carrier)
	DLMAP	Digital carrier line unit (DCLU) channel map
	ffff	Bank identification number (0000 through 9999)
	hhhh	Bank identification number (ffff ≤ hhhh)
	MD	Mode
	g[g]	Mode of operation
	1	SLC 96 Carrier Mode I
	3	SLC 96 Carrier Mode III
	C	SLC Series 5 Carrier FPC
	DGA	Digroup A of a SLC carrier bank
	DGx	Digroup x (x = B, C, or D) of a SLC carrier bank
	DGP	Digroup P of a SLC carrier bank
	aaa	3-digit nonhierarchical DGA NPC number
	bbb	3-digit nonhierarchical DGB, DGC, or DGD NPC number
	ppp	3-digit nonhierarchical DGP NPC number
	aaaa	4-digit nonhierarchical DGA NPC number
	bbbb	4-digit nonhierarchical DGB, DGC, or DGD NPC number
	pppp	4-digit nonhierarchical DGP NPC number
		For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	DSxyz	SLC [®] Carrier Terminating NPC type
		For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	uvjaa	Hierarchical DGA NPC number
	wxlaa	Hierarchical DGA NPC number of the last RT or DCLU listed
	uvkbb	Hierarchical DGB, DGC, or DGD NPC number
	wxmbb	Hierarchical DGB, DGC, or DGD NPC number of the last RT or DC listed
	uvjpp	Hierarchical DGP NPC number
	wxlp	Hierarchical DGP NPC number of the last RT or DCLU listed
	uv,wx	Unit number
	j,k,l,m	Module number
	aa	NPC number

bb	NPC number																					
pp	NPC number																					
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."																					
SWMR	Switch manually requested																					
SWAR	Switch automatically requested																					
	Switch refers to a protection switch.																					
ccc	Beginning channel number																					
ddd	Ending channel number																					
	<table><tr><td>ccc-ddd</td><td>Digroup</td><td>Mode</td></tr><tr><td>001-024</td><td>DGA</td><td>Mode I and C</td></tr><tr><td>001-047 (odd # only)</td><td>DGA</td><td>Mode III</td></tr><tr><td>025-048</td><td>DGB</td><td>Mode I and C</td></tr><tr><td>049-072</td><td>DGC</td><td>Mode I and C</td></tr><tr><td>049-095 (odd # only)</td><td>DGC</td><td>Mode III</td></tr><tr><td>073-096</td><td>DGD</td><td>Mode I and C</td></tr></table>	ccc-ddd	Digroup	Mode	001-024	DGA	Mode I and C	001-047 (odd # only)	DGA	Mode III	025-048	DGB	Mode I and C	049-072	DGC	Mode I and C	049-095 (odd # only)	DGC	Mode III	073-096	DGD	Mode I and C
ccc-ddd	Digroup	Mode																				
001-024	DGA	Mode I and C																				
001-047 (odd # only)	DGA	Mode III																				
025-048	DGB	Mode I and C																				
049-072	DGC	Mode I and C																				
049-095 (odd # only)	DGC	Mode III																				
073-096	DGD	Mode I and C																				
sss	SLC 96® carrier remote terminal power or miscellaneous alarm option																					
	PMJ Power major alarm from the data link																					
	PMN Power minor alarm from the data link																					
	MMJ Miscellaneous major alarm from the data link																					
	MMN Miscellaneous minor alarm from the data link																					
NDL	No data link																					
RTF	Retrofit (only applicable to SLC Series 5 carrier FPC RT)																					
kkk	Total number of SLC carrier RT or DCLU banks																					
tghijjr	Termination with 3-digit nonhierarchical NPC number																					
t[s]ghijjr	Termination with 4-digit nonhierarchical NPC number.																					
tuvmpjjjr	Termination with hierarchical NPC number																					

t	Type of Connection
*	One-way
" "	Two-way (a blank)
B	Broadcast
[s]ghijj	The mapped 3- or 4-digit nonhierarchical NPC and channel numbers.
[0]000000	Unmapped
[-]-SECH-	Subrate channel
[s]ghi	The 3- or 4-digit nonhierarchical NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnpjjj	Mapped hierarchical NPC and channel numbers.
00000000	unmapped
--SECH--	Subrate channel
00-0-00000	unmapped
--SECH--	Subrate channel
--SECH---	Subrate channel
uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
jjj	Channel number
	The valid channel numbers for each NPC type are:
	Channel numbers
001-024	
000-031	(CEPT)
001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)

073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)
001-024 Odd and Even (SLC Series 5 Carrier, Feature
Package C, DGA)
025-048 Odd and Even (SLC Series 5 Carrier, Feature
Package C, DGB)
049-072 Odd and Even (SLC Series 5 Carrier, Feature
Package C, DGC)
073-096 Odd and Even (SLC Series 5 Carrier, Feature
Package C, DGD)

Conference numbers 001-500 (Virtual NPC)

001-085 (MB NPC)

r Termination status

T Terminated

blank Not Terminated

cc Hexadecimal condition code

cc *Explanation*

7E Bank id number not found

QUERY SHELF ALARMS SEVERITY

Explanation of Command

This command retrieves the current system alarm severity for a single shelf alarm or for all the shelf alarms. This command is only executable if the Alarm Severity feature is turned ON via the I.38355 command.

Command

[I.53301]
UTL: [FRM xy][, SEQ ww]:QRY, SALMS, {salm|ALL}!

Completion Message

[O.53301]

If a single shelf alarm is requested:
M hh:mm:ss xy,ww n[vv] UTL QRY SALMS, salm sev COMPL

If ALL shelf alarms are requested:
M hh:mm:ss xy,ww n[vv] UTL QRY SALMS 6 lines
PFF sev SYNC sev DSPC sev CCN sev
LTF sev TREF sev STREF sev TLI sev
CRO sev SMEM sev MCE sev CCNI sev
TSI sev FC sev FTMI sev DSPI sev
FTUC sev CCB sev DSPUC sev SDT sev COMPL

Denial Message

[O.53301.01]
M hh:mm:ss xy,ww n[vv] UTL QRY SALMS {salm|ALL} COND cc DNY

Explanation of Parameters

salm	Shelf Alarms
PFF	Power Failure
SYNC	Failure of one SYNC
CCN	CCN autonomously removed
LTF	NPC Hardware Failure

	TREF	Failure of one SSP
	STREF	Failure of last SSP
	TLI	TLI removed from service
	CRO	Failure of Clock Reference Oscillator
	SMEM	Failure of SMEM memory card
	MCE	MC removed from service
	CCNI	CCI/CCNI autonomously removed
	TSI	TSI/ETSI autonomously removed
	FC	FC autonomously removed
	FTMI	FTMI autonomously removed
	DSPI	DSPI autonomously removed
	FTUC	FTU UC autonomously removed
	CCB	CCB autonomously removed
	DSPUC	DSP UC autonomously removed
	SDT	System date and time not set
	DSPUC	DSPU NPC autonomously removed
	ALL	All Shelf Alarms
sev		Severity
	PMACR	Prompt Maintenance Action CRITICAL alarm severity
	PMAMJ	Prompt Maintenance Action MAJOR alarm severity
	DMAMN	Deferred Maintenance Action MINOR alarm severity
	MI	MESSAGE INFORMATION alarm severity
cc		Hexadecimal condition code
	cc	<i>Explanation</i>
	00	No conditions
	F7	Alarm Severity Feature (already) OFF

UTILITY QUERY

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This command requests the far end information for each customer in the connected channel or range of connected channels.

Only one customer is reported for a DS0A channel. For a DS0B channel, the number of customers reported is 5, 10, or 20, depending on how the channel was established.

Command

Nonhierarchical

[I.52511]

UTL:[FRM xy][,SEQ ww] ww:QRY,SCON,CH,TO [s]abcddd[-eee]!

Hierarchical

[I.52511]

UTL:[FRM xy][,SEQ ww] ww:QRY,SCON,CH,TO uvmnpddd[-eee]!

Completion Message

Nonhierarchical

For a DS0A channel

[O.52511]

M hh:mm:ss xy,ww n[vv] UTL QRY SCON CH [s]abcddd 2 LN MSG:
<far-end> {COMPL|EOM}

For a DS0B 5-customer channel

[O.52511]

M hh:mm:ss xy,ww n[vv] UTL QRY SCON CH [s]abcddd 2 LN MSG:
<far-end> <far-end> <far-end> <far-end> <far-end> {COMPL|EOM}

10-customer channel

[O.52511]

M hh:mm:ss xy,ww n[vv] UTL QRY SCON CH [s]abcddd 3 LN MSG:
<far-end> <far-end> <far-end> <far-end> <far-end>
<far-end> <far-end> <far-end> <far-end> <far-end> {COMPL|EOM}

20-customer channel

[O.52511]

M hh:mm:ss xy,ww n[vv] UTL QRY SCON CH [s]abcddd 5 LN MSG:
<far-end> <far-end> <far-end> <far-end> <far-end>
<far-end> <far-end> <far-end> <far-end> <far-end>
<far-end> <far-end> <far-end> <far-end> <far-end>
<far-end> <far-end> <far-end> <far-end> <far-end> {COMPL|EOM}

Hierarchical

For a DS0A channel

[O.52511]

M hh:mm:ss xy,ww n[vv] UTL QRY SCON CH uvmnpddd 2 LN MSG:
<far-end> {COMPL|EOM}

For a DSOB 5-customer channel

[O.52511]

M hh:mm:ss xy,ww n[vv] UTL QRY SCON CH uvmnpddd 2 LN MSG:
<far-end> <far-end> <far-end> <far-end> <far-end> {COMPL|EOM}

10-customer channel

[O.52511]

M hh:mm:ss xy,ww n[vv] UTL QRY SCON CH uvmnpddd 3 LN MSG:
<far-end> <far-end> <far-end> <far-end> <far-end>
<far-end> <far-end> <far-end> <far-end> <far-end> {COMPL|EOM}

20-customer channel

[O.52511]

M hh:mm:ss xy,ww n[vv] UTL QRY SCON CH uvmnpddd 5 LN MSG:
<far-end> <far-end> <far-end> <far-end> <far-end>

```
<far-end> <far-end> <far-end> <far-end> <far-end>
<far-end> <far-end> <far-end> <far-end> <far-end>
<far-end> <far-end> <far-end> <far-end> <far-end> {COMPL|EOM}
```

Denial Message

Nonhierarchical

[O.52511.01]

M hh:mm:ss xy,ww n[vv] UTL QRY SCON CH [s]abcddd[-eee] 2 LN MSG:
<reason> DNY

Hierarchical

[O.52511.01]

M hh:mm:ss xy,ww n[vv] UTL QRY SCON CH uvmnpddd[-eee] 2 LN MSG:
<reason> DNY

Explanation of Parameters

CH	Channel
TO	To designation
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical FROM NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number for NPC specified in input
eee	Channel number for NPC specified in input denoting end of range The allowable values are presented below: 001-024 001-047 Odd only (SLC 96 [®] Carrier, Mode 3, DGA) 049-095 Odd only (SLC 96 Carrier, Mode 3, DGC) 001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)

	025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
hhh	Channel number (ddd through eee)	
far-end	Far-end data in the form:	
	[t]ghijj/ll	Far-end FROM customer
	[t]ghi-jjj-ll	Far-end FROM customer
	ghijkjj/ll	Far-end FROM customer
	gh-i-jk-jjj-ll	Far-end FROM customer
	MPT aa	Customer is part of a multipoint circuit where aa is either MA (MASTER) or BR (BRANCH).
	UASGN	Customer is unassigned
	NOT_EST	Channel is not established
	PCH ddd	Parity channel to data channel ddd
	data line(s) for each type of channel	
	Data lines(s) depend on the type of channel specified.	
	For a DSOA channel, <data line(s) . . .> =	
reason	Reason for denial	

QUERY SUBRATE CROSS-CONNECT

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This Subrate message requests cross-connect circuit information at the customer (subrate circuit) level.

Command

Nonhierarchical

[I.52521]

UTL:[FRM xy][,SEQ ww] ww:QRY,SCON,TO [s]abcddd[/ff]!

Hierarchical

[I.52521]

UTL:[FRM xy][,SEQ ww] ww:QRY,SCON,TO uvmnpddd[/ff]!

Completion Message

Nonhierarchical

For a two-point circuit

[O.52521]

M hh:mm:ss xy,ww n[vv] UTL QRY SCON TO [s]abcddd/ff 2 LN MSG:
FROM [t]ghihhh/ll RATE rr[TLA t][UTST TP kk] COMPL

For a multipoint circuit

[O.52522]

M hh:mm:ss xy,ww n[vv] UTL QRY SCON TO [s]abcddd/ff 5 LN MSG:
MPTM [t]defggg/hh RATE rr
MJU 0001 MA[MJU tttt,u][TLA t][UTST TP kk]
BR1 <br_data>[TLA t][UTST TP kk] BR2 <br_data>[TLA t]\
[UTST TP kk]
BR3 <br_data>[TLA t][UTST TP kk] BR4 <br_data>[TLA t]\
[UTST TP kk] {EOM|COMPL}

.
.
 .

M hh:mm:ss xy,ww n[vv] UTL QRY SCON TO [s]abcddd/ff 4 LN MSG:
MJU ssss MA MJU tttt,u[TLA t][UTST TP kk]
BR1 <br_data>[TLA t][UTST TP kk] BR2 <br_data>[TLA t]\
[UTST TP kk]
BR3 <br_data>[TLA t][UTST TP kk] BR4 <br_data>[TLA t]\
[UTST TP kk] COMPL

Hierarchical

For a two-point circuit

[O.52521]

M hh:mm:ss xy,ww n[vv] UTL QRY SCON TO uvmnpddd/ff 2 LN MSG:
FROM edhfghhh/ll RATE rr[TLA t][UTST TP kk] COMPL

For a multipoint circuit

[O.52522]

M hh:mm:ss xy,ww n[vv] UTL QRY SCON TO uvmnpddd/ff 5 LN MSG:
MPTM wxkqrggg/hh RATE rr
MJU 0001 MA[MJU tttt,u[TLA t][UTST TP kk]
BR1 <br_data>[TLA t][UTST TP kk] BR2 <br_data>[TLA t]\
[UTST TP kk]
BR3 <br_data>[TLA t][UTST TP kk] BR4 <br_data>[TLA t]\
[UTST TP kk] {EOM|COMPL}

.
.
 .

M hh:mm:ss xy,ww n[vv] UTL QRY SCON TO uvmnpddd/ff 4 LN MSG:
MJU ssss MA MJU tttt,u[TLA t][UTST TP kk]
BR1 <br_data>[TLA t][UTST TP kk] BR2 <br_data>[TLA t]\
[UTST TP kk]
BR3 <br_data>[TLA t][UTST TP kk] BR4 <br_data>[TLA t]\
[UTST TP kk] COMPL

Denial Message

Nonhierarchical

[O.52521.01]

M hh:mm:ss xy,ww n[vv] UTL QRY SCON TO [s]abcddd[/ff] \
2 LN MSG:
<reason> DNY

Hierarchical

[O.52521.01]

M hh:mm:ss xy,ww n[vv] UTL QRY SCON TO uvmnpddd[/ff] \
2 LN MSG:
<reason> DNY

Explanation of Parameters

[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number for FROM NPC specified in input
hhh	Channel number for TO NPC specified in input
The allowable values are:	
001-024	
001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)
001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)
025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)
049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)
073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
ff	Customer (substrate circuit) number of FROM NPC
ll	Customer (substrate circuit) number of TO NPC

The allowable values are:

01 (DS0A at 2.4, 4.8, 9.6, or 56 kb/s)
01-20 (DS0B at 2.4 kb/s)
01-10 (DS0B at 4.8 kb/s)
01-05 (DS0B at 9.6 kb/s)

[t]ghi The 3- or 4-digit nonhierarchical NPC number
edhfg Hierarchical NPC number
wxkqr Hierarchical NPC number

The preceding definitions apply to the multipoint circuit master leg or the FROM side of a two-point circuit. See definition of [s]abc.

jjj Channel number of multipoint circuit master leg or of FROM side of two-point circuit

RATE Rate

rr Circuit rate (24, 48, 56, 96)

MJU Multipoint junction unit

TLA Terminate and leave active

t Terminate and leave status of the two-point or MJU connection.
The TO direction is defined as facing toward the specified facility termination or alternatively as facing toward what is connected to the specified branch or master.

F FROM

T TO

B BOTH

UTST Undertest

For a multipoint circuit, the position of the indicator UTST in the output message precisely identifies the point in the circuit to which a test port is connected. When specified, the indicator UTST implies that the circuit is under test at some point between the TO and FROM terminations.

TP Test port

kk Test port number (01 through 96)

MPTM Multipoint mode

BR1 Branch 1

BR2 Branch 2

BR3 Branch 3
BR4 Branch 4
[t]def The 3- or 4-digit nonhierarchical NPC number of the external facility termination of the multipoint master
ggg The external facility termination channel of the multipoint master
hh Customer (substrate circuit) number
ssss MJU number of MJU cascaded from this branch (0002 - 9999)
tttt MJU number connected to control leg of MJU ssss (0002 - 9999)
u Branch number of MJU tttt (1 - 4)
br_data Branch leg connection data in the form:

[t]ghijj/ii	External facility termination number
jklmnhhh/ii	External facility termination number
MJU ssss	MJU number of MJU cascaded from this branch
UASGN	Branch is unassigned

The external facility termination number is composed of a hierarchical or nonhierarchical NPC number, channel number, and customer number.

reason Reason for denial

QUERY USER|LINK SCREENING OPTION

Explanation of Command

This command queries the user/administrative link for screening options, command category, and the restricted maintenance privilege. These values are set when the user accesses the link.

The frame administrator may query any one or all users and may query the screening options for any one or all administrative links.

TABS or Modified Snider Protocol

This command cannot be used to query users/administrative links provisioned for TABS or Modified Snider protocol since screening options do not apply to them.

RMON/RMOFF option

The RMON/RMOFF option indicates that the user/administrative link is assigned the privilege or not assigned the privilege of issuing the commands restricted to the frame administrator. Default is RMOFF.

The restricted commands are

I.38355	CHG::ALMS,{ON OFF}
I.38451	CHG::INTV,{ON OFF}
I.38471	CHG::MSGLOG {ON OFF}
I.37301	DLT::FPKG
I.34001	RST::MC:CLR[,ALL]
I.51051	UTL::CLR,BMTR
I.57031	UTL::CLR, MSGLOG[,RSTNUM]
I.58001	UTL::BOOT,FRAME
I.55701	UTL::BMTR,FROM,TO

Output from this command is sent only to the link on which the command was input.

Also, for the Message Logging feature, the logged messages are sent to the link on which the command was input and the links with screening option 5.

Command

[I.54001]

UTL: [FRM xy][, SEQ ww]: QRY, SCR, {LINK j[mm[-jnn]]} \\
USER <user id> | LINKS | USERS}!

Completion Message

1.544 Mbit/s Termination

For a single link or user:

[O.54001]

M hh:mm:ss xy, ww n[vv] UTL QRY SCR {LINK j[mm]|USER <user id>} \\
3LN MSG:
LANG {P|M} NPCAD {E|X|H} LEV a b c d e f {RMON|RMOFF}
SCR n[GR a b c d e f] {MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF} COMPL

For a range of links, virtual links, or all links or users:

[O.54001]

M hh:mm:ss xy, ww n[vv] UTL QRY SCR {LINK j[mm]-p[nn]|LINKS|USERS} \\
5 LN MSG:
{LINK j[mm]|USER <user id>} LANG {P|M} NPCAD {E|X|H} \\
LEV a b c d e f {RMON|RMOFF}
SCR n[GR a b c d e f] {MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF}
{LINK h[ii]|USER <user id>} LANG {P|M} NPCAD {E|X|H} LEV a b \\
c d e f {RMON|RMOFF} SCR n[GR a b c d e f]
{MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF} {EOM|COMPL}
.
.
.
[M hh:mm:ss xy, ww n[vv] UTL QRY SCR {LINK j[mm]-p[nn]|LINKS|USERS} \\
e LN MSG:
[{LINK j[kk]|USER <user id>} LANG {P|M} NPCAD {E|X|H} LEV a b \\
c d e f {RMON|RMOFF}
SCR n[GR a b c d e f] {MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF} \\
[{EOM|COMPL}]]
{LINK p[nn]|USER <user \ id>} LANG {P|M} NPCAD {E|X|H} LEV a b \\
c d e f {RMON|RMOFF}
SCR n[GR a b c d e f] {MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF} \\
{EOM|COMPL}]

For a range of virtual circuits/sessions on an X.25 or a TCP/IP link:

[O.54001]

M hh:mm:ss xy, ww n[vv] UTL QRY SCR LINK jmm[-jnn] 5 LN MSG:
LINK jmm LANG {P|M} NPCAD {E|X|H} LEV a b c d e f {RMON|RMOFF}
SCR n[GR a b c d e f] {MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF}
LINK jii LANG {P|M} NPCAD {E|X|H} LEV a b c d e f {RMON|RMOFF}

```
SCR n[ GR a b c d e f] {MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF}
{EOM|COMPL}
.
.
.
[M hh:mm:ss xy,ww n[vv] UTL QRY SCR LINK jmm[-jnn] e LN MSG:
[LINK jkk LANG {P|M} NPCAD {E|X|H} LEV a b c d e f {RMON|RMOFF}
SCR n[ GR a b c d e f] {MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF}]
LINK jnn LANG {P|M} NPCAD {E|X|H} LEV a b c d e f {RMON|RMOFF}
SCR n[ GR a b c d e f] {MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF}
COMPL]
```

For the single link (X.25 virtual circuit) provisioned as a Facility Data Link:

[O.54001]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SCR LINK jmm LANG F NPCAD {E|X|H} \
COMPL
```

For a range of links or all links/users, if a link (X.25 virtual circuit) is provisioned as a Facility Data Link:

```
M hh:mm:ss xy,ww n[vv] UTL QRY SCR {LINK j[mm]-p[nn]|LINKS|USERS} \
e LN MSG:
LINK jmm LANG F NPCAD {E|X|H}[ {EOM|COMPL}]
```

2.048 Mbit/s Termination

For a single link/user:

[O.54001]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SCR {LINK j[mm]|USER <user id>} 3 \
LN MSG:
LANG {P|M} NPCAD {E|X|H} LEV a b c d e f {RMON|RMOFF}
SCR n[ GR a b c d e f] {MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF} COMPL
```

For a range of links, virtual links (for TCP/IP link), or all links/users:

[O.54001]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SCR {LINK j[mm]-p[nn]|LINKS|USERS} \
5 LN MSG:
{LINK j[mm]|USER <user id>} LANG {P|M} NPCAD {E|X|H} \
LEV a b c d e f {RMON|RMOFF}
SCR n[ GR a b c d e f] {MCON|MCOFF} \
RLK {A|I} {CONVON|CONVOFF}
{LINK h[ii]|USER <user id>} \
LANG {P|M} NPCAD {E|X|H} LEV a b c d e f {RMON|RMOFF}
SCR n[ GR a b c d e f] {MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF} \
{EOM|COMPL}
.
```

```
.
.
[M hh:mm:ss xy,ww n[vv] UTL QRY SCR {LINK j[mm]-p[nn]|LINKS| \
USERS} e LN MSG:
[{LINK j[kk]|USER <user id>} LANG {P|M} \
NPCAD {E|X|H} LEV a b c d e f {RMON|RMOFF}
SCR n[ GR a b c d e f] {MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF}[ \
{EOM|COMPL}]]
{LINK p[nn]|USER <user id>} LANG {P|M} NPCAD {E|X|H} LEV a \
b c d e f {RMON|RMOFF}
SCR n[ GR a b c d e f] {MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF}
{EOM|COMPL}]
```

For a range of virtual circuits/sessions on an X.25 or on a TCP/IP link:

[O.54001]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SCR LINK jmm[-lnn] 5 LN MSG:
LINK jmm LANG {P|M} NPCAD {E|X|H} LEV a b c d e f {RMON|RMOFF}
SCR n[ GR a b c d e f] {MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF}
LINK jii LANG {P|M} NPCAD {E|X|H} LEV a b c d e f {RMON|RMOFF}
SCR n[ GR a b c d e f] {MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF}
{EOM|COMPL}
.
.
.
[M hh:mm:ss xy,ww n[vv] UTL QRY SCR LINK jmm[-lnn] e LN MSG:
[LINK jkk LANG {P|M} NPCAD {E|X|H} LEV a b c d e f {RMON|RMOFF}
SCR n[ GR a b c d e f] {MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF}]
LINK jnn LANG {P|M} NPCAD {E|X|H} LEV a b c d e f {RMON|RMOFF}
SCR n[ GR a b c d e f] {MCON|MCOFF} RLK {A|I} {CONVON|CONVOFF} \
[ COMPL]
```

Denial Message

[O.54001.01]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SCR {LINK j[mm][-jnn]| \
USER <user id>|LINKS|USERS} COND cc DNY
```

Explanation of Parameters

SCR	Screening
n	Screening option number (1 - 5)
1	Responses to input at the same link.
2	Responses to input at the same link and autonomous messages.

	3	Responses to messages input at the same link and some specified sets of action verbs.
	4	Responses to messages input at the same link and some specified sets of action verbs including autonomous messages.
	5	Responses to input messages on all links and autonomous messages and message log replay if link is in MML and log retrieval is requested
LINK	Link	
j[mm]	Administrative link number	
j	Physical link number (1 through 7)	
mm	Virtual link/session number (01 through 16) for j = 5, 6, or 7	
	Variable j[mm] when used in combination with p[nn] denotes a range of administrative link numbers beginning with j[mm] and ending with p[nn]. In the general case j is the same value as p; that is, there is no link range. A range of links may only be specified by the Frame Administrator and may only be used for synchronous X.25 links, neither the asynchronous links 1 through 4 nor the TCP/IP link 7.	
	o[uu]	Next administrative link number in command range
	g[vv]	Next administrative link number in command range
	h[ii]	Next administrative link number in command range
	j[kk]	Next administrative link number in command range
	r[tt]	Next administrative link number in command range
	s[yy]	Next administrative link number in command range
	p[nn]	Administrative link number at end of command range
	o,g,h,j, r,s,p	Physical link numbers (1 through 7)
	uu,vv,ii,kk, tt,yy,nn	Virtual circuit/session numbers (01 through 16) for o, g, h, j, r, s, or p = 5, 6 or 7
USER	User	
user id	User identifier	
	The user's login identifier (two to eight alphabetic characters). The frame administrator may use specify any user_id but an individual user is restricted to their own user_id.	

LINKS	Links All administrative links (frame administrator only)
USERS	Users All users (frame administrator only)
LANG	Language
P	Program Documentation Standards (PDS)
M	HuMan-Machine Language (MML)
F	Facility Data Link (FDL) This language may only be provisioned for a single virtual circuit on an X.25 link. A virtual circuit provisioned with this language provides a communication path between an Operations Support System and the ESF data link of a DA or TA type (ANSI) Network Processing Circuit. Such a virtual circuit is completely dedicated to this function and does not interact with other DACS II input/output (I/O) messages. Once the X.25 link is set up, provisioning this function only requires the user to specify the language F for the virtual circuit; no other I/O parameters apply, except for the NPC addressing (NPCAD) option.
NPCAD	NPC Addressing scheme
E	Extended 3-digit nonhierarchical NPC addressing
X	Extended 4-digit nonhierarchical NPC addressing
H	Hierarchical NPC addressing
LEV	Level
a	Execution priority level for circuit provisioning commands
b	Execution priority level for equipment provisioning commands
c	Execution priority level for maintenance commands
d	Execution priority level for test access commands
e	Execution priority level for monitoring commands
f	Execution priority level for common commands
	A table giving the command verbs associated with each of the above command sets is given below. LEV is used in combination with the command set identifiers a through f to set the execution priority level for each command set. A priority level applies to a user or link as appropriate. Priority levels range from 0 through 3. A list of these levels and their meaning is given below for a. The list for b through f is similar to the a list.

a	Explanation
0	Commands in the command set assigned this execution priority level cannot be executed.
1	Highest execution priority level. Commands in the command set assigned this execution priority level will be executed before commands with priority level 2 or 3.
2	Middle execution priority level. Commands in the command set assigned this execution priority level will be executed before commands with priority level 3
3	Lowest execution priority level. Commands in the command set assigned this execution priority level will be executed after all priority level 1 and 2 commands have been executed. Level 3 is the default priority level.
-	The execution priority level of the command set assigned; this execution priority level is not to be changed.

 **NOTE:**
The commands used to login, logoff, cross-connect, stop, and abort always have the highest priority.

 **NOTE:**
The commands used to login, logoff, cross-connect, stop, abort, and fast switch always have the highest priority.

A single queue is used for DACS II commands. When multiple commands arrive at the same time, they will be queued for execution according to the priority assigned to their command set. Commands with the same priority will be executed in the order of arrival, that is, first come first served. A timeout feature insures that no command will wait in the queue forever. When the timeout period has expired for a given command that command will be executed regardless of its priority level.

1.544 Mbit/s Termination

a	b	c	d	e	f
Circuit Prov.	Equipment Prov.	Maint.	Test Access	Monitoring	Common
ACON	COPY	CFR	CTST	AUD	ACT
ALWSW	DGRTH	DGN	STST	UTL	ADD
BCON	DLT	RMV	TTST		ALW
BDIS	GRTH	RST			CHG
CONF					ED
INHSW					EXC
OCNT					INH
OCON					
ODIS					
OPR					
RLS					
SCNT					
SCON					
SDCH					
SDIS					
SECH					
SW					
TCNT					
TCON					
TDIS					
X					

2.048 Mbit/s Termination

a	b	c	d	e	f
Circuit Prov.	Equipment Prov.	Maint.	Test Access	Monitoring	Common
BCON	COPY	CFR	CTST	AUD	ACT
BDIS	DGRTH	DGN	STST	UTL	ADD
CONF	DLT	RMV	TTST		ALW
OCNT	GRTH	RST			CHG
OCON					ED
ODIS					EXC
OPR					INH
RLS					
TCNT					
TCON					
TDIS					

Both Terminations

RMON	Restricted maintenance privilege on
RMOFF	Restricted maintenance privilege off (default)
GR	Group
a	Screening level for circuit provisioning commands
b	Screening level for equipment provisioning commands
c	Screening level for maintenance commands
d	Screening level for test access commands
e	Screening level for monitoring commands
f	Screening level for common commands

A table giving the command verbs associated with each of the above command sets is given in the Explanation of Message section.

The command set identifiers a through f are used to set the group screening level for each command set. Screening levels range from 0 through 1. A list of these levels and their meaning is given below for a. The list for b through f is similar to the a list.

- 1** Output messages from other links are allowed,
- 0** Output messages from other links are not allowed (the screening option for commands LOGIN, LOGOFF, STOP and ABT is not changeable, and it is set to 1).



NOTE:

Group information applies only to screening options 3 or 4; it does not appear for options 1, 2, and 5.

MCON	Macro component completion messages screening on
MCOFF	Macro component completion messages screening off
RLK	Remove link
A	Allowed
I	Inhibited

A and I are used to assign to a user or link the privilege of removing a link. There is a relationship between the link privilege and the execution priority level. If c (see previous Command Sets table) in the LEV field is set to zero, then the command to remove a link cannot be executed; hence the remove link privilege is inhibited, even if the RLK option is set to A or I.

CONVON	Mixed Addressing Conversion ON
CONVOFF	Mixed Addressing Conversion OFF

This mixed addressing conversion feature is only applicable to PDS commands in an environment that uses 4-digit sequential NPC numbers. This conversion feature is useful when a DACS II frame is converted from 3-digit sequential NPC addressing to 4-digit sequential NPC addressing for growth reasons. In that case this conversion feature allows certain Operational Support Systems to use 3-digit NPC numbers, even though the frame has been changed to normally accept only 4-digit NPC numbers.

Assuming sequential NPC number usage, DACS II normally accepts only fixed length NPC numbers in its input commands. This conversion feature transfers the fixed length requirement from NPC number to channel number on a link basis. This

allows the DACS II parser to accept 3- or 4-digit NPC numbers assuming that the channel number is interpreted to be of 2-digit fixed length. If a 3-digit NPC number is entered with CONVON in effect, then DACS II internally expands 3-digit NPC numbers to 4-digit NPC numbers.

For some feature configurations, this conversion feature is not available, and the CONVOFF keyword does not appear in the output of this command.

cc

Hexadecimal condition code

cc	<i>Explanation</i>
D0	Command is Frame administrator (DAX) only.
D3	User does not exist
D7	Cannot execute privileged command
DF	Command and protocol are inconsistent
E1	Virtual circuit is not specified for X.25 link
E2	Invalid link number specified

UTILITY QUERY MEMSTAT SDNUM

Explanation of Command

This command reports the load numbers for individual application files on PMEM and SMEM. This command is not issued in the Command and Message Manual, because the customers should not be interested in the load number for an application.

Command

[I.51061]
UTL: [FRM xy][, SEQ ww]:QRY, SDNUM!

Completion Message

[O.51061]
M hh:mm:ss xy,ww n[vv] UTL QRY SDNUM e LN MSG:
DEV APPLICATION TYPE DATE VERSION LOAD
PMEM SDx aa/bb/yr gen.iss.rel dddd
.
.
[PMEM SDx aa/bb/yr gen.iss.rel dddd]
[SMEM SDx aa/bb/yr gen.iss.rel dddd]
.
.
SMEM SDx aa/bb/yr gen.iss.rel dddd COMPL

Explanation of Parameters

SDNUM	Command to report on the load number for SDx applications
e	Number of lines in the output message
PMEM	Primary memory card
SMEM	Secondary memory card
SDx	Type identifier for a particular application
SD1	X.50/X.57 international subrate application
SD3	Digital Multipoint Bridge (DMB) application
SD4	DDS Subrate and MJU application

gen	DSP Platform application release (generic) number
iss	DSP Platform application point release number
rel	Version number for the point release
dddd	Four-digit load number for the generic

UTILITY QUERY

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This command requests information on an established channel or range of channels.

Data is printed out for the following types of channels:

- An unestablished channel.
- A DS0B channel capable of multiplexing 5, 10, or 20 Subrate customers.
- A DS0A channel (at any rate) without error correction.
- A Subrate DS0A channel with Subrate dataport error correction.
- A 56 kb/s channel with parity channel error correction.
- A DS0B channel capable of multiplexing 5, 10, or 20 Subrate customers and parity channel error correction.
- A parity channel.

Command

Nonhierarchical

[I.52501]

UTL: [FRM xy][, SEQ ww]:QRY, SECH, TO [s]abcddd[-eee]!

Hierarchical

[I.52501]

UTL: [FRM xy][, SEQ ww]:QRY, SECH, TO uvmnpddd[-eee]!

Completion Message

Nonhierarchical

For a single channel request

[O.52501]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SECH [s]abcddd 3 LN MSG:
CHAN SECH TYPE ERR CORR
ddd <es_type> <err_cor>      COMPL
```

For a range of channels

[O.52501]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SECH [s]abcddd-eee e LN MSG:
CHAN SECH TYPE ERR CORR
ddd <es_type> <err_cor>
hhh <es_type> <err_cor>
hhh <es_type> <err_cor>      EOM
```

.

.

.

```
M hh:mm:ss xy,ww n[vv] UTL QRY SECH [s]abcddd-eee e LN MSG:
hhh <es_type> <err_cor>
```

.

.

.

```
eee <es_type> <err_cor>      COMPL
```

Hierarchical

For a single channel request

[O.52501]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SECH uvmnpddd 3 LN MSG:
CHAN SECH TYPE ERR CORR
ddd <es_type> <err_cor>      COMPL
```

For a range of channels

[O.52501]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SECH uvmnpddd-eee e LN MSG:
CHAN SECH TYPE ERR CORR
ddd <es_type> <err_cor>
hhh <es_type> <err_cor>
hhh <es_type> <err_cor>      EOM
```

.

.

.

```
M hh:mm:ss xy,ww n[vv] UTL QRY SECH uvmnpddd-eee e LN MSG:
hhh <es_type> <err_cor>
.
.
.
eee <es_type> <err_cor> COMPL
```

Denial Message

Nonhierarchical

[O.52501.01]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SECH [s]abcddd[-eee] 2 LN MSG:
<reason> DNY
```

Hierarchical

[O.52501.01]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SECH uvmnpddd[-eee] 2 LN MSG:
<reason> DNY
```

Explanation of Parameters

[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Channel number
eee	Channel number denoting end of range specification

The allowable values are presented below:

001-024

001-047 Odd only (SLC 96[®] Carrier, Mode 3, DGA)

049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)

001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)

025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)

049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)

	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)
	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
hhh		Channel number (ddd through eee)
es_type		Establish type
	NOT_EST	Channel is not established
	DS0A rr	DS0A channel established at rate rr (24, 48, 96, 56)
	DS0B nn	DS0B channel established with subrate multiplexer type nn (5, 10, 20)
	PCH	Parity channel
err_cor		Error correction
	SEC	Subrate error correction
	PCH ppp	Parity channel error correction with parity channel ppp
	DCH ggg	Data channel ggg
	---	No error correction
reason		Reason for denial

QUERY TRUNK SIGNALING CONVERSION STATE

Explanation of Command

This command queries the signaling state of a trunk which is using the E1/T1 signaling conversion feature. This feature is implemented on the Digital Signal Processing Platform (DSPP) circuit pack.

The signaling state on any given trunk changes rapidly. This command takes a snapshot of the state of the specified trunk. The snapshot is only useful if the circuit is stuck in one given state. Thus it gives field personnel a way of tracking down the real problem.

Command

Nonhierarchical

[I.52601]

UTL:[FRM xy][,SEQ ww]:QRY,SIGST abcd

Hierarchical

[I.52601]

UTL:[FRM xy][,SEQ ww]:QRY,SIGST uvmnpddd

Completion Message

Nonhierarchical

[O.52601]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SIGST abcd TYPE mnxyz 4 LN MSG:
TRUNK E1-TRN E1-RCV T1-TRN T1-RCV SIG
DIR AB AB A A STATE
tdir ab cd e g <sigst> COMPL
```

Hierarchical

[O.52601]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SIGST uvmnpddd TYPE mnxyz 4 LN MSG:
TRUNK E1-TRN E1-RCV T1-TRN T1-RCV SIG
DIR AB AB A A STATE
tdir ab cd e g <sigst> COMPL
```

Denial Message

Nonhierarchical

[O.52601.01]

M hh:mm:ss xy,ww n[vv] QRY SIGST abcd dd COND cc DNY

Hierarchical

[O.52601.01]

M hh:mm:ss xy,ww n[vv] QRY SIGST uv mnp dd COND cc DNY

Explanation of Parameters

SIGST

Signaling state

abcd dd

E1/T1 trunk termination

abc NPC number

ddd Channel number

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uv mnp dd

E1/T1 trunk termination

uv Unit number

m Module number

np NPC number within the module

ddd Channel number

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

Valid values are listed below:

001-024 T1 NPC channel range

001-030 E1 NPC channel range

TYPE

Type

mnxyz

NPC Type and provisioning options

tdir

Trunk direction

The direction of the trunk as viewed from this channel. A trunk has a direction specified in the circuit provisioning command which established the cross-connection. That direction is either "from T1 to E1" or "from E1 to T1". This represents the direction

in which a call is being established on the trunk between two switches. Valid values are listed below:

T1IC	T1 Incoming, Channel belongs to a T1 NPC receiving the call
T1OG	T1 Outgoing, Channel belongs to a T1 NPC originating the call
E1IC	E1 Incoming, Channel belongs to an E1 NPC receiving the call
E1OG	E1 Outgoing, Channel belongs to an E1 NPC originating the call

ab E1 Transmitting AB signaling bits associated with this channel

cd E1 Receiving AB signaling bits associated with this channel

e T1 Transmitting A signaling bit associated with this channel

g T1 Receiving A signaling bit associated with this channel

Valid values for each bit are zero or one.

sigst Signaling state value

ANS	Answer
BLK	Blocking
CLB	Clear Backward
CLF1	Clear Forward 1
CLF2	Clear Forward 2
DIL0	Dial 0
DIL1	Dial 1
IDL	Idle
SEI	Seizure
SEA	Seize Acknowledgement



NOTE:

An asterisk (*) may be appended to any of the above states. This means that the current received signaling bit value(s) do not correspond to the current signaling state.

COND Condition

cc Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
11	UC is out of service
12	UC is in service but failed
14	FTMI is out of service
15	NPC is unequipped
1F	FTMI is in service but failed
26	NPC type error
0B	Invalid CEPT NPC

UTILITY QUERY SEQUENCE

Explanation of Command

This command retrieves the sequence number of the last autonomous message issued by DACS II.

Command

[I.51131]
UTL:[FRM xy][,SEQ ww]:QRY,SQL!

Completion Message

[O.51131]
M hh:mm:ss xy,ww n[vv] UTL QRY SQL nn COMPL

Explanation of Parameters

SQL Sequence Number
nn Two digit sequence number of the last autonomous message

UTILITY QUERY

Explanation of Command



NOTE:

This command applies to the 1.544 Mb/s Termination Interface only.

This Subrate command requests a circuit/hardware trace for the customer's channel.

Command

Nonhierarchical

[I.52531]

UTL:[FRM xy][,SEQ ww]:QRY,SRHDW,TO [s]abcddd[/ff]!

Hierarchical

[I.52531]

UTL:[FRM xy][,SEQ ww]:QRY,SRHDW,TO uvmnpddd[/ff]!

Completion Message

Nonhierarchical

For a two-point circuit:

[O.52531]

M hh:mm:ss xy,ww n[vv] UTL QRY SRHDW [s]abcddd/ff 4 LN MSG:
TO [t]ghihhh/ll FROM <from>
TO: <ec> <mux>
FROM: <ec> <mux> COMPL

For a multipoint circuit:

[O.52532]

M hh:mm:ss xy,ww n[vv] UTL QRY SRHDW [s]abcddd/ff 5 LN MSG:
MPTM [t]ghihhh/ll <ec> <mux>

```
MJU 0001 MA NPC [u]aaa
BR1 <mju_br_data> BR2 <mju_br_data>
BR3 <mju_br_data> BR4 <mju_br_data> {EOM|COMPL}
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY SRHDW [s]abcddd/ff 4 LN MSG:
MJU ssss MA MJU tttt, BRi NPC [u]aaa
BR1 <mju_br_data> BR2 <mju_br_data>
BR3 <mju_br_data> BR4 <mju_br_data> COMPL
```

Hierarchical

For a two-point circuit

[O.52531]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SRHDW uvmnpddd/ff 4 LN MSG:
TO edfhghhh/ll FROM <from>
TO: <ec> <mux>
FROM: <ec> <mux> COMPL
```

For a multipoint circuit

[O.52532]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SRHDW uvmnpddd/ff 5 LN MSG:
MPTM edfhghhh/ll <ec> <mux>
MJU 0001 MA NPC wxkqr
BR1 <mju_br_data> BR2 <mju_br_data>
BR3 <mju_br_data> BR4 <mju_br_data> {EOM|COMPL}
.
.
.
M hh:mm:ss xy,ww n[vv] UTL QRY SRHDW uvmnpddd/ff 4 LN MSG:
MJU ssss MA MJU tttt, BRi NPC wxkqr
BR1 <mju_br_data> BR2 <mju_br_data>
BR3 <mju_br_data> BR4 <mju_br_data> COMPL
```

Denial Message

Nonhierarchical

[O.52531.01]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SRHDW [s]abcddd[/ff] 2 LN MSG:
<reason> DNY
```

Hierarchical

[O.52531.01]

M hh:mm:ss xy,ww n[vv] UTL QRY SRHDW uvmnpddd[/ff] 2 LN MSG:
<reason> DNY

Explanation of Parameters

SRHDW	Subrate hardware																						
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."																						
uvmnp	Hierarchical NPC number <table> <tr> <td>uv</td><td>Unit number</td></tr> <tr> <td>m</td><td>Module number</td></tr> <tr> <td>np</td><td>NPC number within the module</td></tr> </table> For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."	uv	Unit number	m	Module number	np	NPC number within the module																
uv	Unit number																						
m	Module number																						
np	NPC number within the module																						
ddd	Channel for NPC specified in input The allowable values are presented below: <table> <tr><td>001-024</td><td></td></tr> <tr><td>001-047</td><td>Odd only (SLC 96[®] Carrier, Mode 3, DGA)</td></tr> <tr><td>049-095</td><td>Odd only (SLC 96 Carrier, Mode 3, DGC)</td></tr> <tr><td>001-024</td><td>Odd and Even (SLC 96 Carrier, Mode 1, DGA)</td></tr> <tr><td>025-048</td><td>Odd and Even (SLC 96 Carrier, Mode 1, DGB)</td></tr> <tr><td>049-072</td><td>Odd and Even (SLC 96 Carrier, Mode 1, DGC)</td></tr> <tr><td>073-096</td><td>Odd and Even (SLC 96 Carrier, Mode 1, DGD)</td></tr> <tr><td>001-024</td><td>Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)</td></tr> <tr><td>025-048</td><td>Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)</td></tr> <tr><td>049-072</td><td>Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)</td></tr> <tr><td>073-096</td><td>Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)</td></tr> </table>	001-024		001-047	Odd only (SLC 96 [®] Carrier, Mode 3, DGA)	049-095	Odd only (SLC 96 Carrier, Mode 3, DGC)	001-024	Odd and Even (SLC 96 Carrier, Mode 1, DGA)	025-048	Odd and Even (SLC 96 Carrier, Mode 1, DGB)	049-072	Odd and Even (SLC 96 Carrier, Mode 1, DGC)	073-096	Odd and Even (SLC 96 Carrier, Mode 1, DGD)	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
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049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)																						
073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)																						
ff	Customer number																						

The allowable values are presented below:

	01	(DS0A at 2.4, 4.8, 9.6, or 56 kb/s)
	01-20	(DS0B at 2.4 kb/s)
	01-10	(DS0B at 4.8 kb/s)
	01-05	(DS0B at 9.6 kb/s)
[t]ghi	Nonhierarchical NPC number of multipoint circuit master leg or of FROM side of two-point circuit	
edfhg	Hierarchical NPC number of multipoint circuit master leg or of FROM side of two-point circuit	
hhh	Channel number of multipoint circuit master leg or of FROM side of two-point circuit	
ll	Customer number of multipoint circuit master leg or of FROM side of two-point circuit	
from	Far-end connection in the form:	
	[v]defjjj/ii	Far-end customer
	wxkqrjjj/ii	Far-end customer
	UASGN	Far-end customer is not assigned
ec	Error corrector NPC number in the form:	
	SEC [w]jee	
		Subrate error corrector on NPC [w]jee (nonhierarchical)
	PEC [w]ppp	
		Parity channel error corrector on NPC [w]ppp (nonhierarchical)
	SEC wxkee	
		Subrate error corrector on NPC wx-k-ee
	PEC uvlpp	
		Parity channel error corrector on NPC uv-l-pp
	---	No error corrector applicable
mux	Subrate multiplexer NPC information in the form:	
	MUX [w]mmm	
		Subrate multiplexer on NPC [w]mmm (nonhierarchical)
	MUX edjmm	

	Subrate multiplexer on NPC edjmm
---	No subrate multiplexer applicable
[s]abcdfff	Customer for which trace was requested
[t]ghijjll	External facility termination of multipoint master
MJU	Multipoint junction unit
ssss	MJU number (0002 - 9999) ttttMJU number providing input to MJU ssss
BR	Branch
i	Branch number of MJU tttt providing signal to MJU ssss
[u]aaa	Nonhierarchical Subrate NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
wxkqr	Hierarchical Subrate NPC number
wx	Unit number
k	Module number
qr	NPC number
mju_br_data	MJU branch leg data in the form: [v]rstggg/hh <ec> <mux> External facility termination, error corrector and multiplexer information edrstggg/hh <ec> <mux> External facility termination, error corrector and multiplexer information MJU ssss MJU number to which this branch is internally connected UASGN Unassigned branch
br_data	MJU branch connection data in the form:
[v]jklfff/nn	External facility termination of branch
jklmnfff/nn	External facility termination of branch
MJU-ssss	MJU number of cascaded MJU connected to branch
UASGN	Unassigned branch (ec and mux = "----")
reason	Reason for denial

UTILITY QUERY

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This command requests the framing status of a Subrate multiplexer that is associated with a single DS0B channel or a range of channels or all the DS0B channels in the frame.

The DS0B channels that are reported in the output message must be established and have active cross-connections where multiple channels are listed. Also listed are the carrier group alarm and the failure status of the digroup that is associated with the DS0B channel. This allows the user to determine if the out-of-frame condition is being caused by a failure in a digroup facility or in the equipment.

Command

Nonhierarchical

[I.56501]

UTL: [FRM xy] [, SEQ ww]:QRY, SROOF, {TO [s]abcddd [-eee] | ALL}!

Hierarchical

[I.56501]

UTL: FRM xy, SEQ ww:QRY, SROOF, {TO uvmnpddd [-eee] | ALL}!

Completion Message

Nonhierarchical

[O.56501]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SROOF [s]abcddd 3 LN MSG:
CHAN      DS0B STATUS      NPC STATUS
[s]abcddd <mux_stat>      <npc_stat>  COMPL
```




NOTE:

The above message applies if a single channel was requested.

[O.56501]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SROOF {[s]abcddd-eee|ALL} \
e LN MSG:
CHAN          DS0B STATUS          NPC STATUS
[[s]abcddd    <dsob_stat>          <npc_stat>]
[[s]abcddd    <dsob_stat>          <npc_stat>]
[s]abcddd     <dsob_stat>          <npc_stat> {EOM|COMPL}

.
.
.
```

```
[M hh:mm:ss xy,ww n[vv] UTL QRY SROOF {[s]abcddd-eee|ALL} \
e LN MSG:]
[[s]abcddd    <dsob_stat>          <npc_stat>]
[[s]abcddd    <dsob_stat>          <npc_stat>]
[[s]abcddd    <dsob_stat>          <npc_stat>]
[[s]abceee    <dsob_stat>          <npc_stat> COMPL]
```

[O.56502]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SROOF ALL 2 LN MSG:
NO DS0B CHANNELS ARE OUT-OF-FRAME COMPL
```



NOTE:

The above message, listing all established cross-connected channels, applies if a channel range or ALL was specified.

Hierarchical

[O.56501]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SROOF uvmnpddd 3 LN MSG:
CHAN          DS0B STATUS          NPC STATUS
uvmnpddd      <mux_stat>          <npc_stat> COMPL
```



NOTE:

The above message applies if a single channel was requested.

[O.56501]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SROOF {uvmnpddd-eee|ALL} e LN MSG:
CHAN          DS0B STATUS          NPC STATUS
```

```
[uvmnpddd      <dsob_stat>      <npc_stat>]
[uvmnpddd      <dsob_stat>      <npc_stat>]
uvmnpddd      <dsob_stat>      <npc_stat> {EOM|COMPL}
```

.

.

.

```
[M hh:mm:ss xy,ww n[vv] UTL QRY SROOF {uvmnpddd-eee|ALL}   e LN
MSG:]
[uvmnpddd      <dsob_stat>      <npc_stat>]
[uvmnpddd      <dsob_stat>      <npc_stat>]
[uvmnpddd      <dsob_stat>      <npc_stat>]
[uvmnpjee      <dsob_stat>      <npc_stat>] COMPL]
```

⇒ **NOTE:**
The above message, listing all established cross-connected channels,
applies if a channel range or ALL was specified.

[O.56502]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SROOF ALL   2 LN MSG:
NO DS0B CHANNELS ARE OUT-OF-FRAME   COMPL
```

Denial Message

Nonhierarchical

[O.56501.01]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SROOF {[s]abcddd[-eee]|ALL}  \
2 LN MSG:
<reason>      DNY
```

⇒ **NOTE:**
The above message applies when there are no established DS0B channels
with active cross-connections that are out-of-frame.

Hierarchical

[O.56501.01]

```
M hh:mm:ss xy,ww n[vv] UTL QRY SROOF {uvmnpddd[-eee]|ALL}  \
2 LN \ MSG:
<reason>      DNY
```



NOTE:

The above message applies when there are no established DS0B channels with active cross-connections that are out-of-frame.

Explanation of Parameters

SROOF	Subrate out-of-frame
TO	To NPC
NPC	Network processing circuit
[s]abc-	The 3- or 4-digit nonhierarchical NPC number
uvmnp-	Hierarchical subrate or multijunction NPC number
uv	Unit number
m	Module number
np	NPC number within the module
ddd	Channel number
eee	Channel number indicating end of channel range
	The reported DS0B channels must be already established, and where multiple channels are listed, the DS0Bs must have active cross-connections. This utility also lists the CGA and failure status of the digroup associated with the DS0B to enable the user to determine if the OOF condition is being caused by a digroup facility or equipment failure.
All	All channels
	The ALL keyword cannot be used simultaneously with a single channel or a range of channels.
e	The number of lines in the segment (2 through 5)
mux_stat	Status of DS0B multiplexer in the form:
DOF	Multiplexer is out-of-frame
---	Multiplexer is in-frame
npc_stat	Status of the facility terminating NPC specified as one or more of the following:
OOS	NPC is out-of-service
FAIL	NPC is in the fail state
---	NPC is not failed, out-of-service, or in CGA
CGA <state>	NPC is in one of the following CGA states:

AIS	Alarm Indication Signal
RED	Received DS-1 framing failure
EL	Remote DS-1 framing failure
LMA	Loss of multiframe alignment
RMA	Remote multiframe alarm
FFE	Frame format error rate alarm
LFV	Loss of signal/line format
MUL	More than one CGA reported
NA - UC OOS	No access, UC is out-of-service

dsob_stat

Status of the DSOB channel requested:

OOF	Multiplexer is out-of-frame
NA - SRM FAIL	No access, SRM is failed
NA - SRM PEST	No access, SRM is pested
NA - DSPU OOS	No access, DSPU is out-of-service
NA - DSPU FAIL	No access, DSPU is failed
NA - DSPU PEST	No access, DSPU is pested
NA - DSPI OOS	No access, DSPI is out-of-service
NA - DSPI FAIL	No access, DSPI is failed
NA - DSPI PEST	No access, DSPI is pested

CHANNEL NOT ESTABLISHED AS DS0B
NO DS0B CHANNELS ARE OUT-OF-FRAME

reason

Reason for denial

UTILITY QUERY STATE ALARM CUT OFF

Explanation of Message

This message queries for the active or inactive status of the alarm cutoff.

Command

[I.54340]
UTL:FRM xy,SEQ ww:QRY,STATE,ACO!

Completion Message

[O.54340]
M hh:mm:ss xy ww n[vv] UTL QRY STATE ACO <mode> COMPL

Explanation of Parameters

STATE	State
ACO	Alarm cut off
mode	Alarm mode
	Current state of alarm cut off
ACTIVE	Alarm cutoff is active
NACT	Alarm cutoff is inactive

UTILITY QUERY STATE

Explanation of Command

This command requests the provisioning and status information of a single Network Processing Circuit (NPC) or range of NPCs for one or more Facility Terminating Units (FTU) or DS3 Units (DS3U) or Hybrid DS3 units (HDS3U) or for a single Digital Signal Processing Unit (DSPU).

1.544 Mbit/s Termination

If the type of NPC specified is either DS1yz or DS6yz SLC[®] carrier, the complete output message is printed. If any other NPC type is specified, the second segment of the output format is not printed.

Both Terminations

In the output message, the "PREVIOUS SHORT INTERVAL" data should be ignored for the first 15 minutes following the execution of the CHG::SETOP (Message I.38201) or CHG::NPC,OPTS (Message I.38221) command. These CHG commands clear the stored data, which results in a value of zero being printed for the interval count.

If the accumulated count of a parameter reaches or exceeds its programmed threshold, an autonomous alarm message is generated.

If an NPC range is specified in the input command, the following floating window rules apply:

- Unequipped NPCs within the requested range is skipped.
- If a CEPT gap is within the requested range, the NPCs in the gap are skipped.
- If an endpoint of the requested range is in a CEPT gap, then the NPCs in the portion of the range which is in the gap are denied.

Command

Nonhierarchical

[I.56311]

UTL: [FRM xy][, SEQ ww]:QRY,STATE,NPC [s]abc[-[t]def]!

Hierarchical

[I.56311]

UTL: [FRM xy][, SEQ ww]: QRY, STATE, NPC uvmnp[-wxkqr]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

The first following message segment is output for each DE and TE NPC. The second following message segment is output in addition for DS NPCs.

[O.56311]

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [s]abc TYPE \
mnxyz[ RESET] IW pq 5 LN MSG:
OOS FAIL PEST CGA OOF SLIP BER ERS SERS COFA \
CRC BPV FRER
a b c d wwwww fff st ccccc bbbbbb yyyyy fffff \
kkkkk ggggg \
THRESHOLDS mmm nnn p q ttttt sss ttt uuu
OPTIONS e f g h i j k l { \
COND cc COMPL|EOM}
```

```
[M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [s]abc TYPE DSxyz \
[ RESET] IW pq 5 LN MSG:
SANE SAFE
uuuuu vvvvv
THRESHOLDS xxxxx zzzzz
OPTIONS p q COND cc COMPL]
```

The following message segment is output for each MB, SR, and MJ NPC.

[O.56312]

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [s]abc TYPE mnxyz \
2 LN MSG:
OOS a a FAIL b b PEST c c COMPL
```

The following message segment is output for each SD and ST NPC.

[O.56313]

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [s]abc TYPE mnxyz \
2 LN MSG:
OOS a FAIL b PEST c COMPL
```

Hierarchical

The first following message segment is output for each DE and TE NPC. The second following message segment is output in addition for DS NPCs.

[O.56311]

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC uvmnp TYPE mnxyz[ RESET] \
IW pq 5 LN MSG:
OOS FAIL PEST CGA OOF SLIP BER ERS SERS COFA CRC \
BPV FRER
a b c d wwwwww fff st ccccc bbbbbb yyyyy fffff \
kkkkk ggggg
THRESHOLDS mmm nnn p q ttttt sss ttt uu
OPTIONS e f g h i j k l { \
COND cc COMPL|EOM}
```

```
[M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC uvmnp TYPE DSxyz \
[ RESET] IW pq 5 LN MSG:
SANE SAFE
uuuuu vvvvv
THRESHOLDS xxxxx zzzzz
OPTIONS p q COND cc COMPL]
```

The following message segment is output for each MB, SR, and MJ NPC.

[O.56312]

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC uvmnp TYPE mnxyz \
2 LN MSG:
OOS a a FAIL b b PEST c c COMPL
```

The following message segment is output for each SD and ST NPC.

[O.56313]

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC uvmnp TYPE mnxyz \
2 LN MSG:
OOS a FAIL b PEST c COMPL
```

2.048 Mbit/s Termination

Nonhierarchical

The following message segments is output for each PB and PC NPC.

[O.56311]

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [s]abc TYPE mnxyz \
[ RESET] IW pqr 5 LN MSG:
```



```

24 HOUR 00S FAIL PEST PBA DM      SERS  ERS   US    SLIP  CRC \
FRER   LOFA  MER
      a    b    c    d  aaaaa bbbbbb ccccc ddddd eeeee fffff \
ggggg hhhhh iiiii
THRESHOLDS                      laaaa lbbbbb lcccc ldddd leeee
OPTIONS                          f    g    h    i    j              EOM

```

```

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [s]abc TYPE mnxyz \
[ RESET] IW pqr 5 LN MSG:
PREVIOUS SHORT INTERVAL          DM      SERS  ERS   US    SLIP
                                jjjjj kkkkk lllll mmmm nnnn
THRESHOLDS                      saaaa sbbbb scccc sdddd seeee
OPTIONS                          k    l    n    p    q              EOM

```

```

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [s]abc TYPE mnxyz \
[ RESET] IW pqr 5 LN MSG:
CURRENT SHORT INTERVAL          DM      SERS  ERS   US    SLIP
                                ooooo ppppp qqqqq rrrrr sssss
THRESHOLDS                      saaaa sbbbb scccc sdddd seeee
OPTIONS                          k    l    n    p    q              EOM

```

```

M hh:mm:ss xy,ww n[vv] UTL QRY TS0 abcdefgh TS0M abcdefgh \
TS0MBOFL v COND cc COMPL

```

The following message is output for each MB and CB NPC.

[O.56312]

```

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [s]abc TYPE mnxyz \
2 LN MSG:
00S a a FAIL b b PEST c c[ BOFL o] COMPL

```

The following message segment is output for each SD and ST NPC.

[O.56313]

```

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [s]abc TYPE mnxyz \
2 LN MSG:
00S a FAIL b PEST c COMPL

```

Hierarchical

The following message segments is output for each PB and PC NPC.

[O.56311]

```

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC uvmpn TYPE mnxyz[ RESET] \
IW pqr 5 LN MSG:
24 HOUR 00S FAIL PEST PBA DM      SERS  ERS   US    SLIP  CRC \
FRER   LOFA  MER

```

```

      a   b   c   d   aaaaa bbbbbb ccccc ddddd eeeee fffff \
ggggg hhhhh iiiii
THRESHOLDS          laaaa lbbbbb lcccc ldddd leeee
OPTIONS             f     g     h     i     j             EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC uvmnp TYPE mnxyz[ RESET] \
IW pqr  5 LN MSG:
PREVIOUS SHORT INTERVAL          DM     SERS  ERS   US     SLIP
                                jjjjj kkkkk lllll mmmm nnnnn
THRESHOLDS          saaaa sbbbb scccc sdddd seeee
OPTIONS             k     l     n     p     q             EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC uvmnp TYPE mnxyz[ RESET] \
IW pqr  5 LN MSG:
CURRENT SHORT INTERVAL          DM     SERS  ERS   US     SLIP
                                ooooo ppppp qqqqq rrrrr sssss
THRESHOLDS          saaaa sbbbb scccc sdddd seeee
OPTIONS             k     l     n     p     q             EOM

M hh:mm:ss xy,ww n[vv] UTL QRY TS0 abcdefgh TS0M abcdefgh \
TS0MBOFL v COND cc COMPL

```

The following message is output for each MB and CB NPC.

[O.56312]

```

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC uvmnp TYPE mnxyz \
2 LN MSG:
OOS a a FAIL b b PEST c c[ BOFL o] COMPL

```

The following message segment is output for each SD and ST NPC.

[O.56313]

```

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC uvmnp TYPE mnxyz \
2 LN MSG:
OOS a FAIL b PEST c COMPL

```

Denial Message

Nonhierarchical

[O.56311.01]

```

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [s]abc UEQD DNY

```

[O.56311.02]

```

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [s]abc[-[t]def] COND cc \
DNY

```

Hierarchical

[O.56311.01]

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC uvmnp UEQD DNY

[O.56311.02]

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC uvmnp[-wxkqr] COND cc DNY

Explanation of Parameters

NPC	Network processing circuit
[s]abc	The 3- or 4-digit starting nonhierarchical NPC number
[t]def	The 3- or 4-digit ending nonhierarchical NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Starting hierarchical NPC number
wxkqr	Ending hierarchical NPC number defined for uvmnp
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
[t]ghi	The 3- or 4-digit nonhierarchical NPC number ([s]abc through [t]def)
edfgh	Hierarchical NPC number (uvmnp through wxkqr)
ed	Unit number
f	Module number
gh	NPC number
TYPE	Type
	For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
DA	Dual digroup ANSI NPC
DE	Dual digroup NPC
DS	SLC [®] carrier NPC
TA	DS3U ANSI NPC
TE	DS3U or HDS3U Noninterface unit NPC

TH	Hybrid DS3U CEPT NPC
PA	CEPT NPC (75- or 120-ohm)
PB	CEPT NPC (120-ohm twisted pair)
PC	CEPT NPC (75-ohm coaxial)
MB	Digital multipoint bridge NPC
MJ	Multipoint junction unit NPC
SR	Subrate multiplexer unit NPC
CB	C-bit processor (CPR) NPC
SD	Digital Signal Processing Application Circuit Pack
ST	Digital Signal Processing Circuit Pack (2 NPCs per card)

1.544 Mb/s Termination

SE	HSU Type NPC
SA	HSU Type NPC

2.048 Mb/s Termination

SH	HSU Type NPC

For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

1.544 Mbit/s Termination

RESET Indicates that one or more autonomous resets have occurred.

Both Terminations

IW Insertion word

pq Insertion word value (hexadecimal)

Also referred to as the Disconnect Code (DCC) or idle code. This value is inserted in the transmit direction on unassigned channels. DCC is not applicable to clear-DS1 NPCs, and is not printed. Some common disconnect codes are

2.048 Mbit/s Termination

D5 Unassigned Channel code (UAC), the default value

1.544 Mbit/s Termination

7F Unassigned Channel code (UAC), the default value

- 18** Unassigned Multiplex Code (UMC), should only be used with type DE4yz, for a T1DM formatted facility.
- FF** Per channel all ones code, needed for not connected channels in SLC[®] carrier and CPI applications.

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- r** Transmitted signaling information
- D** Unassigned Channel code (UAC), the default value for CEPT

Both Terminations

- OOS** Out-of-Service
- a** Out of Service flag, applies to FTU NPCs and DSP NPCs on Side 0
- a** Out of Service flag, applies to DSP NPCs on Side 1
 - 1** Out-of-service
 - 0** Not Out-of-service
- FAIL** Fail
- b** Failed flag, applies to FTU NPCs and DSP NPCs on Side 0
- b** Failed flag, applies to DSP NPCs on Side 1
 - 1** Failed
 - 0** Not failed
- PEST** Pest
- c** Pested flag, applies to FTU NPCs and DSP NPCs on Side 0
- c** Pested flag, applies to DSP NPCs on Side 1
 - 1** Pested
 - 0** Not pested

1.544 Mbit/s Termination

- CGA** Carrier group alarm
- d** Carrier Group Alarm flag
 - 0** No CGA
 - A** Alarm Indication Signal (AIS) CGA (non-alarmed)
 - B** Both Yellow and Red CGA (SLC[®] Series 5 NPCs only)

L	LMA - Local Multiframe Alarm
M	RMA - Remote Multiframe Alarm
R	Red CGA
Y	Yellow CGA

The facility monitoring parameters accumulated by the NPC are described below. If the queried NPC cannot be accessed for some reason, for example because the Facility Terminating Module is not equipped or the FTMI or Unit Controller is out of service, then the NPC's parameter count fields are printed as a string of dashes to indicate that the counts are not available. The parameter thresholds and options are still correctly output in this case.

In addition, some parameters are not applicable to all NPCs. Certain parameters may or may not be collected based on NPC type, whether the NPC is equipped in a Facility Terminating Unit (DE type NPC) or a DS3U or a HDS3U (TE type NPC) or an HSU (SE type NPC) and whether the NPC carries a Clear or Channelized facility. In the cases where specific parameters do not apply to the queried NPC, the respective parameter count fields, threshold values and threshold options are all displayed as a string of dashes.

OOF	Out-of-Frame
wwwww	Out-of-Frame count
SLIP	Slip
fff	Slip count
mmm	Slip major alarm threshold (0 through 255)
	The value zero indicates that Slip major threshold crossing alarms are disabled.
e	Slip major alarm option selection (0 through 3)
nnn	Slip minor alarm threshold (0 through 255)
	A value of 000 indicates that the Slip minor threshold crossing alarms are disabled. The Slip minor alarm threshold can not be set to zero unless the Slip major alarm threshold is first set to zero. When the slip minor and major thresholds are not disabled, the major threshold must be greater than the minor threshold.
f	Slip minor alarm option selection (0 through 3)
BER	Bit error rate
st	BER alarm status
CL	BER alarm cleared
ER	Error Rate

	MJ	Major Bit Error Rate
	MN	Minor Bit Error Rate
p		BER major alarm threshold, (1E-p, p can range from 3~ through 6*)
q		BER minor alarm threshold, (1E-q, q can range from 3~ through 6*)

⇒ **NOTE:**
 * p can range to 7 on T1DM and Fe framing
 ~ q ranges from 4 for TG80B or TG186 circuit pack provisioned as clear-DS1

g	BER major alarm option selection (0 through 3)
h	BER minor alarm option selection (0 through 3)

⇒ **NOTE:**
 Major thresholds may not be equal to minor thresholds.

ERS	Errored Seconds
ccccc	ERS count
ttttt	ERS threshold
i	ERS option selection (0 through 3)
SERS	Severely Errored Seconds
bbbbb	SERS count
sss	SERS threshold (1 through 255)
j	SERS option selection (0 through 3)
COFA	Change of frame alignment
yyyyy	COFA count
ttt	COFA major alarm threshold (1 through 511)
k	COFA major alarm option selection (0 through 3)
uuu	COFA minor alarm threshold (1 through 255)
l	COFA minor alarm option selection (0 through 3)

⇒ **NOTE:**
 Major thresholds may not be equal to minor thresholds.

BPV Bipolar violation
kkkkk BPV count

⇒ **NOTE:**
This field is filled with ----- for a TE type NPC.

SANE Shelf alarm near end
uuuuu SANE count
xxxxx SANE threshold (1 through 65535)
p SANE alarm option selection (0 through 3)
SAFE Shelf alarm far end

⇒ **NOTE:**
The SAFE parameter is not applicable for the Digroup P (DGP) of SLC® 96 RTs. Therefore, dashes ("-") are used in the SAFE count (vvvvv), threshold (zzzzz), and option (q) fields for NPCs provisioned as SLC® 96 DGPs.

vvvvv SAFE count
zzzzz SAFE threshold (1 through 65535)
q SAFE alarm option selection (0 through 3)

2.048 Mbit/s Termination

PBA Primary block alarm
d PBA flag
1 PBA
0 No PBA

The PBA flag indicates the presence of one or more of the following conditions:

A16 AIS received in CAS time slot 16.
AIS Alarm Indication Signal received in all 32 time slots.
BER Bit Error Rate detected in received signal.
EER Excessive Error Rate
LMA Loss of Multiframe Alignment in CAS time slot 16.
LOFA Loss of Frame Alignment
LOS Loss of Signal
R16 RAI received in bit 6 of frame 0 of TS16.

RAI	Remote Alarm Indication received in bit 3 of NFW of TS0.
RAIS	Remote AIS detected in bit 4 of TS0.
RBER	Remote Bit Error Rate detected in bit 4 of TS0.
SFI	Synchronization Failure Indication in bit 5 of TS0.

The facility monitoring parameters accumulated by the NPC are described below. If the queried NPC cannot be accessed for some reason, for example because the Facility Terminating Module is not equipped or the FTMI or Unit Controller is out of service, then the NPC's parameter count fields are printed as a string of dashes to indicate that the counts are not available. The parameter thresholds and options are still correctly output in this case.

In addition, some parameters are not applicable to all NPCs. Certain parameters may or may not be collected based on NPC type and whether the NPC carries a Clear or Channelized facility. In the cases where specific parameters do not apply to the queried NPC, the respective parameter count fields, threshold values and threshold options are all displayed as a string of dashes.

DM	Degraded minutes
	Degraded minutes are accumulated on an hourly interval and not a 15-minute interval as with SERS, ERS, US, and SLIP.
aaaaa	DM long interval count
laaaa	DM long interval threshold (1 through 1440)
f	DM long interval option selection (0 through C)
jjjjj	DM previous short interval count
saaaa	DM short interval threshold (1 through 60)
k	DM short interval option selection (0 through C)
ooooo	DM current short interval count
SERS	Severely errored seconds
bbbbb	SERS long interval count (CEPT)
lbbbb	SERS long interval threshold (1 through 65535)
g	SERS long interval option selection (0 through C)
kkkkk	SERS previous short interval count
sbbbb	SERS short interval threshold (1 through 900)
ppppp	SERS current short interval count
l	SERS short interval option selection (0 through C)
ERS	Errored seconds

cccc	ERS long interval count (CEPT)
lcccc	ERS long interval threshold (1 through 65535)
h	ERS long interval option selection (0 through C)
lllll	ERS previous short interval count
scccc	ERS short interval threshold (1 through 900)
n	ERS short interval option selection (0 through C)
qqqqq	ERS current short interval count
US	Unavailable seconds
dddd	US long interval count
ldddd	US long interval threshold (1 through 65535)
i	US long interval option selection (0 through C)
mmmm	US previous short interval count
sddd	US short interval threshold (1 through 900)
p	US short interval option selection (0 through C)
rrrr	US current short interval count
SLIP	Slip
eeee	Slip long interval count
leeee	Slip long interval threshold (1 through 65535)
j	Slip long interval option selection (0 through C)
nnnn	Slip previous short interval count
seeee	Slip short interval threshold (1 through 900)
q	Slip short interval option selection (0 through C)
ssss	Slip current short interval count
CRC	Cyclic redundancy code
ffff	CRC-4 check block error count
FRER	Framing error
gggg	FRER count
LOFA	Loss of frame alignment
hhhh	LOFA count
MER	Multiframe alignment error (time slot 16)
iiii	MER count
TS0	Time slot 0 bits transmitted by the NPC

abcdefgh	Spare bits in TS0
ab	Spare international bits S_i If the NPC is not provisioned for the CRC multiframe format, bits a and b shall represent the S_i bits in the Frame Word (FW) and the Non Frame Word (NFW), respectively. If the NPC is provisioned for the CRC multiframe format, a and b shall represent the S_i bits in frames 13 and 15 of the CRC multiframe in the NFW, respectively.
c	Remote Alarm Indication must be - (hyphen).
de	Two spare national bits S_4 through S_5 in the NFW.
f	RPSFI (Remote Power Supply Failure Indicator) bit in the NFW if provisioned for RPSFI otherwise spare national bit.
gh	Two spare national bits S_7 through S_8 in the NFW
Valid values for a through h are described below:	
0	Transmitted bit set to binary 0
1	Transmitted bit set to binary 1
P	Pass-through: the received bit will be cross-connected unchanged.

 **NOTE:**
A bit provisioned for pass-through may be cross-connected to a bit from another TS0. The values displayed for 'abcdefgh' are those that the NPC is provisioned to transmit. The actually transmitted values may be different, depending on alarm states (see Message 56321).

TS0M	Time slot 0 bits monitored by NPC
abcdefgh	Spare bits in TS0M
ab	Spare international bits S_i If the NPC is not provisioned for the CRC multiframe format, bits a and b shall represent the S_i bits in the Frame Word (FW) and the Non Frame Word (NFW), respectively. If the NPC is provisioned for the CRC multiframe format, a and b shall represent the S_i bits in frames 13 and 15 of the CRC multiframe in the NFW, respectively.
c	Remote Alarm Indication must be - (hyphen).
de	Two spare national bits S_4 through S_5 in the NFW.

	f	RPSFI (Remote Power Supply Failure Indicator) bit in the NFW if provisioned for RPSFI otherwise spare national bit.
	gh	Two spare national bits S_7 through S_8 in the NFW
	Valid values for bits a through h are described below:	
	0	Do not monitor and therefore do not send a message if this bit changes state
	1	Monitor and therefore send a message if this bit changes state
TS0MBOFL		TS0M buffer overflow keyword
v		TS0M buffer overflow condition indicator
	0	NPC is not in TS0M buffer overflow condition
	1	NPC is in TS0M buffer overflow condition
BOFL		Buffer overflow
		CB type NPC buffer overflow keyword
o		State of the buffer
	1	C-bit buffer overflow
	0	No C-bit overflow
cc		Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
04	Subject entity is out of service
11	UC is out of service
12	UC is in service but failed
14	FTMI is out of service
0B	Invalid CEPT NPC
46	NPC Failed or Out of Service
AE	MXR is failed
AF	MIU is failed

cc	<i>Explanation</i>
B1	FMT is out of service
B2	MXR is out of service
CF	MIU is out of service

UTILITY QUERY NPC STATE

Explanation of Command

1.544 Mbit/s Termination

This command requests the provisioning and status information of a single Network Processing Circuit (NPC) or range of NPCs. The output format shown in this message applies to DA, TA and SA type NPCs in one or more Facility Terminating Unit(s) (FTU), DS3 Units (DS3U), or HSUs. It also applies to TH type NPCs in a Hybrid DS3U.

If an NPC range is specified in the input command, the following floating window rules apply:

- Unequipped NPCs within the requested range are skipped.
- For gateway frames, if a CEPT gap is within the requested range, the NPCs in the gap are skipped.
- For gateway frames, if an endpoint of the requested range is in a CEPT gap, then the NPCs in the portion of the range which is in the gap are denied.



NOTE:

Similar information for other NPC types is given by message 56311.

2.048 Mbit/s Termination

This command requests the provisioning and status information of a single Network Processing Circuit (NPC) or a range of NPCs. The output format shown in this message applies to PA type NPCs in one or more Facility Terminating Unit(s) (FTUs).



NOTE:

Similar information for other NPC types is given by message 56311.

Command

Nonhierarchical

[I.56314]

UTL:[FRM xy][,SEQ ww]:QRY,STATE,NPC [s]abc[-[t]def]!

Hierarchical

[I.56314]

UTL:[FRM xy][,SEQ ww]:QRY,STATE,NPC uvmnp[-wxkqr]!

Completion Message

1.544 Mbit/s Termination

Nonhierarchical

[O.56314]

For DA and TA and SA type NPCs:

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz \
[IW pq] 3 LN MSG:
OOS FAIL PEST CGA LOS NE-STATUS FE-STATUS
q r s t u furyatlo fumcablo EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz[IW pq]
5 LN MSG:
DAILY NE CVP ESP SESP SEFS CSSP UASP CVL ESL \
SESL
COUNTS aaaaaaaaaa bbbbbb ccccc ddddd eeeee fffff gggggggggg \
hhhhh iiiii
THRESHOLDS aaaaaaaaaa bbbbbb ccccc ddddd eeeee fffff gggggggggg \
hhhhh iiiii
OPTIONS a b c d e f g h i
EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz[IW pq]
5 LN MSG:
DAILY FE CVP ESP SESP SEFS CSSP UASP ESL
COUNTS jjjjjjjjj kkkkk lllll mmmmm nnnnn ooooo ppppp
THRESHOLDS jjjjjjjjj kkkkk lllll mmmmm nnnnn ooooo ppppp
OPTIONS j k l m n o p EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz \
[IW pq] 5 LN MSG:
15MIN NE CVP ESP SESP SEFS CSSP UASP CVL ESL \
SESL
COUNTS aaaaaaa bbb ccc ddd eee fff gggggggg hhh \
iii

```

THRESHOLDS  aaaaaaa  bbb  ccc  ddd  eee  fff  ggggggg  hhh \
iii
OPTIONS      a        b    c    d    e    f    g        h    i
EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz \
[ IW pq] 5 LN MSG:
15MIN FE     CVP      ESP   SESP  SEFS  CSSP  UASP  ESL
COUNTS      jjjjjjj  kkk   lll   mmm   nnn   ooo   ppp
THRESHOLDS   jjjjjjj  kkk   lll   mmm   nnn   ooo   ppp
OPTIONS      j        k    l    m    n    o    p    COND kk COMPL

```

Hierarchical

[O.56314]

For DA and TA and SA type NPCs:

```

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz[ IW pq] \
3 LN MSG:
OOS FAIL PEST CGA LOS NE-STATUS FE-STATUS
q  r  s  t  u  furyatlo fumcablo EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz[ IW pq] \
5 LN MSG:
DAILY NE     CVP      ESP   SESP  SEFS  CSSP  UASP  CVL      ESL \
SESL
COUNTS      aaaaaaaaa bbbbb ccccc ddddd eeeee fffff gggggggg \
hhhhh iiiii
THRESHOLDS   aaaaaaaaa bbbbb ccccc ddddd eeeee fffff gggggggg \
hhhhh iiiii
OPTIONS      a        b    c    d    e    f    g        h    i
EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz[ IW pq] \
5 LN MSG:
DAILY FE     CVP      ESP   SESP  SEFS  CSSP  UASP  ESL
COUNTS      jjjjjjjj kkkkk lllll mmmm  nnnnn ooooo ppppp
THRESHOLDS   jjjjjjjj kkkkk lllll mmmm  nnnnn ooooo ppppp
OPTIONS      j        k    l    m    n    o    p    EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz[ IW pq] \
5 LN MSG:
15MIN NE     CVP      ESP   SESP  SEFS  CSSP  UASP  CVL      ESL \
SESL
COUNTS      aaaaaaa  bbb  ccc  ddd  eee  fff  ggggggg  hhh \
iii
THRESHOLDS   aaaaaaa  bbb  ccc  ddd  eee  fff  ggggggg  hhh \
iii
OPTIONS      a        b    c    d    e    f    g        h    i

```


EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz[IW pq] \
5 LN MSG:
15MIN FE CVP ESP SESP SEFS CSSP UASP ESL
COUNTS jjjjjjj kkk lll mmm nnn ooo ppp
THRESHOLDS jjjjjjj kkk lll mmm nnn ooo ppp
OPTIONS j k l m n o p COND kk COMPL

2.048 Mbit/s Termination

Nonhierarchical

[O.56314]

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz \
[IW pqr] 7 LN MSG:
OOS FAIL PEST CRCST FEPM SYNSRC CAS LPBK THMOD AISPROV ERB
q r s u v w x df z ttt ccc
PBA LOS LOF AIS EER RAI LMA LCMA BER A16 RAIS RBER RMA SFI PFWOOF \
FLCMA
p y y y y y y y y y y y y y
y
PBA RPSFI
p y EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz \
[IW pqr] 5 LN MSG:
DAILY CRC FRER OFS ES SES CSS CV
COUNTS aaaaaaaa bbbbbbbb ccccc dddd eeeee fffff gggggggg
THRESHOLDS aaaaaaaa bbbbbbbb ccccc dddd eeeee fffff gggggggg
OPTIONS a b c d e f g EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz \
[IW pqr] 5 LN MSG:
DAILY UAS UATC MER FEBE FES FSES FUAS
COUNTS hhhh iiii jjjj kkkkkkkk llll mmmm nnnn
THRESHOLDS hhhh iiii jjjj kkkkkkkk llll mmmm nnnn
OPTIONS h i j k l m n EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz \
[IW pqr] 5 LN MSG:
15MIN CRC FRER OFS ES SES CSS CV
COUNTS aaaaaa bbbbbbb ccc ddd eee fff ggggggg
THRESHOLDS aaaaaa bbbbbbb ccc ddd eee fff ggggggg
OPTIONS a b c d e f g EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz \
[IW pqr] 5 LN MSG:
15MIN UAS UATC MER FEBE FES FSES FUAS
COUNTS hhh ii jjj kkkkkk lll mmm nnn

```
THRESHOLDS hhh ii jjj kkkkkk lll mmm nnn
OPTIONS h i j k l m n EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz \
[ IW pqr] 2 LN MSG:
TS0 abcdefgh TS0M abcdefgh TS0MBOFL v COND kk COMPL
```

Hierarchical

[O.56314]

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz \
[ IW pqr] 7 LN MSG:
OOS FAIL PEST CRCST FEPM SYNSRC CAS LPBK THMOD AISPROV ERB
q r s u v w x df z ttt ccc
PBA LOS LOF AIS EER RAI LMA LCMA BER A16 RAIS RBER RMA SFI PFWOOF \
FLCMA
p y y y y y y y y y y y y y y y
PBA RPSFI
p y EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz \
[ IW pqr] 5 LN MSG:
DAILY CRC FRER OFS ES SES CSS CV
COUNTS aaaaaaaa bbbbbbbb ccccc dddd eeee ffff gggggggg
THRESHOLDS aaaaaaaa bbbbbbbb ccccc dddd eeee ffff gggggggg
OPTIONS a b c d e f g EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz \
[ IW pqr] 5 LN MSG:
DAILY UAS UATC MER FEBE FES FSES FUAS
COUNTS hhhh iiii jjjj kkkkkkkk llll mmmm nnnn
THRESHOLDS hhhh iiii jjjj kkkkkkkk llll mmmm nnnn
OPTIONS h i j k l m n EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz \
[ IW pqr] 5 LN MSG:
15MIN CRC FRER OFS ES SES CSS CV
COUNTS aaaaaa bbbbbbb ccc ddd eee fff ggggggg
THRESHOLDS aaaaaa bbbbbbb ccc ddd eee fff ggggggg
OPTIONS a b c d e f g EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz IW pqr \
5 LN MSG:
15MIN UAS UATC MER FEBE FES FSES FUAS
COUNTS hhh ii jjj kkkkkk lll mmm nnn
THRESHOLDS hhh ii jjj kkkkkk lll mmm nnn
OPTIONS h i j k l m n EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz \
[ IW pqr] 2 LN MSG:
TS0 abcdefgh TS0M abcdefgh TS0MBOFL v COND kk COMPL
```

Both Terminations

Nonhierarchical

[O.56314]

For TH type NPCs:

```

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz \
[ IW pqr] 7 LN MSG:
OOS FAIL PEST CRCST FEPM SYNSRC CAS LPBK THMOD AISPROV ERB
q r s u v w x df z ttt ccc
PBA LOS LOF AIS EER RAI LMA LCMA BER A16 RAIS RBER RMA SFI PFWOOF \
FLCMA
p y y y y y y y y y y y y y y
PBA RPSFI
p y EOM
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz \
[ IW pqr] 5 LN MSG:
DAILY CRC FRER OFS ES SES CSS CV
COUNTS aaaaaaa bbbbbbbb ccccc dddd eeeee fffff gggggggg
THRESHOLDS aaaaaaa bbbbbbbb ccccc dddd eeeee fffff gggggggg
OPTIONS a b c d e f g EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz \
[ IW pqr] 5 LN MSG:
DAILY UAS UATC MER FEBE FES FSES FUAS
COUNTS hhhh iiii jjjj kkkkkkk llll mmmm nnnnn
THRESHOLDS hhhh iiii jjjj kkkkkkk llll mmmm nnnnn
OPTIONS h i j k l m n EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz \
[ IW pqr] 5 LN MSG:
15MIN CRC FRER OFS ES SES CSS CV
COUNTS aaaaaa bbbbbbb ccc ddd eee fff ggggggg
THRESHOLDS aaaaaa bbbbbbb ccc ddd eee fff ggggggg
OPTIONS a b c d e f g EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz \
[ IW pqr] 5 LN MSG:
15MIN UAS UATC MER FEBE FES FSES FUAS
COUNTS hhh ii jjj kkkkkk lll mmm nnn
THRESHOLDS hhh ii jjj kkkkkk lll mmm nnn
OPTIONS h i j k l m nn EOM

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi TYPE mnxyz \
[ IW pqr] 2 LN MSG:
TS0 abcdefgh TS0M abcdefgh TS0MBOFL v COND kk COMPL

```

NOTE:
Parameters CV, FEBE, FES, FSES and FUAS are not applicable for the TH type NPCs.

Hierarchical

[O.56314]

For TH type NPCs:

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz \
[ IW pqr] 7 LN MSG:
OOS FAIL PEST CRCST FEPM SYNSRC CAS LPBK THMOD AISPROV ERB
q r s u v w x df z ttt ccc
PBA LOS LOF AIS EER RAI LMA LCMA BER A16 RAIS RBER RMA SFI PFWOOF \
FLCMA
p y y y y y y y y y y y y y y
PBA RPSFI
p y EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz \
[ IW pqr] 5 LN MSG:
DAILY CRC FRER OFS ES SES CSS CV
COUNTS aaaaaaaa bbbbbbbb ccccc dddd eeeee fffff gggggggg
THRESHOLDS aaaaaaaa bbbbbbbb ccccc dddd eeeee fffff gggggggg
OPTIONS a b c d e f g EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz \
[ IW pqr] 5 LN MSG:
DAILY UAS UATC MER FEBE FES FSES FUAS
COUNTS hhhh ii jjj kkkkkkk llll mmmm nnnn
THRESHOLDS hhhh ii jjj kkkkkkk llll mmmm nnnn
OPTIONS h i j k l m n EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz \
[ IW pqr] 5 LN MSG:
15MIN CRC FRER OFS ES SES CSS CV
COUNTS aaaaaa bbbbbbb ccc ddd eee fff ggggggg
THRESHOLDS aaaaaa bbbbbbb ccc ddd eee fff ggggggg
OPTIONS a b c d e f g EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz IW pqr \
5 LN MSG:
15MIN UAS UATC MER FEBE FES FSES FUAS
COUNTS hhh ii jjj kkkkkk lll mmm nnn
THRESHOLDS hhh ii jjj kkkkkk lll mmm nnn
OPTIONS h i j k l m n EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg TYPE mnxyz \
[ IW pqr] 2 LN MSG:
```

TS0 abcdefgh TS0M abcdefgh TS0MBOFL v COND kk COMPL

NOTE:
Parameters CV, FEBE, FES, FSES and FUAS are not applicable for the TH type NPCs.

Denial Message

Nonhierarchical

[O.56314.01]

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC [t]ghi COND cc DNY

Hierarchical

[O.56314.01]

M hh:mm:ss xy,ww n[vv] UTL QRY STATE NPC edhfg COND cc DNY

Explanation of Parameters

1.544 Mbit/s Termination

NPC	Network Processing Circuit
[s]abc	The first 3- or 4-digit nonhierarchical NPC Number of a range
[t]def	The last 3- or 4-digit nonhierarchical NPC Number of a range
[t]ghi	A 3- or 4-digit nonhierarchical NPC number ([s]abc through [t]def)
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	The first hierarchical NPC number of a range
wxkqr	The last hierarchical NPC number of a range
edhfg	A 3- or 4-digit hierarchical NPC number (uvmnp through wxkqr)
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
mnxyz	NPC type

DAxyz	FTU ANSI NPC
TAxyz	DS3U ANSI NPC
SAxyz	HSU ANSI NPC
	For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
IW	Insertion Word
pq	Hexadecimal value of the DCC (disconnect code)
	This value is inserted in the transmit direction on unassigned channels. DCC is not applicable to Clear-DS1 NPCs, and is not printed. Although any 2-digit hexadecimal code may be specified, the following are commonly used codes:
	7F UAC (Unassigned Channel code), the default value.
	18 UMC (Unassigned Multiplex Code), should only be used with types DA4yz and TA4yz and SA4yz, for a T1DM formatted facility.
OOS	Out-of-Service
q	Out-of-service indicator
	1 NPC is out-of-service
	0 NPC is not out-of-service
FAIL	Failed
r	Failed indicator
	1 NPC is failed
	0 NPC is not failed
PEST	Pested
s	Pested indicator
	1 NPC is pested
	0 NPC is not pested
CGA	Carrier group alarm
t	Carrier group alarm indicator
	A Alarm Indication Signal (AIS) CGA
	L LMA - Local Multiframe Alarm
	M RMA - Remote Multiframe Alarm
	O No CGA
	R Red CGA

	Y	Yellow CGA
LOS		Loss of signal
u		Loss of signal indicator
	1	LOS alarm
	0	No LOS alarm
	-	Not applicable



NOTE:

The LOS alarm indicator is displayed as a dash for ANSI NPCs which are equipped in a DS3 Unit (TA type NPCs) or HSU (SA type NPC) because the LOS alarm does not apply to them. TA type NPCs cannot monitor DS1 line failures (LOS) because the line signal is at the DS3 rate. SA type NPCs cannot monitor DS1 line failures because the line signal is at the STS-1 rate.

NE-STATUS Near-end Circuit Status

furyatlo

The bits in the near-end byte identify the following alarm/status conditions:

f	f = 1, if u or r or y or a or t or l or o = 1
u	u = 1, if an unavailable signal status exists
r	r = 1, if a Red-CGA exists
y	y = 1, if a Yellow-CGA exists
a	a = 1, if an AIS-CGA exists
t	t = 0 (unused)
l	l = 1, if a payload loopback or test signal is active
o	o = 0 (unused)

FE-STATUS Far-end Circuit Status

fumcablo

The bits in the far-end byte identify the following alarm/status conditions:

f	f = 1, if u or m or c or a or b or l or o = 1
u	u = 1, if a far-end unavailable signal status exists
m	m = 1, if no ANSI PRMs or RAI has been received for 4.5 seconds
c	c = 1, if loopback retention code is being received
a	a = 1, if a far-end AIS-CGA or Red-CGA exists

b	b = 1, if loopback retention code is being transmitted
l	l = 1, if a far-end payload loopback is active
o	o = 0 (unused)
CVP	Path Coding Violations
CVL	Line Coding Violations
ESP	Path Errored Seconds
ESL	Line Errored Seconds
SESP	Path Severely Errored Seconds
SESL	Line Severely Errored Seconds
SEFS	Severely Errored Framing Seconds
CSSP	Path Controlled Slip Seconds
UASP	Path Unavailable Seconds

If the queried NPC cannot be accessed for some reason, for example, because the Facility Terminating Module is not equipped or the FTMI or Unit Controller is out of service, then the NPC's parameter count fields are printed as a string of dashes to indicate that the counts are not available. The parameter thresholds and options are still correctly output.

In addition, certain parameters do not apply to ANSI NPCs depending on whether the NPC is equipped in a Facility Terminating Unit (DA type NPCs) or a DS3 Unit (TA type NPCs) or an HSU (SA type NPCs) and whether the NPC is using ESF framing or not. In the cases where specific parameters do not apply to the queried NPC, the respective parameter count fields, threshold values and threshold options are all displayed as a string of dashes. Specifically:

- For Channelized and Clear-DS1 DA type NPCs with ESF framing, all of the Near-end and Far-end parameters are valid.
- For Channelized and Clear-DS1 DA type NPCs with D4 or T1DM framing, all of the Near-end parameters are valid, but the only valid Far-end parameter is Unavailable Seconds.
- For Channelized and Clear-DS1 TA and SA type NPCs with ESF framing, all of the Near-end Path parameters are valid, but the Near-End Line parameters are invalid. All of the Far-end parameters are valid.
- For Channelized and Clear-DS1 TA and SA type NPCs with D4 or T1DM framing, the Near-end Path parameters are valid, but the Near-End Line parameters are invalid. The only valid Far-end parameter is Unavailable Seconds.

CVP (Path Coding Violations)

aaaaaaa[aa]	CVP NE 15 Minute/Daily interval count
jjjjjj[jj]	CVP FE 15 Minute/Daily interval count
aaaaaaa[aa]	CVP NE 15 Minute/Daily interval threshold
jjjjjj[jj]	CVP FE 15 Minute/Daily interval threshold
a	CVP NE 15 Minute/Daily interval threshold option (0 to 3)
j	CVP FE 15 Minute/Daily interval threshold option (0 to 3)
ESP (Path Errored Seconds)	
bbb[bb]	ESP NE 15 Minute/Daily interval count
kkk[kk]	ESP FE 15 Minute/Daily interval count
bbb[bb]	ESP NE 15 Minute/Daily interval threshold
kkk[kk]	ESP FE 15 Minute/Daily interval threshold
b	ESP NE 15 Minute/Daily interval threshold option (0 to 3)
k	ESP FE 15 Minute/Daily interval threshold option (0 to 3)
SESP (Path Severely Errored Seconds)	
ccc[cc]	SESP NE 15 Minute/Daily interval count
lll[l]	SESP FE 15 Minute/Daily interval count
ccc[cc]	SESP NE 15 Minute/Daily interval threshold
lll[l]	SESP FE 15 Minute/Daily interval threshold
c	SESP NE 15 Minute/Daily interval threshold option (0 to 3)
l	SESP FE 15 Minute/Daily interval threshold option (0 to 3)
SEFS (Severely Errored Framing Seconds)	
ddd[dd]	SEFS NE 15 Minute/Daily interval count
mmm[mm]	SEFS FE 15 Minute/Daily interval count
ddd[dd]	SEFS NE 15 Minute/Daily interval threshold
mmm[mm]	SEFS FE 15 Minute/Daily interval threshold
d	SEFS NE 15 Minute/Daily interval threshold option (0 to 3)
m	SEFS FE 15 Minute/Daily interval threshold option (0 to 3)
CSSP (Path Controlled Slip Seconds)	
eee[ee]	CSSP NE 15 Minute/Daily interval count
nnn[nn]	CSSP FE 15 Minute/Daily interval count
eee[ee]	CSSP NE 15 Minute/Daily interval threshold
nnn[nn]	CSSP FE 15 Minute/Daily interval threshold

e	CSSP NE 15 Minute/Daily interval threshold option (0 to 3)
n	CSSP FE 15 Minute/Daily interval threshold option (0 to 3)
UASP (Path Unavailable Seconds)	
fff[ff]	UASP NE 15 Minute/Daily interval count
ooo[oo]	UASP FE 15 Minute/Daily interval count
fff[ff]	UASP NE 15 Minute/Daily interval threshold
ooo[oo]	UASP FE 15 Minute/Daily interval threshold
f	UASP NE 15 Minute/Daily interval threshold option (0 to 3)
o	UASP FE 15 Minute/Daily interval threshold option (0 to 3)
CVL (Line Coding Violations)	
gggggggg[gg]	CVL NE 15 Minute/Daily interval count
gggggggg[gg]	CVL NE 15 Minute/Daily interval threshold
g	CVL NE 15 Minute/Daily interval threshold option (0 to 3)
ESL (Line Errored Seconds)	
hhh[hh]	ESL NE 15 Minute/Daily interval count
ppp[pp]	ESL FE 15 Minute/Daily interval count
hhh[hh]	ESL NE 15 Minute/Daily interval threshold
ppp[pp]	ESL FE 15 Minute/Daily interval threshold
h	ESL NE 15 Minute/Daily interval threshold option (0 to 3)
p	ESL FE 15 Minute/Daily interval threshold option (0 to 3)
SESL (Line Severely Errored Seconds)	
iii[ii]	SESL NE 15 Minute/Daily interval count
iii[ii]	SESL NE 15 Minute/Daily interval threshold
i	SESL NE 15 Minute/Daily interval threshold option (0 to 3)

Both Terminations

For TH type NPCs:

Depending on which interface functions are enabled by the provisioning values of xyz, some parameters may not be applicable. In this case, the threshold value, the parameter count (if present in the message) and the selection value will appear as dashes (-). In the table below N/A indicates that a parameter is not applicable for the given value of x or y.

Also, if the selection value m=c has been chosen for a parameter, the threshold value and the parameter count (if present in the message) will appear as dashes.

Parameter	CRC-4 Mode Disabled (x=B)	CAS Disabled (y=8,9,C,D)	Unframed Clear 2Mbit/s (y=D)
CRC	N/A		N/A
FRER			N/A
OFS			N/A
ES			N/A
SES			N/A
CSS			
UAS			N/A
UATC			N/A
MER		N/A	N/A

2.048 Mbit/s Termination

NPC	Network Processing Circuit
	If an NPC range is specified in the input command, unequipped NPCs within the requested range are skipped.
[s]abc	The first 3- or 4-digit nonhierarchical NPC Number of a range
[t]def	The last 3- or 4-digit nonhierarchical NPC Number of a range
[t]ghi	A 3- or 4-digit nonhierarchical NPC number ([s]abc ≤ [t]ghi ≤ [t]def)
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	The first hierarchical NPC number of a range
wxkqr	The last hierarchical NPC number of a range
edhfg	A 3- or 4-digit hierarchical NPC number (uvmnp ≤ edhfg ≤ wxkqr)
uv,wx	Unit number

	m,k	Module number
	np,qr	NPC number within the module
		For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
	mnxyz	NPC type
	PAxyz	Enhanced 2Mbit/s Interface NPC type (120-ohm or 75-ohm)
	THxyz	HDS3U NPC type
	IW	Insertion Word
	pq	Hexadecimal value of the DCC (disconnect code)
		This value is inserted in the transmit direction on unassigned channels. DCC is not applicable to Clear-DS1 NPCs, and is not printed. Although any 2-digit hexadecimal code may be specified, the following are commonly used codes:
	D5	Unassigned Channel code (UAC), the default value
	r	Transmitted signaling information
	D	Unassigned Channel code (UAC), the default value
	OOS	Out-of-Service
	q	Out-of-service indicator
	1	NPC is out-of-service
	0	NPC is not out-of-service
	FAIL	Failed
	r	Failed indicator
	1	NPC is failed
	0	NPC is not failed
	PEST	Pested
	s	Pested indicator
	1	NPC is pested
	0	NPC is not pested
	CRCST	CRC Multiframe Status for NPCs with the automatic CRC mode
	u	CRC Multiframe status flag
	1	CRC Multiframe active
	0	CRC Multiframe inactive

	-	Not applicable, i.e., automatic CRC mode not provisioned
FEPM		Far End Performance Monitoring
v		Far End Performance Monitoring provisioning flag
	1	FEPM provisioned
	0	FEPM not provisioned
SYNSRC		Synchronization source
w		SYNC source provisioning flag
	1	NPC used as SYNC source
	0	NPC not used as SYNC source
	-	Not applicable, i.e., the NPC cannot be SYNC source
CAS		Channel Associated Signaling
x		CAS provisioning flag
	1	NPC with CAS
	0	NPC with NSA
	-	Not applicable, i.e., NPC is nonchannelized
LPBK		Loopback status
d		Loopback direction flag
	F	Facility loopback
	E	Equipment loopback
	-	Not applicable, i.e., no loopback
t		Loopback NPC state flag
	A	AIS downstream/upstream with performance monitoring off
	B	AIS downstream/upstream with performance monitoring on
	C	Pass-through with performance monitoring off
	T	Pass-through with performance monitoring on
	-	Not applicable, i.e., no loopback
THMOD		Thresholding Mode
z		Thresholding mode flag
	1	Thresholding is inhibited

	0	Thresholding is allowed
AISPROV		AIS provisioning
ttt		Provisioned AIS alarm level
		The AIS PBA alarm is not provisioned for unframed clear (unchannelized) 2.048Mbit/s PAXDz type NPCs. Therefore, disregard the value of ttt for these NPCs, since the AIS alarm with the ttt alarm level is not detected.
	PMC	Prompt maintenance alarm - critical
	PMA	Prompt maintenance alarm - major
	DMA	Deferred maintenance alarm - minor
	MI	Maintenance information
ERB		Errored block
ee		Percentage of errored blocks (1% through 91%, default is 81%)
		The number of errored blocks, expressed as a percentage, used to declare a severely errored second (SES) or far-end SES (FSES).
PBA		Primary block alarm
p		PBA flag
	1	PBA
	0	No PBA

The PBA flag indicates the presence of one or more of the failure conditions output in the same data line:

LOS	Loss of Signal
LOF	Loss of Frame
AIS	Alarm Indication Signal received in all 32 time slots
EER	Excessive Error Rate
RAI	Remote Alarm Indication received in bit 3 of NFW of TS0
LMA	Loss of Multiframe Alignment in CAS time slot 16
LCMA	Loss of CRC4 Multiframe Alignment
BER	Bit Error Rate detected in received signal
A16	AIS received in CAS time slot 16
RAIS	Remote AIS detected in bit 4 of NFW of TS0
RBER	Remote Bit Error Rate detected in bit 4 of NFW of TS0

RMA	Remote Multiframe Alarm received in bit 6 of frame 0 of TS16
SFI	Synchronization Failure Indication in bit 5 of NFW of TS0
PFWOOF	Pseudo Frame Word Out-Of-Frame for TS0 to non TS0 cross-connect
FLCMA	Far-end loss of CRC-4 Multiframe Alignment
RPSFI	Remote Power Supply Failure Indicator
y	Failure flag
1	The failure condition exists
0	The failure condition does not exist
-	The detection of the failure condition is not provisioned


NOTE:

The facility monitoring parameters accumulated by the NPC are described below. If the queried NPC cannot be accessed for some reason, for example because the Unit Controller is out of service, then the NPC's parameter count fields are printed as a string of dashes to indicate that the counts are not available. The parameter thresholds and options are still correctly output in this case.

In addition, some parameters are not applicable to all NPCs. Certain parameters may or may not be collected based on NPC type and whether the NPC carries a Clear or Channelized facility. In the cases where specific parameters do not apply to the queried NPC, the respective parameter count fields, threshold values and threshold options are all displayed as a string of dashes.

PA NPC performance monitoring parameters:

CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
CV	Coding Violations
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors

FEBE	Far End Block Errors
FES	Far End Errored Seconds
FSES	Far End Severely Errored Seconds
FUAS	Far End Unavailable Seconds

⇒ NOTE:
Parameters **FEBE**, **FES**, **FSES** and **FUAS** are not applicable for the TH type NPCs.

Both Terminations

TH NPC performance monitoring parameters:

CRC	CRC Block Errors
FRER	Framing Errors
OFS	Out of Frame Seconds
ES	Errored Seconds
SES	Severely Errored Seconds
CSS	Controlled Slip Seconds
CV	Coding Violations
UAS	Unavailable Seconds
UATC	Unavailable Time Count
MER	Multiframe Errors
FEBE	Far End Block Errors
FES	Far End Errored Seconds
FSES	Far End Severely Errored Seconds
FUAS	Far End Unavailable Seconds

⇒ NOTE:
Parameters **FEBE**, **FES**, **FSES** and **FUAS** are not applicable for the TH type NPCs.

aaaaaaaa	Daily CRC block error current counts
bbbbbbbb	Daily framing error current counts
cccccc	Daily out of frame seconds current counts
dddddd	Daily errored second current counts

eeeeee	Daily severely errored second current counts
ffff	Daily controlled slip second current counts
ggggggggg	Daily coding violation current counts
hhhhh	Daily unavailable second current counts
iiii	Daily unavailable time count current counts
jjjj	Daily multiframe alignment error current counts
kkkkkkkk	Daily far-end block error current counts
llll	Daily far-end errored second current counts
mmmmm	Daily far-end severely errored second threshold value
nnnnn	Daily far-end unavailable second current counts
aaaaaaaa	Daily CRC block error threshold value
bbbbbbbbbb	Daily framing error threshold value
cccc	Daily out of frame seconds threshold value
dddd	Daily errored second threshold value
eeee	Daily severely errored second threshold value
ffff	Daily controlled slip second threshold value
ggggggggg	Daily coding violation threshold value
hhhhh	Daily unavailable second threshold value
iiii	Daily unavailable time count threshold value
jjjj	Daily multiframe alignment error threshold value
kkkkkkkk	Daily far-end block error threshold value
llll	Daily far-end errored second threshold value
mmmmm	Daily far-end severely errored second threshold value
nnnnn	Daily far-end unavailable second threshold value
a	Daily CRC block error threshold selection
b	Daily framing error threshold selection
c	Daily out of frame seconds threshold selection
d	Daily errored second threshold selection
e	Daily severely errored second threshold selection

f	Daily controlled slip second threshold selection
g	Daily coding violation threshold selection
h	Daily unavailable second threshold selection
i	Daily unavailable time count threshold selection
j	Daily multiframe alignment error threshold selection
k	Daily far-end path block error selection
l	Daily far-end path second threshold selection
m	Daily far-end severely errored second threshold selection
n	Daily far-end unavailable second threshold selection

aaaaaa	15-minute CRC block error current counts
bbbbbbb	15-minute framing error current counts
ccc	15-minute out of frame seconds current counts
ddd	15-minute errored second current counts
eee	15-minute severely errored second current counts
fff	15-minute controlled slip second current counts
ggggggg	15-minute coding violation current counts
hhh	15-minute unavailable second current counts
ii	15-minute unavailable time count current counts
jjj	15-minute multiframe alignment error current counts
kkkkkk	15-minute far-end block error current counts
lll	15-minute far-end errored second current counts
mmm	15-minute far-end severely errored second current counts
nnn	15-minute far-end unavailable second current counts

aaaaaa	15-minute CRC block error threshold value
bbbbbbb	15-minute framing error threshold value
ccc	15-minute out of frame seconds threshold value
ddd	15-minute errored second threshold value
eee	15-minute severely errored second threshold value
fff	15-minute controlled slip second threshold value
ggggggg	15-minute coding violation threshold value

hhh	15-minute unavailable second threshold value
ii	15-minute unavailable time count threshold value
jjj	15-minute multiframe alignment error threshold value
kkkkkk	15-minute far-end block error threshold value
lll	15-minute far-end errored second threshold value
mmm	15-minute far-end severely errored second threshold value
nnn	15-minute far-end unavailable second threshold value
a	15-minute CRC block error threshold selection
b	15-minute framing error threshold selection
c	15-minute out of frame seconds threshold selection
d	15-minute errored second threshold selection
e	15-minute severely errored second threshold selection
f	15-minute controlled slip second threshold selection
g	15-minute coding violation threshold selection
h	15-minute unavailable second threshold selection
i	15-minute unavailable time count threshold selection
j	15-minute multiframe alignment error threshold selection
k	15-minute far-end path block error selection
l	15-minute far-end path second threshold selection
m	15-minute far-end severely errored second threshold selection
n	15-minute far-end unavailable second threshold selection

2.048 Mbit/s Termination

For PA type NPCs:

Depending on which interface functions are enabled by the provisioning values of xyz, some parameters may not be applicable. In this case the threshold value, the parameter count (if present in the message) and the selection value will appear as dashes (-). In the table below N/A indicates that a parameter is not applicable for the given value of x or y.

Also, if the selection value m=c has been chosen for a parameter, the threshold value and the parameter count (if present in the message) will appear as dashes.

Parameter	CRC-4 Mode Disabled (x=A,B,E,F)	Far-End PM Disabled (x=0,2,4,6,A,B,E,F)	CAS Disabled (y=8,9,C,D)	Unframed Clear 2Mbit/s (y=D)
CRC	N/A			N/A
FRER				N/A
OFS				N/A
ES				N/A
SES				N/A
CSS				
CV				
UAS				N/A
UATC				N/A
MER			N/A	N/A
FEBE		N/A		N/A
FES		N/A		N/A
FSES		N/A		N/A
FUAS		N/A		N/A

TS0 Time Slot 0

Note that the TS0 output data field is populated with dashes (-) if the NPC is provisioned as a nonchannelized NPC, that is, clear 2Mbit/s NPC.

abcdefgh Spare bits in TS0

ab Spare international bits S_i

If the NPC is not provisioned for the CRC multiframe format, bits a and b shall represent the S_i bits in the Frame Word (FW) and the Non Frame Word (NFW), respectively.

If the NPC is provisioned for the CRC multiframe format, a and b shall represent the S_i bits in frames 13 and 15 of the CRC multiframe in the NFW, respectively.

c Remote Alarm Indication must be - (hyphen).

de Two spare national bits S_4 through S_5 in the NFW.

f RPSFI (Remote Power Supply Failure Indicator) bit in the NFW if provisioned for RPSFI otherwise spare national bit.

gh Two spare national bits S_7 through S_8 in the NFW
Valid values for a through h are described below:

0 Transmitted bit set to binary 0

1 Transmitted bit set to binary 1

P Pass-through: the received bit will be cross-connected unchanged.



NOTE:

A bit provisioned for pass-through may be cross-connected to a bit from another TS0.

The values displayed for 'abcdefgh' are those that the NPC is provisioned to transmit. The actually transmitted values may be different, depending on alarm states (see UTL, QRY, TS0, NPC [I.56321]).

TS0M Time slot 0 bits monitored by NPC

The TS0 output data field is populated with dashes (-) if the NPC is provisioned as a nonchannelized NPC, i.e., clear 2Mbit/s NPC.

abcdefgh Spare bits in TS0M

ab Spare international bits S_i

If the NPC is not provisioned for the CRC multiframe format, bits a and b shall represent the S_i bits in the Frame Word (FW) and the Non Frame Word (NFW), respectively.

If the NPC is provisioned for the CRC multiframe format, a and b shall represent the S_i bits in frames 13 and 15 of the CRC multiframe in the NFW, respectively.

c Remote Alarm Indication must be - (hyphen).

de Two spare national bits S_4 through S_5 in the NFW.

f RPSFI (Remote Power Supply Failure Indicator) bit in the NFW if provisioned for RPSFI otherwise spare national bit.

gh Two spare national bits S_7 through S_8 in the NFW
Valid values for bits a through h are described below:

0 Do not monitor and therefore do not send a message if this bit changes state

1 Monitor and therefore send a message if this bit changes state

TS0MBOFL TS0M buffer overflow

v	TSOM buffer overflow condition indicator
0	NPC is not in TSOM buffer overflow condition
1	NPC is in TSOM buffer overflow condition

COND Condition

kk Hexadecimal completion condition code

cc Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
04	Subject entity is out of service
11	UC is out of service
12	UC is in service but failed
14	FTMI is out of service
0B	Invalid CEPT NPC
46	NPC Failed or Out of Service
AE	MXR is failed
AF	MIU is failed
B1	FMT is out of service
B2	MXR is out of service
CF	MIU is out of service

UTILITY QUERY SCDG

UTL, QRY, STATE, SCDG, NPC, RT, DL, AL

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination Interface only.

This command requests a printout of the list of SLC[®] carrier digroups (DCLU) terminated on this frame. Additionally, if the STATE option is used on the input message, the system reports the status of the digroup(s) with regard to protection switching, line loopback, and the outstanding alarm states.

Output Messages

For Message O.52322, the appearance order for the RTs and DLs (for digital carrier line unit) is such that the RT with the smallest identification number appears first, followed by the DL that has the same identification number.

If a DL is found without the same identification number, then the RT with the next smallest identification number appears next, and so on.

If an RT (DL) is not terminated on this frame, then the output message only includes the first line of the message with the SLC carrier or DCLU digroup value set to zero.

For Message O.52321 and if the NPC number is entered, the RT or DL ID number and the operation mode number are shown in the first output line.

Options

The power/miscellaneous (sss) option shows a SLC 96 carrier RT if it is specified in the ADD::RT command.

The retrofit (RTF) option shows a retrofit SLC carrier RT with FPC.

Command

Nonhierarchical

[I.52321]

UTL: [FRM xy][, SEQ ww]: QRY[, STATE], SCDG, {NPC [s]abc|RT ffff| \ DL ffff|ALL}!

Hierarchical

[I.52321]

UTL: [FRM xy][, SEQ ww]: QRY[, STATE], SCDG, {NPC uvmnp|RT ffff| \ DL ffff|ALL}!

Completion Message

Nonhierarchical

[O.52321]

M hh:mm:ss xy, ww n[vv] UTL QRY[STATE] SCDG {NPC [s]abc|RT ffff| \ DL ffff} [{RT|DL} gggg MD g[g]] [{sss|NDL|RTF}] e LN MSG:
[DGA [t]aaa] [DGB [t]bbb] [DGC [t]ccc] [DGD [t]ddd] [DGP [t]ppp]
[PLSW xxxx xxxx xxxx xxxx ----]
[LLB xxxx xxxx xxxx xxxx xxxx]
[ALST xxxx xxxx xxxx xxxx xxxx]
COMPL

[O.52322]

M hh:mm:ss xy, ww n[vv] UTL QRY[STATE] SCDG llll ALL {EOM|COMPL}
M hh:mm:ss xy, ww n[vv] UTL QRY[STATE] SCDG mmm {RT|DL} ffff MD \ g[g] [{sss|NDL|RTF}] e LN MSG:
[DGA [t]aaa] [DGB [t]bbb] [DGC [t]ccc] [DGD [t]ddd] \ [DGP [t]ppp]
[PLSW xxxx xxxx xxxx xxxx ----]
[LLB xxxx xxxx xxxx xxxx xxxx]
[ALST xxxx xxxx xxxx xxxx xxxx] {EOM|COMPL}
.
.
.
.

M hh:mm:ss xy, ww n[vv] UTL QRY[STATE] SCDG mmm {RT|DL} hhhh MD \ g[g] [{sss|NDL|RTF}] e LN MSG:
[DGA [t]aaa] [DGB [t]bbb] [DGC [t]ccc] [DGD [t]ddd] [DGP [t]ppp]
[PLSW xxxx xxxx xxxx xxxx ----]
[LLB xxxx xxxx xxxx xxxx xxxx]
[ALST xxxx xxxx xxxx xxxx xxxx] {EOM|COMPL}

Hierarchical

[O.52321]

M hh:mm:ss xy, ww n[vv] UTL QRY[STATE] SCDG {NPC uvmnp|RT \ ffff|DL ffff} [{RT|DL} gggg MD g[g]] [{sss|NDL|RTF}] e LN MSG:

[DGA uvjaa] [DGB uvkbb] [DGC uvlcc] [DGD uvmd] [DGP uvjpp]
[PLSW xxxx xxxx xxxx xxxx ----]
[LLB xxxx xxxx xxxx xxxx xxxx]
[ALST xxxx xxxx xxxx xxxx xxxx] COMPL

[O.52322]

M hh:mm:ss xy,ww n[vv] UTL QRY[STATE] SCDG llll ALL {EOM|COMPL}
M hh:mm:ss xy,ww n[vv] UTL QRY[STATE] SCDG mmm {RT|DL} ffff MD \
g[g] [{sss|NDL|RTF}] e LN MSG:
[DGA uvjaa] [DGB uvkbb] [DGC uvlcc] [DGD uvmd] [DGP uvjpp]
[PLSW xxxx xxxx xxxx xxxx ----]
[LLB xxxx xxxx xxxx xxxx xxxx]
[ALST xxxx xxxx xxxx xxxx xxxx] {EOM|COMPL}
.
.
.
.

M hh:mm:ss xy,ww n[vv] UTL QRY[STATE] SCDG mmm {RT|DL} hhhh MD \
g[g] [{sss|NDL|RTF}] e LN MSG:
[DGA uvjaa] [DGB uvkbb] [DGC uvlcc] [DGD uvmd] [DGP uvjpp]
[PLSW xxxx xxxx xxxx xxxx ----]
[LLB xxxx xxxx xxxx xxxx xxxx]
[ALST xxxx xxxx xxxx xxxx xxxx] {EOM|COMPL}

Denial Message

Nonhierarchical

[O.52321.01]

M hh:mm:ss xy,ww n[vv] UTL QRY[STATE] SCDG NPC [s]abc[{RT|DL} \
hhhh] [UNIT [q]q] COND cc DNY

[O.52321.01]

M hh:mm:ss xy,ww n[vv] UTL QRY[STATE] SCDG {RT|DL} ffff[UNIT \
[q]q] COND cc DNY

[O.52321.01]

M hh:mm:ss xy,ww n[vv] UTL QRY[STATE] SCDG ALL {RT|DL} hhhh UNIT \
[q]q COND cc DNY

Hierarchical

[O.52321.01]

M hh:mm:ss xy,ww n[vv] UTL QRY[STATE] SCDG NPC uvmdp[\
{RT|DL} hhhh] [UNIT [q]q] COND cc DNY

[O.52321.01]

M hh:mm:ss xy,ww n[vv] UTL QRY[STATE] SCDG \
{RT|DL} hhhh[UNIT [q]q] COND cc DNY

[O.52321.01]

M hh:mm:ss xy,ww n[vv] UTL QRY[STATE] SCDG ALL \
{RT|DL} hhhh UNIT [q]q COND cc DNY

Explanation of Parameters

SCDG	SLC [®] carrier digroup
STATE	State
	Status of protection switching, line loopback, and alarms
NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical DS-type NPC number belonging to FTU (Unit type FT)
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical DS-type NPC number
uv	Unit number
m	Module number
np	NPC number
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
RT	Remote terminal
DL	Digital carrier line unit (DCLU)
ffff	Bank identification number (0000 through 9999)
ALL	All
	All SLC carrier RTs or DLs on this frame
e	Number of lines in output message
gggg, hhhh	Bank identification number used in the output message when the NPC number or ALL option was specified in the input message. These bank identification numbers have the same values as ffff.
MD	Mode
g[g]	Mode of operation

	Mode of operation for the RT/DL SLC carrier bank
1	SLC carrier 96 Mode I
3	SLC carrier 96 Mode III
C	SLC carrier, Series 5 FPC
III	Total number of SLC carrier and DCLU digroups terminated on this frame
mmm	Total number of digroups terminated for this bank
sss	PWR/MISC alarm option
PMJ	The PWR/MISC alarm from the data link is a power major alarm
PMN	The PWR/MISC alarm from the data link is a power minor alarm
MMJ	The PWR/MISC alarm from the data link is a miscellaneous major
MMN	The PWR/MISC alarm from the data link is a miscellaneous minor
RTF	Retrofit
DGA	Digroup A of a SLC carrier bank
DGB	Digroup B of a SLC carrier bank
DGC	Digroup C of a SLC carrier bank
DGD	Digroup D of a SLC carrier bank
DGP	Digroup P of a SLC carrier bank
[t]aaa	The 3- or 4-digit Nonhierarchical DGA NPC number
[t]bbb	The 3- or 4-digit Nonhierarchical DGB NPC number
[t]ccc	The 3- or 4-digit Nonhierarchical DGC NPC number
[t]ddd	The 3- or 4-digit Nonhierarchical DGD NPC number
[t]ppp	The 3- or 4-digit Nonhierarchical DGP NPC number
uvjaa,wxjaa	Hierarchical DGA NPC number
uvkbb,wxkbb	Hierarchical DGB NPC number
uvlcc,wxlcc	Hierarchical DGC NPC number
uvmdd,wxmdd	Hierarchical DGD NPC number
uvjpp,wxjpp	Hierarchical DGP NPC number
uv,wx	Unit number

	j,k,l,m	Module number (j=k=l=m for SLC carrier Series 5 FPC RT)
	aa	NPC number
	bb	NPC number
	cc	NPC number
	dd	NPC number
	pp	NPC number
NDL		No data link
PLSW		Protection line switch (status)
	SWMR	Manually requested PLSW is performing
	SWPR	Manually requested PLSW is pending
	SWAR	Automatically requested PLSW is performing
	INHB	Protection line switch for the digroup is inhibited
	NORM	Protection line switch status is normal
LLB		Line loopback (status)
	FRTA	LLB request from RT is active
	FRTI	LLB request from RT is inhibited
	TRTA	LLB request to RT is active
	TRTI	LLB request to RT is inhibited
	LBPR	LLB request to RT is pending
	INHB	LLB request from and to RT is inhibited
	NORM	The LLB is not active nor inhibited
ALST		Alarm status
	MNNE	Minor alarm, location near end
	MJNE	Major alarm, location near end
	MNFE	Minor alarm, location far end
	MJFE	Major alarm, location far end
	MNCL	Minor alarm, location carrier line
	MJCL	Major alarm, location carrier line
	----	No alarm is active
UNIT		Unit
[q]q		Unit number (1 through 16)

cc		Hexadecimal condition code
cc	<i>Explanation</i>	
10	Unit is not equipped	
11	UC is out of service	
12	UC is in service but failed	
13	FTMI is not equipped	
15	NPC is unequipped	
0B	Invalid CEPT NPC	
6A	NPC type is not DS type	
7E	Bank id number not found	
7F	NPC is not added	

UTILITY QUERY

Explanation of Command

This command requests the state of the synchronizer.

Command

[I.56301]

UTL: [FRM xy][, SEQ ww]:QRY, STATE, SYNC!

Completion Message

[O.56301]

M hh:mm:ss xy, ww n UTL QRY STATE SYNC 4 LN MSG:
CFR <arch> STRATUM <stratum> MODE <pllop0>, <pllop1> \
SOURCE <source0>, <source1>
IN SERVICE DPLL a b TB c d SOURCE e f
ACTIVE LINK gh ij PLL TIMING ERROR k l COMPL

Denial Message

[O.56301.01]

M hh:mm:ss xy, ww n UTL QRY STATE SYNC COND cc DNY

Explanation of Parameters

SYNC	Synchronizer
CFR	Configure
arch	{MASTER SLAVED}
STRATUM	Stratum
stratum	{STR2 STR3 CEPT TOLL CEPT LOCAL}
MODE	Mode
pllop0	{HOLDOVER FAST NORMAL} for side 0
pllop1	{HOLDOVER FAST NORMAL} for side 1
SOURCE	Source
source0	{HOLDOVER TLI MATE CRO} for side 0

source1	{HOLDOVER TLI MATE CRO} for side 1
DPLL	Digital phase-locked loop
a	Digital Phase-Locked Loop, side 0
b	Digital Phase-Locked Loop, side 1
	0 Out of service
	1 In service
TB	Time Base
c	Time Base, side 0
d	Time Base, side 1
	0 Out of service
	1 In service
SOURCE	Timing source
e	Timing Source status, side 0
f	Timing Source status, side 1
	0 No SSP on side 1 is in service
	1 At least one SSP on side 1 is in service
gh, ij	Active SSP number
	These variables are output as -- if no active SSP is present for SYNC 0 and SYNC 1, respectively
	g,i Timing link interface number of active SSP
	h,j Synchronizer synchronization port (SSP) number
PLL	Phase-locked loop
k	Phase-locked loop timing error, side 0
l	Phase-locked loop timing error, side 1
	0 No errors
	1 PLL error exists
cc	Hexadecimal condition code
	cc <i>Explanation</i>
	16 SYNC TB is not equipped

QUERY STATE UNIT DS3

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination interface only.

This command requests

- The alarm status
- Enabled/disabled status of alarm generation for unprotected DS3 or Hybrid DS3 facilities due to manual commands
- Protection switching status of a single or a range of DS3 or Hybrid DS3 facilities
- For Hybrid DS3 facilities, the Remote Alarm Indication (RAI) bits carried by the X-bits in the DS3 facility
- For Hybrid DS3 facilities, the threshold values and current counts for the performance parameters and the option values that are associated with the particular threshold values.

Either a completion or denial output message is generated for each DS3 or Hybrid DS3 facility.

Command

[I.56361]

UTL: [FRM xy][, SEQ ww]:QRY, STATE, UNIT [q]q, DS3 c[-d]!

Completion Message

[O.56361]

One output message is generated for each DS3, either completion or denial.

```
M hh:mm:ss xy,ww n[vv] UTL QRY STATE UNIT [q]q DS3 c TYPE mnxyz \
4 LN MSG:
PSTATE OOS FAIL PEST OOF LOS HBER [RAI] AIS IDLE BERM BERT LBO
aaaaa-ccc z b p d e f [r] y i m t <l>
DU o DS3UNPROTALM aaa[ COND cc] {EOM|COMPL}
```

```
[M hh:mm:ss xy,ww n[vv] UTL QRY STATE UNIT [q]q DS3 c TYPE mnxyz \
5 LN MSG:]
[DAILY CVL ESL SESL CVP]
```

```
[COUNTS      aaaaaaaaaa bbbbbb ccccc dddddddddd]
[THRESHOLDS   aaaaaaaaaa bbbbbb ccccc dddddddddd]
[OPTIONS      a          b          c          d]          EOM

[M hh:mm:ss xy,ww n[vv] UTL QRY STATE UNIT [q]q DS3 c TYPE mnxyz \
5 LN MSG:]
[DAILY        FMP          ESP      SESP    FSESP  UASP]
[COUNTS       jjjjjjjjj kkkkkk  lllll  mmmm   nnnnn]
[THRESHOLDS   jjjjjjjjj kkkkkk  lllll  mmmm   nnnnn]
[OPTIONS      j          k          l          m          n]          EOM

[M hh:mm:ss xy,ww n[vv] UTL QRY STATE UNIT [q]q DS3 c TYPE mnxyz \
5 LN MSG:]
[15MIN        CVL          ESL      SESL    CVP]
[COUNTS       eeeeeeeee fffff  ggggg  hhhhhhhh]
[THRESHOLDS   eeeeeeeee fffff  ggggg  hhhhhhhh]
[OPTIONS      e          f          g          h]          EOM

[M hh:mm:ss xy,ww n[vv] UTL QRY STATE UNIT [q]q DS3 c TYPE mnxyz \
5 LN MSG:]
[15MIN        FMP          ESP      SESP    FSESP  UASP]
[COUNTS       pppppppp qqqqq  rrrrr  sssss  ttttt]
[THRESHOLDS   pppppppp qqqqq  rrrrr  sssss  ttttt]
[OPTIONS      p          q          r          s          t          {EOM|COMPL}]
```

Denial Message

```
[O.56361.01]
M hh:mm:ss xy,ww n[vv] UTL QRY STATE UNIT [q]q DS3 c COND cc DNY
```

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
DS3	DS3 facility
c,d	The number of the DS3 facility within the unit (1 through 6)
mnxyz	The DS3 format processed by the MXR:
mn	DS3 type
MX	The original R4.0 DS3 facility type supported by the Multiplexer (MXR) circuit pack (KCR-1)
EX	The enhanced R6.0 DS3 facility type supported by the Enhanced Multiplexer (EMXR) circuit pack (KCR-5)

HX The hybrid facility type supported by the Hybrid Multiplexer (HMXR) circuit pack (KCR-8)

If the unit is a regular DS3U of unit type DT100, then the default is the MX type for backward compatibility. If the unit is a Hybrid DS3U of unit type HT100, then the default is HX.

Allowed xyz values

MX100 KCR-1 circuit pack with M13 framing

MX200 KCR-1 circuit pack with C-bit parity framing

EX100 KCR-5 circuit pack with M13 framing

EX200 KCR-5 circuit pack with C-bit parity framing

HX110 KCR-8 Hybrid circuit pack with M13 framing
 ANSI interpretation of X-bit values.

HX100 KCR-8 Hybrid circuit pack with M13 framing
 Reverse ANSI interpretation of X-bit values. Type HX110 and HX100 set the X-bits (carried by the DS3 signal) in the transmit direction and interpret the value of the X-bits in the receive direction for the purpose of obtaining a Remote Alarm Indication (RAI) for the DS3 signal.

Type HX110 interprets X-bit values (there are two X-bits) of 1 as normal, while values of 0 indicate an RAI.

Type HX100 interprets X-bit values of 0 as normal and X-bit values of 1 as RAI.

PSTATE Protection state

aaaaa Protection state of the service MMFG where aaaaa can be:

SALW The Service MMFG is selected to carry service, and protection

Switching is ALLOWED.

SINH The Service MMFG is selected to carry service, and protection

Switching is INHIBITED.

MPALW The facility is being served by the Protection pack as a result of a manual switch command, and automatic switchback is ALLOWED

	APALW	The facility is being served by the Protection pack as a result of an automatic switch, and automatic switchback is ALLOWED
	MPINH	The facility is being served by the Protection pack as a result of a manual switch command, and automatic switchback is INHIBITED
	APINH	The facility is being served by the Protection pack as a result of an automatic switch, and automatic switchback is INHIBITED
ccc	Availability of protection switch in case of failure:	
	AVL	Protection Switch available
	NVL	Protection Switch not available (if the aaaaa field is SINH, MPINH or APINH, this field is always NVL)
OOS	Out-of-service	
z	Service status for selected MMFG	
	1	The MMFG is in service
	0	The MMFG is out-of-service
FAIL	Failed	
b	Failure status for selected MMFG	
	1	The MMFG is failing
	0	The MMFG is not failing
PEST	Pested	
p	Pested status for selected MMFG	
	1	The MMFG is pested
	0	The MMFG is not pested
	If this field is 1, the OOF, LOS, High BER and AIS field are filled with hyphens (-)	
OOF	Out of frame	
d	Out-of-frame status for the facility	
	1	Out-of-Frame alarm for the facility is active
	0	Out-of-Frame alarm for the facility is idle
	-	The facility is pested or OOS, or UC OOS or failed
LOS	Loss of signal	
e	Loss-of-signal status for the facility	

	1	Loss-of-signal alarm for the facility is active
	0	Loss-of-signal alarm for the facility is idle
	-	The facility is pested or OOS, or UC OOS or failed
HBER		High bit error rate
f		High-bit-error-rate status for the facility
	1	High-bit-error-rate alarm for the facility is active
	0	High-bit-error-rate alarm for the facility is idle
	-	The facility is pested or OOS, or UC OOS or failed
r		Status of RAI alarm
	0	No RAI alarm
	1	RAI alarm active
	-	The facility is pested, or OOS, or UC OOS or failed, or DS3 in LOS, OOF or HBER
AIS		Alarm indication signal
y		Alarm indication signal status for the facility
	1	Alarm indication signal alarm for the facility is active
	0	Alarm indication signal alarm for the facility is idle
	-	The facility is pested or OOS, or UC OOS or failed
IDLE		Idle signal
i		Idle signal status for the facility
	1	Idle signal alarm for the facility is active
	0	Idle signal alarm for the facility is idle
	-	The facility is pested or OOS, or UC OOS or failed
BERM		Bit error rate method
m		The BER calculation method
	B	Bipolar violations
	P	DS3 Parity Errors
	C	Both Bipolar violations and DS3 Parity Errors, support by HMXR only
BERT		Bit error rate threshold
t		The BER threshold
	3	Corresponding to threshold of 10E-3

	6	Corresponding to threshold of 10E-6
LBO		Line buildout
<I>		The LBO setting
	ON	The line buildout is turned on.
	OFF	The line buildout is turned off.
a		The number of the DS3 within the range of c and d
DU		DS3 Unprotected Alarm
o		Status of alarm indicating unprotected DS3 due to manual commands
	0	No alarm
	1	Alarm is active to indicate unprotected DS3 service
DS3UNPROTALM		Unprotected Alarm
		The enabling/disabling setting to generate an alarm for unprotected DS3 service due to manual commands.
aaa		The setting to generate alarm for unprotected DS3 service
	ON	Alarm generation is enabled
	OFF	Alarm generation is disabled

Hybrid DS3 Performance Parameters:

CVL	Code Violation for the DS3 Line
ESL	Errored Seconds for the DS3 Line
SESL	Severely Errored Seconds for the DS3 Line
CVP	Code Violation for the DS3 Path
FMP	F- or M-bit errors for the DS3 Path
ESP	Errored Seconds for the DS3 Path
SESP	Severely Errored Seconds for the DS3 Path
FSESP	Far End Severely Errored Seconds for the DS3 Path
UASP	Unavailable Seconds for the DS3 Path

The following is a more detailed description for each parameter:

The **CVL** parameter keeps a count of Bipolar Violations (BPV) and Excessive Zero (EXC) counts. This count may get quite large. If one assumes an error rate of 1 bit per thousand, then a daily count may get as large as 100 million.

The **ESL** parameter counts the number of seconds that have one or more BPVs, one or more EXZs, or one or more LOS defect. This parameter is limited to the number of seconds in the measurement interval, which is 900 in 15 minutes and 86,400 in 24 hours.

The **SESL** parameter counts the number of seconds that have more than 44 BPVs and EXZs, or one or more LOS defects. This parameter is limited to the number of seconds in the measurement interval.

The **CVP** parameter keeps a count of P-bit parity errors. This count may get quite large. If one assumes an error rate of 1 bit per thousand, then a daily count may get as large as 100 million.

The **FMP** parameters keeps a count of F- and M-bit errors. This count may get quite large. If one assumes an error rate of 1 bit per thousand, then a daily count may get as large as 100 million.

The **ESP** parameter counts the number of seconds containing one or more F- and/or M-bit errors, one or more OOF (Out-of-Frame) defects, or one or more AIS defects. This parameter is limited to the number of seconds in the measurement interval.

The **SESP** parameters counts the number of seconds containing more than 44 F- and M-bit errors, one or more OOF defects, or one or more AIS defects. This parameter is limited to the number of seconds in the measurement interval.

The **FSESP** parameter counts the number of seconds that have a Remote Alarm Indication (RAI), i.e., the X-bits transmitted from the Far-End indicate RAI. This parameter is not counted if the DS3 facility has an LOS or OOF defect. This parameter is limited to the number of seconds in the measurement interval.

The **UASP** parameter counts the number of seconds that the DS3 facility is unavailable. The DS3 is declared unavailable, if the DS3 path experiences 10 consecutive seconds of SESP. The DS3 is also declared unavailable, if the DS3 line experiences 10 consecutive seconds of SESL. This parameter is limited to the number of seconds in the measurement interval.

None of the other parameters accumulate counts if the Hybrid DS3 facility is unavailable.

CVL (Line Coding Violations)

aaaaaaaa	Line Coding Violation Daily count or threshold (0 to 1073700000)
eeeeeeee	Line Coding Violation 15Min count or threshold (0 to 29490750)
a	Line Coding Violation new Daily option selection (0 to 3)

e Line Coding Violation new 15Min option selection (0 to 3)

ESL (Line Errored Seconds)

bbbbbb Line Errored Seconds Daily count or threshold (0 to 86400)

ffff Line Errored Seconds 15Min count or threshold (0 to 900)

b Line Errored Seconds new Daily option selection (0 to 3)

f Line Errored Seconds new 15Min option selection (0 to 3)

SESL (Line Severely Errored Seconds)

ccccc Line Severely Errored Seconds Daily count or threshold
(0 to 86400)

ggggg Line Severely Errored Seconds 15Min count or threshold
(0 to 900)

c Line Severely Errored Seconds new Daily option selection
(0 to 3)

g Line Severely Errored Seconds new 15Min option selection
(0 to 3)

CVP (Path Coding Violations)

ddddddddd Path Coding Violations Daily count or threshold
(0 to 353870000)

hhhhhhhhh Path Coding Violations 15Min count or threshold (0 to 3686175)

d Path Coding Violations new Daily option selection (0 to 3)

h Path Coding Violations new 15Min option selection (0 to 3)

FMP (Path F and M Bit Framing Errors)

jjjjjjj Path F and M Bit Framing Errors Daily count or threshold
(0 to 22096800)

pppppppp Path F and M Bit Framing Errors 15Min count or threshold
(0 to 230175)

j Path F and M Bit Framing Errors new Daily option selection
(0 to 3)

p Path F and M Bit Framing Errors new 15Min option selection
(0 to 3)

ESP (Path Errored Seconds)

kkkkk	Path Errored Seconds Daily count or threshold (0 to 86400)
qqqqq	Path Errored Seconds 15Min count or threshold (0 to 900)
k	Path Errored Seconds new Daily option selection (0 to 3)
q	Path Errored Seconds new 15Min option selection (0 to 3)

SESP (Path Severely Errored Seconds)

lllll	Path Severely Errored Seconds Daily count or threshold (0 to 86400)
rrrrr	Path Severely Errored Seconds 15Min count or threshold (0 to 900)
l	Path Severely Errored Seconds new Daily option selection (0 to 3)
r	Path Severely Errored Seconds new 15Min option selection (0 to 3)

FSESP (Path Far End Severely Errored Seconds)

mmmmm	Path Far End Severely Errored Seconds Daily count or threshold (0 to 86400)
sssss	Path Far End Severely Errored Seconds 15Min count or threshold (0 to 900)
m	Path Far End Severely Errored Seconds new Daily option selection (0 to 3)
s	Path Far End Severely Errored Seconds new 15Min option selection (0 to 3)

UASP (Path Unavailable Seconds)

nnnnn	Path Unavailable Seconds Daily count or threshold (0 to 86400)
ttttt	Path Unavailable Seconds 15Min count or threshold (0 to 900)
n	Path Unavailable Seconds new Daily option selection (0 to 3)
t	Path Unavailable Seconds new Daily option old selection (0 to 3)
cc	Hexadecimal condition code

cc	<i>Explanation</i>
00	No conditions
02	Subject entity is not equipped
11	UC is out of service
12	UC is in service but failed
B2	MXR is out of service

QUERY LINK STATUS AND PROTOCOL

Explanation of Command

This message queries the status and protocol parameters of an administrative link, including all virtual circuits of a X.25 link and all sessions of a TCP/IP link.

Command

[I.55113]
UTL: [FRM xy][, SEQ ww]:QRY, STR, LINK j[mm] [-jnn]!

Completion Message

1.544 Mbit/s Termination

[O.55113]

For Snider protocol:

M hh:mm:ss xy, ww n[vv] UTL QRY STR LINK j PTCOL S 2 LN MSG:
STATUS bb e k' q x m s hh COMPL

[O.55113]

For X.25 protocol when virtual circuit is not specified:

M hh:mm:ss xy, ww n[vv] UTL QRY STR LINK j PTCOL X 4 LN MSG:
STATUS bb - k - - m xxxx hh
LNKL b eee ggg aa {A|B}
PKTL iii nn v ppss gghh COMPL

[O.55113]

For X.25 protocol when a single virtual circuit is specified:

M hh:mm:ss xy, ww n[vv] UTL QRY STR LINK jmm PTCOL X 4 LN MSG:
STATUS bb - k - - m s hh
LNKL b eee ggg aa {A|B}
PKTL c ddd iii jjj kkk lll mmm nn p q r v ppss gghh COMPL

[O.55113]

For X.25 protocol when a range of virtual circuits is specified:

M hh:mm:ss xy,ww n[vv] UTL QRY STR LINK jmm PTCOL X 4 LN MSG:
STATUS bb - k - - m s hh
LNKL b eee ggg aa {A|B}
PKTL c ddd iii jjj kkk lll mmm nn p q r v ppss gghh {EOM|COMPL}

M hh:mm:ss xy,ww n[vv] UTL QRY STR LINK jnn PTCOL X 4 LN MSG:
STATUS bb - k - - m s hh
LNKL b eee ggg aa {A|B}
PKTL c ddd iii jjj kkk lll mmm nn p q r v ppss gghh COMPL

[O.55113]

For Modified Snider protocol:

M hh:mm:ss xy,ww n[vv] UTL QRY STR LINK j PTCOL M 2 LN MSG:
STATUS bb - k - - m s hh COMPL

[O.55113]

For TABS protocol:

M hh:mm:ss xy,ww n[vv] UTL QRY STR LINK j PTCOL T e LN MSG:
STATUS bb - k - - m s hh [COMPL]
[APPL {ASCS|ASCD} aa ttt [COMPL]]
[APPL PM aa ttt [COMPL]]

[O.55113]

For TCP/IP protocol when the session number is not specified:

M hh:mm:ss xy,ww n[vv] UTL QRY STR LINK j PTCOL I 2 LN MSG:
STATUS -- e k - - - xxxx hh COMPL

[O.55113]

For TCP/IP protocol when a session or a range of sessions is specified:

M hh:mm:ss xy,ww n[vv] UTL QRY STR LINK jmm PTCOL I 2 LN MSG:
STATUS -- e k - - - s hh {EOM|COMPL}

M hh:mm:ss xy,ww n[vv] UTL QRY STR LINK jnn PTCOL I 2 LN MSG:
STATUS -- e k - - - s hh COMPL

Denial Message

[O.55113.01]

M hh:mm:ss xy,ww n[vv] UTL QRY STR LINK j[mm][-jnn] COND cc DNY

Explanation of Parameters	STR	Status register
	LINK	Link
	j[mm]	Administrative link number
	jnn	Administrative link number
	j	Physical link number (1 through 7)
	mm	First virtual circuit (VC)/session number of the VC/session range mm-nn (01 through 16, j must be 5, 6 or 7)
	nn	Last virtual circuit (VC)/session number of the VC/session range mm-nn (01 through 16, j must be 5, 6 or 7)
	PTCOL	Protocol
	S	Snider
	X	X.25
	M	Modified Snider
	T	TABS
	I	TCP/IP
	e	Number of lines in the message (2, 3, or 4)
	STATUS	Status
	bb	Baud rate. For the physical link j alarm class.
	03	300 b/s
	06	600 b/s
	12	1200 b/s (default for CIU link)
	24	2400 b/s
	48	4800 b/s
	96	9600 b/s
	00	X.25 links


NOTE:

X.25 links are set up to receive external timing only.

e	Backspace character echo
0	Backspace is echoed (default)
1	Backspace is not echoed

k	Failure of the X.25 and/or TCP/IP link
0	No alarm (default)
1	Minor alarm
2	Major alarm
q	ENQ/ACK Protocol Enable/Disable Control
0	Disabled
1	Enabled (default)
x	XON/XOFF Protocol Enable/Disable Control
0	Disabled (default)
1	Enabled
m	Mode
0	Idle
1	Input message in progress
2	Output message in progress
s	Status
	This status applies to the following protocols:
	Snider
	Modified Snider
	X.25 (Single or Range of Virtual Circuits)
	TABS
	TCP/IP
0	In service
1	Out-of-service (OOS)
xxxx	Virtual circuit (VC)/session status (hexadecimal). Range 0000 through FFFF.
	This status applies to the X.25 protocol and TCP/IP protocol. A four-digit hexadecimal number will be output in the protocol field whenever a specific VC or session number is not entered. Each digit represents four bits and each bit is associated with a particular VC/session. The four hexadecimal digits therefore represent 16 VCs/sessions. The bits are assigned to VCs/sessions from right to left in increasing order of VC/session number. That is, bit 1 represents VC/session 1 and bit 16 represents virtual circuit/session 16. See below where VC/session 16 marks the position of the bit representing virtual

circuit/session 16 and VC/session 01 similarly marks the position of the bit representing VC/session 1.

hex	binary
xxxx	bbbbbbbbbbbbbbbb
	^ ^

VC/session 16 VC/session 01

The interpretation of the value of a particular bit is given in the explanation of variable s above. Some specific examples of the output are interpreted below.

00000000000000000000All 16 VCs/sessions in service

00010000000000000001VC/session 1 OOS, all others in service

00020000000000000010VC/session 2 OOS, all others in service

80041000000000000100VC/session 16 and 3 OOS, all others in service

FFFF1111111111111111All VCs/sessions are OOS

hh	Hardware status
03	Link hardware in service
04	Link hardware out of service
05	Link hardware pested for autonomous restoral
LNKL	Link Layer
b	Maximum number of outstanding I frames (1 through 7). Default is 7
eee	Acknowledgment timer (2 through 20 seconds). Default is 3 seconds
ggg	Disconnect (or Idle channel) timer (4 through 120 seconds). Default is 26 seconds
aa	Maximum number of frame transmissions (2 through 16) (including original transmission). Default is 7
A	Data link layer frame address A
B	Data link layer frame address B
PKTL	Packet layer

c	Window size (1 through 7). Default is 2
ddd	Packet size P (ddd) can be 128, 256, or 512 octets. Default is 128 octets
iii	Restart request response timer (10 through 180 seconds). Default is 180 seconds
jjj	Reset request response timer (10 through 180 seconds). Default is 180 seconds
kkk	Disconnect (or Idle channel) timer (10 through 180 seconds). Default is 180 seconds
lll	Data packet acknowledgement timer (10 through 200 seconds). Default is 200 seconds
mmm	Interrupt response timer (10 through 180 seconds). Default is 180 seconds
nn	Restart request retransmission counter (1 through 10). Default is 1
p	Reset request retransmission counter (1 through 3). Default is 1
q	Clear request retransmission counter (1 through 10). Default is 1
r	Data packet retransmission counter (0 through 3). Default is 0
ppss	Virtual circuit range
pp	Range of permanent virtual circuits (PVCs).
ss	Range of switched virtual circuits (SVCs).

The sum of the number of PVCs and SVCs must be equal to 16.

Table 1 shows the default values for these fields.

Table 1 and Table 2 show the acceptable values for these fields, allowing for an LCN numbering scheme of 00-255.

"pp"	"ss"	Number of PVCs	Number of SVCs	Starting LCN for first PVC Channel	Starting LCN for first SVC Channel
00	16	00	16	--	01
01	15	01	15	01	02
02	14	02	14	01	03
03	13	03	13	01	04

"pp"	"ss"	Number of PVCs	Number of SVCs	Starting LCN for first PVC Channel	Starting LCN for first SVC Channel
04	12	04	12	01	05
05	11	05	11	01	06
06	10	06	10	01	07
07	09	07	09	01	08
08	08	08	08	01	09
09	07	09	07	01	10
10	06	10	06	01	11
11	05	11	05	01	12
12	04	12	04	01	13
13	03	13	03	01	14
14	02	14	02	01	15
15	01	15	01	01	16
16	00	16	00	01	--

"pp"	"ss"	Number of PVCs	Number of SVCs	Starting LCN for first PVC Channel	Starting LCN for first SVC Channel
$0 \leq nn \leq 48$					
20	nn	00	16	--	nn
21	nn	01	15	nn	nn+1
22	nn	02	14	nn	nn+2
23	nn	03	13	nn	nn+3

"pp"	"ss"	Number of PVCs	Number of SVCs	Starting LCN for first PVC Channel	Starting LCN for first SVC Channel
24	nn	04	12	nn	nn+4
25	nn	05	11	nn	nn+5
26	nn	06	10	nn	nn+6
27	nn	07	09	nn	nn+7
28	nn	08	08	nn	nn+8
29	nn	09	07	nn	nn+9
30	nn	10	06	nn	nn+10
31	nn	11	05	nn	nn+11
32	nn	12	04	nn	nn+12
33	nn	13	03	nn	nn+13
34	nn	14	02	nn	nn+14
35	nn	15	01	nn	nn+15
36	nn	16	00	nn	--
40	nn	00	16	--	nn+64
41	nn	01	15	nn+64	nn+65
42	nn	02	14	nn+64	nn+66
43	nn	03	13	nn+64	nn+67
44	nn	04	12	nn+64	nn+68
45	nn	05	11	nn+64	nn+69
46	nn	06	10	nn+64	nn+70
47	nn	07	09	nn+64	nn+71
48	nn	08	08	nn+64	nn+72
49	nn	09	07	nn+64	nn+73

"pp"	"ss"	Number of PVCs	Number of SVCs	Starting LCN for first PVC Channel	Starting LCN for first SVC Channel
50	nn	10	06	nn+64	nn+74
51	nn	11	05	nn+64	nn+75
52	nn	12	04	nn+64	nn+76
53	nn	13	03	nn+64	nn+77
54	nn	14	02	nn+64	nn+78
55	nn	15	01	nn+64	nn+79
56	nn	16	00	nn+64	--
60	nn	00	16	--	nn+128
61	nn	01	15	nn+128	nn+129
62	nn	02	14	nn+128	nn+130
63	nn	03	13	nn+128	nn+131
64	nn	04	12	nn+128	nn+132
65	nn	05	11	nn+128	nn+133
66	nn	06	10	nn+128	nn+134
67	nn	07	09	nn+128	nn+135
68	nn	08	08	nn+128	nn+136
69	nn	09	07	nn+128	nn+137
70	nn	10	06	nn+128	nn+138
71	nn	11	05	nn+128	nn+139
72	nn	12	04	nn+128	nn+140
73	nn	13	03	nn+128	nn+141
74	nn	14	02	nn+128	nn+142
75	nn	15	01	nn+128	nn+143

"pp"	"ss"	Number of PVCs	Number of SVCs	Starting LCN for first PVC Channel	Starting LCN for first SVC Channel
76	nn	16	00	nn+128	--
80	nn	00	16	--	nn+192
81	nn	01	15	nn+192	nn+193
82	nn	02	14	nn+192	nn+194
83	nn	03	13	nn+192	nn+195
84	nn	04	12	nn+192	nn+196
85	nn	05	11	nn+192	nn+197
86	nn	06	10	nn+192	nn+198
87	nn	07	09	nn+192	nn+199
88	nn	08	08	nn+192	nn+200
89	nn	09	07	nn+192	nn+201
90	nn	10	06	nn+192	nn+202
91	nn	11	05	nn+192	nn+203
92	nn	12	04	nn+192	nn+204
93	nn	13	03	nn+192	nn+205
94	nn	14	02	nn+192	nn+206
95	nn	15	01	nn+192	nn+207
96	nn	16	00	nn+192	--

gghh Virtual circuit group number

gg Group number of all PVCs

hh Group number for all SVCs (00 through 15)

APPL Application layer

ASCS Alarm surveillance and control, summary

ASCD	Alarm surveillance and control, detailed
PM	Performance monitoring
aa	Layer 2 address
ttt	Polling time
DBIT	D-bit
v	X.25 d-bit setting
0	Off (unset) (acknowledgement done from local DTE). Default
1	On (set) (acknowledgement done from remote DTE)
	DBIT is valid only on a per link basis and will be denied on an individual virtual circuit.
COND	Condition
cc	Hexadecimal condition code
cc	<i>Explanation</i>
E1	Virtual circuit is not specified for X.25 link
E2	Invalid link number specified

UTILITY QUERY SSP

Explanation of Command

This command requests a printout of the 5-byte status register for a select synchronizer port (SSP). The port is located on a timing link interface (TLI) circuit pack of a synchronizer.

Command

[I.55321]
UTL:[FRM xy][,SEQ ww]:QRY,STR,SYNC a,TLI m,SSP b!

Completion Message

Nonhierarchical

[O.55321]
M hh:mm:ss xy,ww n[vv] UTL QRY STR SYNC a TLI m SSP b \
[NPC abc] 2 LN MSG:
<byte1> <byte2> <byte3> <byte4> <byte5> COMPL

Hierarchical

[O.55321]
M hh:mm:ss xy,ww n[vv] UTL QRY STR SYNC a TLI m SSP b \
[NPC uvmp] 2 LN MSG
<byte1> <byte2> <byte3> <byte4> <byte5> COMPL

Denial Message

[O.55321.01]
M hh:mm:ss xy,ww n[vv] UTL QRY STR SYNC a TLI m SSP b \
COND cc DNY

Explanation of Parameters

STR	Status register
SYNC	Synchronizer
a	Synchronizer number (0 or 1)

TLI	Timing link interface
m	Timing link interface number (1 through 4)
SSP	Synchronization Sync Port
b	Synchronization Sync Port number (0 or 1)
NPC	Network processing circuit
abc	Nonhierarchical NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number
uv	Unit number
m	Module number
np	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
byte1, ... byte5	Status register data bytes

Each data byte contains eight bits: abcdefgh. These bits are set for the following conditions:

byte1	Overall status and configuration
a	Timing link is grown
b	Timing link out-of-service
c	Timing link out-of-service; timing signal from the link has serious enough errors that it is not accepted as a source of reference clock
d	TE TLI hardware problem; link is not accepted as a source of reference clock
e-h	Undefined
byte2	Timing link priority field. This field ranges from a value of 1 (highest) to 8 (lowest) for master/slave synchronization networks and affects the choice of a link as the active timing source.
byte3	Characteristics of the timing source
abc	Framing format (TXB1 or TXB2 TE TLIs only)

For TXB1 TE TLIs:

000	D4
001	ESF
010	DDS

For TXB2 TE TLIs:

000	CCS
001	ERSM
010	CAS0
011	CAS1

de Line format (TXB1 or TXB2 TE TLIs only)

For TXB1 TE TLIs:

00	Bipolar
01	B8ZS

For TXB2 TE TLIs:

00	AMI
01	HDB3

fgh Frequency (TXUC TLIs only)

000	512 kHz
001	1.000 MHz
010	1.544 MHz
011	2.048 MHz
100	5.000 MHz

byte4	Timing and line error information on the reference signal
a	(TXB1, TXB2, or TXCC TE TLIs only) Carrier failure alarm/loss of signal flag
b	Timing signal loss of energy
c	(TXUC TE TLIs only) Autobaud failure flag: the frequency of the incoming unipolar clock is not one of the possible frequencies specified in <byte3, fgh>
d	Not used
e	Excessive jitter flag
f	Phase step flag
g-h	Not used
byte5	Timing and line error information on the reference signal (TXB1 and TXB2 only)
a	Out of frame flag
b	Major framing error rate flag
c	Minor framing error rate flag
d-h	Not used

cc Hexadecimal condition code

cc	<i>Explanation</i>
05	Subject entity is pested
16	SYNC TB is not equipped
17	SYNC is out of service
A2	SSP number is illegal
A5	(Timing Distributor) TLI is not equipped
C8	Sync pack denied command

UTILITY QUERY, TIMING LINK INTERFACE

Explanation of Command This command requests a printout of the 3-byte status register of a timing link interface (TLI) for a specific synchronizer.

Command [I.55311]
UTL:[FRM xy][,SEQ ww]:QRY,STR,SYNC a,TLI m!

Completion Message [O.55311]
M hh:mm:ss xy,ww n[vv] UTL QRY STR SYNC a TLI m <byte01> \ <byte02> <byte03> COMPL

Denial Message [O.55311.01]
M hh:mm:ss xy,ww n[vv] UTL QRY STR SYNC a TLI m COND cc DNY

Explanation of Parameters

STR	Status register
SYNC	Synchronizer
a	Synchronizer number (0 or 1)
TLI	Timing link interface
m	Timing link interface number (1 through 4)
byte01, ..., byte03	Status register data bytes

Each data byte contains eight bits: abcdefgh. These bits are set for the following conditions:

byte01	Overall TLI type and configuration
abcd	TLI type

0000	TXB1, 1.544 Mb/s DS1 Extractor
0001	TXB2, 2.048 Mb/s Primary Block (120 OHM) Extractor
0010	TXCC, Composite Clock Extractor
0011	TXUC, High Level Unipolar Clock Extractor
0100	TXRF, Basic System Reference Frequency and CEPT 2.048 MHz Sine (75 OHM) Extractor
0101	TDCC, 64 kb/s Composite Clock Distributor
0110	TDS2, 2.048 MHz Sine Distributor
0111	TXCP, CEPT 2.048 MHz Sine (120 Ohm) Extractor

- e** TLI is grown
- f** TLI out-of-service
- g** TLI hardware error
- h** Unused bit

byte02	TLI phase detector and timing monitor circuitry status
a	Hardware energy detector on the time base strobe signal has failed
b	Loss of timebase strobe signal coming from the DPLL
c	Hardware energy detector on the CRO signal has failed
d	Loss of reference clock signal coming from the CRO

 **NOTE:**
Bits c and d have meaning only for TDCC and TDS2 TLIs and when the SYNC is a master timing source.

For TXB1 or TXB2 TLIs:

- e** Framer chip on side 0 has failed
- f** Framer chip on side 1 has failed

For TXCC TLIs:

- e** Out-of-lock detector on side 0 has failed
- f** Out-of-lock detector on side 1 has failed



NOTE:
Bits e and f have meaning only for TE TLIs

byte03 Hardware status and diagnostic results for Timing Distributor
(TD) type TLI only

cc Hexadecimal condition code

cc	<i>Explanation</i>
05	Subject entity is pested
16	SYNC TB is not equipped
17	SYNC is out of service
A5	(Timing Distributor) TLI is not equipped
C8	Sync pack denied command

UTILITY QUERY SYNCHRONIZER

Explanation of Command

This message requests a printout on the 12-byte status register and configuration of a synchronizer.

Command

[I.55201]
UTL: [FRM xy][, SEQ ww]:QRY, STR, SYNC a!

Completion Message

[O.55201]
M hh:mm:ss xy,ww n[vv] UTL QRY STR SYNC a 3 LN MSG:
<byte01> <byte02> <byte03> <byte04> <byte05> <byte06>
<byte07> <byte08> <byte09> <byte10> <byte11> <byte12> COMPL

Denial Message

[O.55201.01]
M hh:mm:ss xy,ww n[vv] UTL QRY STR SYNC a COND cc DNY

Explanation of Parameters

STR	Status register
SYNC	Synchronizer
a	Synchronizer number (0 or 1)
byte01,	
...,	
byte12	Status register data bytes
	Each data byte contains eight bits. These bits are labeled, in the order they appear in the output, as abcdefgh. These bits are set for the following conditions:
byte01	
a	Unused by craft
b	Sync core hardware fault

- c** Mate sync is bad or declared out of service
- d** Time base is bad or missing
- e** TLI 1 in service without errors
- f** TLI 2 in service without errors
- g** TLI 3 in service without errors
- h** TLI 4 in service without errors

byte02

- a** Timing Extractor Timing link 1 is in service and good
- b** Timing Extractor Timing link 2 is in service and good
- c** Timing Extractor Timing link 3 is in service and good
- d** Timing Extractor Timing link 4 is in service and good
- e** Timing Extractor Timing link 5 is in service and good
- f** Timing Extractor Timing link 6 is in service and good
- g** Timing Extractor Timing link 7 is in service and good
- h** Timing Extractor Timing link 8 is in service and good

byte03

- a** Sync has been reset and awaits configuration
- b** Hardware error on DPLL pack. See byte06 and byte07
- c** Time base has an error, see byte09
- d** PLL symmetry error, see byte08
- e** Problem with cross-couple timing. See byte10 and byte11
- f** Problem with CRO timing. See byte12

	g	Unused bit
	h	Unused bit
byte04		Sync configuration data
	ab	Sync architecture
	00	Sync is slave in master-slave system
	01	Sync is master in master-slave system
	cde	Operational stratum
	000	Domestic stratum 3
	001	CEPT local exchange
	010	CEPT toll exchange
	011	Domestic stratum 2
	fg	PLL locking mode
	00	Normal
	01	Fast
	10	Holdover
	h	Unused by craft
byte05		Sync configuration data
	ab	Source of timing to which Sync is presently locking
	00	Holdover (Not locking)
	01	Timing link(s)
	10	Cross couple
	11	CRO (Clock Reference Oscillator)
	cde	Active Link
		Which timing link the Sync is locking to (This field is meaningful only if byte04 ab = 00 and byte05 ab = 01)
	000	TLI 1, Link 0
	001	TLI 1, Link 1

	010	TLI 2, Link 0
	011	TLI 2, Link 1
	100	TLI 3, Link 0
	101	TLI 3, Link 1
	110	TLI 4, Link 0
	111	TLI 4, Link 1
	f	Unused by craft
	g	Unused by craft
	h	Unused by craft
byte06		DPLL Hardware status. If any bit equals 1, a DPLL hardware failure is indicated
	a	ROM error
	b	RAM error
	c	Phase/Frequency latch error
	d	Loss of energy on 2.048 MHz output of frequency synthesizer
	e	Loss of energy on 2.048 MHz output of phase shifter
	f	Loss of energy on generated sync pulse
	g	Loss of energy on time base strobe signal
	h	Unused by craft
byte07		DPLL Hardware status. If any bit equals 1, a DPLL hardware failure is indicated
	a	Interrupt controller error
	b	Interrupt holding register error
	c	UART error
	d	Control data readable output latch error
	e-h	Unused bits
byte08		PLL status
	a	PLL end of range indicator
	b	PLL excessive range error

	c	PLL real time violation
	d	Fast start timeout
	e-h	Unused bits
byte09		Time base status
	a	Loss of energy for time base signal
	b	Time base I/O error
	c	Time base oscillator has drifted beyond its specified accuracy limit. (This condition is monitored only when the sync is the master timing source)
	d	Time base oven is cold. It must warm up for accurate holdover
	e	Unused bit
	fgh	Stratum of oscillator:
	000	TBS3, Domestic stratum 3
	001	TBCL, CEPT local exchange
	010	TBCT, CEPT toll exchange
	011	TBS2, Domestic stratum 2
byte10		Cross Couple Status
	a	Mate sync declared out-of-service by MC
	b	Mate sync hardware error
	c	Loss of energy on the 1 ms cross couple interrupt flag
	d	Loss of energy on the 30 ms cross couple interrupt flag
	e	Cross couple fast lock not working
	f	Sync's time base drifting with respect to CRO in master mode
	g	Cross couple timing problem
	h	Cross couple timing problem - mate sync's timing suspected
byte11		Cross couple status
	a	Sync clocks not aligned, cross couple network may alarm

	b-h	Unused bits
byte12		CRO status
		The following bits are important only when the sync is a master timing source:
	a	Timing from CRO bad or declared out of service by MC
	b	CRO declared out of service by the MC
	c	Loss of energy on the CRO input signal flag
	d	In master mode, CRO drifting with respect to sync time bases
	e-h	Unused bits
cc		Hexadecimal condition code
	cc	<i>Explanation</i>
	02	Subject entity is not equipped
	04	Subject entity is out of service
	05	Subject entity is pested
	16	SYNC TB is not equipped
	17	SYNC is out of service
	C8	Sync pack denied command

UTILITY QUERY, STATUS REGISTER

Explanation of Command

This command requests a printout of a status register for side 0 or side 1 of a cross-connect network.

Command

[I.55191]
UTL: [FRM xy][, SEQ ww]:QRY,STR,XC a!

Completion Message

[O.55191]
M hh:mm:ss xy,ww n[vv] UTL QRY STR XC a pq rs COMPL

Denial Message

[O.55191.01]
M hh:mm:ss xy,ww n[vv] UTL QRY STR XC a DNY

Explanation of Parameters

STR	Status register
XC	Cross-connect network
a	Cross-connect network side (0 through 1).
pq	Cross connect status register byte 1 (hexadecimal, all bits = 0)
rs	Cross connect status register byte 0 (hexadecimal)
01	In service
05	Active, in service
08	Pested
09	Pested and in service
0A	Pested and Failed
0D	Pested, active and in service

UTILITY QUERY, SYNCHRONIZER

Explanation of Command

1.544 Mbit/s Termination

This command requests information on the provisioning of the synchronizer unit.

2.048 Mbit/s Termination

This command queries the priority status and types of the equipped timing link interfaces.

Command

[I.53001]

UTL: [FRM xy][, SEQ ww]:QRY, SYNC, TYPE!

Completion Message

[O.53001]

```
M hh:mm:ss xy,ww n[vv] QRY SYNC TYPE 5 LN MSG:
TB TYPE      mnxyz mnxyz
TLI TYPE      pqxyz rsxyz  pqxyz rsxyz  pqxyz rsxyz  pqxyz rsxyz
SRC VALUE     p      p      p      p      p      p      p      p
SOURCE NPC    <xxx> <xxx> <xxx> <xxx> <xxx> <xxx> <xxx> <xxx> COMPL
```

Explanation of Parameters

SYNC	Synchronizer
TYPE	Type
	Request for provisioning information
TB	Time base
mnxyz	SYNC time base type
----	Not equipped

1.544 Mbit/s Termination

TB0yz	Domestic Stratum 3
TB3yz	Domestic Stratum 2

2.048 Mbit/s Termination

	TB1yz	CEPT Local
	TB2yz	CEPT Toll
TLI		Timing link interface
	pqxyz	TLI type provisioned on synchronizer synchronization port (SSP) 0
	rsxyz	TLI type provisioned on SSP 1
	----	Not equipped
	TCxyz	64 kb/s composite clock timing extractor
	TD1yz	64 kb/s composite clock timing distributor
	TD2yz	Sinusoidal 2.048 MHz timing distributor
	TUxyz	Unipolar clock timing extractor
	TRxyz	Basic system reference frequency timing extractor

1.544 Mbit/s Termination

TExyz	DS1 timing extractor (xyz should be same as for DExyz NPCs)

2.048 Mbit/s Termination

	TPxyz	2.048 Mb/s primary block timing extractor (xyz should be same as for PBxyz/PCxyz NPCs)
		For CRO applications in MASTER mode, TLI 3 is equipped with a Time Base circuit pack. In this case, "pqxyz" = "mnxyz", showing the Time Base type in the TLI 3 and TLI 4 positions.
SRC		Source
p		Source for priority for the given TLI/SSP
	-	Not equipped.
	1-8	1 is the HIGHEST priority; 8 is the LOWEST priority.
VALUE		Value
SOURCE		Source
NPC		Network processing circuit
cc		Hexadecimal condition code
	cc	<i>Explanation</i>
	00	No conditions

UTILITY QUERY TEST-ACCESS GROUP

Explanation of Command

This command lists one or a range of Nx64Kbit/s test-access groups (TGs). To retrieve a listing of ALL test-access groups, specify the maximum range (1-400).

Command

```
[I.53081]
UTL:[FRM xy][,SEQ ww]:QRY,TGS mmm[-nnn]!
```

Completion Message

Nonhierarchical

```
[O.53081]
M hh:mm:ss xy,ww n[vv] UTL QRY TGS mmm[-nnn] p LN MSG:
TG mmm, rrr, [s]abceeee, sss, [t]defwww, NN, <mode>
TG mmm, rrr, [s]abceeee, sss, [t]defwww, NN, <mode>
TG mmm, rrr, [s]abceeee, sss, [t]defwww, NN, <mode>
TG nnn, rrr, [s]abceeee, sss, [t]defwww, NN, <mode> {EOM|COMPL}
```

or

```
M hh:mm:ss xy,ww n[vv] UTL QRY TGS mmm[-kkk] UEQD {EOM|COMPL}
```

Hierarchical

```
[O.53081]
M hh:mm:ss xy,ww n[vv] UTL QRY TGS mmm[-nnn] p LN MSG:
TG mmm, rrr, [s]abceeee, sss, [t]defwww, NN, <mode>
TG mmm, rrr, [s]abceeee, sss, [t]defwww, NN, <mode>
TG mmm, rrr, [s]abceeee, sss, [t]defwww, NN, <mode>
TG nnn, rrr, [s]abceeee, sss, [t]defwww, NN, <mode> {EOM|COMPL}
```

or

```
M hh:mm:ss xy,ww n[vv] UTL QRY TGS mmm[-kkk] UEQD {EOM|COMPL}
```

Denial Message

[O.53081.01]

M hh:mm:ss xy,ww n[vv] UTL QRY TGS mmm[-nnn] COND cc DNY

Explanation of Parameters

TG	Test-access group
mmm	Test-access group number (001 through 400)
nnn	Test-access group number specifying the end of a TG range (002 through 400)
NPCTG	NPC (for) test group
rrr	NPCTG number supporting the east bundle (001 through 400)
sss	NPCTG number supporting the west bundle, may be same as rrr
[s]abc	3- or 4-digit nonhierarchical NPC number designated as NPCTG rrr
[t]def	3- or 4-digit nonhierarchical NPC number designated as NPCTG sss
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number designated as NPCTG rrr
wxkqr	Hierarchical NPC number designated as NPCTG sss
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
eee	Starting channel for east bundle
www	Starting channel for west bundle
mode	Test access mode
MON	Monitor
SPL	Split
HUB	Hub
LPD	Looped
IDLE	Idle
SPLNOY	Split with yellow alarm transmission disabled

UEQD Unequipped

1.544 Mbit/s Termination

NN TG width (01 through 24)

2.048 Mbit/s Termination

NN TG width (01 through 31)

cc Hexadecimal condition code

cc *Explanation*

63 None of the designated TG(s) are equipped

NONCHANNELIZED UTILITY QUERY TO

Explanation of Command

This command requests provisioning information for a specific TO nonchannelized network processing circuit.

Command

Nonhierarchical

[I.52061]

UTL:[FRM xy][,SEQ ww]:QRY,TO [s]abc!

Hierarchical

[I.52061]

UTL:[FRM xy][,SEQ ww]:QRY,TO uvmnp!

Completion Message

Nonhierarchical

[O.52061]

M hh:mm:ss xy,ww n[vv] UTL QRY TO [s]abc TYPE mnxyz 2 LN MSG:
[[t]ghi mnxyz][AIS][CUS][RDC][{UTST jj|ROLL}]
[{ONEWAY|BCAST|UASGN[kk]}}[TLA s] COMPL

If the NPC is involved in test access:

[O.52061]

M hh:mm:ss xy,ww n[vv] UTL QRY TO [s]abc TYPE mnxyz 2 LN MSG:
[t]ghi [u]klm FAD <tmode> <link number> COMPL

Hierarchical

[O.52061]

M hh:mm:ss xy,ww n[vv] UTL QRY TO uvmnp TYPE mnxyz 2 LN MSG:
[wxkqr mnxyz][AIS][CUS][RDC][{UTST jj|ROLL}] \
[{ONEWAY|BCAST|UASGN[kk]}}[TLA s] COMPL

If the NPC is involved in test access:

[O.52061]

M hh:mm:ss xy,ww n[vv] UTL QRY TO uvmnp TYPE mnxyz 2 LN MSG:
wxkqr ghijk FAD <tmode> <link number> COMPL

Denial Message

Nonhierarchical

[O.52061.01]

M hh:mm:ss xy,ww n[vv] UTL QRY TO [s]abc TYPE mnxyz COND cc DNY

Hierarchical

[O.52061.01]

M hh:mm:ss xy,ww n[vv] UTL QRY TO uvmnp TYPE mnxyz COND cc DNY

Explanation of Parameters

TO	Points to the TO NPC number
[s]abc	The 3- or 4-digit nonhierarchical NPC number of TO non-channelized NPC. For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number of TO nonchannelized NPC
uv	Unit number
m	Module number
np	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
[t]ghi	The 3- or 4-digit nonhierarchical number of FROM NPC mapped to TO NPC, or FROM NPC in the test access connection (--- for unassigned NPC)
[u]klm	The 3- or 4-digit nonhierarchical number of TO NPC in the test access connection ----- or ----- for unassigned NPC
wxkqr	Hierarchical number of FROM NPC mapped to TO NPC
ghijk	FROM NPC in the test access connection.

mnxyz	NPC type of TO or FROM NPCs
DA	Dual digroup ANSI NPC
DE	Dual digroup NPC
TA	DS3U ANSI NPC
TE	DS3U or HDS3U Noninterface unit NPC
PA	CEPT NPC (75- or 120-ohm)
PB	CEPT NPC (120-ohm twisted pair)
PC	CEPT NPC (75-ohm coaxial)
TH	Hybrid DS3U CEPT NPC
--	Unequipped or unassigned NPC
For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."	

 **NOTE:**
xyz values for nonchannelized NPC are xCz and xDz only.

AIS	Alarm indication signal
	The idle code for nonchannelized cross-connection
CUS	Customer-controlled circuit
RDC	Red circuit
UTST	Circuit is under test
jj	The FAD NPC number
	If MONEF is in use and there are two FADS, then jj reports the lower FAD NPC number.
tmode	Test access mode
FAD	Facility access digroup
TERM	Termination
F	From termination
T	To termination
B	Both terminations
ONEWAY	One-way connection
BCAST	Circuit is part of a broadcast connection
UASGN	Unassigned
TLA s	Connection is terminated in direction s (F-From, T-To, B-Both)

ROLL	Bridged facility from Roll procedure
kk	Hexadecimal completion condition code
E3	One way circuit. This means that although the receive side of the NPC is unassigned, the transmit side of the NPC is one-way connected. Thus, this NPC cannot be subsequently two-way connected.
E4	Broadcast circuit. This means that although the receive side of the NPC is unassigned, the NPC is the backbone leg of a NTR type broadcast circuit. Thus, this NPC cannot be subsequently cross-connected, either one-way or two-way.
cc	Hexadecimal condition code
cc	<i>Explanation</i>
15	NPC is unequipped
0B	Invalid CEPT NPC
B4	NPC is channelized type
E4	Broadcast unassigned channel/NPC in QRY, TO

QUERY DESTINATION CROSS-CONNECT

Explanation of Command

This command requests circuit provisioning information associated with the specified To-direction termination(s). The output messages generated depend upon:

- Whether or not the termination is assigned,
- Whether or not the termination is a test port termination,
- The type of network processing circuit for this termination,
- The far-end to which the termination is mapped (if any).

For this utility command, DACS II terminations can be divided into two categories:

- Multipoint termination, which is a multipoint circuit on a real digital multipoint bridge (DMB) in the digital signaling processing unit (DSPU), or in virtual network processing circuits.
- All other terminations.

If the network processing circuit (NPC) number specified in the command is the number of a remote terminal (DL) digroup currently under protection by the protection digroup (DGP), the execution of the command will be completed and DGP with its associated NPC number appears on the output message.

For a SLC[®] carrier denial message, the following appears on output: the bank identification number, operation mode, and digroup A NPC number for that remote terminal.

Command

Nonhierarchical

[I.52041]

UTL:[FRM xy][,SEQ ww]:QRY,TO [s]abcddd[-eee]!

Hierarchical

[I.52041]

UTL:[FRM xy][,SEQ ww]:QRY,TO uvmnpddd[-eee]!

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.52041]

```
M hh:mm:ss xy,ww n[vv] UTL QRY TO [s]abckkk TYPE mnxyz
[ DGP [t]mno] e LN MSG:
<nonhierarchical_PDS_data_line>
<nonhierarchical_PDS_data_line>
<nonhierarchical_PDS_data_line>
<nonhierarchical_PDS_data_line> {EOM|COMPL}
```

.
.
.

```
[M hh:mm:ss xy,ww n[vv] UTL QRY TO [s]abc111 TYPE mnxyz
[ DGP [t]mno] e LN MSG:
<nonhierarchical_PDS_data_line>
<nonhierarchical_PDS_data_line>
<nonhierarchical_PDS_data_line>
<nonhierarchical_PDS_data_line> COMPL]
```

nonhierarchical_PDS_data_line may take on the following forms:

Format 1 Data Line: For One-Way, Two-Way, and Broadcast Cross-Connections

```
[t]defiii ppqqq <tc>
[AIS][ CUS][ RDC][ {UTST {TP kk|TG mmm}|ROLL}][ {ONEWAY|BCAST}]
[ TLA s]
```

Format 2 Data Line: For DMB to non-DMB Cross-Connections

```
[t]defiii ppqqq fmd,tmd snn,smm nn ee <tc>
[CUS][ RDC][ {UTST TP kk|ROLL}][ ONEWAY][ NTR r][ TLA s]
```

Format 2a Data Line: For VI to non-VI Cross-Connections

```
[t]defiii ppqqqfmd,tmd<tc>
[CUS][ RDC][ {UTST TP kk|ROLL}][ ONEWAY][ TLA s]
```

Format 3 Data Line: For DMB to DMB Cross-Connections

```
[t]defiii ppqqq fmd,tmd snn,smm vv ww spp,sqq tt uu <tc>
[CUS][ RDC][ UTST TP kk][ NTR r][ TLA s]
```

Format 4 Data Line: Test Access to a Cross-Connection or Unmapped Termination

```
{TP kk|TG mmm} <tsm> l[vv] <tc> p [s]ghijjj q [t]jklenn
[CUS][ RDC][ {ONEWAY|BCAST}][ NTR r][ TLA s]
```

Format 5 Data Line: For Subrate Cross-Connections

[-]-SECH- TRSP MUX

Format 6 Data Line: For Subrate Cross-Connections involving test access

TP kk <tsm> l[vv] <accpoint>[TLA s]

Format 7 Data Line: For TS0 to non-TS0 Cross-Connections

Not applicable.

Format 8 Data Line: For E1 or T1 to SDxyz Cross-Connections

[t]defiii ppqqq [{UTST {TP kk|TG mmm}|ROLL}]



NOTE:

Formats 1 through 4 data lines are output as either one or two lines. The second line is output only if any of its optional fields are present.

[O.52042]

M hh:mm:ss xy,ww n[vv] UTL QRY TO [s]abchhh TYPE mnxyz 2 LN MSG:
UASGN[<tc> DCC][CUS][UTST {TP kk|TG mmm}][cc] {EOM|COMPL}

Hierarchical

[O.52041]

M hh:mm:ss xy,ww n[vv] UTL QRY TO uvmnpkkk TYPE mnxyz
[DGP feigh] e LN MSG:
<hierarchical_PDS_data_line>
<hierarchical_PDS_data_line>
<hierarchical_PDS_data_line>
<hierarchical_PDS_data_line> {EOM|COMPL}
.
.
.
[M hh:mm:ss xy,ww n[vv] UTL QRY TO uvmnplll TYPE mnxyz
[DGP feigh] e LN MSG:
<hierarchical_PDS_data_line>
<hierarchical_PDS_data_line>
<hierarchical_PDS_data_line>
<hierarchical_PDS_data_line> COMPL]

hierarchical_PDS_data_line may take on the following forms:

Format 1 Data Line: For One-Way, Two-Way, and Broadcast Cross-Connections

wxkqr iii ppqqq <tc>
[AIS][CUS][RDC][{UTST {TP kk|TG mmm}|ROLL}][{ONEWAY|BCAST}]
[TLA s]

Format 2 Data Line: For DMB to non-DMB Cross-Connections

```
wxkqriii ppqqq fmd, tmd snn, smm nn ee <tc>
[CUS][ RDC][ {UTST TP kk|ROLL}][ ONEWAY][ NTR r][ TLA s]
```

Format 2a Data Line: For VI to non-VI Cross-Connections

```
wxkqriii ppqqq fmd, tmd <tc>
[CUS][ RDC][ {UTST TP kk|ROLL}][ ONEWAY][ TLA s]
```

Format 3 Data Line: For DMB to DMB Cross-Connections

```
wxkqriii ppqqq fmd, tmd snn, smm vv ww spp, sqq tt uu <tc>
[CUS][ RDC][ UTST TP kk][ NTR r][ TLA s]
```

Format 4 Data Line: Test Access to a Cross-Connection or Unmapped Termination

```
{TP kk|TG mmm} <tsm> l[vv] <tc> p edhfgjjj q opjstnnn
[CUS][ RDC][ {ONEWAY|BCAST}][ NTR r][ TLA s]
```

Format 5 Data Line: For Subrate Cross-Connections

```
--SECH-- TRSP MUX
```

Format 6 Data Line: For Subrate Cross-Connections involving test access

```
TP kk <tsm> l[vv] <accpoint>[ TLA s]
```

Format 7 Data Line: For TS0 to non-TS0 Cross-Connections

Not applicable.

Format 8 Data Line: For E1 or T1 to SDxyz Cross-Connections

```
wxkqriii ppqqq [{UTST {TP kk|TG mmm}|ROLL}]
```



NOTE:

Formats 1 through 4 data lines are output as either one or two lines. The second line is output only if any of its optional fields are present.

[O.52042]

```
M hh:mm:ss xy, ww n[vv] UTL QRY TO uvmnphhh TYPE mnxyz 2 LN MSG:
UASGN[ <tc> DCC][ CUS][ UTST {TP kk|TG mmm}][ cc] {EOM|COMPL}
```

2.048 Mbit/s Termination

Nonhierarchical

[O.52041]

```
M hh:mm:ss xy,ww n[vv] UTL QRY TO [s]abckkk TYPE mnxyz e LN MSG:
[<nonhierarchical_PDS_data_line>]
[<nonhierarchical_PDS_data_line>]
[<nonhierarchical_PDS_data_line>]
<nonhierarchical_PDS_data_line> {EOM|COMPL}
.
.
.
[M hh:mm:ss xy,ww n[vv] UTL QRY TO [s]abclll TYPE mnxyz e LN MSG:
[<nonhierarchical_PDS_data_line>]
[<nonhierarchical_PDS_data_line>]
[<nonhierarchical_PDS_data_line>]
<nonhierarchical_PDS_data_line> COMPL]
```

nonhierarchical_PDS_data_line may take on the following forms:

Format 1 Data Line: For One-Way, Two-Way, and Broadcast Cross-Connections

```
[t]defiii ppqqq[ <tc>[ <sc>]][ NAM]
[CUS][ RDC][ {UTST {TP kk|TG mmm}|ROLL}][ {ONEWAY|BCAST}][ TLA s]
```

Format 2 Data Line: For DMB to non-DMB Cross-Connections

```
[t]defiii ppqqq fmd,tmd snn,smm nn ee <tc>[ NAM]
[CUS][ RDC][ {UTST TP kk|ROLL}][ ONEWAY][ NTR r][ TLA s]
```

Format 2a Data Line: For VI to non-VI Cross-Connections

```
[t]defiii ppqqq fmd,tmd <tc>[ NAM]
[CUS][ RDC][ {UTST TP kk|ROLL}][ ONEWAY][ TLA s]
```

Format 3 Data Line: For DMB to DMB Cross-Connections

```
[t]defiii ppqqq fmd,tmd snn,smm vv ww spp,sq tt uu <tc>
[CUS][ RDC][ UTST TP kk][ NTR r][ TLA s]
```

Format 4 Data Line: Test Access to a Cross-Connection or Unmapped Termination

```
{TP kk|TG mmm} <tsm> l[vv] <tc>[ <sc>][ NAM] p [t]ghijjj q
[t]jklenn
[CUS][ RDC][ {ONEWAY|BCAST}][ NTR r][ TLA s]
```

Format 5 Data Line: For Subrate Cross-Connections

Not applicable.

Format 6 Data Line: For Subrate Cross-Connections involving test access

Not applicable.

Format 7 Data Line: For TS0 to non-TS0 Cross-Connections

```
[t]defiii ppqqq {PFW(abcdefg,ijklmno)|NFW}[ <tc>][ NAM]
[BCAST][ {UTST {TP kk|TG mmm}|ROLL}][ TLA s]
```

Format 8 Data Line: For E1 or T1 to SDxyz Cross-Connections

```
[t]defiii ppqqq [{UTST {TP kk|TG mmm}|ROLL}]
```



NOTE:

Formats 1 through 4 data lines are output as either one or two lines. The second line is output only if any of its optional fields are present.

[O.52042]

```
M hh:mm:ss xy,ww n[vv] UTL QRY TO [s]abchhh TYPE mnxyz 2 LN MSG:
UASGN[ <tc> DCC][ CUS][ UTST {TP kk|TG mmm}][ cc] {EOM|COMPL}
```

Hierarchical

[O.52041]

```
M hh:mm:ss xy,ww n[vv] UTL QRY TO uvmnpkkk TYPE mnxyz e LN MSG:
[<hierarchical_PDS_data_line>]
[<hierarchical_PDS_data_line>]
[<hierarchical_PDS_data_line>]
<hierarchical_PDS_data_line> {EOM|COMPL}
.
.
.
[M hh:mm:ss xy,ww n[vv] UTL QRY TO uvmnplll TYPE mnxyz e LN MSG:
[<hierarchical_PDS_data_line>]
[<hierarchical_PDS_data_line>]
[<hierarchical_PDS_data_line>]
<hierarchical_PDS_data_line> COMPL]
```

hierarchical_PDS_data_line may take on the following forms:

Format 1 Data Line: For One-Way, Two-Way, and Broadcast Cross-Connections

```
wxkqriii ppqqq[ <tc>[ <sc>]][ NAM]
[CUS][ RDC][ {UTST {TP kk|TG mmm}|ROLL}][ {ONEWAY|BCAST}][ TLA s]
```

Format 2 Data Line: For DMB to non-DMB Cross-Connections

```
wxkqriii ppqqq fmd,tmd snn,smm nn ee <tc>[ NAM]
[CUS][ RDC][ {UTST TP kk|ROLL}][ ONEWAY][ NTR r][ TLA s]
```

Format 2a Data Line: For VI to non-VI Cross-Connections

wxkqr iii ppqqq fmd, tmd <tc>[NAM]
[CUS][RDC][{UTST TP kk|ROLL}][ONEWAY][TLA s]

Format 3 Data Line: For DMB to DMB Cross-Connections

wxkqr iii ppqqq fmd, tmd snn, smm vv ww spp, sqq tt uu <tc>
[CUS][RDC][UTST TP kk][NTR r][TLA s]

Format 4 Data Line: Test Access to a Cross-Connection or Unmapped Termination

{TP kk|TG mmm} <tsm> l[vv] <tc>[<sc>][NAM] p edhfgjjj q opjstnnn
[CUS][RDC][{ONEWAY|BCAST}][NTR r][TLA s]

Format 5 Data Line: For Subrate Cross-Connections

Not applicable.

Format 6 Data Line: For Subrate Cross-Connections involving test access

Not applicable.

Format 7 Data Line: For TS0 to non-TS0 Cross-Connections

wxkqr iii ppqqq {PFW(abcdefg, ijklmno)|NFW}[<tc>][NAM]
[BCAST][{UTST {TP kk|TG mmm}|ROLL}][TLA s]

Format 8 Data Line: For E1 or T1 to SDxyz Cross-Connections

wxkqr iii ppqqq [{UTST {TP kk|TG mmm}|ROLL}]

⇒ NOTE:

Formats 1 through 4 data lines are output as either one or two lines. The second line is output only if any of its optional fields are present.

[O.52042]

M hh:mm:ss xy, ww n[vv] UTL QRY TO uvmnphhh TYPE mnxyz 2 LN MSG:
UASGN[<tc> DCC][CUS][UTST {TP kk|TG mmm}][cc] {EOM|COMPL}

Denial Message

1.544 Mbit/s Termination

Nonhierarchical

[O.52041.01]

M hh:mm:ss xy,ww n[vv] UTL QRY TO [s]abcddd[-eee]
TYPE ----- UEQD DNY

[O.52041.02]

M hh:mm:ss xy,ww n[vv] UTL QRY TO [s]abcddd[-eee]
TYPE mnxyz RNGIE DNY

[O.52041.03]

M hh:mm:ss xy,ww n[vv] UTL QRY TO [s]abcddd[-eee]
[{RT|DL} ffff MD g[g] [t]hij] COND cc DNY

Hierarchical

[O.52041.01]

M hh:mm:ss xy,ww n[vv] UTL QRY TO uvmnpddd[-eee]
TYPE ----- UEQD DNY

[O.52041.02]

M hh:mm:ss xy,ww n[vv] UTL QRY TO uvmnpddd[-eee]
TYPE mnxyz RNGIE DNY

[O.52041.03]

M hh:mm:ss xy,ww n[vv] UTL QRY TO uvmnpddd[-eee]
[{RT|DL} ffff MD g[g] hhijj] COND cc DNY

2.048 Mbit/s Termination

Nonhierarchical

[O.52041.01]

M hh:mm:ss xy,ww n[vv] UTL QRY TO [s]abcddd[-eee]
TYPE ----- UEQD DNY

[O.52041.02]

M hh:mm:ss xy,ww n[vv] UTL QRY TO [s]abcddd[-eee]
TYPE mnxyz RNGIE DNY

Hierarchical

[O.52041.01]

M hh:mm:ss xy,ww n[vv] UTL QRY TO uvmnpddd[-eee]
TYPE ----- UEQD DNY

[O.52041.02]

M hh:mm:ss xy,ww n[vv] UTL QRY TO uvmnpddd[-eee]
TYPE mnxyz RNGIE DNY

Explanation of Parameters

TO	To
[s]abc	The 3- or 4-digit nonhierarchical NPC number For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number uv Unit number m Module number np NPC number within the module For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
ddd	Beginning range channel or conference number
eee	End range channel or conference number
kkk	Mid-range channel or conference number
lll	Mid-range channel or conference number
hhh	Typical midrange channel or conference number
	Channel numbers
	001-024
	0001-047 Odd only (SLC 96 [®] Carrier, Mode 3, DGA)
	049-095 Odd only (SLC 96 Carrier, Mode 3, DGC)
	001-024 Odd and Even (SLC 96 Carrier, Mode 1, DGA)
	025-048 Odd and Even (SLC 96 Carrier, Mode 1, DGB)
	049-072 Odd and Even (SLC 96 Carrier, Mode 1, DGC)
	073-096 Odd and Even (SLC 96 Carrier, Mode 1, DGD)

	001-024	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGA)
	025-048	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGB)
	049-072	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGC)
	073-096	Odd and Even (SLC Series 5 Carrier, Feature Package C, DGD)
	000-031	(CEPT)
	2.048 Mbit/s Termination	
	000-127 (C-bit processing)	
	Both Terminations	
	Conference numbers	
	001-500	(Virtual NPC)
	001-085	(MB NPC)
	UASGN Unassigned	
DCC	Disconnect code	
tc	Trunk conditioning	
	Represents the desired cross-connected signaling and insertion word applied when a failure occurs. A trunk conditioning specification consists of a combination of a signaling specification followed by an insertion word (IW) specification.	
	1.544 Mbit/s Termination	
	TC(ijkl,mnop) TRB	
	2-way 4-state	
	TC(ijkl,mnop) IW pq	
	2-way 4-state	
	TC(----,mnop) TRB	
	1-way 4-state	
	TC(----,mnop) IW pq	
	1-way 4-state	
	TC(ab,cd) TRB	
	2-way 16-state	
	TC(ab,cd) IW pq	

2-way 16-state
TC(--,cd) TRB
 1-way 16-state
TC(--,cd) IW pq
 1-way 16-state
TRSP IW pq
TRSP TRB
TRSP
 2.048 Mbit/s Termination
TC(ijkl,mnop) IW pq
 2-way 4-state
TC(----,mnop) IW pq
 1-way 4-state
TC(ab,cd) IW pq
 2-way 16-state
TC(--,cd) IW pq
 1-way 16-state
TRSP IW pq
TRSP(DMB to DMB)

⇒ NOTE:
 For CEPT to CEPT connections, the insertion word may be specified by the USER if the NPC is provisioned for firmware control. Otherwise, the insertion word defaults to X'FF.

⇒ NOTE:
 For connection of Channel Time Slot 16 (CTS`16) to the CPR pack, the tc field is not output. Also the only optional keywords that can be output are [CUS] [RDC].

1.544 Mbit/s Termination

TRB	Trouble
MUX	Multiplexer out of sync

TRSP	Transparent
sc	Signaling control This variable represents the optional signaling bit control specification and is used only in the Channel Associated Signaling (CAS) to CAS application with CAS signaling. If this option is not used, all four cross-connected time slot 16 (abcd) signaling bits in each direction will be cross-connected unchanged. Signaling control is specified as follows: SC(abcd,efgh) abcd Time slot 16 signalling bits, From direction efgh Time slot 16 signalling bits, To direction All 8 bits can be controlled independently. Control is applied by replacing each character in variable abcd or efgh with the appropriate control character. The allowable control characters are P Pass through unchanged V Pass through inverted 0 Set output to 0 1 Set output to 1 The effect of the V control character depends upon whether the connection is international or gateway. International: Inversion takes place on both the From and To-direction sides. The net effect is to cancel out the inversion. Hence it appears that no inversion took place. Gateway: Inversion takes place only on the international side of the connection. The effect is an inversion.
RT	Remote terminal
DL	Data link
fff	SLC [®] remote terminal (RT) or digital carrier line unit (DCLU) bank identification number (0000 through 9999)
Both Terminations	
MD	Mode

g[g]	Mode of operation of the RT or DCLU
1	SLC 96 Carrier Mode 1
3	SLC 96 Carrier Mode 3
C	SLC Series 5 Carrier Feature Package C (FPC)

1.544 Mbit/s Termination

AIS	Alarm indication signal DS1 range cross-connection with AIS specifications
accpoint	Access point under test
[s]abchhh	The multiplexed DS0B signal.
[s]abchhh/ee	The DS0A signal or customer ee data stream only for a DS0B signal.
MPTM [s]abchhh/ee MJU nnnn [BRi]	The multipoint master of the circuit [s]abchhh/ee and the leg of MJU nnnn which is under test. If only "MJU nnnn" is specified, the control leg of MJU nnnn is under test. If "BRi" is specified, branch i of MJU nnnn is under test. nnnn(0000 through 9999) i(1 through 4)

2.048 Mbit/s Termination

NAM	No A to Mu (conversion) In all cases where the NAM keyword is output, the A law to μ law and μ law to A law code translators on the PA, PB and PC type NPCs are disabled. Presence of the NAM keyword in the output reports on the conversion mode of the circuit, not necessarily on the input keyword used to create it, since NAM is the default case for CEPT to CEPT two — point connections. For multipoint connections the conference mode is established as NAM or A law to μ law when the first CEPT leg is connected. The NAM keyword is output only in the following cases: <i>two—point:</i>

- CEPT to CEPT
- CEPT to North American

multi—point:

- CEPT only or GATEWAY conference:
NAM keyword is output ONLY if conference mode is NAM

This applies to both the CEPT and North American legs of a GATEWAY conference.

The NAM keyword is *NOT* output in the following cases:

two—point:

- North American to North American

multi—point:

- CEPT only or GATEWAY conference:
NAM keyword is NOT output if conference mode is A law to μ law.

- North American only conference:
Here the conference mode is NAM.



NOTE:

For purposes of this utility, a CEPT only multipoint conference created without the NAM keyword is considered a conversion type conference, *"even though all data is externally transmitted in A law," because canceling A law to μ law and μ law to A law conversions are done.* This type of conference has more quantization noise than a true NAM connection such as a CEPT to CEPT two — point.

1.544 Mbit/s Termination

DGP	Digroup P (protection digroup, SLC carrier bank)
[t]mno	The 3- or 4-digit DGP nonhierarchical NPC number
[t]hij	The 3- or 4-digit DGA (digroup A) nonhierarchical NPC number
feigh	DGP hierarchical NPC number
hhijj	DGA (digroup A) hierarchical NPC number

Both Terminations

[t]defiii	Nonhierarchical FROM termination
[t]def	The 3- or 4-digit nonhierarchical NPC number
	Valid values are identical to those for [s]abc
iii	Channel or conference number

Valid values are identical to those for ddd

ppqqq NPC type of the FROM termination

To interpret values of ppqqq see the table following mnxyz below.

 **NOTE:**
If ppqqq = MB100 or VI100, then FROM is a multipoint termination and TO is not.

2.048 Mbit/s Termination

If ppqqq = PAXyz, PBxyz, or PCxyz, then TO is a multipoint termination, FROM is not.

TYPE Type

mnxyz NPC Type

2.048 Mbit/s Termination

CB C-Bit processing NPC

1.544 Mbit/s Termination

DA FTU ANSI NPC type

DE Enhanced digroup NPC

DS SLC[®] *terminating digroup NPC*

Both Terminations

MB Digital multipoint bridge NPC

2.048 Mbit/s Termination

PA Primary block NPC (120- or 75-Ohm)

PB Primary block NPC (120-Ohm twisted pair)

PC Primary block NPC (75-Ohm coaxial)

Both Terminations

SD Digital Signal Processing Application NPC on TG193 pack

ST Digital Signal Processing Circuit Pack
(2 NPCs per card)

1.544 Mbit/s Termination

TA DS3U ANSI NPC type

TE DS3U and HDS3U enhanced NPC

	TH	Hybrid DS3U E1 NPC
	SA	HSU ANSI NPC type
	SE	HSU enhanced NPC
		2.048 Mbit/s Termination
	SH	HSU E1 NPC
		Both Terminations
	VI	Virtual NPC
	xyz	Multiframe, line and signaling, and channel numbering formats
		For a listing of the NPC parameters, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
e		Number of lines in the message segment
SECH		Subrate establish channel
CUS		Customer
		The circuit is a customer controlled circuit
RDC		Red circuit
		The circuit is a red circuit
UTST		Undertest
		The circuit is under test
ONEWAY		One-way
		The circuit is a one-way connection
BCAST		Broadcast
		The circuit is a broadcast-type connection
ROLL		Roll
		Bridged leg from Roll procedure
TLA		Terminate and leave active
s		Terminate and leave state
	F	FROM terminated
	T	TO terminated
	B	BOTH terminated
fmd		FROM multipoint circuit mode of the connection
tmd		TO multipoint circuit mode of the connection

For DMB circuits, there are four possible values for fmd and tmd:

- SYM** For legs of a symmetrical multipoint circuit (must be a DMB channel)
- BRD** For nonbackbone (tributary) legs of a broadcast multipoint circuit (must be a DMB channel)
- BBL** For the backbone leg of a broadcast multipoint circuit (must be a DMB channel)
- LEG** For the end that does not terminate on the multipoint circuit (must be an FTU/DS3U/HSU channel)

For virtual NPC circuits, there are three possible values for fmd and tmd:

- BRD** For nonbackbone legs of a broadcast multipoint circuit (must be a virtual NPC channel)
- BBL** For the backbone leg of a broadcast multipoint circuit (must be a virtual NPC channel)
- LEG** For the end that does not terminate on the multipoint circuit (must be FTU/DS3U/HSU channels)

snn Incoming gain adjust parameters for the DMB NPC

smm Outgoing gain adjust parameters for the DMB NPC

s Sign (+ or -)

nn Incoming gain adjust value (-90 through +88)

mm Outgoing gain adjust value (-90 through +88)

These are the parameters requested for the TO termination. Values are given in steps of two and the units are tenths of a db.

For type VI100 NPCs snn and smm will be output as "---"

The special value --- (three dashes) can be used for either snn or smm (but not both) when no change is to be made to that parameter.

This feature allows changing only one of the two parameters if desired.

Also, if the cross-connection was provisioned with the NTR (no transmit) option, the gain adjustment in the direction for which transmission is shut off MUST be ---.

nn Noise guard setting (in dB) for the FROM/TO NPC

The following default values apply:

For Symmetrical bridges Default: nn = -18 db

For Polling circuits Default: nn = 0 db

Valid values are listed below:

00 db

06 db

12 db

18 db

-- (For VI100 NPCs)

ee Echo suppression setting (in dB) for the FROM/TO NPC

The following default values apply:

For Symmetrical bridges Default: ee = -18 db

For Polling circuits Default: ee = 0 db

00 db

06 db

12 db

18 db

-- (For VI100 NPCs)

spp Incoming gain adjust parameters for the TO DMB NPC

sqq Outgoing gain adjust parameters for the FROM DMB NPC

See snn and smm above for explanation and values.

vv Noise guard setting (in dB) for the FROM DMB NPC

tt Noise guard setting (in dB) for the TO DMB NPC

See nn above for default values.

00 db

06 db

12 db

18 db

ww Echo suppression setting (in dB) for the FROM DMB NPC

uu Echo suppression setting (in dB) for the TO DMB NPC

See ee above for default values.

00 db

	06 db	
	12 db	
	18 db	
NTR	No transmit	
r	Direction which has no transmission	
	F	FROM
	T	TO
TP	Test port	
kk	Test port number (01 through 96)	
TG	Test (access) group	
mmm	Test group number (001 through 400)	
tsm	Test mode	
	HUB	Hubbed
	LPD	Looped
	MON	Monitor
	SPL	Split
	TPR	Test Port Released
	TGR	Test Group Released
	SPLNOY	Split with yellow alarm transmission disabled
l	Link used to access this test port (0 if mode is released)	
vv	Virtual circuit number of an X.25 link used to access this test port (01 through 16)	
p	Channel assignment	
	F	FROM side of circuit under test
	H	HIGH channel of hubbed test port (only for HUB test mode)
q	Channel assignment	
	T	TO side of circuit under test
	L	LOW channel of hubbed Test Port (only for HUB test mode)
[s]ghijj	Nonhierarchical FROM, HIGH, or DSPP NPC number	

	If test access is made to a digital signal processing platform (used for signaling conversion between an E1 and a T1 NPC) then [s]ghijj is the SP100 NPC.
[t]jklenn	Nonhierarchical TO, LOW, E1, or T1 NPC number
	If test access is made to a digital signal processing platform (used for signaling conversion between an E1 and a T1 NPC) then [t]jklenn is the E1 or T1 NPC.
edhfg	Hierarchical FROM/HIGH
opjst	Hierarchical TO/LOW
ed,op	Unit number
h,j	Module number
fg,st	NPC number within module
	Valid values are identical to those for uvmnp
[s]ghi,[t]jhk	The 3- or 4-digit nonhierarchical NPC number
	Valid values are identical to those for [s]abc.
jjj,nnn	Channel, time slot, or conference number
	Valid values are identical to those for ddd above.

2.048 Mbit/s Termination

PFW	Pseudo frame word
abcdefg	Pseudo frame word value (TO to FROM direction)
ijklmno	Pseudo frame word value (FROM to TO direction)
	The PFW keyword is used to select Mode 1 of TS0 Cross-Connect. In both directions of transmission the Frame Word is replaced by a Pseudo Frame Word. The pseudo frame word value replaces the Frame Alignment Signal (Bits 2 - 8) of the transmitted Frame Word. The bit assignments for abcdefg and ijklmno are shown below:
2345678	bit numbers
abcdefg	
ijklmno	
	Variables a through g and i through o may each be set to 0 or 1.
0	Sets the corresponding bit to 0
1	Sets the corresponding bit to 1
NFW	Non frame word

The NFW keyword is used to select Mode 2 of TS0 Cross-Connect. In both directions of transmission the Frame Word is replaced by the Non Frame Word, thus repeating the content of the Non Frame Word in consecutive frames.

Both Terminations

UEQD	Unequipped
RNGIE	Range input error
COND	Condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
E3	One way unassigned channel/NPC in QRY, TO
0B	Invalid CEPT NPC
62	Invalid channel number
63	NPC is a DGP
7F	NPC is not added
91	SR NPC was specified - not allowed
F7	Corresponding NPC for virtual channel is not provisioned

UTILITY QUERY, TEST PORTS

Explanation of Command

All non-channelized test NPCs or Facility Access Digroups (FADs) will be listed together in one or more segments. Each FAD number is the same as the NPC number, and is given with its test mode.

Even though test ports that are established to a Digital Signal Processing Platform (DSPP) application (such as the DDS Subrate and MJU application, the X.50 International subrate application, or the DMB application) are put into monitor or split mode within the application, this command will always display a Test Port as a split connection as long as it is connected to an application.

1.544 Mbit/s Terminations only:

This command reports the network processing circuits (NPCs) used for test ports, their designation, and the test modes of each equipped test port. The report includes the DS0 test port and non-channelized test NPCs.

Not listed are any test ports that are unequipped with numbers less than that of the highest equipped test port **within** a network processing circuit for test ports (NPCTP) since in each NPC they must be grown in numerical order starting with the lowest numbered test port within each NPCTP (01, 13, 25, etc.).

2.048 Mbit/s Terminations only:

This command reports the network processing circuits (NPCs) designated for test ports, their designation **n**, and the test modes of each equipped test port. There cannot be any unequipped test ports with numbers less than that of the highest equipped test port **within** an NPCTP since in each NPC they must be grown in numerical order starting with the lowest numbered test port within each NPCTP (01, 13, 25, etc.).

Command

[I.53061]

UTL:[FRM xy][,SEQ ww]:QRY,TPS!

**Completion
Message**

1.544 Mbit/s Termination

Nonhierarchical

[O.53061]

M hh:mm:ss xy,ww n[vv] UTL QRY TPS kk e LN MSG:
NPCTP n NPC [s]abc <md01> <md02> ... <md12>
NPCTP n NPC [s]abc <md13> <md14> ... <md24>
NPCTP n NPC [s]abc <md25> <md26> ... <md36>
NPCTP n NPC [s]abc <md37> <md38> ... <md48> <EOM|COMPL>

M hh:mm:ss xy,ww n[vv] UTL QRY TPS kk e LN MSG:
NPCTP n NPC [s]abc <md49> <md50> ... <md60>
NPCTP n NPC [s]abc <md61> <md62> ... <md72>
NPCTP n NPC [s]abc <md73> <md74> ... <md84>
NPCTP n NPC [s]abc <md85> <md86> ... <md96> <EOM|COMPL>

[O.53061]

M hh:mm:ss xy,ww n[vv] UTL QRY FAD kk e LN MSG:
[s]abc,<tmode> [s]abc,<tmode> [s]abc,<tmode>\ [s]abc,<tmode>
[s]abc,<tmode> [s]abc,<tmode> [s]abc,<tmode>\ [s]abc,<tmode>
[s]abc,<tmode> [s]abc,<tmode> [s]abc,<tmode>\ [s]abc,<tmode>
[s]abc,<tmode> [s]abc,<tmode> EOM

.
.
.

M hh:mm:ss xy,ww n[vv] UTL QRY FAD kk e LN MSG:
[s]abc,<tmode> [s]abc,<tmode> [s]abc,<tmode>\ [s]abc,<tmode>
[s]abc,<tmode> [s]abc,<tmode> [s]abc,<tmode>\ [s]abc,<tmode>
[s]abc,<tmode> [s]abc,<tmode> [s]abc,<tmode> \ [s]abc,<tmode>
[s]abc,<tmode> [s]abc,<tmode> EOM

M hh:mm:ss xy,ww n[vv] UTL QRY TPS COMPL

[O.53062]

M hh:mm:ss xy,ww n[vv] UTL QRY TPS 00 NPC [0]000 COMPL

Hierarchical

[O.53061]

M hh:mm:ss xy,ww n[vv] UTL QRY TPS kk p LN MSG:
NPCTP n NPC uvmnp <md01> <md02> ... <md12>
NPCTP n NPC uvmnp <md13> <md14> ... <md24>
NPCTP n NPC uvmnp <md25> <md26> ... <md36>
NPCTP n NPC uvmnp <md37> <md38> ... <md48> <EOM|COMPL>

```
M hh:mm:ss xy,ww n[vv] UTL QRY TPS kk p LN MSG:
NPCTP n NPC uvmnp <md49> <md50> ... <md60>
NPCTP n NPC uvmnp <md61> <md62> ... <md72>
NPCTP n NPC uvmnp <md73> <md74> ... <md84>
NPCTP n NPC uvmnp <md85> <md86> ... <md96> <EOM|COMPL>
```

[O.53061]

```
M hh:mm:ss xy,ww n[vv] UTL QRY FAD kk p LN MSG:
uvmnp,<tmode> uvmnp,<tmode> uvmnp,<tmode> uvmnp,<tmode>
uvmnp,<tmode> uvmnp,<tmode> uvmnp,<tmode> uvmnp,<tmode>
uvmnp,<tmode> uvmnp,<tmode> uvmnp,<tmode> uvmnp,<tmode>
uvmnp,<tmode> EOM
.
.
.
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY FAD kk p LN MSG:
uvmnp,<tmode> uvmnp,<tmode> uvmnp,<tmode> uvmnp,<tmode>
uvmnp,<tmode> uvmnp,<tmode> uvmnp,<tmode> uvmnp,<tmode>
uvmnp,<tmode> uvmnp,<tmode> uvmnp,<tmode> uvmnp,<tmode>
uvmnp,<tmode> EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY TPS COMPL
```

[O.53062]

```
M hh:mm:ss xy,ww n[vv] UTL QRY TPS 00 NPC 00000 COMPL
```

Explanation of Parameters

TPS	Test ports
kk	Total number of test ports equipped or total number of equipped non-channelized test NPCs in segment
NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number of test NPC
(source nhphrase here)	
uvmnp	Hierarchical NPC number of test NPC
uv	Unit number
m	Module number
np	NPC number within the module

(source hphrase here)

NPCTP	NPC for test ports
FAD	Facility access digroup
	Non-channelized test NPC
n	64Kbit/s NPCTP number (1 through 8)
md01-md96	Mode of 64Kbit/s Test Port number nn (01 through 96)
<i>mdnn</i>	<i>Definition</i>
TPR	Test Port Released
MON	Monitor
SPL	Split
HUB	Hubbed
LPD	Looped
---	Not equipped
mode	Test mode of non-channelized test NPC
<i>tmode</i>	<i>Definition</i>
MONE	Monitor E (FROM)
MONF	Monitor F (TO)
MONEF	Monitor E and F
SPLTA	Split A
SPLTB	Split B
SPLTAB	Split A and B
SPLTE	Split E
SPLTF	Split F
SPLTEF	Split E and F
LOOPE	Loop E
LOOPF	Loop F
LPBKT	Loopback Test
HUB	Hub
e	Number of lines in message (2 through 5)

QUERY ANSI NPC TEST SIGNAL

Explanation of Command



NOTE:

This command applies to 1.544 Mbit/s Termination only.

This command queries whether a single or range of Network Processing Circuits (NPCs) are transmitting Payload or ESF data link test signals. Only ANSI (DA/TA-type) NPCs provide this capability.

The response is formatted on a module by module basis. The response indicates whether or not any Payload and/or Data Link Test Signals are currently active for each NPC in the addressed range. An NPC may have both a Payload and a Data Link Test Signal active simultaneously.

Command

Nonhierarchical

[I.53161]

UTL: [FRM xy][, SEQ ww]:QRY, TSIG, NPC [s]abc[-[t]def]!

Hierarchical

[I.53161]

UTL: [FRM xy][, SEQ ww]:QRY, TSIG, NPC uvmnp[-wxkqr]!

Completion Message

Nonhierarchical

[O.53161]

```
M hh:mm:ss xy,ww n[vv] UTL QRY TSIG NPC [u]ghi-[u]jkl TOT nnn \
[ COND cc] 5 LN MSG:
pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd [pp/dd pp/dd pp/dd]
pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd [pp/dd pp/dd pp/dd]
pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd [pp/dd pp/dd pp/dd]
pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd [pp/dd pp/dd pp/dd] EOM
```

```
M hh:mm:ss xy,ww n[vv] UTL QRY TSIG NPC [v]mno-[v]pqr TOT nnn \
[ COND cc] 5 LN MSG:
pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd [pp/dd pp/dd pp/dd]
```

pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd [pp/dd pp/dd pp/dd]
pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd [pp/dd pp/dd pp/dd]
pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd [pp/dd pp/dd pp/dd] EOM

M hh:mm:ss xy,ww n[vv] UTL QRY TSIG NPC [s]abc-[t]def[COND cc] \\
COMPL

[O.53162]

M hh:mm:ss xy,ww n[vv] UTL QRY TSIG NPC [s]abc pp/dd COMPL

Hierarchical

[O.53161]

M hh:mm:ss xy,ww n[vv] UTL QRY TSIG NPC uvmaa-uvmbb TOT nnn \\
[COND cc] 5 LN MSG:
pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd [pp/dd pp/dd pp/dd]
pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd [pp/dd pp/dd pp/dd]
pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd [pp/dd pp/dd pp/dd]
pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd [pp/dd pp/dd pp/dd] EOM

M hh:mm:ss xy,ww n[vv] UTL QRY TSIG NPC wxkaa-wxkbb TOT nnn \\
[COND cc] 5 LN MSG:
pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd [pp/dd pp/dd pp/dd]
pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd [pp/dd pp/dd pp/dd]
pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd [pp/dd pp/dd pp/dd]
pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd pp/dd [pp/dd pp/dd pp/dd] EOM

M hh:mm:ss xy,ww n[vv] UTL QRY TSIG NPC uvmnp-wxkqr[COND cc] COMPL

[O.53162]

M hh:mm:ss xy,ww n[vv] UTL QRY TSIG NPC uvmnp pp/dd COMPL

Denial Message

Nonhierarchical

[O.53161.01]

M hh:mm:ss xy,ww n[vv] UTL QRY TSIG NPC [s]abc[-[t]def] \\
COND cc DNY

Hierarchical

[O.53161.01]

M hh:mm:ss xy,ww n[vv] UTL QRY TSIG NPC uvmnp[-wxkqr] \\
COND cc DNY

**Explanation of
Parameters**

1.544 Mbit/s Termination

TSIG	Test signal
NPC	Network processing circuit
[s]abc	The 3- or 4-digit nonhierarchical NPC number, start of NPC range
[t]def	The 3- or 4-digit nonhierarchical NPC number, end of NPC range
[u]ghi	Lowest numbered NPC in the FTM that contains NPC [s]abc
[v]mno	Lowest numbered NPC in the FTM that contains NPC [t]def
[u]jkl	Highest numbered NPC in the FTM that contains NPC [s]abc
[v]pqr	Highest numbered NPC in the FTM that contains NPC [t]def
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
uvmnp	Hierarchical NPC number for beginning of NPC range
wxkqr	Hierarchical NPC number for end of NPC range
uv,wx	Unit number
m,k	Module number
np,qr	NPC number within the module
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

The range of NPCs in the denial messages is given either as module or unit boundaries depending upon the reason for the denial.

uvmaa	Lowest numbered NPC in the FTM that contains NPC uvmnp The parameter value for NPC aa is in the first position, first line of the message.
uvmbb	Highest numbered NPC in the FTM that contains NPC uvmnp The parameter value for NPC bb is just before EOM.
wxkaa	Lowest numbered NPC in the FTM that contains NPC wxkqr
wxkbb	Highest numbered NPC in the FTM that contains NPC wxkqr
pp/dd	ANSI Payload/Data Link Test Signal Types Values of pp/dd are presented in NPC order, grouped within messages by Facility Terminating Module (FTM). For FTMs in Facility Terminating Units, each row of output contains 10 values. For FTMs in DS3 Units, each row of output contains 7 values.

	YL	Yellow Test Signal in D4/T1DM framing mode
	HD	High Density Test Signal
	LD	Low Density Test Signal
	QR	Quasi-Random Test Signal
	NN	No Payload Test Signal active
	00	NPC not specified in input range command
	--	NPC not equipped, not in service, or not ANSI (DA,TA) type
	YL	Yellow Test Signal in ESF framing mode
	LR	Loopback Retention Signal
	NN	No Data Link Test Signal active
	00	NPC not specified in input range command
	--	NPC not equipped, not in service, or not ANSI (DA,TA) type
TOT		Total
nnn		Total Number of NPCs in the module that are in the loopback state
COND		Condition
cc		Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
14	FTMI is out of service
1F	FTMI is in service but failed
26	NPC type error
A0	The selected MXR associated with the NPC is Out-Of-Service
A1	The selected MXR associated with the NPC is In-Service but failed

UTILITY QUERY INTEGRATED TEST SIGNAL MONITORING TEST RESULTS

Explanation of Command

This command is used with the Integrated Test Set feature to query bit error rate test (BERT) results on an Nx64Kbit/s test-access group (TG). The test group NPC (NPCTG) must be provisioned as an Integrated Test Set (type ST1yz) for this command to complete.

The integrated test signal monitoring function is provided by the TG193 circuit pack. No external test sets are required. The integrated test signal monitoring function counts logical bit errors based on discrepancies between the bit stream generated by the test signal generator and the bit stream received by the test signal monitor. The bit errors are used to calculate error performance statistics based on ITU Recommendation G.821. These statistics are displayed as test results in response to this command.

Command

[I.53401]

UTL: [FRM xy][, SEQ ww]:QRY, TSM, TG mmm!

Completion Message

[O.53401]

M hh:mm:ss xy,ww n[vv] UTL QRY TSM TG mmm 5 LN MSG:
STOTAL aaaaaa
S00S bbbbbb
SAVAIL cccccc
SUNAVAIL dddddd EOM

M hh:mm:ss xy,ww n[vv] UTL QRY TSM TG mmm 3 LN MSG:
BE eeeee
BER f.fffE-gg EOM

M hh:mm:ss xy,ww n[vv] UTL QRY TSM TG mmm 5 LN MSG:
ES hhhhhh
ESR i.iiiE-jj
SES kkkkkk
SESR l.lllE-nn COMPL

Denial Message

[O.53401.01]

M hh:mm:ss xy,ww n[vv] UTL QRY TSM TG mmm COND cc DNY

Explanation of Parameters

TSM	Test Signal Monitor
TG	Test-access group
mmm	Test-access group number (001 through 400)
STOTAL	Elapsed time in seconds
aaaaaa	Total elapsed time of the test in seconds; STOTAL = count of seconds since test signal monitoring mode was entered
SOOS	Out of Synchronization Seconds
bbbbbb	Count of out of synchronization seconds; SOOS = count of seconds during which pattern synchronization was not maintained over the entire second
SAVAIL	Available seconds
cccccc	Count of available seconds
SUNAVAIL	Unavailable seconds
dddddd	Count of unavailable seconds
	Explanation of available and unavailable time:
	A period of unavailable time begins when the bit error ratio (BER) is $\geq 1 \times 10^{-3}$ for a period of ten consecutive seconds. These ten seconds are all unavailable time. A separate criteria exists for the transition from unavailable time to available time. A new period of available time begins at the onset of a period of ten consecutive seconds each of which has a $BER < 1 \times 10^{-3}$. These ten seconds are all available time.
BE	Bit errors
eeeeee	Count of logical bit errors detected
BER	Bit error ratio
f.fffE-gg	Bit Error Ratio (expressed as $f.fff \times 10^{-gg}$); $BER = \text{Total Bit Errors} \div (\text{Available Seconds} \times \text{Data Rate})$
ES	Errored Seconds
hhhhhh	Count of errored seconds; ES = number of seconds in which one or more bits are in error
ESR	Errored second ratio

i.iiiE-jj	Errored Second Ratio (expressed as $i.iii \times 10^{-jj}$), $ESR = \text{Errored Seconds} \div \text{Available Seconds}$
SES	Severely Errored Seconds
kkkkkk	Count of severely errored seconds; $SES = \text{number of seconds with } BER \geq 1 \times 10^{-3}$
SESR	Severely errored second ratio
I.IIIE-nn	Severely Errored Second Ratio (expressed as $I.III \times 10^{-nn}$); $SESR = \text{Severely Errored Seconds} \div \text{Available Seconds}$
cc	Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
12	Active CCN side not IS or failed or pested or hardware OOS
13	UNIT not equipped, not in service, or failed
15	FTMI not equipped, not in service, or failed
49	test group unequipped
72	TG not in TSG ON mode

QUERY NPC TIME SLOT ZERO

Explanation of Command

This command prints out the status of the provisioned transmit or of the actual received spare International, National, and Remote Alarm Indication (A) Bits in time slot 0 of a specified network processing circuit (NPC) or range of NPCs. If an NPC range was specified in the input command, the following floating window rules apply:

- Unequipped NPCs within the requested range are skipped
- If a CEPT gap is within the requested range, the NPCs in the gap are skipped
- If an endpoint of the requested range is in a CEPT gap, then the NPCs in the portion of the range which is in the gap are denied.

Command

Nonhierarchical

[I.56321]

UTL: [FRM xy][, SEQ ww]:QRY, TS0 s, NPC [s]abc[-[t]def]!

Hierarchical

[I.56321]

UTL: [FRM xy][, SEQ ww]:QRY, TS0 s, NPC uvmp[-wxkqr]!

Completion Message

Nonhierarchical

[O.56321]

M hh:mm:ss xy, ww n[vv] UTL QRY TS0 s NPC [s]abc abcdefgh COMPL

·
·
·

[M hh:mm:ss xy, ww n[vv] UTL QRY TS0 s NPC [t]def abcdefgh COMPL]

[M hh:mm:ss xy, ww n[vv] UTL QRY TS0 s NPC [s]abc-[t]def COMPL]

Hierarchical

[O.56321]

M hh:mm:ss xy,ww n[vv] UTL QRY TSO s NPC uvmnp abcdefgh COMPL

·
·
·

[M hh:mm:ss xy,ww n[vv] UTL QRY TSO s NPC wxkqr abcdefgh COMPL]

[M hh:mm:ss xy,ww n[vv] UTL QRY TSO s NPC uvmnp-wxkqr COMPL]

Denial Message

Nonhierarchical

[O.56321.01]

M hh:mm:ss xy,ww n[vv] UTL QRY TSO s NPC [t]ghi COND cc DNY

Hierarchical

[O.56321.01]

M hh:mm:ss xy,ww n[vv] UTL QRY TSO s NPC edhfg COND cc DNY

Explanation of Parameters

NPC	Network processing circuit
[s]abc	Nonhierarchical NPC number
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
[t]def	Nonhierarchical NPC number
	Values are identical to those for [s]abc
uvmnp	Hierarchical NPC number
wxkqr	Hierarchical NPC number
	uv,wx Unit number
	m,k Module number
	np,qr NPC number
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
TSO	Time slot 0

s	Direction of transmission for time slot 0 bits
T	Provisioned time slot 0 values
R	Received time slot 0 values
[t]ghi	The 3- or 4-digit nonhierarchical NPC number (abc through def)
[t]jkl	The 3- or 4-digit nonhierarchical NPC number (abc through def)
edhfg	Hierarchical NPC number (uvmnp through wxkqr)
opjst	Hierarchical NPC number (uvmnp through wxkqr)
abcdefgh	Eight individual variables.
	These represent the provisioned or received state of the time slot 0 bits.
	For Clear-2Mbit/s NPCs, dashes (-----) are shown in place of TS0 bits.
ab	Spare international bits S_i
	If the NPC is not provisioned for the CRC multiframe format, bits a and b shall represent the S_i bits in the Frame Word (FW) and the Non Frame Word (NFW), respectively.
	If the NPC is provisioned for the CRC multiframe format, a and b shall represent the S_i bits in frames 13 and 15 of the CRC multiframe in the NFW, respectively.
c	Remote Alarm Indication must be - (hyphen).
de	Two spare national bits S_4 through S_5 in the NFW.
f	RPSFI (Remote Power Supply Failure Indicator) bit in the NFW if provisioned for RPSFI otherwise spare national bit.
gh	Two spare national bits S_7 through S_8 in the NFW
cc	Hexadecimal condition code
cc	<i>Explanation</i>
04	Subject entity is out of service
10	Unit is not equipped
11	UC is out of service
13	FTMI is not equipped
14	FTMI is out of service
15	NPC is unequipped
25	FTMI type error

cc	<i>Explanation</i>
26	NPC type error
0B	Invalid CEPT NPC
46	NPC Failed or Out of Service

QUERY TIME SLOT ZERO MONITOR

Explanation of Command

This command checks whether the received spare national and international bits in time slot 0 are provisioned for monitoring. This information may be requested for a single network processing circuit (NPC) or a range of circuits. If an NPC range was specified in the input command, the following floating window rules apply:

- Unequipped NPCs within the requested range are skipped.
- If a CEPT gap is within the requested range, the NPCs in the gap are skipped.
- If an endpoint of the requested range is in a CEPT gap, then the NPCs in the portion of the range which is in the gap are denied.

Command

Nonhierarchical

[I.56323]

UTL: [FRM xy][, SEQ ww]:QRY,TSOM,NPC [s]abc[-[t]def]!

Hierarchical

[I.56323]

UTL: [FRM xy][, SEQ ww]:QRY,TSOM,NPC uvmp[-wxkqr]!

Completion Message

Nonhierarchical

[O.56323]

M hh:mm:ss xy,ww n[vv] UTL QRY TSOM NPC [s]abc abcdefgh \
TSOMBOFL v COMPL

.
.
.

[M hh:mm:ss xy,ww n[vv] UTL QRY TSOM NPC [t]def abcdefgh \
TSOMBOFL v COMPL]

[M hh:mm:ss xy,ww n[vv] UTL QRY TSOM NPC [s]abc-[t]def COMPL]

Hierarchical

[O.56323]

M hh:mm:ss xy,ww n[vv] UTL QRY TSOM NPC uvmnp abcdefgh \ TSOMBOFL v COMPL

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.

.

[M hh:mm:ss xy,ww n[vv] UTL QRY TSOM NPC wxkqr abcdefgh \ TSOMBOFL v COMPL]

[M hh:mm:ss xy,ww n[vv] UTL QRY TSOM NPC uvmnp-wxkqr COMPL]

Denial Message

Nonhierarchical

[O.56323.01]

M hh:mm:ss xy,ww n[vv] UTL QRY TSOM NPC [v]ghi[-[u]jkl] COND cc DNY

Hierarchical

[O.56323.01]

M hh:mm:ss xy,ww n[vv] UTL QRY TSOM NPC edhfg[-opjst] COND cc DNY

Explanation of Parameters

[s]abc

The 3 or 4 digit nonhierarchical starting NPC number

[t]def

The 3 or 4 digit nonhierarchical ending NPC number

For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp

Hierarchical starting NPC number

wxkqr

Hierarchical ending NPC number

uv,wx Unit number

m,k Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

[v]ghi	The 3- or 4-digit nonhierarchical NPC number ([s]abc through [u]jkl)
[u]jkl	The 3- or 4-digit nonhierarchical NPC number ([v]ghi through [t]def)
edhfg	Hierarchical NPC number (uvmnp through opjst)
opjst	Hierarchical NPC number (edhfg through wxkqr)
ed,op	Unit number (uv through wx)
h,j	Module number
fg,st	NPC number
TSOM	Time slot 0 monitor
abcdefgh	Time slot 0 monitor bits
ab	Spare international bits S_i If the NPC is not provisioned for the CRC multiframe format, bits a and b shall represent the S_i bits in the Frame Word (FW) and the Non Frame Word (NFW), respectively. If the NPC is provisioned for the CRC multiframe format, a and b shall represent the S_i bits in frames 13 and 15 of the CRC multiframe in the NFW, respectively.
c	Remote Alarm Indication must be - (hyphen).
de	Two spare national bits S_4 through S_5 in the NFW.
f	RPSFI (Remote Power Supply Failure Indicator) bit in the NFW if provisioned for RPSFI otherwise spare national bit.
gh	Two spare national bits S_7 through S_8 in the NFW
	Valid values for bits a through h are described below:
0	Do not monitor and therefore do not send a message if this bit changes state
1	Monitor and therefore send a message if this bit changes state
TSOMBOFL	Time slot 0 monitor buffer overflow keyword
v	TSOM condition indicator
0	NPC is not in TSOM buffer overflow condition
1	NPC is in TSOM buffer overflow condition
cc	Hexadecimal condition code

cc	<i>Explanation</i>
10	Unit is not equipped
15	NPC is unequipped
0B	Invalid CEPT NPC
F1	Parameter only valid with PA, PB, or PC type NPCs

QUERY PERFORMANCE MONITORING DATA FOR HYBRID DS3S

Explanation of Command



NOTE:

This command applies to the 1.544 Mbit/s Termination interface only.

This command retrieves current and/or recent historical performance monitoring data for Hybrid DS3 facilities provisioned on KCR8 circuit packs. This command is denied for DS3 facilities provisioned on KCR1 or KCR5 circuit packs. The command response is output in two distinct formats depending on whether the input command is applied to all Hybrid DS3 facilities on the frame or a set of specifically addressed Hybrid DS3 facilities.

When the command is applied to All Hybrid DS3 facilities, DACS II responds with the current parameter counts of a single specified performance parameter for all Hybrid DS3 facilities. All counts, whether they are zero or greater, are output. The output is formatted on a unit-by-unit basis for all Hybrid DS3 facilities. If a particular Hybrid DS3 facility is not in-service, then its accumulator count is printed as a string of dashes.

When a single Hybrid DS3 facility or range of Hybrid DS3 facilities is specifically addressed in the input command, then with some restrictions, all of the optionally entered user parameters are programmable. DACS II outputs the requested data in a different format, which accommodates the various user options.

Restrictions are placed on the use of the ALL options for various keywords to constrain the amount of data that is output for a single command. In particular,

- If all parameters are requested, the input command is restricted to specifying a single Hybrid DS3 facility and the current daily or the current 15-minute accumulation interval for all parameters.
- If all daily accumulation registers are requested, the input command is restricted to specifying a single Hybrid DS3 facility and a single parameter.
- If all 15-minute accumulation registers are requested, the input command is restricted to specifying a single Hybrid DS3 facility and a single parameter.

The following table summarizes the allowed combinations of input specifications.

DS3	<parameter>	AI	LV	MONDAT	MONTIM
ALLDS3	single	DAILY	not allowed defaults 0-Up	not allowed default CURD	not allowed
ALLDS3	single	15MIN	not allowed defaults 0-Up	not allowed	not allowed default CURT
single Unit and DS3	ALLPAR	DAILY	not allowed defaults 0-Up	ALL not allowed HIST allowed CURD allowed	not allowed
single Unit and DS3	ALLPAR	15MIN	not allowed defaults 0-Up	not allowed	ALL not allowed HIST allowed CURT allowed
single Unit and DS3	single	DAILY	any legal value unless MONDAT=ALL	ALL allowed HIST allowed CURD allowed	not allowed
single Unit and DS3	single	15MIN	any legal value unless MONTIM=ALL	not allowed	ALL allowed HIST allowed CURT allowed
single Unit and range of DS3s	single	DAILY	any legal value	ALL not allowed HIST allowed CURD allowed	not allowed
single Unit and range of DS3s	single	15MIN	any legal value	not allowed	All not allowed HIST allowed CURT allowed

The user should be aware that some counts may not be valid if the following occurs:

- A start-up or reset occurred during the measurement interval. This affects all counts currently being accumulated.
- A protection switch occurred for a particular DS3 facility. This affects the current counts for the particular DS3.
- A DS3 loopback was activated. This affects the current counts for the particular DS3.
- The time-of-day was changed by user command. This affects all counts currently being accumulated.

Command

[I.56111]

UTL: [FRM xy][, SEQ ww]: QRY, {UNIT [q]q, DS3 c[-d]|ALLDS3}, \
<parameter> AI aaaaa[, LV llllllllll][, MONDAT dddd][, MONTIM tttt]!

Completion Message

Output message when the ALLDS3 keyword is used for DS3s, retrieving the current counter values of a single specified parameter for all Hybrid DS3s:
(The counter values for DS3s that are not provisioned or are provisioned on KCR1 or KCR5 circuit packs are shown as dashes)

[O.56111]

M hh:mm:ss xy, ww n[vv] UTL QRY ALLDS3 UNIT [q]q DS3 c-d \
<parameter> AI aaaaa 2 LN MSG:
cccccccc cccccccc cccccccc cccccccc cccccccc cccccccc EOM

.
.
.

M hh:mm:ss xy, ww n[vv] UTL QRY ALLDS3 UNIT [q]q DS3 c-d \
<parameter> AI aaaaa 2 LN MSG:
cccccccc cccccccc cccccccc cccccccc cccccccc cccccccc EOM
M hh:mm:ss xy, ww n[vv] UTL QRY ALLDS3 <parameter> AI aaaaa COMPL

Output message when the ALLDS3 keyword is not used for DS3s:
(Output lines for DS3s that are not provisioned or are provisioned on KCR1 or KCR5 circuit packs are not generated)

[O.56112]

Message segment for an individual UNIT when the AI keyword has been set to DAILY:

M hh:mm:ss xy, ww n[vv] UTL QRY UNIT [q]q DS3S <parameter> e LN MSG:
AI DAILY [LV llllllllll][MONDAT dddd]
DS3 PARAM COUNT MONDAT
c ppppp cccccccc dddd
. ppppp cccccccc dddd
. ppppp cccccccc dddd
. ppppp cccccccc dddd
. ppppp cccccccc dddd
d ppppp cccccccc dddd EOM

Message segment for an individual UNIT when the AI keyword has been set to 15MIN:

M hh:mm:ss xy, ww n[vv] UTL QRY UNIT [q]q DS3S <parameter> e LN MSG:
AI 15MIN [LV llllllllll][MONTIM tttt]

```

DS3  PARAM  COUNT  MONTIM
c    ppppp  cccccccc tttt
.    ppppp  cccccccc tttt
.    ppppp  cccccccc tttt
.    ppppp  cccccccc tttt
.    ppppp  cccccccc tttt
.    ppppp  cccccccc tttt
d    ppppp  cccccccc tttt EOM

```

Message segment completing the command output for an individual UNIT:

```

M hh:mm:ss xy,ww n[vv] UTL QRY UNIT [q]q DS3S c[-d] <parameter> \
2 LN MSG:
AI aaaaa [LV llllllllll ][MONDAT dddd ][MONTIM tttt ]COMPL

```

Denial Message

[O.56111.01]

```

M hh:mm:ss xy,ww n[vv] UTL QRY {UNIT [q]q DS3 c[-d]|ALLDS3} \
<parameter> 2 LN MSG:
AI aaaaa[ LV llllllllll ][ MONDAT dddd][ MONTIM tttt] COND cc DNY

```

Explanation of Parameters

UNIT	Peripheral unit housing the DS3s
[q]q	Number of unit ranging between 1 and 16
DS3	Hybrid DS3 circuit
c	The DS3 facility in the unit or the first DS3 of a range of DS3s in the unit.
d	The last DS3 facility of a range of DS3s in the unit.
e	Number of lines in the message
ALLDS3	All Hybrid DS3 facilities that are in service are selected
PARAM	Parameter
<parameter>	Name of parameter in the input
ppppp	Name of parameter in the output
The parameter names and their meanings are listed as follows:	
CVL	Code Violation for the DS3 Line
ESL	Errored Seconds for the DS3 Line
SESL	Severely Errored Seconds for the DS3 Line
CVP	Code Violation for the DS3 Path
FMP	F- or M-bit errors for the DS3 Path

ESP	Errored Seconds for the DS3 Path
SESP	Severely Errored Seconds for the DS3 Path
FSESP	Far End Severely Errored Seconds for the DS3 Path
UASP	Unavailable Seconds for the DS3 Path
ALLPAR	Input only, causes a report on all parameters

The following is a more detailed description for each parameter:

The **CVL** parameter keeps a count of Bipolar Violations (BPV) and Excessive Zero (EXC) counts. This count may get quite large. If one assumes an error rate of 1 bit per thousand, then a daily count may get as large as 100 million.

The **ESL** parameter counts the number of seconds that have one or more BPVs, one or more EXZs, or one or more LOS defect. This parameter is limited to the number of seconds in the measurement interval, which is 900 in 15 minutes and 86,400 in 24 hours.

The **SESL** parameter counts the number of seconds that have more than 44 BPVs and EXZs, or one or more LOS defects. This parameter is limited to the number of seconds in the measurement interval.

The **CVP** parameter keeps a count of P-bit parity errors. This count may get quite large. If one assumes an error rate of 1 bit per thousand, then a daily count may get as large as 100 million.

The **FMP** parameters keeps a count of F- and M-bit errors. This count may get quite large. If one assumes an error rate of 1 bit per thousand, then a daily count may get as large as 100 million.

The **ESP** parameter counts the number of seconds containing one or more F- and/or M-bit errors, one or more OOF (Out-of-Frame) defects, or one or more AIS defects. This parameter is limited to the number of seconds in the measurement interval.

The **SESP** parameters counts the number of seconds containing more than 44 F- and M-bit errors, one or more OOF defects, or one or more AIS defects. This parameter is limited to the number of seconds in the measurement interval.

The **FSESP** parameter counts the number of seconds that have a Remote Alarm Indication (RAI), i.e., the X-bits transmitted from the Far-End indicate RAI. This parameter is not counted if the DS3 facility has an LOS or OOF defect. This parameter is limited to the number of seconds in the measurement interval.

The **UASP** parameter counts the number of seconds that the DS3 facility is unavailable. The DS3 is declared unavailable, if the DS3 path experiences 10 consecutive seconds of SESP. The DS3 is also declared unavailable, if the DS3 line experiences 10 consecutive seconds of SESL. This parameter is limited to the number of seconds in the measurement interval.

None of the other parameters accumulate counts if the Hybrid DS3 facility is unavailable.

ALLPAR is an input parameter only. If ALLPAR is specified, all the individual parameter values are reported on. The following restrictions apply if ALLPAR is specified in the input command:

1. The command must specify only a single Hybrid DS3 facility; ranges are not allowed.
2. The MONTIM input parameter may not have a value of ALL.
3. The MONDAT input parameter may not have a value of ALL.
4. The optional LV input parameter must not be present in the command; it defaults to a value of 1-Up and parameter counts of zero are not shown.

LV

Level

IIIIIIII

The discriminating level for the requested parameter

If IIIIIIII is not specified in the input command, it defaults to a value of 1-Up.

If ALLDS3 is specified in the input command, selecting all Hybrid DS3 facilities, a default value of 0-Up is applied. This provides the current counts (zero included) of the specified parameter for all DS3s on the frame.

Keywords LV and ALLDS3 are mutually exclusive.

{000000000-134217728}U Discriminating Level-Up Direction

{000000000-134217728}D Discriminating Level-Down
Direction

Up	Parameters with values equal to or greater than the specified discriminating level are reported.
Down	Parameters with values equal to or less than the specified discriminating level are reported. Before deciding on a discrimination level, the user should consult the possible ranges for an individual parameter, which are noted previously.
AI	Accumulation interval
aaaaa	The accumulation time period for the specified parameter 15MIN Parameter count from a 15-minute accumulator DAILY Parameter count from a daily accumulator
COUNT	Count
cccccccc	The accumulated value of a monitored parameter (nine digits) This parameter is shown as dashes, if the DS3 is not provisioned or has been provisioned on a KCR1 or KCR5 circuit pack. All leading 0s are output. Range of counts for the CVL, CVP, and FMP parameters
{000000000-134217728}	Range of parameters counts Range of counts for ESL, SESL, ESP, SESP, FSESP, and UASP
{000000000-000086400}	Range of parameters counts Range of 15MIN counts for ESL, SESL, ESP, SESP, FSESP, and UASP
{000000000-000000900}	Range of parameters counts
MONDAT	Monitored Date
dddd	Begin date of performance monitoring period This parameter is only allowed if the AI parameter has been specified as DAILY.

The following are the values for MONDAT:

- HIST** Previous 24-hour accumulators
- CURD** Current 24-hour accumulators (default)
- ALL** All daily accumulators (input only)

As an input parameter, this specifies the date of the beginning of the performance monitoring period as MMDD, where MM is the month (01-12) and DD is the day (01-31) of the month.

If MONDAT is a legal option and not present in the command, then it defaults to a value of CURD.

The MONDAT value ALL is an option only for input commands. If the value ALL is selected, all of the daily accumulation registers are retrieved. If MONDAT = ALL is selected, only a single Hybrid DS3 facility can be specified in the input command.

MONTIM

Monitored Time

tttt

Begin time of the performance monitoring period

This parameter is only allowed if the AI parameter has been specified as 15MIN.

The following are the values for MONTIM:

- HIST** Previous 15-minute accumulators
- CURT** Current 15-minute accumulators (default)
- ALL** All 15-minute accumulators (input only)

This parameter specifies the beginning time of day of the requested performance monitoring period as HHMM, where HH is the hour (00-23) and MM is the minute {00,15,30,45} of the hour. If MONTIM is a legal option and not present in the command, it defaults to a value of CURT.

The MONTIM value ALL is an option only for input commands. Selecting the value ALL retrieves all 16 (historical and current) 15-minute accumulation registers for the selected Hybrid DS3s. If MONTIM = ALL is selected, only a single Hybrid DS3 can be specified in the input command.

cc

Hexadecimal condition code

cc	<i>Explanation</i>
04	Subject entity is out of service
11	UC is out of service
12	UC is in service but failed

cc	<i>Explanation</i>
0C	The MONDAT and MONTIM parameters can not both be specified
B7	The associated MXR is In-Service but psted
0E	Only one parameter is allowed
1B	Historical data can not be specified
1D	Level field is not allowed
1E	Monitored Date field is not allowed
20	Only DAILY for accumulation interval is allowed
21	Only 15MIN for accumulation interval is allowed
23	No PM data available
24	Monitored Time field is not allowed
89	Interval is not valid/not available
9E	MONDAT set to ALL is not allowed
9F	MONTIM set to ALL is not allowed

UTILITY QUERY EQUALIZATION, IMPEDANCE

Explanation of Command

1.544 Mbit/s Termination only:

This message requests the equalization values for a facility terminating module interface (FTMI) in a facility terminating unit (FTU).

2.048 Mbit/s Termination only:

This message requests the system to display the network processing circuit impedance values for a facility terminating module interface (FTMI) in a facility terminating unit (FTU).

Command

1.544 Mbit/s Termination

[I.53071]

UTL:[FRM xy][,SEQ ww]:QRY,UNIT [q]q,FTMI b[,EQL]!

2.048 Mbit/s Termination

[I.53071]

UTL:[FRM xy][,SEQ ww]:QRY,UNIT [q]q,FTMI b[,IMP]!

Completion Message

1.544 Mbit/s Termination

[O.53071]

M hh:mm:ss xy,ww n[vv] UTL QRY UNIT [q]q FTMI b EQL l r COMPL

2.048 Mbit/s Termination

[O.53071]

M hh:mm:ss xy,ww n[vv] UTL QRY UNIT [q]q FTMI b IMP zzz COMPL

Denial Message 1.544 Mbit/s Termination

Nonhierarchical

[O.53071.01]

M hh:mm:ss xy,ww n[vv] UTL QRY UNIT [q]q FTMI b EQL COND cc DNY

2.048 Mbit/s Termination

[O.53071.01]

M hh:mm:ss xy,ww n[vv] UTL QRY UNIT [q]q FTMI b IMP COND cc DNY

Explanation of Parameters

UNIT	Unit
[q]q	Unit number (1 through 16)
FTMI	Facility terminating module interface
b	FTMI number (1 through 4)

1.544 Mbit/s Termination :

EQL	Equalization
l	Left half shelf equalization value (first 10 Dual Digroup Circuits)
r	Right half shelf equalization value (second 10 Dual Digroup Circuits)

Enter a dash for an equalization value if that value is not to be changed.

Equalization option values for 255AS/24 gauge cable

<i>r</i>	<i>Explanation</i>
1	000 to 100 feet
2	100 to 200 feet
3	200 to 300 feet
4	300 to 400 feet
5	400 to 500 feet
-	Do not change equalization

Equalization option values for 600 series/22 gauge cable

<i>r</i>	<i>Explanation</i>
1	000 to 050 feet

2	051 to 267 feet
3	268 to 400 feet
4	401 to 533 feet
5	534 to 655 feet
-	Do not change equalization
Equalization option values for 1249/26 gauge cable	
<i>r</i>	<i>Explanation</i>
1	000 to 090 feet
2	090 to 180 feet
3	180 to 270 feet
4	270 to 360 feet
5	360 to 450 feet
-	Do not change equalization

2.048 Mbit/s Termination :

IMP	Impedance
zzz	Optional impedance value
zzz	Explanation
075	CEPT termination with 75-ohm impedance
120	CEPT termination with 120-ohm impedance
cc	Hexadecimal condition code
cc	<i>Explanation</i>
02	Subject entity is not equipped
10	Unit is not equipped

UTILITY QUERY WHO

Explanation of Command

This command displays the unique frame identifier (UFI) of the DACS frame, the software version identifier, and the feature package identification code.

Command

[I.51041]
UTL: [FRM xy][, SEQ ww]:QRY,WHO

Completion Message

[O.51041]
M hh:mm:ss xy,ww n[vv] UTL QRY WHO <uid> 2 LN MSG:
RELEASE DACSIgg POINT pp VERSION r FPKG kkttuuvv COMPL

Explanation of Parameters

Who	Who With reference to the frame "Who are you?"
uid	Unique (frame) identifier (1 to 20 alphanumeric characters) The uid is initialized by GRTH::FRAME. If the uid is not initialized, no characters appear.
VERSN	Version
DACSII	DACSII
gg	DACS II software release number
pp	DACS II software release point number
r	Version number of the release point
FPKG	Feature package
kkttuuvv	Feature package identifier

QUERY CROSS-CONNECT STATUS BUS

Explanation of Command

This command requests a check of the side switch consistency between the hardware entities and the data base. Depending on the result of the cross-connect consistency check, DACS II responds with different outputs as specified in the following sections.

If the entities of a unit are either all consistent or all inconsistent with the data base, a single line output is generated. The field DB s, which indicates the active side recorded in the data base (DB), is always shown, while the keyword UM (Unmatch) is shown only if all entities of the unit are inconsistent with the data base.



NOTE:

For an FTU, IFTU or IFTU2, if some but not all of its dual digroup cards (DDCs) are consistent with the data base, four output message segments are generated. Each segment reports the side status for NPCs in one Facility Terminating Module (FTM). If all NPCs in an FTM have the same status, the segment for the FTM has only one line; otherwise, it is a five-line segment.

When this command is entered, the side selection configuration register on each dual digroup card of the facility terminating units and each multiplexer or hybrid multiplexer of the DS3 units or Hybrid DS3 units or mapper of an HSU is compared with the information stored in the data base. In addition, the configuration register on each clock and control interface (CCI) is also checked against the status of the data base.

This command can be entered to request the status of the whole frame or of a particular unit. If the status of the whole frame is requested, DACS II outputs the result for each unit in ascending order from units 01 through 16. Unequipped units or digital signal processing units are not checked and reported. If the unit number is specified in the input command, then it must not be a DSPU; otherwise the command is denied.

After the unit-related results are reported, DACS II outputs the result for the CCI.

When this command is entered, DACS II compares the side switch status of each circuit pack with the record in the data base. If those two records agree with each other, i.e., the circuit pack and data base are selecting the same side, the entity is marked pass; otherwise, it is marked fail.

If all DDCs/MXR/HMXRs/MPRs of an FTU/DS3U/HDS3U/HSU unit are marked pass, DACS II generates the completion output (O.55181) showing the active side indicated in the data base, that is, showing DB s. If all of them are marked fail, the UM keyword is also shown to indicate that the side selected by the entities does not match the side recorded in the data base.

For a DS3U/HDS3U, if all its MXRs/HMXRs do not have the same marking, output message O.55182 is generated. This message gives the MXR/HMXR number of the MXR(s)/HMXR(s) marked fail. MXR(s)/HMXR(s) that is (are) pested, out-of-service, or marked pass show a dash (-) in place of the MXR/HMXR number.

For an HSU, if all its MPRs do not have the same marking, output message O.55185 is generated. This message gives the MPR number of the MPR(s) marked fail. MPR(s) that is (are) pested, out-of-service, or marked pass show a dash (-) in place of the MPR number.

For an FTU, if all its DDCs do not have the same marking, output message O.55183 is generated. This message gives the NPC number of the NPC(s) marked fail. NPCs that are pested, out-of-service, or marked pass show dashes (-) in place of the NPC number. Since the two NPCs of a DDC always have the same status, the two NPC numbers are either both shown or both represented by dashes. For the CCIs, if the side status for one or both packs does not agree with the data base, the keyword UM is output in the output message O.55184. A pack that has failed is identified by its side number whereas a pack that has passed is identified by a dash (-).

The execution of this command and the output of messages in response to its execution can be aborted by use of the ABT command.

Command

[I.55181]

UTL:[FRM xy][,SEQ ww]:QRY,XCSB[,UNIT [q]q]!

**Completion
Message****Nonhierarchical**

For an FTM with DS1 circuits

[O.55183]

```
M hh:mm:ss xy,ww n[vv] UTL QRY XCSB UNIT [q]q UM BD s NPCS \  
[s]abc-[t]def 5 LN MSG:  
[s]ghi-[t]jkl [s]ghi-[t]jkl [s]ghi-[t]jkl [s]ghi-[t]jkl \  
[s]ghi-[t]jkl  
[s]ghi-[t]jkl [s]ghi-[t]jkl [s]ghi-[t]jkl [s]ghi-[t]jkl \  
[s]ghi-[t]jkl
```

```
[s]ghi-[t]jkl [s]ghi-[t]jkl [s]ghi-[t]jkl [s]ghi-[t]jkl \
[s]ghi-[t]jkl
[s]ghi-[t]jkl [s]ghi-[t]jkl [s]ghi-[t]jkl [s]ghi-[t]jkl \
[s]ghi-[t]jkl {EOM|COMPL}
```

For an FTM with E1 circuits

[O.55183]

```
M hh:mm:ss xy,ww n[vv] UTL QRY XCSB UNIT [q]q UM BD s NPCS \
[s]abc-[t]def 5 LN MSG:
[s]ghi-[t]jkl [s]ghi-[t]jkl [s]ghi-[t]jkl [s]ghi-[t]jkl
[s]ghi-[t]jkl [s]ghi-[t]jkl [s]ghi-[t]jkl [s]ghi-[t]jkl
[s]ghi-[t]jkl [s]ghi-[t]jkl [s]ghi-[t]jkl [s]ghi-[t]jkl
[s]ghi-[t]jkl [s]ghi-[t]jkl [s]ghi-[t]jkl [s]ghi-[t]jkl {EOM|COMPL}
```

[O.55183]

```
M hh:mm:ss xy,ww n[vv] UTL QRY XCSB UNIT [q]q[ UM] DB s \
NPCS [s]abc-[t]def COND kk {EOM|COMPL}
```

Hierarchical

For an FTM with DS1 circuits

[O.55183]

```
M hh:mm:ss xy,ww n[vv] UTL QRY XCSB UNIT [q]q UM DB s NPCS \
uvmnp-uvmqr 5 LN MSG:
uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl
uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl
uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl
uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl \
{EOM|COMPL}
```

For an FTM with E1 circuits

[O.55183]

```
pahh:mm:ss xy,ww n[vv] UTL QRY XCSB UNIT [q]q UM DB s \
NPCS uvmnp-uvmqr 5 LN MSG:
uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl
uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl
uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl
uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl uvmhi-uvmkl {EOM|COMPL}
```

[O.55183]

```
M hh:mm:ss xy,ww n[vv] UTL QRY XCSB UNIT [q]q[ UM] DB s \
NPCS uvmnp-uvmqr COND kk {EOM|COMPL}
```

Common

[O.55181]

M hh:mm:ss xy,ww n[vv] UTL QRY XCSB UNIT [q]q[UM] DB s ALL \
COND kk COMPL

For a DS3U/HDS3U, if some but not all of its MXRs/HMXRs are consistent with the database, the MXR/HMXR number will be shown for the ones that are inconsistent.

[O.55182]

M hh:mm:ss xy,ww n[vv] UTL QRY XCSB UNIT [q]q UM DS s \
MXR a b c d e f g COMPL

For an HSU unit, if some but not all of its MPRs are consistent with the database, the MPR number will be shown for the ones that are inconsistent.

[O.55185]

M hh:mm:ss xy,ww n[vv] UTL QRY XCSB UNIT [q]q UM DS s \
MPR a b c d e f g COMPL

[O.55184]

M hh:mm:ss xy,ww n[vv] UTL QRY XCSB CCI h j[UM] DB s COMPL

Denial Message

[O.55181.01]

M hh:mm:ss xy,ww n[vv] UTL QRY XCSB[UNIT [q]q] COND cc DNY

Explanation of Parameters

XCSB	Cross-Connect Status Bus
UNIT	Unit
[q]q	Unit number (1 through 16)
[s]abc	The 3- or 4-digit nonhierarchical FTU NPC number of the first NPC in an FTM
[t]def	The 3- or 4-digit nonhierarchical FTU NPC number of the last NPC in an FTM
[s]ghi	The 3- or 4-digit nonhierarchical odd FTU NPC number ([s]abc through [t]def)
[t]jkl	The 3- or 4-digit nonhierarchical even FTU NPC number ([t]jkl = [s]ghi + 1)
	For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp	Hierarchical FTU NPC number of the first NPC in an FTM
uvmqr	Hierarchical FTU NPC number of the last NPC in an FTM
uvmhi	Hierarchical odd FTU NPC number (uvmnp through uvmqr)
uvmkl	Hierarchical even FTU NPC number (uvmkl = uvmhi + 1)
uv	Unit number
m	Module number
np,qr,hi,kl	NPC number
	For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."
UM	Unmatched This keyword indicates there are entities selecting a side different from the side recorded in the database.
DB	Database
s	Cross-connect side (0 or 1)
MPR	Mapper
a, ..., g	Mapper status The assignment of MPRs to variables a through g is shown below. a b c d e f g Variable P 1 2 3 4 5 6 MPR identification The MPR identification appears if the MPR has failed. The appearance of a dash (-) in place of a MPR identification indicates that the particular MPR passed.
MXR	Multiplexer or Hybrid Multiplexer
a, ..., g	Multiplexer/Hybrid Multiplexer status The assignment of MXRs/HMXRs to variables a through g is shown below. a b c d e f g Variable P 1 2 3 4 5 6 MXR/HMXR identification The MXR/HMXR identification appears if the MXR/HMXR has failed. The appearance of a dash (-) in place of a MXR/HMXR identification indicates that the particular MXR/HMXR passed.
CCI	Clock and control interface (CEF)
h	CCI 0 status

j CCI 1 status

The assignment of CCIs to variables h and j is shown below.

h j	Variable
0 1	CCI identification

The CCI identification appears if the CCI has failed. The appearance of a dash in place of a CCI identification indicates that the particular CCI passed.

When this command is entered, DACS II will compare the side switch status of each circuit pack with the record in the database. If those two records agree with each other, i.e., the circuit pack and database are selecting the same side, the entity will be marked pass; otherwise, it will be marked fail.

kk Completion condition code (hexadecimal)

To interpret values of kk use the table of cc values below.

cc Hexadecimal condition code

cc	<i>Explanation</i>
05	Subject entity is pested
10	Unit is not equipped
11	UC is out of service
12	UC is in service but failed
14	FTMI is out of service
24	Unit type error
00	No conditions
05	Subject entity is pested
11	UC is out of service
12	UC is in service but failed
13	FTMI is not equipped
14	FTMI is out of service
1F	FTMI is in service but failed

UTILITY, RECOVERY,PASSWORD

Explanation of Command

This command is used to recover the frame administrator password with the password recovery card. Upon successful completion of this command, DACS II will have copied the original frame administrator's password from the password recovery card to the data base in the RAM. To ensure proper security, the administrator should immediately change his or her password using message I.38301. See the Operations and Maintenance manual for procedures.

Command

[I.51081]
UTL:[FRM xy][,SEQ ww]:RCY,PASSWD!

Completion Message

[O.51081]
M hh:mm:ss xy,ww n[vv] UTL RCY PASSWD COMPL

Denial Message

[O.51081.01]
M hh:mm:ss xy,ww n[vv] UTL RCY PASSWD COND cc DNY

Explanation of Parameters

RCY	Recovery
PASSWD	Password
cc	Hexadecimal condition code

cc	Explanation
64	File doesn't exist/can't be accessed
8D	DB PMEM error OP-CL-RD-WR-SK
DD	SMEM is not READ-only
91	Can't mount or unmount SMEM

UTILITY QUERY, ERROR RECOVERY

Explanation of Message

This message reports that an autonomous error recovery action has been taken to an entity. An in-progress message will be output every 20 seconds until the action is completed or denied.

Autonomous Message

[O.55021]

I hh:mm:ss xy,ww UTL RCY <entity> <action> COND cc COMPL

[O.55022]

I hh:mm:ss xy,ww UTL RCY IN PROGRESS

[O.55021.01]

I hh:mm:ss xy,ww UTL RCY <entity> <action> COND cc DNY

Explanation of Parameters

RCY	Internal recovery error
entity	DACS II entity involved
MC	Action on Main Controller
MP	Action on Main Processor
CI	Action on Communication Interface
DISK	Action on DISK unit
TAPE	Action on TAPE unit
UNIT [q]q	Action on specific unit (1 through 16)
FRAME	Frame wide action
action	Action that the error recovery takes to the entity
REMOVE	Remove processor from service
HWBOOT	Hardware boot (boot of processor with existing data base)
WMBOOT	Warm boot (boot of processor with disk data base)
CDBOOT	Cold boot (boot of processor programs and database)

	MCOND	Put frame into maintenance condition
cc	Hexadecimal condition code	
	cc	<i>Explanation</i>
	00	No conditions
	04	Subject entity is out of service
	0B	BOOT on subject entity failed
	46	Failed to boot CONF file
	47	Failed to boot DB
	48	Failed to boot journal--recurrence indicates database corruption
	49	Failed to boot unit
	4C	Failed to boot CI
	51	General boot failure (vanilla flavor)
	18	DSPI not in service, or failed
	4D	MP database not consistent with Configuration file
	52	Database is empty
	3F	G4 to G4.1 retrofit failed
	92	Can't mount or unmount PMEM
	FA	SSC software out of date
	2B	Database corrupt

SCHEDULE DS1 PERFORMANCE MONITORING REPORT

Explanation of Command

This command schedules or cancels previously scheduled reporting of DS1 performance monitoring data. This command results in periodic reporting of performance monitoring data with the REPT::PM message. Periodic performance monitoring reporting can be suspended with the INH::PMREPT command. However, performance data continues to accumulate and can be retrieved by using the UTL::QRY,<parameter> command. The inhibit command (INH::PMREPT) retains the current schedule and reporting can be resumed with the ALW::PMREPT command.

Denial of PM Report Scheduling

The scheduling of a PM report is denied if it is identical to an already existing schedule. Two schedules are said to be identical if all fields match, with the exception of the NUMBER OF INTERVAL and the START TIME fields.

NPC Addressing

This command handles NPC addressing in the input command as follows:

- If only a single NPC is addressed in the input command, and it is of an applicable type, then a completion response is generated. The type of completion response depends on whether any scheduled report exists for that NPC. If the NPC type is not applicable, then DACS II always denies invalid commands to specifically addressed NPCs.
- If a range of NPCs are addressed and the feature applies to one or more NPCs within the range, DACS II performs the command on the NPCs in the range that support the requested feature, but skips the NPCs which do not support the requested feature.

DACS II provides a variety of line termination types which support different features and can be randomly mixed within the frame. If at least one of the NPCs in the addressed range supports the requested feature, DACS II generates a completion response for the overall addressed range; individual denial responses are not generated for NPCs within the range which do not support the feature. If *none* of the NPCs in the addressed range support the requested feature, DACS II generates a range denial response.

Command

Nonhierarchical

[I.51141]

UTL:[FRM xy][,SEQ ww]:SCHED,PMREPT,NPC [s]abc[-[t]def], \
RI rrrrr,ST ssss,NI nn,<parameter>,LV llllllllll, \
LOCN locn,AI aaaaa,TOF ttttt[-ooooo][,LK p[vv][q[vv]]]!

Hierarchical

[I.51141]

UTL:[FRM xy][,SEQ ww]:SCHED,PMREPT,NPC uvmnp[-wxkqr], \
RI rrrrr,ST ssss,NI nn,<parameter>,LV llllllllll, \
LOCN locn,AI aaaaa,TOF ttttt[-ooooo][,LK p[vv][q[vv]]]!

**Completion
Message**

Nonhierarchical

[O.51141]

M hh:mm:ss xy,ww n[vv] UTL SCHED PMREPT NPC [s]abc[-[t]def] \
3 LN MSG:
RI rrrrr ST ssss NI nn <parameter> LV llllllllll LOCN locn AI aaaaa
TOF ttttt[-ooooo][LK p[vv][q[vv]]] COMPL

Hierarchical

[O.51141]

M hh:mm:ss xy,ww n[vv] UTL SCHED PMREPT NPC uvmnp[-wxkqr] 3 LN MSG:
RI rrrrr ST ssss NI nn <parameter> LV llllllllll LOCN locn AI aaaaa
TOF ttttt[-ooooo][LK p[vv][q[vv]]] COMPL

Denial Message

Nonhierarchical

[O.51141.01]

M hh:mm:ss xy,ww n[vv] UTL SCHED PMREPT NPC [s]abc[-[t]def] \
3 LN MSG:
RI rrrrr ST ssss NI nn <parameter> LV llllllllll LOCN locn AI aaaaa
TOF ttttt[-ooooo][LK p[vv][q[vv]]] COND cc DNY

Hierarchical

[O.51141.01]

M hh:mm:ss xy,ww n[vv] UTL SCHED PMREPT NPC uvmnp[-wxkqr] 3 LN MSG:
RI rrrrr ST ssss NI nn <parameter> LV llllllllll LOCN locn AI aaaaa
TOF ttttt[-ooooo][LK p[vv][q[vv]]] COND cc DNY

Explanation of Parameters

NPC Network processing circuit
[s]abc The 3- or 4-digit nonhierarchical starting NPC number
[t]def The 3- or 4-digit nonhierarchical ending NPC number
For a listing of the nonhierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

uvmnp Hierarchical starting NPC number

wxkqr Hierarchical ending NPC number

uv,wx Unit number

m,k Module number

np,qr NPC number within the module

For a listing of the hierarchical numbering scheme, refer to Chapter 2, "NPC Numbering and XYZ Parameters."

RI Report interval

rrrrr The interval between performance monitoring reports

{0001-1440}M	Report interval in minutes
{0001-0024}H	Report interval in hours
{0001-0007}D	Report interval in days

ST Start time

ssss The starting time for the performance monitoring reporting schedule.

If the value entered for the starting time is less than (previous to) the current time of day on the DACS II clock, the performance monitoring reports are be scheduled to begin tomorrow.

{00-23}{00-59}	Hour of day/Minute of Hour Format

CURT Current time of day

NI	Number of intervals				
nn	The number of intervals over which performance monitoring is reported. If this parameter is CT, the performance monitoring schedule remains in effect until the schedule is canceled. A value of zero cancels any performance monitor reporting that was previously scheduled. 00 Cancel a previously scheduled report {01-96} Finite number of scheduled reports CT Continuous reports until canceled				
parameter	The parameter for which reporting is being scheduled. CVP Path Coding Violations CVL Line Coding Violations ESP Path Errored Seconds ESL Line Errored Seconds SESP Path Severely Errored Seconds SESL Line Severely Errored Seconds SEFS Path Severely Errored Framing Seconds CSSP Path Controlled Slip Seconds UASP Path Unavailable Seconds ALLPAR All listed parameters Note that all listed parameters are valid near-end parameters. All listed parameters except line coding violations (CVL) and line severely errored seconds (SESL) are valid far-end parameters.				
LV	Level				
IIIIIIII	The discriminating level for the requested parameter. This parameter is used to restrict reported output to include only values which are above/below a defined level. <table border="1"> <tr> <td>{000000000-134217728}U</td><td>Discriminating Level-Up Direction</td></tr> <tr> <td>{000000000-134217728}D</td><td>Discriminating Level-Down Direction</td></tr> </table>	{000000000-134217728}U	Discriminating Level-Up Direction	{000000000-134217728}D	Discriminating Level-Down Direction
{000000000-134217728}U	Discriminating Level-Up Direction				
{000000000-134217728}D	Discriminating Level-Down Direction				
Up	Parameters with values equal to or greater than the discriminating level specified are reported.				
Down	Parameters with values equal to or less than the discriminating level specified are reported.				

LOCN Location
locn The location being performance monitored.
NEND Near-end
FEND Far-end
AI Accumulation interval
aaaaa The accumulation time period for the specified parameter.
15MIN Parameter count from a 15-minute accumulator
DAILY Parameter count from a daily accumulator
TOF Time offset
ttttt The age of the requested data registers(s) at the reporting time, measured backwards in time from the end of last completed accumulation interval to the beginning of the requested interval.
ooooo If the report interval is an integral number of accumulation intervals, this parameter may be entered as a range to specify up to four historical data registers.

{0-7}{00-23}{00,15,30,45,60}

Day/Hour/Minute

If the value 7 is given for day, then Hour and Minute must be zero.

To produce reports that contain historical data of completed accumulation intervals, the scheduled report times (set up with start time and report interval) usually coincide with the end of accumulation intervals, and the time offset must be an integral number of accumulation intervals.

A time offset value of 00000 or any value less than the accumulation interval produces a report that contains data from the current register.

The following examples illustrate the use of time offset.

Given start time = 1205

report interval = 0001H

number of intervals = 03

accumulation interval = 15MIN

time offset = 00015-00060

The first report is generated at 12:05. Each hourly report contains the four most recent 15 minute totals of the monitored parameter. The most recent accumulation interval contains data for the period beginning 15 minutes before (time offset = 00015)

the most recently completed accumulation period (12 noon). That is, the accumulation interval had a beginning time of 11:45 am, and covered between 11:45 AM and 12 noon. The range of time offsets also provides 15 minute totals from the three previous quarter hours in the report. There are a total of three reports, one hour apart. The last report occurs at 2:05.

As a second example:

Given start time = 0015

report interval = 0015M

number of intervals = 96

accumulation interval = DAILY

time offset = 00000

The first report is generated fifteen minutes after midnight. Since the time offset is 00000, the contents of the current daily accumulator are contained in the report. The data in the first report is the total accumulation over the first 15 minutes of the day. The second report is generated 15 minutes later at 12:30 AM. The second report contains the accumulation total over the first 30 minutes of the day. Subsequent reports provide the daily accumulation total, sampled every 15 minutes throughout the day. A total of 96 reports are generated, the last one occurring at midnight.

LK

Link

p[vv],q[vv]

Up to two administrative links to which the scheduled report output q[vv] will be transmitted. These parameters take the form of a physical administrative link number followed by a virtual circuit number, if applicable. The user may omit these optional parameters, specify a single link, or specify two links which will both receive all output generated by this scheduled report. If these optional parameters are omitted, the scheduled report output will by default be transmitted only to the link that the schedule command was received on. At the time of report, no PM report shall be sent to a link if it is out of service, or has screening option 1 and the schedule command was not received on that link.

cc

Hexadecimal condition code

cc	<i>Explanation</i>
15	NPC is unequipped
26	NPC type error
A1	The parameter specified does not match with the NPC type
0F	Frame time is not set
12	First and Last NPCs are outside unit boundary
13	First and Last NPCs are outside a module boundary
14	OFFSET range is invalid
16	Only up to 4 historical data registers are allowed
17	Command did not execute for any entity specified in the command
18	Exceeded limit of reports with accum. interval of 15 min. or less
19	Exceeded maximum limit of PM reports
1A	Report already exists
28	Scheduling report could not be found
88	Report interval is not an integral number of accumulation interval

SET DAILY FACILITY ALARM REPORTING TIME

Explanation of Command

This command is used for the following purposes:

- To set the DACS II System clock
- To set the time for the daily facility alarms report.
- To set the parameters to be reported in the daily facility alarms report.

SETTING THE DACS II SYSTEM CLOCK

To set the DACS II System clock, specify only the time to which the clock is to be set (TOD).

SETTING THE TIME FOR THE DAILY FACILITY ALARMS REPORT

The facility alarms report is output daily at the default time of midnight. To output the report at a different time the user must redefine midnight. This redefined midnight is sometimes referred to as "local midnight". The "local midnight" is set by jointly specifying the time of day and the parameters to be reported. Once a "local midnight" has been set, the facility alarms report is output daily at the new "midnight".

A "local midnight" can be set for a gateway frame by specifying

TOD hrminsc and either CFA or FAC X'abcdef

or

TOD hrminsc and either CFA or PRIM X'ghij.

A "local midnight" can be set for a gateway frame by specifying

TOD hr-mn-sc and either CFA or FAC X'abcdef

or

TOD hr-mn-sc and either CFA or PRIM X'ghij.

SETTING THE PARAMETERS TO BE REPORTED

1.544 Mbit/s Termination only:

The parameters are set by use of the FAC keyword using the appropriate value of abcdef from the tables below.

The parameters are set by use of the PRIM keyword using the appropriate value of ghij from the tables below.

Gateway offices require using either both or neither of the FAC and PRIM keywords since the domestic and international sides of the machine must be treated separately.

There are six common parameters. When any of the common parameters are selected, they should be enabled in both abcdef and ghij. These common parameters are listed below.

CGA or PBA
SLIP or CSS
ERS or ES
SERS or SES
CRC
FRER



NOTE:

There are two sets of ghij values; one for NPCs provisioned as PA/TH type NPCs and the other for NPCs provisioned as PB or PC type NPCs.

To disable all reports, specify zeros for each digit in the variable abcdef.

To disable all reports, specify zeros for each digit in the variable ghij.

The CGA alarms report defaults to midnight if this command is not used to alter the report time or parameters.

The PBA alarms report defaults to midnight if this command is not used to alter the report time or parameters.

Command

1.544 Mbit/s Termination

[I.51011]

UTL:[FRM xy][,SEQ ww]:[TOD hrnsc][,{CFA|FAC X'abcdef| \\
PRIM X'ghij|MONDAT}]!

2.048 Mbit/s Termination

[I.51011]

UTL:[FRM xy][,SEQ ww]:[TOD hrmnsc][,{CFA|PRIM X'ghij|MONDAT}]!

Completion Message

1.544 Mbit/s Termination

[O.51011]

M hh:mm:ss xy,ww n[vv] UTL[TOD[MDNT] hrmnsc] \
[{CFA|FAC abcdef|PRIM ghij|MONDAT}] COMPL

2.048 Mbit/s Termination

[O.51011]

M hh:mm:ss xy,ww n[vv] UTL[TOD[MDNT] hrmnsc] \
[{CFA|PRIM ghij|MONDAT}] COMPL

Denial Message

1.544 Mbit/s Termination

[O.51011.01]

M hh:mm:ss xy,ww n[vv] UTL[TOD[MDNT] hrmnsc \
[{CFA|FAC abcdef|PRIM ghij|MONDAT}] COND cc DNY

2.048 Mbit/s Termination

[O.51011.01]

M hh:mm:ss xy,ww n[vv] UTL[TOD[MDNT] hrmnsc \
[{CFA|PRIM ghij|MONDAT}] COND cc DNY

Explanation of Parameters

TOD	Time of day
hrmnsc	Time specification
hr	hours (00 through 23)
mn	minutes (00 through 59)
sc	seconds (00 through 59)

When the time of day is used with the MONDAT keyword mn and sc are restricted to certain values listed in the explanation of MONDAT.

MONDAT

Daily Monitor Starting Time

When the MONDAT keyword is entered, "hrmns" is used to specify the starting time for the daily accumulation interval for PA/TH type NPCs. In this case, "mn" is limited to 00, 15, 30 or 45, and "sc" is limited to 00. The default daily monitor starting time is midnight. At the daily monitor starting time DACS II reports the facility alarms and the counts for all selected daily parameters for the daily interval just ended and clears all current counts and threshold crossing alarms to start a new daily interval. The report time specified with the MONDAT keyword is not applicable to other NPC types. Likewise, the midnight report time entered without the MONDAT keyword is not applicable to PA/TH type NPCs.

.MDNT

Midnight

This keyword is output to indicate that midnight, the default time to output facility alarm reports, has been reset to be the time indicated by TOD hrmns.



NOTE:

If the MONDAT keyword is entered, the MDNT keyword is not output.

CFA

Carrier failure alarm

This keyword, when specified with the time of day field, indicates that the daily facility report time rather than the system time of day is being reprogrammed. The daily facility report is output at the specified time, which defaults to midnight. See below the complete description of facility monitoring alarms that may be included in the daily facility report.

FAC

Facility

Request that the reporting of alarms specified by abcdef be enabled. This causes only a subset of the daily facility report to be output.

abcdef

Facility performance alarm reports enable (hexadecimal)

This variable represents a six-digit hexadecimal number. Each hexadecimal digit represents 4 bits and each bit corresponds to a particular facility parameter. To enable alarm reports for a facility parameter, the bit corresponding to that parameter is set to 1 using the tables below. To disable the alarm report the bit is set to 0.



NOTE:

In a gateway office, the FAC parameter cannot be used alone, but must be used with the international parameter PRIM.

The following tables should be used to set or interpret the hexadecimal values of digit identifiers a through f.

a Digit identifier (Unassigned)

b Digit identifier

Facility parameter alarm report enabled

F DS3 ALM, SAFE, SANE

E DS3 ALM, SAFE

D DS3 ALM, SANE

C DS3 ALM

B SAFE, SANE

A SAFE

9 SANE

8 Not assigned

7 DS3 ALM, SAFE, SANE

6 DS3 ALM, SAFE

5 DS3 ALM, SANE

4 DS3 ALM

3 SAFE, SANE

2 SAFE

1 SANE

0 DS3 ALM, SAFE, SANE alarm reports disabled

DS3 ALM = DS3 or Hybrid DS3 alarm

SAFE = Shelf alarm far end

SANE = Shelf alarm near end

c Digit identifier (Unassigned)

d Digit identifier

Facility parameter alarm report enabled

F FRER, BPV

E FRER

D	BPV
C	Not assigned
B	FRER, BPV
A	FRER
9	BPV
8	Not assigned
7	FRER, BPV
6	FRER
5	BPV
4	Not assigned
3	FRER, BPV
2	FRER
1	BPV
0	FRER, BPV alarm reports disabled
	FRER = Frame errors
	BPV = Bipolar violations

e

Digit identifier

Facility parameter alarm report enabled

F	CRC, COFA, SERS, ERS
E	CRC, COFA, SERS
D	CRC, COFA, ERS
C	CRC, COFA
B	CRC, SERS, ERS
A	CRC, SERS
9	CRC, ERS
8	CRC
7	COFA, SERS, ERS
6	COFA, SERS
5	COFA, ERS
4	COFA
3	SERS, ERS
2	SERS

	1	ERS
	0	CRC, COFA, SERS, ERS alarm reports disabled
		CRC = Cyclic redundancy code
		COFA = Change of frame alignment
		SERS = Severely errored seconds
		ERS = Errored seconds
f		Digit identifier
		Facility parameter alarm report enabled
	F	BER, SLIP, OOF, CGA, LOS
	E	BER, SLIP, OOF
	D	BER, SLIP, CGA, LOS
	C	BER, SLIP
	B	BER, OOF, CGA, LOS
	A	BER, OOF
	9	BER, CGA, LOS
	8	BER
	7	SLIP, OOF, CGA, LOS
	6	SLIP, OOF
	5	SLIP, CGA, LOS
	4	SLIP
	3	OOF, CGA, LOS
	2	OOF
	1	CGA, LOS
	0	BER, SLIP, OOF, CGA, LOS alarm reports disabled
		BER = Bit error rate
		SLIP = Slip
		OOF= Out of frame
		CGA = Carrier group alarm
		LOS = Loss of signal

Some examples of the available choices for X'abcdef are shown below:

X'00000A	BER and OOF alarm reporting enabled

X'000000	alarm reports disabled for all parameters
X'000001	CGA and LOS alarm reporting enabled
X'0C0511	DS3, BPV, ERS, CGA, and LOS alarm reporting enabled

PRIM Primary

Request that reporting of alarms specified by ghij be enabled. This causes only a subset of the daily facility report to be output.

ghij

Primary Alarm or Parameter-count reports enable (hexadecimal)

This variable is a four-digit hexadecimal number. To enable alarm or parameter-count reports for a particular facility parameter, set the appropriate bit of ghij to 1. A bit set to 0 disables the alarm report for the particular parameter.

There are two sets of parameters for ghij:

5. PA/TH NPC parameters
6. PB or PC NPC parameters



NOTE:

In a gateway office, the PRIM parameter cannot be used alone, but must be used with the domestic parameter FAC.

PA/TH NPC parameters

The following tables should be used to set or interpret the hexadecimal values of digit identifiers g through j.

g	Digit identifier
	Facility parameter alarm report enabled
F	FEBE, FES, FSES, FUAS
E	FEBE, FES, FSES
D	FEBE, FES, FUAS
C	FEBE, FES
B	FEBE, FSES, FUAS
A	FEBE, FSES
9	FEBE, FUAS
8	FEBE

7	FES, FSES, FUAS
6	FES, FSES
5	FES, FUAS
4	FES
3	FSES, FUAS
2	FSES
1	FUAS
0	FEBE, FES, FSES, FUAS alarm reports disabled

FEBE = Far end block error
FES = Far end errored seconds
FSES = Far end severely errored seconds
FUAS = Far end unavailable seconds



NOTE:
Parameters FEBE, FES, FSES and FUAS are not applicable for the TH type NPCs.

h	Digit identifier
	Facility parameter alarm report enabled
F	UATC, BER, FRER, MER
E	UATC, BER, FRER
D	UATC, BER, MER
C	UATC, BER
B	UATC, FRER, MER
A	UATC, FRER
9	UATC, MER
8	UATC
7	BER, FRER, MER
6	BER, FRER
5	BER, MER
4	BER
3	FRER, MER
2	FRER
1	MER

	0	UATC, BER, FRER, MER alarm reports disabled UATC = Unavailable time count BER = Minor bit error rate; for NPCs with MBER feature FRER = Framing errors MER = Multiframe errors
i		Digit identifier Facility parameter alarm report enabled
	F	CRC, CV, SES, ES
	E	CRC, CV, SES
	D	CRC, CV, ES
	C	CRC, CV
	B	CRC, SES, ES
	A	CRC, SES
	9	CRC, ES
	8	CRC
	7	CV, SES, ES
	6	CV, SES
	5	CV, ES
	4	CV
	3	SES, ES
	2	SES
	1	ES
	0	CV, SES, ES alarm reports disabled CRC = CRC4 check block errors CV = Degraded minutes SES = Severely errored seconds ES = Errored seconds
j		Digit identifier Facility parameter alarm report enabled
	F	UAS, CSS, OFS, PBA
	E	UAS, CSS, OFS
	D	UAS, CSS, PBA
	C	UAS, CSS

B	UAS, OFS, PBA
A	UAS, OFS
9	UAS, PBA
8	UAS
7	CSS, OFS, PBA
6	CSS, OFS
5	CSS, PBA
4	CSS
3	OFS, PBA
2	OFS
1	PBA
0	UAS, CSS, OFS, PBA alarm reports disabled

UAS = Unavailable seconds
CSS = Controlled slip seconds
OFS = Out-of-frame seconds
PBA = Primary block alarms; default



NOTE:
Enter 0 for an unassigned digit identifier

The following tables should be used to set or interpret the hexadecimal values of digit identifiers g through j.

PB or PC NPC parameters

The following tables should be used to set or interpret the hexadecimal values of digit identifiers g through j.

g Digit identifier (unassigned)

h Digit identifier

Facility parameter alarm report enabled

F	BER, FRER, MER
E	BER, FRER
D	BER, MER
C	BER
B	FRER, MER
A	FRER

9	MER
8	unassigned
7	BER, FRER, MER
6	BER, FRER
5	BER, MER
4	BER
3	FRER, MER
2	FRER
1	MER
0	BER, FRER, MER alarm reports disabled
	BER = Bit error rate
	FRER = Frame errors
	MER = Multiframe alignment errors

i

Digit identifier

Facility parameter alarm report enabled

F	CRC, DM, SERS, ERS
E	CRC, DM, SERS
D	CRC, DM, ERS
C	CRC, DM
B	CRC, SERS, ERS
A	CRC, SERS
9	CRC, ERS
8	CRC
7	DM, SERS, ERS
6	DM, SERS
5	DM, ERS
4	DM
3	SERS, ERS
2	SERS
1	ERS
0	CRC, DM, SERS, ERS alarm reports disabled
	CRC = Cyclic redundancy code
	DM = Degraded minutes

SERS = Severely errored seconds
ERS = Errored seconds

j

Digit identifier

Facility parameter alarm report enabled

F	US, SLIP, LOFA, PBA
E	US, SLIP, LOFA
D	US, SLIP, PBA
C	US, SLIP
B	US, LOFA, PBA
A	US, LOFA
9	US, PBA
8	US
7	SLIP, LOFA, PBA
6	SLIP, LOFA
5	SLIP, PBA
4	SLIP
3	LOFA, PBA
2	LOFA
1	PBA
0	US, SLIP, LOFA, PBA alarm reports disabled

US = Unavailable seconds
SLIP = Slip
LOFA = Loss of frame alignment
PBA = Primary block alarms

ccHexadecimal condition code^

cc	<i>Explanation</i>
E0	Bad FAC value entered
04	MONDAT keyword is invalid for this feature
48	Bad PRIM X'efgh values
49	FAC keyword is invalid for this feature
4A	PRIM keyword is invalid for this feature

cc	<i>Explanation</i>
4B	The common bit(s) is(are) not set in both FAC & PRIM
4C	Both FAC and PRIM values(keywords) are required
D5	Boot in progress, can't service request

UPGRADE FRAME

Explanation of Command

This message performs a database upgrade from Release 6.1 to Release 7.0. The database, MACRO and MAP files from the old Secondary Storage Subsystem (SSS) tape will be transferred onto the SMEM card inserted in the SMEM slot on CPU2.

In order for the automated upgrade procedure to successfully complete, the Main Controller (MC) must be in maintenance condition. In addition, the Secondary Storage Controller (SSC) circuit pack must be physically inserted in the slot and the tape drive must be accessible from the MC circuit pack. Initially, the command will power-up the old SSS tape drive and at completion, the SMEM card will contain the Release 6.1 database converted to Release 7.0 form.

Command

[I.55731]
UTL: [FRM xy,SEQ ww]:UPGRD!

Completion Message

[O.55731]
M hh:mm:ss xy,ww n[vv] UTL UPGRD COMPL

Denial Message

[O.55731.01]
M hh:mm:ss xy,ww n[vv] UTL UPGRD COND cc DNY

Explanation of Parameters

UPGRD	Upgrade
cc	Hexadecimal condition code

cc	<i>Explanation</i>
07	Device failed to initialize
0A	DGN on subject entity failed
84	Problem occurred while accessing SMEM or unformatted SMEM
87	Old_tape is a special install tape
91	Can't mount or unmount SMEM
F0	SSC Diagnostic Failure
F5	Flash Card is not present
F7	Can't mount or unmount old_tape
FA	Bad old_tape DB generic
FB	Old_tape with journal
FD	Problem occurred while accessing old_tape
FE	Fail transfer DB from old_tape to SMEM
01	FPI on old_tape does not match one on SMEM

Glossary

A

ABT

Abort.

ACO

Alarm Cutoff.

Active

For duplicated entities, the entity is providing service rather than operating in hot standby.

AI

Alarm Interface.

AIS

Alarm Indication Signal (also known as all 1s signal).

Alarm Delay

The alarm delay (in seconds) for software-detected alarm conditions. Initial value is 20 seconds.

Alarm Indication Signal (AIS)

A signal transmitted downstream to indicate that network transmission line failures were detected upstream.

All Ones Signal

Another name for DS1 Alarm Indication Signal (AIS). It is defined to contain all ones in the terminal-to-terminal mode.

ALM

Alarm.

Alphanumeric Characters

Letters and digits.

Alternate Mark Inversion (AMI)

A DS1 line code in which alternate one bits are positive and negative, but zero substitution is not used.

AMI

Alternate Mark Inversion.

ANSI

American National Standards Institute.

AS&C

Alarm Surveillance and Control.

ASCII Character

Letters, digits, and symbols used in the American Standard Code for Information Interchange.

ATAG

Autonomous Message Tag.

ATP

All Tests Passed.

Attribute

Alarm indication level: major, minor, or no alarm.

AUD

Audit.

Autolock

When the system autolocks an entity, it switches to protection and forbids return to the working entity even if the trouble clears. This is usually caused by multiple protection switches on that entity in a short time period.

Autolock Number of Switches

This parameter is the number of times that the system restores an entity to service (after intermittent failures) in a given autolock switching interval before the entity is autolocked.

Autolock Release Time

The number of hours between times when the system automatically releases autolock.

Autolock Switching Interval

An interval in minutes (see Autolock Number of Switches).

Autonomous

Done automatically by the system without any manual intervention from the user.

Autoprovisioned

Put in the provisioned state automatically by the system.

B**B3ZS**

Bipolar with 3-zero substitution, a DS3 line code.

B8ZS

Bipolar Eight Zero Substitution.

Baud Rate

Transmission data rate (bits per second) on an administrative link.

BBL

Backbone Leg.

BC

Bus Controller.

BCON

Broadcast Cross-Connect.

BDIS

Broadcast Disconnect.

BER

Bit Error Rate.

BER Metric

Specifies the metric for calculating bit error rate at a DS3 interface port. Options are bipolar variations (BPV) or parity (PTY). (Initial value is BPV).

BERT

Bit Error Ratio Tester.

Bipolar Violation

A violation of the alternating +1, -1 pattern in a 3-level code.

Bit Error Rate Threshold

3 stands for 0.001, 6 stands for 0.000001.

Blue Code

Same as AIS.

BMTR

Back-up Memory Transfer.

Boot

To transfer contents of a Memory Card into the system's working memory and system hardware. The contents of a Memory Card can include both system software and database.

BOS

Bit Oriented Signaling.

BPV

Bipolar Violation.

BRD

Broadcast Leg.

Broadcast

Form a bridge connection.

BSRF

Basic Synchronization Reference Facility.

BT

Bus Terminator.

BX

Bus Extender.

Byte

Usually refers to a group of eight consecutive binary digits, but sometimes used for bit groups of other sizes.

C**CAS**

Channel Associated Signaling.

CATP

Conditional All Tests Passed.

C-Bit

A DS3 line code in which parity checks on blocks of data are used to detect bits in error.

CCB

Cross-Connect Buffer.

CCI

Clock and Control Interface.

CCIS

Common Channel Interoffice Signaling.

CCITT

International Telephone and Telegraph Consultative Committee.

CCN

Cross-Connect Network.

CCNI

Cross-Connect Network Interface.

CEF

Capacity Expansion Frame.

CFA

Carrier Failure Alarm.

CFR	Synchronizer Configuration.
CGA	Carrier Group Alarm.
CHG	Change.
CI	Communications Interface.
CIU	Craft Interface Unit.
Clear (CL)	An alarm condition no longer exists.
CLF	Carrier Line Failure.
CMAP	Channel Map.
COFA	Change-Of-Frame-Alignment.
Condition	The type of alarm indication.
CP	Circuit Pack.
CPR	C-Bit Processor.
CPU	Central Processing Unit.
CR	Critical Alarm
CRC	Cyclic Redundancy Checking.
CRO	Clock Reference Oscillator.
Cross-Connect	A piece of hardware used to interconnect line-terminating equipment, multiplexers, and other equipment.

Cross-Connection

An interconnection between two specified NPC channels.

Crosstalk

A signal induced into one transmission line from another transmission line.

CRT

Cathode Ray Tube.

CSS

Controlled Slip Seconds.

CTAG

Correlation Tag.

Current Value

In the dialog mode, it indicates that the current value of a parameter is used by the system unless you direct otherwise.

CV

Coding Violations.

CVL

Coding Violations - Line.

CVP

Coding Violations - Path.

D**DACS**

Digital Access and Cross-Connect System.

Database

A record of the system configuration and status. It contains cross-connections, status of entities and transmission lines, performance monitoring threshold values and collected data.

DATS

Digital Access Test Set.

DC

Digroup Circuit or Direct Current.

DCC

Disconnect Code.

DCLU

Digital Carrier Line Unit.

DDC

Dual Digroup Circuit.

DDS

Digital Data System.

Default

A value the system automatically uses for a parameter if you do not specify a value.

Delimiter

A colon, comma, or space used to separate two parameters in a command or message.

Demultiplexer

A device used with a multiplexed signal for recovering signals contained within it and restoring the distinct individual channels of these signals.

DFB

Dual Fuse Board.

Diagnose

Test an entity.

DIF

DACS Interface Module.

DL

Data Link.

DLC

Digital Loop Carrier.

DM

Dual Multiplexer.

DMA

Deferred Maintenance Alarm.

DMAP

Digroup Map.

DMB

Digital Multipoint Bridge.

DMI

Digital Multiplex Interface.

DMM

Digital Multimeter.

DND

DACS II Network Director.

DOTS

Digital Office Timing Supply.

DPC

Dual Primary Circuit.

DPLL

Digital-Phase Locked Loop.

Driven

A driven port is being monitored, and a good signal is expected.

DS0

Digital Signal Level 0 (64-kb/s).

DS1

Digital Signal Level 1 (1.544-Mb/s).

DS1 Data Rate

The DS1 Data Rate is calculated as follows: $DS1 = (24 \text{ Channels} \times 8 \text{ bit/sample} + 1 \text{ frame bit}) \times 8000 \text{ samples/sec}$
 $DS1 = 193 \times 8000 = 1.544 \text{ Mb/s}$.

DS1 Port

A DS1 port in either a DS1 interface module or a DS3 interface module.

DS3

Digital Signal Level 3.

DS3U

DS3 Unit.

DSL

Digital Subscriber Line.

DSP

Digital Signal Processor.

DSPC

Digital Signal Processor Circuit.

DSPI

Digital Signal Processor Interface.

DSPU

Digital Signal Processor Unit.

DSU

Data Service Unit.

DSX

Digital Signal Cross-Connect.

DTAC

Digital Test Access Connector.

Duplex Entity

A pair of entities in which one is active and the other is in hot standby (clock generators).

Duplicated Entity

A pair of entities in which one is active and the other is in hot standby (for example, the Synchronizer Cross-Connect (SXC) circuit packs).

E**E1 Data Rate**

The E1 Data Rate is calculated as follows:

$E1 = (32 \text{ Channels} \times 8 \text{ bit/sample}) \times 8000 \text{ samples/sec}$

$E1 = 256 \times 8000 = 2.048 \text{ Mb/s}$

With this data rate, 30 channels carry traffic and two channels are reserved; one channel contains framing information and the other channel contains signaling information.

E2A

Type of Alarm Telemetry.

EBX

Expanded Bus Extender.

ECCN

Expanded Cross-Connect Network.

Echo

Display of keystrokes entered from a terminal (passwords are not echoed).

ECI

Enhanced Communications Interface.

EDDC

Enhanced Dual Digroup Circuit.

EDPC

Enhanced Dual Primary Circuit.

EER

Excessive Error Rate.

EFC

Extended Frame Controller.

EIA	Electronic Industries Association.
EID	Entity Identification.
EMC	Electromagnetic Compatibility.
EMIU	Expanded Multiple Interface Unit.
EMS	Element Management System.
EMTC	Expanded Maintenance Circuit.
Enter	Provision an entity by a command, not automatically by the system.
Entity	A specific piece of hardware (such as the Main Controller (MC) or Network Processing Circuit (NPC)) that has been assigned a name and is recognized by the system.
Entity Identifier	The name used by the system to refer to an entity.
Equalizer	A circuit adjustment used to maintain signal strength between desired limits.
Equipped	The entity is entered in the system database via a user provisioning command.
ER	Error Rate.
ERS	Errored Seconds.
ES	Errored Seconds.
ESD	Electrostatic Discharge.
ESF	Extended Superframe.
ESL	Errored Seconds for the DS3 Line.

ESP

Errored Seconds for the DS3 Path.

ESR

Error Source Register or Errored Seconds Ratio.

ESR1

Error Source Register 1.

ESR2

Error Source Register 2.

Ethernet

A local area network (LAN) technology that transmits information between computers at speeds of 10 to 100 Mbps.

ETSI

European Telecommunication Standardization Institute.

EXZ

Excessive Zeroes.

F**FAL**

Fuse Alarm Lamp.

FAS

Frame Alignment Signal.

FAW

Frame Alignment Word.

FC

Format Converter.

FDL

Facility Data Link.

Fe

Extended Superframe Format.

FEBE

Far-End Block Error.

FELP

Far End Loopback.

FES

Far-End Errored Seconds.

FLI

Far End Loss of CRC-4 Frame Alignment

FLI

Facility-Line Interface.

FMAC

Facility Maintenance and Administration Center.

FMP

F- and M-bit framing errors - Path.

FMT

Formatter.

Forced

A traffic-carrying entity (either service or protection) has been deliberately locked into a service providing state by manual command despite being bad.

FPA

Feature Package A.

FPB

Feature Package B.

FPC

Feature Package C.

FRADT

Frame Audit.

FRER

Framing Bit Error.

Fs

Fx Framing Format.

FSES

Far-End Severely Errored Seconds.

FSESP

Far-End Severely Errored Seconds - Path.

FTM

Facility Terminating Module.

FTU

Facility Terminating Unit.

FUAS

Far-End Unavailable Seconds.

FW

Framing Word.

G**Grooming**

Rearrangement of DS1 signals in DS3 signals.

GUI

Graphical User Interface.

H**HDB3**

High Density Bipolar 3 Zero Substitution.

HDS3U

Hybrid DS3 Unit.

Header

The first line of a message.

Header Date

Specifies the current date as YYMMDD, where YY is the last two digits of the year, MM is the month, and DD is the day of the month.

Header Time

Specifies the current time of day as HHMMSS, where HH is the hour (00 to 23), MM is the minutes, and SS is the seconds.

HECI

High-Speed Enhanced Communications Interface.

HFMT

Hybrid Formatter.

Hierarchy

An orderly ranking or sequence of elements, such as that of menus presented at a terminal.

Hit

A disruption of service that lasts for less than 1 second. See Outage.

HMXR

Hybrid Multiplexer.

Hot Standby

An entity ready for fast, automatic placement into operation to replace an active entity.

HUBID

Hub Identifier.

I**ICI**

Intelligent Communication Interface circuit pack (TM 782).

IDLD

Idled.

Idle

An output port is idle if it is not cross-connected to an input port.

Idle Channel

A channel on an NPC that has not been cross-connected.

IEEE

Institute of Electrical and Electronics Engineers.

IFTU

Integrated Facility Terminating Unit.

IITL

Interface Information Transfer Letter.

In Service

The entity is performing normal service functions, either active or standby.

IP

Internet Protocol, used to route data to its appropriate destination.

IS

See In-Service.

ITS

Integrated Test Set.

ITU-TSS

International Telecommunication Union-Telecommunication Standardization Sector.

J**Jitter**

Short term variations in the phase of a digital signal.

K**kb/s or kbit/s**

Kilobit Per Second.

kHz

Kilohertz.

L**LAN**

Local Area Network.

LBO

Line Build-Out.

LCMA

Loss of CRC-4 Multiframe Alignment.

LED

Light-Emitting Diode.

LFA

Loss of Frame Alignment.

LILB

Line Interface Loopback.

Link

A user interface connection into the DACS II system.

Link ID

The location and type of a user interface link.

LLB

Line Loopback.

LMA

Loss of Multiframe Alignment.

Location

The specific entity involved.

LOF

Loss of Frame.

Loopback

A circuit arrangement that causes a received signal to be returned to its source.

LOS

Loss of Signal.

M**M13**

A standard format used for DS3 signals.

Maintenance

The entity has been locked into a non-service providing state by a manual command.

Maintenance Condition (MCOND)

MCOND is a condition in which the Main Controller (MC) is isolated from system hardware in order for the user to perform memory transfer operations. Placing the MC in MCOND is non-service affecting. When the MC is in the MCOND service state, the system software and database are not transferred to the Memory Cards. The Maintenance Condition enables the user to transfer database and/or system software among the Memory Cards and the MC's Random Access Memory (RAM) in a controlled manner via user commands. The MCOND service state is also used to perform system software upgrades.

Mapped

Cross-connected.

Mb

Megabit

Mb/s or Mbit/s

Megabit Per Second.

MBER

Minor Bit Error Rate.

MC

Main Controller.

MCOND

Maintenance Condition.

MCP

Main Controller Peripheral.

MEMA

Memory Card Slot A

MEMB

Memory Card Slot B.

Memory Location

Specifies the equipment, DS1 interface port, or DS3 MUX port location associated with a memory type.

MER

Multiframe Error.

MFA

Multiframe Alignment.

MI

1. Maintenance Information. 2. Minor Alarm.

MIU

Multipoint Interface Unit.

MJ

Major Alarm.

MJU

Multipoint Junction Unit.

MMFG

Multiplexer-MIU Functional Group or HMXR-MIU Functional Group.

MML

HuMan-Machine Language (a language used by the DACS II).

MP

Main Processor.

MPDIS

Multipoint Disconnect

MPM

Multipoint Mode.

MTC

Maintenance Circuit.

MXR

Multiplexer.

N**NA**

No acknowledgement.

NAS

Non Associated Signaling.

NDL

No Data Link.

NEBS

Network Equipment Building Systems.

Network Element

An individual system in a network of other systems. A DACS II system is a network element.

NFW

Non Framing Word.

NG

No Good.

NOBBL

No Backbone Leg.

Notification Code

The notification code for alarm and status conditions, which include: MJ - major alarm; MN - minor alarm.

NPC

Network Processing Circuit.

NPCTG

Network Processing Circuit Test Group.

NPCTP

Network Processing Circuit Test Port.

NSA

Nonsignaling Associated.

NZCS

No Zero Code Suppression.

O**OA&M**

Operation, Administration and Maintenance.

OCON

One-Way Cross-Connect.

OCNT

One-Way Cross-Connect, Terminated.

ODIS

One-Way Disconnect.

OFS

Out-Of-Frame Seconds.

OOF

Out-of-Frame.

OOS

See Out-Of-Service.

OS

Operations System.

Out-Of-Service (OOS)

The entity is not providing its normal service function (removed from service) either because of a system problem or because it has been removed from service manually.

Outage

A disruption of service that lasts for more than one second. See Hit.

P**Parity Check**

To determine whether a block of digital data has been corrupted in transmission, you can use an even-parity format in which an extra bit is added to the block at the transmitter if necessary so that the block always contain an even number of one bits. A parity-checking circuit at the receiving end can determine whether an error has occurred in transmission. An odd-parity format can also be used for the same purpose.

PBA

Primary Block Alarm.

PBC	Primary Block Circuit.
PBF	Primary Block Failure.
PBX	Private Branch Exchange.
PCM	Pulse Code Modulation.
PCMCIA	Personal Computer Memory Card International Association.
PDS	Program Documentation Standards (a language used by the DACS II).
PF	Printout Follows.
PFW	Pseudo-Frame Word.
PLL	Phase-Locked Loop.
PM	Performance Monitoring.
PMA	Prompt Maintenance Alarm.
PMEM	Primary Memory flash card for the DACS II.
PNI	Packet Network Interface.
POF	Pseudo Frame Word Out of Frame.
POTS	Plain Old Telephone Service.
PRBS	Pseudo-Random Bit Sequence.
Primary Line	The second line in an output message.

Program

The software that directs the operation of the main controller and other frame elements.

Protocol

Detailed format and procedures used for transmitting digital data.

Protocol Type

Indicates the protocol supported on the interface link.

Provisioned

The entity has been configured by the user and entered into the system database and is ready to be restored to service.

PU

Power Unit.

Pulse Code Modulation (PCM)

The process by which analog signals are sampled, quantized, and coded into a digital bit stream.

PVC

Permanent Virtual Circuit.

R**R16**

Remote Alarm Indication in TS16.

RAI

Remote Alarm Indication.

RAIS

Remote Alarm Indication Signal.

RAM

Random Access Memory.

RBER

Remote Bit Error Rate.

RDC

Red Circuit.

Released

If an input port, it is not under test access; if an output port, it is not cross-connected to an input port under test access.

RL

Retry later.

RLS

Terminate and Leave Release (MML language).

RMS-D

Remote Measurement System - Digital.

RMS-I

Remote Measurement System - International.

Rollover

Operation used when the transmission facility between the system and an upstream system is to be replaced.

RT

Remote Terminal.

RTS

Remote Test System.

RTS-5A

Remote Test System 5a.

S**SAP**

Status and Alarm Panel.

SARTS

Switched Access Remote Test System.

SCC

Subrate Cross-Connect.

SCCSAI

Switching Control Center System Asynchronous Interface.

SECH

Subrate Establish Command.

SEF

Severely Errored Frame.

SERS

Severely Errored Seconds.

SESL

Severely Errored Seconds for the DS3 Line.

SESP

Severely Errored Seconds for the DS3 Path.

SESR

Severely Errored Seconds Ratio.

SFI

Synchronizer Failure Indication.

SID

Source Identifier.

SMEM

Secondary Memory flash card for the DACS II.

SNIDER

Protocol (message format) used on asynchronous administrative links.

SNMP

Simple Network Management Protocol, used for building a single management system to perform provisioning, cross-connections and test access for multiple DACS II, etc.

Software ID

Gives the software version information for a system: g - is a one-digit number giving the software release; i - is a two-digit number giving the issue; r - is a one-digit number giving the point release.

SPU

Synchronizer Power Unit.

SRM

Subrate Multiplexer.

SSC

Secondary Storage Controller.

SSP

Select Synchronization Port.

Standby

Entity is one of a duplicated pair, but not providing service. It is ready to be used to replace a similar entity either by protection or by duplex switching.

State/STATE

The state of an entity indicates whether it is defective or normal, whether it is ready for normal use, etc.

Subrate

In the digital data system, a data bit rate that is either 2.4, 4.8, or 9.6 kb/s.

SVC

Switched Virtual Circuit.

SYNC

Synchronizer

Synchronizer Cross Connect

A dual function circuit pack that performs both synchronization and cross-connect functions.

System Executables

The software that directs the operation of the Main Controller (MC) and other system entities.

T**T1DM**

T1 Data Multiplexer.

TABS

Telemetry Asynchronous Block Signal.

TAD

Test Access Digroup.

TA1

TS16 All Ones alarm.

TB

Time Base.

TC

Trunk Conditioning.

TCP

Transmission Control Protocol, used to transfer data from one terminal to another.

TCP/IP

Transmission Control Protocol/Internet Protocol, a suite of protocols developed to allow cooperating computers to share resources across a network.

TCNT

Two-Way Cross-Connection, Terminated.

TCON

Two-Way Cross-Connection.

TD

Timing Distributor.

TDIS

Two-Way Disconnection.

TDM

Time Division Multiplexed.

TELNET

Remote Terminal Protocol, allows a user at one location to access a remote server at another location.

TERM

Terminate and Leave Activate (MML language).

Test Access

A mode of operation that provides full access to the circuit under test but does not interfere with any other cross-connections that have been established.

Test Mode

Specifies the Test Access Mode.

TG

Test Group.

TID

Target Identifier.

TLA

Terminate and Leave Activate (PDS language).

TLI

Timing Link Interface.

TLP

Transmission Level Point.

TLR

Terminate and Leave Release (MML language).

TP

Test Port.

TPR

Test Port Release.

TSI

Time Slot Interchange.

TTY

Teletypewriter Terminal.

U

UAC
Unassigned Channel Code.

UAS
Unavailable Seconds.

UASP
Unavailable Seconds - Path.

UATC
Unavailable Time Count.

UBX
Unit Bus Extender.

UC
Unit Controller.

UMC
Unassigned Multiplexer Code.

V

VC
Virtual Circuit.

X

X.25
Protocol (message format) used on synchronous administrative links.

Z

ZBTSI
Zero Byte Time Slot Interchange.

ZCS
Zero Code Suppression.