Critical Release Notice

Publication number: 297-2621-851
Publication release: Standard 13.01

The content of this customer NTP supports the SN07 (DMS) software release.

Bookmarks used in this NTP highlight the changes between the UCS15 baseline and the current release. The bookmarks provided are color-coded to identify release-specific content changes. NTP volumes that do not contain bookmarks indicate that the UCS15 baseline remains unchanged and is valid for the current release.

Bookmark Color Legend

Black: Applies to new or modified content for UCS15 that is valid through the current release.

Red: Applies to new or modified content for UCS17 that is valid through the current release.

Blue: Applies to new or modified content for UCS18 (SN05 DMS) that is valid through the current release.

Green: Applies to new or modified content for SN06 (DMS) that is valid through the current release.

Purple: Applies to new or modified content for SN07 (DMS) that is valid through the current release.

Attention!
Adobe Acrobat Reader 5.0 or higher is required to view bookmarks in color.

Publication History

Note: *Refer to the UCS15 baseline document for Publication History prior to the UCS17 software release.*

December 2004

Standard release 13.01. This release is current for the SN07 (DMS) software release, although no changes have been made for SN07 (DMS) features. The following CR was added:

Volume 1
CAINPARM - Added parameter STANDARD_ANISCREEN_RULES per CR Q00909834-01
CAINRESP - Added parameter AMABUSCUSTID per feature A00005363
CAINREXT - Added context identifier 300 to field AMA_DIGS_TYPE as per A00005363

Volume 2
CDRTMPLT - Added additional parameters to FIELD per feature A00005363

September 2004

Standard release 12.04. This release is current for the SN07 (DMS) software release, although no changes have been made for SN07 (DMS) features.

Volume 1
CAINPARM - Added parameter TRTMTCD_COMPCODE_ZAPPED_ZERO per CRQ00816405

Volume 5
TMTMAP (amended for CR Q00760514-10)

March 2004

Standard release 12.03 for software release SN06 (DMS)

Volume 3
LTDATA

Volume 4
SUSHELF

September 2003

Standard release 12.02 for software release SN06 (DMS). Updates made for this release are shown below.

Volume 1
CAINPARM

Volume 2
DRMUSERS – this table is obsolete. The description has been removed.
DSLIMIT
IBNRTE selector CND

Volume 3
OFRT selector CND

Volume 4
STDPRTCT.STDPRT

Volume 5
TONES

June 2003

Preliminary release 12.01 for software release SN06 (DMS). Updates made for this release are shown below.

Volume 1
ACRTE

Volume 2
DNRTE
IBNRTE selector CND

Volume 3
OFRT selector CND

Volume 4
No changes

Volume 5
TRKOPTS
TRKSGRP

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297-2621-851

Digital Switching Systems

UCS DMS-250

Data Schema Reference Manual Volume 3 of 5

UCS15 Standard 09.02 June 2001

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Digital Switching Systems

UCS DMS-250

Data Schema Reference Manual Volume 3 of 5

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1 UCS data schema

This document describes the data tables for a particular software load on the UCS DMS-250 switch.

This document assists the customer in preparing office-dependent data for the switch. The office-dependent data is stored in data store tables that are used in conjunction with software programs and systems circuits to advance a call through the stages of call processing.

This document consists of three volumes, and each volume is arranged alphabetically by table name.

IMAGEDEV

Table name

Image Device Table

Functional description

The automatic image dump process tables provide a method to schedule central control (CC) image dumps automatically. The system performs this process without user action. This process does guarantee that the dump correctly completes. The operating company (OC) must verify the completion or failure of the dump. The OC must take the appropriate action. The OCs have complete control over the automatic image dump schedule.

Table IMAGEDEV defines the image file storage devices that the automatic image dump process uses.

Each tuple in this table contains two fields, VOLNAME and ACTIVE.

The OC must enter data in this table.

The following are examples of datafill conditions:

- If the OC does not enter, the AUTO-IMAGE dump process does not run.
- If the OC defines one volume, the AUTO-IMAGE dump process dumps the image to that volume only.
- If the OC defines more than one volume, the next image dump occurs on the next available volume. If the current dump volume is the last one, the AUTO-IMAGE dump process rotates to the top of the table. The AUTO-IMAGE dump uses the volume that the first tuple defines.

Datafill sequence and meaning

You do not need to enter data in other tables before you enter data in table IMAGEDEV.

Table size

0 to 4 tuples

The number of tuples added dynamically determines the table size. The maximum size of 4 tuples corresponds to four different load routes.

Datafill

Datafill for table IMAGEDEV appears in the following table.

xxxField descriptions

Field	Subfield or refinement	Entry	Explanation and action
VOLNAME		alphanumeric (a maximum of 16 characters)	*Volume name*. Enter the name of the disk volume where the system dumps the image. This field is the key to the table.
ACTIVE		Y or N	*Active*. Enter Y if the volume the OC enters is in use. If the volume is not in use, enter N.

Datafill example

Sample datafill for table IMAGEDEV appears in the following example.

In this example, the first image dump uses disk volume D000IMG1.

In the second dump, use of disk volume D010IMG2 does not occur. Field ACTIVE is N. The system dumps the image in D020IMG3.

The third dump uses disk volume D000IMG1. Disk volume D000IMG1 is the first tuple that the OC enters in the table.

MAP example for table IMAGEDEV

```
VOLNAME        ACTIVE
_____________________________________________________

D000IMG1            Y
D010IMG2            N
D020IMG3            Y
```

IMGSCHED

Table name

Image Schedule Table

Functional description

Table IMGSCHED tracks and schedules the automatic image dump process.

Each tuple contains the following six fields:

- DAY
- DUMPHOUR
- DUMPMIN
- CMMS
- ISN
- USESDM
- ACTIVE

Each field can change. The field DAY cannot change.

See table IMAGEDEV for additional information.

Datafill sequence and meaning

You do not need to enter data in other tables before you enter data in table IMGSCHED.

Table size

7 tuples

The size of table IMGSCHED corresponds to the seven days of the week, from Monday to Sunday. You cannot delete tuples or add tuples.

Datafill

Datafill for table IMGSCHED appears in the following table.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
DAY		alphabetic (to a maximum of 9 characters)	*Day of the week*. Enter the day of the week when the dump occurs. The field entries are MONDAY to SUNDAY. You cannot add, delete or change entries.
DUMPHOUR		00 to 23	*Dump hour*. Enter the dump start hour schedule. The 24 hour system specifies this schedule. The default is 21 (9:00 p.m.).
DUMPMIN		00 to 59	*Dump minutes.* Enter the dump start minutes schedule. The default schedule is 00 (0 min).
CMMS		Y or N	*Computer Module and Message Switch*. Enter Y if the system must dump the CM and MS image for this day. Enter N if the system must ignore the day. The default is N.
ISN		Y or N	*Intelligent Switch Network*. Enter Y if the system must dump the ISN image. Enter N if the system must ignore the day. The default is N.
USESDM		Y or N	*USESDM.* Enter Y to use the SuperNode Manager (SDM) to store parts of the data store image during the computing module (CM) image dump process. Enter N to not use the SDM during the CM image dump process. The default entry is N.
ACTIVE		Y or N	*Active*. Enter Y if the system must dump the data for this day. The dump occurs on the day and at the time the DUMPHOUR and DUMPMIN fields specify. Enter N if a data dump is not necessary for this day. If CM/MS and ISN for the selected day is N, ACTIVE cannot be Y.

IMGSCHED (end)

Datafill example

Sample datafill for table IMGSCHED appears in the following example.

In this example, the AUTO-IMAGE dump process runs as follows:

- Monday. At 21:00 the system dumps the ISN image.
- Tuesday. At 21:00 the system dumps the CMMS and ISN image using the SDM to reduce CI lockout time during the CM image dump.
- Wednesday. At 21:30 the system dumps the CMMS image using the SDM to reduce CI lockout time during the CM image dump.
- Thursday. At 20:30 the system dumps the CMMS and ISN images using the SDM to reduce CI lockout time during the CM image dump.
- Friday. At 21:00 the system dumps NO images.
- Saturday. At 21:00 the system dumps the CMMS and ISN images using the SDM to reduce CI lockout time during the CM image dump.
- Sunday. At 20:30 the system dumps NO images.

The CM image dump process can use the SDM every day as shown in the example.

MAP example for table IMGSCHED

DAY	DUMPHOUR	DUMPMIN	CMMS	ISN	USESDM	ACTIVE
MONDAY	21	0	N	Y	N	Y
TUESDAY	21	0	Y	Y	Y	Y
WEDNESDAY	21	30	Y	N	Y	Y
THURSDAY	20	30	Y	Y	Y	Y
FRIDAY	21	0	Y	Y	N	N
SATURDAY	21	0	Y	Y	Y	Y
SUNDAY	20	30	N	N	N	N

Table history

CSP12

Field USESDM is added to table IMGSCHED by feature 59007562 in CSP12.

CSP08

Fields CM/MS and ISN were added to table IMGSCHED by feature AR2215 in CSP08.

IN1RESP

Table name

Intelligent Network Response for IN/1 queries

Functional description

Table IN1RESP provides the required data to build a response for IN/1 quries by using the CAIN SCP simulator. Indices into this table are provisioned by the ACTIDX field from table CAINMTCH. For each index there are fields that dictate the response type, delay factors, operation type, and a list of information elements to be included in the return message.

The OPERTYPE field in table CAINRESP designates the outgoing message type. After the OPERTYPE field has been datafilled, the PARMS field is restricted to those parameters appropriate for the specified operation.

Multiple component packages are supported by table IN1RESP. A multiple component package only occurs when an SCP Response Message and at least one SCP Non-Call Related Message are sent in a single TCAP package.

Technicians can also provision nonrestricted operation types by including the “_NR" suffix to the operation type. The available nonrestricted operations are:

- ACG_NR
- CONNECT_NR
- PLAY_ANN_NR
- TERMINATION_NR

Datafill sequence and implications

Table IN1RESP must be datafilled prior to indexing required by table CAINMTCH.

Table size

The table size is fixed when table IN1RESP is allocated at Initial Program Load (IPL) time.

IN1RESP (continued)

Datafill

The following table lists datafill for table IN1RESP.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
RESPKEY		A vector of up to 16 characters	RESPONSE KEY. Enter string field up to 16 characters.
DATATYPE		CR, NCR	DATA TYPE. Enter CR or NCR to determine if the tuple is a Call Related (CR) component or a Non-Call Related (NCR) component.
		CR	CALL RELATED COMPONENT. Enter CR and enter refinements for the following: DELAY, COMPTYPE and NCRCOMPS.
		NCR	NON-CALL RELATED COMPONENT. Enter NCR and enter refinements for COMPTYPE.
	DELAY	0 to 99	DELAY. Enter values in the range (0 to 99) to delay response message and simulate network SCP congestion. Units are specified in seconds.
	COMPTYPE	INVL, INVNL, RERR, REJ	COMPONENT TYPE. This field specifies the component portion of the response message. • INVL - invoke (last); refer to Table Table , "COMPTYPE=INVL or INVNL refinement descriptions" on page -9 for refinement datafill. • INVNL- for robustness testing only; refer to Table Table , "COMPTYPE=INVL or INVNL refinement descriptions" on page -9 for refinement datafill. • RERR - return error; refer to Table Table , "COMPTYPE=RERR refinement descriptions" on page -10 for refinement datafill. • REJ - for robustness testing only; refer to Table Table , "COMPTYPE=REJ refinement descriptions" on page -11 for refinement datafill.

IN1RESP (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	OPERTYPE	CONNECT, ACG, TERMINATIO N, PLAY_ANN	OPERATION TYPE. This field specifies the type of operation to be returned to the Service Switching Point (SSP).
	NCRCOMPS	a vector of up to 2 indices to index NCR tuples	NON-CALL RELATED COMPONENTS. Enter a vector of up to 2 indices to index a non-call related tuple in table IN1RESP.

COMPTYPE=INVL

When COMPTYPE=INVL or INVNL, datafill the following refinements:

COMPTYPE=INVL or INVNL refinement descriptions (Sheet 1 of 2)

Refinement	Subfield or refinement	Entry	Explanation and action
OPERTYPE			OPERATION TYPE. This refinement contains the operation type for the message.
		ACG	Enter ACG to build an ACG message for the NCR data type. See Table , "ACG message parameter values" on page -13 for refinement.
		TERMINATION	Enter TERMINATION to build a TERMINATION message for the NCR data type. See Table Table , "Termination message parameter values" on page -16 for refinement.

IN1RESP (continued)

COMPTYPE=INVL or INVNL refinement descriptions (Sheet 2 of 2)

Refinement	Subfield or refinement	Entry	Explanation and action
		CONNECT	Enter CONNECT to build a CONNECT message for the CR data type. See Table Table , "CONNECT message parameter values" on page -15 for refinement.
		PLAY_ANN	Enter PLAY_ANN to build a Play Announcement message for the CR data type. See Table , "PLAY_ANN message parameter values" on page -16 for refinement.

COMPTYPE=RERR

When COMPTYPE=RERR, datafill the following refinements:

COMPTYPE=RERR refinement descriptions (Sheet 1 of 2)

Refinement	Subfield or refinement	Entry	Explanation and action
ERRCODE		UNEXPECTED_COMP_SEQ, UNEXPECTED_DATA, UNAVAIL_RESOURCE, DATA_UNAVAIL	The Error code element indicates if an error condition has resulted from an unexpected data value, unexpected component sequence, unavailable network resource, or unavailable data.
PARM_ID		NIL, PROBDATA	Enter a vector of up to 1 Return Error parameter.
		NIL	Enter NIL to remove an existing parameter.
PROBDATA			Datafill the PROBDATA refinement.

COMPTYPE=RERR refinement descriptions (Sheet 2 of 2)

Refinement	Subfield or refinement	Entry	Explanation and action
	PROBDATA		PROBLEM DATA. The problem data element indicates information pertaining to erroneous data caused by an unexpected value in the request for termination information. ***Note:*** Enter the three values together (one each for PARM_ID, PARM_LENGTH, and PARM_DATA).
	PARM_ID	0-255	Enter parameter
	PARM_ LENGTH	0-255	
	PARM_DATA	vector of up to 20 hex digits	

COMPTYPE=REJ

When COMPTYPE=REJ, datafill the following refinements:

COMPTYPE=REJ refinement descriptions (Sheet 1 of 2)

Refinement	Subfield or refinement	Entry	Explanation and action
FAMILY		GENERAL, INVOKE, RETURN_RESULT, RETURN_ERROR, TRANSACTION	FAMILY. Enter the problem family.
PROBLEM			PROBLEM. Enter the problem.
	GENERAL_ PROB	NIL_GENERAL_PROB UNRECOGNIZED_COMPONENT INCORRECT_COMPONENT_PORTION BAD_COMPONENT_STRUCTURE INCORRECT_COMPONENT_CODING MAX_GENERAL_PROB	Enter problem associated with the General family type.

IN1RESP (continued)

COMPTYPE=REJ refinement descriptions (Sheet 2 of 2)

Refinement	Subfield or refinement	Entry	Explanation and action
	INVOKE _PROB	NIL_INVOKE_PROB, INV_DUPLICATE_INVOKE_ID, INV_UNRECOGNIZED_OPERATION, INV_INCORRECT_PARAMETER, INV_UNRECOGNIZED_CORR_ID, INV_RESOURCE_LIMITATION, INV_INITIATING_RELEASE, INV_LINKED_RESPONSE _UNEXPECTED, INV_UNEXPECTED_CORR_ID, MAX_INVOKE_PROB	Enter problem associated with the Invoke family type.
	RESULT _PROB	NIL_RESULT_PROB, RES_UNRECOGNIZED_CORR_ID RES_UNEXPECTED_RESULT, RES_INCORRECT_PARAMETER,MAX_ RESULT_PROB	Enter problem associated with the Return Result problem type.
	ERROR _PROB	NIL_ERROR_PROB,ERR_UNRECOGNIZ ED_CORR_ID,ERR_UNEXPECTED_RET URN,ERR_UNRECOGNIZED_ERROR, ERR_UNEXPECTED_ERROR,ERR_INCO RRECT_PARAMETER,MAX_ERROR_PR OB	Enter problem associated with the Return Error problem type.
	TRANS _PROB	NIL_TRANS_PROB,UNRECOGNIZED_P ACKAGE,INCORRECT_TRANSACTION, BAD_TRANSACTION_STRUCTURE,UNR ECOGNIZED_TRANSACTION_ID,PERMI SSION_TO_RELEASE,RESOURCE_UNA VAILABLE,MAX_TRANS_PROB	Enter problem associated with the Transaction problem type.

ACG message parameter values

The ACG message has parameter values as shown in Table 5.

ACG message parameter values (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CLDNO			CALLED NUMBER. The Called Number parameter specifies a Nature of number, a numbering plan and the called digits. Datafill the DIGITS refinement in table Table , "DIGITS refinement" on page -17 for CLDNO. ***Note:*** For CLDNO, 6 or 10 digits must be entered.
ACGIND			AUTOMATIC CALL GAPPING INDICATOR. This field is a 3 field multiple entry with fields GAP, DURATION and CCI. Enter the 3 fields together.
	GAP	0_ SECONDS, 3_ SECONDS, 4_ SECONDS, 6_ SECONDS, 8_ SECONDS, 11_ SECONDS, 16_SECONDS, 22_SECONDS, 30_SECONDS, 42_SECONDS, 58_SECONDS, 81_SECONDS, 112_ SECONDS, 156_ SECONDS, 217_ SECONDS, 300_ SECONDS	Enter value.

IN1RESP (continued)

ACG message parameter values (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	DURATION	1_ SECOND, 2_ SECONDS, 4_ SECONDS, 8_ SECONDS, 16_ SECONDS, 64_ SECONDS, 128_ SECONDS, 256_ SECONDS, 512_ SECONDS, 1024_ SECONDS, 2048_ SECONDS, INFINITY	Enter value.
	CCI	NOT_USED, VACANT_CODE, OUT_OF_BAND,DB_OVERLOAD, MASS_CALLING, SMS_INITIATED, SPARE	Enter CCI value.

CONNECT message parameter values

The CONNECT message has parameter values as shown in Table 6.

CONNECT message parameter values

Field	Subfield or refinement	Entry	Explanation and action
CARRIER			CARRIER DIGITS PARAMETER. The Carrier digits parameter specifies a Nature of number, a numbering plan and the carrier digits. Datafill the DIGITS refinement in table Table , "DIGITS refinement" on page -17 for CARRIER. ***Note:*** For CARRIER, the numbering plan must be UNK and 3 or 4 digits must be entered.
ROUTENUM			ROUTING NUMBER DIGITS PARAMETER. The Routing Number digits parameter specifies a Nature of number, a numbering plan and the routing digits. Datafill the DIGITS refinement in table Table , "DIGITS refinement" on page -17 for ROUTENUM. ***Note:*** For ROUTENUM, the numbering plan must be ISDN or TELEPHONY, and exactly ten digits must be entered.
BILLIND			BILLING INDICATOR PARAMETER. This parameter is a 2 field multiple entry with fields AMA_CALL_TYPE and SERVICE_FEAT_ID.
	AMA_CALL_TYPE	141, 142	Enter an integer value of either 141 or 142.
	SERVICE_FEAT_ID	3-digit code	Enter a 3-digit service feature identification code.

IN1RESP (continued)

PLAY_ANN message parameter values

The PLAY_ANN message has parameter values as shown in Table 7.

PLAY_ANN message parameter values

Field	Subfield or refinement	Entry	Explanation and action
STDANNC		0 to 255	STANDARD ANNOUNCEMENT. Enter STDANNC refinement. Enter a value from 0 to 255. This parameter value specifies an integer index into table CAINRSRC.

Termination message parameter values

The Termination message has parameter values as shown in Table 8.

Termination message parameter values

Field	Subfield or refinement	Entry	Explanation and action
ECHODATA		vector of up to 8 characters	This parameter is send to associate the initial message requesting termination notification to the termination notification message contained in the EchoData parameter.

Datafill example

The following example shows sample datafill for table IN1RESP.

MAP display example for table IN1RESP

```
RESPKEY                          DATAREA

------------------------------------

PLAYA3
      CR 0 INVL     PLAY_ANN 3     $
```

DIGITS refinements

The DIGITS field has refinements as shown in Table 9.

DIGITS refinement

Field	Subfield or refinement	Entry	Explanation and action
	NATURE_OF_NUM	NATL, INTL	NATURE OF NUMBER. Enter NATL or INTL.
	NUM_PLAN	UNK, ISDN, TELEPHONY, DATA, TELEX, MARITIME_MOBILE, LAND_MOBILE, PRVT	NUMBERING PLAN. Enter a numbering plan.
	DIGITS	0 to 24 digits	DIGITS. Enter a vector of up to 24 digits.

Datafill example

The following example shows sample datafill for table IN1RESP.

MAP display example for table IN1RESP

```
RESPKEY                        DATAREA

------------------------------------

PLAYA3
      CR 0 INVL     PLAY_ANN 3     $
```

Table history

This table changed over releases as follows:

UCS13

Updated ACG message parameter value Automatic Call Gapping Indicator (ACGIND) field CCI with new refinement entry “SPARE” (A60008239).

UCS12

Update to add editorial changes.

IN1RESP (end)

UCS09

Table IN1RESP was added (AX1377).

INWATNPA

Table name

INWATS NPA (INWATNPA) table

Functional description

The INWATNPA table is used to assign NPA codes to receive INWATS Toll Free processing for Call-By-Call feature terminations to a PRI PBX. The NPA (such as, 800, 888, etc.) from the originally dialed number is used to identify an INWATS Toll Free call with subsequent processing that delivers the call to the PRI PBX. This terminating PRI location must subscribe to the incoming Call-By-Call feature as defined in Table CALLATTR.

Datafill sequence and implications

A maximum of 100 NPAs can be datafilled in Table INWATNPA. If an attempt is made to add more than 100 tuples the following error message is generated:

```
A MAXIMUM OF 100 TUPLES MAY BE ADDED TO THIS TABLE
```

Table size

The minimum table size is 0 tuples and the maximum table size is 100 tuples.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table INWATNPA.

Field	Subfield or refinement	Entry	Explanation and action
NPA	N/A	{000 to 999}	This field contains a three digit NPA code.

Datafill example

The following example shows datafill for table INWATNPA.

```
800

888
```

Activation

The activation of this table is immediate.

INWATNPA (end)

Table history

UCS17

Introduced this table. The INWATNPA table has a single field containing three digit NPA codes.

Supplementary information

This is a new table.

INWFEAT

Table name

Inward Wide Area Telecommunications Service Feature (INWFEAT) table

Functional description

Table INWFEAT provides the ability to associate a specified INWATS number with an incoming exclusion index and a unique serving translation scheme (STS) for INWATS call screening and translating.

Only 700, 800, or 900 numbers are valid for this table. Each N00 number is restricted to a total of 10 NXX,with up to 10,000 destination digits (XXXXs) defined for each of the 10 N00-NXXs. There are a total of 10 NXX (and not 30 NXX) for every N00 number even if all three NPAs (700 , 800 and 900 numbers) are used. .

Note: This table can also be accessed through table STDPRT by datafilling INWFEAT in the ES selector.

Datafill sequence and implications

Datafill table HNPACONT before table INWFEAT. The table editor outputs a message indicating that the STS is not datafilled when you attempt to enter an STS that is not already datafilled in table HNPACONT.

The Office Variable parameter in table OFCVAR, DEFAULT_STS, defines the STS used for call routing if a specified INWATS number is not found in table INWFEAT during call processing and the incoming exclusion index defaults to zero. Also, an OCC220 log generates to inform the operating company personnel that the database look-up for the specified INWATS number was unsuccessful.

Table size

Table INWFEAT dynamically allocates up to 100,000 tuples. The table cannot be extended.

The only constraint for the table size is the memory available on the switch.

INWFEAT (continued)

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table INWFEAT.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
INWATDIG		10 digits (0-9, B-F, N)	INWARD WIDE AREA TELECOMMUNICATION DIGIT. List all of the 10-digit INWATS numbers in the form 7XX-NXX-XXXX, 8XX-NXX-XXXX, or 9XX-NXX-XXXX (NXX-NXX-XXXX) originating over an FGC, FGD, or IMT trunk group facility to be associated with an Incoming Exclusion index and a serving translation scheme (STS).
IEXCINDX		0 to 255	INCOMING EXCLUSION INDEX. Specify an index number, within the range 1 to 255, into the IEXCLUDE table which consists of a list of NPAs and NXXs to block or allow. If the Incoming Exclusion feature is not used, specify 0.
STS		000 to 999	SERVING TRANSLATION SCHEME. Enter the 3-digit STS the specified INWATS number uses to determine the routing scheme used by translations in terminating the call. ***Note:*** This STS must be present in the HNPACONT table before an attempt is made to add it to this table. The STS field is a 3-character vector. When a 1- or 2-digit STS is identified, it must be entered in this field with leading zeros. For example, STS 92 is added as 092 and STS 1 is added as 001.
TRANSDIG		Up to 18 digits (0 to 9)	TRANSLATION DIGITS. Enter a 7-digit onnet number (NXX-XXXX), a 6-digit virtual private network (VPN) number, a 10-digit offnet number (NXX-NXX-XXXX), or an international number beginning with 011, a minimum of 10 digits, and a maximum of 18 digits (including the 011). This is an optional field.

INWFEAT (continued)

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CALLEDPB		Y or N	CALLED PARTY BILLED. The default value of Y indicates the called party is billed. A value of N indicates the calling party is billed.
OPTIONS	NIL, NXXBLOCK		NIL. Enter OPTION NXXBLOCK to specify NXX call blocking functionality otherwise enter OPTION NIL. NXXBLOCK. Enter OPTION NXXBLOCK to specify NXX call blocking functionality. See OPTION=NXXBLOCK for datafill refinement.

Datafill example

The following example shows datafill for table INWFEAT:

```
INWATDIG    IEXCINDX STS   TRANSDIG  CALLEDPB OPTIONS
____________________________________________________________

70030000226   0       611  01182262266789    N       $
```

INWFEAT (end)

OPTION=NXXBLOCK

Field	Subfield or refinement	Entry	Explanation and action
NXXBLOCK	INFO_DIGITS	0 to 99, 0 to 99	The INFORMATION DIGITS refinement is a two-part multiple that specifies the range of digits (upto 20 digits) against the NXX number selected to provide call blocking functionality. The first part of the multiple FROM_DIGITS field contains the first INFO_DIGITS in the range. A value of a single INFO_DIGIT indicates there is no range, enter the same value for FROM_DIGITS and TO_DIGITS fields. Datafill as a pair. The second part of the multiple the TO_DIGITS field contains the last INFO_DIGS in the range. The value for field TO_DIGITS must be greater than or equal to the value from field FROM_DIGITS. ***Note:*** A warning message is issued when no infodigs are entered with the NXXBLOCK option and also when tuples added to TO_DIGITS value are smaller than FROM_DIGITS value.

Table History

UCS12
Updated information in functional description to clarify number of NXXs available..

UCS09 NIL and NXXBLOCK values were added to the OPTIONS field (AX1198)

INWTRANS

Table name

Inward Wide Area Translation (INWTRANS) table

Functional description

Table INWTRANS returns an incoming exclusion index, serving translation scheme (STS), and a translated number for a particular INWTRANS number so that INWATS calls are screened and translated for inswitch 8XX calls.

Datafill sequence and implications

Datafill table HNPACONT before table INWTRANS. The table editor outputs a message indicating that the STS is not datafilled when you attempt to enter an STS that is not already datafilled in table HNPACONT.

This table can be datafilled with various NXX-NXX combinations. For each NXX-NXX chosen, the appropriate incoming exclusion index, STS, and translated number are entered. This table is associated by the ES selector in table STDPRT.

Table size

The maximum size of this table is 6.4 billion tuples. Each tuple requires 5 words of physical storage. The total storage required for the maximum number of tuples is 6.4 billion x 5 words = 32 billion words.

INWTRANS (continued)

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table INWTRANS.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
INWATDIG		Up to 10 digits (0-9)	INWARD WIDE AREA TELECOMMUNICATION DIGIT. List all of the 10-digit INWATS numbers in the form NXX-NXX-XXXX or 800-NXX-XXXX. The first digit cannot be 0 or 1.
IEXCINDX		0 to 255	INCOMING EXCLUSION INDEX. Specify a number to index into the IEXCLUDE table which consists of a list of NPAs and NXXs to block or allow. If the IEXCLUDE table is not being used, specify zero. For table INWTRANS, the IECINDX table will screen the NXX and the ANI.
STS		00 to 999	SERVING TRANSLATION SCHEME. Enter the 3-digit serving translation scheme (STS) that the specified INWATS number uses in order to determine the routing scheme used by translations in terminating the call. ***Note:*** This STS must be present in the HNPACONT table before an attempt is made to add it to this table. The STS field is a 3-character vector; therefore, when a 1- or 2-digit STS is identified, it must be entered in this field with leading zeros. For example, STS 92 is added as 092 and STS 1 is added as 001.
TRANSDIG		Up to 18 digits (0 to 9)	TRANSLATION DIGITS. This field contains translation digits. Enter a 7-digit on-net number (NXX-XXXX), a 6-digit virtual private network (VPN) number, a 10-digit off-net number (NXX-NXX-XXXX), or an international number beginning with 011 and a minimum of 10 digits, and a maximum of 18 digits (including the 011). This is an optional field.

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
EFTINDEX		0 to 15	Currently not applicable. Default is 0.
OPTIONS	NIL, NXXBLOCK NXXACCT		NIL. Enter OPTION NXXBLOCK to specify NXX call blocking functionality otherwise enter OPTION NIL. NXX BLOCKING. Enter NXXBLOCK to specify NXX call blocking functionality.See OPTION=NXXBLOCK for datafill refinement.NXX ACCOUNT. Enter NXXACCT to collect and validate account codes on called party billed calls. See OPTION=NXXACCT for datafill refinement.

Datafill example

The following example shows datafill for table INWTRANS.

```
INWATDIG   IEXCINDX     STS      TRANSDIG    EFTINDEX
_____________________________________________________

2082281111        0      761    2142281234           0
```

INWTRANS (continued)

OPTION=NXXBLOCK

Field	Subfield or refinement	Entry	Explanation and action
NXXBLOCK	INFO_DIGITS	0 to 99, 0 to 99	The INFORMATION DIGITS refinement is a two-part multiple that specifies the range of digits (upto 20 digits) against the NXX number selected to provide call blocking functionality. The first part of the multiple FROM_DIGITS field contains the first INFO_DIGITS in the range. A value of a single INFO_DIGIT indicates there is no range, enter the same value for FROM_DIGITS and TO_DIGITS fields. Datafill as a pair. The second part of the multiple the TO_DIGITS field contains the last INFO_DIGS in the range. The value for field TO_DIGITS must be greater than or equal to the value from field FROM_DIGITS. ***Note:*** A warning message is issued when no infodigs are entered with the NXXBLOCK option and also when tuples added to TO_DIGITS value are smaller than FROM_DIGITS value.

OPTION=NXXACCT

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
NXXACCT			NXX ACCOUNT. Datafill fields ACCTLEN and ACCTIDX to collect a valid account code. The code is validated in table ACSCRN2. If an invalid account code is entered, the call is blocked with an invalid account code treatment (INVAC).

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	ACCTLEN	0 to 12	ACCOUNT LENGTH. Enter values 0 to 12 to validate account code length mapped to table ASCRN2.
	ACCTIDX	0 to 99, 999	ACCOUNT INDEX. Enter values 0 to 99, 999 to validate account code index mapped to table ASCRN2.

Table history

UCS09

An OPTIONS field with values NIL, NXXBLOCK (AX1198) and NXXACCT was added (AX1302).

IOC

Table name

Input/Output Controller Table

Functional description

Table IOC contains assignment data for input/output controller (IOC) and message. This table contains assignment data for device controller (MDC) modules with:

- product engineering code (PEC) NT2X76AA or NT2X76BA
- IOC modules NT1X61AA or NT1X61AB
- input/output modules (IOM) NTFX30AA

Datafill sequence and meaning

You do not need to enter data in other tables before you enter data in table IOC.

Enter data in the following tables after you enter data in table IOC:

- DDU
- DLCDEV
- DPACDEV
- MPC
- MTD
- NX25
- TERMDEV

Table size

0 to 13 tuples

Datafill

The datafill for table IOC appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
IOCNO		0 to 19	*Input/output controller number*. Enter the number assigned to the input/output controller (IOC) or message and device controller (MDC) module. The following two factors determine the maximum number of IOCs in a DMS-100: • The configuration of a system. The configuration includes the number of networks and the number of central message controller (CMC)/message switch (MS) interface cards provisioned. • Limit for software to support maintenance functions for IOCs and connected devices without impacting the performance of the system.
FRTYPE		CCC, IOE, MCCM, MCEX, MCGM, or MTC	*Frame type*. Enter the frame type of the module. Enter CCC (central control complex) if the module is an MDC. Enter MTC (magnetic tape center) or IOE (input/output equipment) if the module is an IOC. Enter IOE (input/output equipment) if the module is an IOM. Enter MCCM (Meridian cabinet core module) for the cabinetized Meridian 1 (options 111-211) if the module is a central message controller IOC (CMC/IOC). Enter MCGM (Meridian cabinet general module) for the cabinetized Meridian 1 (options 111-211) if the module is an IOC. Enter MCEX for the Meridian cabinet EIOC extension module.
FRNO		0 to 2	*Frame number*. Enter the frame number of the MTC or CCC frame that the IOC or MDC is on. Entries outside this range are not correct.

IOC (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
SHPOS		04, 18, 32, or 65	*Shelf position*. Enter shelf position 04, 18, or 32 for the IOC. Enter 65 for the MDC module.
FLOOR		0 to 99	*Floor*. Enter the number assigned to the floor or remote location of the MTC or CCC frame equipped with the IOC or MDC module.
ROW		A to Z, AA to ZZ except I, O, II, or OO	*Row*. Enter the row designation on the floor of the location of the MTC or CCC frame that mounts the IOC or MDC module.
FRPOS		0 to 99	*Frame position*. Enter the position number in the row, of the MTC or CCC frame that has the IOC or MDC module.

NT40 switch

If the switch type is NT40, enter data in fields CMCCARD and CMCPORT. This datafill appears in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CMCCARD	0 to 13	*Central message controller card*. Enter the number of the central message controller card assigned to the IOC.
	CMCPORT	0 to 4	*Central message controller port*. Enter the central message controller port number assigned to the IOC. Proceed to field PECINFO on the following page.

SuperNode switch

If the switch type is SuperNode, enter data in fields MSCARD and MSPORT. This datafill appears in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	MSCARD	6 to 23	*Message switch controller card*. Enter the number of the message switch controller card assigned to the IOC.
	MSPORT	0 to 15	*Message switch controller port* . Enter the number of the message switch controller port number assigned to the IOC. Proceed to field PECINFo on the following page.

IOC (continued)

NT40 and SuperNode switches

For both NT40 and SuperNode switches, enter data in field PECINFO. This datafill appears in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	PECINFO	1X6106 1X61AA 1X61AB 2X7606 2X76AA 2X76BA 7X28 NX34AA NX3401 FX30AA	*Product engineering code*. Enter the product engineering code (PEC) that corresponds to the module. All PECs normally begin with the letters NT. When you enter data, omit these first two letters. The default value is 1X61AA. Enter 1X6106 (IOC shelf assembly) for the Meridian cabinet general module. Enter 1X61AA or 1X61AB (IOC shelf) for the IOC module. ***Note:*** NT1X61AB replaces NT1X61AA. Enter 2X7606 (central message and I/O device controller shelf assembly) for the Meridian cabinet core module. Enter 2X76AA or 2X76BA (central message and I/O device shelf) for the MDC module. ***Note:*** NT2X76BA replaces NT2X76AA. Enter 7X28 (central message device controller and memory (MDC) shelf assembly) for the combined CMC IOC and DS shelf memory. Enter NX3401 (dual IOC shelf assembly) for the Meridian cabinet EIOC extension module. ***Note:*** NTNX38BA replaces NTNX34AA. Enter data in the two PECs as NX3401. Enter FX30AA for the IOM peripheral.

PECINFO = FX30AA

If the entry in field PECINFO is FX30AA, enter data in refinements. This datafill appears in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	PMTYPE	alphanumeric (a maximum of 8 characters)	*Peripheral module type*. Enter the type of peripheral module.
	PMNO	0 to 2047	*Peripheral module number*. Enter the number of the peripheral module.
	CARD_POSITION	0 to 37	*Card position*. Enter the location of the card field PECINFO identifies.
	DFILE	alphanumeric (a maximum of 8 characters)	*Download file*. Enter the name of the file downloaded to the IOM.
	DVNAME	alphanumeric (a maximum of 12 characters)	*Device name*. Enter the device name.

Datafill example

Sample datafill for table IOC appears in the following example.

The assignments associated with an IOC for an NT40 type switch with a CMC appear in this example.

MAP example for table IOC

```
IOCNO FRTYPE
            FRNO SHPOS FLOOR ROW FRPOS MSCARD  MSPORT   PECINFO
_____________________________________________________________________

    0    IOE
                0     4     0   A     6     23       0  1X61AB
```

IOC (end)

Table history

CSP06

The entry FX30AA was added to field PECINFO in CSP06.

BCS36

Entry range for fields IOC and MSCARD was corrected in BCS36. A note about the maximum number of IOCs was included in this release.

IPHOST

Table name

Internet Protocol SuperNode End Hosts Table

Functional description

Table IPHOST assigns the Internet protocol (IP) addresses to SuperNode end hosts. SuperNode end hosts can have one or two addresses. The entry in field NODENAME determines the number of addresses.

Table IPHOST supports application processor (AP) and file processor (FP) datafill for the following:

- the two Support Operating System (SOS) nodes
- SOS SuperNode UNIX (SNIX) nodes that require two IP addresses

For datafill for the Circuit Switched Data (CSD) product for MTX offices, refer to *Circuit Switched Data Deployment Guide*, 411-2131-500 or your next level of support.

Datafill sequence and meaning

Enter data in the following tables before you enter data in table IPHOST:

- the LIUINV or SDMINV, or other equivalent inventory table for IP nodes
- the IPNETWRK
- the SMNINV, if data entry of AP or FP nodes occurs in table IPHOST

To enter data in an application processing unit (APU) in table IPHOST, enter the same APU entry in table LIUINV. The APU must be offline before you enter data in table IPHOST.

Note: In the assignment of IP addresses, the LAN side and the workstation must be on different subnets from the DMS peripheral module.

Table size

0 to 64 tuples

IPHOST (continued)

Datafill

The datafill for table IPHOST appears in the following table.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
INDEX		refer to subfield	*Index* This field contains subfield NODEIDX.
	NODEIDX	0 to 63	*Node index* Enter the node index number.
NODENAME		A,P APU, CM, EIU, ELIU, FP, MS	*Node name* Enter the node name: • AP (application processor) • APUX (application processor UNIX) • CM (computing module) • EIU (Ethernet interface unit) • ELIU (Ethernet link interface unit) • FP (file processor) • MS (message switch) ***Note:*** You can enter data in AP and FP to support the SuperNode UNIX (SNIX) versions of the nodes. You can enter data in IP addresses for the software operating system and the SNIX sides of the nodes. You must enter the nodes in table SMNINV first. The IP address for an AP or FP can be software operating side only or software operating side and SNIX sides. You can enter one or two IP addresses for an AP or FP node. The application on the node determines the number for addresses to enter. A node AP that runs UNIX requires two IP addresses for the node.
NODE		refer to subfields	*Node* This field contains subfields for the entries in field NODENAME.

NODENAME = AP

If the entry in field NODENAME is AP, enter data in the following refinements:

- SMNINDEX
- SNADDR
- TCPCONN
- FTPCLCON
- FTPSVCON
- UNIXADDR

The datafill appears in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	SMNINDEX	0 to 99	*File processor index* Enter the FP index number.
	SNADDR	table of 4 (0 to 255)	*Internet protocol address SuperNode* Enter the IP address of the SuperNode side.
	TCPCONN	0 to 20	*Transmission control protocol connections* Enter the transmission control protocol (TCP) connections number.
	FTPCLCON	0 to 50	*File transfer protocol connections* Enter the file transfer protocol (FTP) connections number.
	FTPSVCON	0 to 50	*File transfer protocol server connections* Enter the FTP server number.
	UNIXADDR	table of 4 (0 to 255)	*UNIX address* Enter the UNIX side IP address of the node.

IPHOST (continued)

NODENAME = APU

If the entry in field NODENAME is APU, enter data in the following refinements:

- APUINDEX
- SOSADDR
- UNIXADDR
- TCPCONN
- FTRPCLCON
- FTPSVCON

This datafill appears in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	APUINDEX	0 to 750	*Application processor UNIX index* Enter the APU index number.
	SOSADDR	table of 4 (0 to 255)	*Support operating switch* Enter the support operating switch address.
	UNIXADDR	table of 4 (0 to 255)	*Internet protocol host identification for APU* Enter the UNIX IP identification for the APU.
	TCPCONN	0 to 1	*Transmission control protocol connections* Enter the TCP connections number.
	FTPCLCON	0 to 50	*File transfer protocol connections* Enter the FTP connections number.
	FTPSVCON	0 to 50	*File transfer protocol server connections* Enter the FTP server number.

NODENAME = CM

If the entry in field NODENAME is CM, enter data in the following refinements:

- CMINDEX
- TCPCONN

- FTPCLCON
- FTPSVCON

This datafill appears in the following table.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	CMINDEX	0 to 1	*Computing module index* Enter the CM index number. Enter 0 for the SuperNode Data Manager (SDM) Secure File Transfer (SFT) application.
	TCPCONN	0 to 96	*Transmission control protocol connections* Enter the TCP connections number. For the SDM SFT application, TCPCONN must equal or exceed two times the sum of FTPCLCON and FTPSVCON. This condition allows two connections for each session. ***Note:*** Increase TCPCONN for other services on the SDM. For example, the Enhanced Terminal Access (ETA) application and telnet. Nortel recommends that the TCPCONN equals or exceeds two times the sum of FTPCLON and FTPSVCON plus an additional 15 or more. The use of other TCP services determines the number of additional values.

IPHOST (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	FTPCLCON	0 to 50	*File transfer protocol connections* Enter the maximum number of FTP client sessions.
	FTPSVCON	0 to 50	*File transfer protocol server connections* Enter the maximum number of FTP server sessions. ***Note:*** The system shares FTPSVCON with other CM FTP users. If you enter data in FTPSVCON for the SDM SFT application, make sure that you enter data in this subfield. This data must contain the total number of FTP sessions. For example, you can require 10 SFT sessions and the configuration of the CM FTP server is for two sessions. When this condition occurs, enter 12 for subfield FTPSVCON.

NODENAME = EIU

If the entry in field NODENAME is EIU, enter data in the following refinements:

- EIUINDEX
- SNADDR
- LANADDR
- TCPCONN
- FTRPCLCON
- FTPSVCON

This datafill appears in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	EIUINDEX	0 to 750	*Ethernet interface unit index* Enter the EIU number.
	SNADDR	table of 4 (0 to 255)	*Internet protocol address for node* Enter the IP address of the SuperNode side of the node.
	LANADDR	table of 4 (0 to 255)	*Second IP address for EIU host* Enter the second IP address for the EIU host.
	TCPCONN	0 to 32	*Transmission control protocol connections* Enter the TCP connections number.
	FTPCLCON	0 to 50	*File transfer protocol connections* Enter the file transfer protocol connections number.
	FTPSVCON	0 to 50	*File transfer protocol server connections* Enter the file transfer protocol server number.

NODENAME = ELIU

If the entry in field NODENAME is ELIU, enter data in the following refinements:

- ELIUINDEX
- SNADDR
- LANADDR
- TCPCONN

IPHOST (continued)

This datafill appears in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	ELIUINDEX	0 to 750	*Ethernet interface unit index* Enter the ELIU number.
	SNADDR	table of 4 (0 to 255)	*Internet protocol address for node* Enter the IP address of the SuperNode side of the node.
	LANADDR	table of 4 (0 to 255)	*Second IP address for ELIU host* Enter the second IP address for the ELIU host.
	TCPCONN	2	*Transmission control protocol connections* The only correct entry is 2.

NODENAME = FP

If the entry in field NODENAME is FP, enter data in the following refinements:

- SMNINDEX
- SNADDR
- TCPCONN
- FTPCLCON
- FTPSVCON
- UNIXADDR

This datafill appears in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	SMNINDEX	0 to 99	*File processor index* Enter the file processor index number.
	SNADDR	table of 4 (0 to 255)	*Internet protocol address for node* Enter the IP address of the SuperNode side of the node.
	TCPCONN	0 to 32	*Transmission control protocol connections* Enter the transmission control protocol connections number.
	FTPCLCON	0 to 50	*File transfer protocol connections* Enter the file transfer protocol connections number.
	FTPSVCON	0 to 50	*File transfer protocol server connections* Enter the FTP server number.
	UNIXADDR	table of 4 (0 to 255)	*Internet protocol host identification for APUX* Enter the UNIX IP identification for the APUX.

NODENAME = MS

If the entry in field NODENAME is MS, enter data in the following refinements:

- MSINDEX
- SNADDR
- TCPCONN
- FTPCLCON
- FTPSVCON

IPHOST (continued)

This datafill appears in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	MSINDEX	0 to 1	*Message switch index* Enter the MS index.
	SNADDR	table of 4 (0 to 255)	*Internet protocol address for node* Enter the IP address of the SuperNode side of the node.
	TCPCONN	0	*Transmission control protocol connections* Enter the TCP connections number.
	FTPCLCON	0 to 50	*File transfer protocol connections* Enter the FTP connections number.
	FTPSVCON	0 to 50	*File transfer protocol server connections* Enter the FTP server number.

Datafill example

Sample datafill for table IPHOST appears in the following example.

MAP example for table IPHOST

```
INDEX NODENAME                                          NODEINFO
_____________________________________________________________________

    0       AP  3 12 23   6   5   9   9   9  (17 34 67 5)  $
    2     ELIU 12 141 226  9 121  53  174 345   1   2
```

Table history

Telecom 09

The following changes occurred for the SDM SFT application in Telecom 09:

- Subfield CMINDEX equals 0.
- Subfield TCPCONN value must equal or exceed two times the sum of FTPCLCON and FTPSVCON. This condition allowed two connections for each session.
- Entered data in subfield FTPSVCON with the total number of allowed FTP sessions.

Telecom 07

The following changes occurred in Telecom 07:

- The ELIU was added as a correct entry in field NODENAME.
- Refinements ELIUINDEX, SNADDR, LANADDR, and TCPCONN were added for ELIU.

BCS36

The following changes occurred in BCS36:

- Introduction was added for AP and FP datafill.
- Table SMNINV was added to datafill sequence.
- Maximum table size was corrected.
- The NODENAME entries AP and FP were added to this field.
- Note on datafill for SOS and SNIX was added to explanation of field NODENAME.
- Datafill for address fields SNADDR, SOSADDR, and UNIXADDR was corrected.

IPMLINV

Table name

Interperipheral Message Link Inventory Table

Functional description

The system uses interperipheral message links (IPML) to message between two peripheral modules (PM). Examples of PMs are a message switch buffer (MSB) and digital trunk controller (DTC). The IPMLs use standard speech-type connections through the network.

One of the applications is for MSB to DTC and MSB to PCM30 DTC (PDTC) connections for common channel signaling (CCS). These types of common channel signaling, CCS6 and CCS7, use the IPMLs.

Each IPML contains a pair of network connections between the two specified PMs, interperipheral connections (IPC). One IPC is active and the other is not active. Messages transmit on the active IPC. Message scanning occurs on both IPCs.

The IPMLs use the network nailed-up connection feature. The system maintains the IPMLs during cold restarts, with the paths through the network preserved over the restart. The system establishes the IPMLs again during reload restart initialization, with new network paths selected. The system retains IPMLs over batch change supplement (BCS) applications. The physical connection through the network does not change.

The hardware assignment data that relates to the connection of MSBs with DTCs or PDTCs appears in table IPMLINV. This data includes the following:

- identification of the from-end side, the MSB
- identification of the to-end side, the DTC, PDTC or integrated services digital network (ISDN) line trunk controller (LTCI)
- the IPC port and channel assignment
- the IPML application

Rules in provisioning

The following are the provisioning rules for an IPML:

- The two IPCs that form an IPML must be on different network modules for reliability.
- The allocation of channels for CCS is as follows:
  - MSB - The IPCs must distribute evenly across the available links. The IPCs must use a channel that is not 0.
  - DTC - Select the IPC channels according to the following priorities:
    - channel 16 on port 0
    - channel 16 on port 2
    - other available channel 16s
    - other available channels

    Note: The channel 16 allocations for IPCs conflict with the channel 16 looparound test on non-message links.
- The IPMLs to the PDTC cannot use network ports/channels 1/16 and 3/16. Channel 16 on all ports is for frame alignment and maintenance. Channel 0 is for other purposes. You cannot use channel 0 to assign IPMLs. Use ports/channels 1/1 and 3/1. You cannot use trunks on PCM30 links/channels 0/30 and 2/30 for traffic. The C-side to P-side mapping maps C-side port/channel 3/1 to P-side port/channel on the PCM30 trunks, as 0/30. The C-side to P-side mapping maps C-side port/channel 1/1 maps to P-side port/channel 2/30.

Restrictions

The following restrictions apply to an IPML:

- Enter the PMs that connect with the use of an IPML, in the inventory tables of the PMs. This action must occur before the system accepts the entry in table IPMLINV. You cannot remove a PM from the inventory table when entries are in the table IPMLINV for that PM.
- For CCS7, if an IPML is in use and assigned to a DTC, the DTC must appear in table LTCINV. The entry in field OPTATTR must equal CCS7, to the IPML to the DTC.
- For CCS7, you cannot delete the entry in table IMPLINV if ISDN user part (ISUP) trunks are for the DTC. This restriction applies when connection of the IPML occurs. Delete all ISUP trunks on the DTC before you delete the IPML assigned to the DTC.

IPMLINV (continued)

- The ports assigned to the IPCs must be in the PM inventory table. You cannot remove the ports from the PM inventory table until you remove the ports from the IPMLINV table. If the channels for the IPCs are for other use, like a trunk, the system rejects the table entry.
- Channel 0, ports 0 and 2 on the MSB and DTC are for messaging. You cannot use this channel and ports to assign IPMLs.
- The PDTCs cannot have IPMLs on channel 16.

The verify procedure for table IPMLINV changes. The procedure changes to allow the entry of IPMLs on time slot 16 for specified groups of carriers and signaling types.

Time slot 16 supports the IPMLs for all groups marked with a Y (yes) in table Table , "IPMLs on time slot 16" on page -48.

IPMLs on time slot 16

Carrier type	Signaling type	Time slot 16 supported
D30	Channel-associated signaling (CAS)	-
D30	CCS	-
D30	Common channel signaling inter-peripheral message link (CCSIPML)	Y
M20	Does not apply	-
TTC	Does not apply	-
DS-0	Does not apply	Y
NDS0	Does not apply	Y

Datafill sequence and meaning

Enter the following tables before you enter table IPMLINV.

- LTCINV
- MSBINV

Table size

For junctored network (JNET) offices, parameter MAXNUCS in table OFCENG controls the maximum number of tuples in table IPMLINV. For enhanced network (ENET) offices, parameter MAXNUCS in table OFCENG

does not control the maximum number of tuples in table IPMLINV. Set this parameter to 0.

Datafill

Datafill for table IPMLINV appears in the following table.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
IPMLNO		0 to 239	*Interperipheral message link number*. Enter an index number assigned to an IPML. This field is the key to the table.
FROMPM		refer to subfields	*From peripheral module*. This field contains subfields XPMTYPE and XPMNO.
	XPMTYPE	MSB6 or MSB7	*Peripheral module type*. Enter the PM type as follows: • Enter MSB6 for CCS6 switching units. • Enter MSB7 for CCS7 switching units.
	XPMNO	0 to 4	*Peripheral module number*. Enter the PM number of the MSB6 or MSB7. Entries out of the range indicated for this field are not correct.
TOPM		Refer to subfields	*To peripheral module*. This field contains subfields XPMTYPE and XPMNO.
	XPMTYPE	DTC, DTCI, LTCI, or PDTC	*Peripheral module type*. Enter the PM type as follows: • DTC • DTCI (ISDN DTC) • LTCI • PDTC (PCM30 DTC)
	XPMNO	0 to 63	*Peripheral module number*. Enter the PM number. Entries out of the range indicated for this field are not correct.

IPMLINV (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
IPC0FEND		refer to subfields	*Interperipheral connection zero from-end*. This field contains subfields IPCPORT and IPCCHANNEL.
	IPCPORT	0 to 15	*Interperipheral connection zero from-end port*. Enter the port number where the interperipheral connection (IPC) 0 from-end connects.
	IPCCHANNEL	0 to 31	*Interperipheral connection zero from-end channel*. Enter the channel number where the IPC 0 from-end connects.
IPC0TEND		Refer to subfields	*Interperipheral connection zero to-end*. This field contains subfields IPCPORT and IPCCHANNEL.
	IPCPORT	0 to 15	*Interperipheral connection zero to-end port*. Enter the port number where the IPC 0 To End connects.
	IPCCHANNEL	0 to 31	*Interperipheral connection zero to-end channel*. Enter the channel number where the IPC 0 To End connects.
IPC1FEND		refer to subfields	*Interperipheral connection one from-end*. This field contains subfields IPCPORT and IPCCHANNEL.
	IPCPORT	0 to 15	*Interperipheral connection one from-end port*. Enter the port number where the IPC 1 From End connects.
	IPCCHANNEL	0 to 31	*Interperipheral connection one from-end channel*. Enter the channel number where the IPC 1 From End connects.
IPC1TEND		refer to subfields	*Interperipheral connection one to-end*. This field contains subfields IPCPORT and IPCCHANNEL.
	IPCPORT	0 to 15	*Interperipheral connection one to-end port*. Enter the port number where the IPC 1 To End connects.

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	IPCCHANNEL	0 to 31	*Interperipheral connection one to-end channel*. Enter the channel number where the IPC 1 to-end connects.
IPMLDATA		refer to subfield	*Interperipheral message link data*. This field contains subfield IPMLTYPE.
	IPMLTYPE	CCS	*Interperipheral message link type*. Enter the IPML application, CCS.

Datafill example

The connection of MSB0 to DTC0 appears in the following example. In the example the connection occurs from IPC0 channels 1 to 16 and IPC1 channels 1 to 16.

MAP example for table IPMLINV

```
IPMLNO  FROMPM    TOPM    IPC0FEND   IPC0TEN
     IPC1FEND   IPC1TEND   IPMLDATA
_____________________________________________________

0        MSB6 0    DTC 0   0 1        0 16
      1 1        1 16      CCS
```

Additional information

Information on error messages that can appear when you enter data in table IPMLINV appears in the following section.

Error messages

Operating company personnel cannot enter an IPML link on time slot 16 of a D30 trunk with CAS or CCS signaling type. If personnel attempt this entry, the following error message appears on the MAP terminal:

```
Channel 16 is allowed only for D30 trunks with CCSIPML
```

IPMLINV (end)

Operating company personnel can attempt to enter an IPML link on time slot 16 of a M20 or TTC trunk. When this condition occurs, the following error message appears on the MAP terminal:

```
Channel 16 is not allowed for M30 or TTC trunks
```

IPNETWRK

Table name

Internet Protocol Network Table

Functional description

To define network interfaces, table IPNETWRK stores information for the Internet. The information for the Internet is for the Internet network and the associated SuperNode subnetwork.

Table IPNETWRK is part of the installation of transmission control protocols/ Internet protocol (TCP/IP protocols) on the DMS SuperNode. This feature provides the following functionality:

- Adds third-party compatibility with host machines for connection setup and data exchange.
- Adds routing tables and algorithms to the IP as part of the addressing function.
- Provides the ability to enter and distribute information that you can configure that associates with the TCP/IP protocols through table control. Adds the distributed data manager.

For datafill for the Circuit Switched Data (CSD) product for MTX offices, refer to *Circuit Switched Data Deployment Guide*, 411-2131-500 or your next level of support.

Datafill sequence and meaning

If you want to enter an Ethernet interface unit (EIU) in table IPNETWRK as a default-routing EIU, the following conditions must occur:

- The EIU must be in table LIUINV.
- The EIU must be in the offline state.
- Table IPROUTER must be empty.

If these conditions do not occur, the system generates an error message to indicate the incorrect condition.

Table size

The following features control the maximum size of the table:

- Tuple IPNETWRK_SYSDATA in table SYSDATA specifies the table size.
- Tuple IPNETWRK_KEYITEM in table KEY_ITEM specifies the maximum number of keys.

IPNETWRK (continued)

Datafill

Datafill for table IPNETWRK appears in the following table

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
KEYREF		refer to subfield	*Key reference*. This field contains subfield TAB_KEY.
	TAB_KEY	0 to 15	*Table key*. Enter data in the network interfaces. You can enter a maximum of 16 entries.
CMIPADDR		IP address with four numbers from 0 to 255	*Computing module internet protocol address*. Enter the IP address of the computing module (CM). Separate each number in the address with a single space. For example 47 2 86 122 equals an IP address of 47.2.86.122.
SUBNET		1 to 22	*Internet protocol network subnet range*. Enter the range of the IP network subnet mask bit width. Entries out of the range for this field are not correct.
OPTION		refer to subfields	*Option*. This field contains subfields WORD_EIU and EIU_RNG. You can enter a maximum of two options. If you enter less than two options, end the entry with a $.
	WORD_EIU	EIU or EXTERNAL_ ROUTER	*Ethernet interface unit*. Enter EIU or EXTERNAL_ROUTER.
	EIU_RNG	0 to 750	*Ethernet interface unit range*. Enter the number assigned to the EIU.
PARMAREA		refer to subfields	*Parameter area*. This optional field contains subfield PARM. You can enter a maximum of 12 multiples of this field. If you enter less than 12 multiples, end the list of entries with a $.
	PARM	SCRNFLAG	*Parameter*. If a screening flag is a requirement, enter SCRNFLAG. Enter refinement SCRNFLAG.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
		EIU_ INTERFACE	To specify an EIU interface as the LAN interface for the CM, enter refinements for WORD_EIU and EIU_RNG.
		DFLT_GTWY _IPADDR	If a default gateway IP address for the network is a requirement, enter refinement GTWY_IPADDR.
		IOM_ INTERFACE	To specify an IOM interface as the LAN interface for the network, enter refinements IOMNUM and PORT.
		IOP_ INTERFACE	To specify an XA-Core IOP interface as the LAN interface for the network, enter refinements IOMNUM, PACKLET and PORT.
	DFLT_ INTERFACE	Y or N	To specify the default interface for the CM, enter Y. To not specify the default interface for the CM, enter N.
		NULLPARM	Enter NULLPARM for a null parameter.
	SCRNFLAG	Y or N	*Screen flag* . If the entry in subfield PARM is SCRNFLAG, enter this refinement. Enter Y if the status of the SCRNFLAG is active. If the status is not active, enter N.
	GTWY_ IPADDR	IP address with four numbers from 0 to 255	If the entry in subfield PARM is DFLT_GTWY_IPADDR, enter the default gateway IP address. Separate each number in the address with a single space. For example, 47 2 11 109 is equivalent to an IP address of 47.2.11.109.
	IOM_NUM	0 to 255	Enter the IOM number.
	PORT	0 to 255	Enter the associated IOM port number.
	PACKLET	0 to 255	Enter the associated packlet number.

Datafill example

Sample datafill for table IPNETWRK appears in the following examples.

IPNETWRK (end)

MAP examples for table IPNETWRK

```
KEYREF          CMIPADDR         SUBNET             OPTION
                                                              PARMAREA
_____________________________________________________________________
     0       47 48 32 11             12       (EIU   130)$
                                                   (SCRNFLAG N)$
```

```
KEYREF          CMIPADDR         SUBNET             OPTION
                                                              PARMAREA
_____________________________________________________________________
     1       47 59 128 3             12                          $
                              (EIU_INTERFACE EIU 1) (DFLT_INTERACE Y)$
     2      47 59 128 4             12                          $
                 (EIU_INTERFACE EIU 2) (DFLT_GTWY_IPADDR 47 59 128 1)$
```

Table history

TL09

Refinements EIU_INTERFACE and DFLT_INTERFACE under field PARMAREA were added in TL09. Added an additional datafill example to reflect the new fields.

TL06

The range of values for field KEYREF changed to 0 to 15. Before, the only entry allowed was 0. Refinements DFLT_GTWY_IPADDR, IOM_INTERFACE and IOP_INTERFACE were added to TL06.

The table was restructured. Now, you can enter the multiple network interfaces, IP addresses, associated with XA-Core input/output processors (IOP). You can enter the network interfaces that associate with input/output modules (IOM).

BCS36

Table IPNETWRK was restructured in BCS36.

IPROUTER

Table name

Internet Protocol Subnet Router Table

Functional description

Table IPROUTER is part of TCP/IP Protocols (transmission control protocols/internet protocol) on the DMS SuperNode. This feature provides the following functionality: The functionality of this feature provides the following:

- compatibility with third party host machines for connection setup and data exchange
- ability to route tables and algorithms to the IP as part of the address function
- ability to enter information and distribute setup information. The system associates this information with the TCP/IP through the use of table control and the distributed data manager.

Table IPROUTER stores Internet related information from each of the Ethernet interface units (EIU) or routers, in the SuperNode.

For datafill for the Circuit Switched Data (CSD) product for MTX offices, refer to *Circuit Switched Data Deployment Guide*, 411-2131-500 or your next level of support.

Datafill sequence and meaning

Enter the following tables before you enter table IPROUTER:

- LIUINV
- IPNETWRK

Note: Offline the EIUs to which the datafill refers before you enter table IPROUTER.

Table size

0 to 64 tuples

IPROUTER (continued)

Datafill

Datafill for table IPROUTER appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Description and action
RKEY		0 to 63	*Router key* Enter the identification number of the Internet protocol router. This entry is the key to the table.
ROUTER		see subfields	*Router* This field contains subfields WORD_EIU and EIU_RNG.
	WORD_EIU	EIU	*Ethernet interface unit* Enter EIU (Ethernet interface unit). Entries outside of this range are not correct.
	EIU_RNG	0 to 750	*Ethernet interface unit range* Enter the specified EIU that the system can access for the router index.
SNIPADR		table of four digits (0 to 255)	*Supernode side internet protocol address* Enter the SuperNode side Internet protocol (IP) address.
ETHIPADR		table of four digits (0 to 255)	*Ethernet side internet protocol address* Enter the Ethernet side IP address.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Description and action
ETHARP		YES or NO	*Ethernet address resolution protocol* Enter YES to activate EIU in address resolution protocol (ARP) activity within the Ethernet subnet. To deactivate ARP activity, enter NO. The default value for this field is YES.
ETHPARP		YES or NO	*Ethernet proxy address resolution protocol* Enter YES to activate EIU in address resolution protocol (ARP) activity within the Ethernet subnet. To deactivate ARP activity, enter NO. The default value for this field is YES.

Datafill example

Sample datafill for table IPROUTER appears in the following example.

MAP example for table IPROUTER

```
RKEY            ROUTER          SNIPADR         ETHIPADR ETHARP ETHPARP
_____________________________________________________________________________

   0           EIU 021  00  00  00  44 001 004 006 244    YES      YES
   1           EIU 201  47  64  64   4  47  36   0   5    YES      YES
```

Table history

BCS36

Field SNIPADR replaces field SNHOSTID in BCS 36. Default values for fields ETHARP and ETHPAR were added in BCS36.

IPSCP

Table name

Internet Protocol to Service Control Point

Functional description

Table IPSCP contains configuration data for each Ethernet link interface unit (ELIU) to service control point (SCP) connection. Each tuple in this table corresponds to an ELIU.

Datafill sequence and meaning

Enter table LIUINV must contain entries before you can enter information in table IPSCP.

Table size

A maximum of 63 tuples

Datafill

Datafill for table IPSCP appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Description and action
SCPKEY		0 to 62	*Service Control Point key*. This field is the key field.
ELIUNO		see to subfields	The *ELIU number*. Enter the ELIU number. This field contains subfields ELIU_NODE and ELIU_IDX.
	ELIU_NODE	ELIU	*ELIU node*. Enter ELIU to identify the node as an Ethernet link interface unit. ELIU is the only acceptable entry.
	ELIU_IDX	0 to 511	*ELIU number*. Enter the number or index assigned to the ELIU.
SOCKET1		see to subfields	*IP address first far-end application*. Enter the IP address of the first far-end application. For example, enter the location where the ELIU connects to the SCP. This field contains subfields IP_ADDR and APPL_PORT.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Description and action
	IP_ADDR	multiple with four integers in the range 0 to 255	*IP address*. Enter the internet protocol (IP) address for the first far-end application.
	APPL_PORT	1 023 to 5 000	*Application port*. Enter the port number for the first far-end application.
SOCKET2		see to subfields	*IP address second far-end application*. Enter the IP address of the second far-end application to which the ELIU connects. This field contains subfields IP_ADDR and APPL_PORT.
	IP_ADDR	multiple with four integers in the range 0 to 255	*IP address*. Enter the IP address for the second far-end application.
	APPL_PORT	1 023 to 5 000	*Application port*. Enter the port number for the second far-end application.

Datafill example

Sample datafill for table IPSCP appears in the following example.

MAP example for table IPSCP

```
SCPKEY   ELIUNO     SOCKET1                 SOCKET2
_____________________________________________________________
0       ELIU  0    141 226   8 123  1513  141 226   9 130
  2007
1       ELIU 10    132 131   7 156  2111 132 131   7 128
  1312
```

Table history

TL07

Table IPSCP was introduced in TL07.

IPSCP (end)

Additional information

There is no additional information.

IPTHRON

Table name

Internet Protocol Throttling Numbers

Functional description

Table IPTHRON contains the Internet protocol (IP) throttling numbers that control congestion. The IP is a network layer communication protocol. SuperNode applications that communicate with the Ethernet local area network (LAN) and an application processing unit (APU) require the IP. The APU is a link interface unit (LIU) node with group support operating system (SOS) and UNIX. The IP datagram flow from SuperNode hosts requires throttling. Throttling controls congestion in the shared communication resources between the local message switch (LMS) and the message switch (MS). The IP throttling numbers entered in this table indicate the level of throttling with each IP SuperNode host. The table indicates throttling in kilobytes (1024 bytes) per second (kbyte/s).

The recommended throttling numbers for an Ethernet interface unit (EIU) connected to a SuperNode Data Manager (SDM) are as follows.

- transmit capacity (TXCAPCT) is 5 kbyte/s
- receive capacity (RXCAPCT) is 15 kbyte/s

Site-specific engineering can have different throttling numbers.

The rules for this table are as follows:

- The LMS node name and number are key to each tuple.
- The first two fields for the tuple are numbers between 0 and 32 767. The numbers indicate the maximum IP transmit-and-receive rate in kbyte/s to and from the node. Enter this node as a key.
- The IP throttling numbers default to zero, or 100% throttling for all EIUs entered in table LIUINV. Throttling capacity numbers with values of zero do not allow the EIU to communicate to nodes across DS30 links. The APU datafill is optional in this table. If you do not enter APU in this table, the APU defaults to 0% throttling. A value of 0% throttling indicates that the system does not throttle IP traffic to and from the APU.
- Each tuple has eight optional fields.

IPTHRON (continued)

Each optional field contains the following:

— SuperNode node name like computing module (CM), file processor (FP), application processor (AP), EIU, or APU

— node index

— transmit capacity in kbyte/s

- Each optional field indicates the IP transmission rate from the node in the optional field to the EIU or the APU. Enter the EIU or APU as a key for the tuple.
- Enter the node name and index in the optional field first. Enter the name and the index in the correct inventory table. Table IPTHRON does not check the information in the optional field. For example, enter FPs in table APINV before you enter the FPs the IPTHRON tuple optional fields. The system accepts tuple in IPTHRON when you do not enter the FPs in table APINV.
- The transmit capacity of all of the nodes in the optional fields cannot exceed the LMS node capacity to receive. This condition applies to each tuple.
- For each tuple, the same node and node number must appear only one time in the optional fields.
- The system does not perform any other type of verification for a tuple. Maintenance personnel must check the location of the EIUs and APUs in the optional fields. The EIUs and the APS cannot have the same LIM as the LMS node.
- You can add, modify, or delete table entries when the node is online. You must enter the node in table LIUINV before you can enter the node in table IPTHRON. When you add EIUs to table LIUINV, the system automatically enters EIUs in the IPTHRON with default values. The default values have a transmit capacity of zero and receive capacity of zero. When you delete the EIU from table LIUINV the system deletes the EIU from IPTHRON. You cannot add or delete the EIU directly from table IPTHRON.
- The table does not depend on the other tables.

For datafill for the Circuit Switched Data (CSD) product for MTX offices, refer to *Circuit Switched Data Deployment Guide*, 411-2131-500 or your next level of support.

IPTHRON (continued)

Datafill sequence and meaning

Enter the following tables before you enter table IPTHRON:

- LIUINV
- inventory tables for nodes in field SNNODE in table IPTHRON

Table size

0 to 755 tuples

The table can contain the maximum number of APU nodes allowed for table LIUINV and an additional four tuples.

Datafill

Datafill for table IPTHRON appears in the following table.

Field descriptions

Field	Subfield or refinement	Entry	Description and action
LMSNODE		see subfields	*Local message switch node* This field is the first and key field of the table. This field contains subfields LIUNAME and LIUNO.
	LIUNAME	APU or EIU	*Link interface unit name* Enter the LIU name. This field indicates an IP capable node connected to the LMS. You must enter the node in table LIUINV before you can enter the node in subfield LIUNAME. Enter APU for application processor unit. Enter EIU for Ethernet interface unit.
	LIUNO	0 to 750	*Link interface unit number* Enter the node index.
TXCAPCT		0 to 32 767	*Transmit capacity* Enter the IP transmission rate in kbyte/s from the node to all other SuperNode IP nodes.
RXCAPCT		0 to 32 767	*Receive capacity* Enter the IP receive rate in kbyte/s from all other SuperNode nodes to the node.

IPTHRON (continued)

Field descriptions

Field	Subfield or refinement	Entry	Description and action
OPTION		see subfield	*Option* This field contains subfield SNNODE.
	SNNODE	AP, APU, CM, EIU, ELIU, FP or MS	*SuperNode node* Enter the name of the SuperNode node. Enter the node first in the inventory table of the node. For example, enter FP in table APINV. You can enter a maximum of eight nodes. If the system requires a maximum of seven nodes, end the list with a $. Enter AP. Enter refinement SMNINDEX. Enter APU. Enter refinement APUINDEX. Enter CM. Go to refinement TXCAPCT. Enter EIU. Enter refinement EIUINDEX. Enter ELIU. Enter refinement ELIUINDEX. Enter FP. Enter refinement SMNINDEX. Enter MS. Enter refinement MSINDEX.
	SMNINDEX	0 to 99	*Synchronized and matched node index* If the entry in field SNNODE is AP or FP, enter the synchronized and matched node (SMN) index. Go to refinement TXCAPCT.
	APUINDEX	0 to 750	*Application processor unit index* If the entry in field SNNODE is APU, enter the APU index. Go to refinement TXCAPCT.
	EIUINDEX	0 to 750	*Ethernet interface unit index* If the entry in field SNNODE is EIU, enter the EIU index. Go to refinement TXCAPCT.

Field descriptions

Field	Subfield or refinement	Entry	Description and action
	ELIUINDEX	0 to 750	*Ethernet link interface unit index* If the entry in field SNNODE is ELIU, enter the ELIU index. Go to refinement TXCAPCT.
	MSINDEX	0 to 1	*Message switch index* If the entry in field SNNODE is MS, enter the MS index. Go to refinement TXCAPCT.
	TXCAPCT	0 to 32767	*Transmit capacity* Enter the IP transmission rate in kbyte/s from node to node. The node name and number are key to this tuple.

Datafill example

Sample datafill for table IPTHRON appears in the following table.

MAP example for table IPTHRON

```
LMSNODE   TXCAPCT   RXCAPCT
                                                                OPTION
_____________________________________________________________________

EIU 104      500      1500
                                 (  ELIU  102   15) (  ELIU  101   30)$
```

Table history

NA017

Modify text to reflect standard and consistent use of the term kilobyte.

TL07

The LIU type ELIU to field SNNODE was added in TL07.

TL05

Added recommended throttling numbers for an EIU connected to an SDM in TL05.

IPTHRON (end)

BCS35

Table IPTHRON was introduced in BCS35.

ISAXLA

Table name

Integrated Services Access Translation Table

Functional description

Table ISAXLA provides the service parameters for integrated services access (ISA) calls that employ the service identifier (SID) for services applied to each call (primary rate access [PRA]).

ISA allows call-by-call access to public and private network services through one common integrated access facility. The PRA signaling protocol provides enhancements to the following services: originating public (PUB), private (PVT), outward wide area telephone service (OUTWATS), and tie trunks (TIE) and PUB, PVT, WATS, TIE, foreign exchange (FX) trunks, and inward WATS (INWATS) terminating over a single PRA.

Note: For more information on the above services, see table LTCALLS.

ISA also allows the T1 access facility to evolve from a statically defined access arrangement to an access pipe, in which any open access circuit can originate or terminate any switched service the customer subscribes to. Calls originating over an ISA PRA facility are handled based on the call type.

Table ISAXLA defines the services-related data associated with ISA calls that use the SID to determine translations and routing for calls datafilled in table LTCALLS. The table is accessed by an eight-character router name (field IRTRNAME) and SID range (fields SIDFROM and SIDTO) to form the key. Once the logical terminal identifier (LTID) is determined from the trunk common language location identifier (CLLI), and the call type is determined from the network specific facilities (NSF) information, table LTCALLS is accessed. If the selector is XLAISA, the SID from the NSF is used with the router name (field RTRNAME) to access table ISAXLA (field IRTRNAME).

For ISDN user part (ISUP) calls, ISA translations are based on the multiple business group number (Common Channel Signaling 7 [CCS7] communications partition).

Datafill sequence and implications

All router names must be deleted from tables MBGXLA and LTCALLS before the last tuple in table ISAXLA with that router name can be deleted.

Table OFRT must be datafilled before table ISAXLA if field RTEID is datafilled.

Table size

0 to 30 000 tuples

Datafill

The following table lists datafill for table ISAXLA.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
IRTRNAME		alphanumeric (up to 128 8-character names)	*Router name* Enter up to 128 router names datafilled in table LTCALLS under the XLAISA selector, or in field IRTRNAME in table MBGXLA. Multiple tuples with the same router name are allowed.
SIDFROM		0 to 1023	*Service identifier from* Enter the lower boundary of the service identifiers (SID) values that continue translations and routing.
SIDTO		0 to 1023	*Service identifier to* Enter the upper boundary of the SID values that continue translations and routing.
Note 1: The SIDFROM and SIDTO values form a range of values that can be datafilled over the entire range of the SIDs, over a subrange of the SIDs, or over one single SID. ***Note 2:*** The SIDFROM and SIDTO values cannot overlap each other for the same router name. ***Note 3:*** A maximum of 128 different SIDFROM and SIDTO combinations can be specified for the same router name.			
RTEID		see subfield	*Route identifier* This field consists of subfield TABNAME. This is an optional table route reference.

ISAXLA (end)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	TABNAME	IBNRT2 IBNRT3 IBNRT4 IBNRTE OFR2 OFR3 OFR4 OFRT	*Table name* Enter the routing table name. If no route identifier is used, enter $. Any entry outside the range of indicated values for this field is invalid.
INDEX		0 to 1023 or alphanumeric	*Index* Enter the index into the routing table. If the entry in subfield TABNAME is TOPS, enter the call origination index into table TOPS.

Datafill example

The following example shows sample datafill for table ISAXLA.

MAP display example for table ISAXLA

```
IRTRNAME  SIDFROM   SIDTO                          RTEID
_____________________________________________________________

 ANANAME       10      40                        OFRT 3
```

Table history

BCS31

Table ISAXLA introduced

ISDNPARM

Table name

Integrated Services Digital Network Parameter (ISDNPARM)

Functional description

The ISDNPARM table allows each primary rate interface (PRI) to specify how it handles optional information elements within Q.931 messages. Optional information elements can be transported in an access transport parameter (ATP) of an ISUP message, mapped to a non-ATP parameter in an ISUP message, or blocked.

> ***Note:*** Transporting by way of ATP and mapping to a non-ATP ISUP parameter, apply only to messages arriving at a PRI on a PRI-to-ISUP call.

This table uses a three-part key consisting of a name, the message type, and the message direction. The name associates ISDNPARM tuples with a Primary Rate Interface defined in table TRKSGRP.

Datafill sequence and implications

Table TRKSGRP must be datafilled after table ISDNPARM since the value of the PARMNAME must first be datafilled as a NAME in table ISDNPARM in order to datafill an ISDN trunk in table TRKSGRP with a PARMNAME.

Table size

The minimum table size is 3 tuples.

The maximum table size of 384 is determined according to the following criteria:

- maximum number of unique names allowed: 64
- maximum number of different message types: 3
- maximum number of different message directions: 2

  64 * 3 * 2 = 384

ISDNPARM (continued)

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table ISDNPARM.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
NAME		Up to 8 characters	NAME. The NAME allows each PRI to specify a list of messages, optional information elements, and actions that apply to that particular PRI. A different NAME must be specified if one PRI handles optional information elements differently than another. ***Note:*** This is the first part of the 3-part key.
MSGTYPE		SETUP, NOTIFY, ALERT	MESSAGE TYPE. The message type field specifies to which particular Q.931 message that the optional information elements and actions apply. ***Note:*** This is the second part of the 3-part key.
MSGDIR		IN, OUT, BOTH	MESSAGE DIRECTION. This field specifies whether the actions apply to incoming or outgoing messages on the PRI. ***Note:*** This is the third part of the 3-part key.
DFLTACT		BLK, MAP, ATP	DEFAULT ACTION. This field specifies an action which applies to all optional information elements that are not explicitly listed in the PARMACT field and can be used to reduce the number of vector elements specified in the PARMACT field.
PARMACT	PARM and ACTION	Vector of up to 14 multiples	PARAMETER ACTION. This field is a vector where each item in the vector specifies an optional information element and the appropriate action to take for that optional information element.

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
PARM		CDS, CGS, CN , SH5, SH6, SH7, DIE, FAC, HLC, IRQ, OCN, RGN, RNN, UNK	PARAMETER TYPE
ACTION		BLK, MAP, ATP	ACTION. The action for each optional information element can be one of the following values: • BLK (block) • MAP (map to a non-ATP parameter) • ATP (transport in an ISUP ATP)

Datafill example

The following example shows sample datafill for table ISDNPARM.

```
COMMAND     NAME        MSGTYPE MSGDIR          DFLTACT
INP         DEFAULT     NOTIFY      BOTH        MAP
            DEFAULT     ALERT       BOTH        MAP

PARMACT
PARM        ACTION
UNK         BLK
UNK         BLK
```

ISDNPROT

Table name

ISDN Protocol Variant Timer Table

Functional description

Table ISDNPROT holds timer interval data for primary rate interface (PRI) protocol variants. To access a location in the table, a two-part key is used. The key consists of the protocol variant (field PROTVAR) that defines the PRI protocol being used, and the changed protocol variant timer (field PVCAPPL) that specifies the set of timers to access. The timer interval values are passed to the extended multi-processor system (XMS)-based peripheral module (XPM) in a series of messages. The XPM receives all the information on protocol variant timer interval values, whether they are used by an XPM or not.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table ISDNPROT.

Table size

2 to 8 tuples

Memory is statically allocated for eight tuples at initial program load (IPL).

The minimum size is obtained by assuming an XPM uses only one protocol. Only two tuples need to be downloaded, one for the user side and one for the network side.

The maximum size is obtained by assuming that an XPM uses all the protocol variants. In this case there are four protocol variants and two changed protocol variant timer applications. Therefore, the maximum number of tuples is eight (4×2).

Datafill

The following table lists datafill for table ISDNPROT.

Field descriptions (Sheet 1 of 3)

Field	Subfield	Entry	Explanation and action
PROTVAR		AUSTPRI, ETSIPRI, EVN4PRI, INSPRI, N449PRI, NTM1PRI, NTNAPRI, NIPRI, QSIGPRI, U449PRI, or U459PRI	*Protocol variant* Enter a primary rate interface (PRI) protocol variant. Field PROTVAR depends on the PRI protocol variant software packages ordered by the operating company. The listed values consist of all the PRI variants supported by the DMS-100 switch. Refer to switch printout of table ranges for the particular switch in question before datafilling field PROTVAR.
PVCAPPL		NETTIMER or USRTIMER	*Changed protocol variant timer* Enter the changed protocol variant timer. Enter NETTIMER to change the network timer. Enter USRTIMER to change the user timer. Each PRI protocol defines two sets of timers. This field identifies the timer that the operating company needs to change. ***Note:*** USRTIMER must be used if the protocol variant is QSIGPRI.
APPLDATA		PRITIMER	*Application data* Enter PRITIMER for the primary rate interface timer.
TMR_OPT		see subfields	*Timer options* This field consists of subfields TIMER_NAME and TIMER_VALUE. A maximum of 15 multiples of field TMR_OPT can be entered in table ISDNPROT. If less than 15 multiples are required, end the list with a $ (dollar sign).

ISDNPROT (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield	Entry	Explanation and action
	TIMER_NAME	T301, T302, T303, T304, T305, T306, T308, T309, T310, T313, T314, T316, T317, T321, T322, T323	*Timer names* Enter the required PRI timer used with the selected protocol variant in table PROTVAR. This field stores the timer names. 16 timers are specified; all protocol variants use the same timer names. ***Note 1:*** Although 16 timers are specified, some of the protocol variants use a subset of these timers. Unused timers are set to 0 (zero) at initialization time. The operating company has access to the unused timers, but any change made to the unused timers for a particular protocol variant has no effect on call processing for that variant. ***Note 2:*** Protocol variant QSIGPRI uses all timers except T306, T317, and T323. The central control (CC) of the DMS-100E switch stores the default values for all timers. At initialization, the CC checks which PRI software packages are loaded. The CC loads table ISDNPROT with the default timer interval values for all the PRI protocol variants used on the switch. If packages for Japan PRI and North American PRI are loaded, default timer interval values for these protocol variants (for both user and network side) are loaded in table ISDNPROT.

Field descriptions (Sheet 3 of 3)

Field	Subfield	Entry	Explanation and action
			Note 1: Timer T323 is used when the B-channel availability feature is activated in table LTDATA. T323 is started when a B-channel availability SERV message is sent, and reset when a SERV ACK message is received. If T323 times out, the network side resends the SERV message once. T323 has a range of 30 to 120 seconds in 10 second intervals, set by a stored integer value. The default value is 12, which is equivalent to the maximum time, 120 seconds. B-channel availability is activated in table LTDATA by field NO_BCH_SERV. ***Note 2:*** Timer T323 can be added only as a network timer for the NI-2 protocol variant. ***Note 3:*** Timer T314 can be used for the QSIG PRI protocol variant. The default value is set to 4 seconds. The value range is 4 to 6 seconds. T314 prevents the message reassembly function in the DMS-100E switch from waiting indefinitely for the next segment of a segmented message from the sending switch or PBX. The DMS-100E switch starts or restarts T314 when it receives a non-final SEGMENT message from the D-channel. If T314 times out, all the SEGMENT messages that relate to the affected reassembly process are discarded, and the DMS-100E switch generates an ISDN log.
	TIMER_VALUE	0 to 1023	*Timer value* Enter the required timer value. The timer interval value is specified in seconds.

Datafill example

The following example shows sample datafill for table ISDNPROT.

The following example consists of a NETTIMER on INSPRI with three multiples of timer options.

ISDNPROT (continued)

MAP display example for table ISDNPROT (INSPRI)

```
PROTVAR  PVCAPPL                                APPLDATA
_____________________________________________________________

 INSPRI NETTIMER PRITIMER (T301 109) (T310 15) (T314 4) $
```

On initialization, the timer interval values loaded into the XPM are default values. To alter a timer value that has not previously been altered, the operating company must first position on table ISDNPROT.

The following example consists of a USRTIMER on QSIGPRI with three multiples of timer options.

MAP display example for table ISDNPROT (QSIGPRI)

```
PROTVAR  PVCAPPL                                APPLDATA
_____________________________________________________________

 QSIGPRI USRTIMER PRITIMER (T301 109) (T310 15) (T315 4) $
```

The following table lists the default timer values for QSIGPRI:

QSIGPRI associated timers (Sheet 1 of 2)

Timer	Value in seconds	Start cause
T301	180	On receiving ALERTING
T302	10	On sending SETUP ACKNOWLEDGE; restarted on receipt of INFORMATION message
T303	4	On sending SETUP
T303	2.5	On resending SETUP

QSIGPRI associated timers (Sheet 2 of 2)

Timer	Value in seconds	Start cause
T304	30	On receipt of SETUP ACK. Retransmission of INFORMATION restarts T304
T305	30	On network sending DISCONNECT
T308	4	On sending RELEASE
T309	90	On SCM Disconnection. Calls in stable states are not lost.
T310	60	On receiving CALL PROCEEDING
T313	4	On sending CONNECT (user only)
T314	4	On receiving a SEGMENT
T316	120	On sending RESTART
T322	4	On STATUS ENQUIRY sent

Timer errors

The following error messages can be incurred when datatfilling T323 for NI-2:

- Addition of Timer T323 with protocol variant other than NI-2.

  ```
  TIMER 323 CAN BE PROVISIONED ONLY FOR NI-2PRI
  ```

- Addition of Timer T323 as a user timer with protocol variant of NI-2.

  ```
  TIMER 323 CAN BE PROVISIONED ONLY FOR NI-2PRI
  ```

ISDNPROT (end)

- Addition of Timer T323 with a timeout value more than the maximum.

  ```
  INVALID TIMER T323: TIMER T323 MUST BE LESS THAN OR EQUAL TO
  180 SEC
  ```

- Addition of Timer T323 with a timeout value of 0 restores the default time setting.

  ```
  RESTORING DEFAULT TIMER VALUE
  ```

Table history

EUR010

Table ISDNPROT is modified to detail changes in the application of T314.

EUR008

Table ISDNPROT is modified to include option value EVN4PRI as a valid entry in field PROTVAR.

NA008

Table ISDNPROT was modified to include T323 as a valid entry in field TIMER_NAME with an explanation.

EUR006

New protocol variant, QSIGPRI is added to the first part of the key field PROTVAR and USRTIMER is specified as the only setting for the second part of the key field PVCAPPL.

BCS36

Field PRITIMER was removed and joined with field APPLDATA.

BCS34

Table ISDNPROT was introduced.

ISERVOPT

Table name

International Service Option

Functional description

Operating company personnel use table ISERVOPT to configure switch information for service-related features. This table groups multiple related pieces of data in a single entry.

Each service that uses this table provides a subfield related to that service. Each subfield asks for information in a format relevant to the service. This table accepts an entry if operating company personnel enter a service that is in the load.

Each tuple in table ISERVOPT puts related office parameters in a group. The tuple shows the association between the office parameters.

Datafill sequence and meaning

Enter datafill in table IBNXLA before activating the Call Forward to Announcement (CFTANN)/Call Forward to Operator (CFO) option.

Enter the translator name in table XLANAME before entering the same data in table ISERVOPT for CFO_XLA and CFTAN_XLA.

There is no requirement to datafill tables in a specific order for the implementation of the CCBS (Call Completion to Busy Subscriber) activity.

Table size

Up to 100 tuples

ISERVOPT (continued)

Datafill

The following table lists datafill for table ISERVOPT.

Field descriptions

Field	Subfield	Entry	Explanation and action
SOPTSKEY		alphanumeric string	Service Options Key. This field contains the feature name. The string accepts only feature names that are part of the software load.
SOPTSVAR		alphanumeric string	Service Options Variable. This field contains subfields to control switch-wide performance of the feature. Enter data for each selected option and related subfields. Possible entries for field SOPTSVAR are: ACBAR_TLR, ACCTCODE, ACRJ, AR, CCBS, CEPT_CFX, CFO_XLA, CFTAN_XLA, CND, CNDDISP, CRSP, ECMDNFMT, FNT, ICONF, ICT, ILRCLS, INTNI1, ISUPUTR, IWUC, MCTBYDP2, MCTVAR, MODDN, MONA, NOCOLL, PBMOH, PDDCHANG, PPRIOUTP, RAG, RCODE, RCTL, REVCSE, RMV04ALL, SCRNDN, SFICHK, SLEOPT, UTRCHK, VERDDN and VMLON.
		FNT	This field provides a way to configure the switch behavior either to suppress the Answer message or to send a No-charge indication to the originating switch.The default value is OFF.
		CRSP, RAG, or NOCOLL	This field provides a way to disable the feature without removing the option from all the affected lines. The default value of this is ON.

Field descriptions

Field	Subfield	Entry	Explanation and action
	SUPANSTR	ON or OFF	This field provides a way to configure the switch behavior either to suppress the Answer message or to send a No-charge indication to the originating switch. The default value is OFF.
	STATE	ON or OFF	This field provides a way to disable the NOCOLL feature without removing the option from all the affected lines. The default value of this is ON.

KEY = ACBAR_TLR

If the entry in field SOPTSKEY is ACBAR_TLR (TLR CLASS ACB/AR functionality), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		ACBAR_TLR	
SOPTSVAR	OPTION	ACBAR_TLR	
	ACBAR_TLR	Y or N	ACBAR_TLR controls activation of the TLR CLASS ACB/AR functionality. When ACBAR_TLR is set to N, the TLR CLASS ACB/AR feature functionality has no impact. When ACBAR_TLR is set to Y, the TLR CLASS ACB/AR feature functionality is activated. The default is N.

KEY = ACRJ

If the entry in field SOPTSKEY is ACRJ (Anonymous Call Rejection), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		ACRJ	
SOPTSVAR	OPTION	ACRJ	

ISERVOPT (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	CHKCAUSE	Y or N	Check Cause. This field determines if the ACRJ feature checks the cause of no information in the caller identification. If the cause is “user_requested”, the feature does not reject the anonymous caller. For Japan, enter Y, otherwise enter N.
	ACRJ_CRG	JPN or OFF	Call charge option. Enter JPN for Japan market activation. Enter OFF (the default value) to deactivate the feature.

KEY = AR

If the entry in field SOPTSKEY is AR (Automatic Recall), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		AR	
SOPTSKEY	OPTION	AR	Automatic Recall. Enter AR to activate the AR option.
SOPTSVAR	CALLQ	OFF, ON, or no datafill	Call queueing. When the terminating line is busy, setting the option to OFF applies busy treatment. When the terminating line is busy, setting the option to ON, or entering no datafill, automatically puts the caller into a queue and then informs the caller, by a special ring, when the dialed line becomes free.

ISERVOPT (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	ARVAR	0, 1, or 2	AR Variant. This field determines the variant of AR in use. The functionalities that vary according to this value are: • AR Busy Call Queueing protocol • Blocking of AR calls to Private Numbers • AR Last Number Announcement • Last Caller ID Disabling • Language-specific announcements • AR support for generic numbers • Restricting AR by Nature of Address and Numbering Plan Enter 0 for Australia, 1 for Europe or 2 for Japan.
	ACTDIG	0 to 9	This subfield captures the digit used for AR recall activation. The default ACTDIG values are 1 for CEU (except UK) and ABSM, and 3 for ABSK and UK.
	PRIVBLK	NOBLK, ALL, or CARSCRN	This subfield indicates whether blockage of AR recall calls to Private DNs can occur. This subfield is a mirror of the AR_BLOCK_PRIVATE_CTX office parameter, as they both control the same behavior and always have identical values. For Japan and Europe, enter ALL. Otherwise, enter NOBLK.
	DACTOPT	Y or N	
	CANCDIG	0 to 9	When DACTOPT is datafilled as Y, DACTOPT prompts for datafill in the CANCDIG subfield.

ISERVOPT (continued)

KEY = CCBS

If the entry in field SOPTSKEY is CCBS, the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		CCBS	
SOPTSVAR	OPTION	CCBS	
	DISTINCT_ RECALL_ RING	Y, N	Distinctive Recall Ringing: This field specifies whether the distinctive recall ringing service is available. A value of ‘Y’ indicates that the Distinctive Recall Ringing is activated. A value of ‘N’ indicates that the Distinctive Recall Ringing is deactivated, resulting in the CCBS recall appearing like a normal call.
	SINGLE_ DIGIT_ AND_ANN	Y, N	Single Digit Activation and Announcements: This field specifies whether the single digit activation *and* announcements service is available. A value of ‘Y’ indicates that the Single Digit Activation and Announcements is activated. When set to ‘Y’, the additional field DIGIT has to be datafilled. A value of ‘N’ indicates that the Single Digit Activation and Announcements is deactivated.
	DIGIT	0-9	Digit: Specifies which digit has to be dialed for the single digit activation and announcements service to become available (see subfield SINGLE_DIGIT_AND_ANN).

Distinctive recall ringing

This aspect of CCBS operation applies to MMP lines only, and not to Succession lines.

CCBS recall ringing pattern is similar to the Ring AGain (RAG) service V5.2 support, that is, ftr_dist_ringing_04. Only the ringing can be switched *on* or *off*, the ringing pattern cannot be changed.

- For IBN lines

  The ringing pattern for the CCBS recall (when the destination user becomes free and the originator is rung back) may be different to the regular ringing pattern as applied for normal calls. This change is dependent on the datafill of table ISERVOPT.

- For EBS lines

  To indicate the CCBS recall for EBS sets, the lamp for the CCBS key on the handset will change from solid to blinking. This facility is additional to the distinctive ringing pattern. This change is dependent of the datafill of table ISERVOPT.

Activation - SINGLE_DIGIT_AND_ANN = Y

CCBS can be activated by pressing the the number associated with DIGIT during a CCBSACT announcement (the announcement will stop) or afterwards within a specified period of time (20 seconds). After this timer expires the calling CCBS user hears the busy tone and CCBS activation is no longer possible.

Activation - SINGLE_DIGIT_AND_ANN = N

When single digit activation is not enabled, the method of activation varies for Bellcore and CEPT operation.

- for Bellcore, the user activates CCBS by first performing Hook-Flash (typically using the ‘R’ button). A special tone is applied. The user then selects key sequence *37
- for CEPT, the user activates CCBS with key sequence *37#

Note: 37 is a commonly used code for CCBS activation and deactivation, but it is not mandatory. This code is datafilled in translations.

ISERVOPT (continued)

Deactivation

The method of deactivation varies for Bellcore and CEPT operation.

- for Bellcore, the user deactivates CCBS by first performing Hook-Flash (typically using the ‘R’ button). A special tone is applied. The user then selects key sequence #37
- for CEPT, CCBS is deactivated with key sequence #37#

Interrogation

For CEPT operation only, it is possible to interrogate CCBS to see if there are any pending CCBS requests. Interrogation is activated with key sequence *#37#

Announcements

If SINGLE_DIGIT_AND_ANN = Y, the following announcements are made during CCBS operation:

- CCBSACT:

  “The user you called is busy. For CCBS activation press digit 5.”

  This announcement is made when the caller connects to a busy subscriber. The digit can be pressed during the announcement (the announcement will stop) or within a period of 20 seconds after. After this timer expires, the caller hears the busy tone and CCBS activation is no longer possible.
- CCBSCONFIRM:

  “Your order was successful”
- CCBSHORTDENY:

  “Your order is not possible now”
- CCBSLONGDENY:

  “Your order is not possible”
- CCBSINTERON:

  “You have pending CCBS requests”

  This anouncement applies to CCBS interrogation for CEPT only.
- CCBSINTEROFF:

  “You do not have pending CCBS requests”

  This anouncement applies to CCBS interrogation for CEPT only.

Tones

If SINGLE_DIGIT_AND_ANN = N, the following tones are generated during CCBS operation:

- CCBSACT: User busy tone when reaching busy destination.
- CCBSCONFIRM: Positive acknowledge tone.
- CCBSHORTDENY: Negative acknowledge tone.
- CCBSLONGDENY: Negative acknowledge tone.
- CCBSINTERON: Positive acknowledge tone.

  This tone instance applies to CCBS interrogation for CEPT only.
- CCBSINTEROFF: Negative acknowledge tone.

  This tone instance applies to CCBS interrogation for CEPT only.

If a user calls a busy destination and already has an active CCBS request, no announcement will be played because a user can only have one request. The user will hear a busy tone even when announcements are datafilled to be played.

KEY = CEPT_CFX

If the entry in field SOPTSKEY is CEPT_CFX, the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		CEPT_CFX	
SOPTSVAR	OPTION	CEPT_CFX	The option field

ISERVOPT (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTIONAL_ HASH	Y,N	Optional Hash. This field is used for allowing the last hash (#) digit in the CEPT dialing sequence to be optional. Enter ‘Y’ (Yes) to indicate that the # is optional. Enter ‘N’ (No) to make the use of the last # mandatory. If this field is not datafilled, the default will be interpreted as ‘N’. This field should be set to ‘Y’ for the Papua New Guinea market.
	FROM_RANGE	integer in the range: 0 - 18	From Range. Indicates the start of the forward directory number digit range. If this field is not datafilled, there will be no digit range check. This field should be set to ‘4’ for the Papua New Guinea market.
	TO_RANGE	integer in the range: 0 - 18	To Range. Indicates the end of the forward directory number digit range. If this field is not datafilled, there will be no digit range check. This field should be set to ‘15’ for the Papua New Guinea market.

ISERVOPT (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	PRG_ OVERRIDE	Y,N	Programme override. This field allows reactivation of CEPT Call Forwarding to be programmed. Enter ‘Y’ to allow reactivation of CEPT Call Forwarding by programming a forward directory number. Deactivation is not required beforehand. If this field is not datafilled, the default will be interpreted as ‘Y’. Enter ‘N’ to ensure that the user cannot override activation.
	ACTIVATE_ WITHOUT_ PRG	Y,N	Activate without programming. This field is used to cause activation of the feature without programming a forward directory number. Enter ‘Y’ to activate CEPT Call Forwarding. Activation without number programming can be done via a control procedure. Enter ‘N’ to disable CEPT Call Forwarding, meaning activation without programming is not permitted. This field should be set to ‘N’ for the Papua New Guinea market.
	ISUP_ RESTRICTION	Y,N	ISUP restriction. This field is used for diversion restriction from ISUP trunks. Enter ‘Y’ to allow diversion restriction from ISUP trunks. Enter ‘N’ to disable diversion restriction from ISUP trunks.

ISERVOPT (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	CDND_BSY_ TRTMT_SUPP	Y,N	CDND Busy Treatment Supplementary: Specifies if the CDND option is assigned. If a call is terminating on a line with active CDND and the announcement code is not in data schema table CDANNS, the subscriber will receive either a busy treatment tone (CEPT version) or a NACK tone (Papua New Guinea market). A value of ‘Y’ indicates that the CDND option is assigned. A value of ‘N’ indicates that the active CDND feature is not assigned to the subscriber when “00” key does not exist in data schema table CDANNS, but the inactive CDND feature can be assigned to the subscriber in this state. ***Note:*** The administrator is not allowed to assign the CDND option in an active state to a subscriber in the Papua New Guinea (PNG) market if the “00” key does not exist in data schema table CDANNS. Therefore this boolean will always be set to ‘N’ for the PNG market.

KEY = CFO_XLA

If the entry in field SOPTSKEY is CFO_XLA, the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		CFO_XLA	
SOPTSVAR	OPTION	CFO_XLA	
	CFO_XLA_ NAME	IBN_XLA_ NAME	Call Forward to Operator Translator. This field specifies the CFO translator name for routing through normal translation tables.

KEY = CFTAN_XLA

If the entry in field SOPTSKEY is CFTAN_XLA, the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		CFTAN_XLA	
SOPTSVAR	OPTION	CFTAN_XLA	
	CFTAN_XLA_ NAME	IBN_XLA_ NAME	Call Forward to Announcement Translator. This field specifies the CFTANN translator name for routing through normal translation tables.

KEY = CFWON

If the entry in field SOPTSKEY is CFWON (TLR CFW functionalities), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		CFWON	Short Interdigit Timing
SOPTSVAR	OPTION		
	RCNTACT	Y or N	Redirect Count Timing Active. This field determines if the TLR CFW redirection count option is active. The default is N
	AMAON	Y or N	Automatic Message Accounting Active. This field determines if the TLR CFW AMA option is active. The default is N
	TRMNT	Y or N	This field determines if the TLR CFWV to NACK for call forward double activation is active. The default is N

ISERVOPT (continued)

KEY = CND

If the entry in field SOPTSKEY is CND (Calling Number Delivery), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		CND	
SOPTSVAR	OPTION	CND	Calling number delivery
	RNGSPLSH	rs5-rs45	Ring splash timer. Operating company personnel use this field to enter the required duration of ring splash in units of ten milliseconds.
	CND_LANG	DEFAULT, TURKISH	This field defines the language of choice for the CND exception messages.
	ASK_STATUS	Y or N	This field toggles CND status prompting.
	VARIANT	BELLCORE, ETSI, or NTT	Calling number delivery variable. Operating company personnel use this parameter to control the message format and signaling protocol for the CND feature.
	ACCESS_ CODE	Y or N	Access code. Enter Y or N to indicate if access code is to be activated. This parameter is only available for variants ETSI and BELLCORE.

KEY = CNDDISP

If the entry in field SOPTSKEY is CNDDISP (Calling Number Delivery Display), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		CNDDISP	
SOPTSVAR	OPTION	CNDDISP	Calling number delivery.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	CLIDOPT	Y or N	CLIDOPT controls whether to fill up the DN parameter or send a 0 or a P to the display. CLIDOPT also enables a check of the network and TCAP option before the number is displayed. If CLIDOPT is set to Y and the calling number is available, the digits are displayed. If CLIDOPT is set to N, TCAP options are checked in table CUSTSTN. For Australia, enter Y, otherwise enter N.

KEY = CRSP

If the entry in field SOPTSKEY is CRSP (change ring shift pattern), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		CRSP	
SOPTSVAR	OPTION	CRSP	
	CRSP	Y or N	Change Ring Shift Pattern. This field determines if the switch modifies the ring shift pattern on Meridian Business Set (MBS) conference calls. For Australia, enter Y, otherwise enter N.

KEY = FNT

If the entry in field SOPTSKEY is FNT (Free Number Termination), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY	FNT		
SOPTSVAR	OPTION	FNT	This field provides a way to configure the switch behavior either to suppress the answer message or to send a No-charge indication to the originating switch. The default value is OFF.

ISERVOPT (continued)

KEY = FTRACT

If the entry in field SOPTSKEY FTRACT, the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY	FTRACT		
SOPTSVAR	OPTION	FTRACT	
	ASSIGN, DEASSIGN, ADMACT, ADMDEACT, ADMPROG, SUBACT, SUBDEACT, SUBPROG, USAGE, INTERROG	00 to 99	The corresponding entry is published in MTR156 log for the related feature.

KEY = ICONF

If the entry in field SOPTSKEY is ICONF (International Conference), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		ICONF	
SOPTSVAR	OPTION	ICONF	

ISERVOPT (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	ALLOW_ICT_IN_I3WC	Y,N	Allow International Call Transfer (ICT) in I3WC: Offers a choice to whether ICT will be included in CEPT I3WC option or not, for the Papua New Guinea (PNG) market. Call transfer is included in I3WC option for PNG market. But in CEPT version, there is a separate ICT option to handle call transfer functionality. Enter ‘Y’ to allow ICT in I3WC. This means that the call transfer is a default in CEPT I3WC and there is no need for a separate call transfer option. But if the ICT option is also assigned, call transfer will work. Enter ‘N’ to disallow ICT in I3WC. This means that the subscriber who has I3WC option can’t transfer the call until it has a separate ICT option. This field is mandatory.
	CLF_FLASH_IGNORE	Y,N	Offers a choice to whether Calling Line Identity by Flash (CLF) will be ignored or not, during CLF and ENQ/I3WC interactions for the Papua New Guinea (PNG) market. A PNG I3WC/ENQ subscriber can’t flash during a call with a CLF terminator subscriber. Enter ‘Y’ causes the controller’s flash to be ignored. This means that a CEPT ENQ/I3WC subscriber can’t flash during a call with a CLF subscriber. Also, if the second leg destination is a CLF subscriber, the call will be rejected. Enter ‘N’ to accept Flash during CLF and ENQ/I3WC interactions. This means that a CLF feature is allowed during an enquiry or conference call. This field is mandatory.

ISERVOPT (continued)

KEY = ICT

If the entry in field SOPTSKEY is ICT (International Call Transfer), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		ICT	
SOPTSVAR	OPTION	ICT	

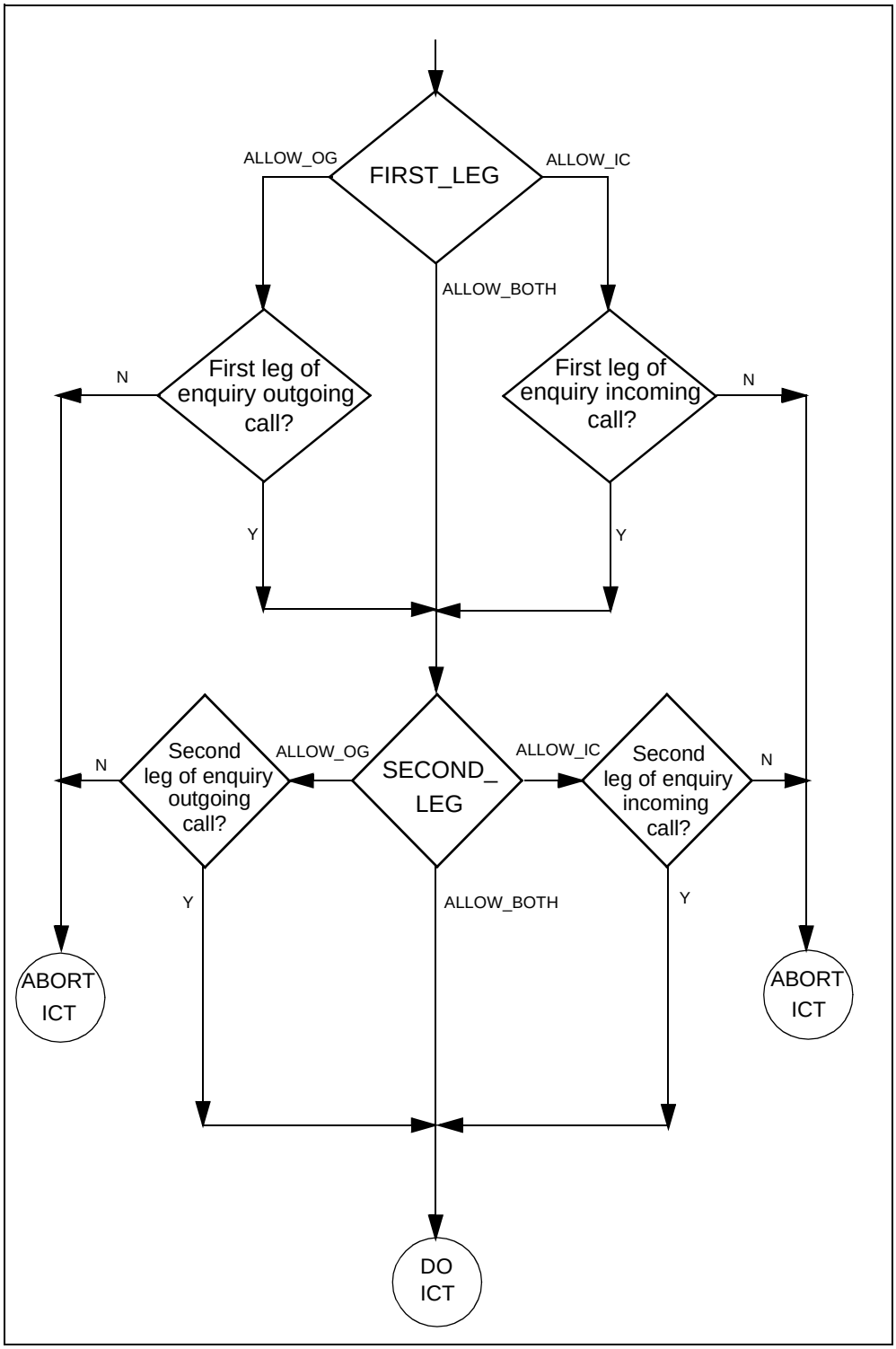
Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	FIRST_LEG	ALLOW_IC ALLOW_OG ALLOW_ BOTH	This field allows call transfer by checking, if first leg is incoming to the controller or outgoing from the controller (see the following flow diagram). Call transfer for Papua New Guinea (PNG) is only allowed, if the controller is the terminator in the first leg of enquiry. But in the CEPT version, the calls should be terminating or originating from the controller. When the FIRST_LEG field is datafilled as ALLOW_IC; the first leg of the enquiry call will be checked; if the controller is the terminator in this call, it means that call transfer will be allowed for this leg. Then the SECOND_LEG field is checked in the same way. This field is mandatory.
	SECOND_LEG	ALLOW_IC ALLOW_OG ALLOW_ BOTH	This field allows call transfer by checking if the second leg is an incoming call to the controller or an outgoing call from the controller (see the following flow diagram). When the SECOND_LEG field is datafilled as ALLOW_OG; the second leg of the enquiry call will be checked; if the controller is the originator in this call, it means that call transfer will be allowed for this leg. When the SECOND_LEG field is datafilled as ALLOW_BOTH; the controller can be the originator or terminator in the second leg. The SECOND_LEG field can also be datafilled as ALLOW_IC. This field is mandatory.

ISERVOPT (continued)

Flow diagram for FIRST_LEG and SECOND LEG fields

ISERVOPT (continued)



ISERVOPT (continued)

KEY = ILRCLS

If the entry in field SOPTSKEY is ILRCLS (International Line Restriction Classes), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		ILRCLS	
SOPTSVAR	OPTION	ILRCLS	
	ILR_PROG	Y,N	International Line Restriction Programmable: This boolean indicates whether a restriction class (see ILRCLASS) could be programmed by the subscriber or not. Enter “Y” for YES and “N” for NO. The Papua New Guinea (PNG) market does not support the subscriber programming part of a restriction class. Therefore this boolean is datafilled as “N” for the PNG market.
	ILRCLASS	DABE, DNID, DIDD, DNI, DAI, DSSV, DANID, DABLE, DNIC, DAIC, DANI	Enter one of these restriction classes to this field. A class cannot be datafilled more than once to ILRCLASS field. If this is applied by an administrator, an error message ‘Multiple ilr_class is not allowed for ilrclass tuple’ is printed. Enter $ to terminate.
	ILR_DIGIT	00 to 99 digits	Enter call restriction programming digits for each ILRCLASS that are valid to that market. A digit cannot be datafilled more than once to a restriction class, otherwise an error message ‘Multiple digit is not allowed for ilr_digit tuple’ is displayed.

KEY = ISUPUTR

If the entry in field SOPTSKEY is ISUPUTR (ISUP Universal Tone Receiver), the SOPTSVAR option field contains the following subfields:

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		ISUPUTR	The ‘UTR for digit collection’ key in ISERVOPT
SOPTSVAR	OPTION	ISUPUTR	The ISERV option name
	ISUPUTRACT	Y,N	ISUP UTR active: Enter ‘Y’ to make available ‘UTR for digit collection’. This should only be done if UTR is available for the ISUP and allowed in the market. Otherwise the loopback trunk for digit collection should be used. Enter ‘N’ to disable UTR being used for digit collection. Default value = ‘N’.

KEY = IWUC

If the entry in field SOPTSKEY is IWUC (Wake Up Call), the SOPTSVAR option field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		IWUC	The Wake Up Call key in ISERVOPT
SOPTSVAR	OPTION	IWUC	The ISERV option name
	NUMBER_OF_ REQUEST	Symbolic number (one - ten)	Number of requests: Enter the number of requests (symbolic) that a subscriber can order at a time. The default is “five”. For the Papua New Guinea market, its value is “one”.

ISERVOPT (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OVERWRITE_ LAST	Y,N	Overwrite the last request: Enter whether the last request is to be overwritten. If this boolean is set to true (Y) when a new request is ordered, and if the maximum NUMBER_OF_REQUEST was datafilled, the new request will be overwritten to the last request. Enter “N“ to deny overwriting of requests. OVERWRITE_LAST can only be datafilled if NUMBER_OF_REQUEST was set to “ONE”. For the Papua New Guinea market, its value is “Y”.
	MIN_AHEAD_ TIME	integer 1 - 30	Minutes ahead of the current time: Enter a time period between the current time and the request time. For the Wake-up Call to operate, the time difference between the request time and the current time must be bigger than the value of this subfield.

KEY = MCTBYDP2

If the entry in field SOPTSKEY is MCTBYDP2 (MCT activation by DP2), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY	SOPTNAME	MCTBYDP2	MCT activation by DP2 digit on DP phones.
SOPTSVAR	OPTION	MCTBYDP2	MCT (Malicious Call Trace) or CLF (Calling Line Identification with Flash) allows IBN line agents to activate a trace on incoming calls for the purpose of malicious caller identification. This option enhances MCT by enabling identification of malicious call originators on DP IBN phone sets. Dialpulse digit 2 is dialled if the line has both CEPT & CLF line options, MCTVAR is EMCT and MCTBYDP2 is set to 'Y'.
	MCTBYDP2	Y or N	If MCTBYDP2 = Y, MCT activation by DP2 digit is enabled on DP phone sets (in this case, MCT activation can also be done by double flashing instead of DP2 but not both flash and digit). If MCTBYDP2 =N, MCT activation by DP2 digit on DP phone sets is disabled and only double flash can be used to activate the MCT feature.

KEY = MCTVAR

If the entry in field SOPTSKEY is MCTVAR (Malicious Call Trace Variant), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		MCTVAR	
SOPTSVAR	OPTION	MCTVAR	
	VARIANT	STD	STD enables standard malicious call trace functionality. This is the default value.

ISERVOPT (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
		EMCT	EMCT enables ETSI malicious call trace for analog lines.
		TLRMCT	TLRMCT enables Telrad malicious call trace functionality.

KEY = MODDN

If the entry in field SOPTSKEY is MODDN (Modify DN), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		MODDN	
SOPTSVAR	OPTION	MODDN	
	MODDNOK	Y or N	MODDNOK controls the length of the input DN. It sets it to 10 digits in length. If MODDNOK is set to Y and the number of digits of the DN is greater than 10, the leading digits are removed to make the DN 10 digits long. If MODDNOK is set to N and the number of digits is greater then 10, no check is performed and leading digits are not removed. For DNs with fewer than 10 digits or with exactly 10 digits, no modification of the digits is performed.

KEY = MONA

If the entry in field SOPTSKEY is MONA (Meridian Off-Net Access), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		MONA	
SOPTSVAR	OPTION	MONA	

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	ENDDIGIT	Y or N	End Digit. If the trunk is 3J and the last digit dialled is * or #, the switch reverses the meaning of these two characters. For Europe, enter Y, otherwise enter N.

KEY = OCBPROG

If the entry in field SOPTSKEY is OCBPROG (Outgoing Call Barring), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		OCBPROG	
SOPTSVAR	OPTION	OCBPROG	
	BARRPROG	DABE, DNID, DIDD, DNI, DAI, DSSV, DANID, DABLE, DNIC, DAIC, DANI, NIL	Outgoing Call Barring Programmes. For each OCBPROG, enter the barring program(s) that are supported by the market.
	BARRDIGITS	00 to 99	Enter the Call Barring Programming Digits corresponding to each BARR_PROG.

KEY = PBMOH

If the entry in field SOPTSKEY is PBMOH (Push-Button Music On Hold), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		PBMOH	

ISERVOPT (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSVAR	OPTION	PBMOH	
	PBMOH_OK	Y or N	PBMOH Okay. This field determines if International Business Network (IBN) lines that use the Key Set Music On Hold (KSMOH) customer group option can have the Music On Hold option. For Japan, enter Y, otherwise enter N.

KEY = PDDCHANG

If the entry is field SOPTSKEY is PDDCHANG (Post Dial Delay Change), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		PDDCHANG	
SOPTSVAR	OPTION	PDDCHANG	PDDCHANG controls EUR specific POST DIAL DELAY(PDD) being assigned to other markets.
	PDD_ CLEANUP	Y or N	Y maintains European-specific PDD in the European market. N means that PDD is not affected in non-European markets.

KEY = PPRIOUTP

If the entry is field SOPTSKEY is PPRIOUTP (Real Outpulser Target Control), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		PPRIOUTP	
SOPTSVAR	OPTION	PPRIOUTP	PPRIOUTP controls the real outpulser target to bound to different markets.
	PPRIOUTPOK	Y or N	Y initiates functionality for outpulser targets. Y must be set for Europe and Australia. N deactivates this functionality, and is the required value for Japan.

KEY = RAG

If the entry in field SOPTSKEY is RAG (Single-digit activation of call back when free), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSVAR		RAG	Service Options Variable. This field contains subfields to control switch-wide performance of the feature. Enter RAG and datafill subfields ANNC_CONF, SINGLE_DIGIT_RAG, RAG_DIGIT and ANNC_PROMPT.
	ANNC_CONF	Y or N	This controls the application of announcements on successful registration of RAG request. If set to Y, announcements or tones can be applied to indicate the successful registration of a RAG request. Table TMTCNTL, tuple RAGC must then be datafilled to provide the optionality. If set to N, only a confirmation tone is applied.
	SINGLE_DIGIT_RAG	Y or N	This controls the single digit activation of ring back when free. If set to Y, single digit activation of RAG is possible. If set to N, single digit activation of RAG is not possible.
	RAG_DIGIT	0 to 9	This field can be datafilled only if the SINGLE_DIGIT_RAG field is set to Y. This field can be datafilled with any digit in the range 0 to 9. The digit entered activates the RAG request.
	ANNC_PROMPT	Y or N	This determines whether announcements should be played to prompt for RAG activation.

ISERVOPT (continued)

KEY = RCODE

If the entry in field SOPTSKEY is RCODE (Register Recall), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		RCODE	Enter RCODE.
SOPTSVAR	OPTIONS	RCODE	Enter RCODE and datafill subfield RCODEX.
	RCODEX	RCODE0 RCODE1 RCODE2 RCODE3 RCODE4 RCODE5 RCODE6 RCODE7 RCODE8 RCODE9	RCODE provides the corresponding actions for defined R-codes. Enter the R-code, RCODE0 to RCODE9 after flash to perform the corresponding action.
	ACTIONS	DISC_ACT, DISC_HOLD, TOGGLE, XFER, CON_3WC, CON_6WC	The actions will terminate active call or holding call, toggling between legs, establishing call transfer, initiating three or six-way call.

KEY = RCTL

If the entry in field SOPTSKEY is RCTL (Ring Control), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		RCTL	

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSVAR	OPTION	RCTL	
	RCTLIBN	Y or N	Ring Control IBN. This field determines if Servord prompts for the RINGCTRL field of the Call Forward Don't Answer Variable Timer (CFDVT) Servord option. This Servord option allows the subscriber to specify the number of rings before the switch forwards the call. For Japan, enter Y, otherwise enter N.

KEY = REVCSE

If the entry in field SOPTSKEY is REVCSE, the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		REVCSE	
SOPTSVAR	OPTION	REVCSE	
	CASE	CASEC	Case C transfer mode. Allows the called user to request Reverse Charging for the entire call during the active phase of the call.
	DIGIT	nn	Case Programming digit, e.g. 01. Specifies the correct provisioning for the intended market. Enter one digit only.

KEY = SCRNDN

If the entry in field SOPTSKEY is SCRNDN, the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		SCRNDN	

ISERVOPT (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSVAR	OPTION	SCRNDN	
	SCRNDNOK	Y or N	SCRNDNOK controls checking to be done on the digits used for Calling Number Displayed (CND) and Dialable Directory Number (DDN). If SCRNDNOK is set to Y, the DN is displayed if available, no other check is required. If SCRNDNOK is set to N, the network ID is checked before checking the availability of the DN. For Europe, the value of SCRNDNOK is Y. The value of SCRNDNOK in the Japan and Australia is N.

KEY = SFICHK

If the entry in field SOPTSKEY is SFICHK, the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		SFICHK	
SOPTSVAR	OPTION	SFICHK	
	SFICHKOK	CALL_FWD_FAX_TERMINATION, CHECK_FOR_CBWF_IFAM, or NONE	SFICHK controls call-forwarding control for No_Ring_Fax_Termination in NCCI ISUP (when the datafill for SFICHKOK subfield is CALL_FWD_FAX_TERMINATION) and CBWF for BTUP (when the datafill for SFICHKOK subfield is CHECK_FOR_CBWF_IFAM). The value of SFICHKOK in Japan is CALL_FWD_FAX_TERMINATION. The value for SFICHK OK in Europe is CHECK_FOR_CBWF_IFAM. The value for SFICHKOK in Australia is NONE.

KEY = SIDIGTON

If the entry in field SOPTSKEY is SIDIGTON (Short Interdigit Timing), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		SIDIGTON	Short Interdigit Timing
SOPTSVAR	OPTION	SITACT	
	SITACT	Y or N	Short Interdigit Timing Active. This field determines if the TLR Short Interdigit Timing option is active. If set to Y, there is no 10 second delay between digits dialed and the second dial tone for IBN lines with one of the following features: CFW, CWT, WML and SC. The default is N.

KEY = SLEOPT

If the entry in field SOPTSKEY is SLEOPT (SLE Optionality), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		SLEOPT	
SOPTSVAR	OPTION	SLEOPT	SLE optionality
	PADDNON	Y or N	Subfield PADDNON controls whether to alter the directory number (DN) to meet a specific dial plan (7,8, 9, 10 dial plans). If PADDNON is set to Y, the DN is altered to meet the specifications of the respective dial plan. If PADDNON is set to N, no padding is allowed and only 7 and 10-digit dial plans are supported. For Australia, the value of PADDNON is Y to allow for the CLI to be padded with 1's, whereas the value of PADDNON in other loads is N to avoid adding extra 1's to the CLI.

ISERVOPT (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	VBCHKON	Y or N	This subfield controls whether to give the markets the ability to alter the voice back count when a user enters a DN that is not in a 7 or 10-digit dial plan to a SLE list. If VBCHKON is set to Y, a check is performed on the number of digits to set the correct voice back count. If VBCHKON is set to N, only 7 and 10-digit dial plans are supported. For Australia, the value of VBCHKON is Y to allow alteration of the voice back count, whereas the value of VBCHKON in Japan and Europe is N, since these markets do not change the voice back count.
	ADDACON	Y or N	ADDACON adds the national access code to the unpadded directory number (DN) in the Belgian market to enable a dialable number to be voiced back.

KEY = TWCON

If the entry in field SOPTSKEY is TWCON (TLR Three Way Call), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		TWCON	
SOPTSVAR	OPTION	TWCON	Three Way Call
	TWCACT	Y or N	Three Way Call Active. This field renames the TWC line option to the 3WC name for the Israel market. The default is N.
	HTON	Y or N	Holding Tone. This field determines if the holding tone in the 3WC feature is active. The default is N.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	CTR_RRNG	Y or N	Controller Re-Ring. This field determines if the 3WC controller gets re-ring, or if all legs of the call must be released. The default is N.
	SFLASH	Y or N	Single Flash Drop. This field determines if the single flash drop feature is active for 3WC. The default is N.

Note: Changing the TWCON fields to Y has impact only after executing a restart reload.

KEY = UTRCHK

If the entry in field SOPTSKEY is UTRCHK, the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		UTRCHK	
SOPTSVAR	OPTION	UTRCHK	
	UTRCHKOK	Y or N	UTRCHKOK controls whether the line being datafilled subtends an XPM that is both an XPM+ and has a CMR and UTR card datafilled. If UTRCHKOK is set to TRUE, the XPM is checked for a CMR or an UTR card datafilled. If UTRCHKOK is set to FALSE, the check is not performed. For Europe and Australia, the value of UTRCHKOK is Y. In Japan, the value is N.

KEY = VERDDN

If the entry in field SOPTSKEY is VERDDN (Verify Digit Length), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		VERDDN	

ISERVOPT (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSVAR	OPTION	VERDDN	
	VERDDN	Y or N	VERDDN controls digit length verification. When VERDDN is set to N, no digit length verification is done in table REVXLA. When VERDDN is set to Y, a warning message is printed if a CLI of more than 10 digits is used in REVXLA.

KEY = VMLON

If the entry in field SOPTSKEY is VMLON (Israeli Voice Mail), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		VMLON	
SOPTSVAR	OPTION	VMLON	
	VMLON	Y or N	VMLON controls activation of the Israeli Voice Mail feature. When VMLON is set to N, the feature has no impact. When VMLON is set to Y, the Israeli Voice Mail feature is activated. The default is N.

KEY = WUCRON

If the entry in field SOPTSKEY is WUCRON (TLR Wake Up Call Request), the SOPTSVAR field contains the following subfields.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SOPTSKEY		WUCRON	
SOPTSVAR	OPTION	WUCRON	Wake Up Call Request
	ATTNUM	0 to 3	Wakeup Attempts Number. This field determines the number of attempts for a wake up call request. The default is 0.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	RNGTMODIG	0 to 2	Timeout Digits. This field determines the number of timeout digits for a wake up call request. The default is 0.
	ACTTRTM	Extended Treatment	Wakeup Success Treatment. This field determines the treatment given to a successful wake up call.
	ALWALLDN	Y or N	Wakeup Allowed on Every Directory Number. This field determines if a wake up call request is allowed on every DN. The default is N.
	COLLDIG	Y or N	Collection Digit. This field determines if all digits are collected in one report. The default is N.
	SECREG	Y or N	Second Activation. This field determines if a second activation is active. The default is N.
	RNGTMO	Y or N	Ringing Timeout. This field determines if the special calculation for ringing time-out is required. If set to Y, each unit in the WUCR_RINGING_TIMEOUT office parameter is calculated as two seconds. The default is N.
	WUCRISDN	Y or N	WUCR for ISDN. This field determines if the WUCR feature for ISDN is allowed. The default is N.
	MRTPULSE	0 to 255	MTR Pulses. If this field contains a value greater than zero, and the subscriber has the MTR feature, the value determines the number of MTR pulses as a result of wakeup call activation. The default is 0.

Datafill example

The figures that follow show sample datafill for table ISERVOPT.

ISERVOPT (continued)

MAP display example for CCBS option in table ISERVOPT

```
SOPTSKEY                    SOPTSVAR
_____________________________________________

CCBS                    CCBS  N  Y  5
```

Note: The following list gives datafill examples for the CCBS service. They are based on the five possible values for the CCBS tuple, namely: KEY (SOPTSKEY), OPTION (SOPTSVAR), DISTINCT_RECALL_RING, SINGLE_DIGIT_AND_ANN, and DIGIT. DIGIT is only operational when SINGLE_DIGIT_AND_ANN is set to ’Y’.

- No enhancements are turned on:
  CCBS CCBS N N

  With this datafill you will hear the busy tone when you reach the busy destination user. CCBS can be activated by pressing R*37.
- Only the distinctive recall ringing enhancement is operational:
  CCBS CCBS Y N
- Only the single digit activation with announcements (e.g. for digit 5) enhancement is operational:
  CCBS CCBS N Y 5

  With this datafill you will hear the busy tone when you reach the busy destination user. CCBS can be activated by pressing digit 5.
- Distinctive recall ringing *and* single digit activation with announcements for digit 9 is operational:
  CCBS CCBS Y Y 9

MAP display example for table ISERVOPT

```
SOPTSKEY                    SOPTSVAR
_____________________________________________

   RCTL                     RCTL Y
 ACRJ                     ACRJ Y
 ACRJ                   ACRJ_CRG JPN
PBMOH                       PBMOH Y
```

ISERVOPT (continued)

MAP display example for entry ILRCLS in table ISERVOPT

```
SOPTSKEY                    SOPTSVAR
_____________________________________________________
ILRCLS ILRCLS N (DABE 01)(DNI 02)(DAT 03)(DAI 09)(DNID 15)$
```

MAP display example for table ISERVOPT

```
SOPTSKEY                    SOPTSVAR
_____________________________________________________
CND                 CND  ETSI  RS45 Y Y DEFAULT
```

MAP display example for table ISERVOPT

```
SOPTSKEY                    SOPTSVAR
_____________________________________________________
 RCODE (RCODE0 DISC_ACT) (RCODE1 DISC_HOLD) (RCODE2 TOGGLE)
(RCODE3 XFER) $
```

MAP display example for table ISERVOPT

```
SOPTSKEY          SOPTSVAR  (OPTION)      MCTBYDP2
_____________________________________________________
MCTBYDP2          MCTBYDP2              Y
```

ISERVOPT (continued)

Example of the MCTBYDP2 option

ISERVOPT (continued)

```
>table ISERVOPT
MACHINES NOT IN SYNC - DMOS NOT ALLOWED
JOURNAL FILE UNAVAILABLE - DMOS NOT ALLOWED
TABLE: ISERVOPT
>
>add
MACHINES NOT IN SYNC - DMOS NOT ALLOWED
JOURNAL FILE UNAVAILABLE - DMOS NOT ALLOWED
ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
>y
SOPTSKEY:
>MCTBYDP2
OPTION:
>MCTBYDP2
MCTBYDP2:
>y
TUPLE TO BE ADDED:
MCTBYDP2 MCTBYDP2 Y
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
>y
TUPLE ADDED
JOURNAL FILE INACTIVE
>
>pos MCTBYDP2 MCTBYDP2 Y
MCTBYDP2 MCTBYDP2 Y
>cha
MACHINES NOT IN SYNC - DMOS NOT ALLOWED
JOURNAL FILE UNAVAILABLE - DMOS NOT ALLOWED
ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
>y
OPTION: MCTBYDP2
>
MCTBYDP2: Y
>n
TUPLE TO BE CHANGED:
MCTBYDP2 MCTBYDP2 N
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
>y
TUPLE CHANGED
JOURNAL FILE INACTIVE
>
>pos MCTBYDP2 MCTBYDP2 Y
>del
MACHINES NOT IN SYNC - DMOS NOT ALLOWED
JOURNAL FILE UNAVAILABLE - DMOS NOT ALLOWED
ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
>y
TUPLE TO BE DELETED:
MCTBYDP2 MCTBYDP2 N

ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
>y
TUPLE DELETED
JOURNAL FILE INACTIVE
```

ISERVOPT (continued)

MAP display example for option CEPT_CFX in table ISERVOPT

```
    SOPTSKEY                        SOPTSVAR
_____________________________________________________
CEPT_CFX                  CEPT_CFX Y 4 15 N N Y N $
```

MAP display example for entry IWUC in table ISERVOPT

```
    SOPTSKEY                        SOPTSVAR
_____________________________________________________
IWUC IWUC                           10 one Y $
```

MAP display example for entry ICONF in table ISERVOPT

```
    SOPTSKEY                        SOPTSVAR
            ALLOW_ICT_IN_I3WC   CLF_FLASH_IGNORE
_____________________________________________________
ICONF ICONF       Y                 Y
```

MAP display example for entry ICT in table ISERVOPT

```
    SOPTSKEY                        SOPTSVAR
            FIRST_LEG   SECOND_LEG
_____________________________________________________
ICT ICT       ALLOW_IC    ALLOW_BOTH
```

MAP display example for entry ISUPUTR in table ISERVOPT

```
    SOPTSKEY          SOPTSVAR  (OPTION)      ISUPUTRACT
_____________________________________________________
   ISUPUTR          ISUPUTR              Y
```

Table history

CSP18/SN05

Feature 59038854

The following information was added:

- CCBS operation details for CEPT and Bellcore
- CCBS interrogation details for CEPT, including new announcements.

SN04 (DMS)

Feature 59034909

The following CCBS entries were added for feature 59034909 (CCBS IBN Line Enhancements)

- Entry CCBS added to field SOPTSKEY
- Entry CCBS added to field SOPTSVAR/OPTION
- New fields DISTINCT_RECALL_RING, SINGLE_DIGIT_AND_ANN, and DIGIT added to entry CCBS in field SOPTSVAR/OPTION

Feature 59037044

The following option was added for feature 59037044 (Support UTR by ISUP in DISA features):

- ISUPUTR

  Attribute ISUPUTRACT added to enable/disable UTR digit collection.

Feature 59034526

The following entries were added for feature 59034526 (Three Party and Enquiry Services for PNG):

- ICONF
  - Entry ICONF added to field SOPTSKEY
  - Entry ICONF added to field SOPTSVAR/OPTION
  - New fields ALLOW_ICT_IN_I3WC and CLF_FLASH_IGNORE, added to entry ICONF in field SOPTSVAR/OPTION
- ICT
  - Entry ICT added to field SOPTSKEY
  - Entry ICT added to field SOPTSVAR/OPTION
  - New fields FIRST_LEG, and SECOND_LEG added to entry ICT in field SOPTSVAR/OPTION

ISERVOPT (continued)

Feature 59034536

The following entries were added for feature 59034536 (Wake-Up Call, Call Control and Automatic Absentee Features for PNG):

- IWUC (Wake-up Call)
  - Entry IWUC added to field SOPTSKEY
  - Entry IWUC added to field SOPTSVAR/OPTION
  - New fields NUMBER_OF_REQUEST, OVERWRITE_LAST and MIN_AHEAD_TIME added to entry IWUC in field SOPTSVAR/OPTION

The following new field was added to the existing IRLCLS entry:

- ILR_PROG

Feature 59034541

Option CEPT_CFX added for feature 59034541 (CEPT Call Forwarding Features for Papua New Guinea (PNG)).

Feature 59033748

Option MCTBYDP2 added for feature 59033748 (MCT (CLF) activation by DP digit 2 for CEPT lines).

Feature 59034914

Feature 59034914 adds new fields ANNC_PROMPT to tuple RAG and renames existing field ANNC_ALLOWED in tuple RAG to ANNC_CONF.

MMP16

Option OCBPROG added for feature 59032661 (ETSI BRI Outgoing Call Barring - User Controlled).

MMP15

Option REVCSE added for feature 59022415 (IBN Line Reverse Charging).

CND_LANG and ASK_STATUS are added to the CND tuple for feature 59021957.

Feature 59022215 adds tuple FTRACT for all CEPT features to provide the ACT codes that indicate feature action codes.

Feature 59022865 adds options ACBAR_TLR, CFWON, SCRNDN, SIDIGTON, TWCON, WUCRON, TLRMCT and VMLON for the Israeli market.

MMP14

Feature 59017799 (RBWF Activation Consistency) modifies the AR option to support Ring Back When Free activation consistency for both IBN and EBS sets.

Feature 59017199 (Anonymous Call Reject enhancements) adds field ACRJ_CRG to the ACRJ option. This implements a Japan-specific enhancement that allows the system to handle ACRJ calls as answered. The operating company therefore has the option to determine whether to bill the calling party for anonymous rejected calls.

Feature 59017996 adds field ACCESS_CODE to the CND option.

Feature 59019295 adds fields ILRCLASS and ILR_DIGIT to the ILRCLS option.

Feature 59019281 adds option RCODE for CEPT features I3WC, ICT, and ICWT to provide the R-codes.

MMP13

Feature 59014534 adds field RNGSPLSH to the CND option.

Feature 59012273 adds field ADDACON to the SLEOPT option for the Belgian market.

Feature 59014225 adds field DACTOPT and subfield CANCDIG to the AR tuple of table ISERVOPT.

Feature 59012835 adds field MCTVAR and subfields STD and EMCT.

MMP12

Added the CND option for activity 59007660.

Added the FNT option for activity 59008217.

Added the CFTANN/CFO option for activity 59008297.

Added the AR option (adapted from the AR CLASS feature for the Australian market) for activity 59007855.

Added UTRCHK, AR, MODDN, SLEOPT, CNDDISP, SCRNDN, ACCTCODE, VERDDN, PDDCHANG, SFICHK, and PPRIOUTP options for activity 10172770.

ISERVOPT (continued)

EUR010

Added RAGDIGIT option for activity AJ5518.

Added key values MONA and CRSP for Multi-Market Platform (MMP). Added ACRJ, CRSP, MONA, PBMOH, and RCTL subfields.

APC011

Introduced table ISERVOPT.

Supplementary information

This table does not contain initial datafill. The operating company using this table provides datafill that refers to indicated services.

The default values of parameters CFO_XLA and CFTAN_XLA are CFOXLA and CFTANXLA respectively.

CFTAN_XLA and CFO_XLA require no restarts.

When CFTAN_XLA and CFO_XLA are changed, there is no memory allocation or de-allocation.

The default state of the NOCOLL parameter in table ISERVOPT is ON. Even if the tuple does not exist in ISERVOPT, the state is considered to be ON. If the state is ON, the functionality of the NOCOLL feature is available officewide and the tone is provided to all applicable calls. If the state is OFF, the functionality of the NOCOLL feature is suppressed and the payphone recognition tone is not provided.

The ring splash duration value is only effective for a global peripheral platform (GPP) Mel channel-associated signaling (CAS) peripheral configuration.

Restriction classes

The restriction classes are described as follows.

- DABE: Deny all but emergency calls. All calls are restricted except emergency calls such as police, fire department, ambulance.
- DNID: Deny national and international direct dial calls. All calls except local and international operator assisted calls are restricted.
- DIDD: Deny international direct dial calls. All international except international operator assisted calls are restricted.
- DNI: Deny national and all international direct calls. All calls except local calls are restricted.

ISERVOPT (end)

- DAI: Deny all international calls. All calls except local and national calls are restricted.
- DSSV: Deny special service calls. Only special service calls are restricted.
- DANID: Deny all national and international direct dial calls.
- DABLE: Deny all but local and emergency calls. All calls except local and emergency calls are restricted.
- DNIC: Deny national, international, national, and international operator-assisted and cellular calls.
- DAIC: Deny international, international operator-assisted and cellular calls.
- DANI: Deny national, international, national operator-assisted, and international operator-assisted calls.
- NIL: No calls are restricted. This is the case that ILR is not assigned to the line or ILR is assigned to the line but not activated.
- DAT: Deny All Timed calls. All calls except Local Unit-Fee calls are barred.
- DOC: Deny Only Cellular call. Only cellular calls are restricted.

ISUPDEST

Table name

CCS7 ISDN User Part Destination Table

Functional description

Table ISUPDEST enables the user to datafill the portion of a signaling network identifier (SNID) that is logically associated with tables TRKGRP and TRKSGRP, separately from the entries in table C7TRKMEM. This reduces the effort required to datafill ISUP (CCS7 ISDN user part), BTUP (the United Kingdom [UK] variant of national user part), and MBTUP (a user-specific version of BTUP) trunks.

Table ISUPDEST is not used for global trunks (GTRK). See table C7TRKMEM for more information on GTRK tables.

Table ISUPDEST contains a key field, DESTKEY, and one result field, ISUPROUT (the ISUP routeset name). The ISUP routeset name is used to access table C7RTESET to obtain the network and point code information that specifies the portion of a SNID logically associated with a trunk group or subgroup. The ISUP routeset name is used to enhance the interface to this table. Actual network and point code values are retrieved at datafill time from the routeset table. These values are stored along with the trunk group common language location identifiers (CLLI) in table ISUPDEST, but are transparent to the user.

Modification or deletion of data in this table is restricted. An ISUPDEST tuple can be modified or deleted only if no C7TRKMEM table entries are associated with the tuple.

Datafill sequence and implications

The following tables must be datafilled before table ISUPDEST.

- IPMLINV
- C7NETWRK
- TRKSGRP
- TRKMEM
- C7LKSET
- C7LINK
- C7RTESET
- CLLI

ISUPDEST (continued)

Table size

0 to 16 384 tuples

Memory allocation is the same as table TRKSGRP.

Datafill

The following table lists datafill for table ISUPDEST.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
DESTKEY		see subfields	*Destination key* This field consists of subfields CLLI and SGRP.
	CLLI	alphanumeric (up to 16 characters)	*Common language location identifier* Enter the code assigned to the ISUP, BTUP, or MBTUP trunk group in table CLLI.
	SGRP	0 or 1	*Subgroup number* Enter the number assigned to the ISUP, BTUP, or MBTUP trunk subgroup.
ISUPROUT		alphanumeric (up to 16 characters)	*CCS7 ISDN user part routeset name* Enter the routeset name that provides the network and point code information from table C7RTESET. This specifies the portion of the SNID that is logically associated with this trunk group. The routeset name entered here must already be datafilled in table C7RTESET.

Datafill example

The following example shows sample datafill for table ISUPDEST.

The example contains data for three trunk groups (ISUPINC, ISUPOTG, and ISUP2W) in subgroup 0. Routeset C7RTESET2 provides the network and point code for trunk group ISUPINC; routeset C7RTESET1 provides the network and point code for trunk groups ISUPOTG and ISUP2W.

MAP display example for table ISUPDEST

```
            DESTKEY  ISUPROUT
_____________________________________________________________

        ISUPINC 0 C7RTESET2
        ISUPOTG 0 C7RTESET1
         ISUP2W 0 C7RTESET1
```

Table history

NA013

Added error message for dynamic trunks for activity 59007550.

Supplementary information

The table that follows explains the error messages that can occur if you enter data incorrectly in table ISUPDEST.

Error message table

Error message	Explanation and action
*** This packet ISUP trunk is incompatible with ISUPDEST. *** This trunk has the DYNAMIC option assigned to it in table TRKOPTS.	No DYNAMIC trunk group can be entered in table ISUPDEST if its DYNAMIC voice signaling network is IP in table TRKOPTS. Select a trunk group that is not marked as DYNAMIC with an IP voice signaling network in table TRKOPTS.

KTGROUP

Table name

Killer Trunk Group Table

Functional description

Table KTGROUP lists the trunk groups to function when the value for field MODE in table KTPARMS is MANUAL or SEMIAUTO.

Refer to table KTPARMS for related information.

Datafill sequence and meaning

Enter data into the following tables before you enter data into table KTGROUP:

- CLLI
- TRKGRP

Table size

0 to 8192 tuples

Tuple TRKGRP in table DATASIZE controls the size of table KTGROUP.

Datafill

Datafill for table KTGROUP appears in the following table.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
KTKEY		alphanumeric (1 to 16 characters)	*Killer trunk key*. Enter the common language location identifier (CLLI) assigned to the trunk groups the system uses if MODE in table KTPARMS is MANUAL or SEMIAUTO. The NTX053AA feature package (Maintenance Assistance Package) must support the specified trunk groups. Table TRKGRP must define these trunk groups.

Datafill example

Sample datafill for table KTGROUP appears in the following example.

KTGROUP (end)

MAP example for table KTGROUP

```
KTKEY
_____________________________________________________________
REGOEAICDTC
REGIEAICDTC
REGISCAMADTC
REGOLAMA
REGIEAS
REGOEAS
REGOTOLL
REGITOLL
LMEATRAF
```

KTMINMAX

Table name

Killer Trunk Minimum Maximum Table

Functional description

Table KTMINMAX allows the operating company to define killer trunk requirements for peg counts and average holding time for each trunk. Table TRKGRP must define trunk groups entered in table KTMINMAX. Feature package NTX053 (Maintenance Assistance) must support the entered trunk groups.

The KTREPORT command provides an option that uses the values in table KTMINMAX during analysis.

Refer to table KTPARMS for related information.

Datafill sequence and meaning

- Enter the following tables before you enter table KTMINMAX:
- CLLI
- TRKGRP

Table size

0 to 8191 tuples

The ADNUM of the common language location identifier (CLLI) entered determines how the system allocates storage for table KTMINMAX.

Datafill

Datafill for table KTMINMAX appears in the following table.

Field descriptions

Field	Subfield or refinement	Entry	Description and action
GROUP		alphanumeric(1 to 16character)	Enter the CLLI from table TRKGRP. This field is the key for this table. This field does not have a default value.
KTPEGMIN		numeric (1 to 32 767)	*Killer trunk peg minimum* Enter the peg threshold that determines if a trunk is a killer trunk. This field does not have a default value.
KTHTMAX		numeric (1 to 32 767)	*Killer trunk holding time maximum* Enter the average holding time threshold in seconds that determines if a trunk is a killer trunk. This field does not have a default value.
SRHTMIN		numeric (1 to 32 767)	*Slow release holding time minimum* Enter the average holding time in seconds that determines if a trunk is a slow release trunk. This field does not have a default value.

Datafill example

Sample datafill for table KTMINMAX appears in the following example.

MAP example for table KTMINMAX

```
          GROUP KTPEGMIN  KTHTMAX  SRHTMIN
_____________________________________________________
   REGOEAICDTC 200       15       100
   REGIEAICDTC 200       15       100
   REGOTOLL    450       30       200
   REGITOLL    450       30       200
```

KTPARMS

Table name

Killer Trunk Parameter (KTPARMS)

Functional description

The KTPARMS, KTGROUP, and KTACTIVE tables are provided in the Maintenance Assistance Software Package NTX053AA. These tables are required with the Identification of Killer Trunks feature.

Killer trunk (KT) identification attempts to detect faulty trunk circuits or facilities that are not detectable by normal call testing. The characteristic for analysis is abnormally long or short holding times. Assignable registers on a trunk basis accumulate the attempts on the trunk and the connect duration.

Periodically a process runs through the registers and computes the average call holding time for each trunk instrumented. Average holding time is equal to accumulated duration divided by accumulated attempts.

If this value is above the long holding time threshold (slow release) or below the short holding time threshold, a report is printed identifying the trunk.

This table also identifies trunks which are always busy (36 CCS) or always idle (0 CCS).

The KTPARMS table contains one tuple from which the KT process is controlled.

Four events can cause an interrupt: start time reached, enable turned on, report time reached, and stop time reached. Trunks are re-instrumented following every interrupt. This means that when a report is generated, new trunks are instrumented in automatic mode, and those indicated by the table KTGROUP are instrumented in manual mode.

Table size

Memory is allocated for a maximum of one tuple in table KTPARMS.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table KTPARMS.

(Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
KEY		KTPARMS	KEY. Enter the key, KTPARMS.
ENABLE		ON or OFF	ENABLE. This is the master switch that controls the execution of the KT process. Enter ON, when feature is active, otherwise enter OFF. Whenever it is changed, the testing process is immediately interrupted and the appropriate action taken. In the case of OFF the KT process goes to sleep. In the case of ON the KT process checks all of the parameters in this table, adjusts itself accordingly, begins any scheduled testing and reschedules an interrupt for itself; in other words, it schedules the next report or start of testing. The default is OFF. ***Note:*** When a change is made to the KTPARMS tuple which the user wishes the change to be made immediately known to the KT process, the ENABLE field must be changed. Otherwise, the KT process picks up the change at the next scheduled interrupt.
SCANRATE		FAST, SLOW	SCAN RATE. Enter FAST to specify that all instrumented trunk groups are scanned for usage once every ten seconds. Enter SLOW to specify that all instrumented trunk groups are scanned for usage once every 100 seconds. The default is FAST.
START		HRS1, MNS1	START. This field specifies the time of day that KT testing is to begin.
	HRS1 (columns 17-18)	0-23	HOUR1. Enter the hour during which the collection of killer trunk data is to start.
	MNS1 (columns 20-21)	0-59	MINUTE1. Enter the minute during the hour at which the collection of killer trunk data is to start.

KTPARMS (continued)

(Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
STOP		HRS2, MNS2	STOP. This field specifies the time of day that KT testing is to stop.
	HRS2 (columns 23-24)	0-23	HOUR2. Enter the hour during which the collection of killer trunk data is to stop and the production of a final report is to start.
	MNS2 (columns 26-27)	0-59	MINUTE 2. Enter the minute during the hour at which the collection of killer trunk data is to stop and the production of a final report is to start.
REPORT		HRS3, MNS3	REPORT. This specifies the length of intervals between the start and stop times when reports are to be produced. Peg and usage registers previously used for instrumented trunks are zeroed, and new trunks are instrumented. The size of registers is 1 word which allows a total usage of approximately 18.2 hours and a peg count of 65K. As the usage counter is circular, if usage should exceed 65534 seconds, wrong values are reported. Therefore, if traffic load is expected to be high, this value should not exceed 18 hours. ***Note:*** The report interval need not be a proper divisor of the difference between the start time and the stop time as a final report is produced at the stop time. If start and stop times are equal, the KT process never stops.
	HRS3 (columns 29-30)	0-23	HOUR3. Enter the number of sixty minute intervals (hours) which is to be added to field MNS3 to define the time intervals between start and stop when reports are to be produced.
	MNS3 (columns 32-33)	0-59	MINUTE3. Enter the number of minutes to be added to field HRS3 to define the time intervals between start and stop when reports are to be produced.

KTPARMS (continued)

(Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
KTPEGMIN		0-32767	KILLER TRUNK PEG MINIMUM. Enter the KT peg threshold in one peg intervals. This is the default value used in report generation. The default value is 999.
KTHTMAX		0-32767	KILLER TRUNK HOLDING TIME MAXIMUM. Enter the killer trunk holding time threshold in one-second intervals. This is the default value used in report generation. The default value is 1.
SRHTMIN		0-32767	SLOW RELEASE HOLDING TIME MINIMUM. Enter the slow release holding time threshold in one-second intervals. This is the default value used in report generation. The default value is 999.
REPTYPE		ALLTRKS, EXCEPTION, SPARE1, SPARE2	REPORT TYPE. Enter the type of report to be produced as follows: • ALLTRKS causes the production of a report on all the trunks instrumented. • EXCEPTION causes the production of a report on only those trunks with one of KT properties looked for. This is the default value. • SPARE1 and SPARE2 are not used.
NTRUNKS		0-2047	NUMBER OF TRUNKS. Enter the maximum number of trunks that may be instrumented at a given time. The default value is 2047.

KTPARMS (end)

(Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
MODE		AUTOMATIC, SEMIAUTO, MANUAL	MODE. Enter the mode of operation AUTOMATIC or MANUAL. When mode is AUTOMATIC, the KT process cycles through the office instrumenting as many trunks as possible during each interval. The SEMIAUTO mode causes the KT process to cycle through the set of trunks designated by table KTGROUP, instrumenting as many as possible during each interval. When mode is MANUAL, the KT process only instruments those groups indicated by table KTGROUP. The default value is MANUAL.
GENKTLOG		OFF, ON	GENERATE KILLER TRUNK LOG. Enter ON to generate a KTRK100 log report containing exceptions at the end of every report interval. therwise, enter OFF. The value of the REPTYPE field does not affect this log. he default value is OFF.

Datafill example

The following example shows sample datafill for table KTPARMS.

```
KEY ENABLE SCANRATE START STOP REPORT KTPEGMIN KTHTMAX
SRHTMIN REPTYPE   NTRUNKS     MODE GENKTLOG
_____________________________________________________________
KTPARMS OFF    FAST   0 0  1 1   0 15     999      1
999     EXCEPTION   2047     MANUAL     OFF
```

LASBLOCK

Table name

Last Block (LASBLOCK)

Functional description

Table LASBLOCK is used to associate a NPA or NPA-NXX with a LATAID and STATEID. The LASBLOCK table checks for entries for the NPA-NXX (or NPA) of both the ANI and destination digits.

If entries for both are present, the LATAIDs and STATEIDs of the numbers are compared. If either is not in the database, by default, the call is not blocked. If the LATAIDs are the same, the LATA table checks to see if IntraLATA calls for that LATA are to be blocked. If the STATEIDs are the same the STATE table is checked to see if IntraSTATE calls are to be blocked.

Datafill sequence and implications

The following tables must be datafilled before table LASBLOCK.

- LATA
- STATE

Table size

Minimum size = (0) tuples, maximum size = (128160) tuples.

Field descriptions

The following table lists field names, subfield names, and valid data ranges for table LASBLOCK.

Field	Subfield or refinement	Entry	Explanation and action
DIGITS		3 or 6 digits	DIGIT REGISTER. Enter 3 digits for NPA and 6 digits for NPA-NXX.
LATA		LATA_ONE, LATA_TWO	LATA ID. Specify the LATA ID to be associated with the DIGITS entry. It must exist in table LATA.
STATE		State name	STATE ID. Specify the STATE ID to be associated with the DIGITS entry. It must exist in table STATE.

LASBLOCK (end)

Datafill example

The following is an example of datafill for table LASBLOCK.

```
DIGITS       LATA      STATE
---------------------------------
214          LATA_ONE    TEXAS
```

LATA

Table name

Local Access and Transport Area (LATA) table

Functional description

Table LATA provides the capability to block calls that originate and terminate in the same LATA (intraLATA screening). A LATA ID defined in table LATA determines whether an intraLATA call for each particular LATA should be blocked.

Datafill sequence and implications

Datafill table LATA before table LASBLOCK.

Table size

Minimum size = 0 tuples; maximum size = 1024 tuples. Table Size is statically set at the top level and cannot be changed.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table LATA.

Field	Subfield or refinement	Entry	Explanation and action
LATAID		Up to 16 alphanumeric characters	LATA ID. A character code designated by the user to define a LATA. It is suggested that the codes average five characters in length and begin with an alphabetic character.
STOP		Y or N	STOP CALL. Specify Y to block the call or N to process the call.

Datafill example

The following example shows sample datafill for table LATA.

```
LATAID       STOP
_____________________
LATA_ONE       Y
```

LATAID

Table name

Local Access Transport Area Identification.

Functional description

Table LATAID stores all valid LATA names for defining the service areas for the Local Exchange Carriers (LEC).

Datafill

The following table lists datafill for table LATAID.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
LATAID		up to 16 characters	LOCAL AREA TRANSPORT IDENTIFICATION stores LATA names. Enter up to 16 characters. The default value is NIL.
LATANUM		3 digit code	LOCAL AREA TRANSPORT NUMBER datafills NPA or NXX digits. Enter a three digit code in the range (N, 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, B, C, D, E, F). The default value is 555.

Datafill sequence and implications

Table LATAID must be datafilled before table LATASCRN.

Table size

Table LATAID may contain up to 1024 entries. Each entry is 10 bytes for a possible total of 10 Kbytes including overhead.

Table history

UCS09

Table LATAID was added (AX0999).

Supplementary information

The table transfer (TABXFR) code for table LATAID is implemented as an external data move.

LATANAME

Table name

Local Access and Transport Area Name (LATANAME) table

Functional description

Table LATANAME lists up to 31 operating company-defined LATA names.

Datafill sequence and implications

Datafill table LATA before datafilling any table with a LATANAME field.

Table size

The maximum LATANAME table size is 31 tuples.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table LATANAME.

Field	Subfield or refinement	Entry	Explanation and action
LATANAME		Up to 16 characters	LATA NAME. List the LATA name used in this office.
LATANUM		3 digits (0-9, B-F, N)	LATA NUMBER. Enter the LATA number associated with the LATANAME. Entries outside this range are invalid.

Datafill example

The following example shows sample datafill for table LATANAME.

```
LATANAME   LATANUM
-------------------
 NILLATA        DFD
```

LATASCRN

Table name

Local Access Transport Screen.

Functional description

Table LATASCRN associates an ANI with a LATA to determine jurisdiction. Each ANI may be datafilled against a valid LATA name from the new table LATAID.

Datafill

The following table lists datafill for table LATASCRN.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
DIGITS		3 or 6 digit ANI	Enter 3 or 6 digits ANI. The default value is NIL.
LATA		Vector of up to 8 characters from LATAID	Enter up to 8 characters. The default value is NIL.

Datafill sequence and implications

Tables ANIVAL and LATAID must be datafilled before table LATASCRN.

Table size

Table LATASCRN may contain up to 640000 entries.

Table history

UCS09

Table LATASCRN was added (AX0999).

Supplementary information

The table transfer (TABXFR) code for table LATASCRN is implemented as a physical data move (PDM).

LCASCRCN

Table name

Local Calling Area Screening Control Table

Functional description

Local calling area screening subtables are required in a toll or local/toll switching unit for incoming or two-way Traffic Operator Position System (TOPS), Centralized Automatic Message Accounting (CAMA), or AMR5 trunk groups.

For an incoming or two-way TOPS trunk group, the LCASCRCN.LCASCR subtable name for operator number identification (ONI) calls is stored in the table TRKGRP, and for automatic number identification (ANI) calls is stored against the NNX code of the originating number in the TOPS table BILLCODE.

For an incoming or two-way CAMA or AMR5 trunk group, the LCASCRCN.LCASCR subtable name for ANI calls is stored against the NNX code of the originating number in table BILLCODE, and for ONI calls the LCASCRCN.LCASCR subtable name is stored in the entry that has 000 for the NNX code in table BILLCODE.

If a toll switch is equipped with TOPS, local calling area subtables are required with the semi automatic zenith feature and are stored in table CLGSET.

LCASCRCN.LCASCR subtables are only required if the local originating office is incapable of screening local codes, or if the operating company (OC) policy is to perform local calling area screening in the toll switch in preference to the local switch.

LCASCRCN.LCASCR subtables are required in a local switching unit for line attributes, if the associated toll switching unit is incapable of local calling area screening, or if the OC policy is to perform local calling area screening in the local switch in preference to the toll switch.

Six-digit local calling area screening

If the switching unit is arranged for cross boundary ten-digit local dialing, then six-digit local calling area screening can be provided.

This is achieved by providing one local calling area screening table for each of the numbering plan area (NPA) codes, home and adjacent. The same name must be assigned to each of the local calling area screening tables assigned to the home and adjacent NPAs. For example, if 613 is the home NPA, 819 is the

LCASCRCN (continued)

adjacent NPA, and OTWA is the local calling area table name, then the tables are defined as 613 OTWA and 819 OTWA, respectively.

In the local calling area table for an adjacent NPA, the home and any other adjacent NPA code is specified as local. For example, in table 819 OTWA, code 613 is defined as local.

If a call is ten digits, translation is routed to the second local calling area table. The second table has the same name as the first but is prefixed by the ABC digits dialed. For example, if the first local calling area screening table is 613 OTWA and the digits dialed are 819, then translation is routed to the 819 OTWA local calling area table. The index into the second local calling area screening table is the DEF digits dialed.

The adjacent NPA code must be entered in table HNPACONT as a home NPA.

The HNPACONT.HNPACODE and HNPACONT.RTEREF subtables for the adjacent NPA code are not required.

Note:

Partitioned editor feature

In DMS offices with the Partitioned Table Editor (PTE) feature, the OC can authorize a non-operating company to use PTE to edit specified tuples of table LCASCRCN. This also enables the non-operating company user to edit all the tuples of the subtables LCASCRCN.LCASCR at the authorized positions of table LCASCRCN.

In order to access a tuple in table LCASCRCN, both the serving translation scheme (STS) and the LCANAME must be owned by the user.

The following table shows example datafill for table DATAOWNR.

Example datafill for table DATAOWNR

Key	Owner
STS 001	CARLING
LCANAME OTWA	CARLING

In the this table, the non-operating company, CARLING has access to the tuple that has a key 001 OTWA. No other tuple can be viewed by user CARLING unless tuples owned by other users are classified as public in table OWNER.

The PTE feature allows the OC to limit edit access to a table for a specified user to read only, change only, or add and delete tuples. It is recommended that PTE access for non-operating company users to table LCASCRCN be limited to read and change only.

Non-operating company users can be authorized to add and delete tuples in subtable LCASCRCN.LCASCR.

Refer to the description of table OWNER for information on how to allow user access to Customer Data Change feature group tables.

Table LCASCRCN lists the name of each of the local calling area screening subtables LCASCRCN.LCASCR and the serving area NPA to which it belongs.

Each of the LCASCRCN.LCASCR subtables is assigned a prefix selector. The prefix selector is required to pick the appropriate entry in table PFXTREAT.

The prefix selector allows the switching unit to accommodate both mandatory and optional dialing of the prefix digits.

Optional dialing of the prefix digit 1 is required with ambiguous codes if the presence or absence of prefix digit 1 defines whether the number of digits expected is ten or seven.

The name of the prefix selector can be mandatory (MAND) or optional (OPTL) or one of 14 four-character names that can be defined by the OC.

Note:

Datafill sequence and implications

Table SNPANAME must be datafilled before table LCASCRCN.

Table size

0 to 1000 tuples

LCASCRCN (continued)

Datafill

The following table lists datafill for table LCASCRCN.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
NPALOCNM		see subfields	NPA local calling area subtable name. This field consists of subfields STS and LCANAME.
	STS	numeric	Serving translation scheme. Enter a serving NPA code for the trunk group.
	LCANAME	alphanumeric (up to 4 characters)	Local calling area name. Enter the name of subtable LCASCRCN.LCASCR. Entry NLCA is not allowed in table LCASCRCN because it is reserved by DMS software to mean no local calling area screening. ***Note:*** Accidental addition of NLCA in table LCASCRCN followed by deletion removes NLCA from tables such as LINEATTR field LCANAME, making the specification of no local calling area screening impossible.
LCASCR		blank	Local calling area screening. This is the table ownership field. It does not accept any input or output, and is not shown on the form. Only the used space field is displayed.
	PFXSELEC	Four-character vector of the two predefined prefix selectors mandatory (MAND) or optional (OPTL), or a maximum of 14 customer-definable prefix selectors	Prefix selector. Enter the prefix selector assigned to the prefix treatment.

LCASCRCN (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
PFXFOR10		Y or N	Prefix for 10. This field is used to set the call screening on operator assisted (OA), direct dial (DD), and no prefix (NP) no toll calls. If Y is entered, all operator assisted calls will be routed as described in table Table , "PFXFOR10 call screening effects on OA call types" on page -104. If Y is entered, all direct dial calls will be routed as described in table Table , "PFXFOR10 call screening effects on DD call types" on page -104. If Y is entered, all no prefix calls will be routed as described in table Table , "PFXFOR10 call screening effects on NP call types" on page -105. If N is entered no call screening will be performed.
LOCALOVR		Y or N	This field indicates that the local nature of the call shall take precedence over other aspects of the call for certain features. Currently the only feature to use this field is Equal Access call attributes control. Casually dialed local calls, that is, local calls for which the subscriber dialed the carrier access code, will be sent to treatment when LOCALOVR is YES. This will prevent casually dialed local calls from completing to the IEC network only to be sent back to the LEC to complete the call. This functionality is optional and is available as order code EQA00025

LCASCRCN (continued)

PFXFOR10 call screening effects on OA call types

Dialed Digits	Pre-NA006	Pre-NA006 with WIS34 patch active	NA006 with PFXFOR10 feature activated
7 digits	Complete	Complete	Complete
0+7	Complete	EMR4 Trmt	MSOA Trmt
1+7	Complete	EMR4 Trmt	MSOA Trmt
10xxx+7	Complete	EMR4 Trmt	Complete
10xxx+0+7	Complete	EMR4 Trmt	MSOA Trmt
10xxx+1+7	Complete	EMR4 Trmt	MSOA Trmt
10 digits	Complete	Complete	MSOA Trmt
0+10	Complete	Complete	Complete
1+10	Complete	Complete	Complete
10xxx+10	Complete	Complete	MSOA Trmt
10xxx+0+10	Complete	Complete	Complete
10xxx+1+10	Complete	Complete	Complete
Service Codes	Complete	If code type is SCD(X), complete.Otherwise, EMR4 Trmt	If code type is SCD(X), complete.Otherwise, MSOA Trmt

PFXFOR10 call screening effects on DD call types (Sheet 1 of 2)

Dialed Digits	Pre-NA006	NA006 with PFXFOR10 feature activated
7 digits	MSCA Trmt	Complete
0+7	MSCA Trmt	MSCA Trmt
1+7	MSCA Trmt	MSCA Trmt
10xxx+7	MSCA Trmt	Complete

PFXFOR10 call screening effects on DD call types (Sheet 2 of 2)

Dialed Digits	Pre-NA006	NA006 with PFXFOR10 feature activated
10xxx+0+7	MSCA Trmt	MSCA Trmt
10xxx+1+7	MSCA Trmt	MSCA Trmt
10 digits	Complete	MSLCTrmt
0+10	Complete	Complete
1+10	Complete	Complete
10xxx+10	Complete	MSLC Trmt
10xxx+0+10	Complete	Complete
10xxx+1+10	Complete	Complete
Service Codes	Complete	Complete

PFXFOR10 call screening effects on NP call types (Sheet 1 of 2)

Dialed Digits	Pre-NA006	NA006 with PFXFOR10 feature activated
7 digits	Complete	Complete
0+7	Complete	MSCA Trmt
1+7	Complete	MSCA Trmt
10xxx+7	Complete	Complete
10xxx+0+7	Complete	MSCA Trmt
10xxx+1+7	Complete	MSCA Trmt
10 digits	MSLC Trmt	MSLCTrmt
0+10	MSLC Trmt	Complete
1+10	MSLC Trmt	Complete
10xxx+10	MSLC Trmt	MSLC Trmt
10xxx+0+10	MSLC Trmt	Complete

LCASCRCN (continued)

PFXFOR10 call screening effects on NP call types (Sheet 2 of 2)

Dialed Digits	Pre-NA006	NA006 with PFXFOR10 feature activated
10xxx+1+10	MSLC Trmt	Complete
Service Codes	Complete	Complete

Datafill example

The following example shows sample datafill for table LCASCRCN.

The example lists an LCASCRCN.LCASCR subtable in NPA 613 with the name OTWA and mandatory dialing of prefix digit 11, and an LCASCRCN.LCASCR subtable in NPA 819 with the name HULL and optional dialing of prefix digit 3.

No input or output is allowed for field LCASCR.

MAP display example for table LCASCRCN

```
NPALOCNM  LCASCR PFXSELEC PFXFOR10 LOCALOVR
_____________________________________________________

613 OTWA (   11)     MAND        N        N

819 HULL (    3)     OPTL        N        N
```

Table history

NA007

Added field description for LOCALOVR in accordance with Equal Access call attributes control feature.

NA006

Changed description of fields PFXSELEC and PFXFOR10 in accordance with the Dial Plan Translations Enhancements feature.

TL06

Increased the maximum number of customer definable prefix selectors for field PFXSELEC from two to 14.

LCASCRCN (end)

Changed the basis on which PFXFOR10 field screens calls. Screening is now based on the prefix digit and number of digits dialed and the call type is only considered in ambiguous cases and when service codes are applied.

TOPS04

Increased the maximum number of LCANAMEs that can be entered from 256 to 1024 per feature AN1379 in functionality TOPS Robustness, OSB00001.

BCS36.1

Added information under table size to clarify the difference between the maximum number of allowable LCANAMES and the maximum number of allowable tuple entries.

LATAXLA

Table name

Equal Access Local Access and Transport Area Translation (LATAXLA)

Functional description

Table LATAXLA allows the operating company to define the attributes of domestic calls such as interLATA or intraLATA, interstate or intrastate. The attributes of the call are then compared with the attributes of the carriers in table OCCINFO to determine which carriers should handle the calls.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table LATAXLA.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
LATACODE		See subfields	LATA CODE. This is the key into this table.
	LATANM	alphanumeric	CALLING LATA NAME. Enter the LATA name associated with the originator of the call. DMS obtains the originator's LATA name from field LATANM of table LINEATTR and uses it together with the dialed digits to index into this table. This name must be known to table LATANAME.
	DIGITS	numeric	DIALED DIGITS. Enter the digits dialed by the originator of the call. DMS uses the dialed digits together with the originator's LATA name to index into this table.
LATA		INTER or INTRA	LATA CALL ATTRIBUTE. Enter INTER or INTRA to define a call from a calling LATA name to the called number as interLATA or intraLATA respectively.

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
STATE		INTER or INTRA	STATE CALL ATTRIBUTE. Enter INTER or INTRA to define a call from a calling LATA name to the called number as interstate or intrastate respectively.
EATYPE		STD, CORRIDOR, PRIVILEGE, NON_EA	EQUAL ACCESS CALL TYPE. Enter the appropriate EA call type to identify the call as standard (STD), CORRIDOR, PRIVILEGE, or NON_EA. Only INTERLATA calls may be CORRIDOR or PRIVILEGE. Only INTRALATA calls may be NON_EA.

Datafill example

The following example shows sample datafill for table LATAXLA.

```
LATACODE  LATA        STATE      EATYPE
-----------------------------------------
LATA1     212220        INTRA       INTER
```

LCAUDIT

Table name

Long Call Audit Enhancements.

Functional description

This feature provides the option on the DMS switch to run the long call duration audit more often than every 24 hours. Table LCAUDIT provides the means to select the originating agencies for the long call audit and to optionally disconnect the long calls based on the terminating country code. Table LCAUDIT is screened by the long call audit for the originating agencies, disconnect timers, data call disconnections, and the terminating country codes.

Table LCAUDIT is indexed by the originating agents DAL, PRI, FGD, Inter-IMT, AXXESS and ALL. When this feature is activated, only the agencies datafilled in this table are considered in the long call audit. Every index has a related disconnect timer and country code list subfield because the disconnection of long calls depends on the disconnect timer and the terminating country code.

Datafill sequence and implications

Not applicable.

Table size

Table LCAUDIT can have a maximum of x tuples.

LCAUDIT (end)

Datafill

The following table lists datafill for table LCAUDIT.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
ORIGAGENT		DAL, PRI, FGD, AXXESS, INTER_IMT, ALL	ORIGAGENT. ORIGAGENT is the key of table LCAUDIT. Enter the neccessary originating agents or ALL.. Datafilling the ALL index equates to datafilling DAL, PRI, AXXESS, FGD, and INTER_IMT. Do not datafill ALL and any other originating agent. Each orignating agent may be datafilled only once.
LCDISTM		0-72	LCDISTM. LCDISTM is an independent disconnect timer that can be set for each orignating agent. Set the timer value between 1 and 72 to specify the length of time that an established call is considered long enough to disconnect. 0 indicates that long calls active at long call audit are not not automatically disconnected at audit time. The default for LCDISTM is 0.
CTRYCODE		1 to 999	CTRYCODE. This field is a multiple of up to 15 multiples. Each country code has aa numeric rage of 1 to 999. A “$” only in this field makes all long calls active at long call audit eligible for disconnect.The default for CTRYCODE is 0.

Datafill example

None.

Table history

UCS013

Table LCAUDIT is introduced (A60007650).

LGINCTRL

Table name

Login Control Table

Functional description

Table LGINCTRL allows the dump and restore of the login control data. This capability allows the preservation of data when the operating company upgrades software. Table LGINCTRL is an extension of table TERMDEV. You can only add or delete tuples from table LGINCTRL through table TERMDEV tuples.

Use the optional command interpreter (CI) command LOGINCONTROL to change tuples in table LGINCTRL.

Datafill sequence and meaning

Enter data in table TERMDEV before you enter data in table LGINCTRL.

Table size

0 to 127 tuples

Datafill

The datafill for table LGINCTRL appears in the following table.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
TERMDES		alphanumeric (a maximum of 8 characters)	*Terminal designation*. This field defines the name defined for each of the terminal types. Assign all trunk test positions (TTPs) first. Start with the MAP (TTP:0). Assign the TTPs that remain in numeric order. After you assign the TTPs, assign the other terminal devices. These devices include printers and video display units (VDU).
DISTIME		-1 to 32767	*Disabled time*. This field defines the time that the system disables the terminal. The time is in seconds. The system does not accept entries out of the range indicated. The default value is -1 (always).
MAXLOGIN		1 to 32767	*Maximum login time*. This field defines the time that you have to login. The system disables you after this time expires. The time is in seconds. The system does not accept entries out of the range indicated. The default value is 60 (60 s).
MAXIDLE		-1 to 32767	*Maximum idle time*. This field defines the maximum time that the terminal can remain idle. The time is in seconds. The system does not accept entries out of the range indicated. The default value is -1 (forever).
Note: You can enter a value of less than -1 (minus one) for fields DISTIME, MAXLOGIN, MAXIDLE or MAXRETRY. When this event occurs, the system aborts the feature. The login control increase is optional. Some or all of these fields are not active in the load. Other fields depend on other optional features, like BC1043 (Automatic Dial Back).			

LGINCTRL (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
MAXRETRY		-1 to 32767	*Login retries*. This field defines the number of tries available for login. The system does not accept entries out of the range indicated. The default value is 4.
DISABLON		ALL LC_ DIALBACK CALLFAIL LC_ DIALBACK LOGINFAIL LC_IDLE TIMEOUT LC_ LOGONFAIL LC_LOGON TIMEOUT LC_LOGOUT LC_OPEN _COND NONE	LOGIN AUTO DISABLE EVENT. This field defines the set of events that disable a terminal. The entries are as follows: • ALL. All conditions are in effect. • LC_DIALBACKCALLFAIL. Modem dialback call failed. • LC_DIALBACKLOGINFAIL. Modem dialback login failed. • LC_IDLETIMEOUT. Terminal idle time-out. • LC_LOGONFAIL. Logon failed. • LC_LOGONTIMEOUT. Logon time-out. • LC_LOGOUT. User logged out. • LC_OPEN_COND. Open condition. • NONE (no conditions are in effect)
FRCOUT		Y or N	*Force-logged out*. The value Y (yes) indicates that the system forces you to log out. This action occurs when you drop the line. If you do not require this action, enter N (no). The default value is N.
Note: You can enter a value of less than -1 (minus one) for fields DISTIME, MAXLOGIN, MAXIDLE or MAXRETRY. When this event occurs, the system aborts the feature. The login control increase is optional. Some or all of these fields are not active in the load. Other fields depend on other optional features, like BC1043 (Automatic Dial Back).			

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
DIALBACK		DB_OFF DB_ANSWER or DB_DIAL	*Dialback state*. This field defines the state of a modem with dialback feature. Enter DB_OFF if the dialback feature is off. Enter DB_ANSWER if the dialback feature answers. Enter DB_DIAL if the dialback feature is in dial mode. The default value is DB_OFF.
DIALTYPE		AUTO PULSE or TONE	*Dial type*. This field defines the type of dialing. Enter AUTO for automatic dialing. Enter PULSE for pulse dialing. Enter TONE for tone dialing. The default value is AUTO.
NUMRINGS		1 to 15	*Number of rings*. This field defines the number of rings allowed before a modem call fails. The default value is 7.
NUMCALLS		1 to 7	*Number of calls*. This field defines the number of calls allowed before the system disables the terminal. The default value is 1.
Note: You can enter a value of less than -1 (minus one) for fields DISTIME, MAXLOGIN, MAXIDLE or MAXRETRY. When this event occurs, the system aborts the feature. The login control increase is optional. Some or all of these fields are not active in the load. Other fields depend on other optional features, like BC1043 (Automatic Dial Back).			

Datafill example

Sample datafill for table LGINCTRL appears in the following example.

LGINCTRL (end)

MAP example for table LGINCTRL

```
TERMDES DISTIME  MAXLOGIN MAXIDLE  MAXRETRY                DISABLON
FRCOUT   DIALBACK DIALTYPE         NUMRINGS  NUMCALLS
-------------------------------------------------------------------

    MAP      -1        60      -1         4                    NONE
     N     DB_OFF     AUTO                 7         1
```

Table history

BCS36

Explanations of entries in fields DISABLON, DIALBACK, and DIALTYPE were added in BCS36.

LIMCDINV

Table name

Link Interface Module Card Inventory Table

Functional description

Table LIMCDINV describes the cards in the link interface module (LIM) cabinet. This table contains only the following cards:

- cards on slots 7 to 32 in the local message switch (LMS) shelf. The LMS shelf is the top shelf of the LIM cabinet.

This table does not contain any cards on the bottom three shelves. These cards are parts of the LIU.

Each slot on the LIM cabinet can contain two cards. One card in front and one card in back. The front name standard is F (slots 7F to 32F). The back name standard is B (slots 7B to 32B).

A list of system cards that can be placed in LIM slots appears in the following table.

System cards that can be placed in LIM slots (Sheet 1 of 2)

Card type (description)	Front PECs	Back PECs
Message switch processor (MSP)	NT9X13DB NT9X13DD NT9X13DE	NT9X26AA NT9X26AB
Processor bus (P-bus) terminator	NT9X49CA	
Transaction bus (T-bus) access	NT9X52AA	
T-bus/F-bus interface (TFI)	NT9X73BA NT9X73BB NT9X73CA	NT9X79BA NT9X79BB
Frame transport bus (F-bus) terminator	NT9X74AA	NT9X79AA NT9X79BA
Clock	NT9X53AA NT9X53AD	
Memory (24 Mbyte)	NT9X14DB	
Mapper	NT9X15AA	

LIMCDINV (continued)

System cards that can be placed in LIM slots (Sheet 2 of 2)

Card type (description)	Front PECs	Back PECs
DS30 interface	NT9X17AA, NT9X17DA	NT9X23BA
DS512 interface	NT9X17AD	NT9X62BB

The following hardware product engineering codes (PECs) support the two-slot LIU7:

- NT9X73BA (TFI) as the rate adapter
- NT9X72BA as the LIU7 shelf

The only system card you can delete from this table is the NT9X14 memory card. You cannot add system cards to the table. To change the configuration card, the LIM unit must be manual busy or the whole LIM must be offline. You can only change field PEC.

Datafill sequence and meaning

Enter data in table LIMINV before you enter data in table LIMCDINV.

Table size

0 to 300 tuples

Datafill

The datafill for table LIMCDINV appears in the following table.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
LIM		0 to 16	*Link interface module number* Enter the link interface module (LIM) number.
SHELF		0 to 3	*Shelf* Enter the shelf that the card is on.
SLOT		7 to 32	*Card slot position* Enter the card slot position number that the card is on.

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
CARDTYPE		DS30, MEMORY, CLOCK, PBUS, TBUSACC, FBUS, MAPPER, TFI, DS512, or MSP	*Card type* Enter the card type that is in the slot position. Entries outside this range are invalid.
CARDINFO		see subfields	*Card information* This field contains subfields FRONTPEC and BACKPEC. These subfields list PEC entries for the front and back cards in the LIM slots. The value in field CARDTYPE determines the applicability of the subfields and the PEC entries.

LIMCDINV (continued)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	FRONTPEC	NT9X13DA NT9X13DB NT9X13DD NT9X13DE NT9X14BA NT9X14BB NT9X14DA NT9X14DB NT9X15AA NT9X17AA NT9X17AC NT9X17AD NT9X17CA NT9X17DA NT9X49CA NT9X49CB NT9X49CC NT9X52AA NT9X53AA NT9X53AD NT9X73AA NT9X73BA NT9X73BB NT9X74BA	*Front slot PEC* Enter the PEC for the card in the front slot. The NT9X73BA is the default rate adapter PEC. The system enters this PEC automatically with the addition of a link peripheral processor (LPP) in table LIMINV. The NT9X73BB is the default rate adapter PEC. The system enters this PEC three times for each LMS automatically with the addition of an enhanced link peripheral processor (ELPP) in table LIMINV. With the entry of NT9X73BB, the system also enters automatically PEC NT9X79BB three times for each LMS. ***Note:*** The system enters automatically the default datafill for the ELPP.
	BACKPEC	NT9X23BA NT9X23DA NT9X26AA NT9X26AB NT9X62CB NT9X62BB NT9X73BB NT9X79AA NT9X79BA NT9X79BB	*Back slot PEC* Enter the PEC for the card in the back slot.

Datafill example

Sample datafill for table LIMCDINV appears in the following examples.

This MAP display represents an LPP.

MAP example for table LIMCDINV

```
LIM SHELF SLOT CARDTYPE                    CARDINFO
_____________________________________________________________________________

  0     0    7     PBUS                    NT9X49CA
  0     0    8      TFI                    NT9X73BA NT9X79BA
  0     0    9     DS30                    NT9X17AA NT9X23BA
  0     0   10     DS30                    NT9X17AA NT9X23BA
  0     0   15   MAPPER                    NT9X15AA
  0     0   16   MEMORY                    NT9X14DB
  0     0   17      MSP                    NT9X13DB NT9X26AA
  0     0   18    CLOCK                    NT9X53AA
  0     0   19  TBUSACC                    NT9X52AA
  0     0   20  TBUSACC                    NT9X52AA
  0     0   21    CLOCK                    NT9X53AA
  0     0   22      MSP                    NT9X13DB NT9X26AA
  0     0   23   MEMORY                    NT9X14DB
  0     0   24   MAPPER                    NT9X15AA
  0     0   29     DS30                    NT9X17AA NT9X23BA
  0     0   30     DS30                    NT9X17AA NT9X23BA
  0     0   31      TFI                    NT9X73BA NT9X79BA
  0     0   32     PBUS                    NT9X49CA
```

This MAP display represents an ELPP with triple F-bus configuration.

LIMCDINV (continued)

MAP example for table LIMCDINV

```
LIM SHELF SLOT CARDTYPE                    CARDINFO
_____________________________________________________________________________

  5     0    7     PBUS                    NT9X49CC
  5     0    9    DS512                    NT9X17AD NT9X62BB
  5     0   10    DS512                    NT9X17AD NT9X62BB
  5     0   11      TFI                    NT9X73BB NT9X79BB
  5     0   12      TFI                    NT9X73BB NT9X79BB
  5     0   13      TFI                    NT9X73BB NT9X79BB
  5     0   15   MAPPER                    NT9X15AA
  5     0   17      MSP                    NT9X13DE NT9X26AB
  5     0   18    CLOCK                    NT9X53AD
  5     0   29  TBUSACC                    NT9X52AA
  5     0   20  TBUSACC                    NT9X52AA
  5     0   21    CLOCK                    NT9X53AD
  5     0   22      MSP                    NT9X13DE NT9X26AB
  5     0   24   MAPPER                    NT9X15AA
  5     0   26      TFI                    NT9X73BB NT9X79BB
  5     0   27      TFI                    NT9X73BB NT9X79BB
  5     0   28      TFI                    NT9X73BB NT9X79BB
  5     0   29    DS512                    NT9X17AD NT9X62BB
  5     0   30    DS512                    NT9X17AD NT9X62BB
  5     0   32     PBUS                    NT9X49CC
```

Table history

TL11

Changed default datafill information for field FRONTPEC.

TL07

The range of values in field CARDINFO was increased in TL07 to add the following cards:

- NT9X17AD
- NT9X62BB
- NT9X13DE
- NT9X26AA
- NT9X26AB
- NT9X73BB
- NT9X73CA
- NT9X79BB

BASE05

The following values were added in BASE05:

- value DS512 to field CARDTYPE
- value NT9X17AD to subfield FRONTPEC
- value NT9X62CB to subfield BACKPEC

Additional information

New warning and error messages are introduced for PECs introduced in CSP11.

LIMINV

Table name

Link Interface Module Inventory Table

Functional description

Table LIMINV contains an inventory of the link interface modules (LIM) in an office and includes the following information:

- the location of each LIM
- the type of software load running in the LIM
- the type of cabinet that houses the LIM

The location information for the LIM includes the building floor number and the row in which the LIM is located. The software information contains the loadname in table PMLOADS. The cabinet information includes the type of cabinet housing the LIM and the type of shelf containing the local message switch (LMS).

Datafill one tuple for every LIM that is present. The standard table editor operations can be performed on the LIMINV tuples with the following two restrictions:

- In order to delete a tuple in table LIMINV, the LIM must be offline and all ports on the LIM must be detached.
- No F-bus can be datafilled against the LIM.

Datafill sequence and implications

Table LIMINV automatically datafills table LIMCDINV. Check table LIMCDINV to ensure that the default datafill of cards does not differ from the cards installed. In order to change tuples in table LIMCDINV, the LIM or LIM unit must be either manual busy or offline.

Datafill tables SUSHELF and LIMPTINV after table LIMINV.

Table size

0 to 16 tuples

Each tuple has 13 words of protected store and 4 words of unprotected store. Operating company personnel can allocate up to 289 words of store for the table (for example $[13 + 4] \times 17 = 289$).

Datafill

The following table lists datafill for table LIMINV.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
LIM		0 to 16	*Link interface module number* Enter the LIM number.
FLOOR		0 to 99	*Floor* Enter the floor on which the LIM is located.
ROW		A to HJ to NP to ZAA to HHJJ to NNorPP to ZZ	*Row* Enter the row in which the LIM is located.
POSITION		0 to 99	*Position* Enter the position of the cabinet containing the LIM.
CABTYPE		LIM	*Cabinet type* Enter the cabinet type in which the LIM resides. LIM is the only valid entry.
CABNUM		0 to 511	*Cabinet number* Enter the cabinet number assigned to the cabinet.
LOAD		alphanumeric (vector of up to 8 characters)	*Load name* Enter the loadname of the software load in the LIM. The loadname must be present in table PMLOADS. The loadname entry in table PMLOADS must point to the correct physical file.

LIMINV (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CABPEC		NT9X70AA NT9X70BA NT9X70CAN T9X70BB	*Cabinet product engineering code* Enter the cabinet product engineering code (PEC). NT9X70AA (for link peripheral processor [LPP] cabinet) NT9X70BA (for 36-link interface unit, LPP cabinet) NT9X70CA (for ELPP cabinet only) ***Note:*** NT9X70CA is only allowed as initial datafill for the ELPP. NT9X70BB (for 36-LPP cabinet) ***Note:*** Only LPP cabinets NT9X70BA and NT9X70BB can be upgraded to have fiber links.
SHLF0PEC		NT9X71AA NT9X71AB	*Shelf number product engineering code* Enter the PEC of shelf 0, which resides on the first shelf of the LIM and contains the LMS shelf.
MTCEVRSN		1.0	*Maintenance version* Enter 1.0, which is the only valid entry.

Datafill example

The following example shows sample datafill for table LIMINV.

MAP display example for table LIMINV

```
LIM FLOOR ROW POSITION CABTYPE CABNUM   LOAD   CABPEC SHLF0PEC MTCEVRSN
_____________________________________________________________________

  1     1   J       0     LIM    500 LPC04AQ NT9X70BA NT9X71AB  1.0
```

Table history

TL11

Corrected table size.

TL07

Increased range of field CABPEC to support triple F-bus configuration (NT9X70CA) and LPP cabinet frame (NT9X70BB).

CSP04

Added read-only field MTCEVRSN in accordance with feature Deliver LIM Maintenance Evolution.

Supplementary information

New warning and error messages have been introduced for cabinet PECs NT9X70BB and NT9X70CA in CSP11.

LIMPTINV

Table name

Link Interface Module Port Inventory Table

Functional description

Table LIMPTINV describes the port connection on each link interface module (LIM). The description includes the following for each port:

- the LIM number
- the location of the port on the LIM
- the shelf number of the port, which must be 0
- the description of the connection of the port. This description occurs in terms of the name, number, card, and port of the node at the other end of the link.

To add or delete a port entry, the local message switch (LMS) must be manually busy. Another option is for the LIM to be manually busy or offline (OFFL).

When you define an inter-LIM unit link, add only one tuple to table LIMPTINV. An inter-LIM unit link is a link that connects the two units of an LIM. The other tuple represents the link from the destination port. Use the information in the first tuple to enter data in the other tuple. When you delete an inter-LIM unit link, delete only one tuple to table LIMPTINV. The system deletes the other tuples.

Datafill sequence and meaning

Enter data in the following tables before you enter data in table LIMPTINV:

- LIMINV
- LIMCDINV

Table size

0 to 272 tuples

Datafill

Datafill for table LIMPTINV appears in the following table.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
LIM		0 to 16	*Link interface module number*. Enter the number assigned to the LIM.
SLOT		7 to 32	*Card slot position*. Enter the slot number that contains the card.
PORT		0 to 3	*Port*. Enter the port number on the card.
SHELF		0 to 3	*Shelf*. Enter the shelf that contains the card.
PROTOCOL		DMSY, NONE, DS30, MUSX, FRAMER	*Protocol*. Enter the protocol used at the port. Entries out of this range are not correct.
LINKDEST		MS or LIM	*Link destination*. This field is a selector that describes the node at the other end of the link. Enter MS if the node at the other end of the link is a message switch. Enter LIM if the node at the other end of the link is a link interface module.

LINKDEST = MS

Enter data in subfield LINKINFO if the entry is MS in field LINKDEST. A description of how to enter data in subfield LINKINFO appears in the following table.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	LINKINFO	see refinements	*Link information*. This subfield contains refinements MS, SLOT, and PORT.
	MS	0 to 1	*Message switch number*. Enter the number of the MS. The MS is the node at the other end of the link.

LIMPTINV (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	SLOT	1 to 26	*Card position*. Enter the card position on the MS at the other end of the link.
	PORT	0 to 15	*Port number*. Enter the number that attaches to the MS at the other end of the link. ***Note:*** The card and port type entries for the LMS must be compatible. These entries must be compatible with the card and port type entries for the destination MS.

LINKDEST = LIM

Enter data in subfield LINKINFO if LIM is the entry in field LINKDEST. A description of how to enter data in subfield LINKINFO appears in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	LINKINFO	see refinements	*Link information*. This subfield contains refinements LIM, SLOT, and PORT.
	LIM	0 to 16	*Link interface module number*. Enter the number of the LIM. Link interface is the node at the other end of the link.
	SLOT	7 to 32	*Card position*. Enter the card position on the LIM at the other end of the link.
	PORT	0 to 3	*Port number*. Enter the number that attaches to the LIM at the other end of the link. ***Note:*** The card and port type entries for the LMS must be compatible. These entries must be compatible with the card and port type entries for the destination LMS.

Datafill example

Sample datafill for table LIMPTINV appears in the following example.

LIMPTINV (end)

MAP example for table LIMPTINV

```
LIM SLOT PORT SHELF PROTOCOL LINKDEST    LINKINFO
_____________________________________________________________________

  1    9    0     0     DMSY       MS 1   26    0
  1    9    1     0     DMSY       MS 0   26    0
  1    9    2     0     DMSY     LIM  1   30   2
  1   10    0     0     DMSY       MS 0   27    1
  1   10    1     0     DMSY       MS 1   27    1
  1   10    2     0     DMSY     LIM  1   29   2
  1   29    0     0     DMSY       MS 1   27    3
  1   29    1     0     DMSY       MS 0   27    3
  1   29    2     0     DMSY     LIM  1   10   2
  1   30    0     0     DMSY       MS 0   26    2
  1   30    1     0     DMSY       MS 1   26    2
  1   30    2     0     DMSY     LIM  1   9   2
```

LIUINV

Table name

Link Interface Unit Inventory

Functional description

Table LIUINV allows the specification of either the message switch (MS) or a link interface module (LIM) as the controlling entity to which the link interface unit (LIU) or multiple link interface unit (MLIU) is connected. An LIU-type node (for example, an LIU7) can be datafilled on either an LMS or MS. If the CCS7 link interface unit (LIU7) is datafilled on an LMS, datafill field LIMNUM; if it datafilled on an MS, datafill fields MSCARD and MSPORT.

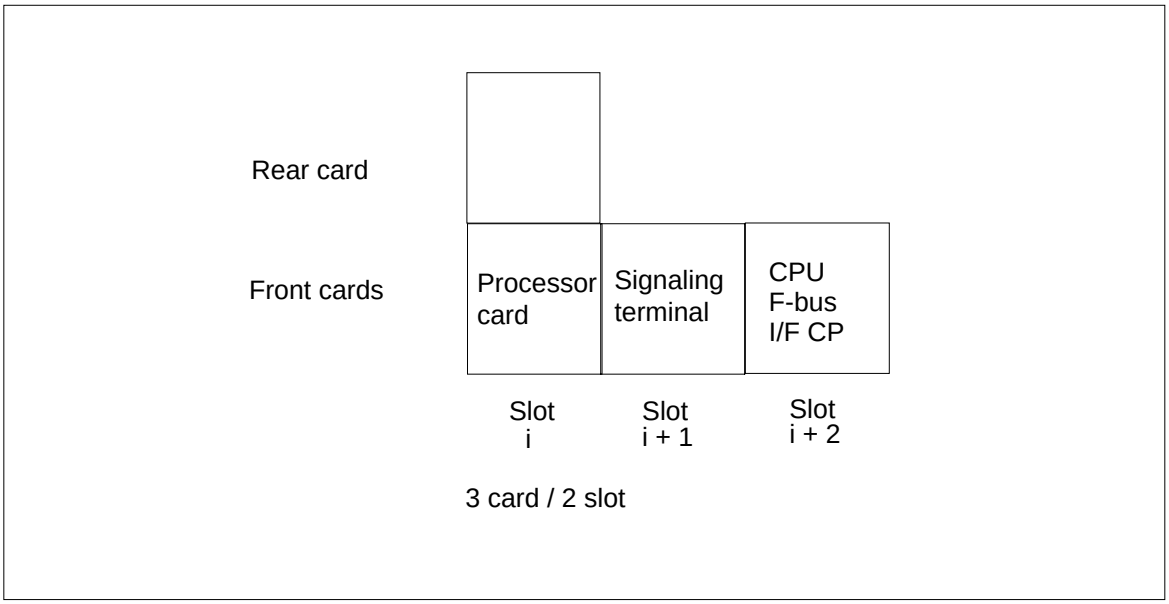
LIUs and MLIUs can be provisioned on a LIM in a link interface shelf (LIS) or in a single shelf link peripheral processor (SSLPP).

Because an office contains up to 36 LIUs on each of 17 LIMs, in addition to the 24 LIUs subtending the MS, the maximum number of LIUs datafilled in a single office is 636. The maximum number of LIUs of the same LIU type is 511.

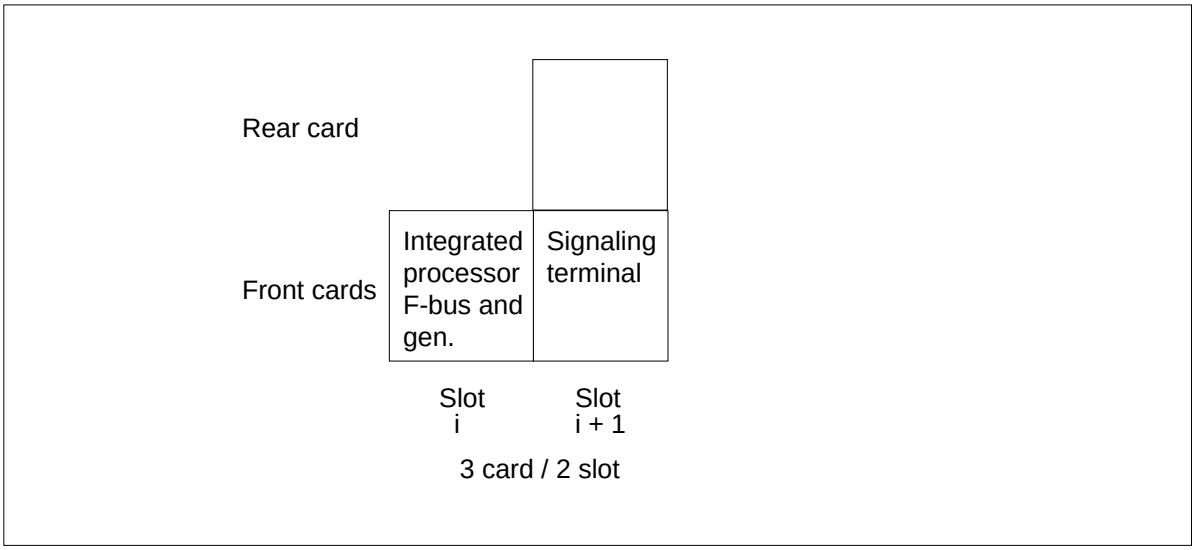
The MLIU increases SS7 link density without adding another LPP to an office. One LPP houses up to 30 MLIUs which in turn can support up to 120 SS7 MLIU based links. One MLIU provides the same connectivity as four LIUs.

The LIU consists of either three or four cards, as shown in the following 3 figures.

Link interface unit configuration (24-link LIM cabinet)

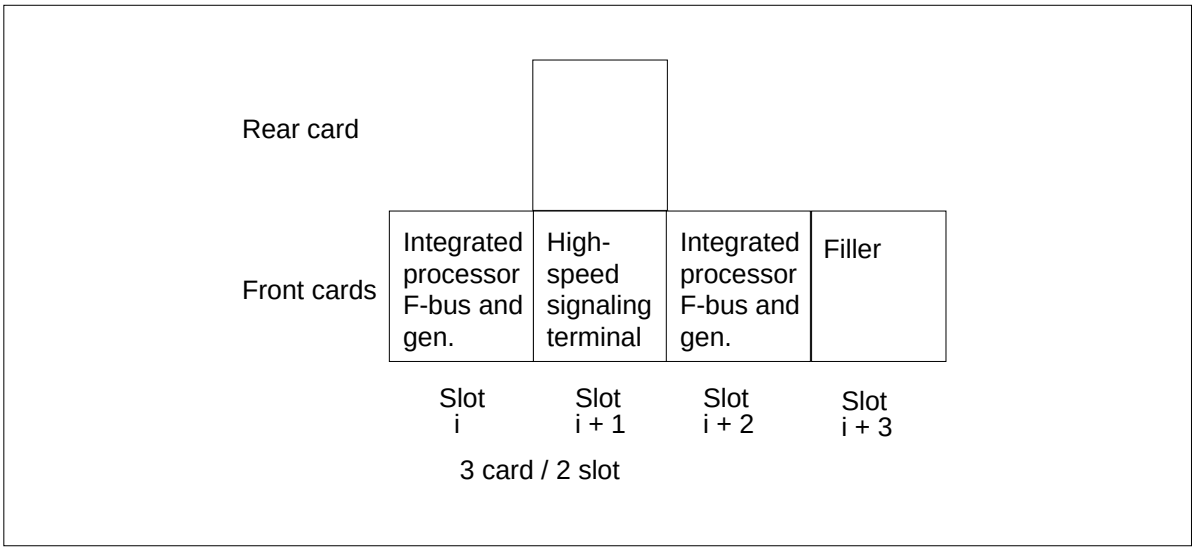


Link interface unit configuration (36-link LIM cabinet)



LIUINV (continued)

Link interface unit configuration (12-link LIM cabinet)



For related information, refer to tables LIMINV and NIUINV.

Datafill sequence and implications

The following tables must be datafilled before table LIUINV:

- LIMINV
- PMLOADS
- CARRMTC
- SUSHELF
- LIMPTINV (LIM-based LIU)
- MSCDINV (MS-based LIU)

An application processing unit (APU) must be datafilled in table LIUINV before it is datafilled in tables IPHOST, SNIXINFO, SNIXVOLS, and SNIXAPPL.

Table size

0 to 511 tuples

Memory requirements

Maximum datastore allocated for tuples of table LIUINV is

$3 \times 408 \times 35 = 42\ 840$ words of protected datastore

$3 \times 408 \times 25 = 30\ 600$ words of permanent datastore

Previous LIUINV data remains unchanged on BCS application.

Datafill

The following table lists datafill for table LIUINV.

Field descriptions (Sheet 1 of 6)

Field	Subfield	Entry	Explanation and action
LIUNAME		see subfields	*Link interface unit name* This is the key field, which consists of subfields LIUTYPE and LIUNO. This field uniquely identifies the type of LIU that is present in the LPP, fiberized LPP, or enhanced LPP (ELPP).
	LIUTYPE	APU, EIU, ELIU, FRIU, LIU7, VPU, HLIU, HSLR, XLIU, SVR7, or MLIU	*Link interface unit type* Enter the LIU type. Enter ELIU if the application specific unit (ASU) type is Ethernet link interface unit. Enter MLIU as a permitted entry in the case of a multiple link interface unit. The LIU type APU is the application processing unit card with UNIX (NT9X14DB). The Ethernet interface unit (EIU) replaces the data communication processor (DCP). The frame relay interface unit (FRIU) requires the frame relay access processor card (NTEX31AA) along with a T1 analog paddle board (NTEX30AA). Though it is possible to specify an LIU7 STPEC with its associated PBINFO as an FRIU, the following error message appears: `INVALID STPEC FOR AN FRIU`

LIUINV (continued)

Field descriptions (Sheet 2 of 6)

Field	Subfield	Entry	Explanation and action
			Similarly, an LIU7 can be incorrectly datafilled with an FRIU STPEC and PBINFO, but the following error message appears: `INVALID STPEC FOR AN LIU7` The voice processing unit (VPU) requires a recording and announcement processor card (NTMX97AA) and a 512-channel bus interface paddle board (NTMX99AA). The X.25 and X.75 link interface unit (XLIU) requires the HDLC frame processor card (NTFX10AA) and the channel bus interface paddle board (NTFX09AA). The high speed link interface unit (HLIU) requires the high speed signaling terminal (HST) NTEX76AA and the DS-1 PB (NTEX78AA). The high-speed link router (HSLR) requires the 32-Mbyte processor and F-bus controller card (NTEX22CA). The CCS7 server (SVR7) requires the 32-Mbyte (NTEX22CA) or the 128-Mbyte (NTEX22FA) integrated processor and F-bus controller card. The card occupies the first slot of a two-slot group. The second slot remains empty. ***Note:*** The NTEX22FA card is available for the Global System for Mobile Communications release 11 (GSM11) SVR7 peripheral only.
	LIUNO	0 to 511	*Link interface unit number* Enter the number assigned to the LIU.
LOCATION		see subfields	*Location* Enter the location of the LIU on the host link interface module. This field consists of subfields CTRL, SHELFNUM, and LIUSLOT.

Field descriptions (Sheet 3 of 6)

Field	Subfield	Entry	Explanation and action
	CTRL	see subfield	*Control information* This field consists of subfield CONTROL.
	CONTROL	LIM or MS	*Controlling host entity* Enter MS if the host is a message switch and datafill subfields MSCARD and MSPORT. Enter LIM if the controlling host is a link interface module and datafill field LIMNUM.
	MSCARD	5 to 23	*Message switch card* If the entry in field CONTROL is MS, enter the message switch card number. Any entries outside the range indicated for this field are invalid.
	MSPORT	0 to 3	*Message switch port* If the entry in field CONTROL is MS, enter the message switch port number.
	LIMNUM	0 to 16	*Link interface module number* If the entry in field CONTROL is LIM, enter the host LIM number on which the LIU resides. Otherwise, leave this field blank.
	SHELFNUM	0 to 3	*Shelf number* Enter the shelf number, at the host LIM, on which the LIU is located.

LIUINV (continued)

Field descriptions (Sheet 4 of 6)

Field	Subfield	Entry	Explanation and action
	LIUSLOT	8 to 31	*Link interface slot* Enter the slot number, at the host LIM, on which the LIU resides. The LIU can occupy two or three slots. In both configurations, the leftmost card is chosen to represent the logical location of the card. That is, the link general processor (LGP) card for the four-card/three-slot configuration, and the integrated processor and frame bus (IPF) card for the three-card/two-slot configuration. All the shelves that are datafilled on a particular controller must be of the same type (two or three-slot).
LOAD		alphanumeric (vector of up to 8 characters)	*Software load name* Enter the table software load name applicable to the LIU. Prefix the load name with MCA in the case of an MLIU eg. MCA11AQ. This load is found in table PMLOADS.
PROCINFO		see subfield	*Processor information* This field specifies the product engineering code (PEC) of the processors used in the LIU. This field consists of subfield PROCPEC.

Field descriptions (Sheet 5 of 6)

Field	Subfield	Entry	Explanation and action
	PROCPEC		*Processor product engineering code* Enter the PEC of the processor card used in the LIU as follows: • NTEX22BA and NTEX22BB are the PECs for the 8-Mbyte integrated processor and F-bus interface cards. The difference between the NTEX22BA and NTEX22BB cards is in firmware only, the hardware is identical. • Enter NTEX22CA for the 32-Mbyte integrated processor and F-bus interface card. • Enter NTEX22DA for the 64-Mbyte integrated processor and F-bus interface card. • Enter NTEX22EA for the 96-Mbyte integrated processor and F-bus interface card. • Enter NTEX22FA for the 128-Mbyte integrated processor and F-bus interface card. ***Note:*** NTEX22DA and NTEX22EA are reserved in the software for future use. NTEX22FA is available for the GSM11 SVR7 peripheral only.

LIUINV (continued)

Field descriptions (Sheet 6 of 6)

Field	Subfield	Entry	Explanation and action
CARDINFO		see subfields	*Card information* This field specifies the card data and consists of subfield APPLPEC.
	APPLPEC	NTEX31AA NTEX31BA NTEX76AA NT9X76AA NT9X76CA NTFX10AA NT9X84AA NT9X14DBN TMX97AANIL STPEC	*Application product engineering code* Enter the PEC of the application card. Cards NTEX31AA and NTEX31BA are used with FRIU applications. Card NTEX76AA is used with HLIU applications. Card NT9X76AA is used with LIU7 applications. Card NT9X76CA is used with Japan ISDN user part (ISUP) LIU7 applications. Card NTFX10AA is used with XLIU applications. Card NT9X84AA is used with EIU and Ethernet link interface unit (ELIU) applications. Card NT9X14DB is used with APUX applications. Card NTMX97AA is used for VPU applications. NILSTPEC is used with SVR7 and HSLR applications.

APPLPEC = NTEX31AA or NTEX31BA

If the entry in field APPLPEC is NTEX31AA or NTEX31BA, datafill subfield PBINFO as described in the following table.

If NTEX31AA is datafilled for an FRIU, the carrier template used must be defined as SF-T1 format and not ESF.

The NTEX31BA PEC must be datafilled when the NTEX31BA card is used on the FRIU. A PEC mismatch is logged if a peripheral module (PM) reset occurs and the datafill does not match the installed card.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
	PBINFO	see subfield	*Paddle board information* This field specifies the paddle board information and consists of subfield PBPEC.
	PBPEC	NTEX30AA	*Paddle board product engineering code* Enter the PEC of the paddle board and datafill the following subfields as described below.
	CLKSRCE	FBUS or EXTERNAL	*Clock source* Enter the clock source if the entry in field LIUTYPE is FRIU.
	T1_FRAMING	CHAN, FRACT, or UNCHAN	*T1 framing* Enter the T1 framing value if the entry in field LIUTYPE is FRIU. If the entry in this field is FRACT, datafill field NUMCHANS; otherwise continue datafill at field PB_LLEQ.
	NUMCHANS	4	*Number of channels* If the entry in field T1_FRAMING is FRACT, enter the number of channels on the fractional T1.
	PB_LLEQ	DS1_LLEQ_110 DS1_LLEQ_220 DS1_LLEQ_330 DS1_LLEQ_440 DS1_LLEQ_550 or DS1_LLEQ_660	*Line length equalization* Enter the line length equalization in feet used by the T1 paddle board.
	PB_CARRIDX	DEFAULT or see table CARRMTC	*Carrier index* This is the index to table CARRMTC. This field must be one of the template names (field TMPLTNM) already datafilled in table CARRMTC.

LIUINV (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
	PB_OSACTION	Y or N	*Out-of-service action* Enter Y (yes) if the T1 carrier is to be put out-of-service if the out-of-service threshold for any performance parameters is reached. Otherwise, enter N (no).
	ZLG	ZCS or B8ZS	*Zero logic* This field is used for the reset of the R8070 chip. B8ZS is normally used.

APPLPEC = NTEX76AA and PBPEC = NTEX78AA

If the entry in field APPLPEC is NTEX76AA, and the entry in field PBPEC is NTEX78AA datafill subfield PBINFO as described in the following table.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
	PBINFO	see subfield	*Paddle board information* This field specifies the paddle board information and consists of subfield PBPEC.
	PBPEC	NTEX78AA	*Paddle board product engineering code* Enter the PEC for the new DS-1 paddle board.
	CLKSRCE	FBUS	*Clock source* The clock source is always FBUS.

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
	CLKRATE	1536	*Clock rate* Enter the clock rate: 1536 kbits/s.
	PB_LLEQ	0_35, 36_65, 66_95, 96_125, 126_155, 156_185, 186_210	*Paddle board line length equalization* These values represent the range of paddle board line lengths. The line lengths are measured in meters from the bulkhead to the terminating equipment. Enter the range that includes the appropriate paddle board line length. ***Note:*** Under certain conditions, an incorrect value may cause errors due to inadequate signal-to-noise ratios.

APPLPEC = NTEX76AA and PBPEC = NTEX26BA

If the entry in field APPLPEC is NTEX76AA and the entry in field PBPEC is NTEX26BA, then datafill the subfield PBINFO as described in the following table.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
	PBINFO	see subfields	*Paddle board information* This field specifies the paddle board information and consists of subfields BPPEC, CLKRATE, and PB_BIT_INV.
	PBPEC	NTEX26BA	*Paddle board product engineering code* NTEX26BA is a permitted entry for the PB PEC of the MLIU. Enter the PEC of the paddle board and datafill subfields CLKRATE and PB_BIT_INV as described below.

LIUINV (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
	CLKRATE	64000, 56000	*Clock rate* Enter the clock rate at which the paddle board operates.
	PB_BIT_INV	NBI	*Paddle board bit inversion* Enter the bit inversion (BI) mode value to match the BI mode characteristic of the associated network.

APPLPEC = NT9X76AA or NT9X76CA and PBPEC = NT9X77AA or NT9X77AB

If the entry in field APPLPEC is NT9X76AA or NT9X76CA, and the entry in field PBPEC is NT9X77AA or NT9X77AB (DMS-100 V.35 PB type), then datafill subfield PBINFO as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	PBINFO	see subfield	*Paddle board information* This field specifies the paddle board information and consists of subfield PBPEC.
	PBPEC	NT9X77AA or NT9X77AB	*Paddle board product engineering code* Enter the PEC of the paddle board and datafill subfields CLKRATE and CLKCONFIG as described below.
	CLKRATE	2400, 4800, 9600, 19200, 56000, or 64000	*Clock rate* Enter the clock rate at which the paddle board operates. The default for this field is 56 000 (56 kbit/s).
	CLKCONFG	DTE or DCE	*Clock configuration* Enter the clock configuration for the paddle board if the LIU7 is specific to the V.35 PB type.

APPLPEC = NT9X76AA or NT9X76CA and PBPEC = NT9X78AA

If the entry in field APPLPEC is NT9X76AA or NT9X76CA, and the entry in field PBPEC is NT9X78AA (DS-0A PB type), then datafill subfield PBINFO as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	PBINFO	see subfield	*Paddle board information* This field specifies the paddle board information and consists of subfield PBPEC.
	PBPEC	NT9X78AA	*Paddle board product engineering code* Enter the PEC of the paddle board and datafill subfield CLKSRCE as described below.
	CLKSRCE	EXTERNAL or FBUS	*Clock source* Enter the clock source for the paddle board if the LIU7 is specific to the DS-0A PB type.

LIUINV (continued)

APPLPEC = NT9X76AA or NT9X76CA and PBPEC = NT9X78BA, NT9X78CA, NT9X78DA, or NT9X78DB

If the entry in field APPLPEC is NT9X76AA or NT9X76CA, and the entry in field PBPEC is NT9X78BA, NT9X78CA, NT9X78DA (DS-0A PB type), or NT9X78DB then datafill subfield PBINFO as described in the following table.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
	PBINFO	see subfields	*Paddle board information* This field specifies the paddle board information and consists of subfield PBPEC.
	PBPEC	NT9X78BA NT9X78CA NT9X78DA or NT9X78DB	*Paddle board product engineering code* Enter the PEC of the paddle board and datafill the following subfields: The NT9X78BA is for 56-kbit/s applications. The NT9X78CA is for 56- and 64-kbit/s applications. The NT9X78DA provides 56- and 64-kbit/s applications and can generate a Link Fault Sectionalization (LFS) control code sequence. The NT9X78DB provides 56- and 64-kbit/s applications and supports LFS enhancements.
	CLKSRCE	EXTERNAL or FBUS	*Clock source* Enter the clock source for the paddle board if the LIU7 is specific to DS-0A PB type.
	CLKRATE	56000 or 64000	*Clock rate* Enter the clock rate at which the paddle board operates. The default is 56000 (56 kbit/s). The 64000 clock rate only works with the NT9X78CA paddle board.

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
	DS0TYP	DS0TRK or NIL	*DS-0 type* Enter the DS-0 type. DS0TRK is valid only if the office has channelized access on LPP/LIS. If the entry in this field is DS0TRK, datafill field DS0TRK.
	DS0TRK	see subfields	*DS-0 trunk* This field consists of subfields CLLI and EXTRKNM.
	CLLI	DS0TRK or NIL	*Common language location identifier* Enter DS0TRK for a DS-0 LIU7; enter NIL for a V.35 LIU7. These are psuedo CLLIs that are needed to satisfy the table editor.
	EXTRKNM	0 to 9999	*External trunk number* Enter a numerical value to represent the external trunk number.

APPLPEC = NT9X76AA or NT9X76CA and PBPEC = NTEX26AA

If the entry in field APPLPEC is NT9X76AA or NT9X76CA, and the entry in field PBPEC is NTEX26AA, then datafill the subfield PBINFO as described in the following table.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
	PBINFO	see subfields	*Paddle board information* This field specifies the paddle board information and consists of subfields OPTIONS, CLKRATE, and PB_BIT_INV.
	PBPEC	NTEX26AA	*Paddle board product engineering code* Enter the PEC of the paddle board and datafill subfields OPTIONS, CLKRATE, and PB_BIT_INV as described below.

LIUINV (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
	OPTIONS	blank	*Option vector* This field cannot be datafilled at this time, leave the entry blank.
	CLKRATE	48000 56000 or 64000	*Clock rate* Enter the clock rate at which the paddle board operates.
	PB_BIT_INV	NBI, EBI, ABI, or OBI	*Paddle board bit inversion* Enter a bit inversion (BI) mode value to match the BI mode characteristic of the associated network.

APPLPEC = NTFX10AA

If the entry in field APPLPEC is NTFX10AA, datafill field PBPEC as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	PBPEC	NTFX09AA	*Paddle board product engineering code* Enter the PEC of the paddle board. The only card code supported is NTFX09AA.

APPLPEC = NTMX97AA

If the entry in field APPLPEC is NTMX97AA, datafill subfield PBPEC as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	PBPEC	NTMX99AA	*Paddle board product engineering code* Enter NTMX99AA, the paddle board for LIUTYPE VPU.

APPLPEC = NT9X14DB

If the entry in field APPLPEC is NT9X14DB, datafill subfield SNIX_FILENAME as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	SNIX_FILE-NAME	alphanumeric (6 characters)	*SuperNode UNIX filename* Enter the name of the SNIX image load file. If SNIX_FILENAME is SOSONL, this entry defines an APU running Support Operating System (SOS) only. If SNIX_FILENAM is SOSNIX, this entry defines an APU running both SOS and SuperNode UNIX (SNIX) Systems.

APPLPEC = NT9X84AA

If the entry for field APPLPEC is NT9X84AA, datafill the subfields in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	PBPEC	NT9X85AA or NT9X85BA	*Paddle board product engineering code* Enter one of the PECs. Enter NT9X85AA for EIU coax applications. Enter NT9X85BA for EIU unshielded twisted pair applications. Enter NT9X85AA or NT9X85BA for ELIU applications.
	HEARTBEAT	YES or NO	*Heartbeat* Enter YES if the EIU or ELIU expects a heartbeat indication signal from the media access unit (MAU) connected to it; otherwise, enter NO.
	MAC_ADDRESS	000075F00000 to 000075FFFFFF	*Media access control address* Enter a 12-character hex string representing the MAC address.

LIUINV (continued)

Datafill example

The following example shows sample datafill for table LIUINV.

MAP display example for table LIUINV

```
 LIUNAME      LOCATION     LOAD         PROCINFO
                                                    CARDINFO
_____________________________________________________________

ELIU   0   LIM  0 1 15  ELS071BA        NTEX22BB
                          NT9X84AA NT9X85AA NO 000075F00020

LIU7 101   LIM  0 1  9  LRS36CJ         NTEX22BB
                                 NT9X76AA NT9X77AA 56000 DTE

LIU7 102   LIM  0 1 12  LRS36CJ         NTEX22BB
                                 NT9X76AA NT9X77AA 56000 DCE

LIU7 104   LIM  0 1 18  LRS36CJ         NTEX22BB
                                 NT9X76AA NT9X77AA 56000 DCE

LIU7 105   LIM  0 1 21  LRS36CJ         NTEX22BB
                                 NT9X76AA NT9X77AA 56000 DCE

LIU7 201   LIM  0 2  9  LRS36CJ         NTEX22BB
                                 NT9X76AA NT9X77AA 56000 DTE
LIU7 202   LIM  0 2 12  LRS77DC         NTEX22BA
                                 NT9X76AA NT9X78DB 56000 NIL

LIU7 301   LIM  0 3  9  LRS36CJ         NTEX22BB
                                 NT9X76AA NT9X77AA 56000 DTE

LIU7 302   LIM  0 3 12  LRS36CJ         NTEX22BB
                                 NT9X76AA NT9X77AA 56000 DCE

LIU7 303   LIM  0 3 15  LRS36CJ         NTEX22BB
                                 NT9X76AA NT9X77AA 56000 DCE

LIU7 305   LIM  0 3 21  LRS36CJ         NTEX22BB
                                 NT9X76AA NT9X77AA 56000 DCE
HLIU   1   LIM  0 1 28  HCA77CK         NTEX22CA
                                 NTEX76AA NTEX78AA FBUS 1536 0_35

HSLR   1   LIM  0 3 30  HCA77CK NILSTPECNTEX22CA

MLIU 100   LIM  1 1  8   MCA11AQ         NTEX22CA
                                 NTEX76AA NTEX26BA 64000 EBI
```

Table history

MMP13

Value 56000 was added to field CLKRATE for the MLIU.

MMP12

The following changes were made to table LIUINV:

- Added MLIU as a permitted entry to subfield LIUTYPE
- Added note to include NTEX26BA to subfield PB PEC for an MLIU
- Added an example datafill for an MLIU in the MAP display

TL11

The following changes were made to table LIUINV:

- Removed note regarding HLIU and HSLR from field LIUTYPE
- Added HLIU and HSLR examples to the datafill example
- Added figure “Link interface unit configuration (12-link LIM cabinet)”
- Added the following PECS under the subfield PROCPEC:
  - NTEX22DA
  - NTEX22EA
  - NTEX22FA
- Added value MLIU to subfield LIUTYPE
- Added value NTEX26BA to subfield PBPEC

TL10

Value SVR7 was added to field LIUTYPE.

Value NILSTPEC was added to field APPLPEC.

STP04.0

The following changes were made to table LIUINV:

- Removed note regarding HLIU and HSLR from field LIUTYPE
- Added value NILSTPEC to subfield APPLPEC
- Added HLIU and HSLR examples to the datafill example
- Added value NT9X78DB to subfield PBPEC.

LIUINV (end)

TL07

The following changes were made to table LIUINV:

- added ELIU as a valid LIU type.
- added values HLIU and HSLR to field LIUTYPE
- added NTEX76AA to subfield APPLPEC
- added PBINFO subfields PBPEC, CLKSRCE, CLKRATE, and PB_LLEQ for NTEX76AA

TL06

The following changes were made to table LIUINV:

- added NTEX22CA to subfield PROCPEC
- deleted NTEX22AA in subfield PROCPEC
- updated the explanation for subfield PFIPEC
- corrected the entry range in subfield MSCARD (from 6 to 23 to 5 to 23)

BCS36

The following changes were made to table LIUINV:

- added value NT9X78DA to subfield PBPEC
- added values NT9X76BA to field APPLPEC and NT9X77BA to subfield PBPEC
- corrected the entry range in field LIUNO (from 0 to 750 to 0 to 511)

BCS35

The following changes were made to table LIUINV:

- changed field LIUTYPE from APUX to APU
- deleted fields SOSTIX, SNIXTIX, and NUMREST
- added field LIUTYPE VPU
- added field PBPEC NTEX26AA for the channelized access feature
- added field APPLPEC NT9X76CA for Japan ISUP

BCS34

The following changes were made to table LIUINV:

- revised fields LIUNAME, CARDINFO, and APPLPEC
- added fields NUMCHANS, SOSTIX, SNIXTIX, and FRAC

LKIDTAB

Table name

Link Identifier Table

Functional description

Table LKIDTAB is a read-only table. Table LKIDTAB preserves the relationship between integrated link maintenance (ILM) links and pairs of ILM access identifiers over software upgrades.

The update of table LKIDTAB only can occur indirectly. The update can occur through the entry of data of a device that requires ILM-supported resources. The update also can occur as a part of a restore operation on the N+ 1 software load as part of a software upgrade. For this reason, table LKIDTAB is a write-restricted table with a system protected (SYSPROT) table protection level.

Note: Table LKIDTAB is for NT use only. The operating company is not allowed to use the table.

Datafill sequence and implications

You do not need to enter data for other tables before you enter data for table LKIDTAB.

Restore table LKIDTAB before any of the inventory tables of devices that require ILM resources.

You can enter data in table LKIDTAB immediately after you enter data in table AKEYTAB. Perform this action to allow future cross-checking between table LKIDTAB and AKEYTAB.

You only enter data for table LKIDTAB through a restore operation. Table LKIDTAB is write-restricted for direct datafill.

Table size

0 to 2048 tuples

The number of dynamically added tuples determines the table size.

LKIDTAB (continued)

Datafill

Datafill for table LKIDTAB appears in the following table.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
LKID		refer to subfields	*Link identifier*. This field contains an identifier that integrated link maintenance (ILM) uses to identify a link. A link occurs between a pair of ports and a pair of access identifiers. This field contains subfields EPTKEY and OFFSET.
	EPTKEY	0 to 32767	*Link endpoint key*. This subfield identifies a pair of access keys that ILM transport resources connect.
	OFFSET	0 to 32767	*Link offset*. This subfield identifies the link between a pair of access keys. If several links are present between two access keys, the link offset differentiates between them.
ACID1		refer to subfields	*First access identifier*. This field is the first of a pair of access identifiers between which the link occurs. This field contains subfields KEY, INDEX, and CHANNEL.
	KEY	0 to 32767	*Access key*. This subfield is the access key part of the first access identifier.
	INDEX	0 to 32767	*Access index*. This subfield is the access index part of the second access identifier.
	CHANNEL	0 to 32767	*Access channel*. This subfield is the access channel part of the second access identifier.
ACID2		refer to subfields	*Second access identifier*. This subfield is the second of a pair of access identifiers between which the link occurs. This field contains subfields KEY, INDEX, and CHANNEL.
	KEY	0 to 32767	*Access key*. This subfield is the access key part of the second access identifier.
	INDEX	0 to 32767	*Access index*. This subfield is the access index part of the second access identifier.
	CHANNEL	0 to 32767	*Access channel*. This subfield is the access channel part of the second access identifier.

Datafill example

Sample datafill for table LKIDTAB appear in the following example.

MAP example for table LKIDTAB

```
LKID                ACID1                    ACID2
---------------------------------------------------------
0     0         0     0     0           1     0     0
```

Table history

BCS36

References to BCS were removed. Software upgrades replaced the references in BCS36.

BCS35

Table LKIDTAB was introduced in BCS35.

LOGCLASS

Table name

Log Class Table

Functional description

The following information for each report name (REPNAME) appears in table LOGCLASS:

- the class assignment of the log name and report number
- the threshold that specifies which messages the terminal prints or displays
- if the system generates log messages
- the time, in minutes, when the register count associated with a threshold report resets to 0 (zero)
- if a log is a system log (SYSLOG)

Note: Field SYSLOG allows this characteristic to remain during a dump and restore. Field SYSLOG does not require the use of SYSLOG command in the LOGUTIL facility at the maintenance and administration position (MAP) terminal. All SYSLOGs appear in table LOGCLASS with field SYSLOG = Y from the external (EXT) files at loadbuild time.

For any log name that does not appear in table LOGCLASS, the values in fields CLASS and THRESHLD are 0.

Table LOGCLASS allows a maximum of 100 different time units (TUNITS). If the field THRESHLD is 0 (print all reports), field TUNITS must be 0 or <0.

The following office parameters can affect the production of the log reports:

- LOG_CENTRAL_BUFFER_SIZE in table OFCVAR
- LOG_DEVICE_BUFFER_SIZE in table OFCVAR
- LOG_CENTRAL_POLLING_MILLI_SECOND in table OFCSTD
- SYSLOG_ACCESS in table OFCVAR

Refer to the *Input/Output System Reference Manual*, 297-1001-129 for additional information on log systems.

Datafill sequence and meaning

You do not need to enter data in other tables before you enter data in table LOGCLASS.

Table size

The system automatically allocates memory for a maximum of 512 tuples.

Datafill

Datafill for table LOGCLASS appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
REPNAME		see subfields	*Report name*. This field contains subfields LOGNAME and REPNUM.
	LOGNAME	alphabetical (up to 4)	*Log name*. Enter the log name. Refer to the *Log Report Reference Manual* for a list of log names in the logs system.
	REPNUM	000 to 999 or -1	*Report number*. Enter the report number. If all report numbers are necessary, enter -1. ***Note:*** If a specified report name uses the report number of -1 you must enter data in the report. Enter data in the report before you enter data in the other logs with the same report name. Any entry outside the range of indicated values for this field is not correct.
CLASS		0 to 31	*Class*. Enter the class number associated with the report name.
THRESHLD		0 to 255	*Threshold*. Enter the number to specify which messages the system prints or displays. Enter 0 to generate all messages. If threshold is 1 to 255, office parameter THRESHOLD_IS_SAMPLING in table OFCVAR controls the action for log thresholding.
SUPPRESS		Y or N	*Suppress*. Enter Y (yes) if the system does not print or display a report or log. Enter N (no) if the system generates a report or log. The office parameter BUFFER_THRESHOLDED_REPORTS in table OFCVAR can control the disposal of reports that the system does not print. The system does not print the reports because of log thresholding. This condition occurs if the entry in field THRESHLD is 1 to 255 and if the system generates a report.

LOGCLASS (end)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
TUNITS		-32768 to 32767	*Time units*. Enter the time, in minutes, when the register count associated with a threshold report resets to 0. This table allows a maximum of 100 unique TUNITS. Enter 0 or a negative value to generate all reports. Enter 0 or a negative value (<0) if TUNITS = 0 if a reset is not necessary.
SYSLOG		Y or N	*System log*. Enter Y (yes) if log is a system log. Enter N (no) if the log is not a system log. ***Note:*** All SYSLOG that are Y appear in table LOGCLASS from the external (EXT) files at loadbuild.

Datafill example

Sample datafill for table LOGCLASS appears in the following example.

MAP example for table LOGCLASS

```
REPNAME   CLASS THRESHLD SUPPRESS TUNITS SYSLOG
_____________________________________________________
SWCT -1       0       0        N      -1      Y
OMPR 200     22       0        N       0      N
SYNC 103      0       0        N       0      Y
```

LOGDEV

Table name

Log Device Table

Functional description

Table LOGDEV lists the log classes the system can print or appear at each terminal or data device. A log is an output message.

Table LOGDEV defines the alternate terminal or data device to which the system sends messages. The system sends these messages if the main terminal device is not operational.

Refer to table LOGCLASS for related information.

Datafill sequence and meaning

Enter data in table TERMDEV before you enter data in table LOGDEV.

The office parameters that table LOGDEV interacts with appear in the following list:

- SCC2_LOGS in table OFCOPT
- LOG_PRIORITIZATION in table OFCENG for feature BR0536 [Critical Message Prioritization]

Table size

The system allocates memory for 32 terminal devices.

Datafill

Datafill for table LOGDEV appears in the following table.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
DEV		alphanumeric (a maximum of 12 characters)	*Device*. Enter the name in table TERMDEV for the terminal device. ***Note:*** This field can be SCC2 if the office parameter SCC2_LOGS in table OFCOPT is Y (yes) and field PRIORITY is Y. This field can be SCC2 if field FORMAT is STD and field PRIORITY is N (no).

LOGDEV (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
ALT		alphanumeric (a maximum of 12 characters) or NIL	*Alternate*. Enter the name in table TERMDEV for the terminal device that receives logs. The system sends logs to this terminal device if the main terminal device is not in operation. If an alternate device is not necessary, enter NIL.
CLASSES		vector of numeric values (0 to 31) with delimiter characters (,), -, and +	*Classes*. Enter the class numbers the system assigns to the terminal device. Enter ((open bracket) if the entry is the first record for the terminal device. If the entry is a block of classes in sequence, enter the first and last class in the block. Separate the first and last class with a - (dash). For example, if classes are 1, 2, 3, 4 and 5, enter 1-5. Separate each log or block of log classes with a blank space. Enter + if additional information for this field appears in the next record. If this condition does not apply, enter) (close bracket) to indicate the end of the tuple. You can use the table editor of the switch to add a separate entry. A single quotation mark must precede the open bracket. A single quotation mark must follow the close bracket. An example of the use of the quotation marks is '(22 24)'.
FORMAT		SCC2 or STD	*Format*. Enter SCC2 for the AT&T #2 Switching Control Center format. Enter STD for the standard format. ***Note:*** This field can only be SCC2 if office parameter SCC2_LOGS in table OFCOPT is Y.
PRIORITY		Y or N	*Critical message prioritization*. Enter Y if the alarm level sets the prioritization of the reports. The system generates the report with the highest alarm level. Enter N if prioritization is not necessary and the system generates the reports in order. ***Note:*** This field can only be Y if office parameter LOG_PRIORITIZATION in table OFCENG is Y.

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
GUAR		Y or N	*Guaranteed device*. Enter Y if the system guarantees the device. For example, the device continues to run with the call processing or maintenance load. If the condition is not for Y, enter N. The default value for this field is N.

Datafill example

Sample datafill for table LOGDEV appears in the following example. In the example, the system guarantees device NWMPRT. The datafill a CMAP device requires appears in the third tuple.

MAP example for table LOGDEV

```
         DEV          ALT
                                                          CLASSES
FORMAT PRIORITY GUAR
_____________________________________________________________________
      NWMPRT       MAPPRT
                                                          (22–24)
   STD        Y    Y

       TTPPRT         NIL
                                                             (10)
   STD        Y    N

        CMAP          NIL
                                                           (0–31)
   SCC2       Y    N
```

Table history

BCS36

During BCS36, the system corrects entry NONE in field ALT to NIL.

LOGDEV (end)

Additional information

This section provides information on how to enter data in table LOGDEV for specified applications. This section provides information on product descriptions related to table LOGDEV.

Critical Message Prioritization

Feature BR0536 (Critical Message Prioritization) provides an optional method of report prioritization in the log system. The alarm levels of the log system form the base for prioritization. The system can turn message prioritization on or off for each specified log device.

If prioritization is on for a specified device, the system generates the report with the highest alarm level. The system outputs logs with the same alarm level in order.

If the system did not enable the feature for a specified device, the system generates reports in order. If the system did not install the feature, the system generates reports in order.

The SAVELOG is a non-optional log and is a part of this feature. A SAVELOG prevents the loss of critical data during restarts.

To enable Critical Message Prioritization, office parameter LOG_PRIORITIZATION in table OFCENG must be Y.

Guaranteed background tasks

If the DMS is under a heavy load, one log device must continue to run with the call processing or maintenance load. Guaranteed background tasks accomplish this functionality. The guaranteed background tasks are limited in number. These tasks run more than other background tasks.

In table LOGDEV, the system can guarantee one device. The operating company assigns this device through datafill in table LOGDEV. The system routes critical logs to this device.

Log device CMAP

The system enters log device CMAP in table LOGDEV. This device permits a CMAP user to open a DMS Dynamic Network Control (DNC) log channel. This log channel resumes after all communication link failures. These link failures include restarts. The system starts logs to this device after a reload restart.

LTCALLS

Table name

Logical Terminal Calls (LTCALLS) table

Functional description

The Logical Terminal Calls (LTCALLS) table stores integrated service access (ISA) data related to the call type needed to determine how calls are translated and screened.

Datafill sequence and implications

Datafill table LTDEF before table LTCALLS.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table LTCALLS.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
LTID		See subfields.	LOGICAL TERMINAL IDENTIFIER. This field is the first portion of the key into table LTCALLS. It consists of subfield LTGRP and LTNUM.
	LTGRP	ISDN or ISUP	LOGICAL TERMINAL GROUP. Enter ISDN or ISUP.
	LTNUM	1 to 1022	LOGICAL TERMINAL NUMBER. Enter the logical terminal number within the group.
	CALLTYP	PUB, PVT, INWATS, WATS, FX, or TIE	CALL TYPE. Enter the call type associated with the logical terminal identifier. More than one call type can be associated with the same identifier.
XLARTE		XLAIEC, RTEREF, XLAISA, or XLAMBG	TRANSLATION ROUTE. Enter XLAIEC to select interexchange carrier translations and datafill the CALLATTR and TABNAME refinements. ***Note:*** The UCS DMS-250 switch does not support values of RTEREF, XLAISA, or XLAMBG.

LTCALLS (continued)

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	CALLATTR	0 to 2047	CALL ATTRIBUTE. Enter an index into table CALLATTR.
	TABNAME		TABLE NAME. Enter the name of the routing table. This is an optional refinement.
		OFRT, OFR2, OFR3, or OFR4	Enter OFRT, OFR2, OFR3, or OFR4 for office routing. Refer to TABNAME=OFRT, for refinement datafill.
		IRTE	The UCS DMS-250 switch does not support IRTE.
		RRTE	Enter RRTE for rerouting; refer to TABNAME=RRTE for refinement datafill.
		OPERRTE	Enter OPERRTE for operator routing; refer to TABNAME=OPERRTE for refinement datafill.
		EXDGTRTE	Enter EXDGTRTE for extended digit routing; refer to TABNAME=EXDGTRTE for refinement datafill.
OPTIONS			No refinements defined.

TABNAME=OFRT

The following table describes valid refinement data ranges when TABNAME=OFRT, OFR2, OFR3, or OFR4.

TABNAME=OFRT refinement descriptions

Refinement	Subfield or refinement	Entry	Explanation and action
INDEX		0 to 1023	INDEX. Enter an index into the associated table.

TABNAME=RRTE

The following table describes valid refinement data ranges when TABNAME=RRTE.

TABNAME=RRTE refinement descriptions

Refinement	Subfield or refinement	Entry	Explanation and action
KEY		0 to 1023	KEY. Enter an index into table RRTE.

TABNAME=OPERRTE

The following table describes valid refinement data ranges when TABNAME=OPERRTE.

TABNAME=OPERRTE refinement descriptions

Refinement	Subfield or refinement	Entry	Explanation and action
RRTNO		1 to 9999	ROUTING NUMBER. Enter an index into table OPERRTE.

TABNAME=EXDGTRTE

The following table describes valid refinement data ranges when TABNAME=EXDGTRTE.

TABNAME=EXDGTRTE refinement descriptions

Refinement	Subfield or refinement	Entry	Explanation and action
INDEX		0 to 1023	INDEX. Enter an index into table EXDGTRTE.

Datafill example

The following example shows datafill for table LTCALLS.

LTCALLS (end)

```
LTID XLARTSEL OPTIONS
_______________________
ISDN 12 PUB XLAIEC 73 $ $
ISDN 20 PUB XLAIEC 20 OFRT 243 $
```

LTCINV

Table name

Line Trunk Controller Inventory (LTCINV)

Functional description

Table LTCINV contains the inventory data, except the P-side link assignment, for peripheral module (PM) types LTC, DTC, LGC, FRUI, DFI, IDTC, IAC, DTCI, SRCC, and HSI. Table LTCINV contains the assignment of the P-side links for these PMs. The key for table LTCPSINV is the same as the key for table LTCINV.

Table LTCINV lists the following data assignment for each bay associated with an LTC unit:

- PM type and number
- frame type and number on which the PM is physically mounted
- floor, row on floor, bay position on row of each PM
- product engineering code (PEC) of the PM
- the issue name of the PM software
- the terminal types versus the executive programs required for the regular lines, regular trunks, FX trunks, CCIS trunks, P-phone/data lines, and remote lines
- the network links on which the PM is assigned corresponding to the C-side links
- the optional cards equipped
- the tone set to be used for the peripheral
- the optional attribute for CCS7 DTC nodes

The following peripheral types are supported by LTCINV:

- DTC-Digital Trunk Controller (controls only digital trunks)
- LGC-Line Group Controller (controls lines only)
- LTC-Line and Trunk Controller (controls lines and digital trunks)
- IDTC-International Digital Trunk Controller (controls only pcm-30 trunks)
- ILGC-International Line Group Controller
- ILTC-International Line Trunk Controller
- LGCI-ISDN Line Group Controller

LTCINV (continued)

- LTCI-ISDN Line Trunk Controller
- SMR-Subscriber Module Remote (controls RCT of the DMS1R)
- SMS-Subscriber Module SLC-96 (controls SLC-96 remote)
- SMU-Subscriber Module Urban (controls RCT of the DMS1U)
- BDTC-British Digital Trunk Controller
- PDTC-Peripheral Digital Trunk Controller (PCM-30 Digital Trunk Controller)
- TRCC-for licensee use only
- PLGC-PCM30 Line Group Controller
- DTCI-ISDN Digital Trunk Controller

The following optional cards are supported and are used for the following applications:

- CONTINUITY (NT6X70)
  - — This is a common channel inter-office signaling (CCIS) card for use with C6 or N6 application.
  - — For DTCs or LTCs that contain any ISUP trunks, table LTCINV must be datafilled with the optional CONTINUITY card.
- UTR8, UTR9, UTR10, UTR11, UTR14, UTR15, UTR16, UTR17, UTR18 (NT6X92)
  - — These are universal tone receiver cards. If UTR8 is datafilled, it means a universal tone receiver card is equipped in slot 8. Both UTR8 and UTR9 are for IDTC or PLGC applications. For LTC/LGC/DTC applications four UTR cards can be equipped either in slot 15 or 16. Only two UTR cards can be used in the PLGC for digit collection.
  - — The UTR11 card is only valid for peripheral types of PDTC or PLGC.
  - — A filler face plate, NT0X50AA, must always be provided in slot 17.

- MSG6X69
  - — This is a new messaging card which resides in the same slot as the old messaging card. This means that the peripheral can be equipped with either the new or old card but not both.
- TONE6X79
  - — This is a new tone card and cannot be added unless the MSG6X69 messaging card has already been added. This is because the presence of the NT6X79 without an NT6X69 is not a valid configuration.
- NT6X44EA
  - — This card applies conversions to both voice and data in the connections made across the NT6X44EA time-switch.
- RAM6X69
  - — This is a universal message protocol and tones card. It cannot be added unless PEC 6X02P2 or 6X02P3 has been added to EQPEC.
- ISP16
  - — The ISDN signaling processor card provides a communication channel between the DTC signaling processor (SP) and the master processor (MP). This card resides on a spare slot in the DTC. This card is valid for DTCI, which requires both the MSG6X69 and ISP16.

DS-30 Interface (NT6X40BA)

This cost-reduced version of the DS-30 Network Interface card is used with an SMS and provides four network ports. Master processor and signaling processor cards used with the NT6X40BA DS-30 Network Interface card have a PEC code of NT6X45CA.

The NT6X45CA processors can only be used on SMS. They and the NT6X40BA card can only be used in software loads after BCS22. With the NT6X40BA card, only four network links can be datafilled for an SMS. Attempting to datafill more than four links results in the following message:

```
Only four c-side links permitted on SMS
```

The processor complex of each XPM unit contains one or more NT6X45 processor cards. For each unit, the PEC corresponding to the 6X45 with the minimum firmware capabilities is to be entered. The PECs are listed in order of non-decreasing capabilities in the string range NT_6X45_PEC. The string type is initially set to contain the following values in order: 6X45AA, 6X45AB, 6X45AC, 6X45CA, 6X45AD, 6X45AE, 6X45AF, 6X45BA.

LTCINV (continued)

If, for example, the MP has a 6X45CA, the SP has a 6X45AD and the FP has a 6X45AE, the PEC that must be entered in field PECS6X45 is 6X45CA. The PEC for unit 0 is to be entered before the PEC for unit 1.

To adapt existing nailed-up connections from the DMS-200 switch onto DMS-300 switch on digital peripherals, the ABTRK terminal type uses the DTCEX exec lineup. The peripherals used are DTC, PDTC, BDTC for digital connections and T8A for analog connections by way of 5X03AA and 5X04AA trunk cards, respectively.

The CCS7 attribute cannot be deleted from a DTC as long as ISUP trunks are still datafilled and assigned to that PM. An error message is output and the ISUP trunks must be deleted before proceeding again with the LTCINV table change.

It is critically important that each ISUP DTC7 be identified by means of this attribute whether MMSB is enabled or not. (MMSB is the Multi-MSB7 Feature).

Datafill sequence and implications

Table PMLOADS must be datafilled before table LTCINV.

Table size

Memory is automatically allocated for a maximum of 128 tuples for tables LTCINV and LTCPSINV.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table LTCINV.

(Sheet 1 of 8)

Field	Subfield or refinement	Entry	Explanation and action
LTCNAME		XPMTYPE, XPMNO	LINK TRUNK CONTROLLER NAME
	XPMTYPE	DCM, LTC, DTC, LGC, IDTC, DTCI, FRIU, DFI, SRCC, HSI	68K PERIPHERAL MODULE TYPE. Enter the type of PM. Enter DTCI for Dialable Wideband Service.

LTCINV (continued)

(Sheet 2 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	XPMNO	0-255	68K PERIPHERALMODULE NUMBER. Enter the PM number. ***Note:*** 180 series II peripherals are currently supported. With external routers (C7ROUTERS), these can be any type of series II peripheral. Without external routers, the 180 series II peripherals can only contain up to 140 DTC7 peripherals.
ADNUM		0 to 4095	ADMINISTRATIVE NUMBER
FRTYPE		alphanumeric	FRAME TYPE. Enter the frame type on which the PM equipment is mounted. Enter DTEI for Dialable Wideband Service.
FRNO		0-511	FRAME NUMBER. Enter the frame number of the frame type mentioned above on which the PM is mounted.
SHPOS		0-77	SHELF POSITION. Enter the position of the shelves on the frame, in inches, above the floor level.
FLOOR		0-99	FLOOR. Enter the floor on which the PM frame is located.
ROW		A-H, J-N, P-Z, AA-HH, JJ-NN, PP-ZZ	ROW. Enter the row on floor in which the PM equipment frame is located.
FRPOS		0-99	FRAME POSITION. Enter the bay position in row of the PM equipment frame.

LTCINV (continued)

(Sheet 3 of 8)

Field	Subfield or refinement	Entry	Explanation and action
EQPEC		6X02AA, 6X02BA, 6X02BC, 6X02BD, 6X02BE, 6X02BG, 6X02GA, 6X02HA, 6X02EA, 7X3304, 6X02JA, 6X02BF, 6X02BK, 6X02FA, 6X02KA, 6X02KB, 6X02P2, 6X02P3	EQUIPMENT PRODUCT ENGINEERING CODE. Enter the PEC of the PM as follows: • Enter 6X02GA for International Line Group Controller/Caribbean Expansion Programme (ILGC/CEP) in order to provide maintenance support. • Enter 6X02HA for International Digital Trunk Controller/Caribbean Expansion Programme (IDTC/CEP). • Enter 6X02BG for the PLGC PM. • Enter 7X3304 for the Meridian Cabinet Trunk Module. • Enter 6X02JA to provide Turkish tones for R2 signaling in the PDTC. • Enter 6X02BF if the dual cards new messaging ILGC for Turkey is being used. • Enter 6X02BK for the single card version of previous. • Enter 6X02FA for single card new message ILGC/CEP. • A new tones card 6X69KA is provided for China. The shelf code is 6X02KA for an IDTC and 6X02KB for an ILGC with the new tones card. • Enter 6X02P2 for a 2-processor PM equipped with NT6X69LA or 6X02P3 for a 3-processor PM equipped with NT6X69LA (Universal Message Protocol and Tones card).
LOAD		Up to eight characters	LOAD. Enter the name given to the issue of the PM software.
EXECTAB	TRMTYPE, EXEC	vector from one to eight multiples	EXECUTIVE TABLE. There must be at least one entry (maximum eight) in the TRMTYPE/EXEC combination for a given PM except for IDTC (frame type IDTE), which has none.

LTCINV (continued)

(Sheet 4 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	TRMTYPE	POTS, ABTRK, CCIS, KEYSET, RMM_TERM, AB250, N6_TERM, R1_TERM, M2000, P2018, P2112, M5X09, M5X12, R2_TERM	TERMINAL TYPE. Enter the type of PM terminals used: POTS for regular lines, ABTRK for regular trunks, FX trunks, CCIS for CCIS digital trunks, KEYSET for P-phone/data lines, RMM_TERM for remotes, AB250 for DMS250 trunks, AB250 required for SOCPEX and UKPDTC execs, N6_TERM and R1_TERM for DTC300 trunks, M2000 for voice and data line, and R2_TERM for R2 trunks in DMS300. M5X09 cannot be used with the LGC peripheral type.

LTCINV (continued)

(Sheet 5 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	EXEC	TM2EX, TM4EX, ATMEX, TM8EX, MTMEX, DCMEX, OAUEX, T8AEX, LMEX, RSMEX, TANEX, DESEX, DMSMTX, AMTMEX, ADCMEX, ADCMIX, DDLCEX, MTM250, KSETEX, DTCEX, FXODCM, MTMTTT, DCMCSC, DCTEX, TM250P, IMTMEX, ESAEX, POTSEX, ADTCEX, ADTCIX, UKMTM, PDTCEX, UKDCM, MTMATD, DTC250, DCM25X, FXODTC, UTR250	EXECUTIVE PROGRAMS. Enter the set of executive programs required for the PM specified in TRMTYPE entry.
CSLNKTAB		ENSHELF, ENSLOT, ENLINK, ENDS30	C-SIDE LINK TABLE.

LTCINV (continued)

(Sheet 6 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	ENSHELF	0-7	ENET SHELF NUMBER. Enter the shelf number to which the PM is assigned.
	ENSLOT	10-16, 25-30	SLOT NUMBER. Enter the crosspoint slot number to which the PM is assigned, corresponding to C-side links.
	ENLINK	0-18	ENET LINK NUMBER. Enter the link on the crosspoint to which the PM is assigned, corresponding to C-side links 0 to 18 of the PM.
	ENDS30	0-15 for fiber links; 0 for DS30 links	ENDS30. This field defaults to 0 when the link is a DS30. All entries must be contiguous from 0. No entry can be duplicated.

LTCINV (continued)

(Sheet 7 of 8)

Field	Subfield or refinement	Entry	Explanation and action
OPTCARD		CONTINUITY, UTR8, UTR9, UTR15, UTR16, UTR17, MSG6X69, TONE6X79, NT6X44EA, RAM6X69, ISP16, NT6X28, DCTAX78	OPTIONAL CARD. This field is a vector which may have up to ten entries separated by plus (+) signs and ended by the $ sign. Make selection as follows: • Enter CONTINUITY if equipped with NT6X70 for CCIS C6 or N6 application. • Enter UTR8, UTR9, UTR15 or UTR16 if equipped with universal tone receiver cards in slots 8, 9, 15, or 16, respectively. Note that UTR8 and UTR9 are for IDTC or PLGC applications, UTR11 is for PDTC or PLGC applications and UTR15 and UTR16 are for LTC/LGC/DTC applications. • Enter MSG6X69 if equipped with the new messaging card. • Enter TONE6X79 if equipped with the NT6X79 Tone Card. The TONE6X79 card cannot be added unless the MSG6X69 card has already been added. Also, the MSG6X69 card is allowed for the Austrian Digital Tone Controller (ADTC). • Enter NT6X44EA for the conversion card for DTC, IDTC, PDTC, LGC, ILGC, and PLGC applications. • Enter RAM6X69 if PEC 6X02P2 or 6X02P3 is datafilled in EQPEC. This is the new Universal Message Protocol and Tones card. • ISP16 and MSG6X69 are both required for DTCI. All optional cards valid for the DTC are valid for the DTCI. • Enter DCTAX78 for Dialable Wideband Service.
TONESET		DEFAULT, NORTHAM	TONE SET. Enter the tone set appropriate for the switch being datafilled. Enter DEFAULT if the peripheral is not equipped with a RAM6X69. Enter NORTHAM for North American tone set.

(Sheet 8 of 8)

Field	Subfield or refinement	Entry	Explanation and action
PROCPEC		alphanumeric	PROCESSOR PEC. Enter the PEC of the card in LTC units 0 and 1. The PEC must reflect minimum firmware capabilities in the processor complex of each unit. PEC MX77AA has been added for XPM PLUS.
EXTLINKS		0 to 6	EXTENDED LINKS. Enter the number of pairs of extended links.
E2LOAD		Up to 8 characters	ELECTRICALLY ERASABLE PROGRAMMABLE READ-ONLY MEMORY. Enter the EEPROM load name. If the shelf is equipped with a processor different from NTXM77, this field is automatically datafilled with NILLOAD.
OPTATTR		CCS7, STRBBF, STRDTRE	OPTIONAL ATTRIBUTE. Enter CCS7 if the XPMTYPE field value is DTC and the DTC is to be used for CCS7 ISUP call processing. For non-CCS7 DTCs, do not include the CCS7 option. Enter STRBBF if the STR is to be used for detecting Blue Box Fraud. Enter STRDTRE if the STR is to be used for detecting reorigination tones. For ISDN, enter a dollar sign ($).
PEC6X40		6X40AA, 6X40BA, 6X40AB, 6X40AC, 6X40CA, 6X40FA	6X40 EQUIPMENT PECS. Enter the PEC. For ISDN, enter 6X40AC, 6X40CA, or 6X40FA, the version of the 6X40 EQPEC card in the PM.
EXTINFO	EXTSHELF	N, Y	EXTENSION INFORMATION. Enter Y to bring up additional information fields. These fields are: EXTFRTYP (Frame name), EXTFRNO (0-511), EXTSHPOS (0-77), EXTFLOOR (0-99), EXTROW (enter row position number), EXTFRPOS (0-99), EXTEQPEC (enter PEC), EXTSIDE (enter left or right). Enter N to indicate no additional information.

Datafill example

The following shows an example tuple in table LTCINV.

LTCINV (end)

```
LTCNAME ADNUM FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC LOAD EXECTAB CSLNKTAB

OPTCARD TONESET PORCPEC EXTLINKS E2LOAD OPTATTR PEC6X40 EXTINFO

 ____________________________________________________________________________

DTC 0 1 DTE 0 18 0 D 1 6X02AA ED713BB (ABTRK DTCEX) (AB250 UTR250)
(ABAXX_TERM AXX250) $ (0 32 0 0) (0 32 0 1) (0 32 0 2) (0 32 0 3)
(0 32 0 4) (0 32 0 5) (0 32 0 6) (0 32 0 7) (0 32 0 8) (0 32 0 9)
(0 32 0 10) (0 32 0 11) (0 32 0 12) (0 32 0 13) (0 32 0 14) (0 32 0 15) $
(CONTINUITY) (UTR15) (MSG6X69) (STR16IC) $ NORTHAM MX77A MX77AA 0
NILLOAD (CCS7) (STRBBF) (STRDTE) $ 6X40CA N
```

Table history

UCS13

Added missing fields PROCPEC and EXTLINKS. Removed PECS6X45 field. Updated datafill example.

LTCPSINV

Table name

Line Trunk Controller P-Side Link Inventory Table

Functional description

Table LTCPSINV contains the assignment of the peripheral side (P-side) links for the peripheral modules (PM). The key for this table is the same as the key for table LTCINV.

An entry in table LTCPSINV is added automatically when an extended multiprocessor system (XMS)-based PM (XPM) or a common peripheral module (CPM) is datafilled in table LTCINV. All the P-side link types initially default to NILTYPE. P-side links that do not have hardware assigned must remain NILTYPE. Unequipped software assigned P-side links generate service-affecting problems.

Feature AN0543 (P-side port and static data—TL) supports P-side port expansion for the Global Peripheral Platform (GPP), which is a common peripheral module (CPM)-based host peripheral, supporting time-division multiplexing (TDM). GPP supports up to 48 PCM30 links connected to generic access nodes (AN); therefore, up to 6000 lines are supported.

ATTENTION

ISDN line drawer for remotes (ILDR) is first available for remote switching center-SONET (RSC-S) and remote switching center (RSC) configurations in the NA007/XPM08 time frame. ILDR is first available for remote line concentrating module (RLCM), outside plant module (OPM), and outside plant access cabinet (OPAC) configurations in the NA008/XPM81 time frame.

When changing the carrier of a link connected to an ILDR-equipped RLCM, the new carrier must allow 64 kbit/s clear channel.

For related information, refer to table LTCINV.

LTCPSINV (continued)

Peripheral module types

Table Table , "PM types" on page -180 shows the PM types that are supported by table LTCPSINV.

PM types

PM	Meaning
ADTC	Austrian digital trunk controller
BDTC	British digital trunk controller
DFI	Direct fiber interface
DTC	Digital trunk controller
DTCI	ISDN digital trunk controller
GPP	Global Peripheral Platform
IDTC	International digital trunk controller (pulse code modulation 30 [PCM30] trunks)
ILGC	International line group controller
ILTC	International line trunk controller
LGC	Line group controller/line group controller ISDN
LTC	Line trunk controller/line trunk controller ISDN
PDTC	PCM30 digital trunk controller
PLGC	PCM30 line group controller
RCC	Remote cluster controller
RCC2	Remote cluster controller 2
SMA	Subscriber carrier module-100S access
SMA2	Subscriber carrier access 2
SMR	Subscriber carrier module-100 rural
SMS	Subscriber carrier module-100S (SLC-96) (controls subscriber loop carrier [SLC] remote)
SMU	Subscriber carrier module-100 urban (controls remote concentrator terminal [RCT] of the DMS-1U system)
TMS	Traffic Operator Position System (TOPS) message switch

Datafill sequence and implications

The following tables must be datafilled before table LTCPSINV:

- LTCINV
- CARRMTC

Table size

Memory is automatically allocated for a maximum of 256 tuples for table LTCPSINV.

Datafill

Field names, subfield names, and valid data ranges for table LTCPSINV are described in the following table:

Field descriptions (Sheet 1 of 6)

Field	Subfield or refinement	Entry	Explanation and action
LTCNAME		see subfields	*Link trunk controller name* This field consists of subfields XPMTYPE and XPMNO.
	XPMTYPE	ADTC, BDTC, DFI, DTC, DTCI, GPP, IDTC, ILGC, ILTC, LGC, LTC, PDTC, PLGC, RCC, RCC2, SMA, SMA2, SMR, SMS, SMU, or TMS	*XPM type* Enter the extended multiprocessor system (XMS)-based peripheral module (XPM) or common peripheral module (CPM) type. See table Table , "PM types" on page -180 for a definition of the PMs.
	XPMNO	0 to 255	*XPM number* Enter the XPM number.
PSLNKTAB		see subfield	*P-side link table* This field consists of subfield EXP_SIDES.

LTCPSINV (continued)

Field descriptions (Sheet 2 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	EXP_PSIDES(CSP02-)	Y or N	*Expanded P-sides platform indicator* If the entry in field XPMTYPE is a Common peripheral module (CPM), host-based peripheral, for example a GPP, and it is equipped with an extension shelf, enter Y (yes) and datafill field EXP_TAB. Otherwise, enter N (no) and datafill field LTC_TAB. Enter a Y for an ISDN LTC/LGC equipped with an NTAX78BA time switch.
	LTC_TAB(CSP 02-)	see subfields (vector of up to 20 multiples)	*Line trunk controller table* This field consists of subfields PSLINK and PSDATA.
	EXP_TAB(CSP 02-)	see subfields (vector of up to 48 multiples)	*Expansion table* This field consists of subfields PSLINK and PSDATA.
PSLINK		0-190 to 39, 0 to 15,0 to 47	*P-side link* Enter the P-side port number. For DCH, enter an odd-numbered port. A D-channel handler (DCH) can occupy any of the odd-numbered ports on the P-side. For DS-0, enter any even-numbered port. For DS30A, enter any port 0-19 (if equipped with an NT6X44AA time switch) or port 0-39 (if equipped with an NTAX78BA time switch). For IDTC, enter 0 to 15. For GPP, enter 0 to 47. For PLGC, enter 0 to 19. For DS1, enter any port 0-19. Any entry outside the ranges indicated for this field is invalid.

Field descriptions (Sheet 3 of 6)

Field	Subfield or refinement	Entry	Explanation and action
PSDATA		see subfield	*P-side data* This subfield consists of subfield AREASELCT.
	AREASELCT	DCH, DS0, DS1, DS1PRA, DS30A, D30, M20, NDS0, P30PRA, NILTYPE, SONET, TTC, or VT1H	*Area select* Enter the applicable link type as follows: Enter DCH for interface with ISDN loops for LGC, LTC, and PLGCs with ISDN signaling processor 16 (ISP) in the OPTCARD field in table LTCINV. ***Note:*** On an SMU, P-side ports can be assigned to DCHs if the SMU has enhanced ISDN signaling processor (EISP) as an optional card. Enter DCH or DS1 for SMA. Enter DCH, DS1 or NILTYPE for SMA2. Enter DCH or D30 for PCM30 TMS. ***Note 1:*** If the entry in this field is DCH, no other datafill is required. ***Note 2:*** Only the first 16 ports are allowed for PCM30 TMS, but all 20 ports are displayed. Entry of DCH ports is prohibited for an ETMS OC (field OPTATTR = OC in table LTCINV). This is because an ETMS can be utilized as an ETMS OC or a terminal server, but not both. Also, DS1/PCM30 ports cannot be removed if an ETMS OC data link is defined on that ETMS in table TMSOCDL. Then, all ETMS OC data links defined on the given port must first be removed from table TMSOCDL.

LTCPSINV (continued)

Field descriptions (Sheet 4 of 6)

Field	Subfield or refinement	Entry	Explanation and action
			Enter DS0 • for interface with a signaling transfer point (STP) node • for ADTCs without ISP DS0 is a valid link type for PDTCs only if the referenced template in table CARRMTC has been datafilled with card option NT6X55BA (64-kbit access) or NTX6X55AB (DS-0 interface). DS0 links can only be specified on even ports. Enter NILTYPE for odd ports. ***Note:*** DS0 is valid only for North American DTCs. Enter DS1 • for DS-1 type interface card for trunks and remote line concentrating modules (LCM) • for LTCs and LGCs with or without ISP Enter DS1PRA for interface with ISDN trunks. Enter DS30A • for P-side interface to local LCMs or for PLGCs • for LGCs and LTCs with or without ISP ***Note:*** DS30A can only be datafilled in links 0 to 19 (if equipped with an NT6X44AA time switch) or 0-39 (if equipped with an NTAX78BA time switch.

Field descriptions (Sheet 5 of 6)

Field	Subfield or refinement	Entry	Explanation and action
			Note: If the entry in this field is DS30A, no other datafill is required. Enter D30 for an interface to PCM30 trunks and to PCM30 remote line concentrating modules (PRLCM). D30 is a valid P-side link for GPP, PDTCs, and PLGCs with or without ISP. ***Note:*** D30 carriers are allowed on ILGCs. Enter M20 for a Japan M20-type carrier. For NDS0 links, enter NDS0, starting with an even-numbered link. NDS0 links are datafilled in two consecutive P-side links. Enter TTC for Japan trunk test center (TTC)-type carrier. Enter NILTYPE for PLGC. ***Note 1:*** If the entry in this field is NILTYPE, no other datafill is required. ***Note 2:*** NILTYPE must not be datafilled as initial input. If field LTCNAME is datafilled with a PDTC, enter P30PRA. P30PRA is a valid link type for ADTCs, PDTCs, and PLGCs with ISP. Any entry outside the range indicated for this field is invalid. Enter VT1H for direct fiber interface (DFI) peripheral types. If the entry in subfield AREASELCT is NDS0, up to 4 multiples of CARRIDX, ACTION, and EQUIP can be datafilled. The default value for this field is NILTYPE. ***Note:*** For Gateways, PSDATA is DSI GWIP.

LTCPSINV (continued)

Field descriptions (Sheet 6 of 6)

Field	Subfield or refinement	Entry	Explanation and action
CARRIDX		alphanumeric (1 to 16 characters) or DEFAULT	*Carrier index* Enter a valid template name from table CARRMTC. Otherwise, enter DEFAULT for the default template name in table CARRMTC. ***Note 1:*** If the entry in CARRIDX is ESFB8ZS for high data link controller (HDLC) and link access protocol on the D-channel (LAPD) then datafill subfield AREASELECT with DS1. ***Note 2:*** If the entry in subfield AREASELCT is DS1, this field must contain NT6X50AB as the carrier card for configuration of clear channel (64kb/s), provisioned for Japan only. ***Note 3:*** If the entry in subfield AREASELCT is DS0, this field must contain NT6X55BA or NT6X55AB as the carrier card to allow specification of the DS-0 link type on a PDTC. DS-0 links can only be specified on even-numbered ports. Odd-numbered ports must be specified as NILTYPE.
ACTION		Y or N	*Action* Enter Y (yes) if the carrier is removed from service when a hit-state alarm exceeds its out-of-service threshold or when the out-of-service limit for frame, slip, errored-second, or severe-errored-second is exceeded. Otherwise, enter N (no).

AREASELCT = NDS0

If the entry in subfield AREASELCT is NDSO, datafill refinement EQUIP as described in the following table:

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	EQUIP	EQ or NEQ	*Carrier equipped* Enter EQ to indicate that the NDSO carrier is equipped. Otherwise, enter NEQ (not equipped).

AREASELCT = P30PRA

If the entry in subfield AREASELCT is P30PRA, datafill refinement IID as described in the following table:

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	IID	0 to 31	*Interface identifier* Enter an interface identifier (IID) that is datafilled in the equipment that terminates the DS-1. Each DS-1 has a different IID. The identifiers are used to identify primary rate access (PRA) interfaces. They are used by offices at either end of the PRA interface to identify the channel associated with the out-of-bank signaling information.

LTCPSINV (continued)

AREASELCT = DS1PRA

If the entry in subfield AREASELCT is DS1PRA, datafill refinements IID and LINEEQ as described in the following table:

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	IID	0 to 31	*Interface identifier* Enter an interface identifier (IID) that is datafilled in the equipment that terminates the DS-1. Each DS-1 has a different IID. The identifiers are used to identify primary rate access (PRA) interfaces. They are used by offices at either end of the PRA interface to identify the channel associated with the out-of-band signaling information. ***Note:*** Nortel Networks recommends that if there are several P-side links in a trunk group, the datafilled IID values be in ascending consecutive order. For example, if there are four P-side links in a trunk group, datafill IID values as 0, 1, 2, and 3. Nortel Networks recommends that the links be datafilled in ascending order. For example, a trunk group in table LTCPINV can be datafilled with P-side link values 3, 6, 8, 11, and 15 - but the associated IIDs must be datafilled as 0, 1, 2, 3, and 4.
	LINEEQ	110, 220, 330, 440, 550, 660, or NIL	*Line length from DS-1 circuit to first DS-1 office repeater* If the DS-1 carrier is equipped with NT6X50EC (integrated echo canceller card) tuple in table CARRMTC, enter the line length value that is used on the dual inline package (DIP) switch. Otherwise, enter NIL.

Datafill example

The following example shows sample datafill for table LTCPSINV.

MAP display example for table LTCPSINV

```
LTCNAME           PSLNKTAB
_____________________________________________________________

LTC   4
(0 DS1PRA PRA64K N 1 NIL)
(1 DS1 DEFAULT N) (2 DS1 DEFAULT N)
(3 DS1PRA PRA64K N 1 NIL) (4 DS1 DEFAULT N)
(5 DS1 DEFAULT N) (6 DS1 DEFAULT N)
(7 DS1 DEFAULT N) (8 DS1 DEFAULT N)
(9 DS1 DEFAULT N) (10 DS1 DEFAULT N)
(11 DS1PRA PRA64K N 1 NIL) (12 DS30A )
(13 DS1PRA PRA64K N 1 NIL) (14 DS30A ) (15 NILTYPE) (16
DS30A ) (17 DCH ) (18 DS30A ) (19 DCH ) $
```

The following example shows sample datafill for table LTCPSINV when the LTC is equipped with an NTAX78BA time switch.

MAP display example for table LTCPSINV -LTC equipped with NTAX78BA time switch

```
LTCNAME           PSLNKTAB
_____________________________________________________________

LTC   3
(0 DS1 DEFAULT N) (1 DS1 DEFAULT N) (2 DS1 DEFAULT N)
(3 DS1 DEFAULT N) (4 DS1 DEFAULT N) (5 DS1 DEFAULT N)
(6 DS30A) (7 DCH) (8 NILTYPE) (9 NILTYPE) (10 DS30A)
(11 DS30A) (12 NILTYPE) (13 DCH ) (14 NILTYPE)
(15 NILTYPE) (16 NILTYPE) (17 NILTYPE) (18 NILTYPE)
(19 NILTYPE) (20 DS30A) (21 DS30A) (22DS30A) (23 DS30A)
(24 DS30A) (25 DS30A) (26 NILTYPE) (27 DS30A) (28 DS30A)
(29 DCH) (30 NILTYPE) (31 DCH) (32 NILTYPE)
(33 NILTYPE) (34 NILTYPE) (35 DCH) (36 NILTYPE)
(37 NILTYPE) (38 NILTYPE) (39 NILTYPE) $
```

The following example shows sample datafill of table LTCPSINV for Japan only, with links 0, and 2 datafilled with a carrier index value of ESFB8ZS clear channel signalling (64 kbit/s), using a tuple datafilled in table CARRMTC to support HDLC LAPD messaging on these links. Links 1 and 3 have the value of DEFAULT for speech only. Links 4 through 19 are unequipped.

LTCPSINV (continued)

MAP display example for table LTCPSINV

```
LTCNAME           PSLNKTAB
_____________________________________________________________
LTC   4
(0 DS1 ESFB8ZS N)(1 DS1 DEFAULT N)(2 DS1 ESFB8ZS N)
(3 DS1 DEFAULT N)(4 NILTYPE)(5 NILTYPE) (6 NILTYPE)
(7 NILTYPE)(8 NILTYPE) (9 NILTYPE)(10 NILTYPE)
(11 NILTYPE) (12 NILTYPE)(13 NILTYPE)(14 NILTYPE)
(15 NILTYPE)(16 NILTYPE ) (17 NILTYPE ) (18 NILTYPE )
(19 NILTYPE) $
```

The following example shows sample datafill for table LTCPSINV for Gateways. For Gateways, PSDATA is DSI GWIP.

MAP display example for table LTCPSINV

```
LTCNAME                                        PSLNKTAB
_____________________________________________________________

LTC   0
  N (0 DS1 GWIP N) (1 DS1 GWIP N)
  (2 DS1 GWIP N) (3 DS1 GWIP N)  (4 NILTYPE)
  (5 NILTYPE) (6 DS30A) (7 DS30A) (8 DS30A) (9 DS30A)
  (10 DS30A ) (11 DS30A) (12 DS30A) (13 DS1 DEFAULT N)
  (14 NILTYPE)  (15 DCH)  (16 NILTYPE)  (17 DCH)
  (18 NILTYPE )  (19 DCH) $
```

Error messages

The following table control error messages apply to tuple changes for the NTAX78BA equipped ISDN line group controller (LGCI) and ISDN line/trunk controller (LTCI).

- The MAP display shows an error message if a DS30A is already provisioned in the lower (0-19) port range and you attempt to assign a DS30A in the matching upper (20-39) port range. Matching means the lower port number plus 20. For example, lower port 2 has a matching

upper port of 22 (2+20=22). The following is an example (using ports 19 and 39 as examples) of the error message display.

```
An attempt has been made to assign 2 DS30As to the same
physical port. A DS30A in physical port 19 can only be
assigned as port 19 or port 39, but not both.
```

- The MAP display shows an error message if a DS1 is already provisioned on an even numbered port in the 0-19 port range (for example, 18) and you attempt to assign a D-channel handler (DCH) in the matching + 1 upper (20-39) port range (for example, 18+20+1=39). The error message is generated in this example because a DS1 and DCH cannot both be assigned to the same physical port. The following is an example of the error message display.

```
An attempt has been made to assign a DS1 and a DCH to the
same physical port. If a DS1 is assigned to physical port 18
or 19, a DCH cannot be assigned to port 39 (or if a DCH is
assigned to port 39, a DS1 cannot be assigned to port 18 or
19).
```

- The MAP display shows an error message if a DS1 is already provisioned on an odd numbered port in the 0-19 port range (for example, 19) and you attempt to assign a DCH in the matching 20-39 port range (for example, 19+20=39). The error message is generated in this example because a DS1 and a DCH cannot be assigned to the same physical port. The following is an example of the error message display.

```
An attempt has been made to assign a DS1 and a DCH to the
same physical port. If a DS1 is assigned to physical port 18
or 19, a DCH cannot be assigned to port 39 (or if a DCH is
assigned to port 39, a DS1 cannot be assigned to port 18 or
19).
```

- The MAP display shows an error message if a DCH is provisioned on an odd port in the lower (0-19) port range (for example, 1) and you attempt to assign a DCH to the matching upper (20-39) port range (for example, 1+20=21). An error message is generated because you cannot assign two DCHs to the same physical port. The following is an example of the error message display.

```
An attempt has been made to assign 2 DCHs to the same physical
port. A DCH in physical port 1 can only be assigned as port
1 or port 21, but not both..
```

- The MAP display shows an error message if the user attempts to change the field EXP_PSIDES from Y to N. The following is an example of the error message display.

```
This field cannot be changed.
```

LTCPSINV (continued)

Note: This restriction is there for any tuple/any XPM in this table. The user is not allowed to change this field with a manual operation.

- The MAP display shows an error message if you attempt to datafill more than 40 P-side ports. The following is an example of the error message display.

```
P-side link is out of valid range of 0...39 for NTAX78BA
equipped XPM.
```

- The switch does not allow you to provision DS1s on the upper 20 (20-39) P-side ports. You can only provision them on the lower 20 (0-19) P-side ports. The following is an example of the error message display.

```
Cannot datafill DS1s on ports 20 to 39 of an NTX78BA equipped
XPM.  DS1s can only be located on ports 0 to 19.
```

Table history

NA013

Added a MAP example for GWIP.

NA010

Added error message information for the NTAX78BA universal time switch card.

NA007

New restrictions have been added as a result of the introduction of the ILDR.

APC06

Added carrier index template ESFB8ZS for LTCs supporting an RLCM with extended distance capability, for Japan only.

APC05.1

Change GPP maximum line capability to 6000 lines and add CPM extension shelf information.

TOPS04

Added DCH and DS1 restrictions for ETMS OC in subfield AREASELECT.

CSP03

The following changes were made to table LTCPSINV:

- added SMA2 to field XPMTYPE
- added SMA2 information to PSLINK field

LTCPSINV (end)

CSP02

The following changes were made to table LTCPSINV:

- added information about P-side port expansion to section “Functional description"
- added value GPP to field XPMTYPE
- added fields EXP_SIDES, LTC_TAB, and EXP_TAB
- revised range of values in field PSLINK
- removed all references to PM type HS12

BCS36

Added value VT1H to field AREASELCT to accept VT1.5 links for DFI peripheral types.

LTDATA

Table name

Logical Terminal Data

Functional description

Table LTDATA stores service-related data associated with the logical terminal identifier (LTID). This is equivalent to field LTDKEY, which is the key to this table. In addition to field LTDKEY, the other primary field of the table is LTDRSLT.

Subscription parameters related to ISDN primary rate access (PRI) services such as calling number delivery, are supported in this table.

Field LTDKEY

Field LTDKEY consists of two parts: the logical terminal index (subfield LTINDEX) and logical terminal datatype (subfield DATATYPE).

Subfield LTINDEX itself consists of subfields logical terminal group (subfield LTGRP) and logical terminal number (subfield LTNUM).

Subfield DATATYPE contains logical terminal datatypes. These correspond to the datatypes in field LTDRSLT

Field LTDRSLT

Field LTDRSLT contains the single subfield DATATYPE, and options associated with the specified datatypes.

Datafill sequence and implications

The following tables must be datafilled before table LTDATA:

- LTGRP
- LTDEF

Table size

0 to 65 408 tuples

LTDATA (continued)

Datafill

The following table lists datafill for table LTDATA.

Field descriptions

Field	Subfield	Entry	Explanation and action
LTDKEY		see subfields	The Logical Terminal Datakey field consists of subfields LTINDEX and DATATYPE.
	LTINDEX		Subfield LTINDEX itself consists of subfields LTGRP and LTNUM.
	LTGRP	alphanumeric (maximum 8 characters)	Enter the logical terminal group (LTG) name.
	LTNUM	1 to 1022	Enter the logical terminal number within the group. The quantity of group numbers is restricted. A maximum of 31 entries is allowed.
	DATATYPE	CLI, DN, SERV, or RN	Enter the logical terminal data type as follows: • Enter CLI to identify a calling line identifier (CLI) subscription parameter. • Enter DN for directory number. • Enter SERV for service-related data associated with a logical terminal identifier (LTID) or PRI interface. • Enter RN for redirected number ***Note 1:*** The entry in this field must agree with that for the DATATYPE subfield of LTDRSLT. ***Note 2:*** Data types CLI and RN are not available with all protocol variants. For details refer to Supplementary Information.

LTDATA (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
LTDRSLT		see subfield	The Logical Terminal Result field consists of the single subfield DATATYPE.
	DATATYPE	CLI, DN, SERV, or RN	Enter the logical terminal data type as follows: • Enter CLI to identify a calling line identifier (CLI) subscription parameter. Enter datafill for subfield OPTION. • Enter DN for directory number. Enter datafill for subfields DFLTCGN and OPTIONS. • Enter SERV for service-related data associated with a logical terminal identifier (LTID) or PRI interface. Enter datafill for subfields AUDTRMT, CGNREQD, CGNDELV, CDNDELV, and OPTION. • Enter RN for redirected number. Enter datafill for subfield OPTION ***Note 1:*** The entry in this field must agree with that for the DATATYPE subfield of LTDKEY. ***Note 2:*** Data types CLI and RN are not available with all protocol variants. For details refer to Supplementary Information.

LTDATA (continued)

DATATYPE = CLI

If the entry in field DATATYPE is CLI, enter datafill for subfield LTCLI_OPTIONS.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	LTCLI_ OPTIONS	BILL_FROM_CPN, POP, EDITCLI, SIGCLI, CLIVD, EDITALLTON, SCRNLTID, SCRNLTID_IC_TON, DDI, NOSCRN, SCRN_CNN_PN, CNN_NOSCRN, DFLTPI, DFLT_CNN_PN, BI_UNAVAIL, SCRNPN, DEFLTPN, SCRNDFLT, 2CLI	Enter BILL_FROM_CPN to activate ETSI or INS1500 primary rate interface (PRI) billing. This activity bills PRI calls to the station making the call. If you do not activate ETSI PRI billing, the DMS-100 switch bills a single number for the whole PRI. ***Note 1:*** This option is valid only in European (CEU), APC, and Japan markets. Enter POP for the point of presence option. This option is part of the CLI selector and is datafilled for all PRI trunks incoming to the DMS switch from a multimedia carrier switch (MMCS). ***Note 2:*** The POP option is valid only in European (CEU) and APC markets. Enter EDITCLI to provide a means for completing a partial CLI. Also enter datafill for subfields OVLYCLI, NPI, TON, and OVLYCNT. ***Note:*** .Refer to section DATATYPE = CLI, OPTION = EDITCLI for detailed entries. Enter SIGCLI to specify a CLI that replaces a received, edited, or default CLI. Enter a range of 1 to 15 digits. Enter CLIVD to specify a numerical index that matches attribute CLIVD in table DNSCRN. The valid range is from 0 to 2047. ***Note:*** The CLIVD option cannot function at the same time as the SCRNLTID option.
			Enter EDITALLTON to modify option EDITCLI. EDITALLTON can be datafilled when EDITCLI is specified as an option.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
			Enter SCRNLTID to allow calling number screening with the direct dial in (DDI) feature. Also enter datafill for subfields NDC, DN, and DNBLKS. ***Note 1:*** The SCRNLTID option cannot function at the same time as the EDITCLI option. ***Note 2:*** The SCRNLTID option cannot function at the same time as the CLIVD option. ***Note 3:*** For the SCRNLTID option to operate, parameter NATIONAL_COUNTRY_CODE in table OFCENG must have the correct entry. ***Note 4:*** .Refer to section DATATYPE = CLI, OPTION = SCRNLTID for detailed entries. Enter SCRNLTID_IC_TON to allow the Calling Number (CGN) digits of incoming calls to be screened as a national call. The option requires that the SCRNLTID option is also datafilled. It is for the Dutch market where some PBXs send a national number which could fail if the SCRNLTID option is datafilled. ***Note 1:*** Datafilling the SCRNLTID_IC_TON option without SCRNLTID results in an error message: This option is datafillable only if the SCRNLTID option is datafilled against the LTID. ***Note 2:*** Datafilling the SCRNLTID_IC_TON for any PRI variant other than Dutch PRI results in an error message: This option is supported only for Dutch PRI. ***Note 3:*** Changing the variant for the LTID with SCRNLTID_IC_TON datafilled results in an error message: Delete the SCRNLTID_IC_TON options entry from Table LTDATA for this interface before changing the PRI variant. ***Note 4:*** Datafilling the SCRNLTID_IC_TON option for the Dutch PRI variant results in a warning message: If the incoming CGN from the PBX holds national/international access code prefixed, screening will fail.

LTDATA (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
			Enter DDI for the direct dialing in option enabling subscribing users to dial a private ISDN number using the public ISDN network. Enter NOSCRN to prevent the system from screening the CLI. NOSCRN indicates the end of datafill for subfield OPTION. ***Note:*** Option NOSCRN is valid only for ETSI and TS14 trunk groups. Enter SCRN_CNN_PN to indicate that the connected number (CNN) information element (IE) sent by the terminating agent contains a CNN presentation number, not a CNN. Enter CNN_NOSCRN to stop the CNN PN from being displayed or edited. Enter DFLTPI to specify a default presentation indicator. Also enter datafill for subfields PI and MODE. ***Note:*** Refer to section DATATYPE = CLI, OPTION = DFLTPI for detailed entries. Enter DFLT_CNN_PN to specify the default connected presentation number. Enter the DFLT_CNN_PN as a decimal number of no more than 13 digits. Enter BI_UNAVAIL N or Y to indicate to the network the availability of the originator's network number (NN) for display purposes. This option is only available for PRI trunks. If this option is datafilled, it indicates to the network that the NN is not available for display. ***Note:*** This option is valid only in European (CEU) and APC markets. Enter SCRNPN (screen PN) to cause the switch to interpret the incoming CLI as a PN.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
			Enter DEFLTPN (default PN) for PRI and QSIG trunks. Enter the DEFLTPN as a decimal number of no more than 13 digits. Enter SCRNDFLT to specify the default calling number and/or the default customer group. You are prompted for a default calling number (DFLTSN) and a default customer group (DFLTCGRP) Refer to section DATATYPE = CLI, OPTION = SCRNDFLT for detailed entries. ***Note:*** SCRNDFLT must be used with SCRNLTID. The SCRNLTID/SCRNDFLT are separate from the DN selector and EDITCLI. To enter the SCRNLTID/SCRNDFLT option, delete tuples that have the DN selector and EDITCLI options under the CLI selector Enter 2CLI to give ETSI PRI the ability to send two CLIs

DATATYPE = CLI, OPTION = EDITCLI

If the entry in subfield OPTION is EDITCLI, enter datafill for subfields OVLYCLI, NPI, TON, and OVLYCNT.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
EDITCLI	OVLYCLI	0 to 9 (maximum 18 digits)	This field converts a partial calling line identification (CLI) to a complete number by associating a partial CLI with an overlying CLI. ***Note:*** Automatic Message Accounting (AMA) only supports calling party numbers of up to 12 digits.
	NPI	E164 or PVT	Enter the numbering plan identifier associated with field OVLYCLI. The default value for this field is E164.

LTDATA (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	TON	INTL, NATL, or UNKNOWN	Enter the type of number associated with field OVLYCLI. The default value for this field is UNKNOWN. ***Note:*** TON must be set to UNKNOWN to enable EDITCLI.
	OVLYCNT	0 to 18	Enter the number of least significant digits from a partial CLI that are overlaid on top of the least significant digits of field OVLYCLI. A value of 0 (zero) indicates that all the digits from the partial CLI are overlaid. ***Note:*** Automatic Message Accounting (AMA) only supports calling party numbers of up to 12 digits.

DATATYPE = CLI, OPTION = SCRNLTID

If the entry in subfield OPTION is SCRNLTID, enter datafill for subfields NDC, DN, and DNBLKS.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SCRNLTID	NDC	0 to 7 digits	This is internally represented as a serving numbering plan area (SNPA).
	DN	0 to 11 digits	This subfield contains either the complete subscriber number or the DDI root, depending on whether DDI is subscribed or not.
	DNBLKS	0 to 9 digits	Each digit in this subfield represents the first digit of the DDI extension and is used under economic usage of DN conditions. ***Note:*** This option is for primary rate interface accesses only.

DATATYPE = CLI, OPTION = DFLTPI

If the entry in subfield OPTION is DFLTPI, enter datafill for subfields PI and MODE.

Note: Option DFLTPI is only valid in international loads.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
DFLTPI	PI	ALLOW or RESTRICT	Enter ALLOW to indicate that the CLI is presented. Enter RESTRICT to indicate that the CLI is not presented. The default value for this field is ALLOW.
	MODE	TEMP or PERM	TEMP indicates that the default presentation indicator (PI) is active for each call. PERM indicates that the default presentation indicator is active for all calls. If the entry in this field is TEMP, the PI is used only if a PI was not received in the incoming SETUP message. If the entry in this field is PERM and the PN_SUPPORTED field in table OFCENG is to set to NN, the PI is used regardless of whether a PI was received in the SETUP message. If PN_SUPPORTED is set to YN, the DEFLTPN (default PN) field must also be assigned a value. The default value for this field is TEMP. ***Note:*** If subfield PI is datafilled with ALLOW, subfield MODE must be datafilled with TEMP.

LTDATA (continued)

DATATYPE = CLI, OPTION = SCRNDFLT

If the entry in subfield OPTION is SCRNDFLT, enter datafill for subfields DFLTSN and DFLTCGRP.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SCRNDFLT	DFLTSN	0 to 11 digits	This subfield (which performs the same function as subfield DFLTCGN under the DATATYPE=DN option but for the European numbering plan) contains the default CGN that is required under the following circumstances: • the user-provided CGN failed screening • the CGN information element (IE) is not part of the SETUP message • if the NOSCRN option is subscribed and the type of number (TON) in the SETUP message is unknown, the network provides this default number as the valid number
	DFLTCGRP	alphanumeric (1 to 16 characters)	This is the default customer group. This field is not concerned with screening. This field replaces the same field under the DN selector. Use of this field cannot occur with SCRNLTID/SCRNDFLT.

DATATYPE = DN

If the entry in field DATATYPE is DN, enter datafill for subfields DFLTCGN and OPTIONS.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	DFLTCGN	see subfields	The default calling party number (CGN) is a ten-digit directory number (DN) to which the call defaults if no CGN is supplied on originations. If CGN screening is enabled, this DN is the only DN that can originate calls on this interface. The default CGN consists of the values entered in subfields SNPA, NXX, and STATION. ***Note 1:*** A log generates when a default CGN is not properly datafilled. ***Note 2:*** This field performs the same function as field DFLTSN under the SCRNLTID option but for the North American DN style.
	SNPA	numeric (maximum 3 digits)	Enter the area code.
	NXX	0 to 9, N, B, C, D, E, or F	Enter the first three characters of the DN.
	STATION	0 to 9, N, B, C, D, E, or F	Enter the last four characters of the DN.
	OPTIONS	see subfield	This field consists of the single subfield OPTION, and options CUSTGRP and E911DN.
		CUSTGRP	Enter CUSTGRP and customer group name(s) (of 16 alphanumeric characters) to specify the customer group(s) to which the DN belongs.

LTDATA (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
		E911DN	Enter E911DN and set a value of calling number (CGN) to indicate to the switch to send incoming CGN digits for 911 calls only. The CGN option passes the user-provided CPN to the PSAP. The actual CPN location is retrieved from the PSAP database, and its DN is screened. If the DN passes screening, it is delivered to the PSAP, instead of the default DN. Set the value to default to indicate to the switch to send the default DN as the CGN.

DATATYPE = SERV

If the entry in field DATATYPE is SERV, enter datafill for subfields AUDTRMT, CGNREQD, CGNDELV, CDNDELV, and OPTION.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SERV	AUDTRMT	Y or N	This field determines whether in-band tones and announcements are provided instead of disconnect with cause when treatments are applied to calls from this LTID. AUDTRMT applies to the following treatments: VACT, UNDN, BLDN, PODN, CONF, MHLD, ATBS, TESS, TRBL, DNTR Enter Y (yes) to enable in-band treatment procedures for originating PRI calls with bearer capability (BC) of speech or 3.1-kHz audio. ***Note:*** To make two bearer capabilities compatible with TBCT, datafill bearer capabilities in table BCCOMPAT before you datafill table LTDATA. Enter N (no) to disable in-band treatment procedures and handle call clearing as it was originally handled.
	CGNREQD	Y or N	Enter Y to indicate that the CGN must be provided by the calling user equipment. Otherwise, enter N. ***Note:*** Set the LTID of a PRI public safety answering point (PSAP) to CGNREQD = Y to ensure the delivery of the CGN.
	CGNDELV	ALWAYS, NEVER, or SCREENED	This field indicates when the CGN is delivered to the called interface. ALWAYS indicates that the actual CGN with the PI is sent. NEVER indicates that the CGN with the PI is not sent. SCREENED indicates that if the PI is private, the CGN is not sent (it is replaced by asterisks).

LTDATA (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
			The default value for this field is SCREENED. ***Note:*** Set the LTID of a PRI PSAP to CGNDELV = ALWAYS to ensure the delivery of the CGN.
	CDNDELV	ALWAYS or NEVER	This field determines whether the called party number is delivered to the called interface. ALWAYS indicates that the called party number is always delivered to the called interface. NEVER indicates that the called party number is never delivered to the called interface.
	OPTION	AIN_IPI_STR, BI_UNAVAIL, BNS, CCBS, CCNR, CGNCALC, CHG, CLIPREFX, COLP, COLR, CUG, DAS, DDI, DFLTCNN, ECMA226_CHNL_MAP, ECT, ETSIDIV, INSNAC, LSPAO, LSPSO, MCID, MWIC, NET_CALLFAIL_ON, NET_DIALTONE_ON, NET_NORMDISC_ON, NET_RINGBACK_ON, NO_BCH_SERV, PCOS, PRI_CD, PRI_CFU, PRIPSAP, PRI_CLB_NOTIF, REDIR_INFO_IN_RGN, RESTRICT_REDIR_ INFO,RNDELV, RNID, RST_ACK_MULT_CID, SHPRN, TBCT, TBO, TCAP_CNAM, UUS1, UUS1EXP.	This field contains options for PRI services. One or more options are assigned. In NA007, all intelligent peripheral (IP) connections use the PRI NI-2 protocol variant. The NI-2 variant is used only for IP connections. During the NA007 to NA008 one-night process (ONP), this is used as the criterion to decide whether or not to assign the AIN_IPI_STR option to a tuple. When table LTDATA is dumped and restored during the ONP, the AIN_IPI_STR option is added to the tuples when the corresponding primary rate interface (PRI) B-channel is attached to an IP.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
			Enter BI_UNAVAIL N or Y to indicate to the network the availability of the originator's network number (NN) for display purposes. This option is only available for PRI trunks. If this option is datafilled, it indicates to the network that the NN is not available for display. ***Note:*** This option is valid only in European (CEU) and APC markets. Enter BNS (billing number selection) to specify the billing number used for AMA recording. Enter datafill for subfield BNS. The provisioning of the CCBS (Completion of Calls to Busy Subscriber) and CCNR (Completion of Calls on No Reply) supplementary services against the QSIG or PRI access enables the network operator to control the availability of these services for public calls. Enter CCBS to permit the Call Completion to Busy Subscriber service. This service enables a subscriber originating a call to a busy destination to be recalled by the network when the busy destination becomes idle. Enter CCNR to permit the Call Completion on No Reply service. This service allows an unanswered call to be completed after the called subscriber has performed an activity. Enter CGNCALC to allow the PRI trunk to control the presentation indicator and CGN in the outgoing setup message. Enter datafill for subfield CGN_PRES_IND. Enter CHG for the charge number in calling number digits when no calling number is available. If the entry in this field is CHG, no other datafill is required.

LTDATA (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
			Enter CLIPREFX to add the calling line identity (CLI) prefix to a line and to allow Expression 1 for Japan primary rate interface (PRI) trunks. ***Note:*** This option is available for Japanese PRI trunks. Enter COLP to enable connected line identification presentation for the specified incoming PRI trunk. Enter COLR to enable connected line identification restriction for the specified outgoing PRI trunk. Enter datafill for subfield MODE. Enter CUG to activate the closed user group feature. Enter DAS for flexible digit analysis and enter datafill for subfield DGNAME. Enter DDI to enable the Direct Dialing In feature, which enables subscribers to dial into a private ISDN using the public ISDN numbering system. Enter datafill for subfield DEFAULT_DN in subfield KVAR. Enter DFLTCNN to provision the default connected number used by Connected Line identification Presentation/Restriction COLP/COLR. Then enter the default connected number. Enter ECMA226_CHNL_MAP to enable channel mapping. If enabled, the signaling channel is mapped to timeslot 16. The user channels 1 to 15 are mapped to timeslots 1 to 15, and channels 16 to 30 are mapped to timeslots 17 to 31. If this option is not entered, channel mapping defaults to the PRI standard.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
			Enter ECT to activate network-side explicit call transfer (ECT) on ETSI PRI trunks. ECT is only available for ETSI PRI 1990. ECT enables a user (user A) to convert two calls (either incoming or outgoing) into one new call between user B and user C. Enter ETSIDIV to enable partial re-routing on ETSI PRI trunks. ETSIDIV is only available on NETWORK mode ETSI PRI trunks. Other PRI variants cannot use this option. Enter INSNAC to trigger the modification of the outgoing CLI to a full national number. This option has no sub-parameters and is only allowed on ETSI PRI variants, for example, base ETSI PRI, Belgian PRI, Italian PRI, French PRI-Numeris/VN4, and QSIG protocol versions. It is rejected on all other protocol versions.
			Enter LSPAO to associate an LSPAO for PRI private trunk types that have a Northern Telecom North America (NTNA) or NI protocol variant. Enter LSPSO to associate an LSPSO for PRI private trunk types that have an NTNA or NI protocol variant. Enter MCID to activate the Malicious Call ID (MCID) feature, which informs a receiving subscriber of the calling party's identity. The call information remains available until a response to the DISConnect message (Release or Release Complete) is received. Enter MWIC to provide the DMS-100 switch with the capability of accepting an MWI control request over an ISDN NI-PRI trunk group. Enter NET_CALLFAIL_ON to provision network provided call failure tones on a PRI trunk. Only network mode PRI trunks support the option.

LTDATA (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
			Enter NET_DIALTONE_ON to provision network provided dial tones on a PRI trunk. Only network mode PRI trunks support the option. Enter NET_NORMDISC_ON to provision busy tone during normal call release. This option applies to the network side of INS1500 PRI trunks. ***Note:*** When NET_NORMDISC_ON is on, enter Y to enable the network sends Progress Message and plays network normal fast busy tone, enter N to enable the network sends Disconnect message. Enter NET_RINGBACK_ON to provision network provided ringback tones on a PRI or QSIG trunk. Only network mode PRI trunks or QSIG trunks support the option. Enter NO_BCH_SERV to disable the exchange of the Q931 SERVICE and SERVICE ACK messages used by B-channel service messaging. ***Note:*** B-channel messaging is enabled when NO_BCH_SERV is not datafilled. Enter PCOS to enable the PRI trunk to originate priority class of service calls even when NETPROT is activated. Enter datafill for subfield LTDATA_PCOS_OPTION. ***Note:*** The PCOS option allows high-priority users privileged access to the telephone system during catastrophic or emergency situations. Other users are denied access to the network. Do not datafill the PCOS option or use the NETPROT or ESP commands unless your network can accommodate high-priority users.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
			Enter PRI_CD (Primary Rate Interface Call Deflection) to allow the served user to respond to an incoming call by requesting that the call be forwarded to another destination. PRI_CD can be datafilled only for VN PRI (FRENCH PRI). Enter PRI_CFU (Primary Rate Interface Call Forward Unconditional) to allow the served user to redirect all incoming calls addressed to the subscriber's ISDN number to another user. PRI_CFU can be datafilled only for VN PRI (FRENCH PRI). Enter PRIPSAP to provision the PRI PSAP. Enter PRI_CLB_NOTIF to add notification of suspend/resume to PRI trunk during regret time of terminator line IBN. This option is valid only in the Israeli market. Enter REDIR_INFO_IN_RGN when redirecting information is required in the Redirecting number Information Element.This option applies when redirection occurs over a different switch and redirection information is received over an Turkish ISUP/ ETSI ISUP V2/FTUP/ANSI ISUP/SPIROU to a terminating ETSI PRI. (If this option is not datafilled then the redirection information is sent in the DivertingLegInfo2 component of the FACILITY IE.)

LTDATA (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
			Enter RESTRICT_REDIR_INFO to restrict Redirecting Information being sent in the SETUP message. However, if not datafilled, then the Redirecting Information will be added to the Q931 SETUP message sent to the terminating ETSI PRI for a diverted call. This will be as per the functionality of the MMP16 feature ‘ISDN Redirecting number enhancements for ETSI PRI & BRI’ (59027615). ***Note:*** This option is only datafillable for ETSI PRI trunks. Enter RNDELV to enable outgoing Redirecting Number Screening and datafill one of the subfields ALWAYS, SCREENED, or NEVER. Enter RNID to activate the PRI Redirecting Number Identification suppression feature. Enter datafill for subfield SUPPRESS. Enter RST_ACK_MULT_CID to enable multiple Channel Identification Information Elements (CIDs) in one RESTART ACK message on receipt of a Global Restart when some B channels are in MB or INB state. Enter SHPRN to provide the DMS-100 switch with the ability to override the delivery of presentation restricted numbers. Enter TBCT to enable two B-channel transfer option for NI-2 PRI trunks. TBCT allows a controller to request the SSP connect two independent callers on the controller's interface. TBCT allows the SSP to release the two links to the controller after connecting the users. If you enter TBCT, also enter datafill for subfields PARM and STATUS.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
			Table control verifies the following datafill for the corresponding LTID tuple in table LTDEF when option TBCT is added to an LTID provisioned in table LTDATA. • The trunk agent datafilled in table LTDEF has field LTCLASS = PRI. • The PRI protocol variant datafilled in table LTDEF has subfield VARIANT = NIPRI. Enter TBO for the terminating billing option for ISDN, PRI, or common language location identifier (CLLI). Enter datafill for subfields CALLCODE and SFPRSNT. Enter TCAP_CNAM to enable PRI calling name delivery, and enter datafill for subfield CNAM_SUSP. Enter UUS1 for User-to-User Signaling, which allows an ISDN user to send to or receive from another ISDN user a limited amount of information over the signaling channel in association with a call to the other ISDN user. Enter UUS1EXP for User-to-User Signalling Service 1, Explicit. For UUS1 explicit service activation, UUS1(implicit) and UUS1EXP(explicit) options should be entered together. Removing only UUS1EXP option disables the explicit UUS1 functionality.

LTDATA (continued)

DATATYPE = SERV, OPTION = BNS

If the entry in subfield OPTION is BNS, enter datafill for subfield BNS.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
BNS	BNS	RN_CPN, SBN, UPNS_RN_CPN, or NIL_BNS_PARM	Enter the type of billing number to use for AMA recording, as follows: • Enter RN_CPN to use a user-provided redirecting number that passed screening. • Enter SBN to use the special billing number from table TRKGRP. • Enter UPNS_RN_CPN to use a user-provided redirecting number that is not screened. The default entry is RN_CPN. ***Note:*** The NIL_BNS_PARM entry applies only to non-NTNA variants. It does not apply to the National ISDN PRI (NI-PRI) variant.
Note: LTMAP table control verifies datafill of SBN in table TRKGRP.			

DATATYPE = SERV, OPTION = CGNCALC

If the entry in subfield OPTION is CGNCALC, enter datafill for subfield CGN_PRES_IND.

Note: Option CGNCALC is not available in North American loads.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
CGNCALC	CGN_PRES_IND	ALLOW, RESTRICT, or TRANSPARENT	Enter ALLOW if the outgoing presentation indicator is always set to PRESENT. Enter RESTRICT if the outgoing presentation indicator is always set to RESTRICT. Enter TRANSPARENT to match the outgoing presentation indicator of the last call forwarding party.

DATATYPE = SERV, OPTION = COLR

If the entry in subfield OPTION is COLR, enter datafill for subfield MODE.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
COLR	MODE	PERM, TEMP	Enter PERM for PERMANENT mode. In PERMANENT mode the COLR supplementary service is invoked automatically by the network on all calls. Enter TEMP for TEMPORARY mode. In this mode the COLR supplementary service is invoked on a per-call basis. This means that one of the following scenarios occurs, according to the default value set in the network: • default value RESTRICTED - COLR is automatically invoked for each incoming call unless the default value is overridden by subscriber request at the time of answer • default value NOT RESTRICTED - COLR is invoked only if requested by the subscriber at the time of answer

DATATYPE = SERV, OPTION = DAS

If the entry in subfield OPTION is DAS, enter datafill for subfield DGNAME.

Note: Option DAS is not available in North American loads.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
DAS	DGNAME	alphanumeric (maximum 8 characters) or NIL	The Digit Name field contains the value NIL until an entry is added to field DGNAME in table DGHEAD. Then the entry in field DGNAME in table DGHEAD is added to field DGNAME in table LTDATA.

LTDATA (continued)

DATATYPE = SERV, OPTION = DDI

If the entry in subfield OPTION is DDI, enter datafill for subfield DEFAULT_DN in field KVAR.

Note: Option DDI is not available in North American loads.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
KVAR	DEFAULT_DN	1 to 11 digits	This field contains the default DN.

DATATYPE = SERV, OPTION = DFLTCNN

If the entry in field OPTION is DFLTCNN, enter the default connected number (CNN).

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
DFLTCNN	CNN	1 to 10 digits	Enter the default CNN.

DATATYPE = SERV, OPTION = LSPAO

If the entry in field OPTION is LSPAO, enter datafill for subfields PROVIDER and CONTEXT.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
LSPAO	PROVIDER	alphanumeric (1 to 16 characters)	Enter a provider name to choose an assigned local service provider. The provider name must exist in table LSPINFO before you make entries in LSPAO.
	CONTEXT	U = unbundled N = native R = resold	Enter a context such as ILEC or CLEC. The context identifier indicates the leasing arrangement between LSPAO and the switch owner.

DATATYPE = SERV, OPTION = LSPSO

If the entry in field OPTION is LSPSO, enter PROVIDER data.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
LSPSO	OPTION	LSPSO	Enter the name assigned to the option, LSPSO and enter the subfield PROVIDER.
	PROVIDER	alphanumeric (1 to 16 characters)	Enter a provider name to choose an assigned local service provider. The provider name must exist in table LSPINFO before you make entries in LSPSO.

DATATYPE = SERV, OPTION = MWIC

If the entry in field OPTION is MWIC, enter datafill for subfields MWIMAX, SPLITNNX, and DMSRID.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
MWIC	MWIMAX	8 to 2000	Maximum number of outstanding MWI Control requests that are supported on the NI-PRI. The default value is 200.
	SPLITNNX	Y or N	Used only if the host DMS-100 switch shares the client user's office code with another switch. This parameter indicates whether to consider the MWI control request received by the host DMS-100 switch as a remote MWI control request. Y indicates a remote request. N indicates a local request. The default is N.
	DMSRID	10 (0, 1, 2, 3, 4, 5, 6, 7, 8, 9)	Default MSRID when no MSRID is supplied by the ISDN MSR System. There is no default value.

LTDATA (continued)

DATATYPE = SERV, OPTION = PCOS

CAUTION
Risk of service interruption
The PCOS option gives high-priority users privileged access to the telephone system during catastrophic or emergency situations. Other users are denied access to the network. Do not use the PCOS option or use commands NETPROT or ESP unless high-priority users must have exclusive access to the network.

If the entry in subfield OPTION is PCOS, enter datafill for subfield LTDATA_PCOS_OPTION.

Note: Option PCOS is not available in North American loads.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
PCOS	LTDATA_PCOS_OPTION	TRUE (set) or FALSE (not set)	The Priority Class of Service field contains a default value of FALSE. Set the field entry to TRUE to enable priority status under Essential Service Protection (ESP) or Network Protection (NETPROT) conditions.

DATATYPE = SERV, OPTION = PRI_CALL_CONTROL

If the entry in subfield OPTION is PRI_CALL_CONTROL, enter datafill for subfields MAX_IN_CALLS and MAX_OUT_CALLS.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
PRI_CALL_CONTROL	MAX_IN_CALLS	numeric (0 to 30)	Enter the maximum number of incoming calls allowed on the ETSI PRI link. ***Note:*** If the MAX_IN_CALLS datafill is zero, the following warning message is displayed: All incoming PRI calls will be rejected!!!
	MAX_OUT_CALLS	numeric (0 to 30)	Enter the maximum number of outgoing calls allowed on the ETSI PRI link. ***Note:*** If the MAX_OUT_CALLS datafill is zero, the following warning message is displayed: All outgoing PRI calls will be rejected!!!
Note: The PRI_CALL_CONTROL datafill must be performed during a very low traffic period when the number of calls active on any PRI is a minimum.			
Note: If the sum of the MAX_IN_CALLS and MAX_OUT_CALLS datafills is less than 30, the following warning message is displayed: Sum of the max_in_calls and max_out_calls is less than 30. Link will not be fully utilized!!!			

DATATYPE = SERV, OPTION = PRI_CD

This option enables the served user to respond to an incoming call by requesting that the call be forwarded to another destination.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
PRI_CD	CD_TYPE	DFLT or INTL	Enter DFLT or INTL to specify the CD TYPE. DFLT is the normal setting and does not allow calls to be forwarded to international destinations. The INTL option allows calls to be forwarded to international destinations. PRI_CD can be datafilled only for VN PRI (FRENCH PRI).

LTDATA (continued)

DATATYPE = SERV, OPTION = PRI_CFU

This option enables the served user to redirect all incoming calls addressed to the subscriber's ISDN number to another destination.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
PRI_CFU	CFU_TYPE	DFLT or INTL	Enter DFLT or INTL to specify the CFU TYPE. DFLT is the normal setting and does not allow calls to be redirected to international destinations. The INTL option allows calls to be redirected to international destinations. PRI_CFU can be datafilled only for VN PRI (FRENCH PRI).

DATATYPE = SERV, OPTION = PRIPSAP

If the entry in subfield OPTION is PRIPSAP, enter datafill for subfields ANONCALL, DIRECT, SNPA, PSAPDN and NATLXLA.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
PRIPSAP	ANONCALL	Y or N	Enter Y if the PSAP can receive anonymous calls. Otherwise, enter N. The default is N. ***Note:*** If the ANONCALL field is set to Y, you will be prompted to enter datafill for the DIRECT field.
	DIRECT	Y or N	Enter Y to add the PRIPSAP option. The default is N.
	SNPA	3 digits	Enter the three-digit serving numbering plan area for the PSAP. The default is 0.
	PSAPDN	7 or 10 digits	Enter 7 or 10-digit directory number of the PSAP. The default is 0.
	NATLXLA	Y or N	If the entry is 'Y', call translations to this PSAP are based on 10 digits (with NPA). The PSAPDN field in table E911PSAP is datafilled with 10 digits. If the entry is 'N', call translations are based on 7 digits (without NPA). The PSAPDN field is datafilled with 7 digits.

DATATYPE = SERV, OPTION = RNDELV

If the entry in subfield OPTION is RNDELV, enter datafill for subfield DELIVER.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
RNDELV	DELIVER	ALWAYS, SCREENED, or NEVER	Enter ALWAYS if the RN digits are included in the outgoing SETUP message regardless of the presentation indicator value associated with the RN. Enter SCREENED if the RN digits are included in the outgoing message based on the PI. If the PI is set to presentation restricted, the RN digits will not be included. Enter NEVER if none of the RN information is included in the outgoing message. The RNDELV OPTION default setting is SCREENED.

DATATYPE = SERV, OPTION = RNID

If the entry in subfield OPTION is RNID, enter datafill for subfield SUPPRESS.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
RNID	SUPPRESS	Y or N	Enter Y to suppress Redirecting Number Identification. The default is N.

DATATYPE = SERV, OPTION = SHPRN

If the entry in subfield OPTION is SHPRN, enter datafill for subfield SHPRN_PARM.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SHPRN	SHPRN_PARM	NNNN, YYYY, YNNY, NNNY, YNYY, NNYY	The first letter represents Direct calls-Calling Party Number. The second letter represents Forwarded Calls-Calling Party Number. The third letter represents Forwarded Calls-Original Number on Calls Forwarded Multiple Times. The fourth letter represents Forwarded Calls-Last (or Only) Forwarding Number. The default is NNNN.

LTDATA (continued)

Note: CGNDELV and RNDELV must be set to screened for SHPRN to be provisioned.

DATATYPE = SERV, OPTION = TBCT

If the entry in subfield OPTION is TBCT, enter datafill for subfields PARM and STATUS.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
TBCT	PARM	NTC	Enter NTC to identify subscription to the Notification to Controller feature. The STATUS subfield indicates if the subscription is ON or OFF. NTC is the only value for this subfield.
	STATUS	ON or OFF	Enter ON to turn the TBCT notification to controller feature (AF7322) on. Enter OFF to turn this feature off. The default is ON.

DATATYPE = SERV, OPTION = TBO

If the entry in subfield OPTION is TBO, enter datafill for subfields CALLCODE and SFPRSNT. If the entry in subfield SFPRSNT is Y, enter datafill for subfield SFEATVAL.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
TBO	CALLCODE	800 to 999	Enter a generic call code.
	SFPRSNT	Y or N	Enter Y to indicate that the service feature is present and enter datafill for subfield SFEATVAL. Enter N to indicate that the service feature is not present.
	SFEATVAL	800 to 999	Enter a service feature value.

DATATYPE = SERV, OPTION = TCAP_CNAM

If the entry in subfield OPTION is TCAP_CNAM, enter datafill for subfield CNAM_SUSP.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
TCAP_CNAM	CNAM_SUSP	Y or N	Enter Y to enable subscriber usage-sensitive pricing (SUSP) billing for the PRI LTID. Enter N to disable SUSP billing for the PRI LTID. The default is N. ***Note:*** Before setting subfield CNAM_SUSP to Y for a PRI LTID, the operating company must assign the billing DN in table TRKGRP (subfield BILLDN).

DATATYPE = RN

If the entry in field DATATYPE is RN, enter datafill for subfield OPTION.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
RN	OPTION	EDITRN	Enter EDITRN to provide a means for completing a partial RN and enter datafill for subfields OVLYRN, NPI, TON, and OVLYCNT.

DATATYPE = RN, OPTION = EDITRN

If the entry in subfield OPTION is EDITRN, enter datafill for subfields OVLYRN, NPI, TON, and OVLYCNT.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
EDITRN	OVLYRN	0 to 9 (maximum 18 digits)	The Overlying Redirected Number field converts a partial Redirected Number (RN) to a complete number by associating a partial RN with an overlying RN. ***Note:*** Automatic Message Accounting (AMA) only supports RNs of up to 12 digits.
	NPI	E164	Enter the numbering plan identifier associated with field OVLYRN.

LTDATA (continued)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	TON	NATL or LOCAL	Enter the type of number associated with field OVLYCLI. ***Note:*** TON must be set to LOCAL to enable EDITCLI.
	OVLYCNT	0 to 18	Enter the number of least significant digits from a partial CLI that are overlaid on top of the least significant digits of field OVLYRN. A value of 0 (zero) indicates that all the digits from the partial RN are overlaid. ***Note:*** Automatic Message Accounting (AMA) only supports RNs of up to 12 digits.

Datafill example

The following figure shows an example of datafill for table LTDATA with datatype CLI and option SCRNLTID_IC_TON.

MAP display example for table LTDATA with datatype CLI and option SCRNLTID_IC_TON

```
LTDKEY
                                    LTDRSLT
_____________________________________________________________

ISDNPRA 1 CLI

          CLI (SCRNLTID 181 811 1234) (SCRNDFLT 8111111 $) (SCRNLTID_IC_TON) $
```

The following figure shows an example of datafill for table LTDATA with datatype SERV and CGNDELV, RNDELV, and SHPRN.

MAP display example for table LTDATA with datatype SERV and CGNDELV, RNDELV, and SHPRN

```
LTDKEY    LTDRSLT

_____________________________________________________________

ISDN      502 SERV SERV Y SCREENED ALWAYS (RNDELV SCREENED) (SHPRN YYYY)
```

The following figure shows an example of datafill for table LTDATA with datatype DN and option CUSTGRP.

MAP display example for table LTDATA with datatype DN and option CUSTGRP

```
LTDKEY
                                LTDRSLT
_____________________________________________________________

ISDN 999   DN
                DN 613 726 1234 (CUSTGRP      CENTESN)$
PIEDMONT 2 DN
                DN 416 555 4321 (CUSTGRP      CENTESN)$
```

The following figure shows an example of datafill for table LTDATA with datatype SERV option LSPAO.

MAP display example for table LTDATA with datatype SERV option LSPAO

```
LTDKEY          LTDRSLT
_____________________________________________________________

ISDN 600 SERV          SERV N N NEVER NEVER (LSPAO CLEC1 U) $
```

The following figure shows an example of datafill for table LTDATA with datatype SERV option LSPSO.

MAP display example for table LTDATA with datatype SERV option LSPSO

```
LTDKEY          LTDRSLT
_____________________________________________________________

ISDN 600 SERV          SERV N N NEVER NEVER (LSPSO CLEC1) $
```

The following figure shows an example of datafill for table LTDATA with datatype SERV option MCID.

MAP display example for table LTDATA with datatype SERV option MCID

```
LTDKEY          LTDRSLT
_____________________________________________________________

ISDN   5 SERV          SERV N N ALWAYS ALWAYS (MCID) $
```

LTDATA (continued)

The following figure shows an example of datafill for table LTDATA with datatype SERV and option PRIPSAP.

MAP display example for table LTDATA with datatype SERV and option PRIPSAP

```
LTDKEY
                                                                    LTDRSLT

_____________________________________________________________________
ISDN        1 SERV
SERV N N ALWAYS ALWAYS (PRIPSAP Y Y 613 6211234) $
```

The following figure shows an example of datafill for table LTDATA with datatype SERV and option RESTRICT_REDIR_INFO.

MAP display example for table LTDATA with datatype SERV and option RESTRICT_REDIR_INFO

```
    LTDKEY
                                LTDRSLT
_____________________________________________________________________

ISDN 2 SERV

                SERV N N ALWAYS ALWAYS (RESTRICT_REDIR_INFO) $
```

The following figure shows an example of datafill for table LTDATA with datatype SERV and option RST_ACK_MULT_CID.

MAP display example for table LTDATA with datatype SERV and option RST_ACK_MULT_CID

```
    LTDKEY
                                LTDRSLT
_____________________________________________________________________

ETSI 24 SERV

                SERV Y Y ALWAYS ALWAYS (RST_ACK_MULT_CID) $
```

The following figure shows an example of datafill for table LTDATA with datatype SERV and option TBCT.

MAP display example for table LTDATA with datatype SERV and option TBCT

```
    LTDKEY
                                LTDRSLT
_____________________________________________________________

ISDN 381 SERV
            SERV Y Y ALWAYS ALWAYS (TBCT) $
ISDN 383 SERV
            SERV Y Y ALWAYS ALWAYS (TBCT) $
ISDN 385 SERV
            SERV Y Y ALWAYS ALWAYS (TBCT (NTC ON) $) $
ISDN 387 SERV
            SERV Y Y ALWAYS ALWAYS (TBCT (NTC OFF) $) $
```

The following figure shows an example of datafill for table LTDATA with datatype SERV and option TBO.

MAP display example for table LTDATA with datatype SERV and option TBO

```
    LTDKEY
                                LTDRSLT
_____________________________________________________________

ISDN 240 SERV
            SERV N N ALWAYS ALWAYS (TBO 805 N RNID Y) $
```

The following figure shows an example of datafill for table LTDATA with datatype SERV and option TCAP_CNAM. Both tuples have subfield CNAM_SUSP for option TCAP_CNAM set to N (SUSP billing disabled).

MAP display example for table LTDATA with datatype SERV and option TCAP_CNAM

```
    LTDKEY
                                LTDRSLT
_____________________________________________________________

ISDN 381 SERV
            SERV Y Y ALWAYS ALWAYS (TCAP_CNAM N)$
ISDN 383 SERV
            SERV Y Y ALWAYS ALWAYS (TCAP_CNAM N)$
```

LTDATA (continued)

The following figure shows an example of datafill for table LTDATA with datatype SERV and option UUS1EXP.

MAP display example for table LTDATA with datatype SERV and option UUS1EXP

```
LTDKEY
                                    LTDRSLT
_____________________________________________________________

ISDN 241 SERV

                SERV N N ALWAYS ALWAYS (UUS1) (UUS1EXP) $
```

The following figure shows an example of datafill for table LTDATA with datatype OPTION and option INSNAC.

MAP display example for table LTDATA with datatype OPTION and option INSNAC

```
LTDKEY
                                    LTDRSLT
_____________________________________________________________

ISDNPRA 244 SERV

                SERV Y Y ALWAYS ALWAYS (INSNAC)$
```

The following figure shows an example of datafill for table LTDATA with datatype DN and option E911DN.

MAP display example for table LTDATA with datatype DN and option E911DN

```
LTDKEY          LTDRSLT
_____________________________________________________________

ISDN 108 DN DN 613 722 9999 E911DN DEFAULT $

ISDN 108 DN DN 613 722 9999 E911DN CGN $
```

The following figure shows an example of datafill for table LTDATA with datatype SERV and option CCBS and CCNR.

MAP display example for table LTDATA with datatype option CCBS and CCNR

```
LTDKEY          LTDRSLT
_______________________________________________________

QSIG 5 SERV SERV N N ALWAYS ALWAYS (DAS RUAOVLP) CCBS CCNR$
```

Details of operation and datafill for RGN screening and billing

MMP17 feature “PRI origination, screening and capture of RGN in AMA” (activity A59034151) introduced the following functionality for ETSI PRI on the DMS-100 MMP platform.

- screening and editing of RGN (redirecting/rerouting number):
  - Redirecting Number IE
  - Redirecting Number in DivertingLegInfo2 (Facility IE)
  - Last Rerouting Number in Call Re-routing operation during invocation of Partial Re-route (Facility IE)
- Redirecting Number billing

SN06 (DMS) feature “ISDN Redirecting Number enhancement” (activity A89008946) introduced the same functionality for Call Server 2000 switches.

This section details the datafill required in LTDATA to achieve different RGN screening options.

Screening overview

When the PBX sends the SETUP message to the DMS with a RGN IE (Redirecting Number Information Element), the RGN will be edited and screened.

LTDATA (continued)

The screening of RGN digits is performed only if NPI screening passes.The NPI values that allow the screening to pass are as shown in table “NPI screening”.

NPI screening

NPI	Screening
Unknown	PASS
ISDN/E.164	PASS
Private numbering plan	FAIL
Note: Screening passes for NPI = Private numbering plan if ALLOW_SPECIAL_TON_NPI_SCREENING is set to ‘Y’ in table OFCENG.	

Per-office screening

The CLI Selector is checked to retrieve screening/editing instructions.

If the SCRNLTID/SCRNDFLT option is not provisioned per-office screening is performed (provided the CLI selector is datafilled and screening is not explicitly disabled using the NOSCRN option).The per-office screening is performed based on the datafill in table DNSCRN.

Per-interface screening

The CLI Selector is checked to retrieve screening/editing instructions. If the SCRNLTID/SCRNDFLT option is provisioned, per-interface screening is automatically enabled.

The SCRNLTID/SCRNDFLT provides an additional screening facility which is provisionable for each LTID (using table LTDATA) instead of each office (using table DNSCRN).It provides more efficient and flexible screening because only data stored for LTID is screened.

Special arrangement (NOSCRN without SCRNPN)

If NOSCRN is datafilled and SCRNPN is not datafilled then calls originating from the particular trunk group are not screened. NOSCRN may be applied to both per-interface screening and per-office screening.

TON and NPI screening is still carried out even with NOSCRN active. The following tables show which NPI and TON values will pass/fail screening, dependent on various parameters such as DDI subscription, the market in which the office resides and the NOSCRN option. The TON values for which the screening passes are as shown in table “TON screening with NOSCRN

option" and the NPI values are shown in table "NPI screening". If SCRNPN is present then the RGN screening will be performed and the RGN will be presented based on the screening results.

TON screening with NOSCRN option

TON	Screening
Unknown	FAIL
Subscriber	FAIL
National	PASS
International	PASS
Network specific	FAIL
Note 1: Screening is not dependent on DDI subscription if NOSCRN is present.	
Note 2: If MARKET_OF_OFFICE = GERMANY then the screening passes.	

NPI screening

NPI	Screening
Unknown	PASS
ISDN/E.164	PASS
Private numbering plan	FAIL

Redirecting Number privacy

The purpose of Redirecting Number privacy is to restrict the presentation of Redirecting Number. The presentation of Redirecting Number is decided based on the Incoming PI value and the DFLTPI datafill, as shown in table "Redirecting Number privacy".

Redirecting Number privacy

Incoming PI	DFLTPI option	Outgoing PI
RESTRICT	ALLOW TEMP/RESTRICT TEMP	RESTRICT
ALLOW	ALLOW TEMP/RESTRICT TEMP	ALLOW
Any value	RESTRICT PERM	RESTRICT

LTDATA (continued)

Redirecting Number privacy

Incoming PI	DFLTPI option	Outgoing PI
Not supplied	ALLOW TEMP	ALLOW
Not supplied	RESTRICT TEMP	RESTRICT
Not supplied	Not datafilled	ALLOW
Any value	Not datafilled	ALLOW

PN support for Redirecting Number

The Presentation Number support for Redirecting Number is provided as part of this feature and is the same as PN support for calling number (CGN). The table “PN support for RGN for the terminating ETSI PRI” illustrates the behavior of the outgoing RGN for the terminating ETSI PRI, when PN_SUPPORTED in table OFCENG is ACTIVE.

PN support for RGN for the terminating ETSI PRI

DFLTPN	DEFLTCGN	SCRNPN	NOSCRN	Screening results	Outgoing RGN
N	N	N	Y	Rudimentary screening passes (Note 1)	User RGN
Y	X (Note 2)	N	Y	Rudimentary screening passes	DEFLTPN
N	Y	N	Y	Rudimentary screening passes	User RGN
X	X	Y	Y	Screening passes	Screened RGN
Y	X	X	Y	Rudimentary screening fails	DEFLTPN
N	Y	X	Y	Rudimentary screening fails	DEFLTCGN
X	X	Y	N	Screening passes (Note 3)	Screened RGN
Y	Y	Y	N	Screening fails	DEFLTPN
N	Y	Y	N	Screening fails	DEFLTCGN

Note 1: “Rudimentary screening” means that TON and NPI only are screened.

Note 2: X = “don’t care”

Note 3: TON, NPI and digits are screened

PN support for RGN for the terminating ETSI PRI

DFLTPN	DEFLTCGN	SCRNPN	NOSCRN	Screening results	Outgoing RGN
N	N	X	N	Screening fails	User RGN
Y	Y	N	N	Screening passes	DEFLTPN
N	Y	N	N	Screening passes	Screened RGN

Note 1: "Rudimentary screening" means that TON and NPI only are screened.

Note 2: X = "don't care"

Note 3: TON, NPI and digits are screened

The behavior is the same for the terminating ETSI BRI also, but in this case the PN is presented only if PI is allowed, and the BRI set is subscribed to CLIP. If these conditions are not met, the screened/unscreened RGN is presented.

Activation of the functionality

The Screening of RGN is performed if the CLI selector is datafilled.The options for Per-office screening and Per-LTID Screening are mutually exclusive and cannot be provisioned at the same time. The screening options for Per-Interface screening and Per-office screening are as shown in table "Screening options".

Screening options

Per-interface screening	Per-office screening
SCRNLTID	EDITCLI
SCRNDFLT	DFLTCGN

The SCRNLTID option requires datafill in the following fields.

- The national destination code (NDC) field is a reference to an area code entry in table SNPANAME.
- The directory number (DN) is the subscriber number or the DDI root (subscriber number without extension digits).This field should not contain a National Significant Number (NSN)
- Field DNBLKS is used to specify a list of extension blocks that are valid for a particular access in the case of economic usage of DN.Otherwise, the field is left empty.

LTDATA (continued)

The SCRNDFLT option requires datafill in the following fields.

- DFLTSN contains the default subscriber number that is provided to the network by prefixing the NDC.
- DFLTCGRP contains the default customer group which is not related to CLIP/CLIR or screening. When a default customer group needs to be specified and Per-LTID screening is required, the default customer group needs to be datafilled under SCRNDFLT option (instead of under the DN selector).This is because the SCRNLTID/SCRNDFLT options and the DN selector are mutually exclusive.

The EDITCLI option requires datafill in the following fields.

- OVLYCLI: Overlay calling line identifier.The user provided CLI is overlaid on top of the OVLYCLI.
- NPI: This field specifies the NPI associated with OVLYCLI.The value supported is E164.
- TON: This field specifies the TON associated with OVLYCLI.
- OVLYCNT: The values specify the number of least significant digits from the user provided CLI to be overlaid on top of the least significant digits of OVLYCLI to form a complete CLI. ‘0’ indicates that all digits from user-provided CLI are to be overlaid on top of the OVLYCLI to form a complete CLI.

Billing

The RGN is given higher priority than the CGN (calling number) and, if present, will be used for billing for an ETSI PRI call. This is to prevent fraud and do proper billing for redirecting calls.

Billing Number Determination is done during call processing and since it depends on the outcome of RGN Screening, it is done subsequent to the Screening/Editing.

In case of partial re-route the last rerouting number will be used for billing the second leg of the call after screening.

No special datafill is required for activation of billing based on RGN. Option AMACLID_IC_PRI_CGN (table AMAOPTS) updates module code 46 of an AMA record with unmodified RGN.

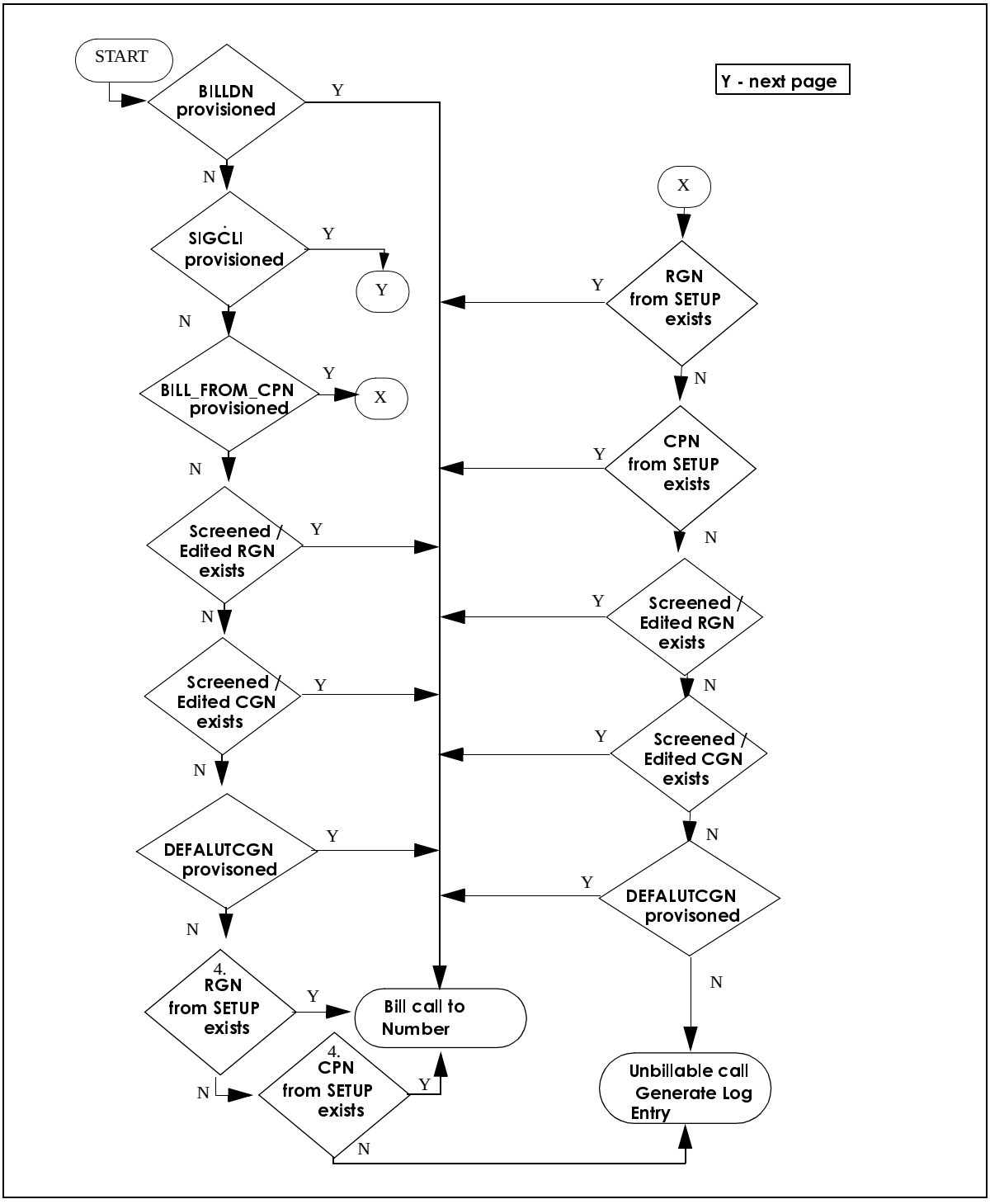
Table “RGN billing datafill” below shows the datafill of the different options in tables LTDATA and AMAOPTS to provide different types of AMA records.

BILLDN	BILL_FROM_CPN	AMACLID_IC_PRI_CGN (in table AMAOPTS)	AMA record content
Y	X	ON	ORIG_OPEN_DIGITS = BILLDN Module Code 46 = Screened RGN
N	Y	OFF	ORIG_OPEN_DIGITS = Unscreened RGN
N	X	OFF	ORIG_OPEN_DIGITS = Screened/edited RGN from SETUP

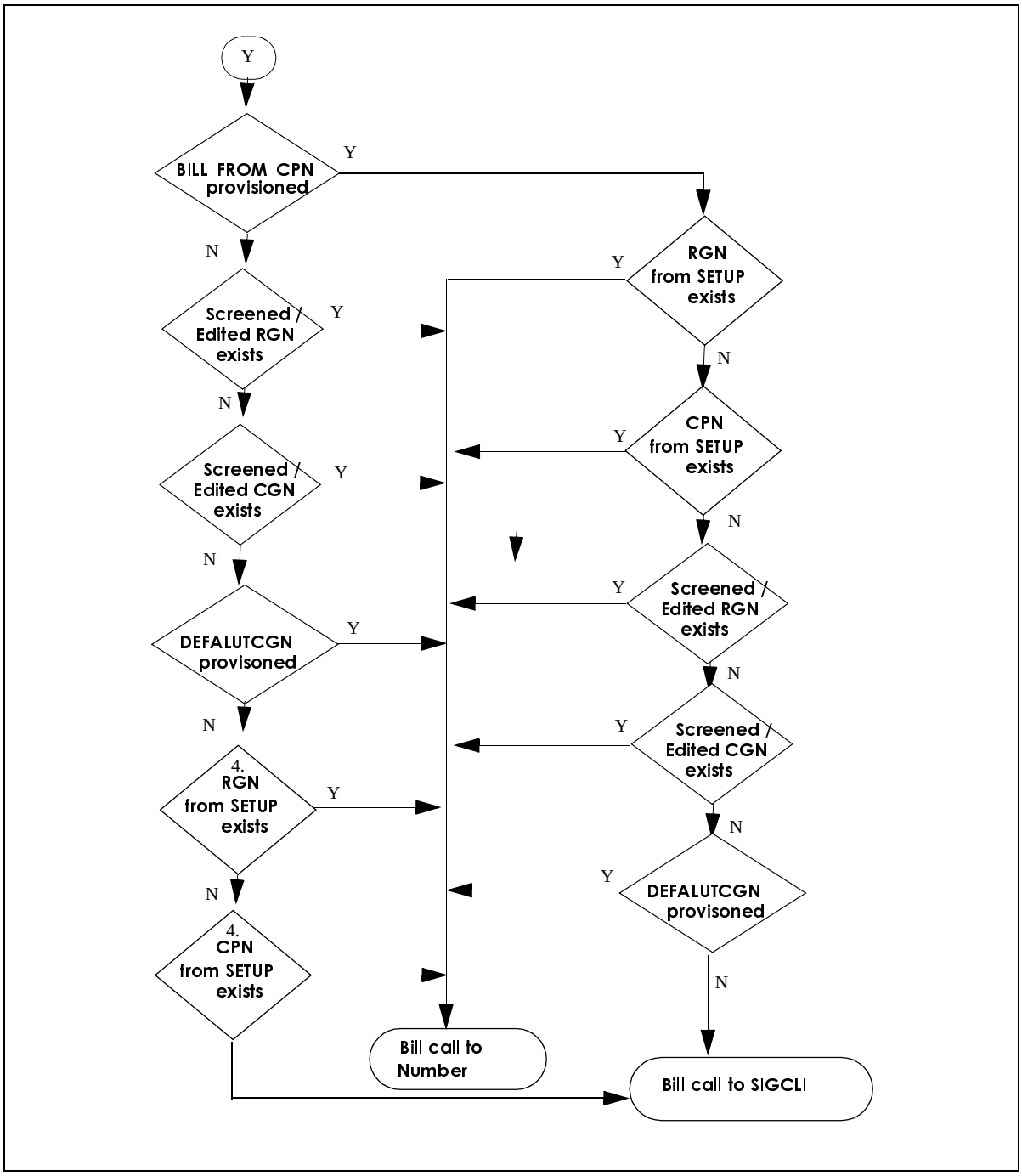
The figures on the following pages show the algorithm for generation of AMA billing record for RGN.

LTDATA (continued)

Algorithm for generation of AMA billing record for RGN



Algorithm for generation of AMA billing record for RGN (continued)



LTDATA (continued)

Table history

SN06 (DMS)

Q00757372

List of applicable treatments added to description of AUDTRMT option

Q00746608

Documented which PRI variants support the CLI and RN options.

A89008946

This feature adds functionality for the screening and billing (capture in AMA) of the Redirecting Number (RGN), to Call Server 2000 switches. This functionality was introduced to MMP switches by MMP17 feature A59034151. A section called “Details of operation and datafill for RGN screening and billing” has been added to this table description.

NA017

59029596

This feature uses existing options in table LTDATA.

SN04 (DMS)

AJ5284

Description of DFLTPI subfield MODE amplified to explain the impact on the entry PERM of the DEFLTPN field and the PN_SUPPORTED field in table OFCENG.

59037870

Adds option RESTRICT_REDIR_INFO under the SERV selector for feature 59037870. Use this option when restricting redirecting information being sent in the SETUP message.

59034092

Adds option PRI_CLB_NOTIF under the SERV selector for feature 59034092. Use this option to add notification of suspend/resume to PRI trunk during regret time of terminator line IBN.

59036446

Adds the SCRNLTID_IC_TON option, under the CLI selector, to enhance the SCRNLTID option for the Dutch PRI (feature 59036446).

MMP16

Adds option REDIR_INFO_IN_RGN under the SERV selector for feature 59027615. Use this option when redirecting information is required in the Redirecting Number Information Element.

Adds new SERV options PRI_CD and PRI_CFU for feature 59027629 to allow the served user to respond to incoming calls by requesting redirection of calls to another user.

MMP15

Adds option PRI_CALL_CONTROL under the SERV selector to allow activation of the ETSI PRI Incoming and Outgoing Call Control Enhancements feature (A59022390).

Explanatory text and note added that BILL_FROM_CPN conditional datafill, as well as supporting ETSI PRI billing, now supports INS1500 PRI billing for the Per Extension Billing feature (A59022582).

Adds existing options CCBS and CCNR to QSIG agents for activity A59023584. Previous to this activity, option CCBS and CCNR were for PRI only.

Adds option RST_ACK_MULT_CID under the SERV selector to enable multiple CIDs in one RESTART ACK message on receipt of a Global Restart when some B channels are in MB or INB state (A59022616).

Adds option UUS1EXP under the SERV selector (A59022169).

MMP14

Use of option NET_RINGBACK_ON is extended to QSIG trunks.

Adds option CCNR under the SERV selector to allow activation of the Call Completion on No Reply feature.

MMP13

Adds subfields SCRN_CNN_PN and CNN_NOSCRN to the CLI option.

Adds option CLIPREFX to field SERV OPTION.

MMP12

Adds 2CLI option which gives ETSI PRI the ability to send two CLI.

Adds option BI_UNAVAIL to indicate to the network if the originator’s Network Number is available for display.

Removed AOC provisioning for PRI and QSIG subscribers from table LTDATA. The AOC option is now available in table TRKOPTS.

LTDATA (continued)

NA016

Enhances option E911DN to include E911 screening on NTNA PRI calls for feature A59029596.

NA012

Adds option E911DN to field LTDKEY, subfield DATATYPE=DN.

Adds field NATLXLA to option PRIPSAP to support seven- and ten-digit call translations.

NA011

Adds option PRIPSAP to field LTDKEY, subfield DATATYPE = SERV. This option allows the user to provision the PRI PSAP.

Adds options SHPRN and MWIC. SHPRN provides the switch with the ability to override the delivery of presentation restricted numbers. MWIC provides the capability of accepting an MWI control request over an ISDN NI-PRI trunk group.

EUR010

Note added that option SCRNLTID requires correct entry for NATIONAL_COUNTRY_CODE in table OFCENG.

Adds option ETSIDIV to allow partial rerouting on ETSI PRI trunks for AU3401.

Adds option BILL_FROM_CPN to allow ETSI PRI DN billing for activity AU3273.

Adds option ECT to allow explicit call transfer on ETSI PRI for activity AU3346.

EUR009

Adds option INSNAC to trigger modification of the outgoing CLI to a full national number.

APC010

Adds the NET_NORMDISC_ON option to provision a busy tone during normal call release. This option applies to the network side of INS1500 PRI trunks.

NA010

Adds options LSPAO and LSPSO to associate LSPAO and LSPSO for PRI private trunk types that have NTNA or NI protocol variant.

PRI SUSP for CNAME (AF7570) adds subfield CNAM_SUSP to option TCAP_CNAM for DATATYPE SERV. This feature also adds the error and warning messages listed in “Supplementary information.”

EUR008

Adds values AOCS, PROTOCOL, REQUEST, and UNITS to the AOC option field.

Adds options NET_CALLFAIL_ON, NET_DIALTONE_ON, and NET_RINGBACK_ON to provision network tones on the network side of PRI trunks.

Adds option ECMA226_CHNL_MAP to permit channel mapping functionality.

APC009

Tones Over PRI (AU2501) adds entries NET_CALLFAIL_ON, NET_DIALTONE_ON, and NET_RINGBACK_ON to subfield OPTION.

Original and Redirection Number on TS14 PRI and ETSI PRI (AU2578) adds entry CGNCALC to subfield OPTION.

LTDATA NOSCRN Option (AU2579) allows entry NOSCRN to subfield OPTION for TS14 trunk groups.

PBX CLI Management (AU2580) adds options CLIVD, EDITALLTON, and SIGCLI to subfield OPTION of field DATATYPE=CLI.

NA009

The following changes were made:

- Added subfields PARM and STATUS for TBCT.
- Added LSPAO option with subfields PROVIDER and CONTEXT.

ISDN PRI calling name delivery (I-CNAM) feature AF7209 adds TCAP_CNAM as a subfield of the service data (SERV) selector OPTION field.

LTDATA (continued)

NA008

The following changes are made:

- PRI Option for AIN IPI (AJ4594) adds AIN_IPI_STR to subfield OPTION.
- Two B-Channel Transfer option (AR2401) adds TBCT to subfield OPTION if field DATATYPE = SERV. Adds table control warnings for dependencies in table LTDEF when using option TBCT.
- PRI Call Screening (AF6863) adds entry RN to field DATATYPE and subfield OPTION = EDITRN.
- PRI Call Screening (AF6863) adds entry RNID suppression to subfield OPTION if field DATATYPE = SERV.
- PRI Call Screening (AF6863) adds entry RNDELV screening to subfield OPTION and subfields ALWAYS, SCREENED, or NEVER if field DATATYPE = SERV.
- PRI Call Screening (AF6863) adds entry BNS to subfield OPTION if field DATATYPE = SERV.

NA007

Added a note for option DFLTPI in response to a customer request.

EUR006

The point of presence (POP) option is added to the CLI selector.

The priority class of service (PCOS) option is added to enable priority class calls to originate on ISDN BRI and PRI trunks under essential service protection (ESP) and network protection (NETPROT) conditions. PCOS prevents non-priority traffic in the case of a catastrophe.

Added AOC in the OPTION field. Option AOC has the following subfields: AOCD, AOCE, DSCNT, AOCREL, and AOCCHGOV.

Note: Option AOC is available only for PRI trunks.

Added supplementary service features Closed User Group (CUG), Call Complete Busy Subscriber (CCBS), and Malicious Call ID (MCID).

Added the Direct Dialing In (DDI) feature.

XPM08

Added a note for option DFLTPI in response to a customer request.

Added NO_BCH_SERV in the OPTION field. Changed default value in field CGNDELV.

CCM07

Added an option to turn B-channel messaging ON or OFF and to allow CGN-related information to be datafilled for the originating PRI.

BCS36

The following changes were made:

- added new functionality to field AUDTRMT
- added value UUS1 to subfield OPTION

Supplementary information

This section provides supplementary information and error messages for table LTDATA.

Limitations for PRI variants CLI and RN

PRI variants that support the CLI datatype are NTNA, NI2, ETSI, QSIG, Australia, Japan, French and Hong Kong. The following error message is displayed at the MAP if an attempt is made to provision the CLI on an unsupported PRI variant. The acronym PVC means Protocol Variant Control.

```
CLI DATATYPE SELECTOR IS NOT SUPPORTED FOR THIS PVC
```

The PRI variant that supports the RN datatype is NI2. The following error message is displayed at the MAP if an attempt is made to provision the RN on an unsupported PRI variant.

```
RN DATATYPE SELECTOR IS NOT SUPPORTED FOR THIS PVC
```

Overnight process notes

The AOC option contents of table LTDATA are transferred to table TRKOPTS during ONP, where the new AOC provisioning for PRI and QSIG subscribers are available.

ECT option support

The ECT option is only supported for ETSI PRI 1990. If an ECT option is added to a non-ETSI 1990 entry, the following error message appears:

```
The ECT option is only supported for ETSI PRI issue
1990.
```

LTDATA (continued)

Errors for PRI Calling Name Delivery and PRI SUSP for CNAME

The following error and warning messages are associated with the PRI Calling Name Delivery (I-CNAM) and PRI SUSP for CNAME features.

- The following warning message displays if the operating company attempts to provision the TCAP_CNAM option against a non-NI-PRI variant:

  ```
  THE OPTION IS ONLY VALID FOR NI-PRI VARIANT
  ```

- The following error message displays if parameter ISDNCIRCUIT in table AMAOPTS is not enabled:

  ```
  TABLE AMAOPTS OFFICE PARM ISDNCIRCUIT MUST BE
  ENABLED
  ```

- The following error message displays if parameter AMA_FORMAT in table AMAOPTS is not set to ATT_AMA_FORMAT to indicate Bellcore billing:

  ```
  SUSP ONLY ALLOWED IN BELLCORE AMA FORMAT OFFICES
  ```

- The following warning message displays if the operating company has not assigned a billing DN in table TRKGRP:

  ```
  Billing DN not assigned in table TRKGRP
  ```

- The following warning message indicates that the billing DN in table TRKGRP is outside the range of 3 to 10 digits:

  ```
  Number of Billing DN digits not in range
  ```

- The following warning message displays if an attempt is made to provision SHPRN and the corresponding LTID in table LDEF is not defined as NI-PRI:

  ```
  The SHPRN option is only supported by the NI-PRI
  variant defined in table LTDEF
  ```

- The following warning message displays if an attempt is made to change the variant from NI-PRI to any other variant while the SHPRN option is provisioned:

  ```
  INVALID CHANGE: Delete the SHPRN option entry from
  table LTDATA for this interface before changing
  the PRI variant
  ```

- The following warning message displays if an attempt is made to provision SHPRN and the option RNDELV is not present:

  ```
  The RNDELV option of table LTDATA must be
  provisioned to datafill SHPRN
  ```

- The following warning message displays if an attempt is made to provision SHPRN and CGNDELV is not set to screened:

  ```
  The SHPRN option requires CGNDELV and RNDELV to be
  set to screened before adding the SHPRN option
  ```

- The following warning message displays if the NCAS option does not exist:

  ```
  MWIC option is only valid with NCAS option. Ensure
  that NCAS option is assigned to the NI PRI LTID
  with PUBLIC service type in table LTCALLS
  ```

- The following warning message displays if the MWIC option is being added to a non-NI-PRI LTID:

  ```
  MWIC option is only valid on NI-PRI LTID
  ```

- The following warning message displays if parameter MAX_NUM_PRI_MWIC_CONTROL is exceeded by the optional parameter MWIMAX of option MWIC:

  ```
  The total MWIMAX must not exceed OFCENG office parm
  MAX_NUM_PRI_MWIC_CONTROL. The current total is
  <total_mwimax>. The allowable MWIMAX value must be
  less than or equal to <allowable_mwimax>
  ```

LTDEF

Table name

Logical Terminal Definition

Functional description

The logical terminal tables identify logical terminals and both the associated line equipment number (LEN) and the associated terminal equipment identifier (TEI). The logical terminal tables consist of tables TAKGAP, LTCALLS, LTDATA, LTDEF, LTGRP, and LTMAP.

Table LTDEF defines the service profile of an ISDN logical terminal identifier (LTID). The key to this table is an LTID. An LTID consists of a logical terminal group (LTGRP) from table LTGRP and a logical terminal number (LTNUM) in the range of 1 to 1022.

This table must be datafilled to provision ISDN primary rate interface (PRI) and basic rate interface (BRI) services. The type of service requested is distinguished by the LTCLASS field, for example, BRAFS, PRA, and BRAMFT. Based on the type of service, datafill logical terminal-specific options against a particular LTID.

The option supports the RES Translations Simplification feature.

Datafill sequence and implications

Datafill tables SVPRIGRP and LTGRP before table LTDEF.

Table size

0 to 32 704 tuples

Datafill

The following table lists datafill for table LTDEF.

Field descriptions

Field	Subfield	Entry	Explanation and action
LTKEY		see subfields	Logical terminal key. This field consists of subfields LTGRP and LTNUM.
	LTGRP	alphanumeric (up to 8 characters)	Logical terminal group. Enter the name of a group of logical terminals. Valid group names are in field GROUP of table LTGRP.

Field descriptions

Field	Subfield	Entry	Explanation and action
	LTNUM	1 to 1022	This is the logical terminal number. Enter a number to identify the logical terminal within the group.
LTAP		B, D, PB, BD, 2B, 2BD	This is the logical terminal access privilege. Enter the access privilege of the logical terminal. For circuit switching or for ISDN MFT terminals, enter B. For D-channel packet switching, enter D. For provisioned B-channel packet switching, enter PB. For combined circuit switching, enter BD. For two B-channel circuit switching, enter 2B. For D-channel packet switching and circuit switching on the same NI-2 terminal, enter 2BD. A terminal with the 2BD option must also have CLASSREF subfield LTCLASS = BRAFS, BRAFS subfield OPTION = PVC, DTEI, and PVC subfields VERSION = FUNCTIONAL and ISSUE = 2. The NITYPE option must be specified with a value of NI2. ***Note 1:*** If the PVC option is not specified, it will be added by default as PVC FUNCTIONAL 2. ***Note 2:*** You cannot change an existing access privilege to 2BD.
CLASSREF		see subfield	The class reference field consists of subfield LTCLASS.
	LTCLASS	BRAFS, BRAMFT, PRA	The logical terminal class field identifies the set of services that are allowed for a logical terminal. For basic rate access (BRA) functional sets, enter BRAFS. For BRA Meridian feature transparency (MFT) terminals, enter BRAMFT. For primary rate access, enter PRA.

LTCLASS = BRAFS

If the entry in subfield LTCLASS is BRAFS, datafill subfield OPTION as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
BRAFS	OPTION	AGA, CACH, CMD, DEFLTERM, DTEI, EKTS, ELN, NITYPE, NOCMD, NOPMD, NOVBD, NOVOICE, NO OCT, OML, PMD, PVC, SCAI, SLBRI, SPIDSFX, TERML, TSPID, UATEI, UNATEI, USRCLI, VBD, VOICE	Enter up to 18 options.
			Enter AGA to enable the associated group feature. Datafill subfields AG_GROUP and AG_CT. Enter CACH to enable the call appearance handling feature on a terminal. This option cannot be assigned without option EKTS. Enter CMD to indicate that circuit mode data calls are allowed (ISDN BRI only). Enter DEFLTERM (for example, non-initializing terminal) to indicate that the option defines a default logical terminal and thus, a default service profile for the loop. Enter DTEI for a dynamic TEI. DTEI must be entered if SPIDSFX or EKTS is required.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
			Enter EKTS to indicate electronic key telephone service. Enter ELN to indicate that the BRA is handled as an essential access. Enter NITYPE to specify whether the terminal is National ISDN 1 (NI-1) or National ISDN 2 (NI-2) compliant. Datafill subfield NITYPE. Enter NOCMD to indicate that circuit mode data calls are not allowed for ISDN PRI. Enter NOPMD to indicate that packet mode data calls are not allowed for ISDN PRI. Enter NOVBD to indicate that voice band data calls are not allowed for ISDN PRI. Enter NOVOICE to indicate that voice calls are not allowed for ISDN PRI. Enter OCT to indicate an overload condition treatment. OCT dictates the type of control applied to terminals in a rapid messaging (RM) state. Valid values are REPONLY (report only) or REPCTRL (report and control). Enter OML to indicate an overload messaging limit for D-channel messages allowed on an LTID before activating RM controls. OML is valid for BRAFS circuit-switched (CS) LTIDs. Valid values are 0 to 150 messages per minute with increments of 15. If OML is set to zero, RM is turned off for the LTID. If OML is assigned a value other than zero, the OML overrides the DEFOML value. Enter PMD to indicate that packet mode data calls are allowed (ISDN BRI only). Enter PVC to indicate that the terminal has protocol selectivity through protocol version control. Datafill subfields VERSION and ISSUE. Enter SCAI to indicate that the logical terminal has access to the switch computer application signaling interface. ***Note:*** Option SCAI is not a valid entry for table LTDEF for BCS34 and up. Enter SLBRI for ISDN single line BRI.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
			Enter SPIDSFX for a service profile identifier suffix. Datafill subfield SPID_SUFFIX. Enter TERML to specify the number of non-initializing terminals (NIT) that the LTID can support. Datafill subfield TERML. Enter TSPID to define the Free Format Terminal Service Profile Identifier (TSPID) value. TSPID is required for datafilling new BRAFS sets and for initializing Basic Rate Interface Functional Signaling (BRIFS) LTIDs. Enter UATEI to indicate user-assigned dynamic TEI terminals. Enter UNATEI to indicate a user- or network-assigned TEI. For a BRI line, enter USRCLI to indicate that for a call originating from an ETSI BRI or VN4 BRI line, the CLI of the originating call is captured and stored in the Orig Open Digits (OOD) field in module 046. Enter VBD to indicate that voiceband data calls are allowed (ISDN BRI only). Enter VOICE to indicate that voice calls are allowed (ISDN BRI only). ***Note:*** Options DTEI, UATEI, UNATEI, EKTS, SPIDSFX, and TSPID are incompatible with option DEFLTERM. By default, NITs use UNATEI TEI assignment procedures.

LTCLASS = BRAFS, OPTION = AGA

If the entry in subfield OPTION is AGA, datafill subfields AG_GROUP and AG_CT as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
AGA	AG_GROUP	1 to 9	This is the associated group number. Enter the number of the associated group.
	AG_CT	AG_VI, AG_CMD, AG_ALL, AG_UNASSIGNED	This is the associated group call type.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
			Enter AG_VI (voiceband information) for voice call type. Enter AG_CMD (circuit mode digital information) for data call type. Enter AG_ALL for all call types. Enter AG_UNASSIGNED to indicate that no call types are assigned.

LTCLASS = BRAFS, OPTION = NITYPE

If the entry in subfield OPTION is NITYPE, datafill subfield NITYPE as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
OPTION	NITYPE	NI1, NI2, or NIL_TERM	This is the terminal type. Enter NI1 or NI2 to specify whether the terminal is National ISDN 1 (NI-1) or National ISDN 2 (NI-2) compliant. The default value for this field is NIL_TERM. ***Note:*** Entry NI3 for this field is reserved for future use.

LTCLASS = BRAFS, OPTION = PVC

If the entry in subfield OPTION is PVC, datafill subfields VERSION and ISSUE as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
PVC	VERSION	AUSTEL, ETSI, FUNCTIONAL, MFT, VN4	Enter the protocol version. Enter AUSTEL for the signaling protocol for Australian BRA. AUSTEL can only be datafilled for ISDN loops subtending peripheral module (PM) types PRCC or PLGC. AUSTEL cannot be datafilled for ISDN loops subtending other types of PMs that are ISDN equipped.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
			Enter ETSI (European Telecommunications Standards Institute ISDN) for the signaling protocol for European basic rate interface (BRI). Enter FUNCTIONAL for the signaling protocol based on Q.931 messaging protocol or 2BD service. For further information, refer to *Integrated Services Digital Network Service Orders for ISDN Terminals Reference Manual*. Enter MFT using the SLT prompt in the Service Order System (SERVORD). For more information on SERVORD, refer to *SERVORD Reference Manual*. The default value for this field is MFT. Enter VN4 (French ISDN protocol variant) for the possible selection of VN4 for the logical terminal.
	ISSUE	0 to 2	Enter the protocol issue designated for the particular logical terminal. Enter 0 (zero) for stimulus and MFT protocols. Enter 0 (zero) to support the ETSI BRI protocol. Enter 0 (zero) if the protocol version specified is AUSTEL or VN4 Enter 1 for BellCore functional protocol. Enter 2 if feature Protocol Variant Control is provisioned.

LTCLASS = BRAFS, OPTION = SCAI

If the entry in subfield OPTION is SCAI, datafill subfield SCAIGRP as described in the following table.

Note: Option SCAI is not a valid entry for table LTDEF for BCS34 and up.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SCAI	SCAIGRP	alphanumeric (up to 8 characters)	This is the switch computer application interface group. Enter a valid SCAI group name.

LTCLASS = BRAFS, OPTION = SPIDSFX

If the entry in subfield OPTION is SPIDSFX, datafill subfield SPID_SUFFIX as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SPIDSFX	SPID_SUFFIX	numeric (up to 8 digits)	This is the service profile identifier suffix. Enter the name that uniquely identifies a particular subscriber on a dynamic TEI terminal. ***Note:*** Prior to BCS35, the entry for field SUFFIX was up to eight alphanumeric characters.

LTCLASS = BRAFS, OPTION = TERML

If the entry in subfield OPTION is TERML, datafill subfield TERML as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
OPTION	TERML	1 to 8	This is the number of NITs. Enter the number of NITs that can be associated with an NI-2 default LTID. A maximum of eight terminals can be associated with an NI-2 default LTID. ***Note 1:*** The TERML value is the number of terminals that can associate with the LTID and that can therefore receive service. The TERML parameter does not restrict the number of TEIs that can exist on the loop in a layer 2 mode. ***Note 2:*** For a D-channel packet-only NIT, a value of 1 is enforced. The default value for this field is 1.

LTCLASS = BRAFS, OPTION = TSPID

If the entry in subfield OPTION is TSPID, datafill subfield TSPID as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
OPTION	TSPID	1 to 18 digits	This is the TSPID value for initializing BRAFS LTIDs. Enter a value from 1 to 18 digits to specify the Free Format SPID value to be used for layer 3 provisioning. The SPID value is composed of the TSPID plus a 2-digit TID.

LTCLASS = BRAMFT

If the entry in subfield LTCLASS is BRAMFT, datafill subfield OPTION as described in the following table. This selector enables datafilling of ISDN MFT terminals. PVC enables specification of the layer 3 protocol that is used for a given ISDN BRI terminal.

Note: Enter the PVC version MFT using the SLT prompt in SERVORD.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
BRAMF	OPTION	DTEI, PVC, SPIDSFX, UATEI	Enter up to four options. Enter DTEI for a dynamic TEI. ***Note:*** DTEI must be entered if SPIDSFX is required. Enter PVC for protocol version control. ***Note:*** This option allows operating company personnel to datafill the protocol version and issue that the ISDN BRI terminals support. Enter SPIDSFX for a service profile identifier suffix. Enter UATEI for a user-assigned, dynamic TEI.

LTCLASS = BRAMFT, OPTION = PVC

If the entry in subfield OPTION is PVC, datafill subfield ISSUE as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
PVC	ISSUE	0 or 1	Enter the valid issue for PVC.

LTCLASS = BRAMFT, OPTION = SPIDSFX

If the entry in subfield OPTION is SPIDSFX, datafill subfield SPID_SUFFIX as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
SPIDSFX	SPID_SUFFIX	numeric (1 to 8 digits)	Enter the service profile identifier suffix. This is the name that uniquely identifies a particular subscriber on a dynamic TEI terminal. ***Note:*** Prior to BCS35, the entry for field SPID_SUFFIX was up to eight alphanumeric characters.

LTCLASS = PRA

If the entry in subfield LTCLASS is PRA, datafill subfields NUMBCHNL and OPTION as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
PRA	NUMBCHNL	1 to 479	Enter the number of B-channels that this logical terminal is allowed to use at any time. The sum of this field over all logical terminal identifier (LTID) on an interface must not exceed the number of B-channels on the interface. ***Note:*** Field NUMBCHNL is not used at this time and is reserved for future use.
	VARISSUE	see subfields	This field consists of subfields VARIANT and ISSUE.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	VARIANT	AUSTPRI, ETSIPRI, EVN4PRI, INSPRI, NTNAPRI, NIPRI, N449PRI, QSIGPRI U449PRI, or U459PRI	This is the variant type. Enter the PRI protocol being used for the LTID as follows: • AUSTPRI - Australian PRI • ETSIPRI - ETSI PRI (Europe) • EVN4PRI - French PRI (Numeris VN4) • INSPRI-Japan INS-1500 PRI • NTNAPRI-Northern Telecom (Nortel) PRI • NIPRI-NI-2 PRI ***Note:*** If the corresponding LTID tuple in table LTDATA has field DATATYPE = SERV and subfield OPTION =TBCT, attempts to change VARIANT from NIPRI are rejected with the following error message: **Cannot change VARIANT: TBCT provisioned on LTID in Table LTDATA. Delete TBCT from the tuple in LTDATA first.** ***Note:*** If the corresponding tuple in table LTCALLS has field CALLTYPE = PVT, an attempt to change the PRA VARIANT to NIPRI fails with the following message: `ERROR: delete Private service type ENTRY from table LTCALLS for this INTERFACE BEFORE changing the LTDEF variant to NIPRI.` • N449PRI-AT&T SYS85 • QSIGPRI-QSIG PRI • U449PRI-AT&T 4ESS • U459PRI-AT&T 5ESS

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	ISSUE	1990, ETSI1993, EVN4V1, FR_VN6, HOLLAND1, ISO1996, NET3, NI2V1, SPAIN1, SWISS3, TS141990, V1, X11	Enter the issue of the PRI variant used as follows: • If ECT is provisioned in table LTDATA, an attempt to change ISSUE to any other value except 1990 displays the message: `The ECT option is only supported for ETSI PRI issue 1990` • If the entry in field VARIANT is ETSIPRI, enter 1990, FR_VN6, HOLLAND1, ISRAEL, NET3, SPAIN1, SPAP_PRI, SWISS3, STDETS11, STDETS12, STDETS13, STDETS14, STDETS15 or X11. • If the entry in field VARIANT is AUSTPRI, enter TS141990. • If the entry in field VARIANT is INSPRI, N449PRI, NTNAPRI, U449PRI, or U459PRI, enter V1 or V2 • If the entry in field VARIANT is NIPRI, enter NI2V1 and datafill subfield PGRPID. • If the entry in field VARIANT is EVN4PRI, enter EVN4V1 or FR_VN6. • If the entry in field VARIANT is QSIGPRI, enter ETSI1993 or ISO1996. This value is dependent on the choice of the VARIANT.
	PROFNAME	alphanumeric to 8 characters), NIL	The profile name field is the key to table PRIPROF. Enter a profile name linking a profile (set of function switches) to an interface. This name must first be datafilled in table PRIPROF. The default for this field is NIL and disables all available function switches. Entries correspond with entries for VARIANT and ISSUE in table PRIPROF.
	OPTION	CMD, ONEPLNC, PGRPID, PMD, SZGRDTM, VBD, VOICE	Enter up to six options.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
			Enter CMD to indicate that circuit mode data calls are allowed. Enter ONEPLNC to allow 1+10 digits for non-AIN translations. Enter PGRPID followed by the name of the Serving PRI group, to indicate a Serving PRI group. This name is the key to table SVPRIGRP, and must first be datafilled in table SVPRIGRP. The default for this field is NIL. If the value is NIL, then PGRPID does not appear in the options list for the tuple. Enter PMD to indicate that packet mode data calls are allowed. Enter SZGRDTM to specify the minimum amount of time the DMS will wait after a call completion before seizing that same trunk for another call. The default value, without this option, is 750 ms. This option is valid for PRA, IBNT2 and PRA250 Trunk Types (as datafilled in table TRKSGRP). Enter VBD to indicate that voiceband calls are allowed. Enter VOICE to indicate that voice calls are allowed.

Datafill example

The following example shows sample datafill for table LTDEF. ISDN 820 is an integrated NIT with dynamic TEI, and ISDN 830 is a packet-only NIT with dynamic TEI.

MAP display example for table LTDEF

```
LTKEY        LTAP                                                    CLASSREF
_____________________________________________________________________
NI1 282          2B
BRAFS    (PVC FUNCTIONAL 2)    (DTEI)    (TSPID 613723512307)          (EKTS) $
NI1 19           B
BRAFS    (VOICE) (VBD) (CMD) (PVC FUNCTIONAL 2)        (DTEI) (TSPID 55555) $
NI1 283          2B
BRAFS    (PVC FUNCTIONAL 2)    (DTEI)    (TSPID 613723512308) (EKTS) (CACH)
$
ISDN 820         2BD
BRAFS    (DEFLTERM) (NITYPE NI2)    (PVC FUNCTIONAL 2)    (TERML 4)$
ISDN 830         D
BRAFS    (DEFLTERM)    (TERML 1) $
ISDN 383         B
PRA 10 10 5 5 NIPRI NI2V1 NIL (NOPMD) (PGRPID PRI_TO_MTRL) $
```

The following example shows the USRCLI option datafill for table LTDEF.

MAP display example for table LTDEF

```
>table ltdef
MACHINES NOT IN SYNC - DMOS NOT ALLOWED
JOURNAL FILE UNAVAILABLE - DMOS NOT ALLOWED
TABLE: LTDEF
>add
MACHINES NOT IN SYNC - DMOS NOT ALLOWED
JOURNAL FILE UNAVAILABLE - DMOS NOT ALLOWED
ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
>y
LTKEY:
>ISDN1 1
LTAP:
>B
LTCLASS:
>BRAFS
OPTION:
> USRCLI
OPTION:
> $
TUPLE TO BE ADDED:
ISDN1 1 B BRAFS (USRCLI) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

Table history

CSP17

CR Q00270160 added options ONEPLNC and SZGRDTM to field PRA subfield OPTION.

CR Q00588753 removed the NUMCALLS, INCALLS, and OUTCALLS options from field PRA.

SN04 (DMS)

Feature A59035533 added option USRCLI to field BRAFS subfield OPTION.

NA015

Feature A59023416 added subfield N449PRI to option VARIANT.

MMP15

Added value FR_VN6 to subfield VARIANT entry EVN4PRI for activity 59022564.

MMP13

Added value FR_VN6 to subfield ISSUE for MMP13.

MMP12

Added option ETSI1993, and deleted obsolete options ISO1990 and ISO1994 from subfield ISSUE

NA011

Deleted BRAKS as an LTCLASS subfield entry. The NA011 release removes obsolete BRAKS types of ISDN BRI and changes obsolete BRAKS LTIDs to default BRAFS LTIDs.

EUR010

Added options SPAIN1, HOLLAND1 to subfield ISSUE for activities AU3208 and AU3209 (Spanish PRI and Dutch PRI).

EUR009

Added option SWISS3 to subfield ISSUE for activity AU2826.

A new value VN4 is added for the PVC entry in table LTDEF.

APC010

Added value QSIGPRI to subfield VARIANT and values ISO1990, ISO1994, and ISO1996 to subfield ISSUE.

NA009

The following changes were made to table LTDEF:

- Table is updated to include a new OPTION entry for PRA to identify the serving PRI group with an associated LTID. The serving PRI group is the key in table SVPRIGRP.
- Increased the range of subfield AG_GROUP of option AGA to support Associated Groups on a TSP Basis, AF7326.
- Added examples of an integrated and a packet-only NIT with TEI to the datafill example to include ISDN Packet NIT Support, AF6788.
- Added SLBRI to OPTION subfield BRAFS.
- Replaced NOVOICE, NOCMD, NOVBD, and NOPMD in OPTION subfield BRAFS with VOICE, CMD, VBD, and PMD. This applies to ISDN BRI only. ISDN PRI continues to use NOVOICE, NOCMD, NOVBD, and NOPMD in OPTION subfield BRAFS.
- Added subfield TSPID to field OPTION for defining the Free Format SPID value during Layer three provisioning, AF7240.

NA008

The following changes have been made to table LTDEF:

- Added option AGA for the Associated Group Assignment capability.
- Added subfields AG_GROUP and AG_CT to option AGA for associated group number and associated group call type to support Associated Group for LTIDs feature (AF6642).
- Made the following changes to support NI-1/NI-2 Interface Identification feature (AF6641):
  - — added entries NITYPE and TERML to subfield OPTION for LTCLASS = BRAFS
  - — added two tuples to MAP display example
- Added warning note to field LTCLASS = PRA, subfield VARIANT = NIPRI when option TBCT is datafilled in table LTDATA to support Two B-Channel Transfer feature (AR2401).
- Added warning note when changing the PRI VARIANT from any type to NIPRI if CALLTYPE = PVT in table LTCALLS to support Call by Call (CBC) feature (AF6864).
- Added entry 2BD to field LTAP to support ISDN Packet Single DN feature (AF6782).
- Added entries X11, NET3 and EVN4PRI to the VARIANT field and EVN4V1 to the ISSUE field.

NA007

Table LTDEF has been updated with a note for subfields NUMBCHNL, NUMCALLS, INCALLS, and OUTCALLS.

EUR006

Feature AR2189 adds the Essential Access (ELN) setting to option BRAFS enabling BRA to be handled as essential lines.

Feature AJ4356 added the protocol variant, QSIGPRI and three new values, ISO1990, ISO1994, and ISO1996, to the range in subfield ISSUE as part of the ISO QSIG base for the DMS-100E Phase 1.

XPM08

Modify LTDEF table for feature AJ4141. Change defaults.

CCM07

Table LTDEF was modified to include 2B as a valid entry in field LTAP. Table LTDEF was modified to include NIPRI as a valid entry in field VARIANT.

BCS36

The following changes have been made to table LTDEF:

- deleted value NONINIT in field OPTION and replaced it with value DEFLTERM
- deleted value PVC in field OPTION for the PRA subfield of LTCLASS
- added fields VARIANT, ISSUE, and PROFNAME for the PRA subfield of LTCLASS

LTGRP

Table name

Logical Terminal Group Table

Functional description

Table LTGRP associates a logical terminal group name with terminal types that can be datafilled in that group. The key to this table is the name of a group of logical terminals. The options field describes what type of terminals are allowed in a group. The group ISDN is a permanent entry in table LTGRP. It does not need to be manually datafilled and cannot be deleted.

Datafill sequence and implications

The following tables must be datafilled after table LTGRP:

- LTDEF
- LTMAP
- LTCALLS
- KSETLINE
- KSETFEAT
- KSETINV

Table size

Memory is allocated dynamically for this table.

Datafill

The following table lists datafill for table LTGRP.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
GROUP		alphanumeric (vector of up to 8 characters)	*Logical terminal group name* Enter the name of the group of logical terminals.
GROUPNO		0 to 31	*Logical terminal group number* Enter the group number associated with the group name. Non-SAPI16 groups can be assigned any value from 0 to 31, but SAPI16 groups must be assigned a value between 0 and 15. Default group ISDN is automatically assigned group number 0.
OPTIONS		SAPI16 or $	*Logical terminal options* Enter the type of terminals allowed in a group. The only option currently allowed is SAPI16. If this is specified, both packet and circuit switching terminals can be datafilled for the group. If SAPI16 is not specified, no packet switching terminals can be datafilled for the group. The default group ISDN is specified as SAPI16.

Datafill example

The following example shows sample datafill for table LTGRP.

MAP display example for table LTGRP

```
GROUP GROUPNO   OPTIONS
_____________________________________________

ISDN      0 (SAPI16)$
```

LTMAP

Table name

Logical Terminal Mapping (LTMAP) table

Functional description

Table LTMAP maps the logical terminals to a common language location identifier (CLLI).

The key to this table is LTKEY - (LTGRP, LTNUM).

Datafill sequence and implications

Datafill the following tables before table LTMAP:

- LNINV
- LTDEF
- SPECCONN
- TRKGRP
- TRKSGRP
- TRKMEM
- DCHINV
- DNCTINFO
- DNCHNL
- LIDINFO

Table size

No data store is required for this table. It uses the data store of table LTDEF.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table LTMAP.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
LTKEY		see subfields	LOGICAL TERMINAL KEY. This field consists of a 2-part key: LTGRP and LTNUM.
	LTGRP	ISDN or ISUP	LOGICAL TERMINAL GROUP. Enter the group of the logical terminal.

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	LTNUM	1 to 1022	LOGICAL TERMINAL NUMBER. Enter the logical terminal number within the group.
MAPPING		see subfields	LOGICAL TERMINAL MAPPING. This field consists of 2 subfields: MAPTYPE and CLLI.
	MAPTYPE	CLLI	LOGICAL TERMINAL MAPPING TYPE. Enter the type of mapping being used. Enter CLLI and datafill refinement CLLI. For primary rate access (PRA), the logical terminal ID must be mapped to a CLLI.
	CLLI	Up to 16 alphanumeric characters	COMMON LANGUAGE LOCATION IDENTIFIER. Enter the CLLI of the PRA trunk that the logical terminal is assigned.
OPTION		TEI	OPTION. The terminal endpoint identifier (TEI) option is used for static TEI terminals to indicate the value of the static TEI. This is an optional field; when TEI is entered, datafill refinement TEI. ***Note:*** This field is a vector of up to two entries. If less than two entries are required, end the list with a $ (dollar sign).
	TEI	0 to 63	TERMINAL END POINT IDENTIFIER. Enter the terminal endpoint identifier that is specified for static TEI terminals.

Datafill example

The following example shows datafill for table LTMAP.

LTMAP (end)

```
      LTKEY                MAPPING                          OPTION
 ------------------------------------------------------------------------

 ISDN  23 CLLI       PRI961LPU11                     (    TEI  0)$

 ISDN  73 CLLI        WITI90I                        (    TEI  0)$

 ISDN  291 CLLI      PRI791LPU0                      (    TEI  0)$

 ISDN  391 CLLI      PRI891LPU1                      (    TEI  0)$

 ISDN  327 CLLI      PRI991LPUX0                     (    TEI  0)$
```

MBGXLA

Table name

Multiple Business Group Translations

Functional description

Table MBGXLA defines the services-related data associated with integrated services access (ISA) calls employing the use of the service identifier (SID) and multiple business group number (MBGNUM) to determine translations and routing for calls datafilled in table LTCALLS.

Datafill sequence and implications

There is no requirement to datafill other tables before datafilling table MBGXLA.

Table size

Maximum number of tuples allowed are 16 384.

Datafill

The following table lists datafill for table MBGXLA.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
MBGKEY			MULTIPLE BUSINESS GROUP KEY. See subfields.
	MRTRNAME	Vector of up to 8 characters	MULTIPLE ROUTER NAME is an 8-character alphanumerica field that would typically be found in table LTCALLS under the MBGXLA MRTRNAME field. Multiple tuples with the same router name are allowed. A maximum of 128 MRTRNAMEs can be defined in this table. Datafill MRTRNAMEs in this table before datafilling them in table LTCALLS for XLAMBG. Delete MRTRNAMEs from this table before deleting the LAST tuple in table MBGXLA that contains that MRTRNAME.

MBGXLA (end)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	MBGNUM	0 to 999	MULTIPLE BUSINESS GROUP NUMBER is a 3-digit value ranging from 0 to 999. The MBGNUM values are unique for each tuple of a given MRTRNAME. For a given MRTRNAME, a maximum of 128 different MBGNUMs can be specified.
IRTRNAME		8-character vector	ROUTERNAME FOR TABLE ISAXLA is an 8-character alphanumeric field that forms the key into table ISAXLA when combined with the SID. Multiple tuples with the same IRTRNAME are allowed. First, however, datafill this name in table ISAXLA. Delete all IRTRNAMEs from this table before deleting the LAST tuple in table ISAXLA that contains that IRTRNAME.

Datafill example

The following example shows sample datafill for table MBGXLA.

MAP display example for table MBGXLA

```
            MBGKEY     IRTRNAME
 ----------------------------
          MBGRTE1  111  ISARTE10
```

Table history

BCS31

Feature AM0075, ISDN ISA Routing, introduced table MBGXLA.

MGCINV

Table name

Media Gateway Controller Inventory.

Functional description

This table defines remote media gateway controllers (MGC) including their IP addresses, related virtual router distribution nodes (VRDN), and connection protocols.

Datafill sequence and meaning

Enter datafill into the following tables after you enter datafill into table MGCINV:

- Table TELEPROF
- Table VRDNINV
- Table TRKOPTS
- Table DPTRKMEM

Datafill

Table lists datafill for table MGCINV.

Field descriptions

Field	Subfield	Entry	Explanation and action
MGCNAME			Name of destination MGC
ADDR			Address
VRDNLIST			Virtual Router Distribution Node List (read only)
PROTOCOL			Protocol

Datafill example

Figure shows sample datafill for table MGCINV.

MAP display example for table MGCINV

```
MGCNAME      ADDR              VRDNLIST     PROTOCOL
-------------------------------------------------------
PORTLAND     47 102 241 227    (VRDN1)      SCTP5
```

Note: Release SNH01 only supports the SCTP5 protocol.

Table history

SNH01

Release SNH01 introduces this table.

MNATMCON

Table name

ATM connections provisioning (MNATMCON)

Functional description

MNATMCON is a read/write table which is provisioned through table control. It is used to provision ATM connections against STS3cP carriers in table MNHSCARR. Each tuple in the table represents a single logical connection between the SPM ATM interface and the ATM network in the OC3c physical connection. Each connection can have upto 24 members provisioned in table TRKMEN.

This table uses a three-part key (node type, node number and connection number). To optimize access time, this table internally hashes the key as a single field for look-ups. AAL-1 is supported. All AAL-1 connections support wideband.

When a new tuple is assigned in table MNATMCON, a connection number (CON) is assigned.

> ***Note:*** The CNO number in table MNATMCON must be unique for that SPM.

To modify a tuple in table MNATMCON, make sure all member are out of service. To delete a parent carrier tuple in table MNHSCARR, remove any connections provisioned against it in table MNATMCON.

No data in the connections tuple can be modified. To change a tuple, it must be deleted and then reentered through table control.

Datafill sequence and implications

Table MNHSCARR must be datafilled before table MNATMCON.

Table TRKMEM must be datafilled after table MNATMCON.

Table size

The maximum size is 5,376 tuples.

Datafill

The key is composed of the first three fields in a tuple. Along with the key, each tuple contains a vpi, vci, AAL type and the parent carrier ID. The data specific to AAL-5 is the application ID and the transmission direction.

MNATMCON (continued)

The following table lists datafill for table MNATMCON.

Field descriptions

Field	Range of values	Explanation and action
NODETYP	SPM	Peripheral type is always SPM
SPMNUM	0 TO 63	SPM number
CONN	0 TO 181	Connection number assigned by user
VPI	0 TO 255	Virtual path identifier
VCI	6 - (64K-1)	Virtual channel identifier
AAL	{1}	Adaptation layer
PCARRID	0 to 181	Parent carrier ID is the carrier number from table MNHSCARR. The PM_TYPE, PM_NO and the PCARRID can be combined to form a carrier id in table MNHSCARR.

Datafill example

The following example shows sample datafill for table MNATMCON.

MAP display example for table MNATMCON

```
SPM  0  0 1  1  5  24
SPM  1  63 83  1  5  24
```

Dump and restore

The new MNATMCON table is a dump and restore table. It is restored after table MNHSCARR during a sortware upgrade. The dump and restore of table MNATMCON writes the physical tuples through the OAM&P database in their sequential search order.

Activation

This table is not activated by SOC.

Table history

SP11

MNATMCON table was added.

Supplementary information

Not applicable

MNCKTPAK

Table name

Management Network Circuit Pack (MNCKTPAK)

Functional description

Table MNCKTPAK is one of seven DMS-Spectrum Peripheral Module (SPM) configuration tables. In this table, each tuple identifies 1 of 15 circuit packs on a shelf. The data maintained in this table includes the circuit pack type, product engineering code (PEC), load name, and slot number.

Datafill sequence and implications

Datafill tables in the following order:

1. table PMLOADS

   Note: Table PMLOADS specifies the location of a particular load file. Datafill PMLOADS only once. There is no need to datafill PMLOADS for each SPM added to the system unless a new load file entry has to be added to table PMLOADS.

2. table MNPRTGRP
3. table MNNODE
4. table MNSHELF
5. table MNCKTPAK

   Note: Table TRKMEM is datafilled after table MNCKTPAK when the office is configured with SPMs with ISUP or per-trunk signaling (PTS) trunks.

6. table MNLINK
7. table MNHSCARR
8. table MNPRIIID

   Note: Table MNPRIIID is datafilled only when configuring an office with SPMs with PRI trunks.

ATTENTION

Some resource modules mentioned in the following discussion do not apply to all markets.

MNCKTPAK (continued)

If the protection group specified by the OC3, DLC, DSP, ATM, or VSP group identifier has not been added to table MNPRTGRP, one of the following messages display:

```
Can not find the corresponding OC3_GRP in table
MNPRTGRP
```

```
Can not find the corresponding DLC_GRP in table
MNPRTGRP
```

```
Can not find the corresponding DSP_GRP in table
MNPRTGRP
```

```
Can not find the corresponding ATM_GRP in table
MNPRTGRP
```

```
Can not find the corresponding VSP_GRP in table
MNPRTGRP
```

If the shelf specified by SHELFID has not been added to table MNSHELF, the following message displays:

```
Can not find the shelf MNPRTGRP
```

If the load specified by field LOAD has not been added to table PMLOADS, one of these messages display:

```
Can not load file xxxxx
```

```
Please datafill load file in table PMLOADS first
```

Table size

The maximum number of tuples in the table is 1,662.

Field descriptions

CPKTYPE = CEM

When CPKTYPE equals CEM (common equipment module), the datafill is as shown in the following table.

(Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
CPKTYPE		CEM	COMMON EQUIPMENT MODULE. The subfields are UNITNO and ALARMCTRL.
	UNITNO	0-1	UNIT NUMBER. Enter the CEM unit number. There are a maximum of two CEMs per SPM. Unit number 0 is assigned to the CEM residing on shelf 0 slot 7. Unit number 1 is assigned to the CEM residing on shelf 0 slot 8. The default is 0.
	ALRMCTRL	See subfields	ALARM CONTROL. The field is a vector of up to 10 entries. Each entry in the vector controls a particular alarm for the CEM circuit pack. To accept the system defaults, enter $. For each entry, the subfields are ALARM and ATTR.
	ALARM	SYSB, MANB, ISTB, SYSBNA, MANBNA, HOLDOVR, HLDOVR24, VCXO70, VCXO90, CLKOOS	ALARM NAME. The alarms are described as follows: SYSB (system busy) The alarm generates when the CEM is in system busy state. The default alarm severity is CR. The default action is RPT. MANB (manual busy) The alarm generates when the CEM is in manual busy state. The default alarm severity is MJ. The default action is RPT. ISTB (in-service-trouble) The alarm generates when the CEM is in-service and it is experiencing non-service-affecting faults. The default alarm severity is MN. The default action is RPT.

MNCKTPAK (continued)

(Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
			SYSBNA (system busy and not accessible) The alarm generates when the CEM is in SYSB state and a network error (for example, ENET or MS) has caused it to be isolated. The default alarm severity is CR. The default action is RPT. MANBNA (manual busy and not accessible) The alarm generates when the CEM is in MANB state and a network error (for example, ENET or MS) has caused it to be isolated. The default alarm severity is MJ. The default action is RPT. HLDOVR (hold-over) The alarm generates when synchronization circuitry loses all its available timing references and goes into hold-over state. The default alarm severity is MJ. The default action is RPT. HLDOVR24 (hold-over-24) The alarm generates when synchronization circuitry has remained in hold-over state for more than 24 hours. The default alarm severity is MJ. The default action is RPT. VCXO70 (voltage-controlled-oscillator 70% threshold crossed) The alarm generates when the voltage controller must exceed 70% threshold of its dynamically adjustable range in order to keep the CEM synchronized to a timing reference. This is an indication that the circuit pack should be replaced. The default alarm severity is MN. The default action is RPT. VCXO90 (voltage-controlled-crystal-oscillator 90% threshold crossed) The alarm generates when the voltage controller must exceed 90% threshold of its dynamically adjustable range in order to keep the CEM synchronized to a timing reference. This is an indication that the circuit pack should be replaced; otherwise, a synchronization failure may occur. The default alarm severity is MJ. The default action is RPT.

MNCKTPAK (continued)

(Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
			CLKOOS (clock out-of-specification) The alarm generates when the synchronization circuitry cannot meet standard performance specifications for its applications. Typically, this happens when the message switch (MS) has lost its synchronization or no adequate SONET (synchronous optical network) synchronization reference is available. The default alarm severity is MJ. The default action is RPT.
	ATTR	See subfields	ALARM ATTRIBUTE. The subfields are SEVERITY and ACTION.
	SEVERITY	NA, MN, MJ, CR	SEVERITY. Enter one of the following alarm severities: • NA (no alarm severity) • MN (minor) • MJ (major) • CR (critical)
	ACTION	RPT, NRPT	ACTION. Enter one of the following actions: • RPT (reportable) • NRPT (no reportable)
PEC		NTLX63AA, NTLX82AA, NTLX82BA, NTLX82EA	PRODUCT ENGINEERING CODE. This field indicates the product engineering code (PEC) of the circuit pack. Select an entry as follows: • NTLX63AA for CEM circuit packs ***Note:*** The NTLX63AA CEM is not compatible with SP15. • NTLX82AA or NTLX82BA for enhanced CEM circuit packs • MG 4000 nodes require NTLX82EA.

MNCKTPAK (continued)

(Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
RELEASE		01-99 or 01-ZZ	RELEASE. This field indicates the release of the circuit pack. The default is 01. Select an entry as follows: • For a Nortel product, valid values include 01 to 99. • For a non-Nortel Networks (third-party vendor) product, valid values include 01 to ZZ.
LOAD		up to 8 alphanumeric characters	This field indicates the default software load for the circuit pack. The default load name entry must be added to table PMLOADS first; otherwise, messages “Can not find load file xxxxx" and “Please datafill load file in table PMLOADS first" display.

CPKTYPE = OC3

ATTENTION

In the case of an SPM, a circuit pack is datafilled as a sync source in table SYNCLK. Because this circuit pack is datafilled through table MNCKTPAK, a dependency exists between table SYNCLK and table MNCKTPAK. A circuit pack cannot be deleted from table MNCKTPAK if it is in use by table SYNCLK. If an attempt is made to delete the tuple in table MNCKTPAK, the deletion is blocked and the following message displays: “This circuit pack is specified as clock sync source in SYNCLK.”

If CPKTYPE equals OC3 (optical carrier 3), the datafill is as shown in the following table.

(Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
CPKTYPE		OC3	OPTICAL CARRIER 3. The subfields are UNITNO, OC3GRPID, WKRSPR, and ALARMCTRL.
	UNITNO	0-1	UNIT NUMBER. Enter the OC-3 unit number. There is a maximum of two OC-3s per SPM. Assign unit number 0 to the OC-3 residing on shelf 0, slot 9. Assign unit number 1 to the OC-3 residing on shelf 0, slot 10.
	OC3GRPID	1-28	OC3 GROUP IDENTIFIER. Enter the OC-3 protection group identifier in table MNPRTGRP. ***Note:*** An OC3_GRP protection group must be added to table MNPRTGRP before datafilling the OC-3 circuit pack. If not, the message “Can not find the corresponding OC3_GRP in table MNPRTGRP" displays. The two OC-3s must belong to the same protection group.

MNCKTPAK (continued)

(Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	WRKSPR	WORKING, SPARE	WORKING, SPARE. Enter the OC-3 protection role designation as follows: • WORKING indicates the circuit pack is designated to provide service. • SPARE indicates the circuit pack is designated to standby and take over the service if the WORKING circuit pack fails. ***Note:*** There is a maximum of two OC-3s per SPM. Datafill one OC-3 as WORKING and datafill the other one as SPARE.
	ALRMCTRL	See subfields	ALARM CONTROL INFORMATION. The field is a vector of up to 4 entries. Each entry in the vector controls a particular alarm for the OC-3 circuit pack. To accept the default values, enter $. For each entry, the subfields are ALARM and ATTR.
	ALARM	SYSB, MANB, ISTB, PROTFAIL	ALARM TYPE. Enter one of the following alarm types: • SYSB (system busy) The alarm generates when the OC-3 is in system busy state. The default alarm severity is CR. The default action is RPT. • MANB (manual busy) The alarm generates when the OC-3 is in manual busy state. The default alarm severity is MJ. The default action is RPT. • ISTB (in-service trouble) The alarm generates when the OC-3 is in service and is experience non-service-affecting faults. The default alarm severity is MN. The default action is RPT. • PROTFAIL (protection failure) The alarm generates when protection switching fails. The default alarm severity is NA. The default action is RPT.
	ATTR	See subfields	ALARM ATTRIBUTE. The subfields are SEVERITY and ACTION.

MNCKTPAK (continued)

(Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	SEVERITY	NA, MN, CR, MJ	SEVERITY. Enter one of the following alarm severities: • NA (no alarm severity) • MN (minor) • CR (critical) • MJ (major)
	ACTION	RPT, NRPT	ACTION. Enter one of the following actions: • RPT (reportable) • NRPT (no reportable)
PEC		NTLX71AA, NTLX71BA	PRODUCT ENGINEERING CODE. This field indicates the product engineering code (PEC) of the circuit pack. Select an entry as follows: • NTLX71AA for OC-3 circuit pack • NTLX71BA for OC-3 circuit packs bearing the PEC code suffix “BA.”
RELEASE		01-99 or 01-ZZ	RELEASE. This field indicates the release of the circuit pack. The default is 01. Select an entry as follows: • For a Nortel product, valid values include 01 to 99. • For a non-Nortel (third-party vendor) product, valid values include 01 to ZZ.
LOAD		up to 8 alphanumeric characters	This field indicates the default software load for the circuit pack. The default load name entry must be added to table PMLOADS first; otherwise, messages “Can not find load file <xxxxxx>" and “Please datafill load file in table PMLOADS first" display.

MNCKTPAK (continued)

CPKTYPE = DSP

If CPKTYPE equals DSP (digital signal processor), the datafill is as shown in the following table.

(Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
CPKTYPE		DSP	DIGITAL SIGNAL PROCESSOR. The subfields are UNITNO, DSPGRPID, and RSRINFO.
	UNITNO	0-27	UNIT NUMBER. Enter the DSP unit number. The default is 0.
	DSPGRPID	1-28	DSP GROUP IDENTIFIER. Enter the corresponding DSP_GRP protection group in table MNPRTGRP. The DSP_GRP protection group must be added to table MNPRTGRP before datafilling the DSP circuit pack; otherwise, message “Can not find the corresponding DSP_GRP in table MNPRTGRP" displays. Typically, the DSP circuit packs on the SPM are partitioned into different protection groups. Within each protection group, some are designated as WORKING to provide service, and others are designated as SPARE to standby. The default is 1.
	RSRINFO	See subfields	RSRINFO indicates the type of the resource and the number of the resource to be provided by the DSP circuit pack. Circuit packs can be configured as spares or working devices. Each working entry consists of a vector of up to six multiples of subfields RSRTYPE and NUM.
	WRKSPR	SPARE or WORKING	DSP RESOURCE CONFIGURATION. This field is refined based on whether the DSP is designated as SPARE or WORKING. The default value is WORKING. If the entry is WORKING, datafill refinements RSRTYPE and NUM.

MNCKTPAK (continued)

(Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	RSRTYPE	COT, DTMF, TONESYN, ABBIT, MF, UKTONE, GERTONE, FRATONE, HOLTONE, BELTONE, BRATONE, ITATONE, SPATONE	RESOURCE TYPE. This field specifies the SPM service resources that require threshold control. Valid resources are • COT (continuity test resource) • DTMF (dual tone multifrequency receiver resource) • TONESYN (tone synthesizer resource) • ABBIT (A- and B-bit signaling resource) ***Note:*** See “Supplementary information" for more detail about changing or deleting a tuple. • MF (multifrequency signaling resource) • UKTONE (UK tone synthesizer resource) • GERTONE (German tone synthesizer resource) • FRATONE (French tone synthesizer resource) • HOLTONE (Holland tone synthesizer resource) • BELTONE (Belgian tone synthesizer resource) • BRATONE (Brazillian tone synthesizer resource) • ITATONE (Italian tone synthesizer resource) • SPATONE (Spanish tone synthesizer resource) ***Note:*** Only one type of tone synthesizer resource is to be datafilled on all RMs on a given SPM; that is, only one type per node is allowable.

MNCKTPAK (continued)

(Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	NUM	0 to 736(0 to 28 for ABBIT)	NUMBER OF RESOURCES. Enter the total number of resources datafilled on the DSP circuit pack. ***Note:*** If field RSRTYPE is datafilled with ABBIT, the range for field NUM is 0 to 28.
	ALRMCTRL	See subfields	ALARM CONTROL INFORMATION. To accept the system defaults, enter $. The field is a vector of up to 4 entries. Each entry in the vector controls a particular alarm for the DSP circuit pack. For each entry, the subfields are ALARM and ATTR.
	ALARM	SYSB, MANB, ISTB, PROTFAIL	ALARM NAME. Enter one of the following alarms: • SYSB (system busy) The alarm generates when the DSP is in system busy state. The default alarm severity is CR. The default action is RPT. • MANB (manual busy) The alarm generates when the DSP is in manual busy state. The default alarm severity is MJ. The default action is RPT. • ISTB (in-service trouble) The alarm generates when the DSP is in service and is experience non-service-affecting faults. The default alarm severity is MN. The default action is RPT. • PROTFAIL (protection failure) The alarm generates when protection switching fails. The default alarm severity is NA. The default action is RPT.
	ATTR	See subfields	ALARM ATTRIBUTE. The subfields are SEVERITY and ACTION.

MNCKTPAK (continued)

(Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	SEVERITY	NA, MN, MJ, CR	SEVERITY. This subfield defines the relative importance of an alarm. Valid values are • NA (no alarm severity) • CR (critical) • MJ (major) • MN (minor)
	ACTION	RPT, NRPT	ACTION. Enter one of the following actions: • RPT (reportable) • NRPT (no reportable)
PEC		NTLX65AA, NTLX65BA	PRODUCT ENGINEERING CODE. This field indicates the product engineering code (PEC) of the circuit pack. Select an entry as follows: • NTLX65AA for DSP circuit pack (the default) • NTLX65BA for DSP circuit packs bearing the PEC code suffix “BA.”
RELEASE		01-99, 01-ZZ	RELEASE. This field indicates the release of the circuit pack. The default is 01. Select an entry as follows: • For a Nortel product, valid values include 01 to 99. • For a non-Nortel (third-party vendor) product, valid values include 01 to ZZ.
LOAD		up to 8 alphanumeric characters	This field indicates the default software load for the circuit pack. The default load name entry must be added to table PMLOADS first; otherwise, messages “Can not find load file <xxxxxx>" and “Please datafill load file in table PMLOADS first" display.

MNCKTPAK (continued)

CPKTYPE = VSP

If CPKTYPE equals VSP (voice services processor), the datafill is as shown in the following table.

(Sheet 1 of 5)

Field	Subfield or refinement	Entry	Explanation and action
CPKTYPE		VSP	VOICE SERVICES PROCESSOR. The subfields are UNITNO, VSPGRPID, and RSRINFO.
	UNITNO	0-27	UNIT NUMBER. Enter the VSP unit number. The default is 0.
	VSPGRPID	1-28	VSP_GRP IDENTIFICATION. This field indicates the identification of the corresponding VSP_GRP protection group in table MNPRTGRP. The VSP_GRP protection group must be added to table MNPRTGRP before datafilling the VSP circuit packs. If not, the message “Can not find the corresponding VSP_GRP in table MNPRTGRP" displays. Typically, the VSP circuit packs on a SPM are partitioned into different protection groups. Within each protection group, some are designated as WORKING to provide service and others are designated as SPARE to standby. The default is 1.
	RSRINFO	See subfields	RSRINFO indicates the type of the resource and the number of the resource to be provided by the VSP circuit pack. Circuit packs can be configured as spares or working devices. Each working entry consists of a vector of up to six multiples of subfields RSRTYPE and NUM.
	WRKSPR	SPARE or WORKING	VSP RESOURCE CONFIGURATION. This field is refined based on whether the VSP is designated as SPARE or WORKING. The default value is WORKING. If the entry is WORKING, datafill refinements RSRTYPE and NUM.

MNCKTPAK (continued)

(Sheet 2 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	RSRTYPE	COT, DTMF, ECAN, TONESYN, ABBIT, MF, UKTONE, GERTONE, FRATONE, HOLTONE, BELTONE, BRATONE, ITATONE, SPATONE	RESOURCE TYPE. This field specifies the SPM service resources that require threshold control. Valid resources are • COT (continuity test resource) • DTMF (dual tone multifrequency receiver resource) • ECAN (echo cancellation resource) • TONESYN (tone synthesizer resource) • ABBIT (A- and B-bit signaling resource) ***Note:*** See “Supplementary information" for more detail about changing or deleting a tuple. • MF (multifrequency signaling resource) • UKTONE (UK tone synthesizer resource) • GERTONE (German tone synthesizer resource) • FRATONE (French tone synthesizer resource) • HOLTONE (Holland tone synthesizer resource) • BELTONE (Belgian tone synthesizer resource) • BRATONE (Brazillian tone synthesizer resource) • ITATONE (Italian tone synthesizer resource) • SPATONE (Spanish tone synthesizer resource) ***Note:*** Only one type of tone synthesizer resource is to be datafilled on all RMs on a given SPM; that is, only one type per node is allowable.

MNCKTPAK (continued)

(Sheet 3 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	NUM	0-736	NUMBER OF RESOURCES. Edit checks during datafill allow a value of 0 to 736. However, various circuit packs may impose their own lower limits. For example, PEC codes NTLX66AA and NTLX66BA allow a maximum of 260 echo cancellation resources, and PEC codes NTLX85AA and NTLX86AA allow a maximum of 336 echo cancellation resources. The actual maximum number of resources depends on the mix of applications configured.
	ALRMCTRL	See subfields	ALARM CONTROL INFORMATION. To accept the system defaults, enter $. The field is a vector of up to 4 entries. Each entry in the vector controls a particular alarm for the VSP circuit pack. For each entry, the subfields are ALARM and ATTR.
	ALARM	SYSB, MANB, ISTB, PROTFAIL	ALARM TYPE. Enter one of the following alarm types: • SYSB (system busy) The alarm generates when the VSP is in system busy state. The default alarm severity is CR. The default action is RPT. • MANB (manual busy) The alarm generates when the VSP is in manual busy state. The default alarm severity is MJ. The default action is RPT. • ISTB (in-service trouble) The alarm generates when the VSP is in service and is experience non-service-affecting faults. The default alarm severity is MN. The default action is RPT. • PROTFAIL (protection failure) The alarm generates when protection switching fails. The default alarm severity is NA. The default action is RPT.
	ATTR	See subfields	ALARM ATTRIBUTE. The subfields are SEVERITY and ACTION.

MNCKTPAK (continued)

(Sheet 4 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	SEVERITY	NA, MN, CR, MJ	SEVERITY. Enter one of the following alarm severities: • NA (no alarm severity) • MN (minor) • CR (critical) • MJ (major)
	ACTION	RPT, NRPT	ACTION. Enter one of the following actions: • RPT (reportable, the default value) • NRPT (no reportable)
PEC		NTLX66AA, NTLX66BA, NTLX85AA, NTLX86AA	PRODUCT ENGINEERING CODE. This field indicates the PEC of the circuit pack. Select an entry as follows: • NTLX66AA for VSP circuit packs manufactured by Nortel Networks; a string of 8 characters for non-NORTEL (third-party vendor) VSP circuit packs • NTLX66BA for VSP circuit packs bearing the PEC code suffix “BA.” • NTLX85AA or NTLX86AA for third party VSP circuit packs. ***Note:*** The NTLX85AA and NTLX86AA VSP RMs are OEM products sometimes referred to as echo canceller resource modules, or ECRMs.

MNCKTPAK (continued)

(Sheet 5 of 5)

Field	Subfield or refinement	Entry	Explanation and action
RELEASE		01-99 or 01-ZZ	RELEASE. This field indicates the release of the circuit pack. The default is 01. Select an entry as follows: • For a Nortel product, valid values include 01 to 99. • For a non-Nortel (third-party vendor) product, valid values include 01 to ZZ.
LOAD		up to 8 alphanumeric characters	This field indicates the default software load for the circuit pack. The default load name entry must be added to table PMLOADS first; otherwise, messages “Can not find load file <xxxxxx>" and “Please datafill load file in table PMLOADS first" display.

CPKTYPE = ATM

ATTENTION
ATM is not applicable to all markets.

If CPKTYPE equals ATM (asynchronous transfer mode), the datafill is as shown in the following table.

(Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
CPKTYPE		ATM	ASYNCHRONOUS TRANSFER MODE. The subfields are UNITNO, ATMGRPID, WRKSPR, and ALARMCNTRL.
	UNITNO	0-1	UNIT NUMBER. Enter the ATM unit number. The default is 0.
	ATMGRPID	1-28	ATM GROUP IDENTIFIER.
	WRKSPR	SPARE or WORKING	ATM RESOURCE CONFIGURATION. This field is refined based on whether the ATM is designated as SPARE or WORKING.
	ALRMCTRL	See subfields	ALARM CONTROL INFORMATION. To accept the system defaults, enter $. The field is a vector of up to 4 entries. Each entry in the vector controls a particular alarm for the ATM circuit pack. For each entry, the subfields are ALARM and ATTR.

MNCKTPAK (continued)

(Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	ALARM	SYSB, MANB, ISTB, PROTFAIL	ALARM NAME. Enter one of the following alarms: • SYSB (system busy) The alarm generates when the ATM is in system busy state. The default alarm severity is CR. The default action is RPT. • MANB (manual busy) The alarm generates when the ATM is in manual busy state. The default alarm severity is MJ. The default action is RPT. • ISTB (in-service trouble) The alarm generates when the ATM is in service and is experience non-service-affecting faults. The default alarm severity is MN. The default action is RPT. • PROTFAIL (protection failure) The alarm generates when protection switching fails. The default alarm severity is NA. The default action is RPT.
	ATTR	See subfields	ALARM ATTRIBUTE. The subfields are SEVERITY and ACTION.
	SEVERITY	NA, MN, MJ, CR	SEVERITY. This subfield defines the relative importance of an alarm. Valid values are • NA (no alarm severity) • CR (critical) • MJ (major) • MN (minor)
	ACTION	RPT, NRPT	ACTION. Enter one of the following actions: • RPT (reportable) • NRPT (no reportable)

(Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
PEC		NTLX73AA, NTLX73BA	PRODUCT ENGINEERING CODE. This field indicates the product engineering code (PEC) of the circuit pack. Select an entry as follows: • NTLX73AA for ATM circuit pack • NTLX73BA for ATM circuit packs bearing the PEC code suffix “BA.”
RELEASE		01-99, 01-ZZ	RELEASE. This field indicates the release of the circuit pack. The default is 01. Select an entry as follows: • For a Nortel product, valid values include 01 to 99. • For a non-Nortel (third-party vendor) product, valid values include 01 to ZZ.
LOAD		up to 8 alphanumeric characters	This field indicates the default software load for the circuit pack. The default load name entry must be added to table PMLOADS first; otherwise, messages “Can not find load file <xxxxxx>" and “Please datafill load file in table PMLOADS first" display.

CPKTYPE = ALM

ATTENTION
ALM is not applicable to all markets.

If CPKTYPE equals ALM (alarm), the datafill is as shown in the following table.

MNCKTPAK (continued)

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CPKTYPE		ALM	ALARM. The subfields are UNITNO, ALMRMGRPID, WRKSPR, and ALARMCNTRL.
	UNITNO	0-1	UNIT NUMBER. Enter the ALM unit number. The default is 0.
	ALMRMGRPID	1-28	ALM GROUP IDENTIFIER.
	WRKSPR	SPARE or WORKING	ALM RESOURCE CONFIGURATION. This field is refined based on whether the ALM is designated as SPARE or WORKING.
	ALRMCTRL	See subfields	ALARM CONTROL INFORMATION. To accept the system defaults, enter $. The field is a vector of up to 4 entries. Each entry in the vector controls a particular alarm for the ALM circuit pack. For each entry, the subfields are ALARM and ATTR.
	ALARM	SYSB, MANB, ISTB, PROTFAIL	ALARM NAME. Enter one of the following alarms: • SYSB (system busy) The alarm generates when the ALM is in system busy state. The default alarm severity is CR. The default action is RPT. • MANB (manual busy) The alarm generates when the ALM is in manual busy state. The default alarm severity is MJ. The default action is RPT. • ISTB (in-service trouble) The alarm generates when the ALM is in service and is experience non-service-affecting faults. The default alarm severity is MN. The default action is RPT. • PROTFAIL (protection failure) The alarm generates when protection switching fails. The default alarm severity is NA. The default action is RPT.
	ATTR	See subfields	ALARM ATTRIBUTE. The subfields are SEVERITY and ACTION.

MNCKTPAK (continued)

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	SEVERITY	NA, MN, MJ, CR	SEVERITY. This subfield defines the relative importance of an alarm. Valid values are • NA (no alarm severity) • CR (critical) • MJ (major) • MN (minor)
	ACTION	RPT, NRPT	ACTION. Enter one of the following actions: • RPT (reportable) • NRPT (no reportable)
PEC		NTLX83AA	PRODUCT ENGINEERING CODE. This field indicates the product engineering code (PEC) of the circuit pack. Select an entry as follows: • NTLX83AA for ALM circuit pack
RELEASE		01-99, 01-ZZ	RELEASE. This field indicates the release of the circuit pack. The default is 01. Select an entry as follows: • For a Nortel product, valid values include 01 to 99. • For a non-Nortel (third-party vendor) product, valid values include 01 to ZZ.
LOAD		NILLOAD	The ALM circuit pack does not require a software load. Datafill “NILLOAD” for the load name.

MNCKTPAK (continued)

CPKTYPE = DLC

If CPKTYPE equals DLC (data link controller), the datafill is as shown in the following table.

(Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
CPKTYPE		DLC	DATA LINK CONTROLLER. The subfields are UNITNO, DLCGRPID, WKRSPR, and ALARMCTRL.
	UNITNO	0-27	UNIT NUMBER. Enter the DLC unit number. The default is 0.
	DLCGRPID	1-28	DLC GROUP IDENTIFIER. Enter the DLC protection group identifier in table MNPRTGRP. Add the DLC_GRP protection group to table MNPRTGRP before datafilling the DLC circuit pack; otherwise, the message “Can not find the corresponding DLC_GRP in table MNPRTGRP" displays.
	WRKSPR	WORKING, SPARE	WORKING, SPARE. Enter the protection role designation as follows: • WORKING indicates the circuit pack is designated to provide service. • SPARE indicates the circuit pack is designated to standby and take over the service if the WORKING circuit pack fails. ***Note:*** There is a maximum of two DLCs for each SPM. Datafill one DLC as WORKING and datafill the other one as SPARE.
	ALRMCTRL	See subfields	ALARM CONTROL INFORMATION. The field is a vector of up to 4 entries. Each entry in the vector controls a particular alarm for the DLC circuit pack. To accept the default values, enter $. For each entry, the subfields are ALARM and ATTR.

MNCKTPAK (continued)

(Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	ALARM	SYSB, MANB, ISTB, PROTFAIL	ALARM TYPE. Enter one of the following alarm types: • SYSB (system busy) The alarm generates when the DLC is in system busy state. The default alarm severity is CR. The default action is RPT. • MANB (manual busy) The alarm generates when the DLC is in manual busy state. The default alarm severity is MJ. The default action is RPT. • ISTB (in-service trouble) The alarm generates when the DLC is in service and is experience non-service-affecting faults. The default alarm severity is MN. The default action is RPT. • PROTFAIL (protection failure) The alarm generates when protection switching fails. The default alarm severity is NA. The default action is RPT.
	ATTR	See subfields	ALARM ATTRIBUTE. The subfields are SEVERITY and ACTION.
	SEVERITY	NA, MN, CR, MJ	SEVERITY. Enter one of the following alarm severities: • NA (no alarm severity) • MN (minor) • CR (critical) • MJ (major)
	ACTION	RPT, NRPT	ACTION. Enter one of the following actions: • RPT (reportable) • NRPT (no reportable)
PEC		NTLX72AA	PRODUCT ENGINEERING CODE. This field indicates the product engineering code (PEC) of the circuit pack. Select the entry as follows: • NTLX72AA for DLC circuit pack

MNCKTPAK (continued)

(Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
RELEASE		01-99 or 01-ZZ	RELEASE. This field indicates the release of the circuit pack. The default is 01. Select an entry as follows: • For a Nortel product, valid values include 01 to 99. • For a non-Nortel (third-party vendor) product, valid values include 01 to ZZ.
LOAD		up to 8 alphanumeric characters	This field indicates the default software load for the circuit pack. The default load name entry must be added to table PMLOADS first; otherwise, messages “Can not find load file <xxxxxx>" and “Please datafill load file in table PMLOADS first" display.

Datafill example

The following shows sample datafill for table MNCKTPAK.

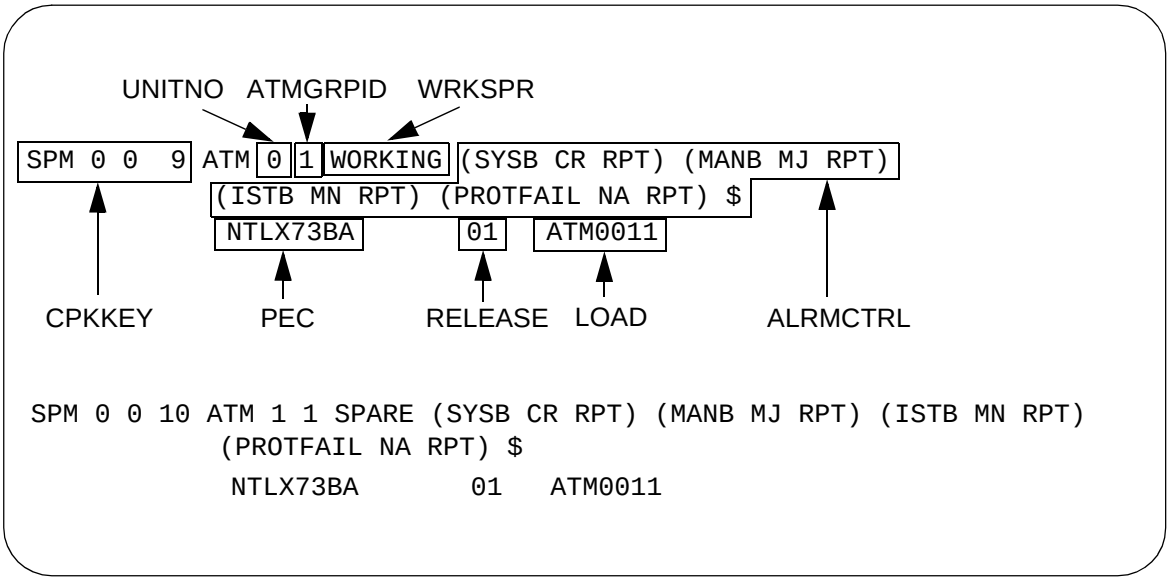
MNCKTPAK (continued)

```
CPKKEY                                                          CPKINFO
                    PEC RELEASE       LOAD
-----------------------------------------------------------------------
          UNITNO OC3GRPID WRKSPR
SPM 10 0  9 OC3 0 1 WORKING (SYSB CR RPT) (MANB MJ RPT)
            (ISTB MN RPT) (PROTFAIL NA RPT) $
            NTLX71BA      01    OC315AA
CPKKEY      PEC           RELEASE LOAD      ALRMCTRL

            UNITNO
SPM 10 0  7 CEM 0 (SYSB CR RPT) (MANB MJ RPT) (ISTB MN RPT)
            (SYSBNA CR RPT)(MANBNA MJ RPT) (HLDOVR MJ RPT)
            (HLDOVR24 MJ RPT) (VCXO70 MN RPT) (VCXO90 MJ RPT)
            (CLKOOS MJ RPT) $
CPKKEY      NTLX82AA      01    CEM15AA
            PEC           RELEASE LOAD      ALRMCTRL

          UNITNO DSPGRPID WRKSPR
SPM 10 0  3 DSP 3 1 WORKING (DTMF 24) (TONESYN 128) $ (SYSB CR RPT)
            (MANB MJ RPT) (ISTB MN RPT) (PROTFAIL NA RPT) $
            NTLX65BA      01    DSP15AA
CPKKEY      PEC           RELEASE LOAD      ALRMCTRL
```

MNCKTPAK (continued)

The following figure shows sample datafill for table MNCKTPAK using PECs introduced in MSH12 (NTLX73BA).

Note: ATM is not applicable to all markets.



MAP display example for DLC card in table MNCKTPAK

```
SPM 9 1 7 DLC 0 1 WORKING $ NTLX72AA 01 DLC0015
```

Table history

SP17 (CSP17)

Added the alarm (ALM) card to the list of valid circuit packs.

MMP16

Documentation feature 59026237 makes use of existing datafill that had not been previously documented.

SP15 (CSP15)

Added a note that the NTLX63AA CEM is not compatible with SP15.

Added NTLX82BA to the range of valid PECs based on features 59018984 and 59019804.

Added notes and attention boxes indicating ATM is not applicable to all markets.

Removed paragraph that indicated the MG 4000 was provisioned through the Succession Network Manager and added NTLX82EA to the list of PECs.

SNH01

Changed datafill examples. Removed references to STA for SR 10366713.

SP14 (CSP13/14)

Added precaution to CPKTYPE = OC3 warning of the interdependency of tables MNCKTPAK and SYNCLK when OC3 is datafilled as a sync source.

Added international tone synthesizer resources to CPKTYPE = DSP and CPKTYPE = VSP per SR 10342332.

MSH12

Added NTLX73BA to the range of valid PECs and provided datafill example.

SP12 (CSP12)

SR 10343869 changed the VSP datafill information in table MNCKTPAK.

Added NTLX65BA, NTLX66BA, NTLX71BA, NTLX72AA, NTLX82AA, NTLX85AA, and NTLX86AA to the range of valid PEC codes and DLC to the range of valid circuit packs.

Added “Procedure for removing a tuple from MNCKTPAK” and substantially rewrote the “Procedure for modifying a tuple in table MNCKTPAK.” These changes are based on SR NR00582, SR 10301661, and design document AD8507.ab03.

SP11 (CSP11)

Added ATM to the range of valid circuit packs and NTLX73AA to the range of valid PEC codes.

SP10 (CSP10)

Added “Modifying provisioned data for RMs" information to “Supplementary information."

MNCKTPAK (continued)

SPM01 (CSP09)

Table MNCKTPAK was created.

Supplementary information

The impact of a request to modify a tuple is described in the following paragraphs.

Procedure for modifying a tuple in table MNCKTPAK

Sparing actions between multiple RMs may have occurred since the original data download from the computing module (CM) to the common equipment module (CEM). Also, the services being provided by the RM may or may not be the same as the provisioned services for that RM. Therefore, to change provisioning data for an RM, perform the following steps.

1. Busy (BSY) the RM.
2. Return to service (RTS) the RM.
3. Busy (BSY) the RM that protects the services of the first RM.
4. Return to service (RTS) the RM.

These steps synchronize the provisioned and actual data.

The RM whose datafill is to be changed belongs to a particular protection group. The SPMRESMAN command displays all RMs that are in the same protection group as the RM to be modified. The procedure that follows uses the SPMRESMAN command to provide you with enhanced visibility into the activity status and protection information for the RMs in a protection group.

Note 1: “Provisioned data" is the set of required resources in table MNCKTPAK. This is also referred to by resource management as the “desired configuration" of the RM.

Note 2: “Configured data" is the set of resources that the RM is actually providing. This is also referred to by resource management as the “actual configuration" of the RM. When an RM takes over for another because of a protection switch, it acquires the configured data of the RM it protects. Thus, configured data and provisioned data for a particular RM may differ because of protection switch actions.

Note 3: “Inactive" is the state of the RM when it is not providing service. The RM can be in service when it is inactive.

Note 4: “Active" is the state of the RM when it is providing service. An RM only provides service when it is active and in service.

MNCKTPAK (continued)

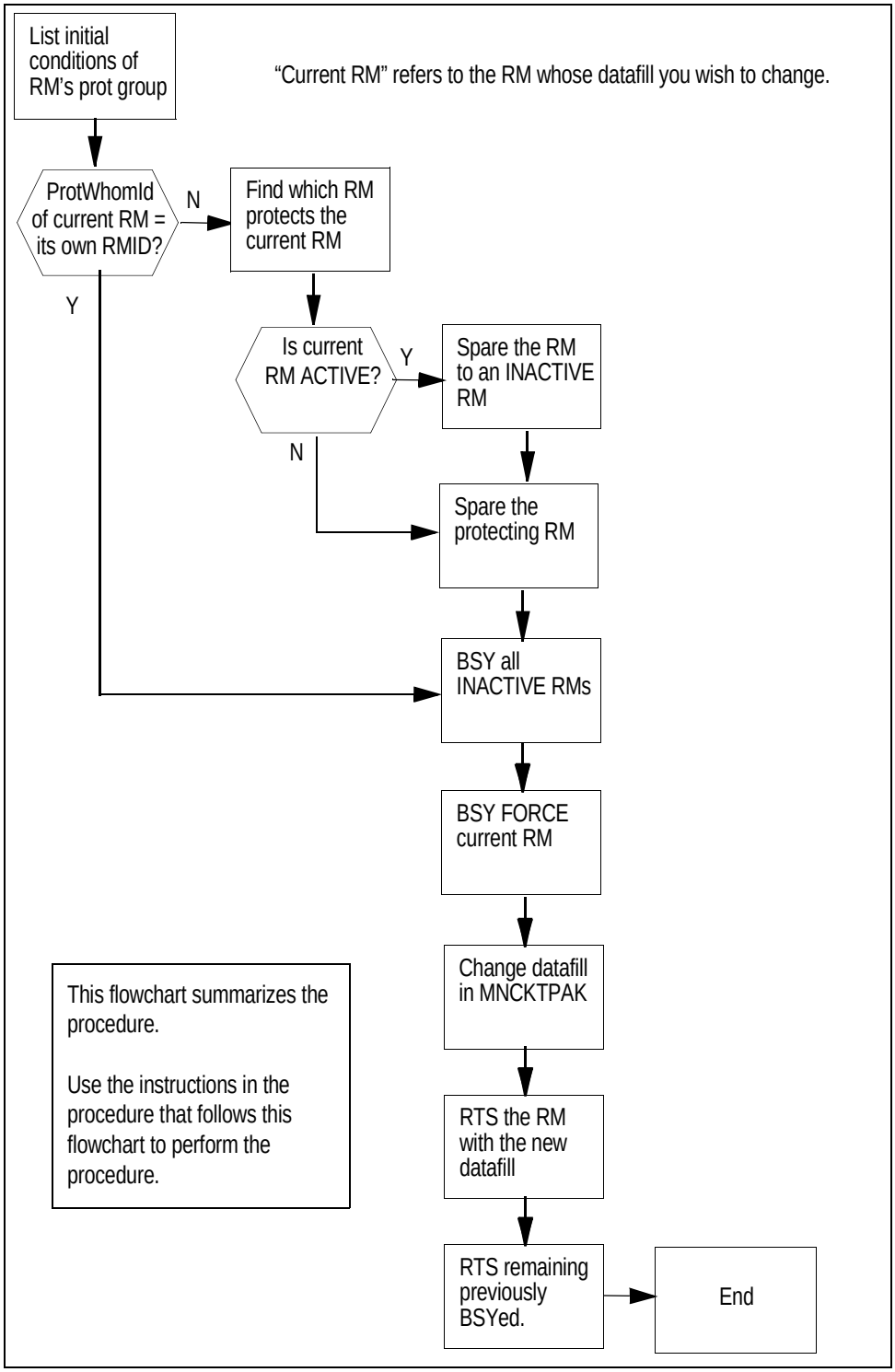
Note 5: The “RMID”(resource module ID) is a number that is formed by the combination of the shelf number and the slot numbers. RMID = (shelf number x 14) + slot number.

Note 6: “ProtWhomID" is a second RMID associated with a specific RM. This number identifies the RM whose services are being protected by this specific RM.

The following flowchart is only a summary of the procedure datafill modification procedure. To perform the procedure, use the instructions in the step-action procedure that follows the flowchart.

MNCKTPAK (continued)

Summary of modifying datafill



Procedure to modify datafill in table MNCKTPAK

At the MAP terminal:

1 Ensure you have access to both the CM and the CEM.

2 Determine the initial conditions of the RMs in the protection group of the RM whose datafill you need to modify.

```
CI> spmresman spm <spm#> [DSP|VSP|DLC] <rm#>
```

where

spm#
is the SPM number of the SPM housing the RM whose datafill is to be changed

rm#
is the number of the RM whose datafill is to be changed

Note: The SPMRESMAN command is available on loads SP12, SP11, or SP10 only if patch DCW25 has been applied. If patch DCW25 has not been applied, you must apply it, then begin this procedure again.

Example of an initial SPMRESMAN command and results

```
>spmresman spm 5 dsp 1
SPM 5
 ProtGroup: 2

        RMID  Activity  ProtWhomID  ProtGrp  Safe to Change?
-------------------------------------------------------------
DSP  0    23    ACTIVE          24        2              NO
DSP  1    24    ACTIVE          25        2              NO
DSP  2    25  INACTIVE          23        2              NO
DSP  3    26    ACTIVE          26        2              NO
DSP  4    27    ACTIVE          27        2              NO
```

For the RM whose datafill needs to be changed, note the values of the RMID, activity state, and ProtWhomID.

If	Do
ProtWhomID is the same as the RM's own RMID, regardless of its activity state	step 6
ProtWhomID is not the same as the RM's own RMID, regardless of its activity state	step 3

3 Determine which RM currently has its ProtWhomID set to the RMID of the RM whose datafill is to be changed.

Example
Assume you want to change the datafill for DSP 1 in the SPMRESMAN output illustrated in step 2. DSP 1 has an RMID of 24. Look for RMID=24 in the ProtWhomID column; you see that DSP 0 has this value. This means DSP 0 is protecting DSP 1.

MNCKTPAK (continued)

4 Using the SPMRESMAN results from step 2, note the activity status of the RM whose datafill you need to change.

If the activity status is ACTIVE, then spare the RM to an INACTIVE RM.

Example
As before, assume you want to change the datafill for DSP 1. Note that its activity status is ACTIVE in the output example in step 2. DSP 2 is INACTIVE, so spare DSP 1 to DSP 2. The following command sequence accomplishes this.

```
mapci; mtc; pm; post spm 5
-->select dsp 1
-->prot
-->manual 1 2
-->y
```

Note: Do not type this example verbatim; remember to substitute appropriate values for your system.

SPMRESMAN command updated results

```
>spmresman spm 5 dsp 1
SPM 5
ProtGroup: 2

        RMID  Activity  ProtWhomID  ProtGrp  Safe to Change?
-------------------------------------------------------------
DSP  0    23    ACTIVE          24        2              NO
DSP  1    24  INACTIVE          23        2              NO
DSP  2    25    ACTIVE          25        2              NO
DSP  3    26    ACTIVE          26        2              NO
DSP  4    27    ACTIVE          27        2              NO
```

Observe that DSP 1, the one whose Datafill you wish to change, is now INACTIVE.

5 Spare the RM (found in step 3) that is protecting the RM whose datafill you want to change. Spare it to the INACTIVE RM from step 4.

Example
Based on the SPMRESMAN output in the preceding step, perform a SPARE operation of DSP 0 to DSP1 (since DSP 0 is currently protecting DSP1, and DSP 1 is INACTIVE). The follow command sequence illustrates this action.

```
mapci; mtc; pm; post spm5; select dsp 0;
-->listres
-->prot
-->manual 0 1
-->y
```

Issue the SPMRESMAN command again. In the sample output that follows, note that DSP 0 is inactive and protecting itself (the RMID and ProtWhomID field are the same), and DSP 1 is active and protecting itself.

SPMRESMAN command updated results

```
>spmresman spm 5 dsp 1
SPM 5
ProtGroup: 2

        RMID  Activity  ProtWhomID  ProtGrp  Safe to Change?
-------------------------------------------------------------
DSP  0    23  INACTIVE          23        2              NO
DSP  1    24    ACTIVE          24        2              NO
DSP  2    25    ACTIVE          25        2              NO
DSP  3    26    ACTIVE          26        2              NO
DSP  4    27    ACTIVE          27        2              NO
```

6 BSY all inactive RMs by entering the following for each one:

CI> mapci;mtc;pm;post spm <#>;select [DSP|VSP|DLC] <#>;bsy force

Example
In the SPMRESMAN output in the preceding step, there is one inactive RM, DSP 0. So you would enter the command

CI> mapci;mtc;pm;post spm 5;select DSP 0; bsy force

SPMRESMAN command results

```
>spmresman spm 5 dsp 1
SPM 5
ProtGroup: 2

        RMID  Activity  ProtWhomID  ProtGrp  Safe to Change?
-------------------------------------------------------------
DSP  0    23  INACTIVE          23        2             YES
DSP  1    24    ACTIVE          24        2              NO
DSP  2    25    ACTIVE          25        2              NO
DSP  3    26    ACTIVE          26        2              NO
DSP  4    27    ACTIVE          27        2              NO
```

In the example printout, note that DSP 0 is inactive and the “safe to change” field is YES.

7 BSY FORCE the RM whose datafill is to be modified by entering the following:

CI> mapci;mtc;pm;post spm <#>;select [DSP|VSP|DSP] <#>;bsy force

SPMRESMAN command results

```
>spmresman spm 5 dsp 1
SPM 5
ProtGroup: 2

        RMID  Activity  ProtWhomID  ProtGrp  Safe to Change?
-------------------------------------------------------------
DSP  0    23  INACTIVE          23        2              YES
DSP  1    24    ACTIVE          24        2              YES
DSP  2    25    ACTIVE          25        2              NO
DSP  3    26    ACTIVE          26        2              NO
DSP  4    27    ACTIVE          27        2              NO
```

Note that the “safe to change” field for the RM whose datafill you wish to change, DSP 1 in the example, now is YES.

8 Change the resource datafill for the RM in table MNCKTPAK.

CI> table mncktpak

TABLE: MNCKTPAK

>rwok on

WRITE ACCESS ENABLED FOR RESTRICTED DATA

>pos spm <#> <shelf#> <slot#>

> change

Continue to provide the new datafill as prompted by the system.

9 RTS the RM whose datafill you modified in the preceding step.

CI> mapci;mtc;pm;post spm <#>;select [DSP|VSP|DLC] <#>;bsy rts

10 RTS the remaining inactive RMs that you busied in step 6 by entering the following command:

CI> mapci;mtc;pm;post spm <#>;select [DSP|VSP|DLC] <#>;bsy rts

The modification to the provisioned data is complete.

Removing a tuple from table MNCKTPAK

Use the following procedure to remove a data tuple from table MNCKTPAK.

Procedure for removing a tuple from table MNCKTPAK

At the MAP display

1 Perform steps 1-7 of the preceding procedure, “Procedure to modify datafill in table MNCKTPAK.”

2 Take offline the RM whose datafill you wish to delete.

3 Delete the tuple for the RM.

4 Perform steps 10 and thereafter in the preceding procedure, “Procedure to modify datafill in table MNCKTPAK.”

Modify an AB-bit resource count

An AB-bit resource is assigned to each DS-1 carrier containing a PTS trunk. When the count of AB-bit resources in the DSP tuple being modified is decreased, a check is made to determine if the new number of AB-bit resources in the SPM where the DSP being modified is located corresponds to the number of DS-1 carriers with PTS trunks. The change is rejected if the total count per SPM falls below the number of DS1 carriers with PTS trunks. The following message displays in such a case:

```
Failed to change count of ABBIT resources for this
DSP. This new count of AB bit resources for its SPM
is less than the number of AB bit resources in use by
PTS trunks configured in table TRKMEM for this SPM.
```

Modify an MF/DTMF resource count

For MF resources, if there are any MF trunks provisioned in table TRKMEM, table MNCKTPAK must contain provisioning for at least one MF resource. When the count for MF resources in the tuple being modified decreases, the system checks to determine if any MF resources remain on the given SPM. The system rejects the change if it does not find at least one MF resource for the SPM while MF trunks are provisioned in table TRKMEM. The following message displays in such a case:

```
ERROR: Cannot delete all remaining MF resources while
in use. You must first delete the SPM PTS trunks in
table TRKMEM whose associated IPULSTYP = MF in table
TRKSGRP.
```

The same is true for DTMF resources. The following message displays if DTMF resources are not available:

```
ERROR: Cannot delete all remaining DTMF resources
while in use. You must first delete the SPM PTS trunks
in table TRKMEM whose associated IPULSTYP = DT in
table TRKSGRP.
```

Delete a tuple that contains AB-bit resources

The count for AB-bit resources on the DSP is deleted from the total AB-bit resources count for the SPM where the DSP is located. The system compares the new count for AB-bit resources with the number of DS-1 carriers with PTS trunks. If the counts do not correspond, the system rejects the change and displays the following message:

```
Failed to delete this DSP.
```

```
The new count of AB bit resources for its SPM is less
than the number of AB bit resources in use by PTS
trunks configured in table TRKMEM for this SPM
```

Delete a tuple containing MF/DTMF resources

The count for MF resources on a given SPM is deleted from the total MF resource count on the SPM. The system compares the new count for MF resources with the number of MF resources on the SPM. If the new count for MF resources = 0 and table TRKMEM contains provisioning for MF trunks, the system rejects the change and displays the following message:

```
ERROR: Cannot delete all remaining MF resources while
in use. You must first delete the SPM PTS trunks in
table TRKMEM whose associated IPULSTYP = MF in table
TRKSGRP.
```

The same check is made for DTMF resources. If all DTMF resources are deleted, the system displays the following message:

```
ERROR: Cannot delete all remaining DTMF resources
while in use. You must first delete the SPM PTS trunks
in table TRKMEM whose associated IPULSTYP = DT in
table TRKSGRP.
```

MNHSCARR

Table name

Management Network High Speed Carrier (MNHSCARR)

Functional description

The MNHSCARR table is one of six tables used to configure a Spectrum Peripheral Module (SPM). The P-side of the OC-3 circuit pack carries a maximum of 175 carriers for OC-3. The P-side of the STM-1 circuit pack carries a maximum of 131 carriers for STM-1. Each tuple in this table identifies a carrier or subcarrier terminating on the SPM.

Datafill sequence and implications

Datafill tables in the following order:

1. PMLOADS

   Note: Table PMLOADS specifies the location of a particular load file. Datafill PMLOADS only once. There is no need to datafill PMLOADS for each SPM added to the system unless a new load file entry has to be added to table PMLOADS.

2. ENCDINV
3. MNPRTGRP
4. MNNODE
5. MNSHELF
6. MNCKTPAK
7. MNLINK
8. MNHSCARR
9. TRKMEM

Note: There is no need to datafill table TRKMEM unless you want to datafill trunks on the carrier.

When datafilling carriers for an OC-3 resource module (RM), perform the following:

1. Datafill the OC-3 section termination carrier.
2. Datafill the STS-3 line termination carrier.
3. Datafill the STS-1 path termination carrier.

MNHSCARR (continued)

4. Datafill the DS-3 or VT1.5 path termination carrier.
5. Datafill the DS-1 path termination carrier.

When datafilling carriers for an asynchronous transfer mode (ATM) RM, perform the following:

1. Datafill the OC-3 section termination carrier.
2. Datafill the STS-3 line termination carrier.
3. Datafill the STS3cp concatenated path termination carrier.

When datafilling carriers for an STM-1 resource module (RM), perform the following:

1. Datafill the STM1R carriers. The parent is the STM circuit pack in table MNCKTPAK.
2. Datafill the STM1M carriers. The parent carrier is STM1R.
3. Datafill the VC4P carriers. The parent carrier is STM1M.
4. Datafill the VC12P carriers. The parent carrier is VC4P.
5. Datafill the E1P carriers. The parent carrier is VC12P.

Note 1: If you try to add a carrier before adding C-side host links for the SPM to table MNLINK, the terminal displays the following message:

```
Please define host links in table MNLINK first
```

Note 2: If you try to add an OC-3 (OC3S) carrier before adding the OC-3 circuit pack for the SPM to table MNCKTPAK, the terminal displays the following message:

```
Can not find the host OC-3 pack
```

Note 3: If you try to add an STM-1 (STM1R) carrier before adding the STM circuit pack for the SPM to table MNCKTPAK, the terminal displays the following message:

```
Can not find the host STM-1 circuit [?] pack
```

Note 4: If you try to add an STS-3 (STS3L) carrier before adding the STS3L_GRP protection group for the SPM to table MNPRTGRP, the terminal displays the following message:

```
Can not find the corresponding STS3L_GRP
```

Note 5: If you try to add an STM-1 (STM1M) carrier before adding the CARR_GRP protection group for the SPM to table MNPRTGRP, the terminal displays the following message:

```
Can not find the corresponding CARR_GRP
```

Note 6: If you try to add a subcarrier before adding the parent carrier to table MNHSCARR, the terminal displays the following message:

```
Can not find the parent <carrier_type> carrier
```

Table size

OC-3: 0 to 11 648 tuples

STM-1: 0 to 8384 tuples

For STM-1, the table size calculation is as follows:

- maximum number of STM-1 carriers per SPM = 131 (A)
- maximum number of SPMs per DMS switch = 64 (B)
- maximum number of STM-1 carriers per DMS switch = 8384 (A x B)

The maximum table size allowed by OAM-DB (the physical store manager for table MNHSCARR) is 16 000 tuples.

The size of the store required by each physical tuple governs the memory required by each tuple. At present, an estimate of the memory required by each physical tuple is 0.5 kbytes. This estimate does not include any memory required to store the logical and data tuples.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table MNHSCARR.

Field	Subfield	Entry	Explanation and action
CARRKEY		See subfield	Carrier key. This field consists of subfield CARRNAME. This is the key field to table MNHSCARR.
	CARRNAME	Maximum 38 characters	Carrier name. Enter the name assigned to the carrier.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
CCTNO		1 to 180	Circuit number. Enter the carrier circuit number assigned to the carrier. ***Note:*** Each carrier on the SPM is assigned a unique circuit number that is used by table TRKMEM to datafill SPM trunks. Circuit number (continued) ***Note:*** Only the CCTNO of DS1P or VT15P carriers with a byte synchronous DS-1 payload (BYSYNC _DS1) can be used in table TRKMEM.
CARRINFO		See subfield	Carrier information. This field consists of subfield CARRTYPE and its refinements.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	CARRTYPE	OC3S, STS3L, STS3cP, STS1P, DS3P, VT15P, DS1P, DS1L, STM1R, STM1M, VC4P, VC12P, E1P	Carrier type. Enter the carrier type and datafill the refinements according to the following list: • See “CARRTYPE= OC3S” for OC-3 section termination datafill. • See “CARRINFO = STS3L” for STS-3 line termination datafill. • See “CARRTYPE = STS3cP” for STS-3 line termination datafill. • See “CARRTYPE = STS1P” for STS-1 path termination datafill.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	CARRTYPE (continued)		Carrier type (continued) • See “CARRTYPE = DS3P” for DS-3 path termination datafill. • See “CARRTYPE = VT15P” for V1.5 path termination datafill. • See “CARRTYPE = DS1P” for DS-1 path termination datafill. • See “CARRTYPE = DS1L" for DSIL path carrier datafill. • See “CARRTYPE = STM1R” for STM-1R section termination datafill. • See “CARRTYPE = STM1M” for STM-1M section termination datafill. • See “CARRTYPE = VC4P” for VC4 path termination datafill. • See “CARRTYPE = VC12P” for VC12 path termination datafill. • See “CARRTYPE = E1P” for E1 path termination datafill.

CARRTYPE = OC3S

If the value of subfield CARRTYPE is OC3S, datafill the following subfields PHYLINK, OC3PP, OC3PM, and OC3FAIL as described in the following table.

Field	Subfield or refinement	Entry	Explanation and action
	PHYLINK	See refinements	PHYSICAL LINK. This is the location of the OC-3 circuit pack on the optical fiber/link termination. This field consists of refinements NODETYPE, NODEID, SHELFID, and SLOTNUM.
	NODETYPE	SPM	NODE TYPE. Enter the type of node, which is SPM.
	NODEID	0-63	NODE IDENTIFIER. Enter the identifier of the node.
	SHELFID	0	SHELF IDENTIFIER. Enter the identifier for the shelf that contains the OC-3 circuit pack. The default value is 0.
	SLOTNUM	9 or 10	SLOT IDENTIFIER. Enter the slot number of the OC-3 circuit pack. The default value is 9.
	OC3PP	See refinements	OC-3 CARRIER PHYSICAL MEDIUM LAYER PARAMETER ATTRIBUTES. The field is a vector of up to 3 entries. Each entry in the vector describes an optical parameter. To accept system default values, enter $ for the field. For each entry, the subfields are PARM and ATTR. Refine the datafill as indicated in the following descriptions.

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	PARM	LBC, OPT, OPR	PARAMETER NAME. Valid values are • LBC (normalized laser bias current in percentage) • OPT (normalized optical power transmitted in percentage) • OPR (normalized optical power received in percentage)
	ATTR	See refinements	PARAMETER ATTRIBUTES. The refinements are ALRMLIM, CLRLIM, and ALRMSEV.
	ALRMLIM	0-200	ALARM LIMIT. The alarm generation thresholds are described as follows: • When LBC goes above ALRMLIM, an alarm generates. The default value is 150. • When OPT goes below the ALRLIM, an alarm generates. The default value is 85. • When OPR goes below the ALRLIM, an alarm generates. The default value is 85.

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	CLRLIM	0-200	ALARM CLEARANCE LIMIT. The alarm clearance thresholds are described as follows: • When LBC goes below the CLRLIM, the alarm clears. The default value is 125. • When OPT goes above the CLRLIM, the alarm clears. The default value is 95. • When OPT goes above the CLRLIM, the alarm clears. The default value is 95.
	ALRMSEV	NA, MN, MJ, CR	ALARM SEVERITY. This is the severity of the alarm when it generates. Valid values are • NA (no alarm) • MN (minor alarm) • MJ (major alarm) • CR (critical alarm, the default value)
	OC3PM	See refinements	PERFORMANCE MEASUREMENTS. This field indicates the performance measurement attributes for an OC-3 section carrier. The field is a vector of up to 4 entries. Each entry in the vector describes an OC-3 section performance measurement parameter. To accept system default values, enter $ for the field. For each entry, the subfields are PARM and ATTR.

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	PARM	SEFS, CV, ES, SES	PARAMETER NAME. This field indicates the performance measurement parameter name. Select the entry as follows: • SEFS (severely errored framing second) • CV (code violation) • ES (errored second) • SES (severely errored second) Default values are shown in parentheses beside the following parameter names. • SEFS (17, 7) • CV (4430, 1732) • ES (864, 346) • SES (4, 2)
	ATTR	See refinements	PARAMETER ATTRIBUTES. The subfields are DAYLIM, MIN15LIM, and ALRMSEV.
	DAYLIM	0 to 4294967295	DAY LIMIT. This subfield indicates the threshold for the current day interval. A threshold crossing alarm generates if the DAYLIM is crossed.
	MIN15LIM	0 to 32767	15-MINUTE LIMIT. This subfield indicates the threshold for the current 15-minute interval. A threshold crossing alarm generates if the MIN15LIM is crossed.

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	ALRMSEV	NA, MN, MJ, CR	ALARM SEVERITY • NA (no alarm) • MN (minor alarm, the default value) • MJ (major alarm) • CR (critical alarm)
	OC3FAIL	See refinements	DEFECT OR FAILURE ATTRIBUTES FOR OC-3 SECTION CARRIER. The field is a vector of up to 2 entries. Each entry in the vector describes an OC-3 section defect or failure. To accept system default values, enter $ for the field. For each entry, the subfields are FAILURE and ATTR.
	FAILURE	LOS, LOF	DEFECT OR FAILURE NAME. Select entry as follows: • LOS (loss of signal) The default alarm severity is CR. The default action is RPT. • LOF (loss of frame) The default alarm severity is CR. The default action is RPT.
	ATTR	See refinements	PARAMETER ATTRIBUTES. The subfields are SEVERITY and ACTION.

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	SEVERITY	NA, MN, MJ, CR	SEVERITY. This subfield indicates the severity of the alarm when the defect is declared. Valid values are • NA (no alarm) • MN (minor alarm) • MJ (major alarm) • CR (critical alarm, the default value)
	ACTION	RPT, NRPT	ACTION. This field indicates the action to take when the defect is declared. Valid values are • NRPT (no report or alarm) ***Note:*** Do not set ACTION to NRPT unless SEVERITY is set to NA. • RPT (report, the default value)

CARRTYPE = STS3L

If the value of subfield CARRTYPE is STS3L, datafill the following subfields PCRRNAME, SFBERLIM, SDBERLIM, CARRCLAS, STS3GRID, GENFLT, STS3PM, and STS3FAIL as described in the following table.

Field	Subfield or refinement	Entry	Explanation and action
	PCRRNAME	Up to 38 alphanumeric characters	PARENT CARRIER NAME. Enter the OC-3S parent carrier name.
	SFBERLIM	3-5	SIGNAL FAILURE BIT-ERROR-RATIO THRESHOLD. Signal failure is declared when the threshold is crossed. Interpret the field as 1 x 10E-SFBERLIM. For example, the value 3 corresponds to 1 x 10E-3 and the value 5 corresponds to 1 x 10E-5. The default value is 4.

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	SDBERLIM	5-9	SIGNAL DEGRADATION BIT-ERROR-RATIO THRESHOLD. Signal degradation is declared when the threshold is crossed. Interpret the field as 1 x 10E-SDBERLIM. For example, the value 5 corresponds to 1 x 10E-5 and the value 9 corresponds to 1 x 10E-9. The default value is 7.
	CARRCLAS	HSCARR	CARRIER CLASS. Enter HSCARR (high-speed carrier).
	STS3GRID	1-28	STS-3 GROUP IDENTIFICATION. Enter the group identification of the STS-3 line protection group. (STS3L_GRP is in table MNPRTGRP.) The default value is 1.
	GENFLT	See refinements	GENERAL FAULT ATTRIBUTES. This subfield indicates the general fault attributes for the STS-3 line carrier. The field is a vector of up to 2 entries. Each entry in the vector describes an STS-3 line fault. To accept system default values, enter $ for the field. For each entry, the subfields are FAULT and ATTR.
	FAULT	SFBERX, SDBERX	FAULT NAME. Valid values are • SFBERX indicates a signal failure bit-error-ratio threshold was crossed. The threshold value is specified by field SFBERLIM. • SDBERX indicates a signal degradation bit-error-ratio threshold was crossed. The threshold value is specified by field SDBERLIM.
	ATTR	See refinements	PARAMETER ATTRIBUTES. The subfields are SEVERITY and ACTION.
	SEVERITY	NA, MN, MJ, CR	ALARM SEVERITY. Values are • NA (no alarm) • MN (minor alarm, the default value) • MJ (major alarm) • CR (critical alarm)

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	ACTION	RPT, NRPT	ACTION. This subfield indicates the action to be taken on fault detection. Values are • NRPT (no report) • RPT (report, the default value)
	STS3PM	See refinements	STS-3 PERFORMANCE MEASUREMENT. This field indicates the performance measurement attributes for the STS-3 line carrier. The field is a vector of up to 4 entries. Each entry in the vector describes an STS-3 line performance measurement parameter. To accept system default values, enter $ for the field. Subfields are PARM and ATTR.
	PARM	CV, ES, SES, UAS	PARAMETER NAME. This field indicates the performance measurement parameter name. Select the entry as follows: • CV (code violation) • ES (errored second) • SES (severely errored second) • UAS (unavailable second) Default values are shown in parentheses beside the following parameter names. • CV (4430, 1732) • ES (864, 346) • SES (4, 2) • UAS (10, 10)
	ATTR	See refinements	PARAMETER ATTRIBUTES. The subfields are DAYLIM, MIN15LIM, and ALRMSEV.
	DAYLIM	0-4294967295	DAY LIMIT. This subfield indicates the threshold for the current day interval. A threshold crossing alarm generates if the DAYLIM is crossed.
	MIN15LIM	0-32767	15-MINUTE LIMIT. This subfield indicates the threshold for the current 15-minute interval. A threshold crossing alarm generates if the MIN15LIM is crossed.

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	ALRMSEV	NA, MN, MJ, CR	ALARM SEVERITY. This subfield indicates the severity of the threshold crossing alarm when it generates. Valid severities are as follows: • NA (no alarm) • MN (minor alarm, the default value) • MJ (major alarm) • CR (critical alarm)
	STS3FAIL	See refinements	FAILURE ATTRIBUTES. This field indicates defects or failure attributes for STS-3 line carrier.The field is a vector of up to 2 entries. Each entry in the vector describes a STS-3 line defect or failure. To accept system default values, enter $ for the field. For each entry, the subfields are FAILURE and ATTR.
	FAILURE	AIS, RFI, SIMPLEX	FAILURE NAME. This field indicates the defect or failure name. The values are • AIS (alarm indication signal) The default severity is MN. The default action is NRPT. • RFI (remote failure indication) The default severity is MN. The default action is NRPT. • SIMPLEX (protection switching unavailable) The default severity is CR. The default action is RPT.
	ATTR	See refinements	PARAMETER ATTRIBUTES. The subfields are SEVERITY and ACTION.
	SEVERITY	NA, MN, JU, CR	ALARM SEVERITY. The valid values are • NA (no alarm) • MN (minor alarm, the default value) • MJ (major alarm) • CR (critical alarm)

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	ACTION	NRPT, RPT	ACTION. Action to be taken on fault detection. • NRPT (no report or alarm, the default value) ***Note:*** Do not set ACTION to NRPT unless SEVERITY is set to NA. • RPT (report)
	STS3OPTION	see subfield OPTION_ SEL	STS3L Options. This field has subfield OPTION_SEL. 5 multiples of OPTION_SEL.
	OPTION_ SEL	see subfields: • TIMING	Option selector. Enter TIMING then enter the relevant data for subfield TIMING.
	TIMING	Y,N	Timing indicator. This field determines whether or not the carrier is used as a clock source for the SPM. Enter Y to use the carrier as a clock source for the SPM. Enter N (the default value) if the carrier is not to be used as a clock source for the SPM. **Note 1:** The TIMING field is currently used only for ATM carriers on an MG4000 SPM. For other carriers the field is ignored. This field is intended for use in future SPM load releases. **Note 2:** It is recommended that STM1M carriers with an ATM payload are used as a timing source.

CARRTYPE = STS3cP

If the value of subfield CARRTYPE is STS3cP, datafill the following subfields, PCRRNAME, STS1POS, STS3PALD, STS1PTRC, STS1PM, and STS1FAIL as described in the following table.

Note: AN STS3cP carrier can be hosted only off the STS3L carrier which is hosting off the WORKING ATM circuit pack. To check whether the STS3L carrier is hosting off a WORKING ATM circuit pack, backtrack to the parent ATM carrier by way of the PCARRNAME of the STS3L carrier. Once the ATM carrier is identified, look up the circuit pack tuple, identified by PHYLINK, in table MNCKTPAK. If the ATM circuit pack is datafilled

MNHSCARR (continued)

as WORKING, then the STS3L carrier is hosting off a WORKING ATM circuit pack; otherwise, it is not.

Field	Subfield or refinement	Entry	Explanation and action
	PCRRNAME	Up to 38 alphanumeric characters	PARENT CARRIER NAME ***Note:*** An STS-1 is hosted by an STS3L carrier, which is resident on a working OC-3 circuit pack.
	STS1POS	1-3	STS-1 PAYLOAD POSITION. This field indicates the position of the STS-1 in the payload. The default value is 1.
	STS3PALD	UNEQ, ATM	STS-3cP PAYLOAD TYPE. This field indicates the type of payload the STS-3cP is carrying. The default is ATM. Valid values are as follows: • UNEQ (payload is unequipped) • ATM (ATM payload, the default value)
	STS1PTRC	Up to 62 alphanumeric characters	STS-1 PATH TRACE MESSAGE
	STS1PM	See refinements	STS-1 PERFORMANCE MEASURE ATTRIBUTES. This field indicates the performance measurement attributes for the STS-1 path carrier. The field is a vector of up to 8 entries. Each entry in the vector describes an STS-1 path performance measurement parameter. To accept the system default value, enter $. The subfields are PARM and ATTR.

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	PARM	CV, ES, SES, UAS, CVFE, ESFE, SESFE, UASFE	PARAMETER NAME. This field indicates the performance measurement parameter name. Valid values are • CV (code violation) • ES (errored second) • SES (severely errored second) • UAS (unavailable second) • CVFE (code violation, far end) • ESFE (errored second, far end) • SESFE (severely errored second, far end) • UASFE (unavailable second, far end) Default values are shown in parentheses beside their names. • CV (125, 15) • ES (100, 12) • SES (7, 3) • UAS (10, 10) • CVFE (125, 15) • ESFE (100, 12) • SESFE (7, 3) • UASFE (10, 10)
	ATTR	See refinements	PARAMETER ATTRIBUTES. The subfields to be refined are DAYLIM, MIN15LIM, and ALRMSEV.

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	DAYLIM	0-4294967295	DAY LIMIT. This field indicates the threshold for the current day interval. An alarm generates when the DAYLIM is crossed.
	MIN15LIM	0-32767	15-MINUTE ALARM. This field indicates the threshold for the current 15-minute interval. An alarm generates when the MIN15LIM is crossed.
	ALRMSEV	NA, MN, MJ, CR	ALARM SEVERITY. This field indicates the severity of the threshold crossing alarm when it generates. Valid values are • NA (no alarm) • MN (minor alarm, the default value) • MJ (major alarm) • CR (critical alarm)
	STS1FAIL	See refinements	STS-1 FAILURE ATTRIBUTES. This field indicates the defects or failure attributes for the STS-1 path carrier. The field is a vector of up to 4 entries. Each entry in the vector describes an STS-1 path defect or failure. To accept system default values, enter $ for the field. The subfields are FAILURE and ATTR.
	FAILURE	LOP, AIS, RFI, PLM	FAILURE. This field indicates the defect or failure name. Valid values are • LOP (loss of pointer) • AIS (alarm indication signal) • RFI (remote failure indication) • PLM (payload label mismatch)

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	ATTR	See refinements	PARAMETER ATTRIBUTES. The subfields are SEVERITY and ACTION.
	SEVERITY	NA, MN, MJ, CR	SEVERITY. This field indicates the severity of the alarm when the defect is declared. Valid values are • NA (no alarm) • MN (minor alarm, the default value) • MJ (major alarm) • CR (critical alarm)
	ACTION	NRPT or RPT	ACTION. This field indicates the action to be taken on fault detection. Valid values are • NRPT (no report or alarm, the default value) ***Note:*** Do not set ACTION to NRPT unless SEVERITY is set to NA. • RPT (reportable)

CARRTYPE = STS1P

If the value of subfield CARRTYPE is STS1P, datafill the following subfields PCRRNAME, STS1POS, STS1PALD, STS1PTRC, STS1PM, and STS1FAIL as described in the following table.

Note: AN STS1P carrier can be hosted only off the STS3L carrier which is hosting off the WORKING OC-3 circuit pack. To check whether the STS3L carrier is hosting off a WORKING OC-3 circuit pack, backtrack to the parent OC-3S carrier by way of the PCARRNAME of the STS3L carrier. Once the OC-3S carrier is identified, look up the circuit pack tuple, identified by PHYLINK, in table MNCKTPAK. If the OC-3 circuit pack is

MNHSCARR (continued)

datafilled as WORKING, then the STS3L carrier is hosting off a WORKING OC-3 circuit pack; otherwise, it is not.

Field	Subfield or refinement	Entry	Explanation and action
	PCRRNAME	Up to 38 alphanumeric characters	PARENT CARRIER NAME ***Note:*** An STS-1 is hosted by an STS3L carrier, which is resident on a working OC-3 circuit pack.
	STS1POS	1-3	STS-1 PAYLOAD POSITION. This field indicates the position of the STS-1 in the payload. The default value is 1.
	STS1PALD	UNEQ, VT, ASYNC_DS3	STS-1 PAYLOAD TYPE. This field indicates the type of payload the STS-1 is carrying. The default is VT. Valid values are as follows: • UNEQ (payload is unequipped) • VT (VT-structured payload, the default value) • ASYNC_DS3 (asynchronous DS3)
	STS1PTRC	Up to 62 alphanumeric characters	STS-1 PATH TRACE MESSAGE
	STS1PM	See refinements	STS-1 PERFORMANCE MEASURE ATTRIBUTES. This field indicates the performance measurement attributes for the STS-1 path carrier. The field is a vector of up to 8 entries. Each entry in the vector describes an STS-1 path performance measurement parameter. To accept the system default value, enter $. The subfields are PARM and ATTR.

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	PARM	CV, ES, SES, UAS, CVFE, ESFE, SESFE, UASFE	PARAMETER NAME. This field indicates the performance measurement parameter name. Valid values are • CV (code violation) • ES (errored second) • SES (severely errored second) • UAS (unavailable second) • CVFE (code violation, far end) • ESFE (errored second, far end) • SESFE (severely errored second, far end) • UASFE (unavailable second, far end) Default values are shown in parentheses beside their names. • CV (125, 15) • ES (100, 12) • SES (7, 3) • UAS (10, 10) • CVFE (125, 15) • ESFE (100, 12) • SESFE (7, 3) • UASFE (10, 10)
	ATTR	See refinements	PARAMETER ATTRIBUTES. The subfields to be refined are DAYLIM, MIN15LIM, and ALRMSEV.

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	DAYLIM	0-4294967295	DAY LIMIT. This field indicates the threshold for the current day interval. An alarm generates when the DAYLIM is crossed.
	MIN15LIM	0-32767	15-MINUTE ALARM. This field indicates the threshold for the current 15-minute interval. An alarm generates when the MIN15LIM is crossed.
	ALRMSEV	NA, MN, MJ, CR	ALARM SEVERITY. This field indicates the severity of the threshold crossing alarm when it generates. Valid values are • NA (no alarm) • MN (minor alarm, the default value) • MJ (major alarm) • CR (critical alarm)
	STS1FAIL	See refinements	STS-1 FAILURE ATTRIBUTES. This field indicates the defects or failure attributes for the STS-1 path carrier. The field is a vector of up to 4 entries. Each entry in the vector describes an STS-1 path defect or failure. To accept system default values, enter $ for the field. The subfields are FAILURE and ATTR.
	FAILURE	LOP, AIS, RFI, PLM	FAILURE. This field indicates the defect or failure name. Valid values are • LOP (loss of pointer) • AIS (alarm indication signal) • RFI (remote failure indication) • PLM (payload label mismatch)

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	ATTR	See refinements	PARAMETER ATTRIBUTES. The subfields are SEVERITY and ACTION.
	SEVERITY	NA, MN, MJ, CR	SEVERITY. This field indicates the severity of the alarm when the defect is declared. Valid values are • NA (no alarm) • MN (minor alarm, the default value) • MJ (major alarm) • CR (critical alarm)
	ACTION	NRPT or RPT	ACTION. This field indicates the action to be taken on fault detection. Valid values are • NRPT (no report or alarm, the default value) ***Note:*** Do not set ACTION to NRPT unless SEVERITY is set to NA. • RPT (reportable)

MNHSCARR (continued)

CARRTYPE = DS3P

If the value of subfield CARRTYPE is DS3P, datafill the following subfields PCRRNAME, DS3APP, and DS3FAIL as described in the following table.

Field	Subfield or refinement	Entry	Explanation and action
	PCRRNAME	Up to 38 alphanumeric characters	PARENT CARRIER NAME. Enter the parent carrier name. ***Note:*** A DS3P carrier can only host off a STS1P carrier with asynchronous DS3 (ASYNC_DS3) payload.
	DS3APP	See refinements	APPLICATION CARRIED BY THE DS-3 PATH. Its subfield is APPTYPE.
	APPTYPE	M23	APPLICATION TYPE. The only valid value is M23, which is the M23 application. Refine the M23 application.
	M23DS3PM	See refinements	PERFORMANCE MEASUREMENTS FOR DS3 PATH CARRIER CARRYING M23 APPLICATION. The subfields are PARM and ATTR.
	PARM	CV, ES, SES, UAS	PARMETER NAME. This field indicates the performance measurement parameter name. Valid values are • CV (code violation) • ES (errored second) • SES (severely errored second) • UAS (unavailable second)

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
			Default values are shown in parentheses beside their names, as follows: • CV (3820, 382) • ES (250, 25) • SES (40, 4) • UAS (10, 10)
	ATTR	See refinements	PARAMETER ATTRIBUTES. The subfields are DAYLIM, MIN15LIM, and ALRMSEV.
	DAYLIM	0 to 4294967295	DAY LIMIT. An alarm generates when the DAYLIM is crossed.
	MIN15LIM	0 to 32767	15-MINUTE ALARM. An alarm generates when the MIN15LIM is crossed.
	ALRMSEV	NA, MN, MJ, CR	ALARM SEVERITY. These alarms indicate the severity of the threshold crossing alarm when it generates. • NA (no alarm) • MN (minor alarm, the default value) • MJ (major alarm) • CR (critical alarm)
	DS3FAIL	See refinements	DS-3 FAILURE ATTRIBUTES. This field indicates the defects or failure attributes for DS-3 path carrier. The field is a vector of up to 3 entries. Each entry in the vector describes a DS-3 defect or failure. To accept system default values, enter $ for the field. The subfields are FAILURE and ATTR.

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	FAILURE	AIS, LOF, RAI	FAILURE NAME. Valid values are as follows: • AIS (alarm indication signal) The default alarm severity is MN. The default action is NRPT. • LOF (loss of frame) The default alarm severity is MJ. The default action is RPT. • RAI (remote alarm indication) The default alarm severity is MN. The default action is NRPT.
	ATTR	See refinements	PARAMETER ATTRIBUTES. The subfields are SEVERITY and ACTION.
	SEVERITY	NA, MN, MJ, CR	SEVERITY. This field indicates the severity of the alarm when the defect is declared. Valid values are • NA (no alarm) • MN (minor alarm) • MJ (major alarm) • CR (critical alarm)
	ACTION	NRPT or RPT	ACTION. Action to be taken on fault detection. The valid values are • NRPT (no report or alarm) ***Note:*** Do not set ACTION to NRPT unless SEVERITY is set to NA. • RPT (reportable)

MNHSCARR (continued)

CARRTYPE = VT15P

If the value of subfield CARRTYPE is VT15P, datafill the following subfields PCRRNAME, VTGRPID, VTID, VT15PALD, VT15PM, and VT15FAIL as described in the following table.

Note: A VT15P carrier can host only off an STS1P carrier with VT-structured payload.

Field	Subfield or refinement	Entry	Explanation and action
	PCARRNAME	Up to 38 alphanumeric characters	PARENT CARRIER NAME. Enter the parent carrier name.
	VTGRPID	1-7	VT GROUP IDENTIFICATION. Enter the group identification. The default is 1.
	VTID	1-4	VT1.5 IDENTIFICATION. Enter the VT1.5 identification within the VT group. The default is 1.
	VT15PALD	UNEQ, ASYNC_DS1, BYSYNC_DS1	VT1.5 PAYLOAD TYPE. Enter the STS-1 payload type as follows: • UNEQ (unequipped) • ASYNC_DS1 (asynchronous DS-1 payload) • BYSYNC_DS1 (byte-synchronous DS-1 payload, the default value)

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	VT15PM	See refinements	VT1.5 PERFORMANCE MEASURE ATTRIBUTES. This field indicates the performance measurement attributes for the VT path carrier. The field is a vector of up to 4 entries. Each entry in the vector describes a VT path performance measurement parameter. To accept the system default values, enter $ for the field. For each entry, the subfields are PARM and ATTR.
	PARM	CV, ES, SES, UAS	PARAMETER. This field indicates the performance measurement parameter name. The valid values are • CV (code violation) • ES (errored second) • SES (severely errored second) • UAS (unavailable second) The default values are shown in parentheses beside the following parameter names: • CV (132960, 13296) • ES (648, 65) • SES (100, 10) • UAS (10, 10)
	ATTR	See refinements	PARAMETER ATTRIBUTES. The subfields are DAYLIM, MIN15LIM, and ALRMSEV.
	DAYLIM	0 to 4294967295	DAY LIMIT. An alarm generates when the DAYLIM is crossed.

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	MIN15LIM	0 to 32767	15-MINUTE ALARM. The threshold crossing alarm generates when the MIN15LIM is crossed.
	ALRMSEV	NA, MN, MJ, CR	ALARM SEVERITY • NA (no alarm) • MN (minor alarm, the default value) • MJ (major alarm) • CR (critical alarm)
	VT15FAIL	See refinements	VT1.5 FAILURE ATTRIBUTES. This field indicates the defects or failure attributes for a VT path carrier. The field is a vector of up to 4 entries. Each entry in the vector describes a VT path defect or failure. To accept system default values, enter $ for the field. For each entry, the subfields are FAILURE and ATTR.

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	FAILURE	LOP, AIS, RFI, PLM	FAILURE OR DEFECT NAME. Valid values are • LOP (loss of pointer) The default alarm severity is MN. The default action is RPT. • AIS (alarm indication signal) The default alarm severity is MN. The default action is NRPT. • RFI (remote failure indication) The default alarm severity is MN. The default action is NRPT. • PLM (payload label mismatch) The default alarm severity is MN. The default action is RPT.
	ATTR	See refinements	PARAMETER ATTRIBUTES. The subfields are SEVERITY and ACTION.
	SEVERITY	NA, MN,MJ, CR	SEVERITY. Enter the alarm severity, The defaults to MN. • NA (no alarm) • MN (minor alarm) • MJ (major alarm) • CR (critical alarm)
	ACTION	RPT, NRPT	ACTION. Action to be taken on fault detection. • NRPT (no report or alarm) ***Note:*** Do not set ACTION to NRPT unless SEVERITY is set to NA. • RPT (reportable)

MNHSCARR (continued)

CARRTYPE = DS1P

If the value of subfield CARRTYPE is DS1P, datafill the following subfields PCRRNAME, DS1POS, FRAMEFMT, and DS1FAIL as described in the following table.

Note: A DS1P carrier can host only off a DS3P carrier or a VT15P carrier with asynchronous DS1 (ASYNC_DS1) payload.

Field	Subfield or refinement	Entry	Explanation and action
	PCRRNAME	1 to 38 alphanumeric characters	PARENT CARRIER NAME. Enter the parent carrier name up to 38 alphanumeric characters.
	DS1ZCS	OFF/ON	ZERO CODE SUPPRESSION. This field indicates if the zero code suppression is enabled or disabled for DS1p carrier. Its values depend on the Frame format option. For Frame format SF, the values are: ON - Zero code suppression is enabled. OFF - Zero code suppression is disabled.For Frame format ESF, only OFF value is supported.
	DS1POS	See refinements	DS1 POSITION. This field indicates the position of the DS1P carrier in the payload. Its one subfield is PCARRTYP.
	PCARRTYP	DS3P or VT15P	PARENT CARRIER TYPE. Valid values are • DS3P (DS-3 path carrier). Refine DS3P by entering PALDPOS, which is the DS1P carrier in the DS-3 payload. Valid values are 1-28. • VT15P (VT1.5 path carrier with asynchronous DS-1 payload) T_SPMCRT_DS1PT_VT15PT_PALD_POS

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	PALDPOS	1 to 28	PAYLOAD POSITION. Enter the position of the DS1P carrier in the DS3 payload.
	FRAMEFMT		Multiple Frame Format entries
	FRAMEFMT	ESF or SF	FRAME FORMAT. This field indicates the frame format used by the DS1P carrier. Valid values are • ESF (extended superframe) • SF (superframe) Enter refinements for ESF and SF as described here.
	ESFDS1PM	See refinements	EXTENDED SUPERFRAME DS-1 PERFORMANCE MEASUREMENT. This field indicates the performance measurement attributes for DS1 path carrier employing ESF format. The field is a vector of up to 5 entries. Each entry in the vector describes an ESF DS-1 path performance measurement parameter. To accept system default values, enter $ for the field. For each entry, there are two subfields: PARM and ATTR.
	PARM	CV, ES, SES, CSS, UAS	PARAMETER NAME. This field indicates the performance measurement parameter name. Valid values include • CV (code violation) • ES (errored second) • SES (severely errored second) • CSS (controlled slip second) • UAS (unavailable second)

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
			The default values for are shown in parentheses beside the following parameter names: • CV (132960, 13296) • ES (648, 65) • SES (100, 10) • CSS (4, 1) • UAS (10, 10)
	ATTR	See refinements	PARAMETER ATTRIBUTES. Valid values are DAYLIM, MIN15LIM, and ALRMSEV.
	DAYLIM	0 to 4294967295	DAY LIMIT. An alarm generates when the DAYLIM is crossed. The default value is 7.
	MIN15LIM	0 to 32767	15-MINUTE ALARM. An alarm generates when the MIN15LIM is crossed. The default value is 3.
	ALRMSEV	NA, MN, MJ, CR	ALARM SEVERITY • NA (no alarm) • MN (minor alarm, the default value) • MJ (major alarm) • CR (critical alarm)

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	SFDS1PM	See refinements	SUPERFRAME DS-1 PERFORMANCE MEASUREMENT. This field indicates the performance measurement attributes for DS1 path carrier employing SF format. The field is a vector of up to 5 entries. Each entry in the vector describes an SF DS-1 path performance measurement parameter. To accept system default values, enter $ for the field. For each entry, there are two subfields: PARM and ATTR.
	PARM	CV, ES, SES, CSS, UAS	PARAMETER NAME. This field indicates the performance measurement parameter name. Valid values include • CV (code violation) • ES (errored second) • SES (severely errored second) • CSS (controlled slip second) • UAS (unavailable second) The default values are shown in parentheses beside the following parameter names: • CV (132960, 13296) • ES (648, 65) • SES (100, 10) • CSS (4, 1) • UAS (10, 10)
	ATTR	See refinements	PARAMETER ATTRIBUTES. Valid values are DAYLIM, MIN15LIM, and ALRMSEV.

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	DAYLIM	0 to 4294967295	DAY LIMIT. An alarm generates when the DAYLIM is crossed.
	MIN15LIM	0 to 32767	15-MINUTE ALARM. An alarm generates when the MIN15LIM is crossed.
	ALRMSEV	NA, MN, MJ, CR	ALARM SEVERITY • NA (no alarm) • MN (minor alarm, the default value) • MJ (major alarm) • CR (critical alarm)
	DS1FAIL	See refinements	DS-1 FAILURE ATTRIBUTES. This field indicates the defects or failure attributes for the DS-1 path carrier. The field is a vector of up to 3 entries. Each entry in the vector describes a DS-1 defect or failure. To accept system default values, enter $ for the field. For each entry, there are two subfields: FAILURE and ATTR.
	FAILURE	AIS, LOF, RAI	FAILURE NAME. Valid values include • AIS (alarm indication signal) The default alarm severity is MN. The default action is NRPT. • LOF (loss of frame) The default alarm severity is MN. The default action is RPT. • RAI (remote alarm indication) The default alarm severity is MN. The default action is NRPT.

MNHSCARR (continued)

Field	Subfield or refinement	Entry	Explanation and action
	ATTR	See refinements	PARAMETER ATTRIBUTES. The subfields are SEVERITY and ACTION.
	SEVERITY	NA, MN, MJ, CR	SEVERITY • NA (no alarm) • MN (minor alarm, the default value) • MJ (major alarm) • CR (critical alarm)
	ACTION	NRPT, RPT	ACTION. Action to be taken on fault detection. • NRPT (no report or alarm) ***Note:*** Do not set ACTION to NRPT unless SEVERITY is set to NA. • RPT (report)

CARRTYPE = DS1L

Carrier type DS1L only applies to Succession Network products with an MSH layer. The following table shows datafill specific to carrier type DS1L.

(Sheet 1 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	PHYLINK	See refinements	PHYSICAL LINK. This is the location of the DS-1 circuit pack on the DS1L carrier. This field consists of refinements NODETYPE, NODEID, SHELFID, SLOTNUM, and PORTNUM.
	NODETYPE	DS1L	NODE TYPE. Enter DS1L as the type of node.

MNHSCARR (continued)

(Sheet 2 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	NODEID	0-63	NODE IDENTIFIER. Enter the identifier of the node.
	SHELFID	0, 1	SHELF IDENTIFIER. Enter the identifier for the shelf that contains the DS-1 circuit pack.
	SLOTNUM	1-28	SLOT NUMBER. Enter the slot number of the DS-1 circuit pack. ***Note:*** Carrier type DS1L only accepts numbers • 3 (for slots 2-4) on shelf 1 • 9 (for slots 8-10) on shelf 1 • 11 (for slots 10-12) on shelf 0
	PORTNUM	1-28	PORT NUMBER. Enter the port number of the DS-1 circuit pack.
	ATTR	See refinements	PARAMETER ATTRIBUTES. The refinements are FRMFMT, LNCODING, SFBERLIM, and SDBERLIM.
	FRMFMT	SF or ESF	FRAME FORMAT. This subfield indicates the frame format bit that the DS-1 carrier uses. Enter one of the following values: • SF (superframe) • ESF (extended superframe)
	LNCODING	AMI, B8ZS, ZCS	LINE ENCODING. Enter one of the following values: • AMI (alternate mark inversion) • B8ZX (binary N zero substitution) • ZCS (zero code suppression)

MNHSCARR (continued)

(Sheet 3 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	SFBERLIM	Multiple with 3-5	SIGNAL FAILURE. Enter SFBERLIM and a value from 3 to 5.
	SDBERLIM	Multiple with 5 to 9	SIGNAL DEGRADATION. Enter SDBERLIM and a value from 5 to 9.
	DS1PM	See refinements	DS-1 PERFORMANCE MONITORING ATTRIBUTES. This subfield indicates the performance monitoring attributes for the DS-1 path carrier. This subfield is a vector of up to 6 entries. Each entry in the vector describes a DS-1 line performance monitoring parameter. The subfields are PARM and ATTR.
	PARM	CV, ES, SES, CSS, UAS, AISS	PARAMETER NAME. This field indicates the performance monitoring parameter name. Select the entry as follows: • CV (code violation) • ES (errored second) • SES (severely errored second) • CSS (control slip second) • AISS (alarm indication signal second) • UAS (unavailable second)
	ATTR	See refinements	PARAMETER ATTRIBUTES. The subfields are DAYLIM, MIN15LIM, and ALRMSEV.

MNHSCARR (continued)

(Sheet 4 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	DAYLIM	0 to 4294967295	DAY LIMIT. This subfield indicates the threshold for the current day interval. A threshold crossing alarm generates if the DAYLIM is crossed.
	MIN15LIM	0 to 32767	15-MINUTE LIMIT. This subfield indicates the threshold for the current 15-minute interval. A threshold crossing alarm generates if the MIN15LIM is crossed.
	ALRMSEV	NA, MN, MJ, CR	ALARM SEVERITY. Enter one of the following values to indicate the level of severity for the alarm: • NA (no alarm) • MN (minor alarm, the default value) • MJ (major alarm) • CR (critical alarm)
	DS1FAIL	See refinements	DEFECT OR FAILURE ATTRIBUTES FOR DS1L SECTION CARRIER. The field is a vector of up to 2 entries. Each entry in the vector describes an DS1L defect or failure. To accept system default values, enter $ for the field. For each entry, the subfields are FAILURE and ATTR.

MNHSCARR (continued)

(Sheet 5 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	FAILURE	LOS, LOF, AIS, RAI, SFBER, SDBER	DEFECT OR FAILURE NAME. Select entry as follows: • LOS (loss of signal) The default alarm severity is CR. The default action is RPT. • LOF (loss of frame) The default alarm severity is CR. The default action is RPT. • AIS (alarm indication signal). The default alarm severity is MN. The default action is NRPT. • RAI (remote alarm indication) The default alarm severity is MN. The default action is NRPT. • SFBER (signal failure) • SDBER (signal degradation)
	ATTR	See refinements	PARAMETER ATTRIBUTES. The subfields are SEVERITY and ACTION.

MNHSCARR (continued)

(Sheet 6 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	SEVERITY	NA, MN, MJ, CR	SEVERITY. This subfield indicates the severity of the alarm when the defect is declared. Valid values are • NA (no alarm) • MN (minor alarm) • MJ (major alarm) • CR (critical alarm, the default value)
	ACTION	RPT, NRPT	ACTION. This field indicates the action to take when the defect is declared. Valid values are • NRPT (no report or alarm) ***Note:*** Do not set ACTION to NRPT unless SEVERITY equals NA. • RPT (report, the default value)

CARRTYPE = STM1R

If the value of subfield CARRTYPE is STM1R, datafill the subfields PHYLINK, STM1RPM, and STM1RFAIL as described in the following table.

Field	Subfield	Entry	Explanation and action
	PHYLINK	see subfields	Physical link. This is the location of the STM-1 circuit pack on which the STM1R carrier is defined. This field has subfields NODETYPE, NODEID, SHELFID, and SLOTNUM.
	NODETYPE	PM_TYPE	Node type. Enter PM_TYPE.
	NODEID	0 to 85	Node identifier. Enter the identifier of the node.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	SHELFID	0	Shelf identifier. Enter 0 to identify the shelf that contains the STM-1 circuit pack.
	SLOTNUM	1 to 14	Slot number. Enter 9 or 10 to identify the slot number of the STM-1 circuit pack. The default value is 9.
	STM1RPM	see subfields	STM1R performance measurements. This field has subfields PARM and ATTR. To accept the system default values, enter $.
	PARM	BBE, ES, SES, UAS	Performance parameter name. Enter values as follows: • BBE = background block errors. Default values are: 15-minute threshold 17280, day threshold 34560, alarm severity MN. • ES = errored second. Default values are: 15-minute threshold 13, day threshold 40, alarm severity MN. • SES = severely errored second. Default values are: 15-minute threshold 7, day threshold 14, alarm severity MN. • UAS = unavailable seconds. Default values are: 15-minute threshold 10, day threshold 10, alarm severity MN.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	ATTR	see subfields	Performance parameter attributes. This field has subfields DAYLIM, MIN15LIM, and ALRMSEV, which specify the thresholds above which the system generates a threshold-crossing alarm. Subfield PARM (above) defines the default values.
	DAYLIM	0 to 4294967295	Day limit. This is the threshold for the current day interval.
	MIN15LIM	0 to 32767	15-minute limit. This is the threshold for the current 15-minute interval.
	ALRMSEV	NA, MN, MJ, CR	Alarm severity. This is the severity of the alarm when it generates. Valid values are: • NA = no alarm • MN = minor alarm • MJ = major alarm • CR = critical alarm; the default value
	STM1RFAIL	see subfields	Defect or failure attributes for the STM1R section carrier. This field has subfields, FAILURE and ATTR. To accept the system default values, enter $.
	FAILURE	LOS, LOF	Defect or failure name. Enter the failure name as follows: • LOS = loss of signal. The default alarm severity is CR. The default action is RPT. • LOF = loss of frame. The default alarm severity is CR. The default action is RPT.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	ATTR	see subfields	Parameter attributes. This field has subfields SEVERITY and ACTION. Subfield FAILURE (above) defines the default values.
	SEVERITY	NA, MN, MJ, CR	Alarm severity. This field indicates the severity of the threshold-crossing alarm when it is generated. Enter severity values as follows: • NA = no alarm • MN = minor alarm • MJ = major alarm • CR = critical alarm; the default value)
	ACTION	RPT, NRPT	Action. This field indicates the action to take when the defect is detected. Enter action values as follows: • RPT = report; the default value) • NRPT = no report or alarm ***Note:*** Do not set ACTION to NRPT unless SEVERITY is set to NA.
	OPTIONS		8 entries of options.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	OPTION_ SEL	LBC,OPR, OPT	Option selector. Enter values as follows: • LBC = normalized laser bias current in percentage • OPR = normalized optical power received in percentage • OPT = normalized optical power transmitted in percentage Then enter data for subfields ALRMLIM, CLRLIM, and ALRMSEV.
	ALRMLIM	0 to 200	Alarm limit. Enter the required value to control the alarm generation threshold as follows: • When LBC goes above ALRMLIM, an alarm generates. The default value is 150. • When OPR goes below ALRMLIM, an alarm generates. The default value is 85. • When OPT goes below ALRMLIM, an alarm generates. The default value is 85.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	CLRLIM	0 to 200	Alarm clearance limit. Enter the required value to control the alarm clearance threshold as follows: • When LBC goes below CLRLIM, the alarm clears. The default value is 125. • When OPR goes above CLRLIM, the alarm clears. The default value is 95. • When OPT goes above CLRLIM, the alarm clears. The default value is 95.
	ALRMSEV	NA, MN, MJ, CR	Alarm severity. Enter the required value to define the severity of the alarms generated as follows: • NA = no alarm • MN = minor alarm (the default value) • MJ = major alarm • CR = critical alarm

CARRTYPE = STM1M

If the value of subfield CARRTYPE is STM1M, datafill the subfields PCRRNAME, STM1MPALD, EXCBERLIM, SDBERLIM, CARRCLASS, STM1MGRID, STM1MPM, STM1MFAIL and STM1MOPTION as described in the following table.

Field	Subfield	Entry	Explanation and action
	PCRRNAME	maximum 38 characters	Parent carrier name. Enter the value of the STM1R carrier CARRNAME field.
	STM1MPALD	VC4P	STM1-M payload. This is the payload type contained within the STM1M carrier. Enter VC4P.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	EXCBERLIM	3 to 5	Excessive error BER threshold. The system declares an EXC failure if this threshold is crossed. The default value is 3.
	SDBERLIM	5 to 9	Signal degrade error BER threshold. The system declares an SD failure if this threshold is crossed. The default value is 5.
	CARRCLASS	HSCARR	Carrier class. Enter HSCARR.
	STM1MGRID	1 to 28	STM1M protection group ID. This field corresponds to the ID of a carrier protection group datafilled in table MNPRTGRP. The default value is 1.
	STM1MPM	see subfields: • PARM • ATTR	STM1M performance measurements. This field has subfields PARM and ATTR. To accept the system default values, enter $.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	PARM	BBE, ES, SES, UAS	Performance parameter name. Enter values as follows: • BBE = background block errors. Default values are: 15-minute threshold 17280, day threshold 34560, alarm severity MN. • ES = errored second. Default values are: 15-minute threshold 13, day threshold 40, alarm severity MN. • SES = severely errored second. Default values are: 15-minute threshold 7, day threshold 14, alarm severity MN. • UAS = unavailable seconds. Default values are: 15-minute threshold 10, day threshold 10, alarm severity MN.
	ATTR	see subfields: • DAYLIM • MIN15LIM • ALRMSEV	Performance parameter attributes. This field has subfields DAYLIM, MIN15LIM, and ALRMSEV, which specify the thresholds above which the system generates a threshold-crossing alarm. Subfield PARM (above) defines the default values.
	DAYLIM	0 to 4294967295	Day limit. This is the threshold for the current day interval.
	MIN15LIM	0 to 32767	15-minute limit. This is the threshold for the current 15-minute interval.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	ALRMSEV	NA, MN, MJ, CR	Alarm severity. This is the severity of the alarm when it generates. Enter values as follows: • NA = no alarm • MN = minor alarm • MJ = major alarm • CR = critical alarm; the default value
	STM1MFAIL	see subfields: • FAILURE • ATTR	Defect or failure attributes for the STM1M section carrier. This field has subfields FAILURE and ATTR. To accept the system default values, enter $.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	FAILURE	AIS, APSAM, APSMM, APSCHM, APSIC, APSFEPLF, APSLCK, APSFC, APSMAN, EXC, RFI, SD	Defect or failure name. Enter the failure name as follows: • AIS = alarm indication signal. The default alarm severity is CR. The default action is RPT. • APSAM = Architecture mismatch. Architecture of the far end is different from the near end architecture. • APSMM = Mode mismatch. The mode of the far end is different from near end mode. • APSCHM = Selector Channel Mismatch. The far end and the near end don't agree on the channel to select the payload from. • APSIC = Invalid code. The far end is sending an invalid code over 'K bytes'. • APSFEPLF = Far end protection failure. Indicates an APS switching of the Far End Protection Line Failure. • APSLCK = Lockout. Lockout on indication. • APSFC = Forced. Forced command on indication. • APSMAN = Manual. Manual command on indication.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
			• EXC = excessive errors. This corresponds to the excessive error BER threshold failure described for subfield EXCBERLIM. The default alarm severity is CR. The default action is RPT. • RFI = remote failure indication. The default alarm severity is CR. The default action is RPT. • SD = signal degrade. This corresponds to the signal degrade BER threshold failure described for subfield SDBERLIM. The default alarm severity is CR. The default action is RPT.
	ATTR	see subfields: • SEVERITY • ACTION	Parameter attributes. This field has subfields SEVERITY and ACTION. Subfield FAILURE (above) defines the default values.
	SEVERITY	NA, MN, MJ, CR	Alarm severity. This field indicates the severity of the threshold-crossing alarm when it is generated. Enter severity values as follows: • NA = no alarm • MN = minor alarm • MJ = major alarm • CR = critical alarm, the default value

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	ACTION	RPT, NRPT	Action. This field indicates the action to take when the defect is detected. Enter action values as follows: • RPT = report; the default value • NRPT = no report or alarm ***Note:*** Do not set ACTION to NRPT unless SEVERITY is set to NA.
	STM1MOPTION	see subfield OPTION_SEL	STM1M Options. This field has subfield OPTION_SEL. 8 multiples of OPTION_SEL.
	OPTION_SEL	see subfields: • TIMING • ALS	Option selector. Enter TIMING or ALS, then enter the relevant data for subfield TIMING or ALS.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	TIMING	Y,N	Timing indicator. This field determines whether or not the carrier is used as a clock source for the SPM. Enter Y to use the carrier as a clock source for the SPM. Enter N (the default value) if the carrier is not to be used as a clock source for the SPM. **Note 1:** The TIMING field is currently used only for ATM carriers on an MG4000 SPM. For other carriers the field is ignored. This field is intended for use in future SPM load releases. **Note 2:** It is recommended that STM1M carriers with an ATM payload are used as a timing source.
	ALS	Y,N	Automatic Laser Shutdown. This boolean provides the ability for the user to turn on/off this functionality. Enter Y to enable Automatic Laser Shutdown. Enter N to disable Automatic Laser Shutdown. (not supported at ISN04 (TDM))

CARRTYPE = VC4P

If the value of subfield CARRTYPE is VC4P, datafill the subfields PCRRNAME, VC4PALD, VC4TXPTRC, VC4RXPTRC, VC4PM, and VC4FAIL as described in the following table.

Field	Subfield	Entry	Explanation and action
	PCRRNAME	maximum 38 characters	Parent carrier name. Enter the value of the STM1M carrier CARRNAME field. ***Note:*** The VC4P carrier can only be hosted off the working STM-1 circuit pack. Therefore the parent STM1M carrier must also be hosted off the working STM-1 circuit pack.
	VC4PALD	ATMC4, UNEQ, VC12P	VC4 payload. This is the payload type contained within the VC4P carrier.Enter the payload type as follows: • ATMC4 = ATM payload (not used) • UNEQ = unequipped • VC12P = VC12 path The default value is VC12P.
	VC4TXPTRC	maximum 15 characters	VC4 transmit path trace. This string is transmitted to the other end of the VC4 path, for validation to ensure path integrity. Enter the required string.
	VC4RXPTRC	maximum 15 characters	VC4 receive path trace. This string is used to validate the trace from the other end of the VC4 path, to ensure path integrity. Enter the required string.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	VC4PM	see subfields	VC4 performance measurements. This field has subfields PARM and ATTR. To accept the system default values, enter $.
	PARM	BBE, ES, SES, UAS	Performance parameter name. Enter values as follows: • BBE = background block errors. Default values are: 15-minute threshold 17280, day threshold 34560, alarm severity MN. • ES = errored second. Default values are: 15-minute threshold 13, day threshold 40, alarm severity MN. • SES = severely errored second. Default values are: 15-minute threshold 7, day threshold 14, alarm severity MN. • UAS = unavailable seconds. Default values are: 15-minute threshold 10, day threshold 10, alarm severity MN.
	ATTR	see subfields	Performance parameter attributes. This field has subfields DAYLIM, MIN15LIM, and ALRMSEV, which specify the thresholds above which the system generates a threshold-crossing alarm. Subfield PARM (above) defines the default values.
	DAYLIM	0 to 4294967295	Day limit. This is the threshold for the current day interval.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	MIN15LIM	0 to 32767	15-minute limit. This is the threshold for the current 15-minute interval.
	ALRMSEV	NA, MN, MJ, CR	Alarm severity. This is the severity of the alarm when it generates. Enter severity values as follows: • NA = no alarm • MN = minor alarm • MJ = major alarm • CR = critical alarm; the default value
	VC4FAIL	see subfields	Defect or failure attributes for the VC4 path. This field has subfields FAILURE and ATTR. To accept the system default values, enter $.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	FAILURE	AIS, LOM, LOP, RFI, SLM, TIM, UNEQ	Defect or failure name. Enter the failure name as follows: • AIS = alarm indication signal. The default alarm severity is MN. The default action is RPT. • LOM = loss of multiframe. The default alarm severity is MN. The default action is RPT. • LOP = loss of pointer. The default alarm severity is MN. The default action is RPT. • RFI = remote failure indication. The default alarm severity is MN. The default action is RPT. • SLM = signal label mismatch. The default alarm severity is MN. The default action is RPT. • TIM = trace identifier mismatch. The default alarm severity is MN. The default action is RPT. • UNEQ = unequipped. The default alarm severity is MN. The default action is RPT.
	ATTR	see subfields	Parameter attributes. This field has subfields SEVERITY and ACTION. Subfield FAILURE (above) defines the default values.

Field	Subfield	Entry	Explanation and action
	SEVERITY	NA, MN, MJ, CR	Alarm severity. This field indicates the severity of the threshold-crossing alarm when it is generated. Enter severity values as follows: • NA = no alarm • MN = minor alarm • MJ = major alarm • CR = critical alarm; the default value
	ACTION	RPT, NRPT	Action. This field indicates the action to take when the defect is detected. Enter action values as follows: • RPT = report; the default value • NRPT = no report or alarm ***Note:*** Do not set ACTION to NRPT unless SEVERITY is set to NA.

CARRTYPE = VC12P

If the value of subfield CARRTYPE is VC12P, datafill the subfields PCRRNAME, VC12POS, VC12PALD, VC12TXPTRC, VC12RXPTRC, VC12PM, and VC12FAIL as described in the following table.

Field	Subfield	Entry	Explanation and action
	PCRRNAME	maximum 38 characters	Parent carrier name. Enter the value of the VC4P carrier CARRNAME field.
	VC12POS	see subfield	VC12 position. This is the position within the parent carrier's payload that contains the VC12P carrier. This field has subfield PCARRTYPE.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	PCARRTYP	VC4P	Parent carrier type of the VC12P carrier. Enter VC4P and datafill subfields K, L, and M.
	K	1 to 3	K position.
	L	1 to 7	L position.
	M	1 to 3	M position.
	VC12PALD	UNEQ, VC12P	VC12 payload. This is the payload type contained within the VC12P carrier.Enter the payload type as follows: • ASYNC_E1 = asynchronous E1 path • UNEQ = unequipped
	VC12TXPTRC	maximum 15 characters	VC12 transmit path trace. This string is transmitted to the other end of the VC12 path, for validation to ensure path integrity. Enter the required string.
	VC12RXPTRC	maximum 15 characters	VC12 receive path trace. This string is used to validate the trace from the other end of the VC12 path, to ensure path integrity. Enter the required string.
	VC12PM	see subfields	VC12 performance measurements. This field has subfields PARM and ATTR. To accept the system default values, enter $.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	PARM	BBE, ES, SES, UAS	Performance parameter name. Enter values as follows: • BBE = background block errors. Default values are: 15-minute threshold 4320, day threshold 8640, alarm severity MN. • ES = errored second. Default values are: 15-minute threshold 13, day threshold 40, alarm severity MN. • SES = severely errored second. Default values are: 15-minute threshold 7, day threshold 14, alarm severity MN. • UAS = unavailable seconds. Default values are: 15-minute threshold 10, day threshold 10, alarm severity MN.
	ATTR	see subfields	Performance parameter attributes. This field has subfields DAYLIM, MIN15LIM, and ALRMSEV, which specify the thresholds above which the system generates a threshold-crossing alarm. Subfield PARM (above) defines the default values.
	DAYLIM	0 to 4294967295	Day limit. This is the threshold for the current day interval.
	MIN15LIM	0 to 32767	15-minute limit. This is the threshold for the current 15-minute interval.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	ALRMSEV	NA, MN, MJ, CR	Alarm severity. This is the severity of the alarm when it generates. Enter severity values as follows: • NA = no alarm • MN = minor alarm • MJ = major alarm • CR = critical alarm; the default value
	VC12FAIL	see subfields	Defect or failure attributes for the VC12 path. This field has subfields FAILURE and ATTR. To accept the system default values, enter $.
	FAILURE	AIS, LOP, RFI, SLM, TIM, UNEQ	Defect or failure name. Enter the failure name as follows: • AIS = alarm indication signal. The default alarm severity is MN. The default action is RPT. • LOP = loss of pointer. The default alarm severity is MN. The default action is RPT. • RFI = remote failure indication. The default alarm severity is MN. The default action is RPT. • SLM = signal label mismatch. The default alarm severity is MN. The default action is RPT. • TIM = trace identifier mismatch. The default alarm severity is MN. The default action is RPT. • UNEQ = unequipped. The default alarm severity is MN. The default action is RPT.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	ATTR	see subfields	Parameter attributes. This field has subfields SEVERITY and ACTION. Subfield FAILURE (above) defines the default values.
	SEVERITY	NA, MN, MJ, CR	Alarm severity. This field indicates the severity of the threshold-crossing alarm when it is generated. Enter severity values as follows: • NA = no alarm • MN = minor alarm • MJ = major alarm • CR = critical alarm; the default value
	ACTION	RPT, NRPT	Action. This field indicates the action to take when the defect is detected. Enter action values as follows: • RPT = report; the default value • NRPT = no report or alarm ***Note:*** Do not set ACTION to NRPT unless SEVERITY is set to NA.

MNHSCARR (continued)

CARRTYPE = E1P

If the value of subfield CARRTYPE is E1P, datafill the subfields PCRRNAME, VOICELAW, CRC4MON, IDLPATTERN, E1PM, and E1FAIL as described in the following table.

Field	Subfield	Entry	Explanation and action
	PCRRNAME	maximum 38 characters	Parent carrier name. Enter the value of the VC12P carrier CARRNAME field.
	VOICELAW	ALAW, MULAW	Voice companding law. Enter ALAW. ***Note:*** The value MULAW is valid but does not change the SPM (which remains set to A-law). m-law will be provided in a later release.
	IDLPATTERN	Q503, G714	IDL bit pattern. This bit pattern is used to maintain synchronization between both ends of a trunk which it carries no voice traffic. Enter the bit pattern as follows: • Q503 = Q.503 bit pattern (01010100) • G714 = G.714 bit pattern (11010101)
	CRC4MON	ON, OFF	CRC4 monitor bit. This bit indicates whether or not CRC4 is supported at the far end.
	E1PM	see subfields	E1 performance measurements. This field has subfields PARM and ATTR. To accept the system default values, enter $.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	PARM	BBE, CRC4, CSS, ES, SES, UAS	Performance parameter name. Enter values as follows: • BBE = background block errors. Default values are: 15-minute threshold 2, day threshold 2, alarm severity MN. • CRC4 = unavailable seconds. Default values are: 15-minute threshold 2, day threshold 2, alarm severity MN. • CSS = unavailable seconds. Default values are: 15-minute threshold 1, day threshold 4, alarm severity MN. • ES = errored second. Default values are: 15-minute threshold 2, day threshold 2, alarm severity MN. • SES = severely errored second. Default values are: 15-minute threshold 1, day threshold 1, alarm severity MN. • UAS = unavailable seconds. Default values are: 15-minute threshold 10, day threshold 10, alarm severity MN.
	ATTR	see subfields	Performance parameter attributes. This field has subfields DAYLIM, MIN15LIM, and ALRMSEV, which specify the thresholds above which the system generates a threshold-crossing alarm. Subfield PARM (above) defines the default values.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	DAYLIM	0 to 4294967295	Day limit. This is the threshold for the current day interval.
	MIN15LIM	0 to 32767	15-minute limit. This is the threshold for the current 15-minute interval.
	ALRMSEV	NA, MN, MJ, CR	Alarm severity. This is the severity of the alarm when it generates. Enter severity values as follows: • NA = no alarm • MN = minor alarm • MJ = major alarm • CR = critical alarm; the default value
	E1FAIL	see subfields	Defect or failure attributes for the E1 path. This field has subfields FAILURE and ATTR. To accept the system default values, enter $.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	FAILURE	AIS, BER, CRE, LLCMA, LOF, RAI	Defect or failure name. Enter the failure name as follows: • AIS = alarm indication signal. The default alarm severity is MN. The default action is RPT. • BER = bit error ratio. The default alarm severity is MN. The default action is RPT. • CRE = CRC4 remote error. The default alarm severity is MN. The default action is RPT. • LLCMA = local loss of CRC multiframe alignment. The default alarm severity is MN. The default action is RPT. • LOF = loss of frame. The default alarm severity is MN. The default action is RPT. • RAI = remote alarm indication. The default alarm severity is MN. The default action is RPT.
	ATTR	see subfields	Parameter attributes. This field has subfields SEVERITY and ACTION. Subfield FAILURE (above) defines the default values.

MNHSCARR (continued)

Field	Subfield	Entry	Explanation and action
	SEVERITY	NA, MN, MJ, CR	Alarm severity. This field indicates the severity of the threshold-crossing alarm when it is generated. Enter severity values as follows: • NA = no alarm • MN = minor alarm • MJ = major alarm • CR = critical alarm; the default value
	ACTION	RPT, NRPT	Action. This field indicates the action to take when the defect is detected. Enter action values as follows: • RPT = report; the default value • NRPT = no report or alarm ***Note:*** Do not set ACTION to NRPT unless SEVERITY is set to NA.

Datafill example

The following examples show sample datafill for table MNHSCARR.

```
                                CARRKEY CCNTO
                                                                    CARRINFO
---------------------------------------------------------------------------
SPM_0_OC3S_1_WORKING                        1
  OC3S SPM 0 0 9 (LBC 150 125 CR) (OPT 85 95 CR) (OPR 85 95 CR) $
  (SEFS 17 7 MN) (CV 4430 1772 MN) (ES 864 346 MN)
  (SES 4 2 MN) $ (LOS CR RPT) (LOF CR RPT) $

SPM_0_OC3S_1_SPARE                          2
  OC3S SPM 0 0 10 (LBC 150 125 CR) (OPT 85 95 CR) (OPR 85 95 CR) $
  (SEFS 17 7 MN) (CV 4430 1772 MN) (ES 864 346 MN)
  (SES 4 2 MN) $ (LOS CR RPT) (LOF CR RPT) $

SPM_0_STS3L_1_WORKING                       3
  STS3L SPM_0_OC3S_1_WORKING 4 7 HSCARR 1 (SFBERX MN RPT) (SDBERX MN RPT) $
  (CV 4430 1772 MN) (ES 864 346 MN) (SES 4 2 MN) (UAS 10 10 MN) $
  (AIS MN NRPT) (RFI MN NRPT) $

SPM_0_STS3L_2_SPARE                         4
  STS3L SPM_0_OC3S_1_SPARE 4 7 HSCARR 1 (SFBERX MN RPT) (SDBERX MN RPT) $
  (CV 4430 1772 MN) (ES 864 346 MN) (SES 4 2 MN) (UAS 10 10 MN) $
  (AIS MN NRPT) (RFI MN NRPT) $

SPM_0_STS1_1                                6
  STS1P SPM_0_STS3L_1_WORKING 1 VT SPM_0_STS1_1_PATH
  (CV 125 15 MN) (ES 100 12 MN) (SES 7 3 MN) (UAS 10 10 MN)
  (CVFE 125 15 MN) (ESFE 100 12 MN) (SESFE 7 3 MN)
  (UASFE 10 10 MN) $ (LOP MN NRPT) (AIS MN NRPT) (RFI MN NRPT)
  (PLM MN RPT) $

SPM_0_STS1_2                                7
  STS1P SPM_0_STS3L_1_WORKING 2 ASYNC_DS3 SPM_0_STS1_2_PATH
  (CV 125 15 MN) (ES 100 12 MN) (SES 7 3 MN) (UAS 10 10 MN)
  (CVFE 125 15 MN) (ESFE 100 12 MN) (SESFE 7 3 MN)
  (UASFE 10 10 MN) $ (LOP MN NRPT) (AIS MN NRPT) (RFI MN NRPT)
  (PLM MN RPT) $

SPM_0_STS1_3                                8
  STS1P SPM_0_STS3L_1_WORKING 3 UNEQ SPM_0_STS1_3_PATH
  (CV 125 15 MN) (ES 100 12 MN) (SES 7 3 MN) (UAS 10 10 MN)
  (CVFE 125 15 MN) (ESFE 100 12 MN) (SESFE 7 3 MN)
  (UASFE 10 10 MN) $ (LOP MN NRPT) (AIS MN NRPT) (RFI MN NRPT)
  (PLM MN RPT) $

SPM_0_STS1_2_DS3                            9
  DS3P SPM_0_STS1_2 M23 (CV 3820 382 MN) (ES 250 25 MN)
  (SES 40 4 MN) (UAS 10 10 MN) $ (AIS MN NRPT) (LOF MJ RPT)
  (RAI MN NRPT) $

SPM_0_STS1_1_VT_1_1                        10
```

MNHSCARR (continued)

```
                              CARRKEY CCTNO
                                                                  CARRINFO
---------------------------------------------------------------------------
SPM_10_STM1R_1_WORKING                      1
   STM1R SPM 10 0 9
  (BBE 34560 17280 MN) (ES 40 13 MN) (SES 14 7 MN)
  (UAS 10 10 MN) $ (LOS CR RPT) (LOF CR RPT) $

SPM_10_STM1R_1_SPARE                        2
   STM1R SPM 10 0 10 (BBE 34560 17280 MN) (ES 40 13 MN) (SES 14 7 MN)
  (UAS 10 10 MN) $ (LOS CR RPT) (LOF CR RPT) $

SPM_10_STM1M_1_WORKING                      3
   STM1M SPM_10_STM1R_1_WORKING VC4P 4 7 HSCARR 1
  (BBE 34560 17280 MN) (ES 40 13 MN) (SES 14 7 MN) (UAS 10 10 MN) $
  (RFI CR RPT) (AIS CR RPT) (EXC CR RPT) (SD CR RPT) (APSAM MN RPT)
  (APSMM MN RPT) (APSCHMM MN RPT) (APSIC MN RPT) (APSFEPLF MN RPT)
  (APSLCK MN RPT) (APSFC MN RPT) (APSMAN MN RPT)$ (TIMING Y) (ALS Y)$

SPM_10_STM1M_SPARE 173                      4
  STM1M SPM_10_STM1R_1_SPARE VC4P 3 5 HSCARR 1
  (BBE 34560 17280 MN) (ES 40 13 MN) (SES 14 7 MN) (UAS 10 10 MN) $
  (RFI CR RPT) (AIS CR RPT) (EXC CR RPT) (SD CR RPT) (APSAM MN RPT)
  (APSMM MN RPT) (APSCHMM MN RPT) (APSIC MN RPT) (APSFEPLF MN RPT)
  (APSLCK MN RPT) (APSFC MN RPT) (APSMAN MN RPT)$ (TIMING Y) (ALS Y)$

SPM_10_VC4P                                 5
  VC4P SPM_10_STM1M_1_WORKING VC12P SPM_10_VC4P_TR SPM10_VC4P_RC
  (BBE 34560 17280 MN) (ES 40 13 MN) (SES 14 7 MN) (UAS 10 10 MN) $
  (RFI MN RPT) (LOP MN RPT) (TIM MN RPT) (LOM MN RPT)
  (SLM MN RPT) (AIS MN RPT) (UNEQ MN RPT) $

SPM_10_VC12P_1                              6
  VC12P SPM_10_VC4P VC4P 1 ASYNC_E1 S_10_VC12_1_TR S_10_VC12_1_RC
  (BBE 8640 4320 MN) (ES 40 13 MN) (SES 14 7 MN) (UAS 10 10 MN) $
  (RFI MN RPT) (LOP CR RPT) (TIM CR NRPT) (SLM CR RPT) (AIS CR RPT) (UNEQ CR RPT) $

SPM_10_VC12P_4                              7
   VC12P SPM_10_VC4P VC4P 4 UNEQ S_10_VC12_4_TR S_10_VC12_4_RC
  (BBE 8640 4320 MN) (ES 40 13 MN) (SES 14 7 MN) (UAS 10 10 MN) $
  (RFI MN RPT) (LOP CR RPT) (TIM CR NRPT) (SLM CR RPT) (AIS CR RPT) (UNEQ CR RPT) $

SPM_10_E1_1                                 8
  E1P SPM_10_VC12P_1 ALAW G714 ON (BBE 2 2 MN) (ES 2 2 MN) (SES 1 1 MN)
  (UAS 10 10 MN) (CSS 4 1 MN) (CRC4 2 2 MN) $
  (LOF MN RPT) (RAI MN RPT) AIS MN RPT)
  (LLCMA MN RPT) (CRE MN RPT) BER MN RPT) $
```

The following figure shows sample datafill for carrier type DS1L.

```
SPM_30_LSA_1_03_04_DS1L_126

 DS1L SPM 30 1 3 4 (FRMFMT ESF) (LNCODING AMI (SFBERLIM 4) (SDBERLIM 7) $

  (CV 132960 13296 MN) (ES 648 65 MN) (SES 100 10 MN)

  (CSS 4 1 MN) (AISS 10 10 MN) (UAS 10 10 MN) $ (LOS MN RPT) (AIS MN NRPT)

   (LOF MN RPT) (RAI MN NRPT) (SFBER MN RPT) (SDBER MN PRT) $
```

Supplementary information

This section explains the error messages that can occur if you enter data incorrectly in table MNHSCARR.

Error messages specific to the SPM DS-1 Assignment SOC Control feature

Limits are set through the SOC options SPMS0016 and SPMS0017, if the user requires more carriers for this office, contact NORTEL NETWORKS to increase the limit in the event of the following message:

```
ADDITION DENIED: Adding this carrier would exceed the maximum
number of SPM carriers for this office
```

Upon calculating the number of carriers, a transient problem has resulted in failure to determine the number of carriers:

```
ERROR: Failed to determine the current number of SPM carriers
```

Table history

NA017

CSR Q00272460 adds the warning messages to the table that signify that the SOC functionality provides the hard usage control for provisioned SPM DS1P carriers assigned with either ISUP/PTS trunks or PRI trunks.

MNHSCARR (end)

SN04 (DMS)

The following changes were made for feature 59033790:

- CARRTYPE = STM1M
  - 8 APS failures added to field STM1MFAIL/FAILURE
  - Field STM1MOPTION added with its subfields: TIMING and ALS
- Datafill example updated with new datafill information
- CARRTYPE = DS1L added as per SPM version of MNHSCARR

MMP12

Feature 59008275 adds the carrier types STM1R, STM1, VC4P, VC12P, and E1P to table MMNHSCARR.

SPM01 (CSP09)

Table MNHSCARR was created.

MNIP

Table name

Management Network Internet Protocol

Functional description

This table is used to hold the Subnet masks, IP addresses, and the Gateway IP addresses for the SMG4 Variant SPMs. The IP address fields as per CEM for the variant are provisioned.

Datafill sequence and meaning

Since IP addresses will be needed for node registration, table MNIP must be datafilled before table MNNODE.

Table size

Table MNIP can support up to 86 tuples

Datafill

The following table lists datafill for table MNIP.

Field descriptions (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
MNIPKEY		0 to 85	Key field. Enter the SPM number.
SUBNET0		IP address with four numbers from 0 to 255	Enter the number of the subnet for CEM 0. Separate each number in the address with a single space. For example, 47 2 11 109 is equivalent to an IP address of 47.2.11.109.
CEM0IP		IP address with four numbers from 0 to 255	Enter the number of the IP address for CEM 0. Separate each number in the address with a single space. For example, 47 2 11 109 is equivalent to an IP address of 47.2.11.109.
GATEWAY0		IP address with four numbers from 0 to 255	Enter the number of the Gateway IP address for CEM 0. Separate each number in the address with a single space. For example, 47 2 11 109 is equivalent to an IP address of 47.2.11.109.

Field descriptions (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
SUBNET1		IP address with four numbers from 0 to 255	Enter the number of the subnet for CEM 1. Separate each number in the address with a single space. For example, 47 2 11 109 is equivalent to an IP address of 47.2.11.109.
CEM1IP		IP address with four numbers from 0 to 255	Enter the number of the IP address for CEM 1. Separate each number in the address with a single space. For example, 47 2 11 109 is equivalent to an IP address of 47.2.11.109.
GATEWAY1		IP address with four numbers from 0 to 255	Enter the number of the Gateway IP address for CEM 1. Separate each number in the address with a single space. For example, 47 2 11 109 is equivalent to an IP address of 47.2.11.109.

Datafill example

The following figure shows sample datafill for table MNIP.

MAP display example for table MNIP

```
MNIPKEY  SUBNET0  CEM0IP  GATEWAY0  SUBNET1  CEM1IP  GATEWAY1
-------------------------------------------------------------

SPM 40 255 255 255 0 10 102 8 148 $ 255 255 255 0 10 102 8 149 $
```

Table History

This table was introduced in CSP14.

MNLINK

Table name

Management Network Link (MNLINK)

Functional description

Table MNLINK (Management Network Link) is one of six tables used to configure the DMS-Spectrum Peripheral Module (SPM). The data maintained in this table includes the link identifier and end-points of the link. Each tuple in the table identifies the C-side host link set for an SPM. The term *host link* refers to the DS-512 fiber links between the common equipment module (CEM) and the enhanced network (ENET) card.

Datafill sequence and implications

Datafill new link information in table MNLINK before putting new ENET cards or SPM modules on line. Before making changes to table MNLINK, set the ENET cards, which are connected to the SPM node specified in field NODEID, to the offline (OFFL) state.

After the links are datafilled in table MNLINK, use command TRNSL at the CEM level of the MAP terminal to view the ENET link assignments. Refer to the *DMS-Spectrum Peripheral Module Commands Reference Manual* (297-1771-819) for additional information about command TRNSL. Refer to the appropriate DMS-100 or DMS-250 *Commands Reference Manual* for information on ENET commands.

Datafill tables in the following order:

1. table PMLOADS

   Note: Table PMLOADS specifies the location of a particular load file. Datafill PMLOADS only once. There is no need to datafill PMLOADS for each SPM added to the system, unless a new load file entry must be added to table PMLOADS.

2. table MNPRTGRP
3. table MNNODE
4. table MNSHELF
5. table MNCKTPAK
6. table ENCDINV
7. table MNLINK
8. table MNHSCARR

MNLINK (continued)

If the ENET XPT card terminating SPM host links has not been added to table ENCDINV, the following message displays:

```
Addition verification failed at ENET end,...
```

If CEM circuit packs of the SPM has not been added to table MNCKTPAK, the following message displays:

```
Cannot find the circuit pack
```

Table size

0 to 64 tuples

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table MNLINK.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
LKSETKEY		See subfields	LINKSET KEY. This field consists of subfields NODETYPE and NODEID. This is the key field to table MNLINK.
	NODETYPE	SPM	NODE TYPE. Enter SPM.
	NODEID	0 to 63	NODE IDENTIFIER. Enter the SPM node identifier. The default value is 0 (zero).
CSLNKSET		See subfields	C-SIDE HOST LINK SET. This is a vector consisting of 4 entries. Each entry defines a paired connection between one of the two SPM CEMs and the ENET. The subfields are LKPAIRID, ENSHELF, ENSLOT, and ENLINK. ***Note:*** There are four optical fiber cables for each CEM. Enter four entries for each CSLINKSET vector. See the following table.

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	LKPAIRID	1 to 4	LINK PAIR IDENTITY. Enter the identity of the host link pair at the SPM end. The default value is 1.
	ENSHELF	0 to 3	ENET SHELF. Enter the ENET shelf where the link pair terminates. The default value is 0 (zero).
	ENSLOT	9 to 32	ENET SLOT. Enter the ENET crosspoint (XPT) card slot where the link terminates. The default value is 32.
	ENLINK	0 to 18	ENET LINK. Enter the ENET port (link) on the XPT card where the link terminates. The default value is 0 (zero).

Datafill example

Each CEM module has four fiber-optic cable pairs. Each pair must be entered as a vector in field CSLNKSET. The following is an example of a link split over two shelves.

(Sheet 1 of 2)

CEM 0		**ENET PLANE 0**		
CEM unit	**CEM link ID**	**ENET shelf**	**ENET slot**	**ENET link**
0	1	0	14	0
0	2	0	14	1
0	3	1	15	2
0	4	1	15	3
CEM 1		ENET PLANE 1		
CEM unit	CEM link ID	ENET shelf	ENET slot	ENET link
1	1	0	14	0

MNLINK (end)

(Sheet 2 of 2)

CEM 0		**ENET PLANE 0**		
CEM unit	**CEM link ID**	**ENET shelf**	**ENET slot**	**ENET link**
1	2	0	14	1
1	3	1	15	2
1	4	1	15	3

An example of the connection of SPM host links to the ENET plane is shown in the following table.

Shelf ID	**Slot**	**CEM unit**	**Host link ID**	**ENET plane**
0	7	0	1	0
0	7	0	2	0
0	7	0	3	0
0	7	0	4	0
0	8	1	1	1
0	8	1	2	1
0	8	1	3	1
0	8	1	4	1

The following shows sample datafill for table MNLINK.

```
     LKSETKEY                                          CSLNKSET
----------------------------------------------------------------
       SPM  0 (1 0 14  0) (2 0 14  1) (3 1 15 2) (4 1 15 3)$
```

Table history

SPM01 (CSP09)

Table MNLINK was created.

MNNODE

Table name

Management Network Node (MNNODE)

Functional description

Table MNNODE is one of six tables used to configure a DMS-Spectrum Peripheral Module (SPM) node. The data maintained in this table includes the node identifier and the node location. Table MNNODE supports the Multi-Service Hub (MSH).

Datafill sequence and implications

Datafill tables in the following order:

1. table PMLOADS

   Note: Table PMLOADS specifies the location of a particular load file. Datafill PMLOADS only once. There is no need to datafill PMLOADS for each SPM added to the system unless a new load file entry has to be added to table PMLOADS.

2. table MNPRTGRP
3. table MNNODE
4. table MNSHELF
5. table MNCKTPAK
6. table MNLINK
7. table MNHSCARR

In a DMS-250 switch load, there is no change to the existing datafill sequence. Table MNNODE does not depend on any other tables being datafilled.

In a DMS-100 switch load, to datafill a SMG4KDA SPM, table SITE should be datfilled before table MNNODE. Datfilling a DMSCP or IW SPM does not depend on any other tables being datfilled first.

Table size

0 to 64 tuples

MNNODE (continued)

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table MNNODE.

Datafill for table MNNODE (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
NODEKEY		See subfields	NODE KEY. Subfields are NODETYPE and NODEID.
	NODETYPE	SPM	NODE TYPE. Enter SPM.
	NODEID	0 to 63	NODE IDENTIFIER. Enter the SPM node identifier. The default value is 0.

Datafill for table MNNODE (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
ALIAS		1 to 12 alphanumeric characters	ALIAS. Enter an alias for the node.
CLASS		DMSCP, IW, or SMG4KDA	CLASS. This field serves as the data selector (or refinement tag) for an SPM's datafill. Enter the class associated with each SPM's datafill to indicate its intended functionality. The SPM supports three classes: • DMSCP (DMS call processing). Assign SPMs deployed as DMS call processing peripherals to this class. For all software releases before SP12, the ONP automatically converts SPMs to this class. See table Table , "Field descriptions when CLASS=DMSCP" on page -312 for further datafill. • SMG4KDA (Succession Media Gateway 4000 Distributed Access). SPMs of this class do not connect to the ENET. This SPM class communicates to the DMS computing module over an ATM network. This SPM class serves as a distributed access point to a DMS switch. These SPMs are part of the Succession network. See table Table , "Field descriptions when CLASS=IW" on page -319 for further datafill. • IW (interworking). SPMs of this class connect to a DMS ENET and function as a bridge between DMS call processing peripherals and the SMG4KDA SPM. These SPMs are part of the Succession network. See table Table , "Field descriptions when CLASS=SMG4KDA" on page -321 for further datafill.

MNNODE (continued)

Conditional datafill when CLASS=DMSCP

The table that follows lists conditional datafill when you enter DMSCP in field CLASS.

Field descriptions when CLASS=DMSCP (Sheet 1 of 7)

Field	Subfield or refinement	Entry	Explanation and action
FLOOR		0 to 99	FLOOR. Enter the floor where the node is located.
CLKMODE		SYNC	CLOCK MODE. Enter SYNC. SYNC (synchronization mode) is the only valid entry for field CLKMODE.
CLKREF		INTERNAL or LOOP	CLOCK REFERENCE. Enter a clock synchronization reference from the following list: • INTERNAL (The clock synchronizes to the DMS message switch. This is the default value.) • LOOP (The clock synchronizes to the local OC-3 network.) ***Note:*** At initial program loading (IPL), field CLKREF is datafilled with the default value INTERNAL. If an SPM is datafilled in table SYNCLK as a sync source, table control prevents a change from INTERNAL to LOOP. An attempt to make such a change from INTERNAL to LOOP results in the following message: “SPM is datafilled in table SYNCLK as a SYNC SOURCE.” When SPM OC-3 line timing is not employed and an SPM node is connected to an OC-3 SONET network, enter LOOP into field CLKREF to ensure correct OC-3 network timing.
LEDTIMER		0 to 1440	LED TIME-OUT PERIOD. Enter the LED timeout period in minutes. If the SPM detects no critical faults during the timeout period, the alarm LEDs turn off in order to extend their life. Enter 0 (zero) if the LEDs are to stay on at all times. The default value is 15.

Field descriptions when CLASS=DMSCP (Sheet 2 of 7)

Field	Subfield or refinement	Entry	Explanation and action
RSRUTLIM		See subfields	RESOURCE UTILIZATION. This field consists of a vector of up to five entries in subfields RESTYPE and THRESHLD. Each entry sets a low water mark use threshold, as a percent, for a resource type. If the use exceeds the threshold, alarms or logs generate. Enter $ to select default values.
	RESTYPE	COT, DTMF, ECAN, TONESYN, MF	RESOURCE TYPE. Enter a resources type from the following list: • COT (continuity test) • DTMF (dual-tone multi-frequency) • ECAN (echo cancellation) • TONESYN (tone synthesizer) • MF (multi-frequency signaling)
	THRESHLD	10 to 100	UTILIZATION THRESHOLD. Enter the low water threshold as a percent of total resource. The default values are 60% for COT, DTMF, ECAN, TONESYN, and MF.
ALRMCTRL		See subfields	ALARM CONTROL INFORMATION. This field consists of a vector of up to ten entries in subfields ALARM and ATTR. Each entry controls a particular alarm. Enter $ to select the system default values.
	ALARM	SYSB, MANB, ISTB, SYSBNA, MANBNA, COTLOW, DTMFLOW, ECANLOW, TONSLOW, MFLOW	ALARM NAME. Enter an alarm name from the following list: • SYSB (system busy) This alarm generates when the node is in system busy state. The default alarm severity is CR. The default action is RPT. • MANB (manual busy) This alarm generates when the node is in manual busy state. The default alarm severity is MJ. The default action is RPT.

MNNODE (continued)

Field descriptions when CLASS=DMSCP (Sheet 3 of 7)

Field	Subfield or refinement	Entry	Explanation and action
			• ISTB (in-service-trouble) This alarm generates when the node is in-service and it is experiencing non-service-affecting faults. The default alarm severity is MN. The default action is RPT. • SYSBNA (system busy and not accessible) This alarm generates when the node is in SYSB state and a network (for example, ENET or MS) error has caused it to be isolated. The default alarm severity is CR. The default action is RPT. • MANBNA (manual busy and not accessible) This alarm generates when the node is in MANB state, and a network (for example, ENET or MS) error has caused it to be isolated. The default alarm severity is MJ. The default action is RPT. • COTLOW (low water mark threshold for COT has been crossed) This alarm generates when use of the COT resource exceeds the threshold previously set, which means that the COT resource is in short supply. The default alarm severity is MN. The default action is RPT. • DTMFLOW (low water mark threshold for DTMF has been crossed) This alarm generates when use of DTMF resources exceeds the threshold previously set, meaning that DTMF resources are in short supply. The default alarm severity is MN. The default action is RPT.

Field descriptions when CLASS=DMSCP (Sheet 4 of 7)

Field	Subfield or refinement	Entry	Explanation and action
			• TONSLOW (low water mark threshold for TONESYN has been crossed). This alarm generates when use of the TONESYN resources exceeds the threshold previously set, meaning that TONESYN resource is in short supply. The default alarm severity is MN. The default action is RPT. • The “configdata all verbose" command displays the list of RMs that were provisioned, as well as other information pertaining to each RM, including the ProtWhomId. This number is found in the line that reads “This RM is currently protecting the services provisioned on RM X". “X" represents the ProtWhomId of that particular RM. Find the RMid whose associated ProtWhomId is the RMid of the RM to have its datafill changed. • MFLOW (low water mark threshold for MF has been crossed). This alarm generates when use of the MF resource exceeds the threshold previously set, meaning that MF resources are in short supply. The default alarm severity is MN. The default action is RPT. • ECANLOW (low water mark threshold for ECAN has been crossed) This alarm generates when use ECAN resources exceeds the threshold previously set, meaning that ECAN resources are in short supply. The default alarm severity is MN. The default action is RPT.
	ATTR	See subfields	ALARM ATTRIBUTES. This field consists of subfields SEVERITY and ACTION.

MNNODE (continued)

Field descriptions when CLASS=DMSCP (Sheet 5 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	SEVERITY	NA, MN, MJ, CR	SEVERITY. The severity of the alarm defines its relative importance. Enter a severity from the following list: • NA (no alarm) • MN (minor alarm) • MJ (major alarm) • CR (critical alarm)
	ACTION	NRPT, RPT	ACTION. This subfield indicates the action to be taken when a fault is detected. Enter an action from the following list: • NRPT (no report generated) • RPT (report generated)
EXECTAB		See subfields	EXECUTABLES TABLE. This field is a vector of up to eight entries (one for each terminal type) in subfields EXEC and TRMTYPE. Each entry defines an executable lineup to be downloaded for a particular terminal type. If a node supports ISUP trunks only (no PTS trunks), enter $ in the subfields. If a node supports PTS trunks, datafill subfields EXEC and TRMTYPE.

Field descriptions when CLASS=DMSCP (Sheet 6 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	TRMTYPE	AB250, ABTRK, ABSPX, PRAB, POTS, or KEYSET	TERMINAL TYPE. Enter one of the following values for PTS trunks: • AB250 (PTS trunk configuration specific to the DMS-250 switch) • ABTRK (standard PTS trunk configuration) • PRAB (Primary Rate Access B channels) • ABSPX (PX trunks). This value must accompany a value of PXSPMX in the EXEC field. • POTS (for POTS lines). This value must accompany a value of SPMPEX in the EXEC field. • KEYSET (for keyset lines). This value must accompany a value of SPMKEY in the EXEC field. Entries outside the range indicated for this field are invalid.

MNNODE (continued)

Field descriptions when CLASS=DMSCP (Sheet 7 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	EXEC	SPM250, SPMEX, SPMFX, FXOSPM, PXDTCX, PXSPMX, SPMPEX, or SPMKEX	EXEC LINEUP NAME. Enter the following values for SPM nodes supporting PTS trunks: • SPM250 • SPMEX (For DT, DP, or MF signalling, all 12 trunk types use ABTRK with SPMEX.) • SPMFX • FXOSPM • PXDTCX (For PX trunks that use FX signalling on the DTC). This value must accompany a value of AB250 in the TRMTYPE field. • PXSPMX (for PX trunks on the SPM). This value must accompany a value of ABSPX in the TRMTYPE field. • SPMPEX (for POTS lines). This value must accompany a value of POTS in the TRMTYPE field. • SPMKEX (for keyset lines). This value must accompany a value of KEYSET in the TRMTYPE feld. ***Note:*** For any trunk type that can use FX signalling, you must enter SPMFX or FXOSPM. Entries outside the range indicated for this field are invalid.

Conditional datafill when CLASS=IW

The table that follows lists conditional datafill when you enter IW in field CLASS.

Field descriptions when CLASS=IW (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
FLOOR		0 to 99	FLOOR. Enter the floor where the node is located.
CLKMODE		SYNC	CLOCK MODE. Enter SYNC. SYNC (synchronization mode) is the only valid entry for field CLKMODE.
CLKREF		INTERNAL or LOOP	CLOCK REFERENCE. Enter a clock synchronization reference from the following list: • INTERNAL (The clock synchronizes to the DMS message switch. This is the default value.) • LOOP (The clock synchronizes to the local OC-3 network.) ***Note:*** At initial program loading (IPL), field CLKREF is datafilled with the default value INTERNAL. When an SPM node is connected to an OC-3 SONET network, enter LOOP into field CLKREF to ensure correct OC-3 network timing.
LEDTIMER		0 to 1440	LED TIME-OUT PERIOD. Enter the LED timeout period in minutes. If critical faults have not been detected during the timeout period, the alarm LEDs turn off in order to extend their life. Enter 0 (zero) if the LEDs are to stay on at all times. The default value is 15.
ALRMCTRL		See subfields	ALARM CONTROL INFORMATION. This field consists of a vector of up to five entries in subfields ALARM and ATTR. Each entry controls a particular alarm. Enter $ to select the system default values.

MNNODE (continued)

Field descriptions when CLASS=IW (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	ALARM	SYSB, MANB, ISTB, SYSBNA, MANBNA	ALARM NAME. Enter an alarm name from the following list: • SYSB (system busy) This alarm generates when the node is in system busy state. The default alarm severity is CR. The default action is RPT. • MANB (manual busy) This alarm generates when the node is in manual busy state. The default alarm severity is MJ. The default action is RPT. • ISTB (in-service-trouble) This alarm generates when the node is in-service and it is experiencing non-service-affecting faults. The default alarm severity is MN. The default action is RPT. • SYSBNA (system busy and not accessible) This alarm generates when the node is in SYSB state and a network (for example, ENET or MS) error has caused it to be isolated. The default alarm severity is CR. The default action is RPT. • MANBNA (manual busy and not accessible) This alarm generates when the node is in MANB state, and a network (for example, ENET or MS) error has caused it to be isolated. The default alarm severity is MJ. The default action is RPT.
	ATTR	See subfields	ALARM ATTRIBUTES. This field consists of subfields SEVERITY and ACTION.

Field descriptions when CLASS=IW (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	SEVERITY	NA, MN, MJ, CR	SEVERITY. The severity of the alarm defines its relative importance. Enter a severity from the following list: • NA (no alarm) • MN (minor alarm) • MJ (major alarm) • CR (critical alarm)
	ACTION	NRPT, RPT	ACTION. This subfield indicates the action to be taken when a fault is detected. Enter an action from the following list: • NRPT (no report generated) • RPT (report generated)

Conditional datafill when CLASS=SMG4KDA

The table that follows lists conditional datafill when you enter SMG4KDA in field CLASS.

Field descriptions when CLASS=SMG4KDA

Field	Subfield or refinement	Entry	Explanation and action
SITE		HOST	SITE. Enter the site identification of the HOST node.
FLOOR		0 to 99	FLOOR. Enter the floor where the node is located.

Datafill example

The following shows sample datafill for table MNNODE.

MNNODE (continued)

```
NODEKEY      ALIAS    NODEINFO
-----------------------------------------------------------------------
SPM       0    $ DMSCP 1 SNYC LOOP 15 (COT  60) (DTMF 60) (ECAN 60)
(TONESYN 60) (MF 60) $ (SYSB CR RPT) (MANB MJ RPT) (ISTB MN RPT) (SYSBNA
CR RPT) (MANBNA MJ RPT) (COTLOW MN RPT) (DTMFLOW MN RPT) (ECANLOW MN RPT)
(TONESLOW MN RPT) (MFLOW MN RPT) $ $

SPM       1    $ IW 1 SYNC INTERNAL 15 (SYSB CR RPT) (MANB MJ RPT( (ISTB
MN RPT) (SYSBNA CR RPT) (MANBNA MJ RPT) $

SPM       2    $    SMG4KDA HOST 1

SPM       3    $    DMSCP 1 SNC LOOP 15 (COT 60) (DTMF 60) (ECAN 60)
(TONESYN 60) (MF 60) $ (SYSB CR RPT) (MANB MJ RPT) (ISTB MN RPT) (SYSBNA
CR RPT) (MANBNA MJ RPT) (COTLOW MN RPT) (DTMFLOW MN RPT) (ECANLOW MN RPT)
(TONESLOW MN RPT) (MFLOW MN RPT) $ $
```

Dump and restore

Over the one night process (ONP), SPMs defined in releases before the MSH12 table change are automatically converted to DMSCP class SPMs. The field by field conversions from existing tuples to new tuples follows.

Conversion of existing tuples to new tuples (Sheet 1 of 2)

Existing tuple field name	New tuple field name	Comment
NODEKEY	NODEKEY	No change
ALIAS	ALIAS	No change
	NODEINFO.CLASS	Set to DMSCP automatically over an ONP.
FLOOR	NODEINFO{DMSCP}.FLOOR	
CLKMODE	NODEINFO{DMSCP}.CLKMODE	
CLKREF	NODEINFO{DMSCP}.CLKREF	
LEDTIMER	NODEINFO{DMSCP}.LEDTIMER	
RSRUTLIM	NODEINFO{DMSCP}.RSRUTLIM	
RSRUTLIM	NODEINFO{DMSCP}.ALRMCTRL	

Conversion of existing tuples to new tuples (Sheet 2 of 2)

Existing tuple field name	New tuple field name	Comment
ALRMCTRL	NODEINFO{DMSCP}.ALRMCTRL	
EXECTAB	NODEINFO{DMSCP}.EXECTAB	

Table history

SP14

The following changes were made:

- Added “ABSPX” as a TRMTYP value and “PXSPMX” as a corresponding EXEC value per feature 59014406, “PX trunk support on the SPM.”
- Added “POTS” as a TRMTYPE value and “SPMPEX” as a corresponding EXEC value. Also added “KEYSET” as a TRMTYPE value and “SPMKEX” as a corresponding EXEC value. Both these additoins were for features 59011720, “NGLA IDT MTCE documentation” and 59012259, “NGLA Static Data.”
- Added restrictions for changing CLKREF datafill when employing SPM OC-3 line timing.

MSH12

Table MNNODE is updated by activity a59007841. Tuple layout in table MNNODE is changed to support multi-service hub (MSH)

SPM12 (CSP12)

Feature A59007841 allows table MNNODE to support the Multi-Service Hub. The feature also added field CLASS to table MNNODE.

SPM01 (CSP09)

Table MNNODE was created.

MNPRIIID

Table name

PRI interface identification (MNPRIIID).

Functional description

Table MNPRIIID is a read/write table that is provisioned through table control. It is used to provision a PRI interface ID against the carrier in table MNHSCARR. This table is used only for SPM nodetype used for all supported trunk types.

This table uses a three-part key (node type, node number and circuit number). To optimize access time, this table internally hashes the key as a single field for look-ups.

Datafill sequence and implications

Table MNHSCARR must be datafilled before table MNPRIIID.

Table size

The table MNPRIIID does not allocate store directly. The OAM&P database allocates store. The minimum size is 0; the maximum size is 5,376 tuples; CC restart type required to increase size is not applicable.

Datafill

The following table lists datafill for table MNPRIIID.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
NODETYPE		SPM	Peripheral type is always SPM.
NODEID		0-63	The SPM number.
CCTNO		0-181	Circuit number.
INTID		0-127	PRI interface ID.

Datafill example

The following example shows sample datafill for table MNPRIIID.

MAP display example for table MNPRIIID

```
Nodetype NODENO CCTNO INTID
---------------------------
SPM       0        0     1
SPM       0        1     1
SPM      63      181   127
```

Table history

SP11

Feature AF7786 introduced table MNPRIIID.

MNPRTGRP

Table name

Management Network Protection Group (MNPRTGRP)

Functional description

Table MNPRTGRP is one of six DMS-Spectrum Peripheral Module (SPM) configuration tables. Each tuple in this table identifies a protection group within a switch.

A protection group is a group of objects that form protecting-protected relationships from a functional or service perspective. Members of the protection group can be peripherals, circuit packs, or links. Each group defines the protection relationship between entities. A maximum of 28 protection groups can be defined for each SPM. Typical maintenance data includes group types and related group attributes, such as protection switching mode and direction.

Datafill sequence and implications

External routing must be supported on the DMS switch before SPM nodes can be datafilled. Routing is set to external by using the C7RTR command. For more information on the C7RTR command, refer to the appropriate NTP.

Datafill tables in the following order for ISUP trunks:

1. PMLOADS

   Note: Table PMLOADS specifies the location of a particular load file. Datafill PMLOADS only once. There is no need to datafill PMLOADS for each SPM added to the system unless a new load file entry has to be added to table PMLOADS.

2. LOGCLASS

   Note: Feature BV1572 automatically suppresses the generation and reporting of selected trunk logs. To unsuppress a log, datafill the log in table LOGCLASS. Datafill N in field SUPPRESS to ensure log generation and reporting. Refer to the *Data Schema Reference Manual* or the data schema section of the *Translation Guide*, as appropriate, for more information about table LOGCLASS. The following 17 logs are affected:

   - TRK110 through TRK123
   - TRK162

- TRK182
- TRK183

3. MNPRTGRP
4. MNNODE
5. MNSHELF
6. MNCKTPAK
7. MNLINK
8. MNHSCARR
9. CLLI
10. MCLLICDR
11. TRKGRP
12. TRKSGRP
13. TRKMEM
14. ISUPDEST
15. C7TRKMEM

Datafill tables in the following order for PTS trunks:

1. PMLOADS
2. LOGCLASS
3. MNPRTGRP
4. MNNODE
5. MNSHELF
6. MNHSCARR
7. CLLI
8. MCLLICDR
9. TRKGRP
10. TRKSGRP
11. TRKMEM

Table size

0 to 1,792 tuples

MNPRTGRP (continued)

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table MNPRTGRP.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY			GROUP KEY. The subfields are NODETYPE, NODEID, GRPTYPE, and GRPID.
	NODETYPE	SPM	NODE TYPE. Enter SPM.
	NODEID	0-63	NODE IDENTIFIER. Enter the SPM node identifier. The default is 0.
	GRPTYPE	OC3_GRP, DSP_GRP, VSP_GRP, STS3L_GRP, ATM_GRP, DLC_GRP, IEM_GRP, STM_GRP, CARR_GRP	GROUP TYPE. Enter the protection group type as follows: • OC3_GRP (protection group for OC-3 circuit pack) • DSP_GRP (protection group for DSP circuit pack) • VSP_GRP (protection group for VSP circuit pack) • STS3L_GRP (protection group for STS-3 line carrier) • ATM_GRP (protection group for ATM circuit pack) • DLC_GRP (protection group for Data Link Controller circuit pack) • IEM_GRP (protection group for IEM RM on the MG4000) ***Note:*** Provisioning and maintenance of the LSA devices is done through the element manager. Do not manually provision this value. • STM_GRP (protection group for the STM-1 circuit pack) • CARR_GRP (protection group for protection switching at a carrier level)

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	GRPID	1-28	GROUP IDENTIFIER. Enter the protection group identifier. The default value is 1.
GRPINFO	SELECTOR	STM_GRP, ATM_GRP, VSP_GRP, OC3_GRP, IEM_GRP, DLC_GRP, DSP_GRP, CARR_GRP, STS3L_GRP	GROUP INFORMATION. This protection group information area is refined for each group type: STM_GRP, ATM_GRP, VSP_GRP, OC3_GRP, IEM_GRP, DLC_GRP, DSP_GRP, CARR_GRP, or STS3L_GRP. Refer to the following refinements.

SELECTOR = OC3_GRP, DSP_GRP, VSP_GRP, ATM_GRP, STM_GRP, or IEM_GRP

If the value in field SELECTOR is OC3_GRP, DSP_GRP, VSP_GRP, ATM_GRP, STM_GRP, or IEM_GRP datafill subfields MODE and ALRMCTRL as described in the following table.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	MODE	See refinement	PROTECTION SWITCHING MODE. This field consists of subfield SWCHMODE.
	SWCHMODE	NRVTV	NON-REVERTIVE PROTECTION SWITCHING MODE. Enter NRVTV
	ALRMCTRL	See refinements	ALARM CONTROL. Each entry controls a particular alarm for the protection group. To accept the system default values, enter $. The subfields are ALARM and ATTR.
	ALARM	NOSPARE	ALARM NAME. The valid alarm is NOSPARE (no sparing cabability). The NOSPARE alarm generates when the protection group has lost its sparing capability. This alarm occurs when no spare circuit pack is provisioned for the protection group or inactive circuit packs are out of service.

MNPRTGRP (continued)

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	ATTR	See subfields	ALARM ATTRIBUTES. The subfields are SEVERITY and ACTION.
	SEVERITY	NA, MN, MJ, CR	SEVERITY. This field indicates the severity of the alarm. Valid severities are • NA (no alarm severity) • MN (minor alarm) • MJ (major alarm, the default value) • CR (critical alarm)
	ACTION	RPT, NRPT	ACTION. This field indicates the action to take when an alarm is detected. Valid entries are • RPT (report the alarm, the default value) • NRPT (do not report the alarm)

SELECTOR = STS3L_GRP

If the value in field SELECTOR is STS3L_GRP, datafill subfields APSCFG, MODE and SWCHDIR as described in the following table.

Field	Subfield or refinement	Entry	Explanation and action
	APSCFG	1PLUS1	AUTOMATIC PROTECTION SWITCHING CONFIGURATION. Enter 1PLUS1.
	MODE	See refinement	PROTECTION SWITCHING MODE. This field consists of subfield SWCHMODE.
	SWCHMODE	NRVTV	NON-REVERTIVE PROTECTION SWITCHING MODE. Enter NRVTV
	SWCHDIR	UNI_DIR	PROTECTION SWITCHING DIRECTION. Enter UNI_DIR (uni-directional) switching.

SELECTOR = CARR_GRP

If the value in field SELECTOR is CARR_GRP, datafill subfields APSCFG, MODE, SWCH_DIR, SIMPLEX_ALM, and SIMPLEX_LOG as described in the following table.

Field	Subfield or refinement	Entry	Explanation and action
	APSCFG	1PLUS1	AUTOMATIC PROTECTION SWITCHING CONFIGURATION. Enter 1PLUS1.
	MODE	See refinement	PROTECTION SWITCHING MODE. This field consists of subfield SWCHMODE.
	SWCHMODE	NRVTV	NON-REVERTIVE PROTECTION SWITCHING MODE. Enter NRVTV
	SWCH_DIR	UNI_DIR	PROTECTION SWITCHING DIRECTION. Enter UNI_DIR (uni-directional) switching.
	SIMPLEX_ALM	N,Y	SIMPLEX ALARM. This boolean value indicates whether the protection group generates simplex alarms. A simplex condition exists when no protection switching is possible. ***Note:*** This facility is not supported for STM-1.
	SIMPLEX_LOG	N,Y	SIMPLEX LOG. This boolean value indicates whether this proection group generates simplex logs. A simplex condition exists when no protection switching is possible. ***Note:*** This facility is not supported for STM-1.

Datafill example

The following shows sample datafill for table MNPRTGRP.

MNPRTGRP (end)

```
 GRPKEY                                                          GRPINFO
-------------------------------------------------------------------------
 SPM 0    DSP_GRP   1    DSP_GRP        NRV            (NOSPARE MJ RPT)$
 SPM 0    VSP_GRP   1    VSP_GRP        NRVTV          (NOSPARE MJ RPT)$
 SPM 0    OC3_GRP   1    OC3_GRP        NRVTV          (NOSPARE MJ RPT)$
 SPM 0    STS3L_GRP 1    STS3L_GRP      1PLUS1 NRVTV    UNI_DIR
```

Table history

MMP12

Feature 59008275 adds CARR_GRP for STM1M carriers to range of valid protection group types.

SP12 (CSP12)

Feature AF7583 adds DLC_GRP to the range of valid PROTGRPS.

SR 50134464 adds IEM_GRP, STM_GRP, and CARR_GRP to the range of valid PROTGRPS.

SP11 (CSP11)

Feature AF7378 adds ATM_GRP to the range of valid PROTGRPS.

SPM01 (CSP09)

Table MNPRTGRP was created.

FEATCNTL

Table name

Feature Control (FEATCNTL)

Functional description

Table FEATCNTL controls feature digit collection on the DMS-Spectrum Peripheral Module (SPM) ISUP trunks. It provides datafill for corresponding supervision control of the type of DTMF digit detection times used for reorigination (or similar type features such as conference calling or call redirection) on trunks that are hosted on SPM.

For SPM, the digit detection times are datafilled in table FEATCNTL. The table can be accessed by call processing by office parameter control, through an index stored in table TRKSGRP (or TRKGRP), or other means.

The data from table FEATCNTL is transferred in advance to SPM by way of the distributed data manager (DDM). An index to the appropriate tuple in table FEATCNTL is passed to SPM in supervision from the computing module (CM) call processing on a per call basis. Alternatively, the universal tone receiver (UTR)/special tone receiver (STR) supervision can be used to drive SPM in the way the digital trunk controller (DTC) receivers are used, or alternate supervision can be provided to download the FEATCNTL data.

Datafill sequence and implications

The planned order to one night process (ONP) table FEATCNTL is to have it one night processed and datafilled prior to table TRKGRP and table TRKSGRP. Thus, the potential table TRKSGRP index method could be used for accessing table FEATCNTL tuple information.

Datafill rules

In order to properly datafill table FEATCNTL, consider the following rules:

- Tuple 0 can not be added, deleted, or changed. Tuple 0 represents the default tuple for short duration. The following shows the default tuple for short duration.

```
0 (OCT) $ MS500 MS0 $
```

- Tuple 1 cannot be added, deleted, or changed. Tuple 1 represents the default tuple for long duration. The following shows the default tuples for long duration.

FEATCNTL (continued)

```
1 (OCT) $ MS500 MS0 $
```

- If the ALL value is entered in the FDTMFDIG vector, it must be the first and only value.
- The NONE value can not be entered in the FDTMFDIG vector.
- The INTDTVAL can be datafilled only if FDTMFDIG and FDIGTVAL are already datafilled.
- If INTDTVAL is equal MS0, the SDTMFDIG vector can not be datafilled.
- If the ALL value is entered in SECONDDG vector, it must be the first and only value.
- If the NONE value is entered in SDTMFDIG vector, it must be the first and only value.

Error messages

The following error messages generate when the datafill rules for table FEATCNTL, as previously defined, are violated.

(Sheet 1 of 2)

Error message	Explanation and action
TUPLE 0 ALREADY EXISTS	An attempt was made to add tuple index 0.
TUPLE 0 CAN NOT BE DELETED	An attempt was made to delete tuple index 0.
TUPLE 0 CAN NOT BE CHANGED	An attempt was made to change tuple index 0.
TUPLE 1 ALREADY EXISTS	An attempt was made to add tuple index 1.
TUPLE 1 CAN NOT BE DELETED	An attempt was made to delete tuple index 1.
TUPLE 1 CAN NOT BE CHANGED	An attempt was made to change tuple index 1.

(Sheet 2 of 2)

Error message	Explanation and action
THE ALL VALUE CAN ONLY BE USED WHEN ADDING/CHANGING A TUPLE. IT MUST BE THE FIRST AND ONLY ENTRY INTO THE FDTMFDIG FIELD	An attempt was made to add the value ALL to the FDTMFDIG field, but this value is not the first and only value in this vector.
THE NONE VALUE CAN ONLY BE USED WHEN ADDING/CHANGING A TUPLE. IT MUST BE THE FIRST AND ONLY ENTRY INTO THE FDTMFDIG FIELD	An attempt was made to add the value NONE to the FDTMFDIG field, but this value is not the first and only value in this vector.
YOU CAN NOT ADD OR CHANGE A SECOND DIGIT VECTOR IF THE FIRST DIGIT VECTOR IS NOT DATAFILLED	An attempt was made to datafill the second digit vector while the first digit vector was not datafilled.
YOU CAN NOT DATAFILL “NONE" IN THE FDTMFDIG FIELD	An attempt was made to datafill the value NONE in the first digit vector.
THE ALL VALUE CAN ONLY BE USED WHEN ADDING/CHANGING A TUPLE. IT MUST BE THE FIRST AND ONLY ENTRY INTO THE SDTMFDIG FIELD	An attempt was made to add the value ALL to SDTMFDIG field, but this value is not the first and only value in this vector.
THE NONE VALUE CAN ONLY BE USED WHEN ADDING/CHANGING A TUPLE. IT MUST BE THE FIRST AND ONLY ENTRY INTO THE SDTMFDIG FIELD	An attempt was made to add the value NONE to SDTMFDIG field, but this value is not the first and only value in this vector.
YOU CAN NOT ADD A SECOND DIGIT VECTOR WHEN THE INTERDIGIT TIMER VALUE IS 0	An attempt was made to datafill the SDTMFDIG field, but INTDTVAL is datafilled with the value ms0.
YOU CAN NOT ADD AN INTERDIGIT TIMER VALUE WITH NO SECOND DIGIT SCAN PATTERN ASSOCIATED WITH IT	An attempt was made to datafill INTDTVAL as a none value $ when the SDTMFDIG was datafilled with a value other than ms0.

Table size

2 to 256 tuples

FEATCNTL (continued)

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table FEATCNTL.

(Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
FEATKEY		0 to 255	FEATURE CONTROL KEY. Enter a feature control key value. This is the key field to table FEATCNTL.
FDTMFDIG		D1, D2, D3, A, D4, D5, D6, B, D7, D8, D9, C, AST, D0, OCT, D, ALL, NONE	The FDTMFDIG field consists of a vector of digit identifications. Each element in the vector represents a possible first DTMF digit for which SPM could be scanning. Note the following: • Entering ALL causes the entire range of 0 to 9, A to D, and * to # to be initialized as the possible first digits for which SPM could scan. • NONE is treated like $ and indicates an empty vector. The NONE value is not visible when a tuple is added. However, NONE is not allowed in FDTMFDIG. • The default value is OCT.
Note: The default values apply on tuple index 0 and 1 only.			

FEATCNTL (continued)

(Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
FDIGTVAL ***Note:*** The default values apply on tuple index 0 and 1 only.		ms40, ms50, ms60, ms70, ms80, ms90, ms100, ms200, ms300, ms400, ms500, ms600, ms700, ms800, ms900, ms1000, ms1100, ms1200, ms1300, ms1400, ms1500, ms1600, ms1700, ms1800, ms1900, ms2000, ms2100, ms2200, ms2300, ms2400, ms2500, ms2600, ms2700, ms2800, ms2900, ms3000	The FDIGTVAL field is entered as a character value representing the time in milliseconds. The default values are ms50 for tuple 1 and MS500 for tuple 2. There are no default values for the remaining tuples.

FEATCNTL (continued)

(Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
INTDTVAL		ms0, ms40, ms50, ms60, ms70, ms80, ms90, ms100, ms200, ms300, ms400, ms500, ms600, ms700, ms800, ms900, ms1000, ms2000, ms3000, ms4000, ms5000, ms6000, ms7000, ms8000, ms9000, ms10000, ms11000, ms12000, ms13000, ms14000, ms15000, ms16000, ms17000, ms18000, ms19000, ms20000, ms21000, ms22000, ms23000, ms24000, ms25000, ms26000, ms27000, ms28000, ms29000, ms30000	The INTDTVAL field is entered as a character value representing the time in milliseconds. If FDTMFDIG is not datafilled, the FDIGTVAL datafill will not be allowed. The default value is ms0.
Note: The default values apply on tuple index 0 and 1 only.			

(Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
SDTMFDIG		D1, D2, D3, A, D4, D5, D6, B, D7, D8, D9, C, AST, D0, OCT, D, ALL, NONE	The SDTMFDIG field consists of a vector of digit identifications. Each element in the vector represents a possible second DTMF digit for which SPM could be scanning. Note the following: • Entering ALL causes the entire range of 0 to 9, A to D, and * to # to be initialized as possible second digits for which SPM could scan. • NONE (the default value) is treated like $ and indicates an empty vector. The NONE value is not visible a when tuple is added.
Note: The default values apply on tuple index 0 and 1 only.			

Datafill example

The following shows an example tuple entry for table FEATCNTL. In this example, the FDTMFDIG indicates either the asterisk or octothorpe can be received as a valid first digit. There is a feature-digit duration value of 500 ms and an inter-digit duration value of 100 ms. Since the INTDTVAL value is greater than 0, this tuple indicates more than one digit is expected. For this reason, the SDTMFDIG field should have a digit pattern entered. The SDTMFDIG field is set to look for only an octothorpe. In terms of a digit pattern for which to scan, this tuple indicates to collect two digits—either *# or ##. If a single digit is required, a different tuple in FEATCNTL must be used.

```
9  (AST)  (OCT)  $  MS500  MS100  (OCT)  $
```

FEATCNTL (continued)

Supplementary information

Dump and restore

If the FEATCNTL table is not present on the dump side, but is present on the restore side, this table comes up empty on the restore side after ONP. If table FEATCNTL is present on both the dump and restore sides prior to ONP, all the tuples in the dump side are present on the restore side after the ONP.

If the TRKSGRP index method is the method chosen for accessing table FEATCNTL tuple information, table FEATCNTL needs to be restored before table TRKSGRP.

DDM registration of table FEATCNTL for SPM

DDM background

The DDM is a DMS switch mechanism used to distribute data from the CM to multiple peripherals in the office. Each peripheral has a copy of the same data registered to the DDM. The DDM on the CM updates each peripheral with its registered data on data synchronization and dynamic updates/changes to the registered data.

The term *data synchronization* means the peripherals are undergoing a state change. For example, manbusy (ManB) changes to in-service (InSv) or offline (OffL) changes to ManB, so a fresh copy of the application data needs to be sent to those peripherals. The registration of the application table indicates what state changes triggers a DDM data synchronization of the application data. For dynamic updates, the application data has been changed (for example, by table control if it is a datafillable table), and all of the peripherals registered for that table need to be updated with the changed data. Depending on how the application table is registered to the DDM, all or some of the peripherals in the office could be updated with the changed data.

The DDM also provides services to allow the applications on the CM to audit the copies of the registered data on the peripherals off the CM. This audit mechanism allows the CM application to send copies of the registered data to the peripherals; the peripherals can send back their copy of the same data to the CM. If the application on the CM detects a difference, the application can choose to update the data on the peripherals through the DDM. The audit time is fixed in the CM software.

Historically, the DDM has been used to register the CCS7 data for the office, such as table C7LKSET or C7RTESET for the LIU7s and DTCs.

Use of DDM for table FEATCNTL on SPM

The DDM is used to register the FEATCNTL data for all SPMs in an office. Data synchronization and dynamic updating to the SPM for this data is

supported. In terms of data synchronization, the FEATCNTL table is registered such that it is triggered only on a state change from ManB to InSv. A maximum of 256 tuples are managed by the DDM for this table and directly depends on the datafill in FEATCNTL. The term *dynamic updating* means that when table FEATCNTL is changed, new copies of FEATCNTL data are downloaded to all SPMs in the office. The application on the CM provides a means to audit the FEATCNTL data on the SPMs. If any discrepancies are found, the SPM is updated with new copies of the data. The audit time chosen is once every 60 minutes.

DTMF supervision to access table FEATCNTL on SPM

DTMF or feature digit collection supervision holds the appropriate index to the tuple in table FEATCNTL to control the DTMF receiver for the particular call involved. If the index is determined to be inappropriate when received by the SPM, the default of the first index in the table is used to control the DTMF receiver on the SPM. If the default tuple is in error, CallP returns an indication to the CM to treat the call.

Either UTR/STR supervision from the DTCs or DTMF supervision can be used to inform the SPM for digit collection. However, existing UTR/STR supervision cannot transfer the new data in table FEATCNTL.

Table history

SPM01 (CSP09)

This table was created.

MODEMPRO

Table name

Modem Protocol Name Definition Table

Functional description

Table MODEMPRO defines the various names associated with the modem protocols that are used in the table BCDEF. The names defined can have a maximum length of 32 characters.

Datafill sequence and implications

Table BCDEF must be datafilled after table MODEMPRO.

Note: Do not enter default tuples at the time of a load build. However, this is a symbolic range command (SRCOM) table; that is, the following string must be entered in an EXT file:

```
>|SRCOM 'MODEMPRO' ON 'MODEM_PROTOCOL_NAME'
```

Table size

0 to 64 tuples

Datafill

The following table lists datafill for table MODEMPRO.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
VALUE		see subfield	*Value* This field consists of subfield UNINT.
	UNINT	0 to 32 767	*Integer value* Enter the integer value associated with the string.
SYMBOL		alphanumeric (up to 32 characters)	*Symbol* Enter the name of the modem protocol.

Datafill example

The following example shows sample datafill for table MODEMPRO.

MODEMPRO (end)

MAP display example for table MODEMPRO

```
VALUE                                SYMBOL
-------------------------------------------------------------------------
2            MODEMPRO
```

MNSHELF

Table name

Management Network Shelf (MNSHELF)

Functional description

This table is one of six DMS-Spectrum Peripheral Module (SPM) configuration tables. An SPM consists of two shelves. Each tuple in this table identifies a shelf on a particular node. The data maintained in this table includes the shelf identifier and physical shelf location.

Datafill sequence and implications

Datafill tables in the following order:

1. table PMLOADS

   Note: Table PMLOADS specifies the location of a particular load file. Datafill PMLOADS only once. There is no need to datafill PMLOADS for each SPM added to the system unless a new load file entry has to be added to table PMLOADS.

2. table MNPRTGRP
3. table MNNODE
4. table MNSHELF
5. table MNCKTPAK
6. table MNLINK
7. table MNHSCARR

If the SPM referenced by field NODETYPE and NODEID of table MNSHELF tuple has not been added to table MNNODE, the following message displays:

```
Failed to find the specified SPM
```

Table size

0 to 128 tuples

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table MNSHELF.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
SHLFKEY		See subfields	SHELF KEY. Subfields are NODETYPE, NODEID, and SHELFID.
	NODETYPE	SPM	NODE TYPE. Enter SPM.
	NODEID	0 to 63	NODE IDENTIFIER. Enter the SPM node identifier. The default is 0. ***Note:*** If the SPM identified in NODETYPE and NODEID has not been added to table MNNODE, the message “Failed to find the specified SPM" displays.
	SHELFID	0 or 1	SHELF IDENTIFIER. Enter the shelf identifier. The lower shelf is shelf 0; the upper shelf is shelf 1. The default is 0.
FRTYPE		SPME, SMGE	FRAME TYPE. Enter SPME or SMGE. • SMGE (Successive Media Gateway Equipment) frametype required for SMG4KD (Succession Media Gateway 4000 Distributed Access) class SPM indicated as the intended functionality of the SPM's datafill. • SPME (SPM equipment) frametype required for DMSCP (DMS call processing) and IW (interworking) class. SPM indicated as the intended functionality of the SPM's datafill.
FRNO		0-511	FRAME NUMBER. Enter the frame number.
ROW		A-H, J-N, P-Z, AA-HH, JJ-NN, PP-ZZ	ROW. Enter the row where the frame is located.
FRPOS		0 to 99	FRAME POSITION. Enter the frame position.

MNSHELF (continued)

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
SHPOS		0 to 77	SHELF POSITION. Enter the shelf position in inches. The recommended positions are 6, 21, 43, and 59. ***Note:*** In each SPM frame, there are a maximum of two SPMs—upper and lower SPM. Each SPM has a maximum of two shelves—bottom and upper shelf. The frame mounting positions of each shelf are “6" for lower SPM bottom shelf; “21" for lower SPM upper shelf; “43" for upper SPM lower shelf, and “59" for upper SPM upper shelf. The shelf position is specified in terms of the count of shelf mounting holes from the bottom of the frame.
FRPEC		NTLX91AA, NTLX50AA, NTLX91BA	FRAME PEC. Enter the frame product engineering code (PEC). • NTLX91AA Frame PEC required when installing a new DMSCP class SPM. • NTLX50AA is no longer used for new SPM deployment. It is still valid for SPMs deployed before this software release. • NTLX91BA Frame PEC is required when you install a new IW and SMG4KDA class SPM.
SHPEC		NTLX51AA, NTLX53AA, NTLX51BA	SHELF PEC. Enter the shelf PEC. Valid values are • NTLX51AA (two high-speed slots, double-height shelf, the default). This is the shelf PEC required for DMSCP- class SPMs. • NTLX53AA (two high-speed slots, single-height shelf). This is no longer used. • NTLX51BA (four high-speed slots, double-height shelf. This is the shelf PEC required for IW- and SMG4KDA-class SPMs.

Datafill example

The following shows sample datafill for table MNSHELF.

```
 SHLFKEY  FRTYPE   FRNO      ROW  FRPOS     SHPOS      FRPEC     SHPEC
-------------------------------------------------------------------------
 SPM 0 0   SPME      3         A     13         6   NTLX91AA  NTLX51AA
 SPM 0 1   SPME      3         A     13        21   NTLX91AA  NTLX51AA
 SPM 1 0   SPME      2         B     12         6   NTLX91BA  NTLX51BA
 SPM 1 1   SPME      2         B     12        21   NTLX91BA  NTLX51BA
 SPM 2 0   SMGE      4         C     14         6   NTLX91BA  NTLX51BA
 SPM 2 1   SMGE      4         C     14        21   NTLX91BA  NTLX51BA
 SPM 3 0   SPME      5         D     15         6   NTLX91AA  NTLX51BA
 SPM 3 1   SPME      5         D     15        21   NTLX91AA  NTLX51BA
```

Table history

MSH12

Table MNSHELF is updated to include three additional fields.

SPM12 (CSP12)

Feature A59007841

- changed fields FRTYPE, FRPEC, and SHPEC to accommodate the multi-service hub designated by the SPM class when you install a new SPM
- added PEC values NTLX91AA and NTLX91BA to field FRPEC
- added PEC value NTLX51BA to field SHPEC
- added frame type value SMGE to field FRTYPE

SPM01 (CSP09)

Table MNSHELF was created.

MPC

Table name

Multiprotocol Controller Table

Functional description

Table MPC contains the values required to implement the multiprotocol controller (MPC) in the DMS switch. Table MPC identifies the MPC card hardware to the DMS central control (CC). Table MPC requires one entry or tuple for each MPC.

Each entry contains the following:

- an index number for the MPC
- the number of the input/output controller (IOC) shelf where the card resides
- the card circuit number
- the product engineering code (PEC)
- the identification (ID) for the preferred download file

The device that contains the download file can appear before tuple entry in table MPC. The device can appear in a list before the first manual download. In these occurrences, a subsequent download or return to service (RTS) normally succeeds and does not list the download file.

Datafill sequence and meaning

Enter data in table IOC before table MPC.

Enter data in table MPC before table MPCLINK. Table MPCLINK provides protocol support and link information for cards configured in table MPC.

Table size

0 to 256 tuples

Datafill

The datafill for table MPC appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
MPCNO		see subfield	*Multiprotocol controller number* This field contains subfield K.
	K	0 to 255	*Multiprotocol controller number key* Enter the number of one multiprotocol controller (MPC). Number the MPC cards as desired. This subfield does not have a default value.
MPCIOC		0 to 19	*Multiprotocol controller input/output controller* Enter the number of the input/output (IOC) shelf on which the MPC card sits. This subfield does not have a default value.
IOCCCT		0, 4, 8, 12, 16, 20, 24, 28, 32	*Input/output circuit number* Enter the slot position on the IOC shelf multiplied by 4, from 0 (zero) to 32. Entries out of this range are not correct. This subfield does not have a default value.

MPC (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
EQ		1X89AA, 1X89BA, 1X89BB FX30AA FX30BA	*Equipment code* Enter the Northern Telecom (NT) product engineering code (PEC): 1X89AA for the MPC card or 1X89BA/BB for the enhanced MPC (EMPC) card. Enter FX30AA if the specified IOC is an IOM. Entries out of this range are not correct. This subfield does not have a default value.
DLDFILE		alphanumeric (8 characters)	*Download file* Enter a file name that begins with MPC. Enter an X for X25ORIG, 0 (zero) for X2580), 4 for X.25, or A for asynchronous protocol software. Enter four alphanumeric characters that designate the Telecom software release cycle and the load designation. An example of a file name is MPCX33AB. Software download files are interchangeable between MPC and EMPC. For IOM MPC, use default name IOM$LOAD. This subfield does not have a default value. ***Note:*** For automatic location identification (ALI), the system enters data in field DLDFILE. The system enters data to specify the asynchronous protocol software download files for the current MPC load. The fourth character of the download filename is the letter A.

Datafill example

Sample datafill for table MPC appears in the following example.

MAP example for table MPC

```
MPCNO MPCIOC IOCCCT     EQ  DLDFILE
_____________________________________________________

    0      0     12 1X89AA MPCX33AB
    1      1     12 1X89AA MPCX33AB
```

Table history

CSP06

The IOM PEC FX30AA/AB was added to EQ field and IOM default information to DLDFILE field in CSP06.

CSP02

The information required to change download file name in field DLDFILE in section “Supplementary information" was added in CSP02.

BCS36

Subfield K was added in BCS36.

BCS35

The range of field MPCIOC was increased to 19 in BCS35.

Additional information

Information on how to enter data in table MPC from a maintenance and administration position (MAP) terminal appears in this section.

When you enter data in table MPC from a MAP position complete the following steps. Complete these steps to identify the MPC (NT1X89AA) and EMPC (NT1X89BA/BB) cards to the CC:

1. List the device directories of the download files to place the files in the user directory. The CC recognizes the download files in the user directory. If the device directories for the download files do not appear, a warning

MPC (end)

message appears. The warning message appears when the system writes the tuple to table MPC.

2. Add the following information in table MPC:
   - the MPC numbers
   - the IOC shelves and circuit positions where the MPC and EMPC cards are configured
   - the NT PECs for the cards
   - the download file names for the MPC and EMPC cards

The following limits apply when you enter data in table MPC from a MAP terminal:

- You can delete tuples in table MPC under the following conditions:
  — the MPCs that correspond are offline
  — you delete the associated tuples in table MPCLINK
- You can change field DLDFILE in a tuple of table MPC. To change other fields, delete the tuple and enter the tuple again. The file name in field DLDFILE can change to a file name of the same load. For example, to change file name MPC434R1, download MPC402BX. These files are 1984 X25 protocol versions. You can not download a 1980 X25 protocol version if table MPC contains a 1984 X25 protocol. An example of a 1980 X25 protocol version is MPC003AB. If the system downloads a wrong protocol version, the system generates the following error message:

  ```
  NEW DOWNLOAD FILE INDICATES CHANGE IN BOARD PROTOCOL.   MPC
  MUST BE DELETED AND RE-ADDED TO CHANGE PROTOCOL.  PROCESSING
  ERROR.
  ```

- List the directory of the storage device, that contains the download file, where the CC can recognize the file. List this directory before you enter a tuple. The CC must recognize the file at the time of entry. List the directory to place the file in the user directory. For example, you can perform the command interpreter (CI) command LISTVOL on a disk like D000XPM, to list the download file. If you do not list the download file, entry of data succeeds with a warning that the download can fail. In other occurrences, you can add a tuple to table PMLOADS. Add this tuple to identify the image name and device name for the download file.

MPCFASTA

Table name

Multiprotocol Controller Fast Applications

Functional description

Table MPCFASTA identifies applications that use the multiprotocol controller (MPC) fast utility. The fast utility is a fast input and output interface through the MPC. Each application has a tuple in table MPCFASTA.

The following information appears in table MPCFASTA:

- the application name
- the frequency at which the system sends audit messages
- the units that apply to the frequency number
- the type of link audit failure recovery procedure
- a maximum of 16 MPC numbers, link numbers, and channel numbers (MLCLIST) for the application

The following considerations apply to the applications:

- If the application does not support an audit, set field AUDITFRQ to 0. Entries in field AUDITFRQ in units of 10 s or less are acceptable. For these unit entries, the system generates a warning about the real time impact frequent audits.
- Two MPCs for each application are recommended for reliability. The first release of this utility supports links 2 and 3.

See table MPC for related information.

Datafill sequence and meaning

Enter data in the tables MPC and MPCLINK before you enter data in table MPCFASTA.

Table size

0-16 tuples

MPCFASTA (continued)

Datafill

Datafill for table MPCFASTA appears in the following table.

Field descriptions (Sheet 1 of 4)

Field	Subfield	Entry	Explanation and action
INDEX		see subfield	Application index. This field contains subfield K.
	K	alphanumeric (1 to 8 characters)	Application name. Enter an application name. This field is the key for table MPCFASTA. This field represents the application identifier (ID) available for multiprotocol controller (MPC) circuits. The MPC is an open interface. The user can enter a new or current application to allow the application to function with the MPC. The MPC is a generic transport device. The documentation of the application provides information on specified applications. If the entry of data in table SERVICES occurs, services DASERV and INTCERV require applications TOPSVR1 and TOPSVR2. The TOPSVR1 and TOPSVR2 cannot run the same service, DASERV or INTCSERV. Enter M or L in tables MPC and MPCLINK. Make one entry in table MPCFASTA for each type of automatic location identification (ALI) system that connects to the tandem. The entry of all the links that serve CCI databases must occur.

Field descriptions (Sheet 2 of 4)

Field	Subfield	Entry	Explanation and action
			Enter one of the following APPLIDs if the application is Remote Call Event Record: • 911RCER1 • 911RCER2 • 911RCER3 • 911RCER4 • 911RCER5 • 911RCER6 Enter OPN911AS if the application is E911 for multiprotocol controller card links with direct access to an ALI controller. This protocol generates a pseudo ANI (pANI) location for wireless calls. Enter ENH911AS to support data transmission from the MPC to an external ALI database for E911 calls terminating to a line or ACD public safety answering point (PSAP). Unlike OPN911AS, this protocol generates both the pANI and the mobile directory number (MDN) number of a wireless caller. Enter WLS911 for E911wireless calls terminating to a line appearance on a digital trunk (LDT) PSAP. Enter ATT911AS for the links that serve the AT&T controllers that connect to the switch. The Traffic Operator Position System (TOPS) personal audio response system (PARS) application uses table MPCFASTA in stand-alone and host offices.
AUDITYPE		ACTIVE or IDLE	Audit type. Enter the type of audit that runs on the MPC link channel (MLC). Enter ACTIVE for a continuous audit. Enter IDLE to run audits when traffic is not present. The default value is IDLE.

MPCFASTA (continued)

Field descriptions (Sheet 3 of 4)

Field	Subfield	Entry	Explanation and action
AUDITFRQ		0-255	Audit frequency. Enter the time between audits of idle permanent virtual circuits (PVCs). Enter the time in minutes or seconds. See field UNITS. Enter 0 if the application does not support the audit. The E911 Remote Call Event Record feature does not support audits. Enter 0 if the entry of one of the following appears in field INDEX: • 911RCER1 • 911RCER2 • 911RCER3 • 911RCER4 • 911RCER5 • 911RCER6 ***Note:*** When field AUDITFRQ is 0, audits do not run on the MLCs.
UNITS		MINUTES or SECONDS	Audit frequency units. Enter the unit of measure that applies to the entry in field AUDITFRQ.

Field descriptions (Sheet 4 of 4)

Field	Subfield	Entry	Explanation and action
RECOVERY		ENHANCED or REGULAR	Recovery. Enter ENHANCED to indicate that the application on link-audit failure requires a reset or initialization at the protocol level when link-audit failure occurs. Enter REGULAR to continue the current process of error recovery. The system does not support audits if field INDEX contains one of the following: • 911RCER1 • 911RCER2 • 911RCER3 • 911RCER4 • 911RCER5 • 911RCER6 If field INDEX contains these entries, enter REGULAR. • ATT911AS • OPN911AS • ENH911AS • WLS911
MLCLIST		see subfields	Multiprotocol controller link channel list. This field contains subfields M, L, and C. You can enter a maximum of 16 three-number sets that represent MLC. Separate each subfield with a single space. If you require less than 16 MLCs, end the list with a dollar sign ($). An MLC contains one MPC, one MPC link, and one link channel. For example, 1 2 3 indicates MPC 1, link 2 on MPC 1, and channel 3 on link 2.
	M	0-255	MPC. Enter the number of the MPC.
	L	2 or 3	Link. Enter the number of the MPC link.
	C	1-255	Channel. Enter the number the MPC link channel.

MPCFASTA (continued)

Datafill example

Sample datafill for table MPCFASTA appears in the following example.

MAP example for table MPCFASTA

```
INDEX   AUDITYPE   AUDITFRQ   UNITS    RECOVERY
                                                  MLCLIST
_____________________________________________________________
TOPSVR1   IDLE      1          MINUTES  REGULAR
                                                 (1 2 1)$
```

Table history

NA012

The E911 Wireless ANI Interface feature added the protocols ENH911AS and WLS911 to field INDEX.

NA006

The APPLIDs 911RCER3, 911RCER4, 911RCER5, and 911RCER6 were added to field INDEX in NA006.

Notes about table SERVICES in field K are changed to reflect changes in table SERVICES by feature AN1844 in functionality Multiple DA System I, OSDA00001.

BCS36

Field AUDITYPE and subfields K, M, L, and C were added in BCS36.

Additional information

Dump and restore information for field AUDITYPE appears in this section.

Dump and restore

For BCS36 and later versions, duplication of the tuples occurs on the restore side.

For BCS35 and earlier versions, all fields except field AUDITYPE are copied to the entries that correspond in the table. Field AUDITYPE defaults to IDLE.

Upgrades from BCS34 or BCS35 to BCS36 and later versions require a manual change in table MPCFASTA. This manual change sets field

MPCFASTA (end)

AUDITYPE to ACTIVE to allow the following applications to continue to run active audits:

- MPCFDS
- MPCFERS
- TOPSIM
- TOPSVR1
- TOPSVR2
- TOPSVSN
- VSNSIM

MPCLINK

Table name

Multiprotocol Controller Link Table

Functional description

Table MPCLINK specifies link and protocol information for cards entered in table MPC. The user can enter correct multiprotocol controller (MPC) link definitions and protocol groups. The user can enter a group of protocol-specified fields in table MPCLINK.

Table MPCLINK supports the application of the 1980 CCITT X.25 layered protocol and asynchronous communications in the MPC. Table MPCLINK supports the application of the previous X25ORIG (BX25) protocol. Protocol support makes sure the establishment and maintenance of links and conversations occurs.

The fields in table MPCLINK identify the MPC data links to the central control (CC). The fields identify the MPC data links like table MPC identifies the MPC hardware to the CC. These fields do not have default values. The user must enter these fields.

The protocol in use determines protocol parameter descriptions. Most parameter fields do not require datafill. Parameter fields require datafill when adjustments occur to the default values assumed on the peripheral modules (PM). These adjustments occur when a download of the PM occurs. These fields contain timing and messaging specifications.

The user can enter a list of parameter entries and values. This list has different lengths. When you enter data in parameters at the MAP (maintenance and administration position) terminal, a prompt appears. This prompt appears until you enter a $. Parameters in which you do not enter data retain the established default values. The parameters receive these default values during download. The user can change most of the fields in a tuple when the affected link is in a busy state.

To view all link parameter values on the MPC card, enter the following command at the MPC level of the MAP. Type

>QLINK linknum

and press the Enter key.

where

linknum
specifies which link number (2 or 3) on the MPC the system queries for parameter values

Note: Command QLINK requires a link that contains entries and an in-service MPC.

The MPC has a limited amount of buffer allocation space. The data packet size determines the number of buffers normally dedicated to an activity on a single circuit. The default number of buffers is two. Requests for additional buffers occur from a general buffer pool. This type of allocation indicates a single channel can use the buffers that remain.

Applications, that output messages, can receive an MPC return code when buffers are not available. An MPC return code causes a CC delay of 10 s before the system sends the block to the MPC again. The system can take a list of parameter entries and values out of active service. The list of parameter entries and values has different lengths.

You must enter data in specified parameters in table MPCLINK. These parameters apply to the X.25 protocols. You must enter data in these parameters to correspond to the circuit subscription configuration for DATAPAC or the host data packet network (DPN).

The following parameters must match the circuit subscription:

- local data network address (DNA)
- number of permanent virtual circuits (PVC)
- number of switched virtual circuits (SVC)
- packet window size

These parameters must correspond exactly to subscription requirements. Users must know the requirements of features that use the MPC. Users must understand the circuit subscriptions or the environment in which the circuit subscriptions operate. Users must configure cards and links in tables MPC and MPCLINK to conform to the requirements of higher-level applications.

Warning: If field PARM = L2WINDOW for all protocols, field SIZE must be the same value at the DTE and DCE ends of the data link. When field PARM = L3WINDOW for all protocols, field SIZE must have the same value at the DTE and DCE ends of the data link. If the field SIZE values are different at

MPCLINK (continued)

the DTE and DCE ends of the data link, call processing errors, malfunctions, and lost revenue can occur.

Datafill sequence and meaning

You must enter data in table MPC before you enter data in table MPCLINK.

Table size

0 to 512 tuples

Datafill

Datafill for table MPCLINK appears in the following table.

Field descriptions (Sheet 1 of 3)

Field	Subfield	Entry	Explanation and action
LINKKEY		see subfields	*Link key*. This key field contains subfields MPCNO and LINKNO.
	MPCNO	0 to 255	*Multiprotocol controller number*. This field specifies the current multiprotocol controller (MPC) or enhanced multiprotocol controller (EMPC) card for this entry. Enter the MPC/EMPC number as entered in table MPC. This subfield does not have a default value.
	LINKNO	0 to 3	*Link number*. You can only specify logical links 2 or 3. A data link cable can connect to MPC physical ports 1, 2, or 3. Physical ports 2 and 3 are low speed RS232 ports (19.2K and below). Physical port 1 is a high speed V.35 port (56/64K). If the data link cable connects to port 3, specify link 3. If the data link cable connects to port 2, specify link 2. The RS232 is the default ELECTSPEC. The RS232 is not a datafill requirement. If the data link cable connects to port 1, specify link 3 with an ELECTSPEC of V35. This field does not have a default value.

Field descriptions (Sheet 2 of 3)

Field	Subfield	Entry	Explanation and action
LINKALM (BCS35-)		Y or N	*Link alarm*. Enter Y to activate the MPCLINK alarm for system busy (SYSB) MPC links. Enter N if you do not want to activate the MPCLINK alarm for system busy (SYSB) MPC links. ***Note:*** If you enter N in field LINKALM, the system does not generate MPC908 (MPC link state transition) logs. For IOM MPC, the system checks the link for changes that are not normal. If the change is not normal, the system generates an MPC908 (MPC link state transition) log. If the change is normal, the system does not generate an MPC908 log. The default value on dump and restore procedures for pre-BCS35 is Y.
PRTCLDAT		see subfield	*Protocol data area*. This field contains subfield PROTOCOL.

MPCLINK (continued)

Field descriptions (Sheet 3 of 3)

Field	Subfield	Entry	Explanation and action
	PROTOCOL	ASYNC X2580 X2584 X25ORIG	*Link protocol data*. The protocol selection must correspond to the download file that table MPC specifies. Enter ASYNC. Enter data in subfield LINKNABL as follows. Enter data in additional refinements. Datafill for additional refinements appears in the next table. Enter X2580 or X2584. Enter data in subfield LINKNABL as follows. Enter data in additional refinements. Datafill for additional refinements appears in the third table in this document. Enter X25ORIG. Enter data in subfield LINKNABL as follows. Datafill for additional refinements appears in the fourth table in this document. This subfield does not have a default value.
	LINKNABL	0 to 32767	*Link enable*. Enter the time-out, in min, before the system system busies (SBSY) and returns to service (RTS) a link that is not fully active. This value must be a multiple of 5. Enter 0 to disable the function. This subfield does not have a default value. ***Note:*** If the entry is not zero, the system activates one link. When the other link reaches the timeout threshold, the system SBSY and RTS the active link and the MPC card. To prevent this condition, enter 0 to disable the function.

PROTOCOL = ASYNC

If the entry in subfield PROTOCOL is ASYNC, enter data in refinements PARMASYN and STRASYNC. The datafill for these refinements appears in the following table.

Field descriptions for conditional datafill (Sheet 1 of 11)

Field	Subfield	Entry	Explanation and action
	PARMASYN	see subfield	*Parameter synonym*. This refinement contains subfield PARM. Enter this refinement with a vector list of a maximum of 19 link configuration parameters.
	PARM	APLDEFN BAUDRATE CHARBITS ECHO FCHARCNT FLOWCTRL IMODE L1IDLY L2IDLY LINEMODE LNKDOWN MODMCTRL NCHARTMO NCHTMOIN OMODE PARITY STOPBITS XPARENT	*Parameter protocol*. This vector field contains 19 parameter options. Some parameters are like the parameters used to configure a link that uses X25ORIG or X2580 protocols. If less than 19 options are a requirement, enter $ to end the list. When you enter data in all parameter options, proceed to field STRASYNC. Field STRASYNC appears later in this table. Enter APLDEFN (application definition) to specify application-specified processing. Enter data in refinement ADEFN. Datafill for refinement ADEFN appears later in this table. Enter BAUDRATE (baud rate) to specify the link baud rate. Enter data in refinement RATE. Datafill for refinement RATE appears later in this table. Enter CHARBITS (character bits) to specify the number of bits that represent each character. Enter data in refinement LEN. Datafill for refinement LEN appears later in this table.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 2 of 11)

Field	Subfield	Entry	Explanation and action
	PARM (continued)		Enter ECHO to specify if the MPC must echo input responses received from the remote. Enter data in refinement ECHO. Datafill for refinement ECHO appears later in this table. Enter FCHARCNT (fill character control) to specify the number of times the system transmits an intermessage fill character. Field FILLCHAR specifies the intermessage fill character that the system transmits. Enter data in refinement FCNT. Datafill for refinement FCNT appears later in this table. ***Note:*** Entry FCHARCNT is only correct when the entry in subfield OMODE is CHR. Enter FLOWCTRL (flow control) to specify the link flow control sequence for incoming traffic. Enter data in refinement FLOW. Datafill for refinement FLOW appears later in this table. Enter IMODE (input mode) to indicate the operation mode for the input link (receive direction). Enter data in refinement MD. Datafill for refinement MD appears later in this table. Enter L1IDLY (level 1 input delay) to specify the maximum layer 1 input delay. This delay occurs when the system passes an input buffer to the layer 2 or layer 3 protocol for additional processing. Enter data in refinement T0. Datafill for refinement T0 appears later in this table.

Field descriptions for conditional datafill (Sheet 3 of 11)

Field	Subfield	Entry	Explanation and action
	PARM (continued)		Enter L2IDLY (level 2 input delay). This entry specifies the maximum layer 2 input delay allowed to handle an input buffer output to the CC for additional processing. Enter data in refinement T1. Datafill for refinement T1 appears later in this table. ***Note:*** The entry in refinement T0 for entry L1IDLY must be less than the entry in refinement T1 for entry L2IDLY. This requirement does not apply when one or both refinements are 0. Enter LINEMODE (line mode) to indicate the line mode for the link. Enter data in refinement MODE. Datafill for refinement MODE appears later in this table. Enter LNKDOWN (link down timer) to specify the amount of time a modem link is idle. The modem link is idle until the system records the modem link down. Enter data in refinement T1. Datafill for refinement T1 appears later in this table. ***Note:*** Entry LNKDOWN is only correct when subfield MODMCTRL is FULLMODM. Enter MODMCTRL (modem control) to specify the type of modem control the link presents. Enter data in refinement MODM. Datafill for refinement MODM appears later in this table. Enter NCHARTMO (intercharacter time-out) to specify the minimum intercharacter time-out for character transmission. Enter data in refinement CHTMO. Datafill for refinement CHTMO appears in this table.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 4 of 11)

Field	Subfield	Entry	Explanation and action
	PARM (continued)		Enter NCHTMOIN (intercharacter time-out incoming) to specify the minimum intercharacter time-out for incoming characters. Enter data in refinement CHTMO. Datafill for refinement CHTMO appears later in this chapter. Enter OMODE to indicate the operation mode for the output link (transmit direction). Enter data in refinement MD. Datafill for refinement MD appears later in this chapter. Enter PARITY (parity) to specify the type of parity used on the link. Enter data in refinement PRTY. Datafill for refinement PRTY appears later in this chapter. Enter STOPBITS (stop bits) to specify the number of stop bits required for data communications. Enter data in refinement BITS. Datafill for refinement BITS appears later in this chapter. Enter XPARENT (transparency) to allow DLE character stuffing to achieve data transparency. Enter data in refinement DLE. Datafill for refinement DLE appears later in this chapter.

Field descriptions for conditional datafill (Sheet 5 of 11)

Field	Subfield	Entry	Explanation and action
	ADEFN	A911 , C911, SMDI, or NONE	*Application definition*. If the entry in field PARM is APLDEFN, enter data in this refinement. The applications that are bound to the asynchronous protocol determines the range of possible inputs to this field. The following values are correct entries if the available features that support the values are installed: • A911 This value requires feature AF2146. This feature is E911 Open Interface to ALI Database for Call Processing. • C911 This value requires feature AF2759. This feature is E911 Direct Access to AT&T ALI Controller. • SMDI This value requires feature AF2471. This feature is SMDI Conversion to Use MPC. The default value is NONE. This value indicates that basic asynchronous processing occurs.
	RATE	B300, B600, B1200, B2400, B4800, B9600, B19200, B14400, B28800	*Baud rate*. If the entry in field PARM is BAUDRATE, enter data in this refinement. Enter the link baud rate. ***Note:*** Baud rates B14400 and B28800 are for IOM MPC only. The default value is B1200 (1200 baud).
	LEN	BIT5, BIT6, BIT7, BIT8	*Character bits*. If the entry in field PARM is CHARBITS, enter data in this refinement. Enter the number of bits that represent each character. The default value is BIT7 (7 bits).
	ECHO	ON or OFF	*Echo*. If the entry in field PARM is ECHO, enter data in this refinement. Enter ON if the MPC must echo input responses received from the remote. Enter OFF if you do not want the MPC to echo input responses received from the remote. The default value is OFF.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 6 of 11)

Field	Subfield	Entry	Explanation and action
	FCNT	0 to 1024	*Fill character control*. If the entry in field PARM is FCHARCNT, enter data in this refinement. Enter the number of times the system transmits an intermessage fill character. Subfield FILLCHAR specifies the intermessage fill character. Fill character control is for applications that must synchronize a remote device, like a terminal, to the link. The default value is 0. ***Note:*** Entry FCHARCNT is correct when the entry in subfield OMODE is CHR.
	FLOW	NOFLOW or XONOFF	*Flow control*. If the entry in field PARM is FLOWCTRL, enter data in this refinement. Enter the link flow control sequence to control incoming traffic. Enter NOFLOW to indicate a flow control sequence is not available. Enter XONOFF to indicate the American National Standards Institute (ANSI) IA5 XON/XOFF characters are for flow control. The system implements ANSI IA5 XON/XOFF characters as sequences DC1 and DC3 in the sequence specified.
	MD	BLK or CHR	*Input mode*. If the entry in field PARM is IMODE or OMODE, enter data in this refinement. If the entry in field PARM is IMODE, enter the mode in which the input link (receive direction) operates. If the entry in field PARM is OMODE, enter the mode in which the output link (transmit direction) operates. Enter BLK for block mode or CHR for character mode. The default value is BLK.

Field descriptions for conditional datafill (Sheet 7 of 11)

Field	Subfield	Entry	Explanation and action
	MODE	FULL, HALF, SIN, SOUT	*Line mode*. If the entry in field PARM is LINEMODE, enter data in this refinement. Enter the line mode for the link. Enter FULL for full duplex, HALF for half duplex, SIN for simplex-incoming, or SOUT for simplex-outgoing. The default value is FULL.
	T0	0 or 5 to 255	*Level 1 input delay*. If the entry in field PARM is L1IDLY, enter data in this refinement. Enter the time the maximum layer 1 input delays. Enter the time in increments of 10 ms. The delay occurs when the system passes an input buffer to the layer 2 or layer 3 protocol for additional processing. Entries out of this range are not correct. An entry of 0 causes the system to handle data byte-by-byte between level 1 and level 2. The default value is 100 (1 s). ***Note:*** The entry in refinement T0 for entry L1IDLY must be less than the entry in refinement T1 for entry L2IDLY. This requirement does not apply when one or both refinements are 0.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 8 of 11)

Field	Subfield	Entry	Explanation and action
	T1	0 to 1000	*Link down timer*. If the entry in field PARM is L2IDLY or LNKDOWN, enter data in this refinement. If the entry in field PARM is L2IDLY, enter the maximum layer 2 input delay. Enter this delay in intervals of 10 ms. This delay is the time the system allows to handle an input buffer output to the CC for additional processing. The correct range is 0 or 5 to 1000. If the entry in field PARM is LNKDOWN, enter the amount of time a modem link is idle. The modem link is idle until the system records the modem link down. Enter the time in increments of 10-ms. Entries out of this range are not correct. The default value is 200 (2 s). ***Note:*** The entry in refinement T0 for entry L1IDLY must be less than the entry in refinement T1 for entry L2IDLY. This requirement does not apply when one or both refinements are 0.
	MODM	DIAL FULLMODM NOMODM or PARTIAL	*Modem control*. If the entry field PARM is MODMCTRL, enter data in this refinement. Enter the type of modem control the link presents. If the entry in refinement MODE is HALF or SOUT, enter FULLMODEM. The default value is FULLMODM. If the entry in subfield PROTOCOL is ASYNC, you can enter the value DIAL. If you enter DIAL, the MPC assumes the connection is not dedicated. The MPC allows the application to send commands to the modem to establish a connection.

Field descriptions for conditional datafill (Sheet 9 of 11)

Field	Subfield	Entry	Explanation and action
	CHTMO	0 to 500	*Intercharacter time-out*. If the entry in field PARM is NCHARMO or NCHTMOIN, enter data in this refinement. If the entry in field PARM is NCHARMO, enter the minimum intercharacter time-out, in increments of 10-ms, for character transmission. If the entry in field PARM is NCHTMOIN, enter the minimum intercharacter time-out. Enter this value in increments of 10-ms for incoming characters. The default value is 0. This value indicates a delay is not present between characters on transmission. This value represents block data transfer.
	PRTY	EVEN NONE or ODD	*Parity*. If the entry in field PARM is PARITY, enter data in this refinement. Enter the type of parity used on the link. Enter EVEN for even parity, NONE for a parity that is not present, and ODD for odd parity. The default value is EVEN. The system does not support mark and space parity.
	BITS	S1, S2, S15	*Stop bits*. If the entry in field PARM is STOPBITS, enter data in this refinement. Enter the number of stop bits required for data communications. The default value is S1 (1 bit). The value S15 represents 1.5 bits.
	DLE	NODLE or YES	*Transparency*. If the entry in field PARM is XPARENT, enter data in this refinement. Enter NODLE if DLE character stuffing to achieve data transparency cannot occur. An entry of YES allows DLE character stuffing to achieve data transparency. The default value is NODLE.
	STRASYNC	see subfield	*String asynchronous*. This subfield contains subfield STRID.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 10 of 11)

Field	Subfield	Entry	Explanation and action
	STRID	FILLCHAR IEOM ISOM OEOM OSOM	*String identification*. This subfield is a vector that contains six parameter options. To change a parameter default value, enter the parameter option and the associated value. If less than six options are a requirement, enter $ to end the list. If the entry in field PARM is OMODE and the entry in refinement MD is CHR, enter FILLCHAR (fill character). Enter data in refinement TSTRVAL. Datafill for refinement TSRVAL appears later in this table. Enter IEOM for incoming end of message. Enter data in refinement STRVAL. Datafill for refinement STRVAL appears later in this table. Enter ISOM for incoming start of message. Enter data in refinement STRVAL. Datafill for refinement STRVAL appears later in this table. Enter OEOM for outgoing end of message. Enter data in refinement STRVAL. Datafill for refinement STRVAL appears later in this table. Enter OSOM for outgoing start of message. Enter data in refinement STRVAL. Datafill for refinement STRVAL appears later in this table.

Field descriptions for conditional datafill (Sheet 11 of 11)

Field	Subfield	Entry	Explanation and action
	TSTRVAL	0 to 9 and A to F (0 or 2 characters)	*Test string value*. If the entry in subfield STRID is FILLCHAR, enter data in this refinement. This parameter allows for the specification of an intermessage fill character. This character is for use in some applications to synchronize a remote device to the link. A terminal is an example of a remote device. Enter characters in multiples of two. The system performs range checking. The default value is a no-fill character. A no-fill character is equivalent to the entry of a vector of zero length (nil).
	STRVAL	0 to 9 and A to F (to a maximum of 8 characters)	*String value*. If the entry in subfield STRID is IEOM, ISOM, OEOM, or OSOM, enter data in this refinement. This parameter specifies the end-of-message or start-of-message sequence verified on all incoming or outgoing messages on the link. Enter characters in groups of two. Each two-character block of the entered string represents from one to four hexadecimal characters. The system can find the character sequence that this subfield represents in an incoming message. When this condition occurs, the system removes the characters from the message. If the entry in subfield STRID is IEOM or ISOM, the default value can occur. The default value occurs if an end-of-message or start-of message verification does not occur. The default value occurs if you do not enter characters. If the entry in subfield STRID is OEOM or OSOM, the default value can occur. The default value occurs when you do not add characters to the end of the transmitted message. The default value occurs if you do not enter characters.

MPCLINK (continued)

PROTOCOL = X2580 or X2584

If the entry in subfield PROTOCOL is X2580 or X2584, enter data in refinements CONVNABL, PARMS, and EXINF. Datafill for these refinements appears in the following table.

Field descriptions for conditional datafill (Sheet 1 of 16)

Field	Subfield	Entry	Explanation and action
	CONVNABL	0 to 32767	*Conversation enable*. Enter the number of minutes a conversation is not in progress before correcting action occurs. This value must be a multiple of 5. An entry of 0 indicates a period of time is not specified. This field does not have a default value.
	PARMS	see subfield	*Parameter selector (CCITT x 25 CC protocol)*. This field contains subfield PARM.
	PARM	BAUDRATE, CLKSRCE, ELECSPEC, L2MODULO, L2WINDOW, L3ACK, L3DATA, L3MODULO, L3WINDOW, N2, NODETYPE, NUMPVCS, PVCDBIT, R20, R22, R23, R25, SVCS2WAY, SVCSIN, SVCSOUT, T1_S, T1_10MS, T20, T21, T22, T23	*Parameter selector*. Enter this field with a vector that has a maximum of 37 parameter options. Enter the parameter option and the associated value to change a parameter default value. Enter parameters as a group of the parameter type. You must enter the parameter name and the value. Enter these items one item at a time in any order. If less than 37 options are a requirement, enter $ to end the list. After you enter all parameter options, proceed to field EXINF. Field EXINF appears later in this table. Enter BAUDRATE (baud rate) to specify the baud rate. Enter data in refinement RATE. Datafill for refinement RATE appears later in this table. Enter CLKSRCE (clock source) to specify the source for the MPC system clock. Enter data in refinement SOURCE. Datafill for refinement SOURCE appears later in this table.

Field descriptions for conditional datafill (Sheet 2 of 16)

Field	Subfield	Entry	Explanation and action
	PARM (continued)	T25, T26, T2_S T2_10MS, T3_S, T3_10MS, T4_S, T4_10MS, THRUPUT	Enter ELECSPEC (physical link specification) to determine the electrical specification for links 2 and 3 on the MPC. Enter data in refinement SOURCE. The refinement SOURCE appears later in this table. Enter L2MODULO (frame level modulo counter) to specify a numbering design for end-to-end messaging at level 2. Enter data in refinement MODVAL as described later in this table. Enter L2WINDOW (frame window size) to specify the size of the frame window. Enter data in refinement SIZE. Datafill for refinement SIZE appears later in this table. *Warning:* Field SIZE must have the same value at the DTE and DCE ends of the data link. If the value is not the same, call processing errors, malfunctions, and lost revenue can occur. Enter L3ACK (level 3 packet acknowledgement) to specify packet acknowledgement. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. Enter L3DATA (level 3 data packet size) to specify the maximum number of bytes of user data allowed in a data packet. Enter data in refinement DATASIZE. Datafill for refinement DATASIZE appears later in this table.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 3 of 16)

Field	Subfield	Entry	Explanation and action
			Enter L3MODULO (level 3 packet level modulo counter) to specify a protocol numbering design for end-to-end messaging at level 3. Enter data in refinement MODVAL. Datafill for refinement MODVAL appears later in this table. Enter L3WINDOW (level 3 packet window) to specify the packet-level window size. Enter data in refinement SIZE. Datafill for refinement SIZE appears later in this table. *Warning:* Field SIZE must have the same value at the DTE and DCE ends of the data link. If the value is not the same, call processing errors, malfunctions, and lost revenue can occur. Enter N2 (retransmission counter) to specify the size of the retransmission counter. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. Enter NODETYPE (node type or address) to specify the node type or address of the MPC. Enter data in refinement NODE. Datafill for refinement NODE appears later in this table. Enter NUMPVCS (number of permanent virtual circuits [PVC]) to specify the number of PVCs on the link. Enter data in refinement NUMVCS. Datafill for refinement NUMVCS appears later in this table.
	PARM (continued)		Enter PVCDBIT (PVC bitset) to activate the X.25 D-bit facility on PVC channels. Enter data in refinement BITSET. Datafill for refinement BITSET appears later in this table.

Field descriptions for conditional datafill (Sheet 4 of 16)

Field	Subfield	Entry	Explanation and action
			Enter R20 (restart requests count) to specify the maximum number of expirations of the restart request timer (entry T20). Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. The user must enter data in parameter T20. Enter R22 (restart requests count) to specify the maximum number of expirations of the restart request timer (entry T22). Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. Parameter T22 must contain data. Enter R23 (restart requests count) to specify the maximum number of expirations of the restart request timer (entry T23). Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. Parameter T23 must contain data. Enter R25 (restart requests count) to specify the maximum number of expirations of the restart request timer (entry T25). Enter data in refinement VALUE. Datafill for refinement value appears later in this table. Parameter T25 must contain data.
	PARM (continued)		Enter SVCS2WAY. This entry is the number of 2-way switched virtual circuit (SVC). Enter data in refinement NUMVCS. Datafill for refinement NUMVCS appears later in this table. Enter SVCSIN (number of one-way incoming SVCs). Enter data in refinement NUMVCS. Datafill for refinement NUMVCS appears later in this table. Enter SVCSOUT (number of one-way outgoing SVCs). Enter data in refinement NUMVCS. Datafill for refinement NUMVCS appears later in this table. Enter T1_S (timer 1 in steps of 1-s) to specify the timer value in seconds. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 5 of 16)

Field	Subfield	Entry	Explanation and action
			Enter T1_10MS (timer 1 in steps of 10m-s) to specify the timer value in milliseconds. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. ***Note:*** You can enter data in timer T1_S or timer T1_10MS. You cannot enter data in both timers.
	PARM (continued)		Enter T20 (restart request timer) to determine the transmission of requests to restart level 3. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. Enter T21 (call restart response timer) to time the remote response to a call request packet. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. Enter T22 (reset request timer) to time the remote response to a reset request. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. Enter T23 (clear request response timer) to time the remote response to a reset to clear a virtual call. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. Enter T25 (packet acknowledgement timer) to time an acknowledgement is from the remote of the reception of a level 3 packet. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. Enter T26 (interrupt response timer) to time the remote response if the system transmits an interrupt packet at level 3. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. Enter T2_S (timer 2 in steps of 1-s) to specify the timer value in seconds. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table.

Field descriptions for conditional datafill (Sheet 6 of 16)

Field	Subfield	Entry	Explanation and action
	PARM (continued)		Enter T2_10MS (timer 2 in steps of 10-ms) to specify the timer value in milliseconds. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. ***Note:*** You can enter data in timer T2_S or timer T2_10MS. You cannot enter data in both timers. Enter T3_S (timer 3 in steps of 1-s) to specify the timer value in seconds. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. Enter T3_10MS (timer 3 in steps of 10-ms) to specify the timer value in milliseconds. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. ***Note:*** You can enter data in timer T3_S or timer T3_10MS. You cannot enter data in both timers. Enter T4_S (timer 4 in steps of 1-s) to specify the timer value in seconds. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. Enter T4_10MS (timer 4 in steps of 10-ms) to specify the timer value in milliseconds. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. ***Note:*** You can enter data in timer T4_S or timer T4_10MS. You cannot enter data in both timers. Enter THRUPUT (throughput class) to specify the throughput class across the link for outgoing data. Enter data in refinement RATE. Datafill for refinement RATE appears later in this table.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 7 of 16)

Field	Subfield	Entry	Explanation and action
	RATE	B300, B600, B1200, B2400, B4800, B9600, B14400, B19200, or B28800 NOVALUE, T75, T150, T300, T600, T1200, T2400, T4800, T9600, T19200, or T48000	*Baud rate*. If the entry in field PARM is BAUDRATE or THRUPUT, enter data in this refinement. If the entry in field PARM is BAUDRATE, enter the baud rate value for data transmission compatible to the ends of the circuit. The baud rate value represents bits per second. If field CLKSRCE contains INTERNAL, you can enter data in field BAUDRATE. ***Note:*** The IOM MPC supports baudrates B14400 and B28800. The default value is B2400. If the entry in field PARM is THRUPUT, enter NOVALUE. This entry indicates that you accept the throughput class transmission rate entered in refinement RATE. Enter one of the throughput values (T75 to T48000) for selection of a throughput class other than the default value.

Field descriptions for conditional datafill (Sheet 8 of 16)

Field	Subfield	Entry	Explanation and action
	SOURCE	INTERNAL or EXTERNAL RS232 or V35 or 512KV35	*Clock source*. If the entry in field PARM is CLKSRCE or ELECSPEC, enter data in this refinement. If the entry in field PARM is CLKSRCE, enter INTERNAL for the MPC card, or EXTERNAL for a modem device. Link 2 and link 3 must have the same clock source. The clock source can be internal or external. If link 2 and link 3 have different clock sources, the system generates an error message. The default value is EXTERNAL. If the entry in field PARM is ELECSPEC, enter RS232. This entry is the electrical specification for links 2 and 3 on the NT1X89AA multiprotocol controller (MPC) card. If the enhanced MPC (EMPC) is installed, enter RS232 (port 3 is link 3) or V35 (port 1 is link 3). You must enter one of these values because the NT1X89BA/BB enhanced multiprotocol controller card supports both specifications. ***Note:*** The IOM MPC can have value 512KV35. This value supports X2580 or X2584 protocols. The default value is RS232.
	MODVAL	MOD8 or MOD128	*Frame level modulo counter*. If the entry in field PARM is L2MODULO or L3MODULO, enter data in this refinement. Enter a numbering design for end-to-end messaging at level 2 or level 3. Modulo 8 frame sequencing (MOD8) supports a maximum level 2 or level 3 window size of 7. The refinement SIZE is 7. The default value is MOD8.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 9 of 16)

Field	Subfield	Entry	Explanation and action
	SIZE	1 to 127	*Frame window size*. If the entry in field PARM is L2WINDOW or L3WINDOW, enter data in this refinement. Enter the size of the frame window. The frame window is the number of frames that level 2 and level 3 software sends before the levels require a confirmation. The confirmation indicates the software received the first frame. The recommended frame window is 7 because this frame window transmits data faster. In conditions specified, the end application cannot allow a frame window of 7. The digital terminal equipment (DTE) and the digital carrier equipment (DCE) must agree on this parameter. The default value is 2.

Field descriptions for conditional datafill (Sheet 10 of 16)

Field	Subfield	Entry	Explanation and action
	VALUE	0 to 255	*Value*. If the entry in field PARM is one of the following, enter data in refinement VALUE: L3ACK, N2, R20, R22, R23, R25, T1_S, T1_10MS, T20, T21, T22, T23, T25, T26, T2_S, T2_10MS, T3_S, T3_10MS, T4_S, T4_10MS. If the entry in field PARM is L3ACK, the system uses this level 3 timer with subfields T2_S and T2_10MS. The entry is in units of 10 ms. The entry must be less than the values in subfields T2_S and T2_10MS. This requirement does not apply if both values are 0. The preferred value is a minimum of 20 ms less than the values in subfields T2_S and T2_10MS. The operating system timing functions of the following cards determine the preferred value: • the NT1X89AA multiprotocol controller cards • the NT1X89BA/BB enhanced multiprotocol controller cards The default value of 0 indicates the system immediately acknowledges incoming data at level 3. To conserve packets when refinement VALUE is not 0, the system starts the timer for an incoming packet. The system starts the timer and waits for reciprocal outgoing data. The reciprocal outgoing data can carry the acknowledgment of the incoming data. If outgoing data is not present, the system acknowledges the incoming data when refinement VALUE expires. Do not enter data in refinement VALUE unless a pattern of data is present and recognized. The user must use the Level 3 packet acknowledgment correctly. If the user does not use acknowledgment correctly, throughput from the remote node is affected. The default value is 0.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 11 of 16)

Field	Subfield	Entry	Explanation and action
	VALUE (continued)		If the entry in field PARM is N2, 0 is not a correct entry. A value of 255 indicates the counter size does not have a limit. This counter determines the number of times level 2 transmits a frame again. Level 2 transmits the frame again for which the level does not receive an acknowledgment in the retransmission time. Field PARM is T1. The default value is 10. If the entry in field PARM is R20, 0 is not a correct entry. Enter the maximum number of expirations of the restart request timer. Field PARM is T20. When the value for entry T20 expires, the system sends the level 3 restart request again. The system resends the level 3 restart request until the number of requests equals the value entered for value R20. Timing stops if the system receives confirmation of the request. The default value is 1. If the entry in field PARM is R22, 0 is not a correct entry. The default value is 1. If the entry in field PARM is R23, 0 is not a correct entry. Enter the number of clear request retransmissions sent before the counter clears.

Field descriptions for conditional datafill (Sheet 12 of 16)

Field	Subfield	Entry	Explanation and action
			If the entry in field PARM is R25, enter the number of data retransmissions attempted before the system fails the message. The system resets the channel. The data that the system does not acknowledge after the packet acknowledgment timer (T25) expires determines the channel. The default value is 0. If the entry in field PARM is T1_S, 0 is not a correct entry. Enter the time value in steps of 1 s. Entry T1_S is a timer used at level 2 to determine if the remote responds correctly. The system uses this timer with entry N2. The link can change state and reinitialize. This condition occurs under the following conditions: • if the T1_S timer expires the number of times specified in refinement VALUE for parameter N2 • if the T1_S timer does not send the correct acknowledgment of a frame to the remote device The entry in refinement VALUE must be equal to the entry of the remote DCE or DTE for local timer (T2_S) accuracy. If the entry in field PARM is T1_10MS or T2_10MS, the range is 0 or 5 to 255. Enter the time value in steps of 10 ms.
	VALUE (continued)		***Note:*** You can enter timer T1_S or timer T1_10MS. You cannot enter both timers. If you do not enter timer T1_S or timer T1_10MS, the default value for timer T1_S is 5 s. If the entry in field PARM is T2_S, this timer is the guideline to send an acknowledgment for data received. The real value of this entry must be less than the value entered in refinement VALUE for T1_S or T1_10MS. Enter the time value in steps of 1 s.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 13 of 16)

Field	Subfield	Entry	Explanation and action
			Note: You can enter timer T2_S or timer T2_10MS. You cannot enter both timers. If you do not enter timer T2_S or timer T2_10MS, the default value for timer T2_S is 3 s.
	VALUE (continued)		If the entry in field PARM is T20, T21, T22, or T23, 0 is not a correct entry. The default for timer T20 is 180. The default for timer T21 is 200. The default for timer T23 is 180. If the entry in field PARM is T25, an entry of 0 indicates a time period that is not specified. Value 0 is not a correct entry for protocol X2580. The default value is 0. If the entry in field PARM is T26, 0 is not a correct entry. The default value is 180. If the entry in field PARM is T3_S, 0 is not a correct entry. Enter the time value in steps of 1 s. This timer is the idle channel timer. This timer determines when the link logically disconnects after detection of the idle channel state. The system enters the idle channel state when one end detects that I-frames or flags are not incoming on a channel from the remote device. The idle channel time value must be greater than the inactive link timer value. The idle channel time value must be greater than the timer values for timers T1_S or T1_10MS, and T2_S or T2_10MS. If the entry in field PARM is T3_10MS or T4_10MS, the range is 5 to 255. Enter the time value in steps of 10 ms. ***Note:*** You can enter data in timer T3_S or timer T3_10MS. You cannot enter data in both timers. If you do not enter timer T3_S or timer T3_10MS, the default value for timer 3 is 25 s.

Field descriptions for conditional datafill (Sheet 14 of 16)

Field	Subfield	Entry	Explanation and action
	VALUE (continued)		If the entry in field PARM is T4_S, 0 is not a correct entry. Enter the time value in steps of 1 s. This timer is the inactive link timer. This timer times the periodic transmission of a frame to check remote responsiveness. This timer checks remote responsiveness when a higher level of activity on the link is not present. The inactive link timer value must be less than the idle channel timer value. The idle channel timers are T3_S or T3_10MS. The inactive link timer value must be greater than the values for timers T1_S or T1_10MS. ***Note:*** You must enter data for timer T4_S or timer T4_10MS. You cannot enter data for both timers. If you do not enter data for timer T4_S or timer T4_10MS, the default value for timer T4_S is 10 s.
	DATASIZE	P16, P32, P64, P128, P256, P512, P1024, P2048, or P4096	*Level 3 data packet size*. If the entry in field PARM is L3DATA, enter data for this refinement. Enter the maximum number of bytes of user data allowed in a data packet. The default value is P128.
	NODE	DCE or DTE	*Node type or address*. If the entry in field PARM is NODETYPE, enter data in this refinement. Enter the node type or address of the MPC. Enter DCE for digital carrier equipment or DTE for data terminal equipment. This entry indicates to the MPC that frame addressing is DCE or DTE. The default value is DTE.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 15 of 16)

Field	Subfield	Entry	Explanation and action
	NUMVCS	0 to 255	*Number of virtual circuits*. If the entry in field PARM is NUMPVCS, SVCS2WAY, SVCSIN, or SVCSOUT, enter data in this refinement. If the entry in field PARM is NUMPVCS, enter the number of permanent virtual circuits (PVC) on the link. If the system does not configure SVCs, a user can configure a maximum of 255 PVCs. The default value is 3. If the entry in field PARM is SVCS2WAY, enter the number of two-way SVCs configured on the link. If the entry in field PARM is SVCSIN, enter the number of one-way incoming SVCs. If the entry in field PARM is SVCSOUT, enter the number of one-way outgoing SVCs.
	NUMVCS (continued)		If the total number of SVCs on a link is not 0, you must enter SVCDNA in subfield EXINF80. The entry SVCTYPE is not an additional information option with the X2580 protocol. If you do not enter any SVCs, the system configures a default of 0 for each type. This condition occurs if the user enters data in some PVCs. If the system does not enter data in PVCs or SVCs, the system rejects the tuple. The system can configure a maximum of 255 SVCs. The total of combined PVCs and SVCs cannot exceed 255 (NUMPVCS + SVCS2WAY + SVCSIN + SVCSOUT £ 255)

Field descriptions for conditional datafill (Sheet 16 of 16)

Field	Subfield	Entry	Explanation and action
	BITSET	DOFF or DON	*Permanent virtual circuit d-bit set*. If the entry in field PARM is PVCDBIT, enter data in this refinement. Enter DOFF to disable the D-bit facility. Enter DON to activate the D-bit facility. Over a network PVC, the network subscription must include the D-bit to use parameter PVCDBIT correctly. The MPC sends all user data with the D-bit set. The MPC acknowledges all incoming D-bit data. This condition applies to PVCs on the link. The call setup process determines the use of the D-bit for an SVC. The default value is DOFF.
	EXINF	see subfield	*Example information protocol*. This field contains subfield EXINFO.
	EXINFO	SVCDNA	*Example information protocol*. Enter SVCDNA if the link uses SVCs. Enter data in refinement DIGITS. If the link uses SVCs, enter $. SVCDNA is the only correct entry.
	DIGITS	0 to 9 (vector of a maximum of 15 entries)	*Digits*. Enter the digits for the network address.

MPCLINK (continued)

PROTOCOL = X25ORIG

If the entry in subfield PROTOCOL is X25ORIG, enter data in refinements CONVNABL, PARMS, and EXTRAINF. The datafill for these refinements appears in the following table.

Field descriptions for conditional datafill (Sheet 1 of 20)

Field	Subfield	Entry	Explanation and action
	CONVNABL	0 to 32767	*Conversation enable*. Enter the number of minutes a conversation is not in progress before the system takes corrective action. This value must be a multiple of 5. An entry of 0 indicates a period of time that is not specified. This subfield does not have a default value.
	PARMS	see subfield	*Parameters*. This refinement contains subfield PARMSEL.

Field descriptions for conditional datafill (Sheet 2 of 20)

Field	Subfield	Entry	Explanation and action
	PARM	BAUDRATE, CLKSRCE, CTSTIMER, DCDTIMER, ELECSPEC, ENVIRON, FACILCODE, INITROLE, L1PTTOPT, L2ACCESS, L2MODULO, L2WINDOW, L3DATA, L3MODULO, L3WINDOW, LINEMODE, LINKCONT, LINUSAGE, N2, NODETYPE, NUMPRIO, NUMPVCS, NUMSVCS, PHONE, POOLPCT, R20, R22, R23, R25, R27, STANDARD, SYNCMODE, T1, T2, T20, T21, T22, T23, T24, T25, T26, T27, THRUPUT, TIDLE, TINACTIVE	*Parameter selector*. Enter this field with a vector of a maximum of 46 parameter options. Enter the parameter option and the associated value to change a parameter default value. You must enter parameters as a combination of the parameter type. Enter the parameter name and the value. Enter these items one item at a time in any order. If you require less than 46 options, enter $ to end the list. After you enter all parameter options, proceed to field EXTRAINF. A description of this field appears later in this table. Enter BAUDRATE (baud rate) to specify the baud rate. Enter data in refinement RATE. Datafill for refinement RATE appears later in this table. Enter CLKSRCE (clock source) to specify the source for the MPC system clock. Enter data in refinement SOURCE. Datafill for refinement SOURCE appears later in this table. The system does not support CTSTIMER. The CTSTIMER is the call-through simulator (CTS). Enter CTSTIMER to indicate that timing for CTS is not active on the MPC. Enter data in refinement DEFAULT. Datafill for refinement DEFAULT appears later in this table. The DCDTIMER (DCD timer) is not supported. Enter DCDTIMER to indicate timing failure for DCD. Enter data in refinement DEFAULT. Datafill for refinement DEFAULT appears later in this table.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 3 of 20)

Field	Subfield	Entry	Explanation and action
	PARM (continued)		Enter ELECSPEC (physical link specification) to determine the electrical specification for links 2 and 3 on the MPC. Enter data in refinement SPEC. Datafill for refinement SPEC appears later in this table. Enter ENVIRON (environment) to specify the protocol environment to establish communications. Enter data in refinement MPCENVRN. Datafill for refinement MPCENVRN appears later in this table. The system does not support FACILCODE (facility code). Enter FACILCODE. Enter data in refinement DEFAULT. Datafill for refinement DEFAULT appears later in this table. Enter INITROLE (initialization role) to indicate the role of the MPC during initialization. Enter data in refinement ROLE. Datafill for refinement ROLE appears later in this table. Enter L1PTTOPT (dedicated link) to specify if the link is dedicated. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. Enter L2ACCESS (level 2 link access procedure) to specify the link access. Enter data in refinement PROTOCOL. Datafill for refinement PROTOCOL appears later in this table.

Field descriptions for conditional datafill (Sheet 4 of 20)

Field	Subfield	Entry	Explanation and action
	PARM (continued)		Enter L2MODULO (level 2 frame level modulo counter) to specify a numbering scheme for end-to-end messaging at level 2. Enter data in refinement MODVAL. Datafill for refinement MODVAL appears later in this table. Enter L2WINDOW (level 2 frame window size) to specify the size of the frame window. Enter data in refinement SIZE. Datafill for refinement SIZE appears later in this table. *Warning:* Field SIZE must have the same value at the DTE and DCE ends of the data link. If the value is not the same, call processing errors, malfunctions, and lost revenue can occur. Enter L3DATA (level 3 data packet size) to specify the maximum number of bytes of user data allowed in a data packet. Enter data in refinement DATASIZE. Datafill for refinement DATASIZE appears later in this table. Enter L3MODULO (level 3 packet level modulo counter). This entry specifies a protocol numbering scheme for end-to-end messaging at level 3. Enter data in refinement MODVAL. Datafill for refinement MODVAL appears later in this chapter. Enter L3WINDOW (level 3 packet window) to specify the packet level window size. Enter data in refinement SIZE. Datafill for refinement SIZE appears later in this chapter.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 5 of 20)

Field	Subfield	Entry	Explanation and action
			Warning: Field SIZE must have the same value at the DTE and DCE ends of the data link. If the value is not the same, call processing errors, malfunctions, and lost revenue can occur. Enter LINEMODE (line mode) to specify the line mode. Enter data in datafill refinement MODE. Datafill for refinement MODE appears later in this chapter. Enter LINKCONT (link control) to specify the link control protocol. Enter data in refinement CONTROL. Datafill for refinement CONTROL appears later in this chapter. Enter LINUSAGE (line usage) to specify the type of circuit. Enter data in refinement LINE. Datafill for refinement LINE appears later in this chapter. Enter N2 (retransmission counter) to specify the size of the retransmission counter. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this chapter.

Field descriptions for conditional datafill (Sheet 6 of 20)

Field	Subfield	Entry	Explanation and action
	PARM (continued)		Enter NODETYPE (node type or address) to specify the node type or address of the MPC. Enter data in refinement NODE. Datafill for refinement NODE appears later in this chapter. Enter NUMPRIO (number with priority) to specify the number of virtual circuits with high priority. Enter data in refinement NUMVCS. Datafill for refinement NUMVCS appears later in this chapter. Enter NUMPVCS. This entry is the number of permanent virtual circuits (PVC). This entry specifies the number of PVCs on the link. Enter data in refinement NUMVCS. Datafill for refinement NUMVCS appears later in this chapter. Enter NUMSVCS. This entry is the number of simultaneous virtual circuits (SVC). This entry specifies the number of SVCs on the link. Enter data in refinement NUMVCS. Datafill for refinement NUMVCS appears later in this chapter. The system does not support PHONE (phone). Enter PHONE. Enter data in refinement DEFAULT. Datafill for refinement DEFAULT appears later in this chapter. Enter POOLPCT (pool percentage) to specify the percentage of total buffer pool resources that belong to PVCs. Enter data in refinement PERCENT. Datafill for refinement PERCENT appears later in this chapter.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 7 of 20)

Field	Subfield	Entry	Explanation and action
	PARM (continued)		Enter R20 (restart requests count) to specify the maximum number of expirations of the restart request timer (entry T20). Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this chapter. The user must enter data in parameter T20. Enter R22 (restart requests count) to specify the maximum number of expirations of the restart request timer (entry T22). Enter data in refinement VALUE. Datafill for refinement VALUE appears in this chapter. You must enter parameter T22. Enter R23 (restart requests count) to specify the maximum number of expirations of the restart request timer (entry T23). Enter data in refinement VALUE. Datafill for refinement VALUE appears in this chapter. You must enter parameter T23. Enter R25 (restart requests count) to specify the maximum number of expirations of the restart request timer (entry T25). Enter data in refinement VALUE as appears in this chapter. You must enter parameter T25. The system does not support R27 (reject retransmission count). Enter R27. Enter data in refinement DEFAULT. Datafill for refinement DEFAULT appears later in this chapter.

Field descriptions for conditional datafill (Sheet 8 of 20)

Field	Subfield	Entry	Explanation and action
	PARM (continued)		Enter STANDARD (standard) to specify the protocol standards the system must follow for communications on the link. Enter data in refinement STANDARD. Datafill for refinement STANDARD appears later in this chapter. Enter SYNCMODE (synchronous mode) for synchronous communications. Enter data in refinement MODE. Datafill for refinement MODE appears later in this chapter. Enter T1 (retransmission timer) to set the time for the level 2 retransmission timer. This setting specifies if the remote MPC responds correctly. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this chapter. The system does not support T2 (checkpoint). Enter T2. Enter data in refinement DEFAULT. Datafill for refinement DEFAULT appears later in this chapter. Enter T20 (restart request timer) to determine the transfer of requests to restart level 3. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this chapter. Enter T21 (call restart response timer) to time the remote response to a call request packet. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this chapter.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 9 of 20)

Field	Subfield	Entry	Explanation and action
	PARM (continued)		Enter T22 (reset request timer) to time the remote response to a reset request. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. Enter T23 (clear request response timer) to time the remote response to a reset to clear a virtual call. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. The system does not support T24 (window update timer). Enter data in refinement DEFAULT. Datafill for refinement DEFAULT appears later in this table. Enter T25 (packet acknowledgement timer) to time an acknowledgement from the remote that reception of a level 3 packet occurred. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. Enter T26 (interrupt response timer) to time the remote response if the system transmits an interrupt packet at level 3. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. The system does not support T27 (reject response timer). Enter T27. Enter data in refinement DEFAULT. Datafill for refinement DEFAULT appears later in this table.

Field descriptions for conditional datafill (Sheet 10 of 20)

Field	Subfield	Entry	Explanation and action
			Enter THRUPUT (throughput class) for the throughput class across the link for outgoing data. Enter THRUPUT. Enter data in refinement DEFAULT. Datafill for refinement DEFAULT appears later in this table. Enter TIDLE (idle channel timer) to determine when the system logically disconnects a link after the system detects an idle channel state. The idle channel state occurs when one end detects that I-frames or flags are not incoming. The I-frames or flags are not incoming on a channel from the remote. Enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table. Enter TINACTIVE (inactive link timer) to time the periodic transmission of a frame. Perform this action to check remote responsiveness if applications activity does not occur on the link. Enter TINACTIVE to enter data in refinement VALUE. Datafill for refinement VALUE appears later in this table.
	RATE	B300, B600, B1200, B2400, B4800, B9600, B14400, B19200 or B28800	*Baud rate*. If the entry in field PARM is BAUDRATE, enter data in this refinement. Enter the baud rate value for data transmission that is compatible for both ends of the circuit. The baud rate value is in bits per second. The user can enter data in field BAUDRATE if entry of field CLKSRCE is INTERNAL. ***Note:*** The IOM MPC supports baudrates B14400 and B28800. The default value is B2400.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 11 of 20)

Field	Subfield	Entry	Explanation and action
	SOURCE	INTERNAL or EXTERNAL	*Clock source*. If the entry in field PARM is CLKSRCE, enter data in this refinement. Enter INTERNAL for the MPC card or EXTERNAL for a modem device. Links 2 and 3 must have the same clock source. If the user enters a different clock source for links 2 and 3, the system generates an error message. The default value is EXTERNAL.
	DEFAULT	NOVALUE or T75, T150, T300, T600, T1200, T2400, T4800, T9600, T19200, or T48000	*Default*. Enter data in this refinement if the entry in field PARM is one of the following: • CTSTIMER • DCDTIMER • FACILCODE • PHONE • R27 • T2 • T24 • T27 • THRUPUT If the entry in field PARM is THRUPUT, enter NOVALUE. This entry allows the acceptance of the throughput class transmission rate entered in refinement RATE. To select a throughput class other than the default value, enter one of the throughput values. The throughput values are T75 to T48000. If the entry in field PARM is any value other than THRUPUT, the system does not support the parameter. Enter NOVALUE. The default value is NOVALUE.

Field descriptions for conditional datafill (Sheet 12 of 20)

Field	Subfield	Entry	Explanation and action
	ELECSPEC	RS232 or V35	*Specification*. If the entry in field PARM is ELECSPEC, enter RS232 as the electrical specification for links 2 and 3. Links 2 and 3 are on the NT1X89AA multiprotocol controller (MPC) card. If the enhanced MPC (EMPC) is installed, enter RS232 or V35. Port 3 is link 3 for RS232. Port 1 is link 3 for V35. The NT1X89BA/BB enhanced MPC card supports both specifications. The default value is RS232.
	MPCENVRN	DCETODTE or DTETODXE	*Environment*. If the entry in field PARM is ENVIRON, enter this refinement. This parameter specifies the protocol environment to establish communications. If the entry in refinement NODE is DCE, enter DCETODTE. If the entry in refinement NODE is DTE, enter DTETODXE. The default value is DTETODXE.
	ROLE	PASSIVE	*Initialization role*. If the entry in field PARM is INITIROLE, enter data in this refinement. Enter PASSIVE to indicate the role of the MPC during initialization. The default value is PASSIVE.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 13 of 20)

Field	Subfield	Entry	Explanation and action
	VALUE	0 to 255 or YES or NO	*Value*. Enter data in this refinement if the entry in field PARM is one of the following: • L1PTTOPT • N2 • R20 • R22 • R23 • R25 • T1 • T20 • T21 • T22 • T23 • T25 • T26 • TIDLE • TINACTIVE If the entry in field PARM is L1PTTOPT, if the link is a dedicated link enter YES. Enter NO if the link is not a dedicated link. If the entry in field PARM is N2, a value of 255 indicates the counter size does not have a limit. This counter determines how many times level 2 transmits a frame again. The system does not receive acknowledgment for this frame in the retransmission time. Field PARM is T1. The default value is 10.

Field descriptions for conditional datafill (Sheet 14 of 20)

Field	Subfield	Entry	Explanation and action
	VALUE (continued)		If the entry in field PARM is R20, 0 is not a correct entry. Enter the maximum number of expirations of the restart request timer (T20). When the value entered for entry T20 expires, the system resends the level 3 restart request. The system resends the request the number of times data is entered for value R20. Timing stops if the system receives confirmation of the request. The default value is 1. If the entry in field PARM is R22, 0 is not a correct entry. The default value is 1. If the entry in field PARM is R23, 0 is not a correct entry. Enter the number of clear request retransmissions sent before the system clears the counter. If the entry in field PARM is R25, enter the number of data retransmissions attempted before the system fails the message. The data that is not acknowledged after the packet acknowledgment timer (T25) expires, determines how the system resets a channel. The default value is 0.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 15 of 20)

Field	Subfield	Entry	Explanation and action
	VALUE (continued)		If the value in field PARM is T1, enter time, in seconds, for the retransmission timer. The system uses a timer at level 2 to determine if the remote MPC responds. Time can expire. the number of times entered for protocol N2 without correct acknowledgment. The correct acknowledgment is of a transmitted frame from the remote. When these conditions occur, the link changes state and reinitializes. An entry of 0 indicates a period of time that is not specified. This entry is not correct. The default value is 3. If the entry in field PARM is T20, T21, T22, or T23, 0 is not a correct entry. The default for timer T20 is 180. The default for timer T21 is 200. The default for timer T23 is 180. If the entry in field PARM is T25, an entry of 0 indicates a time period that is not specified. The default value is 0. If the entry in field PARM is T26, 0 is not a correct entry. The default value is 180. If the entry in field PARM is TIDLE, 0 is not a correct entry. Enter the amount of time, in seconds, that a channel can remain idle before the system disconnects the channel.

Field descriptions for conditional datafill (Sheet 16 of 20)

Field	Subfield	Entry	Explanation and action
	VALUE (continued)		The default value is 180. If the entry in field PARM is TINACTIVE, 0 is not a correct entry. Enter the time, in seconds, that the link can remain idle before the system deactivates the link. The default value is 180. ***Note:*** The value of the inactive link timer (TINACTIVE) must be less than or equal to the value of the idle channel timer (TIDLE). The value of the inactive link timer must be greater than the value of the transmission timer (T1).
	PROTOCOL	LAPB	*Link access procedure*. If the entry in field PARM is L2ACCESS, enter data in this refinement. The system can support link access procedure balance mode (LAPB). Enter LAPB as the type of level 2 link access procedure. The default value is LAPB.
	MODVAL	MOD8 or MOD128	*Frame level modulo counter*. If the entry in field PARM is L2MODULO or L3MODULO, enter data in this refinement. This parameter specifies a numbering scheme for end-to-end messaging at level 2 or level 3. The only correct entry is MOD8. Modulo 8 frame sequencing (MOD8) supports a maximum level 2 or level 3 window size of 7. The refinement SIZE is 7. The default value is MOD8.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 17 of 20)

Field	Subfield	Entry	Explanation and action
	SIZE	1 to 127	*Frame window size*. If the entry in field PARM is L2WINDOW or L3WINDOW, enter data in this refinement. Enter the size of the frame window. The frame window refers to the number of frames that level 2 and level 3 software send before the software requires confirmation. The software receives confirmation that the system received the first frame. The recommended frame window value is 7. A frame window of 7 transmits data faster. The end application does not always allow a frame window of 7. The digital trunk equipment (DTE) and the digital carrier equipment (DCE) must agree on this parameter. The default value is 2. *Warning:* Field SIZE must have the same value at both the DTE and DCE ends of the data link. If the value is not the same, call processing errors, malfunctions, and lost revenue can occur.
	DATASIZE	P256	*Level 3 data packet size*. If the entry in field PARM is L3DATA, enter data in this refinement. Enter the maximum number of bytes of user data allowed in a data packet. The maximum number is 256 (P256). Entries outside this range are not correct. The default value is P128.
	MODE	FDUPLEX SYNC	*Synchronous mode*. If the entry in field PARM is LINEMODE or SYNCMODE, enter data in this refinement. If the entry in field PARM is LINEMODE, full duplex is the only mode that operates on the MPC. Enter FDUPLEX. If the entry in field PARM is SYNCMODE, communications are synchronous on the MPC. Enter SYNC. The default value is SYNC.

Field descriptions for conditional datafill (Sheet 18 of 20)

Field	Subfield	Entry	Explanation and action
	CONTROL	HDLC	*Link control*. If the entry in field PARM is LINKCONT, enter data in this refinement. High-level data link control (HDLC) is the only link control protocol that the MPC can support. Enter HDLC. The default value is HDLC.
	LINE	LEASED	*Line usage*. If the entry in field PARM is LINUSAGE, enter data in this refinement. The MPC can support the four-wire leased circuit (full duplex). Enter LEASED. The default value is LEASED.
	NODE	DCE or DTE	*Node type or address*. If the entry in field PARM is NODETYPE, enter data in this refinement. Enter the node type or address of the MPC. Enter DCE for digital carrier equipment or DTE for data terminal equipment. This entry indicates to the MPC that frame addressing is DCE or DTE. The default value is DTE.
	NUMVCS	0 to 255	*Number of virtual circuits*. If the entry in field PARM is NUMPRIO, NUMPVCS or NUMSVCS, enter data in this refinement. If the entry in field PARM is NUMPRIO, enter the number of virtual circuits with high priority. The value must be less than the total number of virtual circuits entered. The number of circuits entered is protocol NUMPVCS + protocol NUMSVCS. If the user does not specify protocol NUMPVCS or NUMSVCS, the entry for protocol NUMPRIO must be less than 3.

MPCLINK (continued)

Field descriptions for conditional datafill (Sheet 19 of 20)

Field	Subfield	Entry	Explanation and action
	NUMVCS (continued)		The default value is 0. If the entry in field PARM is NUMPVCS, enter the number of permanent virtual circuits (PVC) on the link. If the system does not configure SVCs, you can configure a maximum of 255 PVCs. The default value is 3 if the user does not enter data in parameter NUMPVCS or subfield NUMSVCS. If the user specifies parameter NUMSVCS, the default value for parameter NUMPVCS is 0. The user enters a value that is not zero to specify parameter NUMSVCS. If the entry in field PARM is NUMSVCS, enter the number of SVCs configured on the link. The user can enter a value that is not zero for parameter NUMSVCS. If the user enters this value, the user must enter SVCDNA and SVCTYPE in subfield EXINFSEL. The user can configure a maximum of 255 SVCs. The combination of PVCs and SVCs cannot exceed 255.
	PERCENT	0 to 100	*Pool percentage*. If the entry in field PARM is POOLPCT, enter data in this refinement. Enter the percentage of total buffer pool resources for permanent virtual circuits (PVC). The default value is 0.
	STANDARD	BX25 CCITT80 or DDNBASIC	*Standard*. If the entry in field PARM is STANDARD, enter data in this refinement. This parameter specifies the protocol standards the system must follow for communications on the link. The SVC users must specify CCITT80. The PVC users do not need to enter data in this parameter. The default value is BX25.
	EXTRAINF	see subfield	*Extra information*. This refinement contains subfield EXINFSEL.

Field descriptions for conditional datafill (Sheet 20 of 20)

Field	Subfield	Entry	Explanation and action
	EXINFSEL	SVCDNA SVCTYPE	*Extra information selector*. If SVCs are not on the link, do not enter data in this subfield. Enter a maximum of two selectors. If less than two selectors are a requirement, enter $ to end the list. Enter SVCDNA for a data network address. Enter data in refinement DIGITS. Enter SVCTYPE for a switched virtual circuit (SVC) network. Enter data in refinement NETWORK. ***Note:*** If the user does not enter data in SVCs, the system configures a default of 0 for each type. The user must enter data in some permanent virtual circuits (PVC). If the user does not enter data in PVCs, the system rejects the tuple.
	DIGITS	0 to 9 (vector of a maximum 15 digits)	*Digits*. If the entry in subfield EXINFSEL is SVCDNA, enter data in this refinement. Enter the digits that define the network address. Additional data entries are not a requirement.
	NETWORK	DATAPAC, NTELPAC, DDN	*Network*. If the entry in subfield EXINFSEL is SVCTYPE, enter data in this refinement. Enter the SVC network format. Entries outside this range are not correct.

Datafill example

Sample datafill for table MPCLINK appears in the following example.

The example contains three tuples for table MPCLINK.

In the first tuple for MPC 5, link 2:

- MPC number is 5.
- Link number is 2.
- Link alarm is active.
- Protocol is X25ORIG.

MPCLINK (continued)

- Link enabling time is 35 min.
- Conversation enabling time is 35 min.

This tuple must contain the following parameters:

- Level 2 frame window is 7.
- Clock source is external.
- Packet acknowledgment timer is 180 s.
- Number of PVCs is 3.

> ***Note:*** The user does not enter data in protocol NUMSVCS. The entry in subfield EXTRAINF is $.

In the second tuple for MPC 3, link 3:

- The MPC number is 3.
- The link number is 3.
- The link alarm is active.
- The protocol is X25ORIG.
- The link enabling time is 55 min.
- The conversation enabling time is 55 min.

> ***Note:*** The user enters one parameter in this tuple. This parameter is the number of SVCs. The number of SVCs is 32.

Refinement NUMVCS for parameter NUMSVCS has a value that is not zero. The user must complete parameters SVCDNA and SVCTYPE in vector field EXTRAINF as follows:

- The SVC data network address is 3333333.
- The SVC type is DATAPAC.

In the third tuple for MPC 4, link 2:

- The MPC number is 4.
- The link number is 2.
- The link alarm is not active.
- The protocol is ASYNC.
- The link enabling time is 55 min.

This tuple must contain the following parameters:

- The number of bits per character is 7.
- Baud rate is 1200.
- Modem control is FULL.
- Number of stop bits is 1.
- Number of start bits is 1. Default values do not appear.
- Line mode is FULL.
- Parity is EVEN.
- The APLDEFN is NONE.

The link configuration parameters include outgoing end-of-message sequence. The outgoing end-of-message sequence is 0D0A19.

MAP example for table MPCLINK

```
 LINKKEY LINKALM
                                                          PRTCLDAT
 ------------------------------------------------------------------------
   0 3        Y
X2584 0 55 (CLKSRCE EXTERNAL) (ELECSPEC 512KV35) (L2WINDOW 7)
(L3DATA P256) (NODETYPE DTE) (SVCSWAY 16) (THRUPUT T48000) $
(SVCDNA 02580081) $

   1 2        Y
 X25ORIG 0 55 (NUMSVCS 15) (T20 5) (N2 10) (TINACTIVE 10) (TIDLE 120)
 (L2WINDOW 7) (L3WINDOW 2) (STANDARD CCITT80) $ (SVCDNA 0115021000)
 (SVCTYPE DDN) $

   2 3        Y
 X25ORIG 55  55 (NUMSVCS 32) (T20 5) (STANDARD CCITT80) (L2WINDOW 7)
 (L3WINDOW 2) (N2 10) (TIDLE 180) (T1 5) $ (SVCDNA 95800240)
 (SVCTYPE DATAPAC) $
```

Table history

NA07B

Additional warnings that L2WINDOW and L3WINDOW must be the same at both ends of the data link were added. Field SIZE previously contained this note. An office missed the note and caused call processing errors, malfunctions and lost revenue.

MPCLINK (end)

TELECOM 06

An explanation to enter data in field LINKALM in IOM MPC logs was added.

The baudrates B14400 and B28800 were added to subfield BAUDRATE for all protocols (X250RIG/X2580/X2584/ASYNC).

The 512KV35 was added to the subfield ELECSPEC for subfield PROTOCOL = X2580/X2584.

A new MAP display for MPCLINK was added.

NA04B

Entry DDN was added to subfield SVCTYPE refinement NETWORK for subfield PROTOCOL = X25ORIG.

BCS36

Refinement names for all parameters (field PARM) were renamed. The default values for timers T20, T21, T23, T25, and T26 were changed.

MPCLOGIN

Table name

Multiprotocol Controller Login Table

Functional description

Table MPCLINK stores the screening information to determine if the multiprotocol controller (MPC) card accepts incoming calls. The MPC accepts incoming calls for the MAP login.

Datafill sequence and meaning

You do not have to enter data in other tables before you enter data in table MPCLOGIN.

Enter data in tables MPC and MPCLINK before you enter data in table MPCLOGIN. The table control software does not enforce the requirement of data entry in table MPC and MPCLINK before data entry in table MPCLOGIN. You cannot access table MPCLOGIN unless you enter hardware in tables MPCLINK and MPC.

Changes to table MPCLOGIN do not affect users logged in when the changes occur. For example, a tuple can change in table MPCLOGIN. This change does not terminate the login session for the user that the tuple changes for. The changes occur at the next login.

Table size

0 to 64 tuples

The system allocates memory for 64 tuples in table MPCLOGIN.

Datafill

Datafill for table MPCLOGIN appears in the following table.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
INDEX		0 to 63	*MPCLOGIN index*. Enter the number for the index in table MPCLOGIN. The index number is only for MPCLOGIN. This number can appear once as a table index.
MANDL		see subfields	*MPCLINK index* This field contains subfields MPCNO and LINKNO.

MPCLOGIN (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	MPCNO	0 to 255	*Multiprotocol controller number*. Enter the MPC card number to log in to the MAP(maintenance and administration). This value must be a correct entry in table MPC.
	LINKNO	0 to 3	*Multiprotocol controller link number*. Enter the MPC link number to log in to the MAP. This value must be a correct entry in table MPCLINK.
CLINGDNA		see subfields	*Calling data network address*. This field contains subfields MPCMAPDNA and PROTCLID.
	MPCMAPDNA	0 to 9 (1 to 15 digits)	*MPC MAP data network address*. Enter an MPC MAP calling data network address assigned to the MPC card. Enter the link for MAP logins. If network addressing is not in use, enter $ to meet the requirements of the table editor.
	PROTCLID	0 to F (1 to 8 hexadecimal digits)	*Protocol identifier*. Enter the protocol identifier of the incoming call that uses the MPC for MAP login. This protocol identifier checks against a user logging on. The check determines if the user can use a MAP login. If protocol identification is not in use, enter $ to meet the requirements of the table editor.
USERDATA		see subfield	*MPCLOGIN user data*. This field contains subfield HEXASCII.

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	HEXASCII	ASCII, HEX, or NONE	*Hexadecimal ASCII*. Enter the field required with a correct refinement for password security on the MPC login process. Each tuple in table MPCLOGIN can only have one entry and refinement. Enter ASCII for ASCII digits. Enter data in refinement ASCIICHRS. Enter HEX for hexadecimal digits. Enter data in refinement HEXDIGITS. Enter NONE if password security is not a requirement. Additional datafill is not a requirement.
	ASCIICHRS	alphanumeric (1 to 12 characters)	*ASCII character password string*. If the entry in field USERDATA is ASCII, enter data in this refinement. Enter an ASCII character password for this login circuit.
	HEXDIGITS	0 to F (1 to 24 characters)	*Hex digit password string*. If the entry in field USERDATA is HEX, enter data in this refinement. Enter a hexadecimal character password for this login circuit. Additional data is not a requirement.

Datafill example

Sample datafill for table MPCLOGIN appears in the following example.

MAP example for table MPCLOGIN

```
INDEX MANDL        CLINGDNA PROTCLID                    USERDATA
_____________________________________________________________________

    0   2 2       555551212 12345678   HEX          ABCDEFABCDEF
    1   2 3        55551212        $                        NONE

    2   3 2        88880505 01000000           ASCII  PASSWORD
    3   3 3               $        $                        NONE
```

MPCLOGIN (end)

Table history

BCS36

Subfield HEXASCII was added in BCS36.

MPCLSET

Table name

Multiprotocol Controller LINKSET

Functional description

Table MPCLSET allows the logical links of a multiprotocol controller (MPC) fast application to group in linksets for selective link transfers. Table MPCFASTA specifies the link connections as a collection of application name and MPC number, link number, and channel number (MLC).

Each linkset entry in table MPCLSET contains the application name. The linkset entry contains the linkset number for that application. The linkset entry contains the list of MLCs in that set.

Each application can have a maximum of 16 linksets. An application can have some links grouped in linksets and some links without sets. When a link failure occurs the links without sets do not receive a message transfer.

The user can enter links in different linksets. This action prevents link transfers. The MLCs for an application can appear in the same set. When this condition occurs the link selection and transfer is the like a table that does not contain data. If you remove an MLC from a linkset, the system transfers queued messages to a link in the same linkset. The user enters the MLC in another linkset for availability to a linkset application.

Subfields APPLID and SETNUM allow field LSETKEY to provide a two-part key for this table. Subfield APPLID contains the name of the application to which the linkset belongs. Subfield SETNUM contains the number assigned to each linkset within an application.

Field MLCLIST contains a vector of the MLCs in the application. The user places the vector in the linkset indicated by field LSETKEY. Each vector contains an MPC number, a link number, and a channel number. There can be a maximum of 16 MLCs in each linkset. The system does not allow duplicate MLCs in a linkset MLCLIST. Place a minimum of one MLC in the MLCLIST for each entry.

See table MPC for related information.

Datafill sequence and meaning

Table MPCFASTA must contain all application names and MLCs in table MPCLSET. The user must remove the table MPCLSET entries for applications or MLCs before the user can remove the table MPCFASTA entries.

MPCLSET (continued)

Before a user adds a new tuple to table MPCLSET, the user must enter correct MPCNOs in table MPC. The user must enter correct MPCLINKs in table MPCLINK. The user must enter correct RCERAPPL in table MPCFASTA.

Table size

Table MPCLSET requires 785 words of protected data store for each application entered. The system allocates the memory when an application enters the first entry in the table. The system removes memory when an application removes the last linkset of that application. The maximum amount of memory required is 785 words x 16 applications = 12.56K words.

Datafill

Datafill for table MPCLSET appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
LSETKEY		see subfields	*Linkset key*. This field contains subfields APPLID and SETNUM.
	APPLID	911RCER1, 911RCER2, 911RCER3, 911RCER4, 911RCER5, 911RCER6, ATT911AS, OPN911AS, ENH911AS, WLS911	*Application identification*. Enter the name of the MPC fast application to which the LINKSET belongs. This name must appear in field INDEX in table MPCFASTA.
	SETNUM	0-15	*Linkset number*. Enter the number assigned to each linkset in an application.
MLCLIST		see subfields	*MPC and link control vector list*. Enter all MLCs in the same sequence as the MLCs appear in table MPCTASTA with INDEX=911RCER(1-6). Table MPCTASTA determines the order of tries. This field contains subfields M, L, and C. The user can enter a maximum of 16 three-number sets that represent MLC. Separate each subfield with a single space. If the user requires less than 16 MLCs, end the list with a dollar sign ($). The MLCLIST contains one MPC, one MPC link, and one link channel entered in the following three subfields.

Field descriptions (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
	M	0-255	*MPC*. Enter the number of the MPC.
	L	2 or 3	*Link*. Enter the number of the MPC link.
	C	1-255	*Channe*l. Enter the number the MPC link channel.

Datafill example

The following example of datafill for table MPCLSET contains four MPC fast applications. The 911RCER1 numbers 0 and 1 contain single linkset members, MPC 1 in 911RCER1 0 and MPC 2 in 911RCER1 1. The system does not transfer messages from the down link to an operational link when a link failure occurs.

The 911RCER3 number 0 contains the elements MPC 5 and MPC 6. The 911RCER3 number 1 contains the elements MPC 3 and MPC 4. The system switches messages queued for the down link to the operational link if a failure occurs on a link.

MAP example for table MPCLSET

```
LSETKEY                                        MLCLIST
_____________________________________________________________

911RCER1 0                                  (  1 2   1)$
ENH911AS 1                                  (  2 3   1)$
911RCER3 0                        (  6 2   1) (  5 3   1)$
WLS911   0                        (  4 2   1) (  3 2   1)$
```

MQLIMITS

Table name

Maintenance Q Limits Table

Functional description

Table MQLIMITS stores the maintenance Q limits for the bit error rate test (BERT) line and test time of the BERT.

The Q limit is a predetermined test limit. The test passes when the value of a test result is less than or equal to the Q limit value. The test fails if the value exceeds the Q limit value.

You can perform a BERT from the trunk test position (TTP) level of the MAP (maintenance and administration position) terminal. The test can occur automatically from the automatic trunk testing (ATT) level of the MAP terminal.

Refer to the *Trunks Maintenance Guide* for more information on trunk testing.

Datafill sequence and meaning

You do not need to enter data in other tables before you enter data in table MQLIMITS.

Table size

0 to 10 tuples

Datafill

Datafill for table MQLIMITS appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
IDXKEY		see subfield	*Index key*. This field contains subfield MQKEY.
	MQKEY	0 to 9	*Maintenance Q limits table index*. Enter an index number from 0 to 9.
MQDATA		see subfields	*Maintenance Q data*. This field contains subfields TLTIME, BERQ, SLIPSQ, and ERSQ.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	TLTIME	0 to 15300	*Bit error rate test line test time*. Enter the length of the test time the BERT runs. Enter the time in minutes. You cannot stop a test in progress if the test originates from the ATT level of the MAP. The default value for this field is 15.
	BERQ	0 to 15	*Bit error rate Q limit*. Specify the Q limit for the test. The bit error rate is 1.0 X 10-*n*. The absolute exponent (*n*) is the number you specify. The default value for this field is 3.
	SLIPSQ	0 to 15	*Slips Q limit*. Specify the maximum number of slips allowed from the Q limit. The default value for this field is 3.
	ERSQ	0 to 999	*Percent of errored seconds*. Enter a number that indicates the maximum percentage of errored seconds. Enter the percentage in tenths of seconds (0.1 s). The percentage of errored seconds equals a specified equation. This equation is the number of errored seconds divided by the number of seconds the test runs, multiplied by 100. An entry of 10 equals to 1%. The default value for this field is 8 (0.8 s).

Datafill example

Datafill for table MQLIMITS appears in the following example.

The example contains a maintenance Q index of 0 that contains the default values.

MQLIMITS (end)

MAP example for table MQLIMITS

```
IDXKEY          MQDATA
_____________________________________________________________

     0    15  3  3  80
     1    15  3  3  80
```

MSBINV

Table name

Message Switch and Buffer Inventory Table

Functional description

Table MSBINV contains all inventory data except for peripheral side (P-side) information and external frame information.

See table MSBPSINV for P-side information and external frame information.

Datafill sequence and meaning

- Enter data in the following tables before you enter data in table MSBINV:
- PMLOADS
- NETWORK
- ENCDINV

- Enter data in table MSBINV before you enter data in the following tables:
- IPMLINV
- MSBPSINV
- STINV

Table size

0 to 5 tuples

MSBINV (continued)

Datafill

Datafill for table MSBINV appears in the following table.

Field descriptions (Sheet 1 of 6)

Field	Subfield or refinement	Entry	Explanation and action
MSBNAME		see subfields	*Message switch and buffer name*. This field contains the subfields XPMTYPE and MSBNO.
	XPMTYPE	MSB6, MSB7, RCC2, SRCC, or TRCC	*Peripheral module type*. Enter the peripheral module (PM) type as follows: • Enter MSB6 to specify common channel interoffice signaling no. 6 (CCIS6). Enter MSB7 to specify Common Channel Signaling 7 (CCS7). • Enter RCC2 to specify remote cluster controller 2. • Enter SRCC to specify SONET remote cluster controller. • Enter TRCC to specify Turkish remote cluster controller. This controller is for licensee use only.
	MSBNO	0 to 9	*Message switching buffer number.* Enter the PM number. Entries out of this range are not correct.
FRTYPE		MC6M MC7M MLNK MS6E or MS7E	*Frame type* Enter the frame type for the PM equipment as follows: • MC6M (Meridian cabinet CCS6 module the DMS-250 uses) • MC7M (Meridian cabinet CCS7 module the DMS-300 and international DMS-250 uses) • MLNK (Meridian CCS7 link module the MSL-100 compact uses) • MS6E (message switching 6 equipment frame) • MS7E (message signaling 7 frame)

Field descriptions (Sheet 2 of 6)

Field	Subfield or refinement	Entry	Explanation and action
FRNO		0 to 511	*Frame number* . Enter the frame number for the PM.
SHPOS		0 to 77	*Shelf position* . Enter the position of the lowest MSB shelf on the frame that contains the two MSB shelves.
FLOOR		0 to 99	*Floor*. Enter the floor number of the PM.
ROW		A to H J to N P to Z AA to HH JJ to NN or PP to ZZ	*Row*. Enter the row number for the PM equipment frame.
FRPOS		0 to 99	*Frame position*. Enter the frame position of the PM equipment frame.
EQPEC		6X07AA 6X07AB 6X32AA 6X32AB 6X32BB 6X32CD 6X3201 or 6132SA	*Equipment product engineering code*. Enter the product engineering code (PEC) of the PM as follows: • 6X07AA (Message switch buffer 6 Comm CP kit), rated manufacturer discontinued (MD), 6X07AB (message switch and buffer 6 shelf) replaces 6X07AA • 6X32AA (message switch and buffer 7 module) • 6X32AB (MS7B common circuit packs) • 6X32BB (MS7B common circuit pack-EBI): entered in international switches if the MSB7 has a 6X44DA timeswitch card • 6X32CD (MSB7 common CP) • 6X3201 (STA7 shelf assembly): for use in frame type MLNK • 6132SA Only the Austrian version of the MSB7 uses this code.

MSBINV (continued)

Field descriptions (Sheet 3 of 6)

Field	Subfield or refinement	Entry	Explanation and action
LOAD		alphanumeric (vector of a maximum of eight characters)	*Load*. Enter the load name for the issue of PM software. See table PMLOADS for the appropriate release for a list of available names.
CSLNKTAB		see the subfields	*C-side link table*. If the DMS switch has junctored network (JNET) modules, enter data in subfields NMPAIR and NMPORT. If the DMS switch has an enhanced network (ENET), enter data in subfields ENSHELF, ENSLOT, ENLINK, and ENDS30.
	NMPAIR	0 to 31	*Network module pair number*. Enter the network link for the MSB. This link corresponds to C-side links 0 t o 15 of the MSB. Enter the pairs in order to complete the vector.
	NMPORT	0 to 63	*Network module port*. Enter the network ports that correspond to the preceding links. Enter the ports in order to complete the vector.
	ENSHELF	0 to 7	*Enhanced network shelf number*. Enter the network shelf for the MSB. This shelf corresponds to the C-side link of the MSB.
	ENSLOT	10 to 16 and 25 to 32 (for ENET 128K, BCS34 and higher) or 13 to 19 (for ENET 16K)	*Enhanced network crosspoint slot number*. Enter the network crosspoint slot. Entries out of this range are not correct.
	ENLINK	0 to 18	*Enhanced network link on crosspoint card*. Enter the network link that corresponds to the preceding slot.
	ENDS30	0 to 15	*Enhanced fiber network link on crosspoint card*. Enter the network link. Entries must be in ascending order, starting with 0. Duplicate entries cannot occur.

Field descriptions (Sheet 4 of 6)

Field	Subfield or refinement	Entry	Explanation and action
HWCLASS		C6, C7, D, N6, or N7	*CCS signaling terminal control data*. Enter a vector to a maximum of four of the following designations of Common Channel Signaling hardware types: • C6 (CCIS6) • C7 (CCS7) • D (digital private network signaling system [DPNSS]) • N6 (CCITT no. 6) • N7 (CCITT no. 7) Separate each entry with a single space. If you enter less than four designations, end the list with a $ (dollar sign). Entries out of the range for this field are not correct.
STCLOADS		alphanumeric (a maximum of eight characters)	*Signaling terminal control loads*. Enter a vector to a maxium of two STC loads. If you enter less than two loads, end the list with a $.

MSBINV (continued)

Field descriptions (Sheet 5 of 6)

Field	Subfield or refinement	Entry	Explanation and action
OPTCARD		CONTINU-ITY, CMR5, CMR6, CMR7, CMR13, CMR15, CMR16, CMR17, CMR18, CMR19, CPA15, CPA17, CSMMSG, CTR13, CTR15, DCTAX78, ECC_300, ECC_600, ECC_1200, ECC_2400, ECC_4800, ECC_9600, ETSBX69, ISP4, ISP, NE2X10AA, NT6X28, NT6X28AB, NT6X28BA, NT6X44EA, RAM6X69,	*Optional card*. Enter a vector to a maximum of ten optional card types. If you enter less than ten cards, end the list with a $.

Field descriptions (Sheet 6 of 6)

Field	Subfield or refinement	Entry	Explanation and action
		STR8, STR11, STR16IC, STR16OG, STR17IC, STR17OG, TONE6X79, UTR6, UTR7, UTR8, UTR9, UTR10, UTR11, UTR14, UTR15, UTR16, UTR17, or UTR18	*Optional card*. Enter a vector to a maximum of ten optional card types. If you enter less than ten cards, end the list with a $.
PECS6X45		6X45AA 6X45AB 6X45AC 6X45AD 6X45AE 6X45AF 6X45BA 6X45BB 6X45BC 6X45CA 6X45DA or 6X45EA	*Product engineering codes of 6X45 processor cards*. Enter the PECs of the processor cards that correspond to the 6X45 with the minimum firmware abilities. Enter the PEC for unit one before the PEC for unit two.

Datafill example

This example is for a DS30 link.

MSBINV (continued)

MAP example for table MSBINV

```
MSBNAME
      FRTYPE  FRNO  SHPOS  FLOOR  ROW  FRPOS  EQPEC  LOAD
                                                          CSLNKTAB
                                                           HWCLASS
                             STCLOADS
                                                           OPTCARD
                       PECS6X45
-------------------------------------------------------------------

MSB7  0
       MS7E     0   18      1    D    0 6X32AA  MC7XB07
            ( 0  13  0  0) ( 0 13  1  0) ( 0 13 2  0) ( 0 13 3 0) $
                                                         ( C7) $
                        ( M7CQA01)$
                                                       (  MSG6X69)$
              6X45AE 6X45AE
```

Additional information

Information on dump and restore procedures for table MSBINV appears in this section.

Dump and restore

From BCS34, field ENSLOT is an enumerated type. Conversion of the numeric slot is a requirement. The only correct enumerated slots are 10, 11, 12, 13, 14, 15, 16, 25, 26, 27, 28, 29, 30, 31, and 32.

Numeric slots from 10 to 16 and 25 to 32 receives a conversion. All other slots are not correct.

Field ENDS30 defaults to 0 for DS30 links. Use the old link entry to convert DS30 link entries from BCS33 or earlier to BCS34 or later. The addition of ENDS30 field occurs to the old link entry with a value of 0.

From BSC34 16 link entries replace each fiber link entry from BCS33 or earlier. The values of fields ENSHELF, ENSLOT, and ENLINK remain the same. The ENDS30 values for each of the 16 entries range from 0 to 15. The entries must be in ascending order of ENDS30.

A dump and restore from BCS33 or lower to BCS34 or later versions can occur. If this event occurs and a tuple contains the value MSG6X69 in field OPTCARD, delete the tuple.

MSBINV (end)

You can perform a dump and restore from BCS33 or lower to BCS34 or later versions. The system must encounter MSG6X69 or RAM6X69 values for a tuple in table MSBINV when you perform this action. If the system does not encounter these values, the system reports an error condition.

MSBPSINV

Table name

Message Switch and Buffer P-Side Inventory Table

Functional description

This table contains the following data assignment for each bay associated with a message switch and buffer (MSB) unit:

- peripheral module (PM) type and number
- signaling terminal controller (STC) extension frame type, number, and location
- if the frame type is MS6E or MC6M, the table contains the modem extension frame type, number, floor, row, and position

The only operation that table MSBPSINV allows is tuple changes. When the addition of a tuple occurs in table MSBINV the system adds tuples to table MSBPSINV. The system deletes tuples from table MSBPSINV when deletion occurs to tuples that correspond in table MSBINV.

See table MSBINV for related information.

Datafill sequence

Enter data in table MSBINV before you enter data in table MSBPSINV.

Table size

0 to 5 tuples

The system dynamically allocates memory when the system allocates blocks in table MSBINV.

Datafill

Datafill for table MSBPSINV appears in the following table.

Field descriptions (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
MSBNAME		see the subfields	*Message switch and buffer name*. This field contains the subfields XPMTYPE and MSBNO.
	XPMTYPE	MSB6, MSB7, RCC2, SRCC, or TRCC	*Peripheral module type*. Enter the MSB PM type as follows: • Enter MSB6 to specify Common Channel Signaling 6 (CCS6) • Enter MSB7 to specify Common Channel Signaling 7 (CCS7). • Enter RCC2 to specify remote cluster controller 2 (RCC2). • Enter SRCC to specify SONET remote cluster controller. • Enter TRCC to specify Turkish remote cluster controller. ***Note 1:*** Types RCC2 and SRCC are not correct entries. ***Note 2:*** Type TRCC is for licensee use only.
	MSBNO	0 to 9	*Message switch and buffer number*. Enter the PM number.
MSBDATA		see the subfield	*Message switch and buffer data*. This field contains of subfield FRTYPE.
	FRTYPE	MS6E, MS7E, MC6M, MC7M, MLNK	*Frame type*. Enter the frame type for the PM equipment.

MSBPSINV (continued)

Field descriptions (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	EXTFRAME	Y or N	*Extension frame*. If equipment of the STC extension occurs, enter Y (yes). If the STC extension is not equipped, enter N (no). If the entry in this field is Y, and the entry in field FRTYPE is MS6E or MC6M, enter data in the following fields: • EXTFRTYPE • EXTFRNO • EXTFRPOS • MODFRTYPE • MODFRNO • MODFLOOR • MODROW • MODFRPOS The entry in this field can be Y. The entry in field FRTYPE can be MS7E, MC7M, or MLNK. When this two conditions apply, enter data in the following fields: • EXTFRTYPE • EXTFRNO • EXTFRPOS

Field descriptions (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	EXTFRTYPE	ST6E or ST7E	*Signaling terminal controller extension frame type*. If the entry in field EXTFRAME is Y, enter the STC extension frame type as follows: • Enter ST6E to specify the CCS6 extension frame, including STC modules 4 to 9. ***Note:*** An MS6E or MC6M frame is a requirement before use of ST6E can occur. • Enter ST7E to specify the CCS7 extension frame, including STC modules 4 to 9. ***Note:*** An MS7E or MC7M frame is a requirement before use of ST7E can occur.
	EXTFRNO	0 to 511	*Extension frame number*. If the entry in field EXTFRAME is Y, enter the frame number of the preceding frame type.
	EXTFRPOS	0 to 99	*Extension frame position*. If the entry in field EXTFRAME is Y, enter the bay position of the PM equipment frame.
	MODFRTYPE	DME	*Modem extension frame type*. The entry in field EXTFRAME can be Y. The entry in field FRTYPE can be MS6E or MC6M. When these conditions apply, enter the frame type for the PM equipment. ***Note:*** Frame MS6E or MC6M is a requirement.
	MODFRNO	0 to 511	*Modem extension frame number*. The entry in field EXTFRAME can be Y. The entry in field FRTYPE can be MS6E or MC6M. When these conditions apply, enter the frame number of the preceding frame type.

MSBPSINV (continued)

Field descriptions (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	MODFLOOR	0 to 99	*Modem extension floor*. The entry in field EXTFRAME can be Y. The entry in field FRTYPE can be MS6E or MC6M. When these conditions apply, enter the floor for the PM equipment frame.
	MODROW	A to H J to N P to Z AA to HH JJ to NN or PP to ZZ	*Modem extension row*. The entry in field EXTFRAME can be Y. The entry in field FRTYPE can be MS6E or MC6M. When these conditions apply, enter the row for the PM equipment frame.
	MODFRPOS	0 to 99	*Modem extension frame position*. The entry in field EXTFRAME can be Y. The entry in field FRTYPE can be MS6E or MC6M. When these conditions apply, enter the bay position of the PM equipment frame.
	STCMODS	0 to 9 (vector of a maximum of 10 entries)	*STC modules*. For MS6E, MC6M, MS7E, and MC7M, DME STC values 0 and 1 are correct. For ST6E and ST7E, values 4 to 9 are correct. Enter the values without a blank space between the values. Do not end the vector with a $.

Datafill example

Datafill examples for table MSBPSINV appear in the following section.

Assignments for two MSB PMs appear in the following example. The two MSB PMs are MSBO and MSB1. When you enter data in table MSBINV, the system automatically adds default tuples to table MSBPSINV. This process appears in the following example:

In the example the following conditions apply:

- the MSB0 does not have an STC extension frame.
- the MSB1 has an STC extension frame and a modem extension frame.

MAP example for table MSBPSINV

```
MSBNAME   MSBDATA
_____________________________________________________________

MSB6  0    N                                        01
MSB6  1    N                                        01
```

In the following example, the second tuple has an extension frame. You must modify the tuple. To modify the tuple, use the CHANGE command.

MAP example for table MSBPSINV

```
MSBNAME                                    MSBDATA
_____________________________________________________________

MSB6  1    Y  ST6E  2  18  DME  3  01  C  18  0145
```

The current status of the entries in table MSBPSINV appears in the following example.

MSBPSINV (end)

MAP example for table MSBPSINV

```
MSBNAME                                   MSBDATA
_____________________________________________________________________
MSB6  1     N                                          01
MSB6  1    Y  ST6E  2  18  DME  3  01  C  18  0145
```

MSCDINV

Table name

Message Switch Cards Inventory (MSCDINV) Table

Functional description

Table MSCDINV allows changes to the characteristic information of the system cards, bus extension unit, and interface units. This table also allows addition and deletion to interface units.

The owner message switch (MS) node requires the system cards to operate. The system adds the system cards to table MSCDINV with the addition of the MS to table MSINV. The system deletes the system cards from table MSCDINV with the deletion of the MS node from table MSINV. You cannot change the slot positions of the system cards. The only field that changes for these cards is the product engineering codes (PEC).

The owner extension shelf requires the bus extension units to operate. The system fixes the slot positions of these extension units. Operating company personnel cannot change these slot positions. The only field that you can change for these units is the PECs.

The interface cards have different configurations. These configurations provide for the different functions of the interface cards. Each DS30 and nonchannelized DS512 card contains one interface unit. The channelized DS512 card can have multiple interface units. These units link together serially to form a daisy chain. Each unit contains a main card, front card and a card subordinate to the front card. Each unit also contains a back card. A chain can also have a maximum of eight cards that link together. For noninterface units, the front and back cards can have functions that do not relate to each other.

The enhancement of the mechanism to modify chain tuples can now update the PECs for current chains. To modify chain tuples, the following rules apply:

- You can change a PEC to a compatible PEC for any card in a chain without affecting other cards. A compatible PEC is a PEC that can be present on a chain with the current PECs.
- A change to the the head card to an incompatible PEC causes the change to occur to all the relevant cards in the chain.
- A PEC can change to an incompatible PEC at the head card only.

To enter the different configurations, each tuple contains a card selector. Single-system cards are cards with functionally linked front and back cards.

MSCDINV (continued)

The clock is an example of a single-system card. Double-system cards have front and back cards that are functionally different.

The system treats single interface cards as independent cards. The entry of multiple interface cards is in the order in which they appear on the shelf.

Datafill sequence and meaning

You must enter data in table MSINV before you enter data in table MSCDINV.

Table size

20 to 52 tuples

Table MSCDINV contains 20 default tuples. Each default MS contains 10 default tuples. Each shelf has 26 cards. You can enter data in all 26 cards.

The range of front and back card PECs appears in the following tables.

Range of front card PECs (field FRONTPEC) (Sheet 1 of 2)

Card type	Range of values
CHAIN	NT9X17AB, NT9X17AC, NT9X17AD, NT9X17BA, NT9X17BB, NT9X17CA, NT9X17DA
CLOCK	NT9X53AA, NT9X53AB, NT9X53AC, NT9X53AD
CMIC	NT9X17AA, NT9X17AC, NT9X17AD, NT9X17BB
DS30	NT9X17AA, NT9X17AB, NT9X17AC, NT9X17AD NT9X17BA, NT9X17BB, NT9X17CA, NT9X17DA
DS512	NT9X17AA, NT9X17AB, NT9X17AC, NT9X17AD NT9X17BA, NT9X17BB, NT9X17CA, NT9X17DA
MAPPER	NT9X15AA
MEMORY	NT9X14AA, NT9X14BA, NT9X14BB, NT9X14DA, NT9X14DB
MSP	NT9X13AA, NT9X13DA, NT9X13DB, NT9X13DC, NT9X13DD, NT9X13NA, NT9X13NB
PBUS	NT9X49CA, NT9X49CB, NT9X49CC
TBUS	NT9X49BA

Range of front card PECs (field FRONTPEC) (Sheet 2 of 2)

Card type	Range of values
TBUSACC	NT9X52AA
TFI	NT9X73BA

Range of back card PECs (field BACKPEC)

Card type	Range of values
CHAIN	NT9X20BB, NT9X62BA, NT9X62CA, NT9X62CB
CLOCK	NT9X54AA, NT9X54AB, NT9X54AC, NT9X54AD, NT9X54AE
CMIC	NT9X20AA, NT9X62BA, NT9X62CA
DS30	NT9X23AA, NT9X23AB, NT9X23BA, NT9X25AA NT9X25BA, NT9X69AA, NT9X69BA
DS512	NT9X20AA, NT9X20BA, NT9X20BB, NT9X25AA, NT9X25BA, NT9X62BA, NT9X62BB, NT9X62CA, NT9X62CB
MAPPER	does not apply
MEMORY	does not apply
MSP	NT9X26AA, NT9X26AB
PBUS	NIL
TBUS	NIL
TBUSACC	NIL
TFI	NT9X79BA

Note: For MAPPER and MEMORY, a back card does not apply. Leave field BACKPEC blank.

MSCDINV (continued)

Datafill

Datafill for table MSCDINV appears in the following table.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
MSCDKEY		see the subfields	*Message switch card key*. This field contains the subfields MSNUM, SHELFNUM, and CARDNUM.
	MSNUM	0 to 1	*Message switch number*. Enter the MS number.
	SHELFNUM	0 to 3	*Shelf number*. Enter the shelf number of the card slot.
	CARDNUM	1 to 26 (see note)	*Card position number*. Enter the card position number relative to the other 26 cards. The MS has a total of 38 physical slots. Power converter cards occupy the first 6 and last 6 physical slots. The physical slots 7 to 32 are for the MS cards. These slots have the numbers 1 to 26. For example, for physical slot 7, enter 1 in this subfield. For physical slot 32, enter 26. ***Note:*** For the SuperNode SE MS, the range of subfield CARDNUM must be between 1 and 13. Physical slots 7 and 32 = CARDNUM 13. Physical slots 19 and 20 = CARDNUM 1. Only position 12 can contain TFI card datafill. Positions 5 to 9 can contain interface card datafill.
SLOTINFO		see subfield	*Slot information*. This field contains the subfield CARDTYPE.
	CARDTYPE	CHAIN CLOCKCMIC DS30 DS512 MAPPER MEMORY MSP PBUS TBUS TBUSACC TFI FBUS	*Card type*. Enter the type of card. If MSP contains the entry NT9X13DD, the corresponding memory card, NT9X14DB, is optional. If the entry is CHAIN, datafill fields PROTOCOL and HEADPECS.

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	PROTOCOL	DS30 or DS512	*Protocol*. If the entry in subfield CARDTYPE is CHAIN, enter the protocol of the chain. If the entry is not chain, leave the field blank. ***Note:*** The DS30 is not a correct entry for operating company use.
	HEADPECS	see subfields	*Head product engineering code*. This field contains the subfields FRONTPEC and BACKPEC.
	FRONTPEC	alphanumeric (8 characters)	*Front product engineering code*. Enter the PEC for the front card. See the following table for a list of correct PECs for each card type.
	BACKPEC	alphanumeric (8 characters)	*Back product engineering code*. Enter the PEC for the back card. Seethe following table for a list of correct PECs for each card type. If the entry in subfield CARDTYPE can be CHAIN or DS512, and the entry in this subfield can be NT9X62BA, NT9X62CA, NT9X62CB, or NT9X62BB. When this condition occurs, enter the data in refinement NUMLINKS. If the entry in subfield CARDTYPE is MAPPER or MEMORY, leave this subfield blank.
	NUMLINKS	1, 2, or 4	*Number of links*. The entry in subfield CARDTYPE can be CHAIN or DS512, and the entry in field BACKPEC can be NT9X62BA, NT9X62CA, NT9X62CB, or NT9X62BB, enter the number of links on the NT9X62 card in the chain that receives data. The entry is as follows: • If the entry in subfield BACKPEC is NT9X62BA, enter 1, 2, or 4. • If the entry in subfield BACKPEC is NT9X62CA or NT9X62CB, enter 1 or 2. • If the entry in subfield BACKPEC is NT9X62BB, enter 4.

MSCDINV (continued)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	BODYPECS	see subfields	*Body product engineering code*. This field contains the subfields BODYFRONTPEC and BODYBACKPEC. Enter a maximum of seven groups of front PEC and correct back PEC that form the body of the chain. Enter $ at the end of the field.
	BODYFRON TPEC	alphanumeric (8 characters)	*Body front product engineering code*. Enter the PEC of the front card that connects to the body section of the chain.
	BODYBACK PEC	NT9X25AA or NT9X25BA	*Body back product engineering code*. Enter the PEC of the back card that connects to the body section of the chain. The last card in a chain must be NT9X25BA.

Datafill example

Sample datafill for table MSCDINV appears in the following example.

MAP example for table MSCDINV

```
MSCDKEY                                                SLOTINFO
_____________________________________________________________________________

0  0  1                                                TBUSACC NT9X52AA NIL
0  0  2                                                CLOCK NT9X53AA NT9X54AB
0  0  3                                                MSP NT9X13DB NT9X26AA
0  0  4                                                MEMORY NT9X14DB
0  0  5                                                MAPPER NT9X15AA
0  0 20                                                DS30 NT9X17AA NT9X23BA
0  0 21                                                DS30 NT9X17AA NT9X23BA
0  0 22                                                DS30 NT9X17AA NT9X23AA
0  0 23                                                DS30 NT9X17AA NT9X23AA
0  0 24                                                CMIC NT9X17AA NT9X20AA
0  0 25                                                CMIC NT9X17AA NT9X20AA
0  0 26                                                PBUS NT9X49CB NIL
1  0  1                                                TBUSACC NT9X52AA NIL
1  0  2                                                CLOCK NT9X53AA NT9X54AB
1  0  3                                                MSP NT9X13DB NT9X26AA
1  0  4                                                MEMORY NT9X14DB
1  0  5                                                MAPPER NT9X15AA
1  0 20                                                DS30 NT9X17AA NT9X23BA
1  0 21                                                DS30 NT9X17AA NT9X23BA
1  0 22                                                DS30 NT9X17AA NT9X23AA
1  0 23                                                DS30 NT9X17AA NT9X23AA
1  0 24                                                CMIC NT9X17AA NT9X20AA
1  0 25                                                CMIC NT9X17AA NT9X20AA
1  0 26                                                PBUS NT9X49CB
```

Table history

TEL07

The PEC NT9X62BB was added to the range of values for card type DS512 in the table, "Range of back cards" and in the table, "Field descriptions."

CSP04

The PEC NT9X62CB was added to the range of values for card type CHAIN and DS512 in the table ,“Range of back cards" and in the table , “Field descriptions."

CSP02

The PEC NT9X53AD was added to range of values for card type CLOCK in table 1 in section "Functional description."

MSFWLOAD

Table name

Message Switch Firmware Load Table

Functional description

Table MSFWLOAD contains the name of the firmware load file for each firmware downloadable message switch (MS) product engineering codes (PEC). Table MSFWLOAD also contains the name of the device that contains the file.

The command LOADCD has a default file and device parameters. The switch uses the file name and device associated with the PEC of the card downloaded as the default file and device parameters.

Only the following interface cards are firmware downloadable:

- NT9X17CA (DMS-bus 128-port card)
- NT9X17DA (message switch 64-port card)
- NT9X17BB (DMS-bus 32-port card)

Datafill sequence and meaning

You do not need to enter data in other tables before you enter data in table MSFWLOAD.

Table size

1 to 32 tuples

Datafill

Datafill for table MSFWLOAD appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
PECODE		see subfield	*Interface product engineering code*. This field consists of subfield NAME.
	NAME	NT9X17BB NT9X17CA NT9X17DA	*Name*. Enter the the PEC of the interface card.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
DEV		alphanumeric (1 to 16 characters)	*Device name*. Enter the name of the device where the firmware load file resides.
FILENAME		alphanumeric (one to eight characters)	*Firmware load file name*. Enter the file name of the firmware load file.

Datafill example

Sample datafill for table MSFWLOAD appears in the following example.

MAP example for table MSFWLOAD

```
  PECODE              DEV FILENAME
_____________________________________________________________

NT9X17CA      D000PMLOADS  MPF36CJ
NT9X17DA      D000PMLOADS  MPF36CJ
NT9X17BB      D000PMLOADS  MPF36CJ
```

Table history

BCS36

Subfield NAME was added in BCS36.

MSGCTR

Table name

FLEXDIAL Message Center (MSGCTR) table

Functional Description

See *UCS DMS-250 FLEXDIAL Framework Application Guide* for table MSGCTR datafill information.

MSGRTE

Table name

PRA Facility Message Routing Table

Functional description

Table MSGRTE provides for the networking of features on PRA trunks. Table MSGRTE is used for the routing and processing of PRA facility messages. This table does not establish call connections.

Table MSGRTE determines if the message terminates on the current switch or is sent to another switch. This is done through the use of the origination and destination information elements. The destination can be either LOCAL or a PRA D-channel that transmits the message to the next switch for further routing.

Datafill sequence and implications

The following tables must be datafilled before table MSGRTE.

- NETNAMES
- TRKMEM
- C7RTESET
- SPECCONN

All network names in this table must already exist in table NETNAMES.

To datafill a DPNSS selector, a source ISUP trunk CLLI must be specified along with a DPNSS selector, and the ISUP trunk CLLI must exist in tables TRKGRP and TRKSGRP. Only one DPNSS selector is allowed per tuple.

Table size

The table size is dynamic.

MSGRTE (continued)

Datafill

The following table lists datafill for table MSGRTE.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
MSGRTKEY		see subfields	*Message route key* This is the key to table MSGRTE and consists of subfields NETID and DIGRANGE.
	NETID	alphanumeric	*Network identifier* Enter the network name. The network name must be datafilled in table NETNAMES prior to being entered in table MSGRTE.
	DIGRANGE	see subfields	*Digit range* This field consists of subfields FROMDIGS and TODIGS.
	FROMDIGS	alphanumeric (vector of up to 11 characters, 0 to 9, B to F, or N)	*From digits* Enter the digit or digits translated. If the entry represents a block of consecutive numbers, enter the first number of the block.
	TODIGS	alphanumeric (vector of up to 11 characters, 0 to 9, B to F, or N))	*To digits* If FROMDIGS represents a block of consecutive numbers, enter the last number in the block. Otherwise, the entry is equal to field FROMDIGS.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
MSGRTRES		MSGRTSEL	*Message route result* Enter the list of routes used to transmit messages. Up to four routes can be datafilled.
	MSGRTSEL	DPNSS, GTT, LOCAL, PRA, SCREEN, or SS7	*Message route selector* Enter the route type. Enter DPNSS if TCAP NRAG messages are sent over DPNSS virtual trunks. Enter LOCAL if the message terminates on this switch. Enter PRA if the message is routed out on a specified PRA-D channel. Enter SCREEN if the message is screened and does not route further. Enter SS7 if a the message is routed over a specific SS7 route set.

MSGRTSEL = DPNSS

If the entry for field MSGRTSEL is DPNSS, datafill the following subfields.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	ISUPTRK	alphanumeric (up to 16 characters)	*Common language name* Enter the ISUP trunk CLLI name. ***Note:*** The CLLI name must correspond to a valid ISUP CLLI datafilled in table TRKGRP and table TRKSGRP.
	DELDIGS	0 to 15	*Delete digits* Enter the number of deleted digits from the destination address in the message routing information.

MSGRTE (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	PREDIGS	numeric or N (vector of up to 11 characters)	*Prefix digits* Enter the digit string prefixed to the destination address in the message routing information.
	OPTIONS	NEWNET	*DPNSS options* Enter the list of optional parameters for the DPNSS selector. ***Note:*** NEWNET is the only option currently supported.
	OPTION	NEWNET	*DPNSS option* Enter NEWNET.
	NETNAME	INTECNET or PUBLIC	*New Network name* Enter the new network name used to replace the network identifier in the destination address in the message routing information. Enter either INTECNET or PUBLIC. ***Note:*** The new network name must already exist in table NETNAMES.

MSGRTSEL = GTT

If the entry for field MSGRTSEL is GTT, datafill the following subfields.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	GTT_INDEX	alphanumeric (1 to 16 characters)	*Global title type name* Enter the title type name as defined in table C7GTTYPE.

MSGRTSEL = PRA

If the entry for field MSGRTSEL is PRA, datafill the following subfields.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	TRKCLLI	alphanumeric (1 to 16 characters)	*Trunk common language location identifier* Enter the trunk CLLI name.
	DELDIGS	0 to 15	*Delete digits* Enter the number of deleted digits from the destination address in the message routing information.
	PREDIGS	vector of up to 11 characters (0 to 9, B to F, or N)	*Prefix digits* Enter the digit string prefixed to the destination address in the message routing information.
	OPTIONS	NEWNET or NEWTOR	*PRA options* Enter NEWNET for a new network and datafill subfield NETNAME. Enter NEWTOR for a new type of route and datafill subfield TYPEOFRT.
	NETNAME	INTECNET or PUBLIC	*Network name* Enter either INTECNET or PUBLIC.
	TYPEOFRT (BCS36-)	PUB or PVT	*Type of route* Enter PUB for a public route. Enter PVT for a private route.

MSGRTE (continued)

MSGRTSEL = SS7

If the entry for field MSGRTSEL is SS7, datafill the following subfields.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	DPC	alphanumeric (1 to 16 characters)	*Destination point code* Enter the CLLI name.
	DELDIGS	0 to 15	*Delete digits* Enter the number of deleted digits from the destination address in the message routing information.
	PREDIGS	numeric or N (vector of up to 11 digits)	*Prefix digits* Enter the digit string prefixed to the destination address in the message routing information.
	OPTIONS	NEWNET	*SS7 options* Enter NEWNET.
	NETNAME	INTECNET or PUBLIC	*Network name* Enter either INTECNET or PUBLIC.

Datafill example

The following example shows sample datafill for table MSGRTE.

MAP display example for table MSGRTE

```
                          MSGRTKEY
                                                MSGRTRES
_____________________________________________________________
PUBLIC      6137223      6137224
(PRA   K2KDTI64CLLP1  4           N NEWTOR PVT)$
```

Table history

UK002

The following changes were made:

- expanded datafill implications
- corrected field name MSGRTESEL to read MSGRTSEL
- added DPNSS explanation to field MSGRTSEL
- corrected field name SUPTRK to read ISUPTRK
- added field OPTION for MSGRTSEL = DPNSS conditional datafill
- expanded explanation for refinements OPTIONS, OPTION, and NETNAME for MSGRTSEL = DPNSS conditional datafill
- added N to range of values for subfield PREDIGS for MSGRTSEL = DPNSS conditional datafill

CSP02

Message route selector ISMDI and its refinements were removed.

BCS36

The following changes were made:

- added entry NEWTOR to field OPTIONS
- added new field TYPEOFRT

MSILINV

Table name

Message Switch Inter-MS Link Inventory Table

Functional description

Table MSILINV defines inter-message-switch links. These links provide greater messaging reliability in the DMS-bus.

The frame transport system (FTS) messaging software uses the interlinks. The software uses these interlinks to direct messages across DMS message switches (MS) at the DMS-bus protocol level.

The software must use the interlinks if a DMS-100 contains link peripheral processor (LPP) cabinets. These cabinets have application specified units (ASU) that use feature package NTXH77AA (Channelized Access on LPP/LIS). Feature package NTXH77AA allows an LPP connection to a DMS junctored network (JNET) or enhanced network (ENET) that uses DS30 links. The method that feature package NTXH77AA replaces the previous method. In the previous method, channel banks connect the ASUs to the public switching network.

An additional path for messaging improves system reliability. This path is for use when one or more node message ports are not operational. The FTS software can detect message points that do not function. The FTS software can rate messages with the MS interlinks. Before, the system lost the message if a path was not available.

See table MSCDINV for related information.

Datafill sequence and meaning

You must enter data in tables MSINV and MSCDINV before you enter data in table MSILINV.

Table size

0 to 2 tuples

Datafill

Datafill for table MSILINV appears in the the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
IMSL		see subfield	*Inter-message-switch link*. The field contains subfield LINKNO.
	LINKNO	0 to 1	*Message switch interlink number*. Enter the link number of the interlink to define. One MS shelf pair can have a maximum of two links defined. The addition of link 0 must occur before the addition of link 1.
SHELFNO		0 to 3	*Message switch shelf number*. Enter the number of the MS shelf where the interlink resides. For most DMS SuperNodes, shelf 0 is present. All MS shelves have MS 0 and MS 1 planes.
CARDNO		6 to 23	*Message switch card number*. Enter the number of the MS card where the interlink resides. For example, if you select card 5, card 5 of MS 0 and card 5 of MS 1 link together.
INFO		see subfields	*Message switch interlink information*. This field contains subfields PROTOCOL and PORTNO.

MSILINV (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	PROTOCOL	DS30 DS512 SR128 or SR256	*Messaging protocol*. Enter the messaging protocol for the MS interlink. Enter data in subfield PORTNO.
	PORTNO	0 to 15	*Message switch port number*. Enter the number of the MS port that the interlink uses. For DS512 protocol, the only correct entry is 0. For DS30 protocol, the correct entries are 0 to 15. ***Note:*** For four-port DS30 MS cards, the only correct entries are 0 to 3. For SR128 the correct entries are 0 to 3. For SR256 the correct entries are 0 or 1.

Datafill example

An example of datafill for table MSILINV appears in the example below. The example defines two interlinks.

Link 0 connects card 6, port 12 on MS shelf 0, MS 0, to card 6, port 12 on MS shelf 0, MS 1. Link 0 performs this connection with DS30 protocol.

Link 1 connects card 10, port 0 on MS shelf 0, MS 0, to card 10, port 0, on MS shelf 0, MS 1. Link 1 performs this connection with DS512 protocol.

MAP example for table MSILINV

```
IMSL SHELFNO CARDNO     INFO
_____________________________________________________________

   0       0    6       DS30 12
   1       0    10      DS512 0
```

Table history

BCS35

Values SR256 and SR128 were added to field PROTOCOL in BCS35.

MSINV

Table name

Message Switch Inventory Table

Functional description

Table MSINV contains message switch (MS) location and characteristic information. The table allows operating company personnel to change the characteristic information of the default MS nodes. This table allows operating company personnel to add and delete optional MS nodes.

The DMS switch requires the default MS nodes to operate. The default MS nodes are MS 0 and 1. The addition of these nodes to table MSINV occurs during the first data entry. Operating company personnel cannot delete these nodes from the table. Operating company personnel can change the location, product engineering codes (PEC), load name, and extension shelves of the nodes only.

The optional MS nodes increase the message handling capacity of the DMS-100E switch. At the start, this additional capacity is not a requirement. The system does not allow the entry of the optional MS nodes.

Each tuple in table MSINV contains a required and an optional part. The required part contains the identity, location, and PECs of the MS. The required part contains the version and edition of the MS software loaded in the MS.

The optional part contains information about shelves available for the MS. The number of shelves depends on the size of the office.

Datafill sequence and meaning

You do not need to enter data in other tables before you enter data in table MSINV.

Table size

2 tuples

Datafill

Datafill for table MSINV appears in the following table.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
MSINVKEY		see subfield	*Message switch inventory key*. This is the key field to table MSINV. This field contains subfield MSNUM.
	MSNUM	0 to 1	*Message switch number*. Enter the MS number.
FLOOR		0 to 99	*Floor*. Enter the floor where the frame is. The default value for this field is 0.
ROW		A to H J to N P to Z AA to HH JJ to NN or PP to ZZ	*Row*. Enter the row position on the floor where the frame is. The default value for this field is A.
FRAMEPOS		0 to 99	*Frame position*. Enter the position of the frame in the row. The default value for this field is 0.
FRTYPE		CMDC DNPC DPCC MCCM MCOR or SCC	*Frame type*. Enter the name of the frame type as follows: • CMDC to specify a computing module duplex cabinet • DNPC to specify a dual network packaged core • DPCC to specify a dual-plane combined core cabinet • MCCM to specify a Meridian cabinet core module • MCOR to specify a computing module mixed core cabinet • SCC to specify SuperNode combined core cabinet The default value for this field is SCC. Entries out of the range indicated for this field are incorrect.

MSINV (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
FRAMENO		0 to 511	*Frame number*. Enter the number of the frame type. The default value for this field is 0.
FRINFO		see subfield	*Frame information*. This field contains subfield FRAMEPEC.
	FRAMEPEC	NT7X26AA NT9X01BA NT9X01MB NTMX42BA NTNX20AA	*Frame product engineering code*. Enter the PEC that corresponds to the frame type entry in field FRTYPE. If the entry in field FRTYPE is CMDC or DPCC, enter NT9X01BA. The NT9X01BA is the Dual-plane combined core cabinet. If the entry in field FRTYPE is DNPC, enter NT7X26AA. The NT7X26AA is the Dual network package core. If the entry in field FRTYPE is MCCM, enter NTNX20AA. The NTNX20AA is the Meridian cabinet core module. If the entry in field FRTYPE is MCOR, enter NTMX42BA. The NTMX42BA is the CM-mixed core cabinet. If the entry in field FRTYPE is SCC, enter NT9X01MB. The NT9X01MB is the SuperNode SE cabinet. The default value for this field is NT9X01MB.
	SHELF0	see subfields	*Shelf zero*. This field contains subfields SHELFPEC and SHELFPOS.

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	SHELFPEC	NT9X0470 NT9X04AA NTRX1501	*Shelf product engineering code*. Enter the PEC for the MS shelf as follows: • NT9X0470 (combined message switch shelf assembly) • NT9X04AA (message switch shelf) • NTRX1501 (mini message switch shelf assembly) The default value for this field is NT9X0470.
	SHELFPOS	0 to 77	*Shelf position*. Enter the mounting position for shelf 0. The acceptable values are 0, 13, 26, and 39. The default value for this field is 39. Entries out of the range indicated for this field are incorrect.

Datafill example

Sample datafill for table MSINV appears in the following example. Four possible assignments associated with MS 0 and 1 appear in the example. The entry of two tuples, one tuple for each default MS, must occur.

MSINV (end)

MAP example for table MSINV

```
MSINVKEY FLOOR ROW FRAMEPOS FRTYPE FRAMENO FRINFO
_________________________________________________________________________



0        0     A   0        MCOR   0       NTMX42BA NTRX1501 39
1        0     A   0        MCOR   0       NTMX42BA NTRX1501 26

0        0     A   0        MCCM   0       NTNX20AA NTRX1501 39
1        0     A   0        MCCM   0       NTNX20AA NTRX1501 26

0        0     A   0        DNPC   0       NT7X26AA NTRX1501 39
1        0     A   0        DNPC   0       NT7X26AA NTRX1501 26

0        0     A   0        SCC    0       NT9X01MB NT9X0470 39
1        0     A   0        SCC    0       NT9X01MB NT9X01MB 26
```

MTD

Table name

Magnetic Tape Device Table

Overview

The input/output device (IOD) tables appears in the following table. These tables identify the hardware position assignments for many of the possible IOD devices in the DMS-100 switch.

IOD table assignments

Table name	Table title
MTD	MTDMagnetic Tape Device Table
TERMDEV	TERMDEVTerminal Device Table
DDU	Disk Drive Unit Table
DPACDEV	DATAPAC Device Table
DLCDEV	Data Link Controller Device Table

Input/output controller fixed assignments

The input/output controller (IOC) fixed assignments appear in the following tables.

Configuration 1

The arrangement for switching units equipped with magnetic tape drives (MTD) appear in the following table. These switching units do not have disk drive units (DDU).

Configuration (Sheet 1 of 2)

Card slot and base CKT number on shelf PEC								
NT1X61AA		**NT1X61AB**		**NT2X76BA**		**Fixed assigned devices on module**		
SLT	**CKT**	**SLT**	**CKT**	**SLT**	**CKT**	**IOC:00**	**IOC:01**	**Note**
12	16	04	00	21	00	MTD:00	MTD:01	1, 2
04	00	06	04	19	04	MTD:02	MTD:03	1, 3
14	20	08	08	17	08	MAP:00	PORT.VDU	1, 4

MTD (continued)

Configuration (Sheet 2 of 2)

Card slot and base CKT number on shelf PEC							
06	04	10	12	15	12	Other devices	1, 6
16	24	12	16	--	--	Other devices	1, 6
08	08	14	20	--	--	Other devices	1, 6
18	28	16	24	--	--	Other devices	1, 6
10	12	18	28	--	--	Other devices	1, 6
20	32	20	32	--	--	Other devices	1, 6

Configuration 2

The arrangement for switching units with one MTD and a minimum of one DDU appears in the following table.

Configuration

Card slot and base CKT number on shelf PEC								
NT1X61AA		**NT1X61AB**		**NT2X76BA**		**Fixed assigned devices on module**		
SLT	**CKT**	**SLT**	**CKT**	**SLT**	**CKT**	**IOC:00**	**IOC:01**	**Note**
12	16	04	00	21	00	DDU:00	DDU:01	1, 7
04	00	06	04	19	04	DDU:02	MTD:00	1, 8
14	20	08	08	17	08	MAP:00	PORT.VDU	1, 4
14	23	08	11	17	11	ETAS	ETAS	1, 5
06	04	10	12	15	12	Other devices		1, 11
16	24	12	16	--	--	Other devices		1, 11
08	08	14	20	--	--	Other devices		1, 11
18	28	16	24	--	--	Other devices		1, 11
10	12	18	28	--	--	Other devices		1, 11
20	32	20	32	--	--	Other devices		1, 11

Configuration 3

The arrangement for switching units with a minimum of two MTDs and a minimum of two DDUs appears in the following tables.

Configuration

Card slot and base CKT number on shelf PEC								
NT1X61AA		**NT1X61AB**		**NT2X76BA**		**Fixed assigned devices on module**		
SLT	**CKT**	**SLT**	**CKT**	**SLT**	**CKT**	**IOC:00**	**IOC:01**	**Note**
12	16	04	00	21	00	DDU:00	DDU:01	1, 7
04	00	06	04	19	04	MTD:01	MTD:03	1, 10
14	20	08	08	17	08	MAP:00	PORT.VDU	1, 4
14	23	08	11	17	11	ETAS	ETAS	1, 5
06	04	10	12	15	12	Other devices		1, 12
16	24	12	16	--	--	Other devices		1, 12
08	08	14	20	--	--	Other devices		1, 12
18	28	16	24	--	--	Other devices		1, 12
10	12	18	28	--	--	Other devices		1, 12
20	32	20	32	--	--	Other devices		1, 12

Configuration 4

The arrangement for switching units with a minimum of one MTD and one DDU appears in the following table.

Configuration (Sheet 1 of 2)

Card slot and base CKT number on shelf PEC								
NT1X61AA		**NT1X61AB**		**NT2X76BA**		**Fixed assigned devices on module**		
SLT	**CKT**	**SLT**	**CKT**	**SLT**	**CKT**	**IOC:00**	**IOC:01**	**Note**
12	16	04	00	21	00	DDU:00	MTD:02	1, 10
04	00	06	04	19	04	MTD:01	MTD:00	1, 10

MTD (continued)

Configuration (Sheet 2 of 2)

Card slot and base CKT number on shelf PEC								
NT1X61AA		**NT1X61AB**		**NT2X76BA**		**Fixed assigned devices on module**		
SLT	**CKT**	**SLT**	**CKT**	**SLT**	**CKT**	**IOC:00**	**IOC:01**	**Note**
14	20	08	08	17	08	MAP:00	PORT.VDU	1, 4
14	23	08	11	17	11	ETAS	ETAS	1, 5
06	04	10	12	15	12	Other devices		1, 13
16	24	12	16	--	--	Other devices		1, 13
08	08	14	20	--	--	Other devices		1, 13
18	28	16	24	--	--	Other devices		1, 13
10	12	18	28	--	--	Other devices		1, 13
20	32	20	32	--	--	Other devices		1, 13

Notes:

The configuration tables reference the following notes:

1. The old type IOC has product engineering code (PEC) 1X61AA. The new type IOC has PEC 1X61AB. The combined IOC/CMC has PEC 2X76BA.

   - SLT = slot number on the IOC
   - CKT = circuit number in tables TERMDEV and MTD
   - CMC = central message controller
   - NT1X61AA restrictions: Fixed assignments impose these restrictions. The assignment of cards to slots on the shelf occur in the same order as in configurations 1, 2, 3, or 4. The assignment of a maximum of three cards to the following group of slots: 04, 06, 08, and 10 occurs. The assignment of a maximum of four cards to the group of slots: 12, 14, 16, 18, and 20 occurs. This assignment must satisfy power loading requirements of NT1X61AA. In NT1X61AA,

a converter feeds slots 12, 14, 16, 18, and 20 and another converter feeds slots 04, 06, 08, and 10.

- The assignment of fixed-assignment devices to the lowest numbered circuit that associates with the slot occurs. The assignment of circuits that the system does not use for other functions occurs.

2. The MTD:00 and MTD:01 are available for each DMS. The assignment of MTD:00 and MTD:01 appears in the tables in this document.
3. If the MTD:02 and MTD:03 is available for assignment, the assignment appears in the second table in this document. If MTD:02 and MTD:03 are not available, the assignment of the other devices to these locations occurs. The user can reserve the slots for future MTD additions.
4. The MAP:00 is the office primary general maintenance position. The MAP:00 is the same as TTP:00. This device is always available. The PORT.VDU is the portable visual display unit (VDU) available for maintenance use in the main equipment aisles. This device is always available.
5. Emergency Technical Assistance Service (ETAS) assignments for the VDU and printer are IOC:00 VDU and IOC:01 printer. The assignment of ETAS devices appear in configuration tables. Name the Dial-up facilities that ETAS and field service engineering (FSE) use DIAL1, DIAL2 and follow in sequence.
6. Assign additional MTDs or terminals as necessary.
7. The DMS requires a minimum of one DDU. The assignment of DDU:00 and DDU:01 appears in the configuration tables.
8. If the DDU:02 is available for assignment, the assignment appears in the third table in this document. If the DDU:02 is not available for assignment, the assignment of other devices to this location occurs. The user can reserve the slot for a future DDU addition.
   - The DMS requires a minimum of one MTD. The assignment of MTD:00 occurs as indicated.
9. The DMS requires a minimum of one DDU. The assignment of DDU:00 occurs as indicated.
   - If MTD:02 is available for assignment, the assignment of MTD:02 occurs as indicated. If the MTD:02 is not available for assignment, the assignment of other devices to this location occurs. The user can reserve the slot for a future MTD addition.
10. The DMS requires a minimum of one MTD. The assignment of MTD:00 and MTD:01 occurs as indicated.

MTD (continued)

11. The assignment of additional DDUs, distributed processing peripherals (DPP), billing medial converters (BMC), or terminals occurs as necessary.
12. The assignment of additional MTDs, DDUs, DPPs, BMCs, or terminals occurs as necessary.
13. The assignment of additional MTDs, DPPs, BMCs, or terminals occurs as necessary.

Functional description

Table MTD lists the assignments for each of the MTDs. The maximum number of assignments is 16.

The system can only boot an image from MTDs with IOC assignments that appear in the following table.

IOC assignments

	Card slot and base CKT number of shelf PEC					
	NT1X61AA					
IOC number	**Slot**	**CKT**	**Slot**	**CKT**	**Slot**	**CKT**
0	12	16	04	00	21	00
0	04	00	06	04	19	04
1	12	16	04	00	21	00
1	04	00	06	04	19	04

Seethe following table for magnetic tape drives 0 to 3 with fixed assignments on the IOC.

Datafill sequence and meaning

Enter data into table IOC before you enter data into table MTD.

Enter data into the following tables after enter data into table MTD.

- DIRPPOOL
- FTRANDEV

Table size

The system automatically allocates memory for 16 magnetic tape drives.

Datafill

Datafill for table MTD appears in the following table.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
MTDNO		0 to 15	*Magnetic tape drive number*. Enter the number assigned to the MTD.
IOCNO		0 to 19	*Input/output controller number*. Enter the input/output controller number to which the system assigns the MTD. See the second table in this document.
IOCCKTNO		0 to 35	*Input/output controller circuit number*. Enter the input/output controller circuit number (slot) to which the system assigns the MTD. See the second table in this document.
EQPEC		alphanumeric (6 characters)	*Product engineering code*. Enter the PEC of the MTC circuit card. Use PECs 1X68AA, 1X68AB, and 1X68BB with Hewlett-Packard tape drives. Use PECs 1X68AC and 1X68BC with Cook Electric tape drives.

Datafill example

Sample datafill for table MTD appears in the following example.

MAP example for table MTD

```
MTDNO   IOCNO   IOCCKTNO   EQPEC
_____________________________________________________________

0        0       0         1X68AA
1        1       0         1X68AA
```

MULTICOS

Table name

Multiple Class of Service screening (MULTICOS) table

Functional description

Table MULTICOS creates a one-to-many relationship between a subscriber number (for example, AUTHCODE, ANI, and TCN) and the Class of Service (COSUS) table indexes for class of service (COS) screening. The purpose of relating multiple COS screening indexes to a subscriber number is to provision COSUS table indexes on a more reusable level, such as geographical regions. With the MULTICOS table, COS screening can be performed several times during a single call.

Table MULTICOS provides for 2047 tuples to store up to 32 indexes into table COSUS. Thus, COS screening can be performed up to 32 times per call.

Table size

The physical tuple is a fixed size tuple and stores all 32 indexes. One physical tuple allocates 65 bytes.

The total data store per block of 32 tuples is 2212 bytes. Table MULTICOS supports up to 64 blocks. Block sizes of 32 tuples are allocated and deallocated as they are needed.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table MULTICOS.

Field	Subfield or refinement	Entry	Explanation and action
KEY		1 to 2047	KEY. Enter a vector of up to 32 table COSUS indexes.
COSIDX		0 to 1023	CLASS OF SERVICE INDEX. Enter a number to index into the associated COSUS table. If set to any digit besides 0, this field indexes into COSUS. If set to 0, COS screening is not performed and field COSIDX does not apply. Enter up to 32 COSUS indexes.

Datafill example

The following example shows datafill for table MULTICOS.

```
KEY COSIDX
_____________________________________________________

3 (40) (34) (67) (36) (1) (2) (3) (4) (5) (6) $
4 (32) (33) (34) (35) (36) (37) (38) (39) $
5 (5) $
```

Table history

UCS06

Table MULTICOS is created.

MULTILNK

Table name

Multi-link Procedure (MULTILNK)

Functional description

The Multi-link Procedure (MULTILNK) table enables data interchange when multiple circuits (links) are used in parallel. A user-defined group of parallel links terminating at the same far-end signaling terminal is referred to as a multi-link group.

Table MULTILNK defines the multi-link group and the links within the group to perform multi-link procedure.

Datafill sequence and implications

Table NX25 must be datafilled before table MULTILNK.

Field descriptions

The following describes field names, subfield names, and valid data ranges for table MULTILNK.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
MLG		0-16	MULTI GROUP. Enter the key that identifies a multilink group.
LINKS		0-30	LINKS. Identifies a link that is a member of this multi-link group and is an index into table NX25 for a link with application field of NX25MLP.
MT1		1-255	MULTI-LINK PROCEDURE LOST FRAME TIMER. Enter the time in seconds that the MTL is to start. This timer is used to detect frame loss in low traffic conditions. It is started when there is a multi-link frame ready for delivery, but the multi-link frame has not been received (in other words, the timer is started to ensure the missing in sequence frame is received).

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
MT3		1-255	MULTILINK 3 TIMER. Enter the time in seconds that the MT3 is to start.
MLPYEAR		CCITT1980, CCITT1984	RECOMMENDATION YEAR. Enter the year of CCITT recommendation that applies.

Datafill example

The following example shows datafill for table MULTILNK.

```
MLG     LINKS
1       1

MT1     MT3     MLPYEAR
10      10      CCITT1980
```

MULTIPIN

Table name

Multiple Personal Identification Numbers (MULTIPIN) table

Functional description

Table MULTIPIN validates personal identification numbers (PIN). The subscriber dials the PIN that is accessed by call processing. The index into table MULTIPIN corresponds to the PIN index in table AUTHCODU. Two-digit PINS index from 1-4095. Three-digit PINS index from 4096-8191. Two- and three-digit PINS should not associate with the same index number.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table MULTIPIN.

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	KEY. This field consists of a 2-part key: MPIDX and PINDIGS. Both subfields PININDEX and PIN must be input as having the same response.
	MPIDX	0 to 8191	PERSONAL IDENTIFICATION NUMBER INDEX. Enter the corresponding index number in table AUTHCODU. This is the index part of the key field. ***Note:*** Use index numbers 1-4095 for 2-digit PINs. Use index numbers 4096-8191 for 3-digit PINs.
	PINDIGS	Up to 3 digits (0-9, B-F, N)	PERSONAL IDENTIFICATION NUMBER. Enter up to three digits as a PIN number. This number is validated against the dialed PIN and compared to the PINLEN field in table AUTHCODU. This is the second part of the key field.

Datafill example

The following example shows datafill for table MULTIPIN.

MULTIPIN (end)

```
        KEY
____________________________________________________________

1        11
```

MULTITZ

Table name

Multi Time Zone Support

Functional description

Table MULTITZ is used to contain the data for different timezones where customer lines are located. It contains offsets from the CM clock time, taking into account variations in Daylight Savings Time.

Datafill sequence and implications

There is no requirement to datafill tables in a specific order.

Table size

Memory is allocated as required to allow a maximum of 100 tuples.

Datafill

The following table lists the datafill for table MULTITZ.

Field descriptions

Field	Subfield	Entry	Explanation and action
MTZNAME		MULTITM_KEY Alphanumeric (1 to 4 characters)	Key
	TMSENSE	MODIFY {POS, NEG}	Is offset positive or negative?
	MINUTES	MTZMINSTYPE {0 TO 1560}	Minutes to offset from CM clock
	DST	YES_NO {NO, YES}	Does timezone have DST?
	DSTSENSE	MODIFY {POS, NEG}	Is DST offset positive or negative?
	DSTMINS	DSTMINSTYPE {0 TO 120}	Extra minutes to offset from DST
	STRTYEAR	MTZYEARTYPE {2000 TO 3000}	Year when DST period starts
	STRTMON	MONTHS {jan, feb, mar...}	Month when DST period starts

Field descriptions

Field	Subfield	Entry	Explanation and action
	STRTDAY	DAYS {1 TO 31}	Day when DST period starts
	STRTHOUR	HOURS {0 TO 23}	Hour when DST period starts
	STRTMIN	MINUTES {0 TO 59}	Minute when DST period starts
	ENDYEAR	MTZYEARTYPE {2000 TO 3000}	Month when DST period ends
	ENDMON	MONTHS {jan, feb, mar,...}	Month when DST period ends
	ENDDAY	DAYS {1 TO 31}	Day when DST period ends
	ENDHOUR	HOURS {0 TO 23}	Hour when DST period ends
	ENDMIN	MINUTES {0 To 59}	Minute when DST period ends

Datafill example

The following example shows sample datafill for table MULTITZ

Table MULTITZ

```
BERL POS  60 Y POS  60 2002 MAR 31 2  0 2002 OCT 27 3  0
TOKY POS 540 N POS   0 2002 JAN  1 0  0 2002 JAN  1 0  0
```

Table history

CSP18/SN05

Feature 59038784 introduced this table.

Supplementary information

None.

MULTPROF

Table name

Multiple Automatic Number Identification (ANI) Profile by Carrier Identification Code (CIC) table

Functional description

Table MULTPROF provides optional functionality of multiple profiles on a per-jurisdiction basis for automatic number identification (ANI). Table ANIVAL can index MULTPROF to obtain a profile from table UNIPROF. The profile obtained through MULTPROF is based on the carrier identification code (CICJUR) associated with the call.

Table ANIVAL indexes table MULTPROF through the KEY field. The CICJUR associated with the call is compared to the entries in the CIC and JUR refinement of the indexed tuple. When a match is found, the corresponding UNIPROFIDX entry is used to index table UNIPROF, where a profile is assigned to the call.

Datafill sequence and implications

You must enter datafill in table MULTPROF before the MULT selector value can be used by table ANIVAL.

Table size

Table MULTPROF can range in size from 0 to 65,532 tuples.

Datafill

The following table lists datafill for table MULTPROF.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
KEY		string of 1 to 8 characters	KEY. This key field is indexed by table ANIVAL.
OPTION			OPTION. The OPTION field is a vector of up to 10 multiples with options CIC, DEFAULT, and EVAL63, CICJUR.
		CIC	CARRIER IDENTIFICATION CODE. This option specifies a UNIPROF index for a given CIC. Enter datafill for the CIC and UNIPROFIDX refinements.

MULTPROF (continued)

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
	CIC	1 to 9999	CARRIER IDENTIFICATION CODE. Enter a valid CIC.
	UNIPROFIDX	string of 1 to 8 characters	UNIVERSAL PROFILE INDEX. Enter a valid profile from table UNIPROF for ten digit ANIs.
		EVAL63	EVAL63. This option returns the ANI to table ANIVAL if the CIC associated with the ANI has not been specified for the given MULTPROF key.
		DEFAULT	DEFAULT. This option specifies a default UNIPROF index for a MULTPROF key that has no associated CIC. Enter datafill for the UNIPROFIDX refinement.
		CICJUR	CARRIER IDENTIFICATION CODE and JURISDICTION. This option indicates that an ANI is screened based on CIC and jurisdiction. Enter a valid CIC from 1 to 9999. When CICJUR is datafilled, enter the following options: INTER, INTRA, INTRN, DEFJUR.
		INTER	INTER LATA. This option processes INTER LATA calls using the ANI associated with the INTER key. Datafill with the UNIPROFIDX refinement.
		INTRA	INTRA LATA. This option processes INTRA LATA calls using the ANI associated with the INTRA KEY. Datafill with the UNIPROFIDX refinement.
		INTL	INTERNATIONAL- This option processes international calls using the ANI associated with the INTL key. Datafill with the UNIPROFIDX refinement.

MULTPROF (continued)

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
		DEFJUR	DEFAULT JURISDICTION. This options is used when the jurisdiction of this call is not specified as one of the options for this call. The call is then processed using the ANI associated with the DEFJUR key. Datafill with the UNIPROFIDX refinement.
		JUR	JURISDICTION. This option is used to indicate that an ANI should be screened based on jurisdiction. Jurisdictions subfield has the following values: InterLATA, IntraLATA, International and Default Jurisdiction. When JUR is datafilled, enter the following options: When CICJUR is datafilled, enter the following options: INTER, UNIPROF KEY, INTRA, INTL, DEFJUR.

Datafill example

The following example shows sample datafill for table MULTPROF.

MAP display example for table MULTPROF

```
 KEY              OPTIONS
 ____________________________________________________________
MULTPRF1   (CIC 0001 UNIPROF6) (CIC 0002 UNIPROF7) (CIC 0010
           UNIPROF9)(CICJUR 0999(DEFJUR UNIPROF1)(INTER UN
           IPROF2)$)(JUR (DEFJUR UNIPROF2 (INTER UNIPROF5)
           (INTL UNIPROF6) (INTRA UNIPROF7) $
           $
MULTPRF2   (CIC 0555 UNIPROF3) (CIC 0888 UNIPROF9)
           (DEFAULT UNIPROF7) $
MULTPRF3   (CIC 0999 UNIPROF4) (EVAL63) $
MULTPRF4    (CIC0555 UNIPROF4) (CIC0777 UNIPROF5) (CIC0999
           UNIPROF5) (CIC0444 UNIPROF8) (CIC0666 UNIPROF1)$
```

Supplementary information

Functionality for table MULTPROF is controlled via a new SOC, UTRS0200, “MULT Prof ANI by CIC."

MULTPROF (end)

The table transfer (TABXFR) code for table MULTPROF is implemented as a physical data move (PDM).

Table history

UCS17

USC17 option JUR was added to table MULTPROF, (A59033229).

UCS09

Option CICJUR was added to table MULTPROF (AX0999).

UCS08

This table was introduced to support phase II of the multiple ANI profile development.

MVPRTE

Table name

Mechanized Voice Prompt Route (MVPRTE) table

Functional description

The MVPRTE table, together with the new field OPIDX added to the Universal Access (UA) selector in table STDPRTCT (subtable STDPRT), allows customized operator routing for each Universal Access numbers.

Table size

The maximum size of table MVPRTE is 1032 words.

Datafill sequence and implications

Datafill table POSITION before datafilling table MVPRTE.

Datafill one of the office routing tables (OFRx, where x = T, 2, 3, or 4) before datafilling table MVPRTE.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table MVPRTE.

Field	Subfield or refinement	Entry	Explanation and action
OPIDX		1 to 255	OPERATOR INDEX Enter an index from table STDPRTCT.
MCCS_TABLE_SEL		POS,OFRT,OFR2,OFR3,OFR4,NONE	MCCS TABLE SELECTOR. Enter the table for operator routing. See sections MCCS_TABLE_SEL=POS and MCCS_TABLE_SEL=OFRT, OFR2, OFR3, or OFR4 for refinement datafill.

MVPRTE (end)

MCCS_TABLE_SEL=POS

When MCCS_TABLE_SEL=POS, datafill the following refinement:

Refinement	Subfield or refinement	Entry	Explanation and action
MVPPOS		NONE,RTE1,RTE2,RTE3,TOPS,DIRECT,LOOP,RTE7,RTE8,RTE9,RTE10,RTE11,RTE12,NILRTE,RTE4,RTE5	POSITION. Enter value of data type position datafilled in table POSITION for routing.

MCCS_TABLE_SEL=OFRT, OFR2, OFR3, or OFR4

When MCCS_TABLE_SEL=OFRT, OFR2, OFR3, or OFR4, datafill the following refinements:

Refinement	Subfield or refinement	Entry	Explanation and action
MCCS_IDX		1 to 1023	MCCS INDEX. Enter an index into table OFRx for routing.

Datafill example

The following example shows datafill for table MVPRTE.

```
OPIDX TABLE_SEL
_______________________
2 POS RTE1
5 OFRT 12
255 OFR4 21
```

Table history

UCS06

Table MVPRTE is created.

MWDATA

Table name

Milliwatt Data Table

Functional description

Table MWDATA provides different milliwatt (mW) values for the office. Table MWDATA can have a maximum of ten different milliwatt values set for the office. Milliwatt values are the level in decibels (dB) and frequency in hertz (Hz). The office uses table MWDATA when the office requires a milliwatt reference value. Table CLLIMTCE provides a milliwatt index number that indexes table MWDATA.

The trunk group determines the milliwatt level required. You can use standard table control aspects to change table MWDATA. Add, change, and delete the milliwatt values in positions 1 to 9, field IDXKEY, as required. You can change the value in position 0. You cannot delete the value in position 0. Position 0 must contain the standard milliwatt value for the office.

For a specified cp_id of a circuit, an update of the milliwatt level and frequency fields occurs. The system indicates if the information is correct. If the information is not correct, the system uses the standard milliwatt value assigned for the office. Position 0 in table MWDATA always has the standard value assigned.

Note: Position 0 of field IDXKEY in table MWDATA must always contain datafill.

Datafill sequence and meaning

You do not need to enter data in other tables before you enter data in table MWDATA.

Table size

1 to 10 tuples

Datafill

Field names, subfield names, and correct data ranges for table MWDATA appear in the following table.

MWDATA (continued)

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
IDXKEY		0 to 9	*Milliwatt index key*. Enter the milliwatt (mW) index. This field is the key to the table. The index 0 must contain data. You cannot delete index 0. You can change the values in field MWDATA. You can add, change or delete all other indexes.
MWDATA		see subfields	*Milliwatt data*. This field contains subfields LEVEL and FREQ.
LEVEL		1000 to 1000	*Decibel level*. Enter the decibel level in 0.1-dB steps. An entry of 10 equals a decibel gain of 1 dB. An entry of -10 equals a loss of 1 dB. ***Note:*** You can only change values against index 0.
FREQ		0 to 16 000	*Milliwatt frequency*. Enter the milliwatt frequency in Hertz. Any entry outside the range indicated for this field is not correct. ***Note:*** You can only change values against index 0.

Datafill example

Datafill for table MWDATA appears in the following example.

The example contains the assignment of index 0. The index 0 contains a standard North American level of 0 dB and a frequency of 1004 Hz.

MWDATA (end)

MAP example for table MWDATA

```
IDXKEY      MWDATA
_____________________________________________________________

      0     0  1004
```

NETBUSY

Table name

Network Busy (NETBUSY) table

Functional description

The Carrier Advanced Intelligent Network (CAIN) uses trigger tables to set triggering criteria. A call requiring CAIN services subscribes to a CAIN group (table CAINGRP), which, in turn, enables to one or more trigger sets.

> ***Note:*** A CAIN group subscribes to a trigger set defining the point in call (PIC), trigger detection point (TDP), and trigger.

Table NETBUSY defines the trigger criteria for the *Network_Busy* trigger at the *Network_Busy* TDP of the **Select_Route** PIC (PIC 5). When the datafilled trigger criteria is met, the datafilled action is performed. Available actions are: ignore the current trigger, block the call, leave trigger detection point, continue with no trigger, query the service control point (SCP), or attempt the next route in the route list.

> ***Note:*** Attempting the next route in a route list is known as route advancing.

Refer to the *UCS DMS-250 NetworkBuilder Application Guide* for CAIN services information.

Datafill sequence and implications

Datafill a valid CAIN group in table CAINGRP before datafilling table NETBUSY.

Table size

0 to 65,535 tuples

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table NETBUSY.

NETBUSY field descriptions (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
NETBUSYKY		see subfields	NETWORK BUSY KEY. Datafill the 4-part key: CAINGRP, CRITERA, DIGTYPE, and FROMDIGS.
	CAINGRP	Valid CAIN group datafilled in table CAINGRP	CAIN GROUP. Enter a valid CAIN group datafilled in table CAINGRP.
	CRITERIA		CRITERIA. Enter RTEAVAIL or RTESDONE to qualify the action.
		RTEAVAIL	Enter RTEAVAIL to indicate routes are still available in the routing list or additional routing parameters are available.
		RTESDONE	Enter RTESDONE to indicate no routes are available in the routing list.
		TERMRTE_GNCT	Enter TERMRTE_GNCT to indicate that a release cause value of TERM_RESOURCE_UNAVAILABLE was received on a terminating SS7 agency and routes are still available in the routing list or additional routing parameters are available.
	DIGTYPE	INFO, ANI, XLAADDR, ADDR, CIC	DIGIT TYPE. Enter the digit type used in the FROMDIGS-TODIGS range. Enter INFO (information digits), ANI (automatic number identification), XLAADDR (translated address), ADDR (address) or CIC (carrier identification code).
	FROMDIGS	Up to 24 digits (0 to 9, *, #)	FROM DIGITS. Enter a vector of up to 24 digits. ***Note:*** Only enter * or # as the first digit. The digit values from least to greatest are: 0 1 2 3 4 5 6 7 8 9 * #.

NETBUSY (continued)

NETBUSY field descriptions (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
TODIGS		Up to 24 digits (0 to 9, *, #)	TO DIGITS. Enter a vector of up to 24 digits. ***Note:*** Only enter * or # as the first digit. The digit values from least to greatest are: 0 1 2 3 4 5 6 7 8 9 * #.
TRIGACT			TRIGGER ACTION. Enter the action call processing performs when trigger criteria is met. Enter one of the following: IGNORE, LEAVE_TDP, CONT_NOTRIG, QUERY, or NEXTRTE.
		IGNORE	IGNORE - CAIN call processing ignores these calls and regular switch processing continues.
		QUERY	QUERY - CAIN call processing queries the SCP.
		NEXTRTE	NEXTRTE - CAIN call processing attempts the next route in the route list. ***Note:*** A TRIGACT of NEXTRTE is only available when CRITERIA is RTEAVAIL.
		NEXTCNRTE	NEXTCNRTE - CAIN call processing attempts the next CAIN route in the route list. ***Note:*** A TRIGACT of NEXTCNRTE is only available when CRITERIA is RTEAVAIL.
		LEAVE_TDP	LEAVE TRIGGER DETECTION POINT. Ignore the fact that a match was made, and continue call processing at the next trigger detection point.
		CONT_NOTRIG	CONTINUE WITH NO TRIGGER. Ignore the fact that a match was made and continue the call without further CAIN processing.

NETBUSY field descriptions (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
OPTIONS			OPTION. Datafill this field to specify optional CAIN features. Enter up to 3 options. ***Note:*** Currently, the available options are only valid for a TRIGACT of QUERY.
		NIL	Enter NIL to remove an option.
		BUFFER	Enter BUFFER to activate digit buffering while the SCP is queried. The collected digits are delivered during conversational digit collection.
		GT	Enter GT to identify the global title used to identify the SCP handling the query. Datafill the GT_VALUE refinement.
		T1OVFLGT	This option the global title to use for SCP querying after a T1 timeout occurs on the default global title. Datafill the GT_VALUE refinement.
		ACGOVFLGT	ACG OVERFLOW GT. This option specifies the global title to use for requerying when query is blocked by an ACG control. Datafill the GT_VALUE refinement.
	GT_VALUE		GLOBAL TITLE VALUE. Enter one of the following: CAIN_CLID, CAIN_ADDR, or CAIN_FEAT.
		CAIN_CLID	Enter CAIN_CLID to send overflow queries to the SCP associated with the CAIN_CLID_GT global title defined in table C7GTTYPE.
		CAIN_ADDR	Enter CAIN_ADDR to send overflow queries to the SCP associated with the CAIN_ADDR_GT global title defined in table C7GTTYPE.

NETBUSY (continued)

NETBUSY field descriptions (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
		CAIN_FEAT	Enter CAIN_FEAT to send overflow queries to the SCP associated with the CAIN_FEAT_GT global title defined in table C7GTTYPE. Datafill the GT_DIGITS refinement.
	GT_DIGITS	0 to 4095	Enter the digits associated with CAIN_FEAT_GT from table C7GTTYPE.
		VERSION	VERSION. This option controls the CAIN protocol version for outgoing messages.
	VERSION	V0, V1, V2, V3, V4, V5	Enter one of the following values: V0, V1, V2, V3, V4 or V5.
		STREAM	STREAM. This option controls the NetworkBuilder protocol stream.
	STREAM	UCS05, UCS06, UCS07, UCS08, UCS09, UCS11	Enter one of the following values: UCS05, UCS06, UCS07, UCS08, UCS09, UCS11.

Datafill example

The following example shows sample datafill for table NETBUSY.

```
NETBUSYKY TODIGS TRIGACT OPTIONS
_______________________________

LNPGRP RTESDONE XLAADDR 215 8 QUERY $
SIOTRK_LNPGRP RTEAVAIL XLAADDR 211 211
IGNORE $
```

Table history

UCS14

Added new option, STREAM (SR 60105565).

UCS12

Updated to add editorial changes.

UCS11

Updated the VERSION option to include a new value V5 (AX1373).

UCS09

Added VERSION to options vector (AX0973). Added option ACGOVFLGT to options vector (AX0976).

UCS07

Expanded field TRIGACT to include the entries LEAVE_TDP and CONT_NOTRIG.

Subfield DIGTYPE is expanded and option T1OVFLGT is added.

UCS06

Table NETBUSY was created.

NETJUNCT

Table name

Network Junctor Group Table

Functional description

The two network ports and network module pairs assigned to the junctor groups appear in table NETJUNCT lists .

For the dual shelf network equipment (DSNE), the definition of a strict junctor pattern occurs. The network hardware limits the assignment of junctors on the DSNE. The definition of four junctor groups occurs. Each junctor group must be identical. The junctor groups are 0 to 15, 16 to 31, 32 to 47, and 48 to 63. Each group must contain only serial junctors or only parallel junctors. To keep the same junctor pattern, the software imposes additional restrictions on junctor assignments as follows:

- In a single network configuration, the assignment of all four junctor groups as parallel intranetwork junctors must occur. All four junctor groups are 0 to 15, 16 to 31, 32 to 47, and 48 to 63.
- In a two-network configuration, the assignment of the first two junctor groups on the DSNE as serial internetwork junctors must occur. The first two junctor groups are 0 to 15 and 16 to 31. The assignment of the second two junctor groups as parallel intranetwork junctors must occur. The second two junctor groups are 32 to 47 and 48 to 63.
- In a configuration of three or more networks, the assignment of all four junctor groups on the DSNE as serial internetwork or intranetwork junctors must occur. All four junctor groups are 0 to 15, 16 to 31, 32 to 47, 48 to 63.

Datafill sequence and meaning

You must enter data for table NETWORK before you enter data for table NETJUNCT.

Table size

Table size is 0 to 1024 tuples.

The system automatically allocates memory for 32 junctor groups for each network module pair. The memory allocated for table NETWORK contains the memory for this table.

Datafill

Datafill for table NETJUNCT appears in the following table.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
JUNCTNO		see subfields	*Junctor number*. This field contains subfields GRP and FLD.
	GRP	0 to 31	*Group*. Enter the junctor group number.
	FLD	0 to 31	*Field*. Enter the junctor field number.
FROMNM		0 to 31	*From network pair*. Enter the number of the network module pair assigned to the from side of the junctor group.
FROMPORT		0 to 63	*From network port*. Enter the number of the network port of the network module pair assigned to the from side of the junctor group.
TONM		0 to 31	*To network pair*. Enter the number of the network module pair assigned to the to side of the junctor group.
TOPORT		0 to 63	*To network port*. Enter the number of the network port of the network module pair assigned to the to side of the junctor group.

Datafill example

Sample datafill for table NETJUNCT appears in the following example.

The network assignments for junctor group 0 field 31 appear in this example.

NETJUNCT (end)

MAP example for table NETJUNCT

```
JUNCTNO FROMNM FROMPORT TONM TOPORT
____________________________________________________

 0  31     0       35    1     27
```

NETNAMES

Table name

Internal Logical Network Names Table

Overview

Tables NETNAMES, DNGRPS and DNATTRS, together with tables NCOS and IBNXLA, enable an operating company to datafill station information against a directory number (DN) on a logical network basis.

The following information is required for each DN:

- the address employed within the network to identify the station
- the number of digits in the network
- an indication of whether the DN is unique
- an associated name for use with display terminals
- a suppression parameter indicating whether the display of line identification information is enabled
- an indication of whether the facility reject message must be sent to the originator if the facility message cannot be properly routed to the destination
- an indication of whether the network can route its Network Ring Again (NRAG) connectionless SS7 messages to the NRAG subsystem
- an indication of whether the network can route its NRAG connectionless SS7 messages through the digits and the point code (PC) returned in the integrated services digital network user part (ISUP) release message instead of using table MSGRTE
- an indication of whether transaction capability application part (TCAP) messages are routed by table MSGRTE or through the Network Message Service (NMS) subsystem

Table NETNAMES associates logical network names with external global network identifiers.

Table DNGRPS stores attributes for blocks of DNs, normally corresponding to customer groups. The key to the table consists of a digit range for a block of DNs.

Table DNATTRS stores attributes for individual DNs. The key to the table is a specific DN.

NETNAMES (continued)

Calls that can be completed within a single office have access to data that describes the parties involved in the call. This information is essential for invoking many customer features, such as Line Identification Display and Ring Again. When a call is routed interoffice, the necessary information is unavailable and these features are disabled.

With the advent of high-level signaling protocols, such as Common Channel Signaling 7 (CCS7) and ISDN primary rate access (PRA), it has become both desirable and feasible to exchange this sort of information between offices, providing access to these features network wide.

Station identification

The identity of a station involved in a call is given by that station's DN. This DN can be a public number associated with the station, or any one of a number of private DNs used to address the station within the private networks accessible to the station. Ideally this DN uniquely identifies the station for remote feature (for example, NRAG) activation. Because this is not always possible (as in the case of stations without a unique DN), it is necessary to store information about a station's identity and characteristics on a logical network basis within each office.

Network types

Physically, a telephony network consists of wires and switches connecting various pieces of communication equipment. Logically, a telephone network consists of a set of virtual connections between end points. The term “station" refers to these end points.

Each logical network employs its own particular addressing scheme, or numbering plan, for identifying the stations in its network. The logical network is actually defined by its numbering plan.

A single station is often identifiable by different addresses, corresponding to different numbering plans. In such cases, the station can be viewed as being an element of several different logical networks. A call to or from that station can either remain within that station's own default logical network, or cross a network boundary to enter another logical network.

Address exchange between stations in a logical network

Stations must agree on their addressing scheme when communicating. An individual's internal company mailing address is not sufficient to identify that individual outside the logical company network. The same is true of telephony addresses.

The choice of addressing scheme for station identification must be agreed upon during call set-up through appropriate information elements contained in high-level protocol setup messages.

A station can have a preferred or default address associated with it, and can be considered part of a primary logical network. The default address is used in a communication unless a different one is explicitly selected.

If a station is not directly addressable within a network, then the station address of the closest access point, such as an attendant console, can be used for address exchange. An indication that the station does not have a unique DN is also given once this information element is defined within all appropriate high-level signaling protocols.

Network selection during call origination

It is usually the originating station that determines the choice of the logical network. In telephony, this is either the originating station's default network, or a specific network selected through dialed access codes and translation schemes in accordance with the originator's dial plan.

The choice of logical network also determines the address by which the originating station must identify itself to the intended destination station. It need not be the station address used for billing or other purposes.

Communicating logical network to the terminator

The destination station requires knowledge of the originator's logical network in order to establish a proper context for address exchange. This means that the originator's logical network must be included as part of the originating station's address in the call set-up message.

Network selection by the terminator

The destination station identifies itself to the originator using the originator's network numbering plan where possible. If the terminating office does not have information about the originators network, or if call diversion features (such as Call Forward, Call Transfer, and Call Pickup) are used, the final destination station can be different from that intended by the originator. In such circumstances, there is a possibility that the terminating station cannot be identified by an address in the originator's selected numbering plan.

In these cases, a public network address must be communicated. The address must also be accompanied by the corresponding public network identifier. Public network addresses must be employed in any further communications between the stations.

NETNAMES (continued)

The associated physical network

The logical network connection does not necessarily correspond to the physical network connection. For example, private network calls can be routed over public facilities and public calls can be routed over private facilities. For station identification between the originating and terminating parties, the physical connection is irrelevant.

Directory attributes

For each station capable of initiating outgoing calls or receiving incoming calls on multiple public or private networks, the following information is required for each logical network accessible:

- the address of the station within the network
- whether the DN of the station is unique
- whether the display of DN information is enabled
- two names optionally associated with the station display

Assign the station address to reflect as closely as possible the address within the network by which the station can be accessed for identification and feature activation. For stations without Direct Inward Dialing (DID) on that network, use the DN of the access point (for example, an attendant console).

Standard defaults for DN attributes

The following default values are assumed whenever specific data for a particular DN is absent:

- The address of the station within the network is the same as the internal DN assigned to the station.
- The station DN is UNIQUE (option NONUNIQUE does not appear in the table).
- No name is associated with the station display.
- Information display is enabled.

Only data that differs from these standard defaults is explicitly datafilled.

Since the majority of DNs are published, all DNs are enabled for display by default. The operating company must ensure that any unpublished numbers are explicitly datafilled in order to suppress the display of these numbers.

Attributes for customer groups

In the vast majority of cases, network attributes for individual stations within a customer group are identical. Only attributes that differ from these defaults must be explicitly stored for a particular DN.

Attributes can be datafilled for blocks of DNs (which usually correspond to different customer groups). Only the data that is unique for a particular DN must be explicitly stored against that DN.

Accessing the network attribute tables

When applications such as call processing need to determine network attributes for a given DN, data specific to the DN is accessed first. In the absence of specific DN data, data for the range of DNs in which the given DN falls is accessed next. In the absence of both, the standard defaults are assumed.

Network identifiers

Information concerning a station is stored for each logical network. This requires network identifiers for identifying specific logical networks. These network identifiers must be unique across all networks if they require inclusion in information elements for call set-up (and other) messages.

Within each office, accessible networks are identified by a network name. These names are mapped to the appropriate global external network identifiers for transmission in interoffice high-level protocol messages.

Logical table NETNAMES

Network names and associated external network identifiers are datafilled for each office in table NETNAMES. These names are used in tables that store DN attributes for the network.

The first entry, corresponding to the public telephone network, is added automatically by the system and cannot be deleted. This is the default network.

Default logical networks

The default logical network is defined as the public network. Plain ordinary telephone service (POTS) lines always belong to this network.

For Integrated Business Network (IBN) lines, option DFLTNET is added to table NCOS to indicate the default numbering plan or logical network for stations within that customer group and network class of service. In the absence of the NCOS option, the public network is assumed.

This default can be overridden by dialing specific network access codes.

Selected logical networks

For IBN lines, option LOGNET (GEN refinement of the NETWORK_AREA field for the NET selector) in table IBNXLA indicates the logical network name resulting from translations.

NETNAMES (continued)

Station identification

Each station in an office capable of initiating or receiving calls is identifiable by a specific logical address, or DN, within that office. Attendant consoles, which are usually identified by a common language location identifier (CLLI), must also be assigned a DN for station identification.

Station addresses

The station address stored against the DN for each accessible network is in the standard North American fixed format.

Control of directory number suppression in table NETNAMES

By default, all DNs and names assigned in a switching unit are displayable. Suppression of the DN on an office level is really suppression on a network basis. The network option SUPPRESS exists in table NETNAMES for the suppression of DNs and names associated with physical DNs, not software-only DNs such as Automatic Call Distribution (ACD) and uniform call distribution (UCD) group numbers. (Names and numbers for ACD and UCD DNs should be suppressed in tables DNATTRS and DNGRPS.) The refinement for this option indicates whether the suppression is required internally (suppress presentation of the name or DN within the switching unit) or externally (suppress presentation of the name or DN outside the switching unit).

Logical table DNGRPS

Customer groups are normally assigned blocks of DNs, usually in thousand block groups (THOUGROUPs), and attributes are defined against these DN blocks.

Table DNGRPS stores this data. The key to the table consists of a digit range corresponding to a block of DNs.

Up to two network names can be datafilled in each range. The network names datafilled for a range correspond to entries in table NETNAMES. The data for each accessible network includes station address, associated station name, whether the DN is unique, and whether the DN or name displayed must be suppressed. Values for fields that are absent are taken from standard defaults.

The station address field allows substitution of digits in DN identification parameters within high-level protocol messages between logical networks.

The station address field consists of a full network DN (as for an attendant console), or portions of the full DN with indications that corresponding internal DN digits must be used (as in table DN). For example, an entry such

as 613-72N-NNNN indicates that the digits 613-72 replace the first five digits of the DN in the key, while the remaining digits remain unaltered.

Logical table DNATTRS

Table DNATTRS contains entries for attributes associated with a particular DN. The key to the table is a specific DN.

For each DN, specific data can be stored for up to two network names from table NETNAMES. The data stored consists of the station name, whether the display is suppressed, whether the DN is unique, and whether the DN is a multiple appearance DN (MADN). Values for fields that are absent are taken from table DNGRPS for the range in which the DN falls.

While it is possible to datafill the above data (along with all other DN-specific information) for individual DNs in table DNGRPS, a separate table is desirable for storage efficiency and packaging reasons. This is especially true for POTS lines, for which customer groups and their associated attributes are not an issue.

MADN member display flag

The identity of all MADN members can be associated with two names: a MADN group name and a MADN member name. If a member name is not datafilled, then the group name is used (if datafilled). The MADN member names are stored in table MDNMEM and can be used for any datafilled network.

A MADN member display flag determines whether MADN member names are used for particular networks. This applies to any MADN DN of any network. The information is stored in table DNATTRS.

Table DNATTRS has options NAME, SUPPRESS, MEMDISP, and NONUNIQUE. The NAME option is used for assigning names to the MADN group. The SUPPRESS option applies only to the suppression of the DN or name display on network calls. The MEMDISP option is used for assigning MADN member names. The NONUNIQUE option is added automatically by the switching unit.

The MADN group name can also be datafilled in table DNGRPS. The difference between tables DNATTRS and DNGRPS is that a name is assigned against a DN in table DNATTRS, and is assigned against a range of DNs in table DNGRPS. If both tables are datafilled for the same DN, the name from table DNATTRS overrides.

NETNAMES (continued)

Definition of DN uniqueness

The term DN uniqueness is defined below as it applies to tables DNATTRS and DNGRPS.

A unique DN can be thought of as a subscriber number that has a single DN and a single line equipment number (LEN) associated with it. The two classes of non-unique DNs are described below:

- A DN that has several LENs associated with it (for example, an MADN) is non-unique.
- A LEN that has several DNs associated with it (for example, a party line) is non-unique.

Another class of calls exists for which uniqueness cannot be determined:

- A position that has neither a DN nor LEN associated with it (for example, operator calls that arrive and terminate on trunks) can be non-unique.

Calls such as these are assigned unknown uniqueness.

The definition of a unique DN used in this document is: “A unique DN is the only number that can reach a single, specific LEN".

Note that since Custom Local Area Signaling Service (CLASS) features are used within the public network, DN uniqueness exists with respect to a particular network.

Storage and determination of DN uniqueness

A DN can be non-unique because of its line class code (for example, 8FR) or because of a particular line option assigned to it (for example, MDN). A DN can also be non-unique if it is substituted for another when outgoing calls are made.

The boolean field NONUNIQUE in table DNATTRS is used to show that a DN is non-unique because of an assigned attribute. When a line is given a line class code or assigned a line option that makes the DN non-unique, the NONUNIQUE option is automatically assigned to the DN in table DNATTRS.

This option is assigned to all networks present in the table at the time. If a value of PUBLIC for field NETNAME in table DNATTRS is not present, it is added with the option NONUNIQUE. If no entry exists for that DN, then one is created with the network of PUBLIC having the option NONUNIQUE.

If the non-unique line class code is changed to a unique line class code and no non-unique options are assigned, or the last non-unique line option has been

removed, the NONUNIQUE option is removed from each network datafilled against the DN in table DNATTRS. Also, if the maximum number of networks is present and the public network is not among them, then the addition of the NONUNIQUE option fails and is not added to any networks.

The boolean field NONUNIQUE in table DNGRPS is used to indicate that DN substitution has occurred and the substituted DN is not unique. An example of this situation occurring is when the main switchboard number is substituted for all outgoing calls from an office. The substituted DN is a valid DN, but it cannot be used to uniquely reach the particular originator.

Non-uniqueness due to line class code

Four-, eight-, and ten-party lines are non-unique because a single LEN is associated with multiple DNs.

Two party lines are unique because although a single LEN is associated with two DNs, the DNs can be differentiated using the tip and ring lines. When a call is made to one party, the other is not rung.

Lines with a line class code of PBX or PBM are non-unique if a key set or PBX is behind the line into the central office.

The following is a summary of line class codes (LCC) that have non-unique properties:

- 4FR
- 8FR
- 10FR
- PBX
- PBM

Non-uniqueness due to line options

The following line options make a DN non-unique:

- *ACD* The Automatic Call Distribution (ACD) line option associates a single DN with multiple LENs.
- *BNN* The Bridged Night Number (BNN) line option assigns a LEN to two different DNs.
- *DLH* Distributed Line Hunt (DLH) groups associate a single DN with more than one LEN.
- *MADN* The three types of multiple appearance directory number (MADN) groups, Single Call Arrangement (SCA), Multiple Call Arrangement

NETNAMES (continued)

(MCA), and Extension Bridging (EXB), all associate a single DN with more than one LEN.

- *MLH* Multiline Hunt (MLH) groups associate a single DN with more than one LEN

  Note: Hunt groups do not always make a line non-unique. In a Directory Number Hunt (DNH) group, each member has an associated DN. If the members of a DNH group are unique, placing them in a DNH group does not make them non-unique.

- *MPB* Although each member of a POTS Multiparty Bridging (MPB) group has its own DN and LEN, if any one of them is called, all are alerted and any one of them can join in any call.
- *SDN* The Secondary DN (SDN) line option associates a primary DN and several secondary DNs with a particular LEN. Note that all secondary DNs are also made non-unique.
- *UCD* The Uniform Call Distribution (UCD) line option associates a single DN with several LENs.

Non-uniqueness due to implementation

Calls that are neither line calls nor trunk calls are assigned unknown uniqueness since they do not have a DN associated with them. These include operator calls and attendant console calls. The uniqueness of a DN is with respect to a particular network.

Restrictions and limitations

Tables NETNAMES, DNGRPS, and DNATTRS do not provide the means for associating a DN with an attendant console for line identification, nor do they provide the complete set of modifications to translations necessary in order to uniquely determine the logical network in every case. Instead, the logical network is determined from prefix digits alone.

Protocol modifications required to include network identification along with station address, and an indication as to whether these addresses are directly accessible, are not implemented. The numbering plan area (NPA) portion of the address field is used to distinguish between public and private network addresses. If this field does not contain a recognized private serving translation scheme (STS), then a public network address is assumed.

Access to tables NETNAMES, DNGRPS, and DNATTRS through operating company service orders is not supported.

Service order and Partitioned Table Editor (PTE) access to tables DNGRPS and DNATTRS is not supported for customers subscribing to the Customers Data Change (CDC) feature.

In order to support suppression of address display for unpublished numbers in POTS-only (non-IBN) switching units, the only table made available in these switching units is DNATTRS. Only PUBLIC, which is the default NETNAME, is acceptable for input to table DNATTRS.

Determination of DN attributes

The following algorithm traverses the DN attribute tables in order to determine a complete set of attributes for a given DN and specific NETNAME.

1. Access table DNATTRS for a given DN and NETNAME, recording values for attributes present.
2. For attributes not present in table DNATTRS, access table DNGRPS for the range in which the DN falls, and the specific NETNAME. Record values for attributes present.
3. For attributes not present in either table DNATTRS or DNGRPS, record values for the standard defaults.

As an example, consider the problem of determining the attributes for DN 001-366-5678 in the PUBLIC network. The sample datafill shown in the examples for tables DNGRPS and DNATTRS is used for this purpose.

Accessing table DNATTRS for NETNAME PUBLIC yields that the display of the DN and name is suppressed and the DN is unique (options NONUNIQUE, NAME, and MEMDISP do not appear in the table). Upon exiting from this table, only the suppression and uniqueness attributes are known.

Table DNGRPS is then accessed for the range 001-366-2000 to 001-366-7999 wherein the DN 001-366-5678 falls. The entry corresponding to NETNAME PUBLIC yields a station address of 613-726-5678, and a station name of BNR.

The final attribute set is shown below.

- ADDRESS: 613-726-5678
- NAME: BNR
- NONUNIQUE: NO
- SUPPRESS: YES (DN) YES (NAME)

NETNAMES (continued)

Functional description

Table NETNAMES defines internal logical network names. These names are used in tables storing DN attributes corresponding to that network. Information that is required for each network name is listed below:

- An external global network identifier used in interoffice high-level protocol messages must be specified.
- The number of digits in the network must be specified.
- Whether the presentation of the DN or name is suppressed, and whether this suppression is internal or external to the switching unit, must be specified.
- Which of two methods is used to convey the name information across the CCS7 network must be specified. In method one, the name information of the calling party is included in the initial address message (IAM). In method two, an indicator for the availability of the calling party name information is included in the IAM. In both methods, a request for the connected party name information is also included in the IAM if necessary.

  Note: The actions at the terminating switching office are dependent on the method that is used to exchange the name information. When the terminating switching unit receives an IAM that contains the name information in the party information parameter, the switching unit passes the information to the connected party (if applicable) and continues to complete the call set-up phase. When method two is used, the terminating switching unit determines if the connected party needs the name information, and sends the request to the originating switching unit using either the address complete message (ACM) or an information request message (INR). The call continues without waiting for the name information from the originating switching unit. The option NMDSP and its refinements are provided in table NETNAMES to indicate which method is used.

- Whether the PRA Facility Reject message is sent to the originator when the PRA Facility message cannot be properly routed to the destination must be specified.
- Whether a network can route its NRAG connectionless SS7 messages to the NRAG subsystem, and whether such messages can be routed through the digits and the point code (PC) returned in the ISUP release message (instead of using table MSGRTE) must be specified.
- Whether TCAP messages are routed by the MSGRTE table or through the NMS subsystem must be specified.

The first entry in table NETNAMES is PUBLIC 0, which corresponds to the public telephone network. This entry is added automatically by the system and cannot be deleted.

The following warning message appears when deleting a NETNAME in this table. Before deleting a particular NETNAME, check that the NETNAME is not datafilled in tables NCOS, IBNXLA, DNGRPS, and DNATTRS.

CAUTION
Possible undefined data in tables
This NETNAME may be referred by the following tables: NCOS, IBNXLA, DNGRPS and DNATTRS. Please check and delete them; otherwise these tables will contain undefined data.

Facility reject message on ISDN primary rate access (PRA)

The feature Facility Reject Message on PRA implements the PRA Facility Reject message, which is sent back to the originator of the PRA Facility message when it is not possible to route the Facility message. The PRA Facility Reject message identifies the originator and indicates the reason that the message could not be routed to the destination. The reason for return information element in this message indicates the cause of the rejection. Operational Measurements are incremented for the PRA Facility Reject message.

The PRA Facility Reject message is returned to the originator only if the PRA Facility message contains the option for receiving this message. This option is specified in the PRA Facility message only if the indication for this option was specified for the current network. The options for each network are contained in table NETNAMES, and include an option for specifying that the PRA Facility Reject message is requested.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table NETNAMES.

Table size

1 to 4095 tuples

The maximum of 4095 tuples is only specified if the operating company has the Software Option Control feature. The maximum tuples without Software Option Control is 512. The default NETNAME (PUBLIC) and its associated

NETNAMES (continued)

external network identifier (0) are automatically added by the system and cannot be deleted.

Datafill

The following table lists datafill for table NETNAMES.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
NETNAME		alphanumeric (1 to 32 characters)	*Logical network name* Enter a unique character string for the logical network name. The network name is used to access tables DNGRPS and DNATTRS.
DMS_SLC		numeric (1 to 7 digits)	*DMS Site Location Code* Enter the steering code digits for the network to route calls with the site location code (SLC) to the DMS-100E switch. This steering code is sent as the Node Number in the DA parameter of the route optimization (ROP) request. The terminating node uses this DA (and hence this SLC) to route the optimized call back to the originating DMS-100E switch.
EXTNETID		numeric(0 to 32 600)	*External network identifier* Enter a unique number for the external network identifier. This number is used externally to identify logical networks. All switching units must agree on the values used. The external network identifier 0 (zero) is automatically added for NETNAME PUBLIC, and is therefore not available for other tuples.
NETDIGS		numeric(0 to 10)	*Network digit* Enter a value that represents the number of digits in the logical network. The value in this field is used to extract the correct number of digits from the stored DN.
NETOPTS		see subfields	*Network options* This field consists of subfield OPTION and refinements.

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	FACREJ NINTNRAG NMDSP NMRTNRAG NMSTBRTE or SUPPRESS	NETWORK OPTION enter a network option in accordance with the following conditions: • If the Facility Reject message must be sent to the originator when the Facility message cannot be properly routed to the destination, enter FACREJ. • If TCAP messages sent for the network NWI must be routed through the use of the MSGRTE table (as opposed to using the SCCP NMS subsystem), enter NMSTBRTE. • If the original call was made over an SS7 trunk, and the network can route its Network Ring Again (NRAG) connectionless SS7 messages to the NRAG subsystem, enter NINTNRAG (Non-interworking NRAG). • If name exchange is required, enter NMDSP and datafill field NMXCHG. • If the original call was made over an SS7 trunk, and the network can route its NRAG connectionless SS7 messages through the digits and the point code (PC) returned in the ISUP release message instead of using table MSGRTE, enter NMRTNRAG (No MSGRTE NRAG). ***Note:*** A tuple is rejected if option NINTNRAG is datafilled without option NMRTNRAG also being datafilled. If suppression of the DN or name is required, enter SUPPRESS and datafill fields INTRNLDN, EXTRNLDN, INTRNLNM, and EXTRNLNM.
	INTRNLDN	Y or N	*Internal suppression of DN* Enter Y to mark intraoffice/intranetwork numbers as private or enter N to allow number delivery on intraoffice/intranetwork calls.

NETNAMES (continued)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	EXTRNLDN	Y or N	External suppression of dn Enter Y to mark interoffice/intranetwork numbers as private or N to allow number delivery on interoffice/intranetwork calls.
	INTRNLNM	Y or N	*Internal suppression of name* Enter Y to mark intraoffice/intranetwork calls as private or enter N to allow name delivery on intraoffice/intranetwork calls.
	EXTRNLNM	Y or N	*External suppression of name* Enter Y to mark interoffice/intranetwork calls as private or enter N to allow name delivery on interoffice/intranetwork calls.
	NMXCHG	SETUP or QUERY	*Name exchange method* If the name exchange method that appends the name of the calling party in the set-up message is required, enter SETUP. If the name exchange method that sends the name of the connected party only if a request is received is required, enter QUERY.
CONTMARK		+ or $	*Continuation mark* Enter + if additional information for this tuple is contained in the next record. Otherwise enter $ to indicate the end of the tuple.

Datafill example

The following example shows sample datafill for table NETNAMES. This example shows two tuples, the first of which is the default tuple present in the table at load time. The second tuple defines a network named BNR, which has an external identifier of 4, uses 5 of the DN digits, and has suppressed external name and number identification on a network basis. It sends the name information only when requested and can route its NRAG connectionless SS7 messages through the digit and point code (PC) returned in the ISUP release message.

MAP display example for table NETNAMES

```
NETNAMES      EXRNETID     NETDIGS     NETOPTS
_____________________________________________________
PUBLIC          0            0         $
BNR             4            5        (SUPPRESS N N Y Y)
                                       (NMXCHG QUERY)
                                       (NMRTNRAG) $
```

Limitations and restrictions

The following limitations and restrictions apply to the determination of the network identifier for a call.

- If the call is a trunk call, the network of the originating line and trunk are compared to verify if the call is a private or public network call. If the trunk does not have a network name, the call is assumed to be a public network call.
- If the originator of the call is a POTS line, the public network identifier is used.
- If the customer group of either the originator or the terminator is not datafilled in table CUSTNTWK, the public network identifier is used.
- If the customer groups for both the originator and the terminator are datafilled in table CUSTNTWK, but are associated with different networks, the public network identifier is used.
- If the customer groups of both the originator and the terminator are datafilled in table CUSTNTWK and are associated with the same network, the network identifier in table CUSTNTWK is used.

Table history

NA008

The following changes were made as a result of a customer service request.

- Reworded the subfields INTRNLDN, EXTRNLDN, INTRNLNM, and EXTRNLM to add clarity.
- Revised the datafill example for table NETNAMES.
- Added list of limitations and restrictions that apply to the determination of the network identifier for a call.

NETNAMES (end)

EUR010

Added option DMS_SLC for activity AJ5366.

NA004

NA004 increased the table size to 4095 tuples for operating companies with the Software Control Option.

NETSPROF

Table name

Network Security Profile.

Functional description

Table NETSPROF is utilized by the switch for calls in which Network Securtity (NETSEC) is active for either originating or terminating PTS FGD, SS7 FGD, PRI, DAL, SS7 Inter IMT, Q.767 Global IMT, ISUP92 Global IMT, PTS IMT and AXXESS agencies. When a call originates/terminates from/to one of these agencies, the NETSEC functionality is active, and datafill fraud screening criteria are met , then a NETS log/CDR is generated (depending on the values of the office parameter NETWORK_SECURITY_GEN_CDR) at the time the call is answered.

Table NETSPROF is created with a capacity of 256 fraud profiles and indexed from tables TRKGRP and TRKFEAT. . The fraud profile screening criteria include Time_of_Day, Day_of_Week, Nature_of_Address, Info_Digits and Country_Code. Datafill for each of the criteria is optional within a specific fraud profile tuple.

Datafill sequence and implications

Not applicable.

Table size

Table NETSPROF has a maximum of 256 tuples with 0 reserved to indicate no NETSPROF screening.

Datafill

The following table lists datafill for table NETSPROF.

Field descriptions (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
INDEX		0 to 255	INDEX. Key field with values in the range of 0 to 255.
CRITERIA_SEL			CRITERIA SELECTOR. The criteria field is a vector of up to 5 of the following multiples: TOD, DOW, NOA, INFODIG, CC.

NETSPROF (continued)

Field descriptions (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
		TOD	TIME OF DAY. This field is a 3-part multiple with the fields TOD, START_HOUR and END_HOUR. The TOD criteria is TRUE when the call is answered within the specified time range for each day of the week, otherwise, it is false.
	START_HOUR END_HOUR	0 to 23	For START_HOUR and END_HOUR criteria, enter a numeric value in the range 0 to 23. 0 is 12:00 pm midnight and 23 is 11:00 pm. The time range is from the start of START_HOUR through the end of END_HOUR. If START_HOUR equals to END_HOUR, specify a single hour of time. If END_HOUR is greater than START_HOUR, specify a single range of time starting from the START_HOUR until the end of END_HOUR. If START_HOUR is greater than END_HOUR, specify a range of time starting from the START_HOUR to midnight and from midnight to the end of END_HOUR.
		DOW,	DAY OF WEEK. This field is a 3-part multiple with the fields DAY_OF_WEEK, START_DAY and END_DAY. This criteria is TRUE when the call is answered within the specified day range, otherwise, it is FALSE.
	START_DAY,END_DAY	MON, TUE, WED, THU, FRI, SAT, SUN	For START_DAY and END_DAY criteria, enter the day of week: MON, TUE, WED, THU, FRI, SAT, SUN. MON is the earliest day of week and SUN is the latest day of the week. If START_DAY equals END_DAY, specify a single day. If END_DAY is later than START_DAY, specify a single day range starting from the START_DAY to the END_DAY. If START_DAY is later than the END_DAY, then a single day range starting from the START_DAY to Sunday and from Monday through the END_DAY is specified.

Field descriptions (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
		NOA	NATURE OF ADDRESS. This criteria specifies a single range of NATURE_OF_ADDRESS values. The NATURE_OF ADDRESS applies to the called party number for ISUP originations and terminations. If the NATURE _ OF_ADDRESS in the called party number is within the range, this criteria is TRUE, otherwise, it is FALSE.
	FROM_NOA,TO_NOA	0 to 127	This field is a 3-part multiple with the fields: NATURE_ OF_ADDRESS, FROM_NOA and TO_NOA. Enter a numeric value in the range of 0 to 127 for FROM_NOA and TO_NOA fields. If FROM_NOA equals to TO_NOA , specify a single NOA . If TO_NOA is greater than FROM_NOA, then specify a single nature of address range starting from the FROM_NOA to the TO_NOA. If FROM_NOA is greater than the TO_NOA, the following error message is generated:“TO_NOA must be equal to or greater than FROM_NOA"
		ID	INFORMATION DIGITS. This criteria specifies a single range of values received or outpulsed on PTS or ISUP FGD agencies. If the information digits are in the specified range, the criterion is evaluated as TRUE, otherwise, it is FALSE. For originations and terminations other than FGD PTS, this field will be ignored if datafilled. ***Note:*** The term “INFORMATION DIGITS” is synonymous with “Outgoing Line Information” (OLI).

NETSPROF (continued)

Field descriptions (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	FROM_ID,TO_ID	0 to 99	This field is a 3-part multiple with the fields : ID, FROM_ID and TO_ID. The FROM_ID and TO_ID fields have a numeric range value of 0 to 99. If FROM_INFODIG equals TO_INFODIG, specify a single information digit. If TO_INFODIG is greater than FROM_INFODIG, specify a single digit range.If FROM_INFODIG is greater than TO_INFODIG, the following error message is generated:“TO_INFODIG must equal to or greater than FROM_DIG."
		CC	COUNTRY CODE. This criteria allows the datafill of none ($), one, two and three digit country codes. These values need not be sequential.
	CC	1 to 999	This field is a vector of up to 15 country codes. Each country code has a numeric range value of 1 to 999. If this criterion contains “$" only, it means no further screening is performed and the screening result is evaluated as TRUE. For international calls, the dialed country code included in the called party number may be a real country code or a pseudo-country code. The real country code must be obtained from the existing table called CCTABLE. For the counteracted screening, if any of the values datafilled under this option match the real country code obtained from CCTABLE, then this field is evaluated to TRUE. Otherwise, this criteria is evaluated to FALSE.

Datafill example

The following example shows sample datafill for table NETSPROF.

MAP display example for table NETSPROF

```
INDEX CRITERIA
------------
1 (CC ( 8) $)$
2 (ID 0 0) $
3 (CC ( 7) $)$
4 (NOA 3 3) $
5 (NOA 0 120) $
```

Table history

UCS013

Changed country code (CC) criterion selector to increase number of country codes to fifteen allowed country codes (A60007645). Added support for originating line information (OLI) received or sent on ISUP FGD to the ID criterion selector (A60007645).

UCS012

Updated to add editorial changes

UCS09

Table NETSPROF was added (AX0980).

NETTOSTS-Canada only

Table name

Network Information Table

Functional description

Table NETTOSTS maps between network information (NETINFO) parameter fields, network identification (ID), network class of service (NCOS), and a serving translation scheme (STS).

Datafill sequence and meaning

You must enter data in the following tables before you enter data in table NETTOSTS-Canada only:

- HNPACONT
- NETNAMES

Table size

0 to 4 100 000 tuples

Datafill

Datafill for table NETTOSTS-Canada only appears in the following table.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
NETNAME		alphanumeric (a maximum of 32 characters)	*Network name*. Enter the network name entered in table NETNAMES to identify an external network identification (ID).
NETCGID		1 to 4096	*Network customer group ID*. Enter the predefined number that identifies an external customer group on a Meridian SL-100. The value 0 is not a correct entry.
NCOS		0 to 511	*Network class of service*. Enter the network class of service (NCOS). See table NCOS.
STS		000 to 999	*Serving translation scheme*. Enter the serving translation scheme (STS) number entered in table HNPACONT. The STS number is always a three-digit number.

Datafill example

Datafill for table NETTOSTS-Canada only appears in the following example.

In the example, the network name is NETWKD. The ID is 100. The NCOS is 60. The STS is 600.

MAP example for table NETTOSTS-Canada only

```
NETNAME   NETCGID   NCOS   STS
_____________________________________________________

NDTWKD      100      60    600
```

NETWORK

Table name

Network Assignment Table

Functional description

Table NETWORK lists the following assignment data for each network frame:

- floor, row on floor, frame position in row, and shelf position on frame of each network module
- central message controller card and port assigned to each network module of an NT40 or a message switch card and port assigned to each network module of a SuperNode.
- size of network. The size can be full, half, or quarter.
- product engineering code of network

Datafill sequence and meaning

You do not need to enter data into other tables before you enter data in table NETWORK.

Table size

Table is from 0 to 64 tuples.

The system allocates memory continuously.

Datafill

Datafill for table NETWORK appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
NETNUM		see subfields	*Network number*. This field contains subfields PAIR and PLANE.
	PAIR	0 to 31	*Network*. Enter the number assigned to the network pair.
	PLANE	0 or 1	*Plane*. Enter the plane number of the network pair.
SHPOS		0 to 77	*Shelf position*. Enter the base mounting position of the network module.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
FLOOR		0 to 99	*Floor*. Enter the remote location or the floor that contains the network module.
ROW		A to H J to N P to Z AA to HH JJ to NN PP to ZZ	*Row*. Enter the row on the floor that contains the trunk module equipment frame.
FRPOS		0 to 99	*Frame position*. Enter the bay position in the row that contains the network module.

NT40 switch

If the switch is an NT40, enter data into fields CMCCARD and CMCPORT. An explanation of this process appears in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
CMCCARD		0 to 13	*Central message controller card*Enter the central message controller card number assigned to the network module.
CMCPORT		0 to 4	*Central message controller port*. Enter the central message controller port number assigned to the network module.

NETWORK (continued)

SuperNode switch

If the switch is a SuperNode, enter data into fields MSCARD, MSPORT, NETSIZE, and EQPEC. An explanation of this process appears in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
MSCARD		6 to 23	*Message switch controller card*. Enter the message switch controller card number. Entries outside of this range are not correct.
MSPORT		0 to 15	*Message switch controller port*. Enter the message switch controller port number.
NETSIZE		FSIZE HSIZE or QSIZE	*Network size*. Enter the network size. The network size can be FSIZE (full), HSIZE (half), or QSIZE (quarter). The size refers to the number of incoming and outgoing ports. A full size network contains 64 incoming and 64 outgoing ports. A half size network contains 32 incoming and 32 outgoing ports. A quarter size network contains 16 incoming and 16 outgoing ports.
EQPEC		0X48AA 5X13AA 5X13AB 5X13BA 5X13LS 7X27AA 7X27AB 8X11AA 8X11BA or 8X1101	*Product engineering code*. Enter the product engineering code (PEC) of the network. Enter 0X48AA if the PEC is 0X48AB, AC, AG, AH, or AJ. Enter 5X13AA or 5X13BA for the 5X13 network. Enter 5X13LS for the large system configuration (LSC) network simulator. Enter 7X27AA for the 7X27 network. Enter 5X13AB or 7X27AB for the 5X13 or 7X27 networks. These 5X13 or 7X27 networks contain per-channel digital gain pads on the A-side crosspoint cards. Enter 8X11AA or 8X11BA for the double shelf network equipment (DSNE). Enter 8X1101 for the cabinetized Meridian SL-100 network.

Datafill example

Two examples of datafill for table NETWORK appear in the following examples.

The assignments associated with network modules 0 and 1 for an NT40 switch appear appear in the first example.

The datafill example provides one record for each network module to a maximum of 32 modules.

MAP example for table NETWORK

```
NETNUM SHPOS FLOOR ROW FRPOS MSCARD MSPORT NETSIZE EQPEC
_____________________________________________________________

  0 0    0       5   C     0      0      1  FSIZE 0X48AA
  1 1    0       5   C     1      0      2  FSIZE 0X48AA
```

The assignments associated with network module 0 for a SuperNode switch appear in the second example.

MAP example for table NETWORK

```
NETNUM SHPOS FLOOR ROW FRPOS MSCARD MSPORT NETSIZE EQPEC
_____________________________________________________________

  0 0     0     5   C     0     0      1   FSIZE 8X1101
```

NIUINV

Table name

Network Interface Unit Inventory Table

Functional description

Table NIUINV contains one tuple for each network interface unit (NIU). The tuple describes the following:

- location of the NIU
- default load
- cards used for each unit
- links to the network

Datafill sequence and meaning

To add a tuple to table NIUINV, you must enter data into tables SUSHELF, PMLOADS, and NETWORK correctly. Specified requirements appear in the following list:

- If the host is a link interface module (LIM), you must enter the LIM in table LIMINV and LIMPTINV.
- If the host is a fiberized link interface shelf (FLIS) NIU, you must enter data into table MSCDINV.
- You must enter the shelf in table SUSHELF. The product engineering code (PEC) of the F-bus repeaters for the shelf must be NT9X74DA.
- You must enter the load name in table PMLOADS. You must enter the network in table NETWORK.
- For a junctured network (JNET), enter tables NETWORK, and table ENCDINV (ENET only). For an enhanced network (ENET), enter tables NETWORK, and table ENCDINV (ENET only).
- In table LIUINV, you cannot enter another peripheral module (PM) in slots 18 to 21. This condition applies to a two-slot shelf. In table LIUINV, you cannot enter another PM in slots 17 to 22. This condition applies to a three-slot shelf.
- The maximum number of NIUs is nine.

Table size

0 to 29 tuples

Datafill

Datafill for table NIUINV appears in the following table.

Field descriptions (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
NUMBER		0 to 29	*Network interface unit number* This is the key field for the table. Enter the NIU number.
LOCATION		see subfields	*Location* This field contains subfields CONTROL and SHELF.
	CONTROL	LIM or MS	*Control* If the host is an LIM, enter LIM. Enter refinement LIMNUM. If the host is the message switch (MS), enter MS. Enter refinements MSCARD and MSPORT.
	LIMNUM	0 to 16	*Link interface module number* Enter the LIM number.
	MSCARD	5 to 23	*Message switch card* Enter the MS card number.
	MSPORT	0 to 3	*Message switch port* Enter the MS port number.
	SHELF	1 to 3	*Shelf* If the host is a LIM, enter the shelf number. If the host is a MS, enter 1 for a fiberized link interface shelf (FLIS). If the host is a MS, enter 1 or 2 for a rate adapter (RA).
LOAD		alphanumeric (vector of a maximum of eight characters)	*Default loadfile* Enter the name of the default loadfile as entered in table PMLOADS.

NIUINV (continued)

Field descriptions (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
U0INFO		see subfields	*Network interface unit 0 information* This field contains the PEC information for NIU 0. Enter subfields PROCPEC, CBCPEC, and PBPEC.
UN1INFO		see subfields	*Network interface unit 1 information* This field contains the PEC for NIU unit 1. Datafill subfields PROCPEC, CBCPEC, and PBPEC.
	PROCPEC	NTEX22BB, NTEX22CA, NTEX22DA, NTEX22EA, or NTEX22FA	*Processor PEC* Enter NTEX22BB to specify the integrated processor and F-bus interface card PEC. Enter NTEX22CA to specify the 32-Mbyte integrated processor and F-Bus interface card. Enter NTEX22DA to specifythe 64-Mbyte integrated processor and F-Bus interface card. Enter NTEX22EA to specify the 96-Mbyte integrated processor and F-Bus interface card. Enter NTEX22FA to specify the128-Mbyte integrated processor and F-Bus interface card. ***Note:*** NTEX22DA and NTEX22EA are reserved in the software for future use. NTEX22FA is available for the Global System for Mobile Communications release 11 (GSM11) CCS7 server (SVR7) peripheral only.
	CBCPEC	NTEX25AA NTEX25BA	*Channel bus controller PEC* Enter NTEX25AA to specify the NIU CBC card PEC for field NIU_UNIT0_INFO. Enter NTEX25BA to specify the NIU CBC card PEC for field NIU_UNIT1_INFO.

Field descriptions (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	PBPEC	NTEX28AA	*Paddle board PEC* Enter NTEX28AA to specify the NIU DS30 link interface paddle board PEC.
NETLINKS		vector of a maximum of four multiples	*Network links* For junctored network (JNET) offices, enter a vector of a maximum of four multiples of subfields NMPAIR and NMPORT. These vector entries specify the network links. For enhanced network (ENET) offices, enter a vector of a maximum of four multiples of subfields ENSHELF, ENSLOT, ENLINK, and ENDS30. These vector entries specify the network links. A blank space must separate each entry. Enter + to indicate that the vector continues in the next record. Enter $ to indicate the end of the vector.
	NMPAIR	0 to 31	*Network module pair* Enter a number to specify the network module (NM) pair.
	NMPORT	0 to 63	*Network module port* Enter a number to specify the NM port.
	ENSHELF (BCS35-)	0 to 7	*Enhanced network shelf* Enter a number to specify the ENET shelf. For a 16K-byte ENET, 0 is the only correct entry. For a 128K-byte ENET, the correct entry range is 0 to 3. Only Northern Telecom can use values 4 to 7.
	ENSLOT (BCS35-)	10 to 19 25 to 32	*Enhanced network slot* Enter a number to specify the ENET slot. For a 16K-byte ENET, the entry range is 13 to 19. For a 128K-byte ENET, the entry range is 10 to 16 and 25 to 32.

NIUINV (continued)

Field descriptions (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	ENLINK (BCS35-)	0 to 18	*Enhanced network link* Enter the ENET link number.
	ENDS30 (BCS35-)	0 to 15	*DS30 or fiber link* Enter a number to specify the DS30 on the fiber link. For DS30 links, the only correct entry is 0. The NIU only uses DS30 links.

Datafill example

Datafill for table NIUINV appears in the following example. This example contains the following information:

- A LIM host uses LIM number 3, shelf number 1, and default loadfile NRS34AA. A LIM uses PEC NTEX22BB for the processor, NTEX25AA for the CBC, and NTEX28AA for the netlink paddle board. These PECs apply to NIU units 1 and 2. Two network links are defined with NMPAIR and NMPORT values 1, 2 and 1, 3.
- The MS host uses MS card number 5, MS port number 1, shelf number 1, and default load file NRS34AA. The MS host uses PEC NTEX22BB for the processor, NTEX25AA for the CBC, and NTEX28AA for the netlink paddle board. These PECs apply to NIU units 1 and 2. Two network links are defined with NMPAIR and NMPORT values 2, 2 and 2, 3 in sequence.

MAP example for table NIUINV

```
NUMBER  LOCATION    LOAD                          U0INFO
                                     UN1INFO    NETLINKS
_____________________________________________________________

    1   LIM 3 1    NRS34AA NTEX22BB NTEX25AA NTEX28AA +
NTEX22BB  NTEX25AA  NTEX28AA      1  2  1  3 $
    2    MS 5 1 1  NRS34AA NTEX22BB NTEX25AA NTEX28AA +
NTEX22BB  NTEX25AA  NTEX28AA      2  2  2  3 $
    3    LIM  2 2  NWS11?? NTEX22FA NTEX25AA NTEX28AA
NTEX22FA NTEX25BA NTEX28AA
( 0 32  1 0) ( 0 32  2 0) ( 0 32  3 0) (  0 32  4 0)$
```

Table history

TL11

The following PECs were added under PROCPEC subfield:

- NTEX22FA
- NTEX22DA
- NTEX22EA

TL06

The NTEX22CA was added to subfield PROCPEC.

BCS35

Subfields ENSHELF, ENSLOT, ENLINK, and ENDS30 were added in BCS35.

BCS34

Table NIUINV was introduced in BCS34.

NLUPCLLI

Table name

Nailed-up Connection (NLUP) common language location identifier (CLLI) Table

Functional description

A switching unit can provide table NLUPCLLI. This switching unit must have feature package NTX802AA (Toll Features II), or feature package NTX902AA (Local Features II).

The incoming side of the nailed-up connection pair does not require a hard-wire supervision off-hook to be available. The system supports in-band and standard supervision signals in both directions.

Trunks for the nailed-up connection trunk group have trunk group type NU in table TRKGRP.

The maximum number of nailed-up connections is 801 or 0 to 800. For each of the connections, the following requirements apply:

- Data entry of the CLLI and external trunk number of the incoming and outgoing trunks must occur. You must connect this CLLI and the external trunk number of the incoming and outgoing trunks.
- The value of field CONNECT must be specified.

If field CONNECT is set to Y (yes), the two trunk circuits connect. The state of these trunk circuits change from idle, inhibit, lockout, or remote make busy. The state of these trunk circuits change to seized on the trunk test position (TTP).

If field CONNECT is set to N (no), a release of the connection occurs. The trunks return to the idle state.

For the first datafill, field CONNECT must be N.

Datafill sequence and meaning

Enter data in the following tables before you enter data in table NLUPCLLI:

- CLLI
- TRKMEM

Table size

0 to 801 tuples

Additional table size information for junctored network (JNET) and enhanced network (ENET) offices appears in the following paragraphs.

Junctored Network offices

For JNET offices, parameter MAXNUCS in table OFCENG allocates memory for table NLUPCLLI.

Enhanced Network offices

For ENET offices, parameter MAXNUCS in table OFCENG does not use allocate memory for table NLUPCLLI. For ENET offices, parameter MAXNUCS in table OFCENG must be 0.

Datafill

Datafill for table NLUPCLLI appears in the following table:

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
INDX		numeric (0 to 800)	*Index*. Enter the index for the entry. the assignment of the index must be in order and start from 0.
NUPI		see subfields	*Nailed-up incoming connection*. This field contains subfields CLLI and EXTRKNM.
	CLLI	alphanumeric (a maximum of 16 characters)	*Incoming common language location identifier*. Enter the CLLI code assigned to the incoming trunk in table CLLI.
	EXTRKNM	numeric (0 to 9999)	*Incoming external trunk number*. Enter the external trunk number for the incoming trunk.
NUPO		see subfields	*Nailed-up outgoing connection*. This field contains subfields CLLI and EXTRKNM.
	CLLI	alphanumeric (a maximum of 16 characters)	*Outgoing common language location identifier*. Enter the CLLI code for the outgoing trunk in table CLLI.
	EXTRKNM	numeric (0 to 9999)	*Outgoing external trunk number*. Enter the external trunk number for the outgoing trunk.
	CONNECT	Y or N	*Connect*. Enter Y if the two trunks are to connect. For other conditions enter N.

NLUPCLLI (end)

Datafill example

Datafill for table NLUPCLLI appears in the following example:

MAP example for table NLUPCLLI

```
INDX            NUPI            NUPO                CONNECT
_____________________________________________________________
10          OTWAON52CG02 15     HULLPQ1077X0 17      Y
```

Table history

CSP04

The following changes, occur in CSP04.

- References to table DATASIZE are deleted because table NLUPCLLI is now self-sizing and does not appear in table DATASIZE.
- The reference to the cold restart requirement is deleted when changes occur to field SIZE in table DATASIZE for nailed-up connection CLLIs.

NNASST

Table name

Node Number Assignment Table

Functional description

A dump and restore occurs for table NNASST when the building of a new load occurs. Other controls of the table are not a requirement.

Table NNASST contains information which was dumped from the old load. This information does not change when building the new load. This information is for information and reloading purposes only.

A new load is built. When this event occurs, table NNASST makes sure that the node number assignments are compatible with the assignments in the old load. When the addition, deletion, or relocation of nodes occurs, the switch updates table NNASST automatically.

Datafill sequence and meaning

You do not need to enter data in other tables before you enter data in table NNASST.

Table size

0 to 4096 tuples.

Datafill

Datafill for table NNASST appears in the following table.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
NODENO		0 to 4095	*Node number*. Entry is equal to the node number of a node in the system.
CSLINK0		0 to 4095	*C-side link 0*. Entry is equal to the C-side link 0 of the node.

Datafill example

Sample datafill for table NNASST appears in the following example.

NNASST (end)

MAP example for table NNASST

```
NODENO                                                  CSLINK0
_____________________________________________________________________

   102      0                   004                        0
```

NOPADDR

Table name

Network Operations Protocol Address Table

Functional description

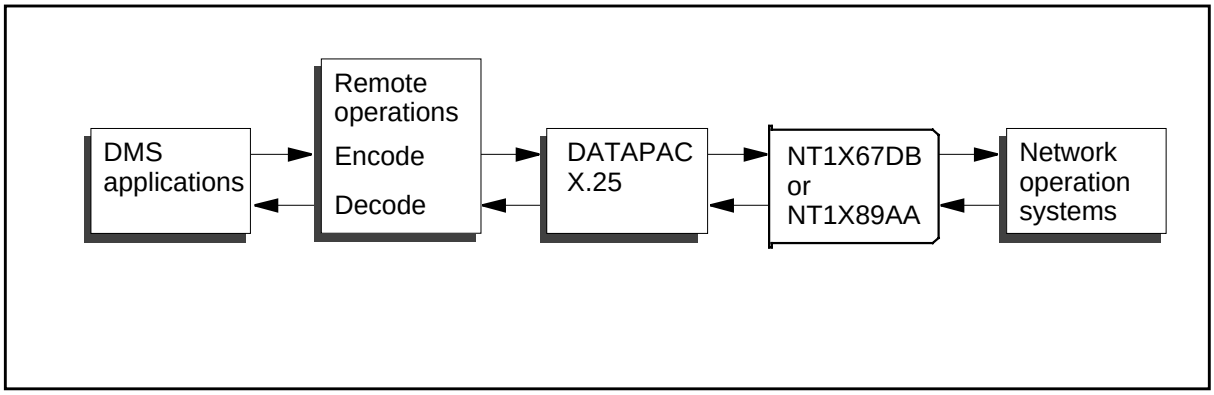
Network Operations Protocol (NOP) is the protocol by which the DMS switch communicates with a Network Operation Systems (NOS) product. Communication occurs with remote operations (RO). An RO is a task one processor requests but another processor performs.

The RO service:

- implements remote operations buffering to minimize transmitted and received data blocking
- provides an interface for an application to receive data from the RO service when the user needs the information
- performs X.409 encoding and decoding
- implements a part of the application procedures the ROs requires to interface with X.25 protocols

The following figure illustrates the data flow between a DMS switch and an NOS product.

Figure Data flow between a DMS and an NOS product



The 1X67DB DATAPAC controller card can operate as the communication interface between the DMS-100 switch and the NOS product. The 1X89AA multiprotocol controller (MPC) card can operate as the communication interface.

Table GDLADEV determines the use of the data packet controller (DPC) or the MPC.

NOPADDR (continued)

Table NOPADDR contains the addresses the NOP can accept calls from. Information contained in table NOPADDR follows:

- the index (0 to 127) of the originating address
- the eight-digit address the DATAPAC carrier provides
- the MPC or the DPC unit number
- the MPC port number
- a four-number protocol identifier

Datafill sequence and meaning

You must enter data into table GDLADEV before you enter data into table NOPADDR.

Operating company personnel first enters data in table NOPADDR at installation. The user can use the table editor to modify table NOPADDR. Refer to the *Basic Translations Tools Guide* for an explanation of table editor commands.

Note: Table NOPADDR and table XFERADDR cannot contain datafill at the same time unless the switch allows for more than one 1X67DB.

Table size

The system allocates the size of table NOPADDR for 128 tuples.

Datafill

Datafill for table NOPADDR appears in the following table.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
INDEX		0 to 127	Virtual channel index. Enter an integer to identify the position of the generic datalink in this table and the associated range of value. This field does not have a default value.
UNIT		0 to 255 (for MPC) 0 to 15 (for DPC)	Unit number. Enter the unit number of the multiprotocol controller (MPC) or data packet controller (DPC). The range for the MPC is 0 to 255. The range for the DPC is 0 to 15. Any entry outside the range indicated for this field is not correct. This field does not contain a default value.
LINK		2 or 3 (for MPC) -1 (for DPC)	Link number. Enter the port number of the 1X89 (MPC) card. If a DPC is present, the value is -1. Any entry outside the range indicated for this field is not correct. This field does not contain a default value.
ADDRESS		numeric (a maximum of 15 digits)	Network operations system address. Enter a digit string that corresponds to the Network Operations System address that the DATAPAC carrier provides. This field does not contain a default value.
PROTOCOL		numeric 0 to 255 (4 digits) (see note)	Protocol identifier. Enter four digits that correspond to the protocol used to communicate with the DMS. Separate each number from the next with a single space. ***Note:*** The only correct entry is 0 0 0 0.

Datafill example

Sample datafill for table NOPADDR appears in the following example.

NOPADDR (end)

In the first example, field INDEX contains the following:

- a virtual channel index number of 1
- a Network Operations System (NOS) address of 88888888 that uses the DPC unit 15 with a value of -1
- a protocol of 0 0 0

In the second example, field INDEX contains the following:

- a virtual channel index number of 2
- a Network Operations System (NOS) address of 88888889, that uses the MPC unit 222 with a value of 2
- a protocol of 0 0 0 0

MAP example for table NOPADDR

```
INDEX   UNIT   LINK        ADDRESS        PROTOCOL
_____________________________________________________

    1     15     -1       88888888   0   0   0   0

    2    222      2       88888889   0   0   0   0
```

Table history

BCS36

A note was added that 0 0 0 0 is the only valid entry in field PROTOCOL.

NOPAPPLN

Table name

Network Operations Protocol Applications Table

Functional description

The remote operation (RO) service uses table NOPAPPLN to determine which applications a remote data network address (DNA) can access. With this information, remote operation security can limit access to applications.

A DNA not defined in table NOPAPPLN cannot access any network operations protocol (NOP) applications on the DMS switch. To access an NOP application, the remote DNA must appear in table NOPAPPLN. The descriptions of the DNA applications must appear in table NOPAPPLN.

Adding or deleting tuples in table NOPAPPLN

The administration personnel of the unit that switches is responsible for updating table NOPAPPLN. Personnel must update table NOPAPPLN each time you add a new DNA in table NOPADDR. Add a new DNA in order to secure the RO service.

Datafill sequence and meaning

You must enter the DNAs in table NOPADDR before you enter data in table NOPAPPLN.

Table size

The number of tuples in table NOPADDR determines the size of table NOPAPPLN. The maximum number of tuples is 128.

Datafill

Datafill for table NOPAPPLN appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
DNAKEY		numeric (1 to 15 digits)	*Data network address key*. Enter the DNA defined in table NOPADDR. This field is the key to the table.
APPLNS		see subfields	*Applications*. This field contains subfields CHOICE and APPLICATION_ID.

NOPAPPLN (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	CHOICE	ALL or ONLY	*Choice of applications*. Enter ALL if the remote DNA can access all applications. This field does not require more information after this selection. Enter ONLY when the remote DNA and datafill refinement APPLICATION_ID can access only certain applications.
	APPLICATION _ID	a vector of a maximum of 30 different application names	*Application names*. If the entry in field CHOICE is ONLY, enter this refinement. Enter a vector of a maximum of 30 different application names the DNA can access. The correct entries are: • FT • TRAN • PADN • SOCCOM • FTRAN • PTAE • APPL • TOCCHOST • TOCCREM • CALM • DCR • ACDMIS_APPL TABCHGS • EXNDMAP • FBS • PHMAPMMI • PHS Separate each application name from the next with a blank space. Indicate the end of the vector with a single space and $.

Datafill example

Sample datafill for table NOPAPPLN appears in the following example.

MAP example for table NOPAPPLN

```
DNAKEY
             APPLNS
_____________________________________________________________

01101360
             ONLY (FTRAN) (PTAE_APPL) (SOCCOM)$
```

Table history

CSP06

The SOC Communication Protocol (SOCCOM) was added to correct NOP applications in CSP06.

NOPDEST

Table name

Network Operations Protocol Destination Table

Functional description

Applications that use network operation protocol (NOP) remote operations (RO) services on the DMS switch use table NOPDEST. The applications use the table to start outgoing calls over the X.25 protocol. The system only supports outgoing calls on the multiprotocol controller (MPC) 1X89 cards. The system maintains support for the data packet controller (DPC) 1X67 cards for incoming calls only.

Table NOPDEST contains a mapping between accessible remote nodes and local symbolic names. Each remote location requires the following information:

- the node name, a 1- to 16-character name that identifies the tuple in the table
- the MPC unit and link, the DMS port address through which the network connection occurs
- the data network address of the remote node
- the protocol, a value passed to the remote node that identifies the network services user

Datafill sequence and meaning

You must enter data into the following tables before you enter data into table NOPDEST.

- MPC
- MPCLINK

Table size

The system allocates a maximum of 50 tuples for this table.

Datafill

Datafill for table NOPDEST appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
NODENAME		see subfield	*Node name*. This field contains subfield K.
K		alphanumeric (1 to 16 characters)	*Key*. Enter an alphanumeric name to identify the tuple in table NOPDEST. The name can range from 1 to 16 characters. Application software uses this name if the system requests a remote connection. The system does not store the character string entry internally with the table. The system uses the name to calculate a symbolic range as an index to the table. Applications that use the network operation protocol (NOP) outgoing call capability use this field to identify the remote destination.
MPCLINK		see subfields	*Multiprotocol controller link path*. This field identifies the DMS port address through which the network connects. This field contains subfields M and L.
	M	0 to 255	*Multiprotocol controller unit*. Enter the multiprotocol controller (MPC) unit number that indexes into table MPC. This entry identifies the exact DMS equipment card over which the system tries the outgoing call.
	L	0 to 3	*Link*. Enter the number of the link on the selected MPC card over which the system tries the outgoing call.

NOPDEST (end)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
ADDRESS		0 to 9	*Data network address*. Enter a maximum of 15 X.25 data network addresses of remote nodes.
PROTOCOL		0 to 255 (table of 4 entries)	*Protocol identifier*. Enter the protocol identifier that the remote node uses to identify the network services user of the connection attempt. For the NOP, the network services user is always the remote operation service. The correct entries in this field are: • 00 00 00 00 (represents in NOP the NULL transport layer) • 03 01 80 00 (represents in OSI the NULL transport layer) The default value for this field is 03 01 80 00.

Datafill example

Sample datafill for table NOPDEST appears in the following example.

This example contains three node names to which outgoing calls are to be made. The three tuples contain the following:

- MPC card and link for an outgoing call
- data network address of the remote node
- protocol identifier the remote node uses to identify the network services connection user

MAP example for table NOPDEST

```
   NODENAME MPCLINK          ADDRESS        PROTOCOL
 ------------------------------------------------------------

 SAT_OFFICE1   2  3        01090210  00  00  00  00
 SAT_OFFICE2   1  3        01090220  03  01  80  00
 SAT_OFFICE3   3  3        01104302  03  01  80  00
```

NOPUSERS

Table name

Network Operations Protocol Users Table.

Functional description

The remote operations (RO) service uses table NOPUSERS to determine which applications a user at a remote data network address (DNA) can access. A DNA can have different users. Table NOPAPPLN defines the applications the DNA can access. Table NOPUSERS adds limits to each user when this table defines the applications the user can access.

Adding or deleting tuples in table NOPUSERS

The system does not check if user names (USERKEY) are correct before it adds a tuple to table NOPUSERS. The administration personnel of the unit that switches makes sure user names are correct.

If the user does not have a correct user name, the user cannot access applications on the DMS-100E switch. The correct user names appear in table NOPUSERS. The system generates a hidden log when an access attempt does not succeed.

Datafill sequence and meaning

You do not need to enter data in other tables before you enter data in table NOPUSERS.

Table size

This table can contain a maximum of 1024 tuples.

Datafill

Datafill for table NOPUSERS appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
USERKEY		alphanumeric (1 to 16 characters)	*User name key*. Use the command interpreter (CI) command PERMIT to define user names. This field is the key to the table. Enter the name of the user.
APPLNS		see subfield	*Applications*. This field contains subfield CHOICE and refinement APPLICATION_ID.

NOPUSERS (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	CHOICE	ALL or ONLY	*Choice of applications*. Enter ALL to allow the user at the remote DNA to access an application. This field does not require other entries. Enter ONLY to limit access for the user at the remote DNA. This entry limits access to all applications and datafill refinement APPLICATION_ID.
	APPLICATION _ID	vector of a maximum of 20 different application names	*Application names*. Enter a vector of a maximum of 20 different application names that the user can access at the remote DNA. Separate each application name with a single space. Indicate the end of the vector with a single space followed by a $. The correct entries are: • FT • TRAN • PADN • SOCCOM • SOCCOM • FTRAN • PTAE_APPL • TOCCHOST • TOCCREM • CALM • DCR • ACDMIS_APPL • TABCHGS • EXNDMAP • FBS • PHMAPMM • PHS

Datafill example

Sample datafill for table NOPUSERS appears in the following example.

MAP example for table NOPUSERS

```
USERKEY
                APPLNS
_____________________________________________________________

   1
                ONLY (FTRAN) (PADN) (SOCCOM)$
```

Table history

EUR006

Table NOPUSERS increases in size from 360 tuples to a new maximum of 1024 tuples.

CSP06

The SOC Communication Protocol (SOCCOM) was added to correct NOP applications in CSP06.

NPENDING

Table name

Number Pending Table

Functional description

Table NPENDING identifies the order files for the customer data change (CDC) users found in table CDCLOGON.

Datafill sequence and meaning

You must enter data in the following tables before you enter data in table NPENDING.

- OWNER
- CDCLOGON

Enter the owners in field OWNER in table CDCLOGON before you enter the owners in table NPENDING.

Enter data in table CDCLOGON to associate the logon identification (ID) of the CDC user with the owner. This association enforces the ownership of data and records in the pending service order file (PSOF).

Enter owners with Y in field POF of table CDCLOGON before you enter the owners in table NPENDING.

Table size

0 to 2048 tuples

Datafill

Datafill for table NPENDING appears in the following table.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
POFID		vector of a maximum of 16 characters	*Pending order file identification.* Enter the pending order file identification.
OWNER		NILOWNER	*Owner.* Enter the owner identification of the pending service order (PSO) in the PSOF. This field partitions the PSOF. The partition makes this field match field OWNER for a CDC user in table CDCLOGON. When these fields match, the PSO becomes visible to the CDC user. The default value is NILOWNER.
DUE		see subfields	*Due.* This field contains subfields Y, M, D, and H. Separate each subfield with a single space.
	Y	1990 to 2999	*Year.* Enter the year deadline for the pending order file (POF).
	M	JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC	*Month.* Enter the month deadline for the POF.
	D	1 to 31	*Day.* Enter the day deadline for the POF.
	H	0 to 2359	*Hour.* Enter the hour and minute deadlines for the POF.
PROMPT		0 to 366	*Prompt.* Enter a number between 0 and 366 that represents the POF prompt.
LOGMESST		table of 2 Y or Ns	*Log message status.* Enter Y if the user requires a log message status. If the user does not require a log message, enter N.

NPENDING (end)

Datafill example

Sample datafill for table CDCLOGON appears in the following example.

Note: Use the data that table CDCLOGON compiled to make the entries for table NPENDING.

MAP example for table NPENDING

```
          POFID     OWNER                 DUE  PROMPT    LOGMESST
_____________________________________________________________________

            CDC  NILOWNER   1990 JAN 22 2300     355          YY
```

NSCCODE

Table name

Number Service Code Code Table

Functional description

Table NSCCODE is one of a group of tables used to implement the Number Service feature. Number Services provide inward call management features that require the dialing of special numbers.

Mobile Application Part (MAP) service and Enhanced 800 (E800) service are examples of Number Services that require access to a database for call processing information.

Number services are provided using Northern Telecom's Service Switching Point (SSP) and Service Control Point (SCP) systems. The SSP and SCP use common channel signaling 7 (CCS7) protocols. CCS7 allows calls to be held while requests are sent to a database for call processing information.

For the option selector CAMA, which is used in translation selectors CONT, DNRTE, and RTE, set office parameter ICAMA_REQUESTED in table OFCVAR to Y (yes) if ICAMA detailed call recording is required.

An IAA record can be generated by selecting existing office parameter IAA_REQUESTED in table OFCVAR, or the CAMA selector.

Only ANI and MTR trunk group originations currently support the option selector CAMA. All other call types ignore this translation option.

Office parameter IMEI_ACCEPTABLE_FOR_EMRG_CALL in table OFCVAR provides an option for the network operator to accept emergency call set ups from mobile stations that transmit the IMEI instead of the IMSI or TMSI. The default value allows emergency call setups with IMEI as the identifier if, for example, no SIM is present.

For emergency calls translation, class EMRG must be datafilled. This can be done before or after translation selector DMOD with option select or COODM. This requirement differentiates between normal mobile originated calls and emergency calls set up by a conventional SETUP message.

Datafill sequence and implications

Enter data in the following tables before entering data in table NSCCODE:

- PCIXLA
- PCITRK

NSCCODE (continued)

- IAACTRL
- CDNUXLA
- CPCUXLA
- CLISERV
- CLISRVPF

Enter data in table NSCCODE before you enter data in the following tables:

- ACHEAD
- CTHEAD
- FAHEAD
- FTHEAD
- NSCHEAD
- OCFHEAD
- PXHEAD
- AMHEAD
- MDESTIDX
- BCDEF
- CDNCHAR
- CLISERV

Office parameters

The following office parameters interact with table NSCCODE:

- ICAMA_REQUESTED in table OFCVAR
- IAA_REQUESTED in table OFCVAR
- IMEI_ACCEPTABLE_FOR_EMRG_CALL in table OFCVAR

Table size

The size is altered dynamically as tuples are added or deleted. There is a maximum of 32 768 entries per table, with a maximum of 32 768 tuples per subtable. Memory is allocated when XLANAME is datafilled into the head table.

Note: The maximum number of tuples may vary due to compression and expansion of tuples.

Tuple compression

Starting in release TL006, the CONSUME option is always datafilled. If it is not datafilled by the operating company personnel, the universal translation (UXLA) system's write procedure automatically adds the datafill and sets it to the original key length. This action is taken for the following reasons:

- The UXLA system only has access to the key length in the write procedure for table xxCODE. It is done at this time so the key length is available if required during call processing.
- If tuple compression or expansion changes the key length, the consume value cannot be updated to reflect these changes. The result is that translations consume the original key length, not the current key length, during call processing. CONSUME is forced to be datafilled to make the operating company personnel aware of the number of digits that are consumed. Therefore, the default option (DFOP) CONSUME is not used.

When a tuple is initially added to table xxCODE, the key length is stored. If the tuple is then split, the new tuple's length is stored for that tuple. At this point, there are three tuples, two of one length, and a third of a different length. If the tuple that is now out of the first range of digits is changed to the original value, it will not compress because the original length of the three tuples is different. See the following examples. (The consume option is not on for any of the tuples in these examples.) The entry "exp_tuple" represents the XLANAME table entry.

Original tuple: add exp_tuple 0181 0181 feat...

The tuple is split: rep exp_tuple 0181810 0181810 dnrte...

Resulting tuples:

exp_tuple 0181 0181809 feat... (hidden consume = 4)

exp_tuple 0181810 0181810 dnrte... (hidden consume = 7)

exp_tuple 0181811 0181811 feat... (hidden consume = 4)

If the middle tuple is changed back to the original value the result is as follows:

rep exp_tuple 0181810 0181810

Resulting tuples:

exp_tuple 0181 0181809 feat... (hidden consume = 4)

NSCCODE (continued)

exp_tuple 081810 0181810 feat... (hidden consume = 7)

exp_tuple 0181811 0181 feat... (hidden consume = 4)

The tuples did not compress because the tuples must be identical in content and key length. To compress the tuple see the following:

Enter:

rep exp_tuple 0181000 018809 feat...

rep exp_tuple 0181811 0181999 feat...

Resulting tuple:

exp_tuple 0181 0181 feat...

If a tuple is added, for example:

add exp_tuple 0182 0182 feat...

Resulting tuples:

exp_tuple 0181 0181 feat... (hidden consume = 7)

exp_tuple 0182 0182 feat... (hidden consume = 4)

To compress these tuples

Enter:

rep exp_tuple 0182000 0182999 feat...

Resulting tuple:

exp_tuple 0181 0182 feat... (hidden consume = 7)

Datafill

The following table lists datafill for table NSCCODE.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	*Translation name* Enter the name from the corresponding head table.
FROMD		numeric (1 to 11 digits)	*From digits* Enter the digit or digits that represent a single number or the first in a block of consecutive numbers that have the same result given in field XLADATA. See Notes 1 and 2.
TOD		numeric (1 to 11 digits)	*To digits* If field FROMD represents a single number, enter the number that is equal to the number in field FROMD. If field FROMD represents the first number of a block of consecutive numbers, enter the last number in the block. See Notes 1 and 2.
Note 1: Adding or changing a tuple affects all digit combinations between FROMD and TOD. However, DELETE only deletes the tuple at FROMD. ***Note 2:*** Because of the way the FROM and TO digit key is implemented, the operation of table control requires additional explanation. Suppose that a tuple is datafilled such that TOD is greater than FROMD; (for example FROMD is 3 and TOD is 8). If a user positions on a tuple with FROMD and TOD within the datafilled range, the tuple is displayed as if only those digits are datafilled as the key. In this example, the user positions on the tuple with FROMD and TOD both equal to 5. The tuple is displayed with both fields equal to 5. The information is being requested for the given key. If the user then displays the previous tuple, the FROMD and TOD fields contain the digits originally datafilled before the current FROMD digit. In this example, the FROMD and TOD digits are 3 and 8. If the user now displays the next tuple, the digits following the currently displayed TOD field are displayed, 5 and 8 in this example.			
XLADATA		see subfields	*Universal translation datats* This field is a vector consisting of subfield XLASEL plus a set of options (refinements) dependent on the entry in XLASEL. Subfield XLASEL and its refinements are described on the following pages.

NSCCODE (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	XLASEL	CONT, DBQ, DMOD, DNRTE, FEAT, FEATINFO, HRC, IAC, RTE, or TRMT,	*Translation selector* Enter one of the following: Enter CONT and datafill subfield OPT, if further translation is required. Enter DBQ and datafill subfield OPT to perform a database query. Enter DMOD and datafill subfield OPT, if the input digit stream requires modification. Enter DNRTE and datafill subfield OPT, if the input digits are routed. Enter FEAT and datafill subfield OPT, if access to a feature is required. Enter FEATINFO and datafill subfield FTR, to trigger the screening function. Enter HRC and datafill the subfields if the system requires the home routing code selector for local number portability applications. Enter IAC and datafill subfield OPT, if the insertion of own area code is required when an ambiguous area code is found through translations. Enter RTE and datafill subfield OPT, if a translation result is found, and translation terminates. Enter TRMT and datafill subfield OPT, if a call is routed to a treatment. The following tables describe each entry in XLASEL together with its options.

XLASEL = CONT

The following table lists the datafill for table NSCCODE where the translator selection field has been set to continued (CONT).

This selector is used when further translation is required. The next table to use is given by the XLT option. The CONT option in the head table entry for the

current XLANAME determines whether the digits that were used to index the current table are to be consumed (that is, ignored by the next table). For example, in a pretranslator, the digits are not usually consumed, but they are consumed when continuing from the office code table to table DNINV. Note that the consumed digits are NOT deleted from the digit register (they are ignored for the moment).

> ***Note:*** If translation continues and no next translation table is specified (with the XLT option), UXLA reenters the same table it is currently in. If the CON option is set in the head table, a new translation results since different digits are used. If no next translation table is specified and the NOCON option is set, UXLA reenters the same table with the same digits, gets the same result, and continues looping through the table.

It is possible to datafill the tables so that the same table is explicitly reentered, but it is not recommended because it makes the sequence very difficult to follow and prone to error. (The same table refers to the same subtable in the same translation system. It is correct to enter a different subtable in the same translation system, but if the XLT option is not used, this is not the case.) If the same table is entered, it is datafilled explicitly.

If the CONT selector is used, the XLT option must be present in the code table tuple or in the default options (DFOP) of the corresponding head table. If the CONT selector is used in the default tuple (DFLT), the XLT option must be present there as well. The DMOD selector does not use the default options from the head table, so the XLT option must be datafilled in the code table tuple as well.

NSCCODE (continued)

Table AMAXLAID must be datafilled prior to selecting option AMAXLAID.

Field descriptions for conditional datafill (Sheet 1 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	OPT	see subfield	*Options* This subfield is a vector consisting of up to 10 options. Each option consists of subfield OSEL, and refinements that depend on the entry in subfield OSEL. For each option, specify OSEL, followed by a space, then the refinements, each separated by a space. The entry is concluded by a $.
	OSEL	ACF, AMAXLAID, CALLCTRL, CAMA, CDN, CDNRTE, CLASS, CLIOVRD, CONSUME, CPCRTE, CPMCALL, DDIDX, DEST, EXTCIC, IAA, LNET, MM, MZONE, NETSRV, OSS, PCC, PF, PNRF, PRESEL, PRIVL, QFT, SETCDN, TELETAXE, TOC, VPN, or XLT	*Option selector* The following options can be selected: Enter ACF, followed by a space, and datafill subfield ACF, if the area code fence is defined. Enter AMAXLAID, followed by a space, and datafill subfield XLAID, to specify an Automatic Message Accounting identity from within table AMAXLAID. Enter CALLCTRL, followed by a space, and datafill subfield CALLCTRL. The entry in subfield CALLCTRL indicates who has control of the call: the calling party, the called party, or both. Enter CAMA, followed by a space, and datafill subfield CLDFMT. The entry in CLDFMT indicates whether the ICAMA record is generated with the originally-signaled DN or the final public switched telephone network (PSTN) number.

Field descriptions for conditional datafill (Sheet 2 of 14)

Field	Subfield or refinement	Entry	Explanation and action
			Enter CDN, followed by a space, and datafill subfields NOA, STOPRTMR, or PFXAMA to select the Nature of Address field. This field is used to identify the called party of the initial address message (IAM). It is used for Australian ISDN user part (AISUP) call translations. Enter CDNRTE to route a call using the called number name (CDNNAME) from table CDNCHAR. If the CDNNAME is present on the incoming call or is set by the SETCDN option, translation proceeds to table CDNUXLA. The CDNRTE option does not apply to table AMCODE. The CDNRTE option does not have suboptions. Enter CLASS, followed by a space, and datafill subfield CLASS, if the class of the dialed digits can be determined. Enter CLIOVRD, followed by a space, and enter datafill datafill in refinement CLIOVRD. This field allows operating company personnel to block or allow the delivery of a calling line identity (CLI) for each call. The entry in refinement CLIOVRD is CNB (calling number blocked) or CNA (calling number allowed). Enter CONSUME, followed by a space, and datafill subfield CONDIGS, to specify the number of digits that are consumed during translation. Enter CPCRTE to route a call using the calling party category (CPCNAME) from table CPCCHAR. If the CPCNAME is present on the incoming call, translation proceeds to table CPCUXLA. The CPCRTE option does not apply to table AMCODE. The CPCRTE option does not have subfields.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 3 of 14)

Field	Subfield or refinement	Entry	Explanation and action
			Enter CPMCALL, followed by a space, and datafill subfield CPMCALL, to specify call billing against the called party instead of the calling party for intra-office calls. Enter DDIDX, followed by a space, and enter data for subfield DDIDX. Operating company personnel can enter data in this field to specify the destination discount index in the discount database. Enter DEST, followed by a space, and datafill subfield DEST, if the destination is known. Enter EXTCIC, followed by a space, and datafill refinements SOURCE, SKIPDIGS, and CICSIZE. EXTCIC is the external carrier identification code that indicates a long distance carrier in the global environment. This option is only supported for TOPS calls. For further information, refer to functionality Global Competitive Access, GOS00006. Enter IAA and the datafill refinement IAA_INDEX to generate or modify IAA message parameters based on datafill in table IAACTRL. Enter LNET, followed by a space, and datafill subfield LNET, if a logical network is required for metering. Enter MM, followed by a space, and datafill subfields MIN and MAX, if the minimum and maximum dialed digits are known. Enter MZONE, followed by a space, and datafill subfield MZONE if metering of the call is required. Enter NETSRV and datafill refinement NETSRV_NAME to indicate a Japan network service.

Field descriptions for conditional datafill (Sheet 4 of 14)

Field	Subfield or refinement	Entry	Explanation and action
			Enter OSS, followed by a space, if determining the appropriate IFAM format for an indirect BTUP call to Operator Service System. Enter PCC, followed by a space, and datafill subfield PCCDR if a pseudo country code is required. Enter PF, followed by a space, and datafill subfield PFDIGS if there are prefix digits in the digit stream. Enter PNRF to invoke the ported number recognition function. LNP applications for the German market use PNRF. The PNRF option does not have subfields. Enter PRESEL, followed by a space, if the call is to be treated as a preselected carrier case. Enter PRIVL, followed by a space, and datafill subfield PRIVL if the user is a privileged user (for example, operators). Enter QFT followed by ON or OFF to determine if an outgoing route is capable of QSIG feature transparency. Enter SETCDN, followed by a space, and enter datafill in refinement CDNNAME. The SETCDN field allows operating company personnel to set the outgoing called party characteristics. Enter TELETAXE. The TELETAXE field does not have subfields. Enter TOC, followed by a space, and datafill subfield CHG for the type of charge if the type of charge messaging is to be selected.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 5 of 14)

Field	Subfield or refinement	Entry	Explanation and action
			Enter VPN, followed by a space, and datafill subfields ONNET and BILLABLE, if the call routes through a service switching point (SSP) and the Australian VPN - SSP software package (NTXH49AA or NTXH49AB) is in the switching unit. Enter XLT, followed by a space, and datafill subfield XLASYS, if the call proceeds to another translation system.
	ACF	0 to 29	*Area code fence* If the value of subfield OSEL is ACF, enter the number of digits between the beginning of the digits to currently index the table and the end of the area code.
	BILLABLE	Y or N	*Virtual private network billable call* If the value of subfield OSEL is VPN, enter Y (yes) if an automatic message accounting (AMA) record is required for each VPN call. Otherwise enter N (no). The system does not generate an AMA record if an address complete message (ACM) of address complete, no charge is returned, or if the call terminates in the SSP on a line with the free number terminating (FNT) option.
	CALLCLASS	PRESELECT OVERRIDE, CSN,TRUNK	Call class. If the entry in subfield OSEL is PRESEL, enter PRESELECT to treat the DN as a preselected call. Enter OVERRIDE to permit the DN to use override codes. Enter CSN to treat the DN as a carrier specific number. Enter TRUNK to permit access to trunk originated calls.

Field descriptions for conditional datafill (Sheet 6 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	CALLCTRL	CALLING, CALLED, or MUTUAL	*Call control* If the value of subfield OSEL is CALLCTRL, enter one of the following three values to specify the party that has control of the call. If the entry is CALLING and the calling party goes on-hook first, the call is released immediately. If the called party goes on hook first, the called party is allowed to reanswer within a datafilled reanswer time out or until the calling party goes on-hook. If the time out expires or if the calling party goes on-hook, the calling party releases the call and the called party is set to idle. If the entry is CALLED and the called party goes on-hook first, the call is released immediately. If the calling party goes on-hook first and does not reanswer, the connection is not released until the called party goes on-hook. There are no time outs, and the calling party is allowed to reanswer until the called party goes on- hook. If the entry is MUTUAL and either party goes on-hook the call is released immediately.
Note 1: Calls to lines with the ESG option must have CALLCTRL(CALLED). ***Note 2:*** Calls terminating on an ITOPS position must have CALLCTRL(CALLED).			
	CDNNAME	CDNTEST	Called Number NameIf the value of subfield OSEL is SETCDN, enter refinement CDNNAME. This option assigns the CDNNAME from table CDNCHAR to the call.
	CHG	SEND_ CHARGE or SEND_NO_C HARGE	*Charge* If the value of subfield OSEL is TOC, enter SEND_CHARGE to set the answer message (BTUP ANM) type of answer (TOA) string sent out from a node to SEND_CHARGE. Enter SEND_NO_CHARGE to set the answer message (BTUP ANM) type of answer (TOA) string sent out from a node to SEND_NO_CHARGE.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 7 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	CICSIZE	1 to 4	CIC size. If the entry in subfield OSEL is EXTCIC, datafill this refinement. This field indicates how many digits are in the CIC. This field operates on the B (called) number, so it is assumed that the CIC is signalled as part of the B number. The MAP display indicates the range is 0 to 4; however, the system does not allow 0.
	CLASS	ATT, CNTL, COLL, DATT, EMRG, IAGRP, ICNTL, INTL, IOPRA, LCL, NATL, OPRA, RURAL, SPEC, or UNKW	*Translation class* If the value of subfield OSEL is CLASS, enter the translation class determined by the dialed digits. This can be used for screening or billing as described under CLASS in screening and charging options. The translation classes are defined as follows: • ATT (attendant console) • CNTL (continental) • COLL (collect) • DATT (dial attendant) • EMRG (emergency) • IAGRP (inter-agent group) • ICNTL (inter-continental) • INTL (international) • IOPRA (international operator assisted) • LCL (local) • NATL (national) • OPRA (operator assisted) • RURAL (rural) • SPEC (special) • UNKW (unknown)

Field descriptions for conditional datafill (Sheet 8 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	CLDFMT	CURRENT or POSTXLA	*Called format* If the value of subfield OSEL is CAMA, enter either CURRENT or POSTXLA to produce the required ICAMA record format. If the entry is CURRENT, an ICAMA record is produced with the signaled DN (without translation). If the entry is POSTXLA, an ICAMA record is produced with public switched telephone network (PSTN) number resulting from translations.
	CLIOVRD	CNB, CNA	Calling line identity override.If the entry in subfield OSEL is CLIOVRD, enter CNB to block the CLI for each call. Enter CNA to allow the CLI.
	CONDIGS	numeric (0 to 29 digits)	*Consumed digits* If the value of subfield OSEL is CONSUME, enter a number to explicitly define the number of digits consumed during call processing.
	CONTINUE	CONT, NOCONT	Continue. If the entry in subfield OSEL is PRESEL, enter CONT to continue translations through UXLA. Enter NOCONT to immediately route translations through PCIXLA or PCITRK.
	CPMCALL	Y or N	*Called party metering* If the value of subfield OSEL is CPMCALL, enter Y (yes) if calls are billed against the called party for intra-office calls. Enter N (no) for the default value of billing against the calling party for intra-office calls.
	DDIDX	1 to 63 or DEFAULT	Destination discount index. If the entry in subfield OSEL is DDIDX, enter the destination discount index number.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 9 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	DEST	0 to 1023	*Destination route list index* If the value of subfield OSEL is DEST, enter the number in the route list of the same translation system to which the call is routed.
	IAA_INDEX	0 to 1024	Interadministration accounting index. If the entry in subfield OSEL is IAA, datafill this refinement. Enter the value that indexes the corresponding tuple in table IAACTRL.
	LNET	alphanumeric (1 to 16 characters)	*Logical network* If the value of subfield OSEL is LNET, enter the logical network name that the call is on. The logical network name must have been previously datafilled in table LNETWORK. The entry in this field is used by the international metering system to determine a tariff for the call.
	MAX	0 to 30	*Maximum digits* If the value of subfield OSEL is MM, enter the maximum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MIN	0 to 30	*Minimum digits* If the value of subfield OSEL is MM, enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MZONE	0 to 63	*Metering zone* If the value of subfield OSEL is MZONE, enter the metering zone of the call in the logical network as defined by selector LNET. The entry in this field is used by the international metering system to determine a tariff for the call.

Field descriptions for conditional datafill (Sheet 10 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	NETSRV_ NAME	IPHS, DPHS, MOBILE, DA, TELEGRAM, or NCC	Network service name. If the entry in subfield OSEL is NETSRV, datafill this refinement. The entry in this field determines the parameters in an outgoing IAM message. Enter IPHS to indicate a call to an independent personal handyphone system subscriber. Enter DPHS to indicate a call to a dependent personal handyphone system subscriber. Enter MOBILE to indicate a call to a mobile subscriber. Enter DA to indicate a call to the directory assistance operator. Enter TELEGRAM to indicate a call to the Telegram office. Enter NCC to indicate a call routed to one of the following networks: • New Common Carrier serving international toll traffic • New Common Carrier serving national toll traffic
	NOA	INTL, LOCAL, NATL, or NET	*Nature of address* If the entry in subfield OSEL is CDN, enter the required called party nature of address as listed below: • INTL (international) • LOCAL (local) • NATL (national) • NET (Intelligent Network Services)

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 11 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	ONNET	Y or N	*Call on virtual private network* If the value of subfield OSEL is VPN, enter Y if the call stays within the defined virtual private network. Otherwise enter N (no). Overlapped outpulsing is only supported on off-network calls. Calls processed without the ONNET subfield set to Y are off-network calls. Meridian digital centrex (MDC) calls are treated as off-network calls, and therefore overlapped outpusling is supported for MDC calls.
	PCCDR	000 to 999	*Pseudo country code digits* If the value of subfield OSEL is PCC, enter the three-digit pseudo country code. If a two-digit PCC is required, it must be padded by a leading zero.
	PFDIGS	0 to 24	*Number of prefix digits* If the value of subfield OSEL is PF, enter the number of prefix digits. If prefix digits have been identified in a previous table, then this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed or used to index the next translation table. ***Note:*** If refinements PF and CONSUME are both datafilled for the same tuple, only the entry for the greater of the two values is processed; the other entry is ignored.
	PFXAMA	0 to 4 digits, or N	*Called party number prefix in AMA* If the entry in subfield is OSEL is CDN, and refinement NOA is set to NATL, datafill PFXAMA with 0011. If NOA is set to NATL, datafill PFXAMA with 0. If NOA is set to LOCAL or NET, datafill PFXAMA with N.

Field descriptions for conditional datafill (Sheet 12 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	PRIVL	Y or N	*Privileged user* If the value of subfield OSEL is PRIVL, enter Y (yes), if the user is a privileged user (for example, operator). Otherwise, enter N (no). If the originator is a privileged user, then no action is taken. If the originator is not privileged, translation AH01.2294 acts as if this code had not been found in this table, and the default value from the head table is used. This allows two classes of originator to use the same translation tables if the privileged user can dial all the same codes as a non-privileged user as well as some other privileged codes. The privileged user is allowed full access to all the codes, while the ordinary subscriber is prevented from using the privileged codes.
	QFT	OFF or ON	If the entry in subfield OSEL is QFT and the outgoing trunk is capable of QSIG feature transparency, enter ON. Operating company personnel must not add the QFT ON option to a route unless the far-end node is QFT-capable. The default is OFF.
	SKIPDIGS	0 to 24	Skip digits. If the entry in subfield OSEL is EXTCIC, datafill this refinement. This field indicates how many digits to skip before extracting the carrier digits from the digit stream. This field operates on the B (called) number, so it is assumed that the CIC is signalled as part of the B number.
	SOURCE	PRESUB or DIALED	Carrier identification code source. If the entry in subfield OSEL is EXTCIC, datafill this refinement. This field specifies the source of the CIC as follows: • PRESUB - presubscribed, the CIC is defined in table TRKGRP • DIALED - dialed, the CIC is entered by the subscriber when dialing a call

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 13 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	STOPRTMR	Y or N	*Stop remote timer* If the entry in subfield OSEL is CDN, enter Y (yes) to disable the address complete message (ACM) timer of the remote switch. Default is N (no).
	XLAID	FREE, GENERIC1, GENERIC2, or GENERIC3	*AMA translation identifier* If the value of subfield OSEL is AMAXLAID, enter the AMA translation identifier to be used against table AMAXLAID.

Field descriptions for conditional datafill (Sheet 14 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	XLASYS	AC, AM, CT, DN, FA, FT, NIL, NSC, OFC, or PX	*Translation system* If the value of subfield OSEL is XLT, enter the next translation system to use, followed by a space, then datafill subfield XLANAME (the instance of the translation system). The choice of translation systems is • AC (access) • AM (ambiguous) • CT (country) • DN (directory number) • FA (foreign area) • FT (utility) • NIL • NSC (number service code) • OFC (office) • PX (prefix) ***Note:*** The XLASYS value NIL must not be datafilled by the operating company. NIL is only used to satisfy internal software functionality.
	XLANAME	alphanumeric (1 to 8 characters)	*Translation name* If the value of subfield OSEL is XLT, enter the translation name of the table instance within the XLASYS to which the call is routed.

NSCCODE (continued)

XLASEL = DBQ

If the value of subfield XLASEL is DBQ, datafill refinement OPT as described below.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
OPT		vector (see subfields)	*Options* This subfield is a vector consisting of up to ten options. Each option consists of subfield OSEL and refinements that depend on the entry in subfield OSEL. For each option specify OSEL, followed by a space, then the refinements, each separated by a space. The entry is terminated by a $.
	OSEL	MM, NSC, or PF	*Option selector* The following options can be selected: Enter MM, followed by a space, and datafill subfields MIN and MAX, if the minimum and maximum dialed digits are known. Enter NSC, followed by a space, and datafill subfield NSCODE, if a number service code operation is to be performed on a call. Enter PF, followed by a space, and datafill subfield PFDIGS if there are prefix digits in the digit stream.
	MAX	0 to 30	*Maximum digits* If the value of subfield OSEL is MM, enter the maximum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MIN	0 to 30	*Minimum digits* If the value of subfield OSEL is MM, enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	NSCODE	AIN, 800P, E008, E800, MAP_HLR, MAP_MSC, MAP_VLR, PVN, MAPHLR, REPLDIGS, or VPN	*Number service code* If the value of subfield OSEL is NSC, enter one of the following required number service operations to be performed on the call: • AIN is for advanced intelligent network service. • 800P is for the 800+ service. • E008 is for the enhanced 008 service. • E800 is for the enhanced 800 service. • MAP_HLR is for Mobile Application Part Home Location Register. • MAP_MSC is for Mobile Application Part Mobile service Switching Center. • MAP_VLR is for Mobile Application Part Visitor Location Register. • MAPHLR appears only if the package for MAP HLR Database Query service is on the switch. • PVN is for private virtual network service. • REPLDIGS is for replace digits service. • VPN is for Australian virtual private network service. All entries for field NSCODE must first be datafilled in table NSCDEFS, field NSCODE.
	PFDIGS	0 to 24	*Number of prefix digits* If the value of subfield OSEL is PF, enter the number of prefix digits. If prefix digits have been identified in a previous table, then this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed or used to index the next translation table.

NSCCODE (continued)

XLASEL = DMOD

If the value of subfield XLASEL is DMOD, datafill refinement subfield OPT as described below.

Field descriptions for conditional datafill (Sheet 1 of 8)

Field	Subfield or refinement	Entry	Explanation and action
OPT		vector (see subfields)	*Options* This subfield is a vector consisting of up to five options. Each option consists of subfield OSEL, and refinements that depend on the entry in subfield OSEL. For each option, specify OSEL, followed by a space, then the refinements, each separated by a space. The entry is terminated by a $.
	OSEL	AFTER, CDNRTE, CGNDM, CONSUME, COODM, CPCRTE, DEL, EXTCIC, INSRT, PF, RBP, REPL, SETCDN, VPNREPL, VPNXLT, XLT	*Option selector* The following options can be selected: Enter AFTER, followed by a space, and datafill subfield AFTER, if a certain number of digits must be skipped before modifying the digit stream. Enter CDNRTE to route a call using the called number name (CDNNAME). IF the CDNNAME is present on the incoming call or is set by the SETCDN option, translation proceeds to table CDNUXLA. The CDNRTE option does not apply to table AMCODE. The CDNRTE option does not have subfields. Enter CGNDM, followed by a space, and datafill subfields PREFXCLI and INSRTCLI to remove digits from the CLI and insert a datafilled digit in the prefix string. The total length of the string can be up to 18 digits. A modified CLI and digit string greater than 18 digits routes the call to treatment. Enter CONSUME, followed by a space, and datafill subfield CONDIGS, to specify the number of digits that are consumed during translation.

Field descriptions for conditional datafill (Sheet 2 of 8)

Field	Subfield or refinement	Entry	Explanation and action
			Enter COODM, followed by a space, and datafill subfield SERVICE, to replace the dialed emergency code by the emergency number stored in table LAC. Option selector COODM must be combined with the XLT option to guarantee translation continues with the modified number. Selector COODM cannot be combined with any other option. Enter CPCRTE to route a call using the calling party category (CPCNAME). IF the CPCNAME is present on the call, translation proceeds the table CPCUXLA. The CPCRTE option does not apply to table AMCODE. The CPCRTE option does not have subfields. Enter DEL, followed by a space, and datafill subfield DELDIGS. Further digits are accepted from the agent, and overlapped outpulsing is not affected. Digits being deleted are processed before those being inserted. Enter EXTCIC, followed by a space, and datafill refinements SOURCE, SKIPDIGS, and CICSIZE. EXTCIC is the external carrier identification code that indicates a long distance carrier in the global environment. This option is only supported for TOPS calls. For further information, refer to functionality Global Competitive Access, GOS00006.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 3 of 8)

Field	Subfield or refinement	Entry	Explanation and action
			Enter INSRT, followed by a space, and datafill subfield INSRDIGS. Further digits are accepted from the agent, and overlapped outpulsing is not affected. Digits being deleted are processed before those being inserted. ***Note:*** Digit insertion is done in the actual digit stream, and the changes are reflected in call detail records. Replacement and insertion cannot be datafilled in the same tuple. If both options are datafilled, the second option in the tuple is used. Enter PF, followed by a space, and datafill subfield PFDIGS, if there are prefix digits in the digit stream. Enter RBP without refinements. The entry RBP is used when a call is to be marked as Ringback Price. The RBP entry in table NSCCODE suffixes a hexadecimal E to the calling digits for a call that translates using a tuple with the RBP option. Enter REPL, and datafill subfield REPLDIGS. Overlapped outpulsing is disabled, and all digits are collected before continuing. ***Note:*** Digit replacement occurs in the actual digit stream, and the changes are reflected in call detail records. Replacement and insertion cannot be datafilled in the same tuple. If both options are datafilled, the second option in the tuple is used. Enter SETCDN, followed by a space, and enter data in refinement CDNNAME to allow CDN routing.

Field descriptions for conditional datafill (Sheet 4 of 8)

Field	Subfield or refinement	Entry	Explanation and action
			Enter VPNREPL to replace the called party digits with the VPN called party digits. The QSIG feature transparency mechanism sends the VPN digits across the public network. This option does not have subfields. Enter VPNXLT to replace the current translation system and translator name with the values in table BGIDMAP. The VPNXLT and XLT options cannot be present in the same place. The VPNXLT option does not have subfields. Enter XLT, followed by a space, and datafill subfield XLASYS, if the call proceeds to another translation system.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 5 of 8)

Field	Subfield or refinement	Entry	Explanation and action

	AFTER	0 to 29	*After*
			If the value of subfield OSEL is AFTER, enter the number of digits to skip before doing the modification. The default case is to calculate the new prefix fence, and then replace, insert or delete digits after the fence (for example, starting at the next digit). Option after is an additional number of digits to skip, before doing the modification. Option after refers to the option datafilled immediately before it. For example:
			DMOD DEL 3 AFTER 2 INSRT 11
			skips two digits, deletes the next three and inserts digits 11 at the beginning of the digit string. The result when applied to 234567 is 23117.
			Note: Datafilling this refinement with 0 (the default value) displays the following error message:
			`Too few digits for AFTER option`
			`UNSUPPORTED OPTION AT: #`
			`PROCESSING ERROR`
			`UNEXPECTED ERROR CONDITION`

	CDNNAME	CDNTEST	Called Number NameIf the value of subfield OSEL is SETCDN, enter refinement CDNNAME. This option assigns the CDNNAME from table CDNCHAR to the call.
	CICSIZE	1 to 4	CIC size. If the entry in subfield OSEL is EXTCIC, datafill this refinement. This field indicates how many digits are in the CIC. This field operates on the B (called) number, so it is assumed that the CIC is signalled as part of the B number. The MAP display indicates the range is 0 to 4; however, the system does not allow 0.

Field descriptions for conditional datafill (Sheet 6 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	CONDIGS	numeric(0 to 29 digits)	*Consumed digits* If the value of subfield OSEL is CONSUME, enter a number to explicitly define the number of digits consumed during call processing.
	DELDIGS	0 to 29	*Delete digits* If the value of subfield OSEL is DEL, enter the number of digits requiring deletion. Refer to the description of subfield AFTER.
	INSRDIGS	0 to 29 digits	*Insert digits* If the value of subfield OSEL is INSRT, enter the number of digits requiring insertion. Refer to the description of subfield AFTER.
	INSRTCLI	numeric (1 to 5 digits) or $	*Insert CLI* If the value of subfield OSEL is CGNDM, enter the new string to insert as the prefix onto the CLI. Enter $ to specify no digit string is inserted.
	PREFXCLI	0 to 18	*Prefix CLI* If the value of subfield OSEL is CGNDM, enter the number of prefix digits to delete.
	PFDIGS	0 to 24	*Number of prefix digits* If the value of subfield OSEL is PF, enter the number of prefix digits. If prefix digits have been identified in a previous table, then this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed, or used to index the next translation table. ***Note:*** If refinements PF and CONSUME are both datafilled for the same tuple, only the entry for the greater of the two values is processed; the other entry is ignored.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 7 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	REPLDIGS	0 to 30 digits	*Replace digits* If the value of subfield OSEL is REPL, enter the digits that replace the existing digits.
	SERVICE	alphanumeric (1 to 8 characters)	*Coodm service* If the value of subfield OSEL is COODM, enter the emergency service name. Emergency service names are listed in field EMRGSERV in table LAC.
	SKIPDIGS	0 to 24	Skip digits. If the entry in subfield OSEL is EXTCIC, datafill this refinement. This field indicates how many digits to skip before extracting the carrier digits from the digit stream. This field operates on the B (called) number, so it is assumed that the CIC is signalled as part of the B number.
	SOURCE	PRESUB or DIALED	Carrier identification code source. If the entry in subfield OSEL is EXTCIC, datafill this refinement. This field specifies the source of the CIC as follows: • PRESUB - presubscribed, the CIC is defined in table TRKGRP • DIALED - dialed, the CIC is entered by the subscriber when dialing a call

Field descriptions for conditional datafill (Sheet 8 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	XLASYS	AC, AM, CT, DN, FA, FT, NIL, NSC, OFC, or PX	*Translation system* If the value of subfield OSEL is XLT, enter the next translation system to use, followed by a space, and datafill subfield XLANAME (the instance of the translation system). The choice of translation systems are • AC (access) • AM (ambiguous) • CT (country) • DN (directory number) • FA (foreign area) • FT (utility) • NIL • NSC (number service code) • OFC (office) • PX (prefix) ***Note:*** The XLASYS value NIL must not be datafilled by the operating company. NIL is only used to satisfy internal software functionality.
	XLANAME	alphanumeric (1 to 8 characters)	*Translation name* If the value of subfield OSEL is XLT enter the translation name of the table instance within the XLASYS to which the call is routed.

XLASEL = DNRTE

The DNRTE selector allows translation to continue in table DNINV. Through this translation, calls can be terminated at directory numbers datafilled in table DNINV.

Table DNINV must be datafilled before the DNRTE selector is datafilled in table NSCCODE.

Table AMAXLAID must be datafilled prior to selecting option AMAXLAID.

NSCCODE (continued)

If the value of subfield XLASEL is DNRTE, datafill refinement subfield OPT as described below.

Field descriptions for conditional datafill (Sheet 1 of 5)

Field	Subfield or refinement	Entry	Explanation and action
OPT		vector (see subfields)	*Options* This subfield is a list consisting of up to ten options. Each option consists of subfield OSEL and refinements that depend on the entry in subfield OSEL. For each option, specify OSEL, followed by a space, then the refinements, each separated by a space.
	OSEL		*Option selector* The following options can be selected:
		ALLOWOVLP, AMAXLAID, CAMA, CLASS, DN, MM, PF, SF	Enter ALLOWOVLP. The ALLOWOVLP does not have subfields. Enter AMAXLAID, followed by a space, and datafill subfield XLAID, to specify an Automatic Message Accounting identity from within table AMAXLAID. Enter CAMA, followed by a space, and datafill subfield CLDFMT. The entry in CLDFMT indicates whether the ICAMA record is generated with either the originally-signaled DN or the final public switched telephone network (PSTN) number. Enter CLASS, followed by a space, and datafill subfield CLASS, if the class of the dialed digits is determined. Enter DN, followed by a space, and datafill subfield SNPA and OFC for the directory number that the call is routed to. Enter MM, followed by a space, and datafill subfields MIN and MAX, if the minimum and maximum dialed digits are known. Enter PF, followed by a space, and datafill subfield PFDIGS, if there are prefix digits in the digit stream.

Field descriptions for conditional datafill (Sheet 2 of 5)

Field	Subfield or refinement	Entry	Explanation and action
			Enter SF, followed by a space, and datafill refinement SFDIGS to indicate the beginning of the station code digits.
	CLDFMT	CURRENT or POSTXLA	*Called format* If the value of subfield OSEL is CAMA, enter either CURRENT or POSTXLA to produce the required ICAMA record format. If the entry is CURRENT, an ICAMA record is produced with the signaled DN (without translation). If the entry is POSTXLA, an ICAMA record is produced with public switched telephone network (PSTN) number resulting from translations.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 3 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	CLASS	ATT, CNTL, DATT, EMRG, IAGRP, ICNTL, INTL, IOPRA, LCL, NATL, OPRA, RURAL, SPEC, COLL, or UNKW	*Translation class* If the value of subfield OSEL is CLASS, enter the translation class determined by the digits dialed. This can be used for screening or billing as described under CLASS in screening and charging options. The translation classes are defined as follows: • ATT (attendant console) • CNTL (continental) • COLL (collect) • DATT (dial attendant) • EMRG (emergency) • IAGRP (inter-agent group) • ICNTL (inter-continental) • INTL (international) • IOPRA (international operator assisted) • LCL (local) • NATL (national) • OPRA (operator assisted) • RURAL (rural) • SPEC (special) • UNKW (unknown)
	MAX	0 to 30	*Maximum digits* If the value of subfield OSEL is MM, enter the maximum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.

Field descriptions for conditional datafill (Sheet 4 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	MAX	0 to 30	*Maximum digits* If the value of subfield OSEL is MM, enter the maximum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MIN	0 to 30	*Minimum digits* If the value of subfield OSEL is MM, enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	OFC	numeric (1 to 7 digits)	*Seven-digit office code* If the value of subfield OSEL is DN, enter the office code for the DN that the call is routed to.
	PFDIGS	0 to 24	*Number of prefix digits* If the value of subfield OSEL is PF, enter the number of prefix digits. If prefix digits have been identified in a previous table, then this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed, or used to index the next translation table.
	SFDIGS	0 to 29	Station fence digits. If the entry in subfield OSEL is SF, datafill this refinement. Enter a number to indicate how many digits to advance past the start of the digits that index into the tuple. (During call processing, the station code digits consist of all digits beyond this indicator to the end of the dialled digits. If option SF is not datafilled, then the last four digits comprise the station code.)

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 5 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	SNPA	000 to 999	*Serving number plan area* If the value of subfield OSEL is DN, enter the required SNPA. This number must be in table HNPACONT or in table SNPANAME. This field must be three digits in length.
	XLAID	FREE, GENERIC1, GENERIC2, or GENERIC3	*AMA translation identifier* If the value of subfield OSEL is AMAXLAID, enter the AMA translation identifier to be used against table AMAXLAID.

XLASEL = FEAT

If the value of subfield XLASEL is FEAT, datafill refinement subfield OPT as described below.

Field descriptions for conditional datafill (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
OPT		vector (see subfields)	*Options* This subfield is a vector consisting of up to 10 options. Each option consists of subfield OSEL, and refinements that depend on the entry in subfield OSEL. For each option, specify OSEL, followed by a space, then the refinements, each separated by a space. The entry is concluded by a $.
	OSEL	FTR, FUNC, MM or PF	*Option selector* The following options can be selected: Enter FTR, followed by a space, and a feature code (FTR described below) to identify the international line feature. Enter FUNC, followed by a space, and a feature function code (FUNC described below) to identify the international line feature function. Enter MM, followed by a space, and datafill subfields MIN and MAX, if the minimum and maximum dialed digits are known. Enter PF, followed by a space, and datafill subfield PFDIGS, if there are prefix digits in the digit stream.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	FTR	CALLBACK, CALLCHAR, CLCTDIGS, JES, NTC, VMWI, VSC or VALIDATE	Feature name. If the entry in subfield OSEL is FTR, enter the refinement name shown below: • CALLBACK (call back) • CALLCHAR (call characters) • CLCTDIGS (collect digits) • JES (Japan emergency services) • NTC (Notify Time Charges) • TLC (trunk logic circuit) • VMWI (voice mail waiting indication) • VSC (vertical service code) • VALIDATE (not used in GL03)
	FUNC	ACT, DEACT, INTER, USAGE, PROG, or DELETE	*Feature function code* If the value of subfield OSEL is FUNC, enter one of the international line feature function codes listed below: • ACT (Activate) • DEACT (Deactivate) • INTER (Interrogate) • USAGE (Usage) • PROG (Programming) • DELETE (Delete)
	MAX	0 to 30	*Maximum digits* If the value of subfield OSEL is MM, enter the maximum number of digits expected following MIN entry and a space. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.

Field descriptions for conditional datafill (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	MIN	0 to 30	*Minimum digits* If the value of subfield OSEL is MM, enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	PFDIGS	0 to 24	*Number of prefix digits* If the value of subfield OSEL is PF, enter the number of prefix digits. If prefix digits have been identified in a previous table, then this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed, or used to index the next translation table.

XLASEL = FEATINFO

If the entry in subfield XLASEL is FEATINFO, datafill the following refinements. Selector FEATINFO makes use of table DNSCRN to store information against DNs, which is used during call processing to determine how to proceed with the call. The screening function is triggered by selector FEATINFO in the universal translation tables. The options available with this selector are shown below.

Field descriptions for conditional datafill (Sheet 1 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	FTR	CALLBACK, CALLCHAR, CLCTDIGS, JES, NTC, TLC, or VALIDATE	Feature name. Enter CALLBACK to enable originator callback during translations. Datafill subfield CALLBACK_OPTION and its refinements, then datafill subfields PFDIGS, MINDIGS, MAXDIGS, and TABREF. Enter CALLCHAR to modify all signaling characteristics. Datafill subfields CLLCHROP, PFDIGS, MINDIGS, MAXDIGS, and TABREF.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 2 of 10)

Field	Subfield or refinement	Entry	Explanation and action
			Enter CLCTDIGS to collect digits from the call originator and add them to the called digits stream for translation. Datafill subfields CLDGMIN, CLDGMAX, CLCTDIGS_OPTION, PFDIGS, MINDIGS, MAXDIGS, and TABREF. Enter JES to activate the Japan Emergency Service feature. Datafill refinements PFDIGS and TABREF. Enter NTC to notify the originating subscriber of applicable time and charges after the call terminates. Datafill subfield SUBOPT_NAME and its refinement, then datafill subfields PFDIGS, MINDIGS, MAXDIGS, and TABREF. Enter TLC to enable the test line call feature, which provides audible ringback tone followed by dial tone after specified durations. Datafill subfields RING_BACK_TONE_DUR, DIAL_TONE_DUR, TLC_PREFIX_DIGS, TLC_NUM_DIGS, and TLC_CHARGE. Enter VALIDATE, and datafill subfield VALATOP and its refinements. Datafill subfields PFDIGS, MINDIGS, MAXDIGS, and TABREF.
	CALLBACK_ OPTION	CLCTDEST or NIL	Callback option. If the entry in field FTR is CALLBACK, datafill this option. Enter CLCTDEST to call back the subscriber and collect destination digits. Datafill subfields CLDGMIN, CLDGMAX, DISC_ANNC_TRK, PROMPT_ANNC_TRK, and SEND_ANM. Otherwise, enter NIL.
	CLDGMIN	1 to 24	Minimum collected digits. Enter the minimum number of digits to be collected and entered into the called digit stream.

Field descriptions for conditional datafill (Sheet 3 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	CLDGMAX	1 to 24	Maximum collected digits. Enter maximum number of digits to be collected and written into the called digit stream. The value cannot be less than CLDGMIN.
	DISC_ANNC_TRK	alphanumeric (1 to 16 characters)	Disconnect announcement trunk. Enter trunk common language location identifier (CLLI).
	PROMPT_ANNC_TRK	alphanumeric (1 to 16 characters)	Prompt announcement trunk. Enter trunk the common language location identifier (CLLI).
	SEND_ANM	Y or N	Send answer message. Enter Y (yes) or N (no).
	CLLCHROP	NOCHGMSG or EARLYCPG	Call characteristics. If the entry in field FTR is CALLCHAR, datafill this option. Enter NOCHGMSG to block backward CHG message. Enter EARLYCPG to specify that a call progress (CPG) message is issued in the backwards direction before an address complete message (ACM) is sent. The CPG message is permitted before an ACM in certain ISDN user part (ISUP) variants to establish a bidirectional speech path and to stop the T7 timer.
	CLCTDIGS_OPTION	NIL or $	Collect digits option. If the entry in field FTR is CLCTDIGS, datafill this option. Enter NIL or enter $ to proceed to the next option.
	SUBOPT_NAME	DUR_ADJ	Suboption name. If the entry in field FTR is NTC, datafill this option. Enter DUR_ADJ to specify the duration adjustment for NTC and datafill subfield DURATION_ADJ.
	DURATION_ADJ	0 to 99	Duration adjustment. Enter the time in seconds.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 4 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	RING_BACK_ TONE_DUR	1 to 255	Ringback tone duration. If the entry in field FTR is TLC, datafill this option. Enter the time, in seconds, that ringback tone is provided to the originator.
	DIAL_TONE_ DUR	1 to 255	Dial tone duration. If the entry in field FTR is TLC, datafill this option. Enter the time, in seconds, that dial tone is provided to the originator.
	TLC_PREFIX_ DIGS	0 to 18	Prefix digits in called number. If the entry in field FTR is TLC, datafill this option. Enter the number of digits to advance the prefix fence to detect the charge message digits when CPC = PAYPHONE.
	TLC_NUM_ DIGS	numeric(3 or 4) Japan only	Test line call number of digits. Enter the number of dialed digits to be transferred to the NCCI#7 CHG message. This is also the number of digits stored in the LMNNUM field of the SMDR #DE record.
	TLC_CHARGE	Y or N	Test line call charge indicator. The TLC_CHARGE field indicates the billing status of an ISUP test call. Enter Y if the call is billable. Enter N if the call is not billable. The default value for this field is N.
	OPT	see subfield VALDATOP	Options. If the entry in field FTR is VALIDATE, datafill this option. This field is a vector consisting of up to five options. Each option consists of subfield VALDATOP, and refinements that depend on the entry in subfield VALDATOP. For each option, specify VALDATOP, followed by a space, then the refinements, each separated by a space. The entry is concluded by a $ and datafill continues with field DFOP.

Field descriptions for conditional datafill (Sheet 5 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	VALDATOP	BCSCRN, CALLED, CLDTOCLG, CLISERV, CUSTMOD, LCASCRN, NOCHARGE, PRESEL, SCRNLNTH, SUBSCRN, TCNOTSCR, THIRDPTY, VERDEST, V3PTYBIL	Validate option. Enter a list of up to five options. The options specify what characteristics are to be considered when screening the call. Enter $ to signify the end of the list. ***Note:*** Selector VALIDATE is traversed only once for each call. Enter BCSCRN and datafill refinement BCOPTS to identify the bearer capability name. Enter CALLED to indicate the number to be used for screening. The SUBSCRN options are used to specify the subscriber types allowed to receive the call. ***Note:*** When using option CALLED, there must be no further digit manipulation after selector VALIDATE is encountered in translations. If option CALLED is not entered, then the calling party number is used for screening and the SUBSCRN options are used to specify the subscriber types allowed to make the call. ***Note:*** Pay phone subscribers are treated as general subscribers if option CALLED is specified. Enter CLDTOCLG, followed by a space, to copy digits from the called to the calling digit stream, and datafill options OFFSET and COUNT. Enter CLISERV, followed by a space,and enter data in subfield SERVNAME to add the name of the service provider.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 6 of 10)

Field	Subfield or refinement	Entry	Explanation and action
			Enter CUSTMOD, followed by a space, to alter the internal network class of service (NCOS) and customer group to new value for a given directory number (DN) based on the CUSTINFO attribute in table DNSCRN. The source of the DN used as an index into table DNSCRN is determined by the VALIDATE datafill. Datafill refinement CUSTSCRN. Enter LCASCRN, followed by a space, to enable local calling area screening. The called and calling numbers are checked against tables LCARNAME and LCASCRCN to determine if the numbers are local to each other, and whether the call should be denied or allowed to continue routing. Enter NOCHARGE, followed by a space, to indicate that the call is nonbillable. ***Note:*** If both NOCHARGE and THIRDPTY options are specified, NOCHARGE takes precedence. Enter PRESEL to allow screening for the PRESEL attribute in table DNSCRN. Enter SCRNLNTH, followed by a space, and datafill refinement MINLNGTH to specify the minimum length of the number being screened. Enter SUBSCRN, followed by a space, and datafill up to three multiples of the following subscriber types: GENERAL, PAYPHONE, PERSONAL, and MOBILE. Enter $ after entering SUBSCRN to indicate that no subscriber types are permitted to make or receive the call. Enter TCNOTSCR to indicate that calls with CPC set to Test Call are not screened.

Field descriptions for conditional datafill (Sheet 7 of 10)

Field	Subfield or refinement	Entry	Explanation and action
			Enter THIRDPTY to indicate that automatic third party billing is used. Table DNSCRN is checked for attribute UNPAID. ***Note:*** If both NOCHARGE and THIRDPTY options are specified, NOCHARGE takes precedence. ***Note:*** Payphone subscribers are treated as general subscribers if option CALLED is specified. Enter VERDEST to verify the destination of a call. Called digits are checked against ADDCODE entries in table DNSCRN. ***Note:*** NIL appears on the switch range but is not a valid entry. The value NIL is used only to satisfy internal software requirements.
	BCOPTS	alphanumeric (1 to 8 characters)	Bearer capability option. If the entry in field VALDATOP is BCSCRN, datafill this refinement. Enter up to four bearer capability names.
	COUNT	0 to 30	If the entry in field VALDATOP is CLDTOCLG, enter subfield count to count the digits from the called stream to the calling stream.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 8 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	CUSTSCRN	Y or N	Customer screen. Enter Y to block calls that are not subscribed to the switched on-net services if attempting a switched on-net call. If the DN being screened is not present in table DNSCRN, the call is rejected with the Call Not Allowed (CNAD) treatment. The internal NCOS and CUSTGRP associated with the call are altered to the values found in the CUSTINFO attribute if present for the given DN in table DNSCRN. The DN used to index table DNSCRN can be the subscriber calling line identification (CLI) or the dialed number. The source of the DN is determined by the datafill of field VALIDATE. Enter N if no screening is performed.
Note: The FEATINFO values CCANN, CCARD, CCSDT, DAFOP, FAXSUP, FAXTEST, INBFAX, INBFD, INTLFD, ISD, ISDTST, ISDVRE, OUTBFAX, OUTBFD, PB3RDPTY, PBCALL, PBISD, PBISDVRE, and PBTST are valid only in DMS-250 switching offices. Additional DMS-250 parameters are listed in the DMS-250 specific data schema NTPs.			
	MINLNGTH	0 to 18values from 0 to 30 are possible in APC software loads	Minimum length. If the entry in field VALDATOP is SCRNLNTH, enter the minimum number of digits required in number being screened.
	OFFSET	0 to 30	If the entry in field VALDATOP is CLDTOCLG, enter subfield OFFSET to offset the digits from the called stream to the calling stream.
	SERVNAME	alphanumeric string	Service Provider name. If the entry in field VALDATOP is CLISERV, enter the name of the service provider in this refinement.
	SUBSCTYP	GENERAL, PAYPHONE, PERSONAL, or MOBILE	Subscriber type. Enter subscriber type, followed by a space, and datafill refinements WHITLIST, CHKBLKCL, CHKUNPD, and CHKCCR. This option allows you to specify which subscriber types are permitted to make or receive a call and whether the subscriber's standing is important for a call.

Field descriptions for conditional datafill (Sheet 9 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	WHITLIST	Y or N	Whether it list. Enter Y (yes) to indicate that the subscriber's directory number must be datafilled in table DNSCRN. Otherwise, enter N (no).
	CHKUNPD	Y or N	Check unpaid. Enter Y to check if the subscriber has paid his bills. Otherwise, enter N.
	CHKBLKCL	Y or N	Check block call. Enter Y to check if the subscriber has subscribed to all services for which this tuple is being used (BLKCALL attribute in table DNSCRN). Otherwise, enter N.
	CHKCCR	Y or N	Check cumulative call restriction. Enter Y to check the subscriber's cumulative charge limit. Otherwise, enter N.
	PFDIGS	0 to 24	Prefix digits. Enter the number of prefix digits present at this point in the call. Prefix digits are not used to index any further translation tables and are not outpulsed, but they remain stored in call detail records (CDR).
	MINDIGS	0 to 30	Minimum digits. Enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MAXDIGS	0 to 30	Maximum digits. Enter the maximum number of digits expected. This value includes the digits used to index the current tuple and and must also include the prefix digits specified in the current tuple.
	TABREF	see subfields	Table reference. This field consists of subfields XLASYS and XLANAME.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 10 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	XLASYS	AC, AM, CT, FA, FT, NSC, OFC, or PX	Translation system. Enter the next translation system to use, followed by a space, and datafill subfield XLANAME (the instance of the translation system). The choice of translation systems is as follows: • AC (access) • AM (ambiguous) • CT (country) • FA (foreign area) • FT (utility) • NSC (number service code) • OFC (office) • PX (prefix) ***Note:*** NIL is not a valid entry. NIL is used only to satisfy internal software functionality.
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. Enter the translation name of the table instance within the XLASYS to which the call is routed.

XLASEL = HRC

If the entry in subfield XLASEL is HRC, enter datafill for the following refinements.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	OPT	see subfield	Options. This field contains subfield OSEL, and refinements that depend upon the entry in subfield OSEL. The entry is concluded by a $ and datafill continues with field DFOP.
	OSEL	XLT, PFBILL	Option selector. If the call proceeds to another translation system, enter XLT, followed by a space, and datafill refinement XLASYS. Enter option selector PFBILL.
	XLASYS	AC, AM, CT, FA, FT, NSC, OFC, PX	Translation system. If the entry in subfield OSEL is XLT, enter data for this refinement. Enter the next translation system to use, followed by a space, and enter data in refinement XLANAME. Enter one of the following: • AC (access) • AM (ambiguous) • CT (country) • FA (foreign area) • FT (utility) • NSC (number service code) • OFC (office) • PX (prefix) ***Note:*** NIL is not a valid entry. Operating company personnel use NIL only to satisfy internal software functionality. NSC is not used in GL03.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. If the entry in subfield OSEL is XLT, enter data for this refinement. Enter the translation name of the table in XLASYS to which the system routes the call.
	PFBILL	Y or N	Prefix billing option. Enter PFBILL, followed by a space, and enter either Y or N. If the entry is Y, billing record includes the home routing code specified in the tuple. If the entry is N, the billing record does not include the home routing code.

XLASEL = IAC

If the value of subfield XLASEL is IAC, datafill refinement subfield OPT as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
OPT		vector (see subfields)	*Options* This subfield is a vector list consisting of up to ten options and terminated by $. Each option consists of subfield OSEL, and refinement subfields that depend on the entry in OSEL.
	OSEL	PF	*Option selector* Enter PF, followed by a space, and datafill subfield PFDIGS, if there are prefix digits in the digit stream.
	PFDIGS	0 to 24	*Number of prefix digits* If the value of OSEL is PF, enter the number of prefix digits. If prefix digits have been identified in a previous table, then this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed, or used to index the next translation table.

XLASEL = RTE

Table AMAXLAID must be datafilled prior to selecting option AMAXLAID.

If the value of subfield XLASEL is RTE, datafill refinement subfield OPT as described below.

Field descriptions for conditional datafill (Sheet 1 of 13)

Field	Subfield or refinement	Entry	Explanation and action
OPT		see subfield	*Options* This subfield is a list consisting of up to ten options. Each option consists of subfield OSEL, and refinements that depend on the entry in subfield OSEL. The refinements are described in subfield OSEL. For each option, specify OSEL, followed by a space, then the refinements, each separated by a space.
	OSEL	ACF, AMAXLAID, BLKOVLP, CALLCTRL, CAMA, CDN, CDNRTE, CLASS, CONSUME, CPCRTE, CPMCALL, DDIDX, DEST, EXTCIC, IAA, LNET, MM, MZONE, NETSRV, OSS, PCC, PF, PIP, PNRF, PRESEL, PRESELRTE, PRIVL, SETCDN, TELETAXE, TOC, VPN, or XLT	*Option selector* The following options can be selected: Enter ACF, followed by a space, and datafill subfield ACF, if the area code fence is defined. Enter AMAXLAID, followed by a space, and datafill subfield XLAID, to specify an Automatic Message Accounting identity from within table AMAXLAID. Enter BLKOVLP, followed by a space, and enter data in refinement XLADATA to prevent the system from outpulsing calls until all CDN digits are collected. Enter CALLCTRL, followed by a space, and datafill subfield CALLCTRL. The entry in subfield CALLCTRL indicates who has control of the call: the calling party, the called party, or both. Enter CAMA, followed by a space, and datafill subfield CLDFMT. The entry in CLDFMT indicates whether the ICAMA record is generated with either the originally-signaled DN or the final public switched telephone network (PSTN) number.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 2 of 13)

Field	Subfield or refinement	Entry	Explanation and action
			Enter CDN, followed by a space, and datafill subfields NOA, PFXAMA, or STOPRTMR to select the nature of address field. This field is used to identify the called party of the initial address message (IAM). It is used for Australian ISDN user part (AISUP) call translations. Enter CDNRTE to route a call using the called number name (CDNNAME) from table CDNCHAR. If the CDNNAME is present on the incoming call, or is set in the SETCDN option, translation proceeds to table CDNUXLA. The CDNRTE option does not apply to table AMCODE. The CDNRTE option does not have subfields. Enter CLASS, followed by a space, and datafill subfield CLASS, if the class of the dialed digits is determined. Enter CONSUME, followed by a space, and datafill subfield CONDIGS, to specify the number of digits that are consumed during translation. Enter CPCRTE to route a call using the calling party category (CPCNAME) from table CPCCHAR. If the CPCNAME is present on the incoming call, translation proceeds to table CPCUXLA. The CPCRTE option does not apply to table AMCODE. The CPCRTE option does not have subfields. Enter CPMCALL, followed by a space, and datafill subfield CPMCALL, to specify call billing against the called party instead of the calling party for intra-office calls. Enter DDIDX, followed by a space, and enter data for subfield DDIDX. Operating company personnel can enter data in this field to specify the destination discount index in the discount database.

Field descriptions for conditional datafill (Sheet 3 of 13)

Field	Subfield or refinement	Entry	Explanation and action
			Enter DEST, followed by a space, and datafill subfield DEST, if the destination is known. Enter EXTCIC, followed by a space, and datafill refinements SOURCE, SKIPDIGS, and CICSIZE. EXTCIC is the external carrier identification code that indicates a long distance carrier in the global environment. This option is only supported for TOPS calls. For further information, refer to functionality Global Competitive Access, GOS00006. Enter IAA and the datafill refinement IAA_INDEX to generate or modify IAA message parameters based on datafill in table IAACTRL. Enter LNET, followed by a space, and datafill subfield LNET, the index into table LNETWORK, to find the International Metering System tariff for the call. Enter MM, followed by a space, and datafill subfields MIN and MAX, if the minimum and maximum number of expected digits dialed are known. These values include the digits used to index the current tuple and must also include the prefix digits specified in the current tuple. ***Note:*** For fast interdigital timing to function properly, MM should only be used with the RTE selector whenever MIN is not equal to MAX. In other words, if MIN = MAX, MM can be used with the CONT selector in PXCODE; if MIN is not equal to MAX, MM should not be used until the RTE selector is used (which is usually in either table FACODE or OFCCODE). If MIN and MAX are set in PXCODE when they are not equal to each other, partial dial timing is used after MIN digits are dialed in order to determine the end of dialing.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 4 of 13)

Field	Subfield or refinement	Entry	Explanation and action
			Enter MZONE, followed by a space, and datafill subfield MZONE, if metering is done on the call. Enter NETSRV and datafill refinement NETSRV_NAME to indicate a Japan network service. Enter OSS, followed by a space, if determining the appropriate IFAM format for an indirect BTUP call to Operator Service System. Enter PCC, followed by a space, and datafill subfield PCCDR, if a pseudo country code is required. Enter PF, followed by a space, and datafill subfield PFDIGS, the prefix fence. This is the number of prefix digits associated with this tuple (that is, if some prefix digits were identified in a previous table, then the number here is added to the existing value). Prefix digits are not stored in call detail records, are not outpulsed, and are not used to index any further translation tables. Enter PIP to perform a residency check for the digits the system is translating. The local number portability feature uses the residency check to make sure that the system does not route calls which were ported in the office, out of the office. The PIP option does not have subfields. Enter PNRF to invoke the ported number recognition feature. LNP applications in Germany use the PNRF feature. The PNRF option does not have subfields. Enter PRESEL, followed by a space, if the call is to be treated as a preselected carrier case.

Field descriptions for conditional datafill (Sheet 5 of 13)

Field	Subfield or refinement	Entry	Explanation and action
			Enter PRESELRTE, followed by a space, and datafill refinement PRESELRTE, the index into the route table of the current XLASYS and XLANAME. Enter PRIVL, followed by a space, and datafill subfield PRIVL, if the user is a privileged user (for example, operators). Enter SETCDN, followed by a space, and enter data in refinement CDNNAME, to allow CDN routing for a call. Use this option when incoming agents are not available in table CDNCHAR. Enter TOC, followed by a space, and datafill subfield CHG, for the type of charge where the type of charge messaging is to be selected. Enter VPN, followed by a space, and datafill subfields ONNET and BILLABLE, if the call routes through a service switching point (SSP) and the Australian VPN - SSP software package (NTXH49AA or NTXH49AB) is in the switching unit. Enter XLT, followed by a space, and datafill subfield XLASYS, if the call proceeds to another translation system.
	ACF	0 to 29	*Area code fence* If the value of subfield OSEL is ACF, enter the number of digits between the beginning of the digits to currently index the table, and the end of the area code.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 6 of 13)

Field	Subfield or refinement	Entry	Explanation and action
	BILLABLE	Y or N	*Virtual private network billable call* If the value of subfield OSEL is VPN, enter Y (yes) if an automatic message accounting (AMA) record is required for each VPN call. Otherwise enter N (no). An AMA record is not generated if an address complete message (ACM) of address complete, no charge is returned, or if the call terminates in the SSP on a line with the free number terminating (FNT) option.
	CALLCLASS	PRESELECT OVERRIDE, CSN,TRUNK	Call class. If the entry in subfield OSEL is PRESEL, enter PRESELECT to treat the DN as a preselected call. Enter OVERRIDE to permit the DN to use override codes. Enter CSN to treat the DN as a carrier specific number. Enter TRUNK to permit access to trunk originated calls.
	CALLCTRL	CALLING, CALLED, MUTUAL	*Call control* If the value of subfield OSEL is CALLCTRL, enter one of the following values to specify the party who has control of the call: • CALLING • CALLED • MUTUAL If the entry is CALLING and the calling party goes on-hook first, the call is released immediately. If the called party goes on-hook first, the called party is allowed to reanswer within a datafilled reanswer time out or until the calling party goes on-hook. If the time out expires or if the calling party goes on-hook, the calling party releases the call and the called party is set to idle.

Field descriptions for conditional datafill (Sheet 7 of 13)

Field	Subfield or refinement	Entry	Explanation and action
			If the entry is CALLED and the called party goes on-hook first, the call is released immediately. If the calling party goes on-hook first and does not reanswer, the connection is not released until the called party goes on-hook. There are no time outs, and the calling party is allowed to reanswer until the called party goes on-hook. ***Note 1:*** Calls to lines with the ESG option must have CALLCTRL (CALLED). ***Note 2:*** Calls terminating on an ITOPS position must have CALLCTRL(CALLED). If the entry is MUTUAL and either party goes on-hook the call is released immediately.
	CDNNAME	alphanumeric string	Called Number NameIf the value of subfield OSEL is SETCDN, enter refinement CDNNAME. This option assigns the CDNNAME from table CDNCHAR to the call.
	CHG	SEND_ CHARGE or SEND_NO_ CHARGE	*Charge* If the value of subfield OSEL is TOC, enter SEND_CHARGE to set the answer message (BTUP ANM) type of answer (TOA) string sent out from a node to SEND_CHARGE. Enter SEND_NO_CHARGE to set the answer message (BTUP ANM) type of answer (TOA) string sent out from a node to SEND_NO_CHARGE.
	CICSIZE	1 to 4	CIC size. If the entry in subfield OSEL is EXTCIC, datafill this refinement. This field indicates how many digits are in the CIC. This field operates on the B (called) number, so it is assumed that the CIC is signalled as part of the B number. The MAP display indicates the range is 0 to 4; however, the system does not allow 0.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 8 of 13)

Field	Subfield or refinement	Entry	Explanation and action
	CLASS	ATT, CNTL, COLL DATT, EMRG, IAGRP, ICNTL, INTL, IOPRA, LCL, NATL, OPRA, RURAL, SPEC, or UNKW	*Translation class* If the value of OSEL is CLASS, enter the translation class determined by the dialed digits. This may be used for screening or billing as described under CLASS in screening and charging options. The translation classes are defined as follows: • ATT (attendant console) • CNTL (continental) • COLL (collect) • DATT (dial attendant) • EMRG (emergency) • IAGRP (inter-agent group) • ICNTL (inter-continental) • INTL (international) • IOPRA (international operator assisted) • LCL (local) • NATL (national) • OPRA (operator assisted) • RURAL (rural) • SPEC (special) • UNKW (unknown)
	CLDFMT	CURRENT, POSTXLA	*Called format* If the value of subfield OSEL is CAMA, enter either CURRENT or POSTXLA to produce the required ICAMA record format. If the entry is CURRENT, an ICAMA record is produced with the signaled DN (without translation).

Field descriptions for conditional datafill (Sheet 9 of 13)

Field	Subfield or refinement	Entry	Explanation and action
			If the entry is POSTXLA, an ICAMA record is produced with public switched telephone network (PSTN) number resulting from translations.
	CONDIGS	numeric (0 to 29 digits)	*Consumed digits* If the value of subfield OSEL is CONSUME, enter a number to explicitly define the number of digits consumed during call processing.
	CONTINUE	CONT, NOCONT	Continue. If the entry in subfield OSEL is PRESEL, enter CONT to continue translations through UXLA. Enter NOCONT to immediately route translations through PCIXLA or PCITRK.
	CPMCALL	Y or N	*Called party metering* If the value of subfield OSEL is CPMCALL, enter Y (yes) if calls are billed against the called party for intra-office calls. Enter N (no) for the default value of billing against the calling party for intra-office calls.
	DDIDX	1 to 63 or DEFAULT	Destination discount index. If the entry in subfield OSEL is DDIDX, enter the destination discount index number.
	DEST	0 to 1023	*Destination route list index* If the value of subfield OSEL is DEST, enter the number in the route list of the same translation system to which the call is routed.
	IAA_INDEX	0 to 1024	Interadministration accounting index. If the entry in subfield OSEL is IAA, datafill this refinement. Enter the value that indexes the corresponding tuple in table IAACTRL.

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 10 of 13)

Field	Subfield or refinement	Entry	Explanation and action
	LNET	alphanumeric (1 to 16 characters)	*Logical network* If the value of subfield OSEL is LNET, enter the logical network name that the call is on. The logical network name must be datafilled in table LNETWORK. The entry in this field is used by the international metering system to determine a tariff for the call.
	MAX	0 to 30	*Maximum digits* If the value of subfield OSEL is MM, enter the maximum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MIN	0 to 30	*Minimum digits* If the value of subfield OSEL is MM, enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MZONE	0 to 63	*Metering zone* If the value of subfield OSEL is MZONE, enter the metering zone of the call, in the logical network as defined by selector LNET. The entry in this field is used by the international metering system to determine a tariff for the call.

Field descriptions for conditional datafill (Sheet 11 of 13)

Field	Subfield or refinement	Entry	Explanation and action
	NETSRV_ NAME	IPHS, DPHS, MOBILE, DA, TELEGRAM or NCC	Network service name. If the entry in subfield OSEL is NETSRV, datafill this refinement. The entry in this field determines the parameters in an outgoing IAM message. Enter IPHS to indicate a call to an independent personal handyphone system subscriber. Enter DPHS to indicate a call to a dependent personal handyphone system subscriber. Enter MOBILE to indicate a call to a mobile subscriber. Enter DA to indicate a call to the directory assistance operator. Enter TELEGRAM to indicate a call to the Telegram office. Enter NCC to indicate a call routed to one of the following networks: • New Common Carrier serving international toll traffic • New Common Carrier serving national toll traffic
	NOA	INTL, LOCAL, NATL, or NET	*Nature of address* Enter the required called party nature of address as follows: • INTL (international) • LOCAL (local) • NATL (national) • NET (Intelligent Network Services)

NSCCODE (continued)

Field descriptions for conditional datafill (Sheet 12 of 13)

Field	Subfield or refinement	Entry	Explanation and action
	ONNET	Y, N	*Call on virtual private network* If the value of subfield OSEL is VPN, enter Y if the call stays within the defined virtual private network. Otherwise enter N (no). Overlapped outpulsing is only supported on off-network calls. Calls processed without the ONNET subfield set to Y are off-network calls. Meridian digital centrex (MDC) calls are treated as off-network calls, and therefore overlapped outpusling is supported for MDC calls.
	PCCDR	000 to 999	*Pseudo country code digits* If the value of subfield OSEL is PCC, enter the three-digit pseudo country code. If a two-digit PCC is required, it must be padded by a leading zero.
	PFDIGS	0 to 24	*Number of prefix digits* If the value of subfield OSEL is PF, enter the number of prefix digits. If prefix digits have been identified in a previous table, then this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed or used to index the next translation table. ***Note:*** If refinements PF and CONSUME are both datafilled for the same tuple, only the entry for the greater of the two values is processed; the other entry is ignored.
	PFXAMA	0 to 4 digits, or N	*Called party number prefix in AM* If NOA is set to NATL, datafill PFXAMA with 0011. If NOA is set to NATL, datafill PFXAMA with 0. If NOA is set to LOCAL or NET, datafill PFXAMA with N.

Field descriptions for conditional datafill (Sheet 13 of 13)

Field	Subfield or refinement	Entry	Explanation and action
	PRIVL	Y or N	*Privileged user* If the value of subfield OSEL is PRIVL, enter Y (yes), if the user is a privileged user (for example, operator). Otherwise, enter N (no).
	SKIPDIGS	0 to 24	Skip digits. If the entry in subfield OSEL is EXTCIC, datafill this refinement. This field indicates how many digits to skip before extracting the carrier digits from the digit stream. This field operates on the B (called) number, so it is assumed that the CIC is signalled as part of the B number.
	SOURCE	PRESUB or DIALED	Carrier identification code source. If the entry in subfield OSEL is EXTCIC, datafill this refinement. This field specifies the source of the CIC as follows: • PRESUB - presubscribed, the CIC is defined in table TRKGRP • DIALED - dialed, the CIC is entered by the subscriber when dialing a call
	STOPRTMR	Y or N	*Stop remote timer* Enter Y (yes) to disable the address complete message (ACM) timer of the remote switch. Default is N (no).
	XLAID	FREE, GENERIC1, GENERIC2, or GENERIC3	*AMA translation identifier* If the value of subfield OSEL is AMAXLAID, enter the AMA translation identifier to be used against table AMAXLAID.

XLASEL = TRMT

Route to specified treatment. A treatment is a known exception or failure condition. The action taken terminates translation, returning an indication that a treatment has been encountered and decoded into a route.

NSCCODE (continued)

If the value of subfield XLASEL is TRMT, datafill refinement subfield OPT as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
OPT		vector (see subfields)	*Options* This subfield is a list consisting of up to ten options. Each option consists of subfield OSEL. For each option, specify OSEL, followed by a space.
	OSEL	OFC	*Option selector* Enter OFC, followed by a space, and datafill subfield OFC, if a treatment name is required.
	OFC	alphanumeric (4 characters)	*Office treatment* Enter a treatment name that is contained in the office treatment subtable, TMTCNTL.TREAT.

Datafill example

Refer to examples in the description of table ACHEAD.

Table history

MMP013

Increased maximum table size from 16 384 to 32 768 tuples.

APC010

Added field CHGIND to option TLC in the FEATINFO selector.

LET010

Added option EXTCIC to selectors CONT, DMOD, and RTE.

APC009

Added option NETSRV to selectors CONT and RTE.

Added option JES to selector FEATINFO.

GL04.0

The field XLADATA was added for Japan CableTV trunks.

APC008.1

The following updates were introduced in APC008.1 to table AMHEAD:

- Field CHKCCR was added to all subscriber types (SUBSCTYP) that are part of the SUBSCRN option of selector FEATINFO VALIDATE.
- Field EARLYCPG was added to selector FEATINFO.
- Option IAA was added to selectors ROUTE and CONT.

GL04

The options CHGIND, ISUPPREF, and FLEXCHG were added to the RTE and CONT selectors.

Note: The FLEXCHG and ISUPPREF indicators are obsolete, and have been removed from the tables.

APC008

The following updates were introduced in APC007 to table ACCODE:

- option TRUNK was added to field CALLCLASS of option PRESEL of selector RTE
- option TRUNK was added to field CALLCLASS of option PRESEL of selector CONT
- option PRESEL was added to field VALDATOP in selector FEATINFO

APC007

The following updates were introduced to table AMHEAD in APC07:

- option PRESEL was added to selector RTE
- option PRESEL was added to selector CONT

APC006

Subscriber type PERSONAL added to option SUBSCRN of FEATINFO VALIDATE.

NSCCODE (continued)

NA005

The following updates were introduced to table AMHEAD in NA005:

- increased the number for universal translations support to 30 digits, affecting the following options, subfields or selectors:
  - ACF
  - AFTER
  - CONSUME
  - DEL
  - DMOD
  - DNRTE
  - INSRT
  - MAX
  - MIN
  - PF
  - REPL
- added option SF and its refinement SFDIGS to selector DNRTE
- added note about potential conflict with refinements CONSUME and PFDIGS

APC004

Features CALLBACK, CALLCHAR, CLCTDIGS, NTC, and TLC were added to the FTR field of selector FEATINFO.

Options CLDTOCLG, LCASCRN, TCNOTSCR, VERDEST, and V3PTYBIL were added to the VALDATOP subfield of selector FEATINFO.

Subfield CDN of selectors CONT and RTE was modified to incorporate subfields NOA, STOPRTMR, and PFXAMA.

BCS36

Option CUSTMOD was added to refinement VALDATOP for XLASEL set to FEATINFO.

BCS35

The following information was added:

- CGNDM to option selector OSEL and refinements PRDFXCLI and INSRTCLI
- field CONSUME
- CPMCALL to XLASEL set to CONT, RTE

NSCHEAD

Table name

Number Service Code Head Table

Functional description

Table NSCHEAD is one of a group of tables used to implement the Number Service feature. Number services provide inward call management features that require the dialing of special numbers.

Mobile Application Part Service (MAP) and Enhanced 800 Service (E800) are examples of number services requiring access to a database for call processing information.

Number services are provided using Northern Telecom service switching Point (SSP) and service control point (SCP) systems. The SSP and SCP use Common Channel Signaling 7 protocols (CCS7). CCS7 allows calls to be held while requests are sent to a database for call processing information.

For option selector CAMA, used in translation selectors CONT, DNRTE, and RTE, set office parameter ICAMA_REQUESTED in table OFCVAR to Y (yes) if ICAMA detailed call recording is required.

An IAA record can be generated by selecting office parameter IAA_REQUESTED in table OFCVAR, and the CAMA selector.

Only ANI and MTR trunk group originations currently support the option selector CAMA. All other call types ignore this translation option.

Office parameter IMEI_ACCEPTABLE_FOR_EMRG_CALL in table OFCVAR provides an option for the network operator to accept emergency call setups from mobile stations that transmit the IMEI instead of the IMSI or TMSI. The default value allows emergency call set ups with IMEI as the identifier if for example, no SIM is present.

For emergency call translation, class EMRG must be datafilled. The datafilling of class EMRG can be done before or after translation selector DMOD with option selector COODM. This requirement differentiates between normal mobile originated calls and emergency calls set up by a conventional SETUP message.

Datafill sequence and implications

Table NSCDEFS must be datafilled before table NSCHEAD.

Table size

There is a maximum of 28 671 entries for each table, with a maximum of 2047 tuples for each subtable. Memory is allocated when XLANAME is datafilled into the head table. The size is altered dynamically as tuples are added or deleted.

The head tables define the instances of code and route tables and their characteristics. All head tables, described in this section, have an identical format for the options they contain.

A tuple in a head table consists of the name of the code, the route table instance, and some or all of the options listed below:

- DFLT <a code table tuple>
- DFOP <code table options>
- CON
- MAXIDX <hex digit>

Datafill

The following table lists datafill for table NSCHEAD.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translation name. Enter the name assigned to the universal translator.
CONTMARK		+	Continuation mark. Enter + to indicate that additional information for this tuple is contained in the next record.
DFLT		see subfield	Default translations data. This is the result that translation uses if the dialed digits are not datafilled in the code table associated with table NSCHEAD. This field consists of subfield DFLTSEL and refinements dependent on the entry in field DFLTSEL.

NSCHEAD (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	DFLTSEL	SDFLT or DFLT	Default selector. Enter the default selector. Enter SDFLT if a standard default is required for dialed digits not found in the code table. The standard default is TRMT OFC VACT. That is if dialed digits are not found in the code table, the call is routed to vacant code treatment. No additional subfields are required. Enter DFLT and datafill subfield XLASEL and refinements if the standard default is not correct.
	XLASEL	CONT, DBQ, DMOD, DNRTE, FEAT, FEATINFO, HRC, IAC, RTE, or TRMT	Translation selector. Enter one of the following values and datafill field OPT (field OPT is a vector and must be ended by a $): Enter CONT and datafill subfield OPT if further translation is required. Enter DBQ and datafill subfield OPT to perform a database query. Enter DMOD and datafill subfield OPT if input digit stream modification is required. Enter DNRTE and datafill subfield OPT if input digit routing is required. Enter FEAT and datafill subfield OPT if access to a feature is required. Enter FEATINFO and datafill subfield FTR to trigger the screening function. Enter HRC and datafill its refinements if the home routing code selector is required for local number portability applications. Enter IAC and datafill subfield OPT if the insertion of own area code is required when an ambiguous area code is found through translations.

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
			Enter RTE and datafill subfield OPT if a translation result has been found, and translation is to terminate. Enter TRMT and datafill subfield OPT if a call is routed to a treatment. Each entry in XLASEL together with its options is described below.
	DFOP	DFOP or NODFOP	Default options. Enter DFOP and datafill subfield OSEL and its refinements. The default options apply only if a tuple with field XLASEL set to RTE or CONT is chosen in the CODE table. If the entry in field DFOP is equal to DFOP, this field is a vector that consists of a number of options. Each option, consisting of subfield OSEL and refinements dependent on the entry in subfield OSEL, is separated from the next by a space. The various refinements are identical to the refinements described in field DFLT, selector CONT, subfield OSEL. For each option, specify the option selector, followed by a space, and the refinements, with each refinement separated from the next by a space. The entry is concluded by a $ and datafill continues with field CON.

XLASEL = CONT

If the entry in field XLASEL is CONT, datafill the following subfields.

NSCHEAD (continued)

Table AMAXLAID must be datafilled prior to selecting option AMAXLAID.

Field descriptions for conditional datafill (Sheet 1 of 13)

Field	Subfield or refinement	Entry	Explanation and action
OPT		see subfields	Options. This field is a vector consisting of up to ten options. Each option consists of subfield OSEL, and refinements that depend on the entry in subfield OSEL. For each option, specify OSEL, followed by a space, and the refinements, each separated by a space. The entry is concluded by a $.
	OSEL	ACF, AMAXLAID, CALLCTRL, CAMA, CDN, CDNRTE, CHGIND, CLASS, CLIOVRD, CONSUME, CPCRTE, CPMCALL, DDIDX, DEST, EXTCIC, IAA, LNET, MM, MZONE, NETSRV, OSS, PCC, PF, PRESEL, PRIVL, QFT, SETCDN, TOC, VPN, or XLT	Option selector. The following options can be selected: Enter ACF, followed by a space, and datafill subfield ACF if the area code fence is defined. Enter AMAXLAID, followed by a space, and datafill subfield XLAID to specify an automatic message accounting (AMA) identity from within table AMAXLAID. Enter CALLCTRL, followed by a space, and datafill subfield CALLCTRL. The entry in subfield CALLCTRL indicates who has control of the call: the calling party, the called party, or both.

Field descriptions for conditional datafill (Sheet 2 of 13)

Field	Subfield or refinement	Entry	Explanation and action
			Enter CAMA, followed by a space, and datafill subfield CLDFMT. The entry in CLDFMT indicates whether the International automatic message accounting (ICAMA) record is generated with the the originally-signaled directory number (DN) or the final Public Switched Telephone Network (PSTN) number. Enter CDN, followed by a space, and datafill subfield CDN to select the nature of address field. This field is used to identify the called party of the initial address message (IAM). It is used for Australian ISDN user part (AISUP) call translations. Enter CDNRTE to route using the called number name (CDNNAME) from table CDNCHAR. If the CDNNAME is present on the incoming call or is set by the SETCDN option, translation proceeds to table CDNUXLA. CHGIND indicates whether to override the value of the charge indicator in the Backward Call indicators. The CHGIND option applies only to JCTV loads. Enter CLASS, followed by a space, and datafill subfield CLASS if the class of the dialed digits can be determined. Enter CONSUME, followed by a space, and datafill subfield CONDIGS to specify the number of digits that are consumed during translation. Enter CPCRTE to route using the calling party category (CPCNAME) from table CPCCHAR. If the CPCNAME is present on the incoming call, translation proceeds to table CPCUXLA.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 3 of 13)

Field	Subfield or refinement	Entry	Explanation and action
			Enter CPMCALL, followed by a space, and datafill subfield CPMCALL to specify call billing against the called party instead of the calling party for intra-office calls. Enter DDIDX, followed by a space, and enter data for refinement DDIDX. Enter data for this subfield for the destination discount index. Enter DEST, followed by a space, and datafill subfield DEST if the destination is known. Enter EXTCIC, followed by a space, and enter data for refinements CICSIZE, SKIPDIGS, or SOURCE. Enter EXTCIC for the external carrier identification code Enter IAA and the datafill refinement IAA_INDEX to generate or modify IAA message parameters based on datafill in table IAACTRL. Enter LNET, followed by a space, and datafill subfield LNET if a logical network is required, for metering. Enter MM, followed by a space, and datafill subfields MIN and MAX if the minimum and maximum dialed digits are known. Enter MZONE, followed by a space, and datafill subfield MZONE if metering is to be done on the call. Enter NETSRV and datafill refinement NETSRV_NAME to indicate a Japan network service. Enter OSS for the operator signaling service. The OSS subfield does not have refinements. Enter PCC, followed by a space, and datafill subfield PCCDR if a pseudo country code is required.

Field descriptions for conditional datafill (Sheet 4 of 13)

Field	Subfield or refinement	Entry	Explanation and action
			Enter PF, followed by a space, and datafill subfield PFDIGS if there are prefix digits in the digit stream. Enter PNRF to invoke the ported number recognition function, which is used for LNP applications in Germany. The PNRF option does not require any subfields. Enter PRESEL, followed by a space, if the call is to be treated as a preselected carrier case. Enter PRIVL, followed by a space, and datafill subfield PRIVL if the user is a privileged user (for example, operators). Enter QFT followed by ON or OFF to indicate if an outgoing route is capable of QSIG Feature Transparency. ***Note:*** The QFT ON option must not be added to a route unless the far-end node is QFT-capable. Enter SETCDN to trigger the setting of outgoing called party characteristics. This option assigns the called number name (CDNNAME) from table CDNCHAR to the call. If the CDNRTE option is subsequently encountered, the CDNNAME is used to route the call. You can use the SETCDN option to allow CDN routing when incoming agents such as DPNSS or BTUP are not available in table CDNCHAR. Enter TELETAXE. This subfield does not have refinements. Enter TOC, followed by a space, and datafill subfield CHG, for the type of charge if the type of charge messaging is selected.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 5 of 13)

Field	Subfield or refinement	Entry	Explanation and action
			Enter VPN, followed by a space, and datafill subfields ONNET and BILLABLE if the call routes through a service switching point (SSP) and the Australian VPN - SSP software package (NTXH49AA or NTXH49AB) is in the switching unit. Enter XLT, followed by a space, and datafill subfield XLASYS if the call is to proceed to another translation system.
	ACF	0 to 29	Area code fence. If OSEL = ACF, enter the number of digits between the beginning of the digits to currently index the table, and the end of the area code.
	BILLABLE	Y or N	Virtual private network billable call. If OSEL = VPN, enter Y (yes) if an automatic message accounting (AMA) record is required for each VPN call. Otherwise enter N (no). An AMA record is not generated if an address complete message (ACM) of address complete, no charge is returned, or if the call terminates in the SSP on a line with the free number terminating (FNT) option.
	CALLCLASS	PRESELECT, OVERRIDE, CSN, TRUNK	Preselection call processing. If the entry in subfield OSEL is PRESEL, datafill this refinement. Enter the preselection call class type that is associated with the call. ***Note:*** Calltype CSN and TRUNK are available under the PRESEL option. These call classes are not needed for German Carrier Selection, and are not supported. The same applies to the Continue option of CONT. For the German market only NOCONT is supported.

Field descriptions for conditional datafill (Sheet 6 of 13)

Field	Subfield or refinement	Entry	Explanation and action
	CALLCTRL	CALLING, CALLED, or MUTUAL	Call control. If OSEL = CALLCTRL, enter one of the three following values to specify the party who has control of the call. If the entry is CALLING and the calling party goes onhook first, the call is released immediately. If the called party goes onhook first, the called party is allowed to reanswer within a datafilled reanswer time out or until the calling party goes onhook. If the time out expires or if the calling party goes onhook, the calling party releases the call and the called party is set to idle. If the entry is CALLED and the called party goes onhook first, the call is released immediately. If the calling party goes onhook first and does not reanswer, the connection is not released until the called party goes onhook. There are no time outs, and the calling party is allowed to reanswer until the called party goes onhook. If the entry is MUTUAL and either party goes onhook the call is released immediately. ***Note 1:*** Calls to lines with the ESG option must have CALLCTRL(CALLED). ***Note 2:*** Calls terminating on an Internationl Traffic Operator Position System (ITOPS) must have CALLCTRL(CALLED).
	CDNNAME	alphanumeric string	If the entry in subfield OSEL is SETCDN, enter data for refinement CDNNAME. Enter CDNNAME to route the call using a called number name from table CDNCHAR.
	CHG	SEND_ CHARGE or SEND_NO_ CHARGE	Charge. If OSEL = TOC, enter SEND_CHARGE to set the answer message (BTUP ANM) type of answer (TOA) string sent out from a node to SEND_CHARGE. Enter SEND_NO_CHARGE to set the answer message (BTUP ANM) type of answer (TOA) string sent out from a node to SEND_NO_CHARGE.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 7 of 13)

Field	Subfield or refinement	Entry	Explanation and action
	CHGIND	ASIS, CHG, NOCHG	Datafill the CHGIND field with the following values: • ASIS-treat charge indicator as is • CHG-treat charge indicator as charge • NOCHG-treat charge indicator as no charge
	CICSIZE	1 to 4	CIC size. If the entry in subfield OSEL is EXTCIC, enter data for this refinement. This field indicates the number of digits in the CIC. This field operates on the B (called) number, so it is assumed that the switch signals the CIC as part of the B number. The MAP display indicates the range is 0 to 4. The system does not allow a 0 entry.

Field descriptions for conditional datafill (Sheet 8 of 13)

Field	Subfield or refinement	Entry	Explanation and action
	CLASS	ATT, CNTL, COLL, DATT, EMRG, IAGRP, ICNTL, INTL, IOPRA, LCL, NATL, OPRA, RURAL, SPEC, or UNKW	Translation class. If OSEL = CLASS, enter the translation class determined by the dialed digits. This can be used for screening or billing purposes as described under CLASS in screening and charging options. The translation classes are defined as follows: • ATT (attendant console) • CNTL (continental) • COLL (collect) • DATT (dial attendant) • EMRG (emergency) • AGRP (inter-agent group) • CNTL (inter-continental) • INTL (international) • OPRA (international operator assisted) • LCL (local) • NATL (national) • OPRA (operator assisted) • RURAL (rural) • SPEC (special) • UNKW (unknown)
	CLDFMT	CURRENT or POSTXLA	Called format. If OSEL = CAMA, enter either CURRENT or POSTXLA to produce the required ICAMA record format. If the entry is CURRENT, an ICAMA record is produced with the signaled DN (without translation). If the entry is POSTXLA, an ICAMA record is produced with PSTN number resulting from translations.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 9 of 13)

Field	Subfield or refinement	Entry	Explanation and action
	CLIOVRD	CNA, CNB	Calling line identity override. If the entry in subfield OSEL is CLIOVRD, enter data for this refinement. Enter CNA to allow the calling number for each call. Enter CNB to block the calling number for each call.
	CONDIGS	numeric (0 to 29 digits)	Consumed digit. If OSEL = CONSUME, enter a 0- to 11-digit number to explicitly define the number of digits consumed during call processing.
	CONTINUE	CONT, NOCONT	Continue. If the entry in subfield OSEL is PRESEL, enter data for this refinement. Enter CONT to continue translations through UXLA. Enter NOCONT to route translations through PCIXLA or PCITRK.
	CPMCALL	Y or N	Called party metering. If OSEL = CPMCALL, enter Y (yes) if calls are billed against the called party for intra-office calls. Enter N (no) for the default value of billing against the calling party for intra-office calls.
	DDIDX	1 to 63 or DEFAULT	Destination discount index. If the entry in subfield OSEL is DDIDX, enter data for this refinement. Enter the destination discount index number from table AOCOPT.
	DEST	0 to 1023	Destination route. If OSEL = DEST, enter the number in the route list, of the same translation system, that the call is routed to.
	IAA_INDEX	0 to 1024	Interadministration accounting index. If the entry in subfield OSEL is IAA, datafill this refinement. Enter the value that indexes the corresponding tuple in table IAACTRL.
	LNET	alphanumeric (1 to 16 characters)	Logical network. If OSEL = LNET, enter the logical network name that the call is on. The logical network name must have been previously datafilled in table LNETWORK. The entry in this field is used by the international metering system to determine a tariff for the call.

Field descriptions for conditional datafill (Sheet 10 of 13)

Field	Subfield or refinement	Entry	Explanation and action
	MAX	0 to 30	Maximum digits. If OSEL = MM, enter the maximum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MIN	0 to 30	Minimum digits. If OSEL = MM, enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MZONE	0 to 63	Metering zone. If OSEL = MZONE, enter the metering zone of the call, in the logical network as defined by selector LNET. The entry in this field is used by the international metering system to determine a tariff for the call.
	NETSRV_ NAME	IPHS, DPHS, MOBILE, DA, TELEGRAM, or NCC	Network service name. If the entry in subfield OSEL is NETSRV, datafill this refinement. The entry in this field determines the parameters in an outgoing IAM message. Enter IPHS to indicate a call to an independent personal handyphone system subscriber. Enter DPHS to indicate a call to a dependent personal handyphone system subscriber. Enter MOBILE to indicate a call to a mobile subscriber. Enter DA to indicate a call to the directory assistance operator. Enter TELEGRAM to indicate a call to the Telegram office. Enter NCC to indicate a call routed to one of the following networks: • New Common Carrier serving international toll traffic • New Common Carrier serving national toll traffic

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 11 of 13)

Field	Subfield or refinement	Entry	Explanation and action
	NOA	INTL, LOCAL, NATL or NET	Nature of address. Enter the required called party nature of address. • INTL (international) • LOCAL (local) • NATL (national) • NET (Intelligent Network Services)
	ONNET	Y or N	Call on virtual private network. If OSEL = VPN, enter Y if the call stays within the defined virtual private network. Otherwise enter N (no). Overlapped outpulsing is only supported on off-network calls. Calls processed without the ONNET subfield set to Y are off-network calls. Meridian digital centrex (MDC) calls are treated as off-network calls, and therefore overlapped outpusling is supported for MDC calls.
	PCCDR	000 to 999	Pseudo country code digits. If OSEL = PCC, enter the three-digit pseudo country code (PCC). If a two-digit PCC is required, it must be padded by a leading zero. ***Note:*** The pseudo country code is used to record a particular pseudo country code. This can be extracted for use by system logic later, for example, two-stage outpulsing.
	PFDIGS	0 to 24	Number of prefix digits. If OSEL = PF, enter the number of prefix digits. If prefix digits have been identified in a previous table, this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed, or used to index the next translation table. ***Note:*** If refinements PF and CONSUME are both datafilled for the same tuple, only the entry for the greater of the two values is processed; the other entry is ignored.

Field descriptions for conditional datafill (Sheet 12 of 13)

Field	Subfield or refinement	Entry	Explanation and action
	PFXAMA	0 to 4 digits, or N	Called party number prefix in AMA. If NOA is set to NTL, datafill PFXAMA with 0011. If NOA is set to NATL, datafill PFXAMA with 0. If NOA is set to LOCAL or NET, datafill PFXAMA with N.
	PRIVL	Y or N	Privileged user. If OSEL = PRIVL, enter Y (yes) if the user is a privileged user (for example, operator). Otherwise enter N (no).
	SKIPDIGS	0 to 24	Skip digits. If the entry in subfield OSEL is EXTCIC, enter data for this refinement. This field indicates the number of digits to skip before removing the carrier digits from the digit stream. This field operates on the B (called) number, so it is assumed that the system signals the CIC as part of the B number.
	SOURCE	PRESUB or DIALED	Carrier identification code source. If the entry in subfield OSEL is EXTCIC, enter data for this refinement. This field specifies the source of the CIC as follows: • PRESUB - presubscribed. Table TRKGRP contains the definition of the CIC. • DIALED - dialed. The subscriber enters the CIC when dialing a call.
	STOPRTMR	Y or N	Stop remote timer. Enter Y (yes) to disable the address complete message (ACM) timer of the remote switch. Default is N (no).
	XLAID	FREE, GENERIC1, GENERIC2, or GENERIC3	AMA translation identifier. If OSEL = AMAXLAID, enter the AMA translation identifier to be used against table AMAXLAID.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 13 of 13)

Field	Subfield or refinement	Entry	Explanation and action
	XLASYS	AC, AM, CT, DN, FA, FT, NIL, NSC, OFC, or PX	Translation system. If OSEL = XLT, enter the next translation system to use, followed by a space, and datafill subfield XLANAME (the instance of the translation system). The choice of translation systems are: • AC access • AM ambiguous • CT country • DN directory number • FA foreign area • FT utility • NIL • NSC number service code • OFC office • PX prefix ***Note:*** The XLASYS value NIL must not be datafilled by the operating company. NIL is only used to satisfy internal software functionality.
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. If OSEL = XLT, enter the translation name of the table instance within the XLASYS that the call is routed to.

XLASEL = DBQ

If the entry in field XLASEL is DBQ, datafill the following subfields.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
OPT		vector (see subfields)	Options. This subfield is a vector consisting of up to 10 options. Each option consists of subfield OSEL, and refinements that depend on the entry in subfield OSEL. For each option, specify OSEL, followed by a space, then the refinements, each separated by a space. The entry is concluded by a $.
	OSEL	MM, NSC, or PF	Option selector. The following options can be selected: Enter MM, followed by a space, and datafill subfields MIN and MAX if the minimum and maximum dialed digits are known. Enter NSC, followed by a space, and datafill subfield NSCODE if a number service code operation is to be performed on a call. Enter PF, followed by a space, and datafill subfield PFDIGS if there are prefix digits in the digit stream.
	MAX	0 to 30	Maximum digits. If OSEL = MM, enter the maximum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MIN	0 to 30	Minimum digits. If OSEL = MM, enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	NSCODE	AIN, 800P, E008, E800, MAP_HLR, MAP_MSC, MAP_VLR, MAPHLR, PVN, REPLDIGS, or VPN	If OSEL = NSC, enter the required number service operation to be performed on the call. • AIN is for advanced intelligent network service. • 800P is for the 800+ service. • E008 is for the enhanced 008 service. • E800 is for the enhanced 800 service. • MAP_HLR is for Mobile Application Part Home Location Register. • MAP_MSC is for Mobile Application Part Mobile service Switching Center. • MAP_VLR is for Mobile Application Part Visitor Location Register. • MAPHLR appears only if the package for MAP HLR Database Query service is on the switch. • PVN is for private virtual network service. • REPLDIGS is for replace digits service. • VPN is for Australian virtual private network service. All entries for field NSCODE must first be datafilled in table NSCDEFS, field NSCODE.
	PFDIGS	0 to 24	Number of prefix digits. If OSEL = PF, enter the number of prefix digits. If prefix digits have been identified in a previous table, then this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed or used to index the next translation table.

XLASEL = DMOD

If the entry in field XLASEL is DMOD, datafill the following subfields.

Field descriptions for conditional datafill (Sheet 1 of 6)

Field	Subfield or refinement	Entry	Explanation and action
OPT		vector (see subfields)	Option. This subfield is a vector consisting of up to ten options. Each option consists of subfield OSEL, and refinements that depend on the entry in subfield OSEL. For each option, specify OSEL, followed by a space, and the refinements, each separated by a space. The entry is concluded by a $.
	OSEL	AFTER, CDNRTE, CGNDM, CONSUME, COODM, CPCRTE, DEL, EXTCIC, INSRT, PF, RBP, REPL, SETCDN, VPNREPL, VPNXLT, or XLT	Option selector. The following options can be selected: Enter AFTER, followed by a space, and datafill subfield AFTER if a certain number of digits must be skipped before modifying the digit stream. Enter CDNRTE to route using the called number name (CDNNAME) from table CDNCHAR. If the CDNNAME is present on the incoming call or is set by the SETCDN option, translation proceeds to table CDNUXLA. Enter CGNDM, followed by a space, and datafill subfields PREFXCLI and INSRTCLI to remove digits from the Calling Line Identifier (CLI) and insert a datafilled digit in the prefix string. The total length of the string can be up to 18 digits. A modified CLI and digit string greater than 18 digits routes the call to treatment. Enter CONSUME, followed by a space, and datafill subfield CONDIGS to specify the number of digits that are consumed during translation.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 2 of 6)

Field	Subfield or refinement	Entry	Explanation and action
			Enter COODM, followed by a space, and datafill subfield SERVICE to replace the dialed emergency code by the emergency number stored in table LAC. Option selector COODM must be combined with the XLT option to guarantee that translation continues with the modified number. Selector COODM cannot be combined with any other option. Enter CPCRTE to route using the calling party category (CPCNAME) from table CPCCHAR. If the CPCNAME is present on the incoming call, translation proceeds to table CPCUXLA. Enter DEL, followed by a space, and datafill subfield DELDIGS if digits are to be deleted, after skipping over digits to be left unprocessed. Enter EXTCIC, followed by a space, and enter data for refinements CICSIZE, SKIPDIGS, and SOURCE. The EXTCIC subfield is the external carrier identification code that indicates a long distance carrier in the global environment. This option is supported for TOPS calls. Enter INSRT, followed by a space, and datafill subfield INSRDIGS if digits are to be inserted, after skipping over digits to be left unprocessed. Enter PF, followed by a space, and datafill subfield PFDIGS if there are prefix digits in the digit stream. Enter RBP without refinements. The entry RBP is used when a call is to be marked as Ringback Price. The RBP entry in table ACCODE suffixes a hexadecimal E to the calling digits for a call that translates using a tuple with the RBP option.

Field descriptions for conditional datafill (Sheet 3 of 6)

Field	Subfield or refinement	Entry	Explanation and action
			Enter REPL, and datafill subfield REPLDIGS if the whole digit stream, after skipping over digits to be left alone, is to be replaced. Enter SETCDN to trigger the setting of outgoing called party characteristics. This option assigns the called number name (CDNNAME) from table CDNCHAR to the call. If the CDNRTE option is subsequently encountered, the CDNNAME is used to route the call. You can use the SETCDN option to allow CDN routing when incoming agents such as DPNSS or BTUP are not available in table CDNCHAR. Enter VPNREPL to replace the called party digits with the VPN called party digits conveyed across the public network by the QSIG Feature Transparency mechanism. Enter VPNXLT to replace the current translation system and translation name with the values stored in table BGIDMAP. The entry to table BGIDMAP is addressed by the NNI BGID and SIGNIFICANCE information received in the originating signaling for the call. ***Note:*** The VPNXLT and XLT options must not both exist in the same tuple. Enter XLT, followed by a space, and datafill subfield XLASYS if the call is to proceed to another translation system.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 4 of 6)

Field	Subfield or refinement	Entry	Explanation and action

	AFTER	0 to 18	After. If OSEL = AFTER, enter the number of digits to skip before doing the modification. The default case is to calculate the new prefix fence, and replace, insert or delete digits after the fence (for example, starting at the next digit). Option after is an additional number of digits to skip before doing the modification. Option after refers to the option datafilled immediately before it. For example: DMOD DEL 3 AFTER 2 INSRT 11 skips two digits, deletes the next three and inserts digits 11 at the beginning of the digit string. The result when applied to 234567 is 23117.
			
			Note: Datafilling this refinement with 0 (the default value) displays the following error message:
			
			`Too few digits for AFTER option`
			
			`UNSUPPORTED OPTION AT: #`
			
			`PROCESSING ERROR`
			
			`UNEXPECTED ERROR CONDITION`

	CDNNAME	alphanumeric string	Called number name. If the entry in subfield OSEL is SETCDN, enter data for this refinement. Enter data for this refinement to
	CICSIZE	1 to 4	CIC size. If the entry in subfield OSEL is EXTCIC, enter data for this refinement. This field indicates the number of digits in the CIC. This field operates on the B (called) number, so it is assumed that the switch signals the CIC as part of the B number. The MAP display indicates the range is 0 to 4. The system does not allow a 0 entry.
	CONDIGS	numeric (0 to 29 digits)	Consumed digits. If OSEL = CONSUME, enter a 0- to 11-digit number to explicitly define the number of digits consumed during call processing.

Field descriptions for conditional datafill (Sheet 5 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	DELDIGS	0 to 29	Delete digits. If OSEL = DEL, enter the number of digits to be deleted, after skipping digits to be left unprocessed.
	INSRDIGS	numeric (1 to 29 digits)	Insert digits. If OSEL = INSRT, enter the digits to be left unprocessed.
	INSRTCLI	numeric (1 to 5 digits) $	Insert CLI. If OSEL = CGNDM, enter the new string to insert as the prefix onto the CLI. Enter $ to specify no digit string is inserted.
	PFDIGS	0 to 24	Number of prefix digits. If OSEL = PF, enter the number of prefix digits. If prefix digits have been identified in a previous table, this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed or used to index the next translation table.
	PREFXCLI	numeric (0 to 18)	Prefix CLI. If OSEL = CGNDM, enter the number of prefix digits to delete.
	REPLDIGS	numeric (1 to 30 digits)	Replace digits. If OSEL = REPL, enter the digits that replace the existing digits, after skipping digits to be left unprocessed.
	SERVICE	alphanumeric (1 to 8 characters)	COODM service. If OSEL = COODM, enter the emergency service name. Emergency service names are listed in field EMRGSERV in table LAC.
	SKIPDIGS	0 to 24	Skip digits. If the entry in subfield OSEL is EXTCIC, enter data for this refinement. This field indicates the number of digits to skip before removing the carrier digits from the digit stream. This field operates on the B (called) number, so it is assumed that the system signals the CIC as part of the B number.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 6 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	SOURCE	PRESUB or DIALED	Carrier identification code source. If the entry in subfield OSEL is EXTCIC, enter data for this refinement. This field specifies the source of the CIC as follows: • PRESUB - presubscribed. Table TRKGRP contains the definition of the CIC. • DIALED - dialed. The subscriber enters the CIC when dialing a call.
	XLASYS	AC, AM, CT, DN, FA, FT, NIL, NSC, OFC, or PX	Translation system. If OSEL = XLT, enter the next translation system to use, followed by a space, and datafill subfield XLANAME (the instance of the translation system). The choice of translation systems is: • AC (access) • AM (ambiguous) • CT (country) • DN (directory number) • FA (foreign area) • FT (utility) • NIL • NSC (number service code) • OFC (office) • PX (prefix) ***Note:*** The XLASYS value NIL must not be datafilled by the operating company. NIL is only used to satisfy internal software functionality.
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. If OSEL = XLT, enter the translation name of the table instance within the XLASYS that the call is routed to.

XLASEL = DNRTE

The DNRTE selector allows translation to continue in table DNINV. Through this translation, calls can be terminated at directory numbers datafilled in table DNINV.

Table DNINV must be datafilled before the DNRTE selector is datafilled in table ACCODE.

Table AMAXLAID must be datafilled prior to selecting option AMAXLAID.

Field descriptions for conditional datafill (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
OPT		vector (see subfields)	Options. This subfield is a vector consisting of up to ten options. Each option consists of subfield OSEL, and refinements that depend on the entry in subfield OSEL. For each option, specify OSEL, followed by a space, and the refinements, each separated by a space. The entry is concluded by a $.
	OSEL	ALLOWOVLP, AMAXLAID, CAMA, CLASS, DN, MM, PF, or SF	Option selector. The following options can be selected: Enter ALLOWOVLP to allow overlap. This subfield does not have refinements. Enter AMAXLAID, followed by a space, and datafill subfield XLAID to specify an automatic message accounting identity from within table AMAXLAID. Enter CAMA, followed by a space, and datafill subfield CLDFMT. The entry in CLDFMT indicates whether the ICAMA record is generated with the the originally-signaled DN or the final PSTN number. Enter CLASS, followed by a space, and datafill subfield CLASS if the class of the dialed digits can be determined. Enter DN, followed by a space, and datafill subfield SNPA and NXX for the directory number that the call is to route.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
			Enter MM, followed by a space, and datafill subfields MIN and MAX if the minimum and maximum dialed digits are known. Enter PF, followed by a space, and datafill subfield PFDIGS if there are prefix digits in the digit stream. Enter SF, followed by a space, and datafill subfield SFDIGS to indicate the beginning of the station code digits.
	CLASS	ATT, CNTL, COLL, DATT, EMRG, IAGRP, ICNTL, INTL, IOPRA, LCL, NATL, OPRA, RURAL, SPEC, or UNKW	Translation class. If OSEL = CLASS, enter the translation class determined by the dialed digits. This can be used for screening or billing purposes as described under CLASS in screening and charging options. The translation classes are defined as follows: • ATT (attendant console) • CNTL (continental) • COLL (collect) • DATT (dial attendant) • EMRG (emergency) • AGRP (inter-agent group) • CNTL (inter-continental) • INTL (international) • OPRA (international operator assisted) • LCL (local) NATL (national) • NATL national • OPRA (operator assisted) • RURAL (rural) • SPEC (special) • UNKW (unknown)

Field descriptions for conditional datafill (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	CLDFMT	CURRENT or POSTXLA	Called format. If OSEL = CAMA, enter either CURRENT or POSTXLA to produce the required ICAMA record format. If the entry is CURRENT, an ICAMA record is produced with the signaled DN (without translation). If the entry is POSTXLA, an ICAMA record is produced with PSTN number resulting from translations.
	MAX	0 to 30	Maximum digits. If OSEL = MM, enter the maximum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MIN	0 to 30	Minimum digits. If OSEL = MM, enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	OFC	000 to 999	Three-digit area code. If OSEL = DN, enter the three-digit area code for the DN being routed to.
	PFDIGS	0 to 24	Number of prefix digits. If OSEL = PF, enter the number of prefix digits. If prefix digits have been identified in a previous table, then this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed or used to index the next translation table.
	SFDIGS	0 to 29	Station fence digits. If the entry in subfield OSELis SF, datafill this refinement. Enter a number to indicate how many digits to advance past the start of the digits that index into the tuple. (During call processing, the station code digits consist of all digits beyond this indicator to the end of the dialed digits. If option SF is not datafilled, then the last four digits comprise the station code.)

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	SNPA	000 to 999	Serving number plan area. If OSEL = DN, enter the required Serving number plan area (SNPA). This number must be datafilled in table HNPACONT or in table SNPANAME. This field must be three digits in length.
	XLAID	FREE, GENERIC1, GENERIC2, or GENERIC3	AMA translation . If OSEL = AMAXLAID, enter the AMA translation identifier to be used against table AMAXLAID.

XLASEL = FEAT

If the entry in field XLASEL is FEAT, datafill the following subfields.

Field descriptions for conditional datafill (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
OPT		vector (see subfields)	Options. This field is a vector consisting of up to ten options. Each option consists of subfield OSEL, and refinements that depend on the entry in subfield OSEL. For each option, specify OSEL, followed by a space, and the refinements, each separated by a space. The entry is concluded by a $.
	OSEL	FTR, FUNC, MM, PF, or XLT	Option selector. The following options can be selected: Enter FTR, followed by a space, and a feature code (FTR described below) to identify the international line feature. Enter FUNC, followed by a space, and feature function code (FUNC described below) to identify the international line feature function. Enter MM, followed by a space, and datafill subfields MIN and MAX if the minimum and maximum dialed digits are known. Enter PF, followed by a space, and datafill subfield PFDIGS if there are prefix digits in the digit stream. Enter XLT, followed by a space, and datafill refinement XLANAME if the translation name of the translation system is known.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	FTR	CALLBACK, CALLCHAR, CLCTDIGS, JES, NTC, VMWI, VSC or VALIDATE	Feature name. If the entry in subfield OSEL is FTR, enter the refinement name shown below: • CALLBACK (call back) • CALLCHAR (call characters) • CLCTDIGS (collect digits) • JES (Japan emergency services) • NTC (Notify Time Charges) • TLC (trunk logic circuit) • VMWI (voice mail waiting indication) • VSC (vertical service code) • VALIDATE (not used in GL03)
	FUNC	ACT, DEACT, DELETE, INTER, PROG, or USAGE	Feature function code. If OSEL = FUNC, enter one of the international line feature function codes listed below: • ACT (activate) • DEACT (deactivate) • DELETE (delete) • INTER (interrogate) • PROG (programming) • USAGE (usage)
	MAX	0 to 30	Maximum digits. If OSEL = MM, enter the maximum number of digits expected following MIN entry and a space. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.

Field descriptions for conditional datafill (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	MIN	0 to 30	Minimum digits. If OSEL = MM, enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	PFDIGS	0 to 24	Number of prefix digits. If OSEL = PF, enter the number of prefix digits. If prefix digits have been identified in a previous table, this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed, or used to index the next translation table.

XLASEL = FEATINFO

If the entry in subfield XLASEL is FEATINFO, datafill the following refinements. Selector FEATINFO makes use of table DNSCRN to store information against DNs, which is used during call processing to determine how to proceed with the call. The screening function is triggered by selector FEATINFO in the universal translation tables. The options available with this selector are shown below.

Field descriptions for conditional datafill (Sheet 1 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	FTR	CALLBACK, CALLCHAR, CLCTDIGS, JES, NTC, TLC, or VALIDATE	Feature name. Enter CALLBACK to enable originator callback during translations. Datafill subfield CALLBACK_OPTION and its refinements, then datafill subfields PFDIGS, MINDIGS, MAXDIGS, and TABREF. Enter CALLCHAR to modify all signaling characteristics. Datafill subfields CLLCHROP, PFDIGS, MINDIGS, MAXDIGS, and TABREF.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 2 of 10)

Field	Subfield or refinement	Entry	Explanation and action
			Enter CLCTDIGS to collect digits from the call originator and add them to the called digits stream for translation. Datafill subfields CLDGMIN, CLDGMAX, CLCTDIGS_OPTION, PFDIGS, MINDIGS, MAXDIGS, and TABREF. Enter JES to activate the Japan Emergency Service feature. Datafill refinements PFDIGS and TABREF. Enter NTC to notify the originating subscriber of applicable time and charges after the call terminates. Datafill subfield SUBOPT_NAME and its refinement, then datafill subfields PFDIGS, MINDIGS, MAXDIGS, and TABREF. Enter TLC to enable the test line call feature, which provides audible ringback tone followed by dial tone after specified durations. Datafill subfields RING_BACK_TONE_DUR, DIAL_TONE_DUR, TLC_PREFIX_DIGS, TLC_NUM_DIGS, and TLC_CHARGE. Enter VALIDATE, and datafill subfield VALDATOP and its refinements. Datafill subfields PFDIGS, MINDIGS, MAXDIGS, and TABREF.
	CALLBACK_ OPTION	CLCTDEST or NIL	Callback option. If the entry in field FTR is CALLBACK, datafill this option. Enter CLCTDEST to call back the subscriber and collect destination digits. Datafill subfields CLDGMIN, CLDGMAX, DISC_ANNC_TRK, PROMPT_ANNC_TRK, and SEND_ANM. Otherwise, enter NIL.
	CLDGMIN	1 to 24	Minimum collected digits. Enter the minimum number of digits to be collected and entered into the called digit stream.

Field descriptions for conditional datafill (Sheet 3 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	CLDGMAX	1 to 24	Maximum collected digits. Enter maximum number of digits to be collected and written into the called digit stream. The value cannot be less than CLDGMIN.
	DISC_ANNC_TRK	alphanumeric (1 to 16 characters)	Disconnect announcement trunk. Enter trunk common language location identifier (CLLI).
	PROMPT_ANNC_TRK	alphanumeric (1 to 16 characters)	Prompt announcement trunk. Enter trunk the common language location identifier (CLLI).
	SEND_ANM	Y or N	Send answer message. Enter Y (yes) or N (no).
	CLLCHROP	NOCHGMSG or EARLYCPG	Call characteristics. If the entry in field FTR is CALLCHAR, datafill this option. Enter NOCHGMSG to block backward CHG message. Enter EARLYCPG to specify that a call progress (CPG) message is issued in the backwards direction before an address complete message (ACM) is sent. The CPG message is permitted before an ACM in certain ISDN user part (ISUP) variants to establish a bidirectional speech path and to stop the T7 timer.
	CLCTDIGS_OPTION	NIL or $	Collect digits option. If the entry in field FTR is CLCTDIGS, datafill this option. Enter NIL or enter $ to proceed to the next option.
	SUBOPT_NAME	DUR_ADJ	Suboption name. If the entry in field FTR is NTC, datafill this option. Enter DUR_ADJ to specify the duration adjustment for NTC and datafill subfield DURATION_ADJ.
	DURATION_ADJ	0 to 99	Duration adjustment. Enter the time in seconds.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 4 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	RING_BACK_ TONE_DUR	1 to 255	Ringback tone duration. If the entry in field FTR is TLC, datafill this option. Enter the time, in seconds, that ringback tone is provided to the originator.
	DIAL_TONE_ DUR	1 to 255	Dial tone duration. If the entry in field FTR is TLC, datafill this option. Enter the time, in seconds, that dial tone is provided to the originator.
	TLC_PREFIX_ DIGS	0 to 18	Prefix digits in called number. If the entry in field FTR is TLC, datafill this option. Enter the number of digits to advance the prefix fence to detect the charge message digits when CPC = PAYPHONE.
	TLC_NUM_ DIGS	numeric(3 or 4) Japan only	Test line call number of digits. Enter the number of dialed digits to be transferred to the NCCI#7 CHG message. This is also the number of digits stored in the LMNNUM field of the SMDR #DE record.
	TLC_CHARGE	Y or N	Test line call charge indicator. The TLC_CHARGE field indicates the billing status of an ISUP test call. Enter Y if the call is billable. Enter N if the call is not billable. The default value for this field is N.
	OPT	see subfield VALDATOP	Options. If the entry in field FTR is VALIDATE, datafill this option. This field is a vector consisting of up to five options. Each option consists of subfield VALDATOP, and refinements that depend on the entry in subfield VALDATOP. For each option, specify VALDATOP, followed by a space, then the refinements, each separated by a space. The entry is concluded by a $ and datafill continues with field DFOP.

Field descriptions for conditional datafill (Sheet 5 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	VALDATOP	BCSCRN, CALLED, CLDTOCLG, CLISERV, CUSTMOD, LCASCRN, NOCHARGE, PRESEL, SCRNLNTH, SUBSCRN, TCNOTSCR, THIRDPTY, VERDEST, V3PTYBIL	Validate option. Enter a list of up to five options. The options specify what characteristics are to be considered when screening the call. Enter $ to signify the end of the list. ***Note:*** Selector VALIDATE is traversed only once for each call. Enter BCSCRN and datafill refinement BCOPTS to identify the bearer capability name. Enter CALLED to indicate the number to be used for screening. The SUBSCRN options are used to specify the subscriber types allowed to receive the call. ***Note:*** When using option CALLED, there must be no further digit manipulation after selector VALIDATE is encountered in translations. If option CALLED is not entered, then the calling party number is used for screening and the SUBSCRN options are used to specify the subscriber types allowed to make the call. ***Note:*** Pay phone subscribers are treated as general subscribers if option CALLED is specified. Enter CLDTOCLG, followed by a space, to copy digits from the called to the calling digit stream, and datafill options OFFSET and COUNT. Enter CLISERV, followed by a space, and enter data for refinement SERVNAME to add the name of the service provider.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 6 of 10)

Field	Subfield or refinement	Entry	Explanation and action
			Enter CUSTMOD, followed by a space, to alter the internal network class of service (NCOS) and customer group to new value for a given directory number (DN) based on the CUSTINFO attribute in table DNSCRN. The source of the DN used as an index into table DNSCRN is determined by the VALIDATE datafill. Datafill refinement CUSTSCRN. Enter LCASCRN, followed by a space, to enable local calling area screening. The called and calling numbers are checked against tables LCARNAME and LCASCRCN to determine if the numbers are local to each other, and whether the call should be denied or allowed to continue routing. Enter NOCHARGE, followed by a space, to indicate that the call is nonbillable. ***Note:*** If both NOCHARGE and THIRDPTY options are specified, NOCHARGE takes precedence. Enter PRESEL to allow screening for the PRESEL attribute in table DNSCRN. Enter SCRNLNTH, followed by a space, and datafill refinement MINLNGTH to specify the minimum length of the number being screened. Enter SUBSCRN, followed by a space, and datafill up to three multiples of the following subscriber types: GENERAL, PAYPHONE, PERSONAL, and MOBILE. Enter $ after entering SUBSCRN to indicate that no subscriber types are permitted to make or receive the call. Enter TCNOTSCR to indicate that calls with CPC set to Test Call are not screened.

Field descriptions for conditional datafill (Sheet 7 of 10)

Field	Subfield or refinement	Entry	Explanation and action
			Enter THIRDPTY to indicate that automatic third party billing is used. Table DNSCRN is checked for attribute UNPAID. ***Note:*** If both NOCHARGE and THIRDPTY options are specified, NOCHARGE takes precedence. ***Note:*** Payphone subscribers are treated as general subscribers if option CALLED is specified. Enter VERDEST to verify the destination of a call. Called digits are checked against ADDCODE entries in table DNSCRN. ***Note:*** NIL appears on the switch range but is not a valid entry. The value NIL is used only to satisfy internal software requirements.
	BCOPTS	alphanumeric (1 to 8 characters)	Bearer capability option. If the entry in field VALDATOP is BCSCRN, datafill this refinement. Enter up to four bearer capability names.
	COUNT	0 to 30	If the entry in field VALDATOP is CLDTOCLG, enter subfield COUNT to count the digits from the called stream to the calling stream.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 8 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	CUSTSCRN	Y or N	Customer screen. Enter Y to block calls that are not subscribed to the switched on-net services if attempting a switched on-net call. If the DN being screened is not present in table DNSCRN, the call is rejected with the Call Not Allowed (CNAD) treatment. The internal NCOS and CUSTGRP associated with the call are altered to the values found in the CUSTINFO attribute if present for the given DN in table DNSCRN. The DN used to index table DNSCRN can be the subscriber calling line identification (CLI) or the dialed number. The source of the DN is determined by the datafill of field VALIDATE. Enter N if no screening is performed.
Note: The FEATINFO values CCANN, CCARD, CCSDT, DAFOP, FAXSUP, FAXTEST, INBFAX, INBFD, INTLFD, ISD, ISDTST, ISDVRE, OUTBFAX, OUTBFD, PB3RDPTY, PBCALL, PBISD, PBISDVRE, and PBTST are valid only in DMS-250 switching offices. Additional DMS-250 parameters are listed in the DMS-250 specific data schema NTPs.			
	MINLNGTH	0 to 18values from 0 to 30 are possible in APC software loads	Minimum length. If the entry in field VALDATOP is SCRNLNTH, enter the minimum number of digits required in number being screened.
	OFFSET	0 to 30	If the entry in field VALDATOP is CLDTOCLG, enter subfield OFFSET to offset the digits from the called stream to the calling stream.
	SERVNAME	alphanumeric string	Service provider name. If the entry in field VALDATOP is CLISERV, enter the name of the service provider in this refinement.
	SUBSCTYP	GENERAL, PAYPHONE, PERSONAL, or MOBILE	Subscriber type. Enter subscriber type, followed by a space, and datafill refinements WHITLIST, CHKBLKCL, CHKUNPD, and CHKCCR. This option allows you to specify which subscriber types are permitted to make or receive a call and whether the subscriber's standing is important for a call.

Field descriptions for conditional datafill (Sheet 9 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	WHITLIST	Y or N	Whether it list. Enter Y (yes) to indicate that the subscriber's directory number must be datafilled in table DNSCRN. Otherwise, enter N (no).
	CHKBLKCL	Y or N	Check block call. Enter Y to check if the subscriber has subscribed to all services for which this tuple is being used (BLKCALL attribute in table DNSCRN). Otherwise, enter N.
	CHKUNPD	Y or N	Check unpaid. Enter Y to check if the subscriber has paid his bills. Otherwise, enter N.
	CHKCCR	Y or N	Check cumulative call restriction. Enter Y to check the subscriber's cumulative charge limit. Otherwise, enter N.
	PFDIGS	0 to 24	Prefix digits. Enter the number of prefix digits present at this point in the call. Prefix digits are not used to index any further translation tables and are not outpulsed, but they remain stored in call detail records (CDR).
	MINDIGS	0 to 30	Minimum digits. Enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MAXDIGS	0 to 30	Maximum digits. Enter the maximum number of digits expected. This value includes the digits used to index the current tuple and and must also include the prefix digits specified in the current tuple.
	TABREF	see subfields	Table reference. This field consists of subfields XLASYS and XLANAME.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 10 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	XLASYS	AC, AM, CT, FA, FT, NSC, OFC, or PX	Translation system. Enter the next translation system to use, followed by a space, and datafill subfield XLANAME (the instance of the translation system). The choice of translation systems is as follows: • AC (access) • AM (ambiguous) • CT (country) • FA (foreign area) • FT (utility) • NSC (number service code) • OFC (office) • PX (prefix) ***Note:*** NIL is not a valid entry. NIL is used only to satisfy internal software functionality.
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. Enter the translation name of the table instance within the XLASYS to which the call is routed.

XLASEL = HRC

If the entry in subfield XLASEL is HRC, datafill the following refinements.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
	OPT	see subfield	Options. This field contains subfield OSEL, and refinements that depend on the entry in subfield OSEL. The entry is concluded by a $ and datafill continues with field DFOP.
	OSEL	PFBILL, XLT	Option selector. If the call proceeds to another translation system, enter XLT, followed by a space, and datafill refinement XLASYS. Also complete an entry for option selector PFBILL.

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
	XLASYS	AC, AM, CT, FA, FT, NSC, OFC, PX	Translation system. If option selector XLT is entered in subfield OSEL, datafill this refinement. Enter the next translation system to use, followed by a space, then datafill refinement XLANAME. Enter one of the following: • AC (access) • AM (ambiguous) • CT (country) • FA (foreign area) • FT (utility) • NSC (number service code) • OFC (office) • PX (prefix) ***Note:*** NIL is not a valid entry. NIL is used only to satisfy internal software functionality. NSC is not used in GL03.
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. If XLT is entered in subfield OSEL, datafill this refinement. Enter the translation name of the table within the XLASYS to which the call is routed.
	PFBILL	Y or N	Prefix billing option. Enter PFBILL, followed by a space, and then enter either Y or N. If “Y" is entered, the home routing code specified in the tuple is included in the billing record. If “N" is entered, the home routing code is not included in billing records.

NSCHEAD (continued)

XLASEL = IAC

If the entry in field XLASEL is IAC, datafill the following subfields.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
OPT		vector (see subfields)	Options. This subfield is a vector list consisting of up to 10 options and terminated by $. Each option consists of subfield OSEL, and refinement subfields that depend on the entry in OSEL.
	OSEL	PF	Option selector. The following options can be selected: Enter PF, followed by a space, and datafill subfield PFDIGS if there are prefix digits in the digit stream.
	PFDIGS	0 to 24	Number of prefix digits. If OSEL = PF, enter the number of prefix digits. If prefix digits have been identified in a previous table, then this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed, or used to index the next translation table.

XLASEL = RTE

If the entry in field XLASEL is RTE, datafill the following subfields.

Field descriptions for conditional datafill (Sheet 1 of 12)

Field	Subfield or refinement	Entry	Explanation and action
OPT		see subfield	Options. This subfield is a vector consisting of up to ten options. Each option consists of subfield OSEL, and refinements that depend on the entry in subfield OSEL. For each option, specify OSEL, followed by a space, and the refinements, each separated by a space. The entry is concluded by a $.
	OSEL	ACF, AMAXLAID, BLKOVLP, CALLCTRL, CAMA, CDN, CDNRTE, CHGIND, CLASS, CONSUME, CPCRTE, CPMCALL, DIDDX, DEST, EXTCIC, IAA, LNET, MM, MZONE, NETSRV, PCC, PF, PIP, PNRF, PRESEL, PRESLERTE, PRIVL, QFT, SETCDN, TOC, VPN, or VPNPAN	Option selector. The following options can be selected: Enter ACF, followed by a space, and datafill subfield ACF if the area code fence is defined. Enter AMAXLAID, followed by a space, and datafill subfield XLAID to specify an automatic message accounting identity from within table AMAXLAID. Enter BLKOVLP to prevent calls from being outpulsed until all CDN digits are collected. This subfield does not have refinements. Enter CALLCTRL, followed by a space, and datafill subfield CALLCTRL. The entry in subfield CALLCTRL indicates who has control of the call: the calling party, the called party, or both. Enter CAMA, followed by a space, and datafill subfield CLDFMT. The entry in CLDFMT indicates whether the ICAMA record is generated with the the originally-signaled DN or the final PSTN number.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 2 of 12)

Field	Subfield or refinement	Entry	Explanation and action
			Enter CDN, followed by a space, and datafill subfield CDN to select the nature of address field. This field is used to identify the called party of the initial address message (IAM). It is used for Australian ISDN user part (AISUP) call translations. Enter CDNRTE to route using the called number name (CDNNAME) from table CDNCHAR. If the CDNNAME is present on the incoming call or is set by the SETCDN option, translation proceeds to table CDNUXLA. CHGIND indicates whether to override the value of the charge indicator in the Backward Call indicators. The CHGIND option applies only to JCTV loads. Enter CLASS, followed by a space, and datafill subfield CLASS if the class of the dialed digits can be determined. Enter CONSUME, followed by a space, and datafill subfield CONDIGS to specify the number of digits that are consumed during translation. Enter CPCRTE to route using the calling party category (CPCNAME) from table CPCCHAR. If the CPCNAME is present on the incoming call, translation proceeds to table CPCUXLA. Enter CPMCALL, followed by a space, and datafill subfield CPMCALL to specify call billing against the called party instead of the calling party for intra-office calls. Enter DDIDX, followed by a space, and enter data for refinement DDIDX. Enter data for this subfield if a destination discount applies to the call.

Field descriptions for conditional datafill (Sheet 3 of 12)

Field	Subfield or refinement	Entry	Explanation and action
			Enter DEST, followed by a space, and datafill subfield DEST if the destination is known. Enter EXTCIC, followed by a space, and enter data for refinements CICSIZE, SKIPDIGS, and SOURCE. This subfield indicates the external carrier identification code. Enter IAA and the datafill refinement IAA_INDEX to generate or modify IAA message parameters based on datafill in table IAACTRL. Enter LNET, followed by a space, and datafill subfield LNET if a logical network is required, for metering. Enter MM, followed by a space, and datafill subfields MIN and MAX if the minimum and maximum dialed digits are known. ***Note:*** For fast interdigital timing to function properly, MM can only be used with the RTE selector whenever the value in refinement MIN is not equal to the value in refinement MAX. In other words, if MIN=MAX, MM can be used with the CONT selector in table PXCODE; if the value in refinement MIN is not equal to the value in refinement MAX, MM cannot be used until the RTE selector is used (which is usually in either table FACODE or table OFCCODE). If refinements MIN and MAX are set in table PXCODE when they are not equal to each other, partial dial timing is used after MIN digits are dialed in order to determine the end of dialing. Enter MZONE, followed by a space, and datafill subfield MZONE if metering is to be done on the call. Enter NETSRV and datafill refinement NETSRV_NAME to indicate a Japan network service.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 4 of 12)

Field	Subfield or refinement	Entry	Explanation and action
			Enter PCC, followed by a space, and datafill subfield PCCDR if a pseudo country code is required. Enter PF, followed by a space, and datafill subfield PFDIGS if there are prefix digits in the digit stream. Enter PIP, followed by a space, to perform a residency check for the digits being translated. The residency check is used by the local number portability feature to ensure that calls to DNs that have been ported into the office are not routed out of the office. ***Note:*** You must complete entries in fields MIN and MAX before entering the PIP option. Enter PNRF to invoke the ported number recognition function, which is used for LNP applications in Germany. The PNRF option does not require any subfields. Enter PRESEL, followed by a space, if the call is to be treated as a preselected carrier case. Enter PRESELRTE, followed by a space, and datafill refinement PRESELRTE, the index into the route table of the current XLASYS and XLANAME. Enter PRIVL, followed by a space, and datafill subfield PRIVL if the user is a privileged user (for example, operators). Enter QFT followed by ON or OFF to indicate if an outgoing route is capable of QSIG Feature Transparency. ***Note:*** The QFT ON option must not be added to a route unless the far-end node is QFT-capable.

Field descriptions for conditional datafill (Sheet 5 of 12)

Field	Subfield or refinement	Entry	Explanation and action
			Enter SETCDN to trigger the setting of outgoing called party characteristics. This option assigns the called number name (CDNNAME) from table CDNCHAR to the call. If the CDNRTE option is subsequently encountered, the CDNNAME is used to route the call. You can use the SETCDN option to allow CDN routing when incoming agents such as DPNSS or BTUP are not available in table CDNCHAR. Enter TOC, followed by a space, and datafill subfield CHG, for the type of charge if the type of charge messaging is selected. Enter VPN, followed by a space, and datafill subfields ONNET and BILLABLE if the call routes through a service switching point (SSP) and the Australian VPN - SSP software package (NTXH49AA or NTXH49AB) is in the switching unit. Enter VPNPAN to indicate that the PINX is to act as the PAN for an outgoing route. ***Note:*** If VPNREPL or VPNXLT have been entered in the DMOD selector, the VPNPAN option is redundant.
	ACF	0 to 29	Area code fence. If OSEL = ACF, enter the number of digits between the beginning of the digits to currently index the table, and the end of the area code.
	BILLABLE	Y or N	Virtual private network billable call. If OSEL = VPN, enter Y (yes) if an automatic message accounting (AMA) record is required for each VPN call. Otherwise enter N (no). An AMA record is not generated if an address complete message (ACM) of address complete, no charge is returned, or if the call terminates in the SSP on a line with the free number terminating (FNT) option.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 6 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	CALLCLASS	PRESELECTOVERRIDE, CSN, or TRUNK	Preselection call processing. If the entry in subfield OSEL is PRESEL, datafill this refinement. Enter the preselection call class type that is associated with the call. ***Note:*** Calltype CSN and TRUNK are available under the PRESEL option. These call classes are not needed for German Carrier Selection, and are not supported. The same applies to the Continue option of CONT. For the German market, only NOCONT is supported.
	CALLCTRL	CALLING, CALLED, or MUTUAL	Call control. If OSEL = CALLCTRL, enter one of the following values to specify the party who has control of the call. If the entry is CALLING and the calling party goes onhook first, the call is released immediately. If the called party goes onhook first, the called party is allowed to reanswer within a datafilled reanswer time out or until the calling party goes onhook. If the time out expires or if the calling party goes onhook, the calling party releases the call and the called party is set to idle. If the entry is CALLED and the called party goes onhook first, the call is released immediately. If the calling party goes onhook first and does not reanswer, the connection is not released until the called party goes onhook. There are no time outs, and the calling party is allowed to reanswer until the called party goes onhook. If the entry is MUTUAL and either party goes onhook the call is released immediately. ***Note 1:*** Calls to lines with the ESG option must have CALLCTRL(CALLED). ***Note 2:*** Calls terminating on an ITOPS position must have CALLCTRL(CALLED).

Field descriptions for conditional datafill (Sheet 7 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	CDNNAME	alphanumeric string	Called number name. If the entry in subfield OSEL is SETCDN, enter data for this refinement to route the call using the called number name from table CDNCHAR.
	CHG	SEND_ CHARGE or SEND_NO_ CHARGE	Charge. If OSEL = TOC, enter SEND_CHARGE to set the answer message (BTUP ANM) type of answer (TOA) string sent out from a node to SEND_CHARGE. Enter SEND_NO_CHARGE to set the answer message (BTUP ANM) type of answer (TOA) string sent out from a node to SEND_NO_CHARGE.
	CHGIND	ASIS, CHG, NOCHG	Datafill the CHGIND field with the following values: • ASIS-treat charge indicator as is • CHG-treat charge indicator as charge • NOCHG-treat charge indicator as no charge
	CICSIZE	1 to 4	CIC size. If the entry in subfield OSEL is EXTCIC, enter data for this refinement. This field indicates the number of digits in the CIC. This field operates on the B (called) number, so it is assumed that the switch signals the CIC as part of the B number. The MAP display indicates the range is 0 to 4. The system does not allow a 0 entry.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 8 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	CLASS	ATT, CNTL, COLL, DATT, EMRG, IAGRP, ICNTL, INTL, IOPRA, LCL, NATL, OPRA, RURAL, SPEC, or UNKW	Translation class. If OSEL = CLASS, enter the translation class determined by the dialed digits. This can be used for screening or billing purposes as described under CLASS in screening and charging options. The translation classes are defined as follows: • ATT (attendant console) • CNTL (continental) • COLL (collect) • DATT (dial attendant) • EMRG (emergency) • AGRP (inter-agent group) • CNTL (inter-continental) • INTL (international) • OPRA (international operator assisted) • LCL (local) • NATL (national) • OPRA (operator assisted) • RURAL (rural) • SPEC (special) • UNKW (unknown)
	CLDFMT	CURRENT or POSTXLA	Called format. If OSEL = CAMA enter either CURRENT or POSTXLA to produce the required ICAMA record format. If the entry is CURRENT, an ICAMA record is produced with the signaled DN (without translation). If the entry is POSTXLA, an ICAMA record is produced with PSTN number resulting from translations.

Field descriptions for conditional datafill (Sheet 9 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	CONDIGS	numeric (0 to 29 digits)	Consumed digits. If OSEL = CONSUME, enter a 0- to 11-digit number to explicitly define the number of digits consumed during call processing.
	CONTINUE	CONT, NOCONT	Continue. If the entry in subfield OSEL is PRESEL, enter data for this refinement. Enter CONT to continue with the current translations system. Enter NOCONT to stop translations.
	CPMCALL	Y or N	Called party metering. If OSEL = CPMCALL, enter Y (yes) if calls are billed against the called party for intra-office calls. Enter N (no) for the default value of billing against the calling party for intra-office calls.
	DDIDX	1 to 63 or DEFAULT	Destination discount index. If the entry in subfield OSEL is DDIDX, enter data for this refinement to apply the destination discount to the call.
	DEST	0 to 1023	Destination route list index. If OSEL = DEST, enter the number in the route list, of the same translation system, that the call is routed to.
	IAA_INDEX	0 to 1024	Interadministration accounting index. If the entry in subfield OSEL is IAA, datafill this refinement. Enter the value that indexes the corresponding tuple in IAACTRL.
	LNET	alphanumeric (1 to 16 characters)	Logical network. If OSEL = LNET, enter the logical network name that the call is on. The logical network name must have been previously datafilled in table LNETWORK. The entry in this field is used by the international metering system to determine a tariff for the call.
	MAX	0 to 30	Maximum digits. If OSEL = MM, enter the maximum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 10 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	MIN	0 to 30	Minimum digits. If OSEL = MM, enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MZONE	0 to 63	Metering zone. If OSEL = MZONE, enter the metering zone of the call, in the logical network as defined by selector LNET. The entry in this field is used by the international metering system to determine a tariff for the call.
	NETSRV_ NAME	IPHS, DPHS, MOBILE, DA, TELEGRAM, or NCC	Network service name. If the entry in subfield OSEL is NETSRV, datafill this refinement. The entry in this field determines the parameters in an outgoing IAM message. Enter IPHS to indicate a call to an independent personal handyphone system subscriber. Enter DPHS to indicate a call to a dependent personal handyphone system subscriber. Enter MOBILE to indicate a call to a mobile subscriber. Enter DA to indicate a call to the directory assistance operator. Enter TELEGRAM to indicate a call to the Telegram office. Enter NCC to indicate a call routed to one of the following networks: • New Common Carrier serving international toll traffic • New Common Carrier serving national toll traffic

Field descriptions for conditional datafill (Sheet 11 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	NOA	INTL, LOCAL, NATL, or NET	Nature of address. Enter the required called party nature of address. • INTL (international) • LOCAL (local) • NATL (national) • NET (Intelligent Network Services)
	ONNET	Y or N	Call on virtual private network. If OSEL = VPN, enter Y if the call stays within the defined virtual private network. Otherwise enter N (no). Overlapped outpulsing is only supported on off-network calls. Calls processed without the ONNET subfield set to Y are off-network calls. Meridian digital centrex (MDC) calls are treated as off-network calls, and therefore overlapped outpusling is supported for MDC calls.
	PCCDR	000 to 999	Pseudo country code digits. If OSEL = PCC, enter the three-digit pseudo country code (PCC). If a two-digit PCC is required, it must be padded by a leading zero. The pseudo country code is used to record a particular pseudo country code. This can be extracted for use by system logic later, for example, two-stage outpulsing.
	PFDIGS	0 to 24	Number of prefix digits. If OSEL = PF, enter the number of prefix digits. If prefix digits have been identified in a previous table, this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed or used to index the next translation table. ***Note:*** If refinements PF and CONSUME are both datafilled for the same tuple, only the entry for the greater of the two values is processed; the other entry is ignored.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 12 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	PFXAMA	0 to 4 digits, or N	Called party number prefix in AMA. If NOA is set to NTL, datafill PFXAMA with 0011. If NOA is set to NATL, datafill PFXAMA with 0. If NOA is set to LOCAL or NET, datafill PFXAMA with N.
	PRIVL	Y or N	Privileged user. If OSEL = PRIVL, enter Y (yes) if the user is a privileged user (for example, operator). Otherwise, enter N (no).
	SKIPDIGS	0 to 24	Skip digits. If the entry in subfield OSEL is EXTCIC, enter data for this refinement. This field indicates the number of digits to skip before removing the carrier digits from the digit stream. This field operates on the B (called) number, so it is assumed that the system signals the CIC as part of the B number.
	SOURCE	PRESUB or DIALED	Carrier identification code source. If the entry in subfield OSEL is EXTCIC, enter data for this refinement. This field specifies the source of the CIC as follows: • PRESUB - presubscribed. Table TRKGRP contains the definition of the CIC. • DIALED - dialed. The subscriber enters the CIC when dialing a call.
	STOPRTMR	Y or N	Stop remote timer. Enter Y (yes) to disable the address complete message (ACM) timer of the remote switch. The default value is N (no).
	XLAID	FREE, GENERIC1, GENERIC2, or GENERIC3	AMA translation identifier. If OSEL = AMAXLAID, enter the AMA translation identifier to be used against table AMAXLAID.

XLASEL = TRMT

If the entry in field XLASEL is TRMT, datafill the following subfields.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
OPT		vector (see subfields)	Options. This subfield is a vector consisting of up to ten options. Each option consists of subfield OSEL, and refinements that depend on the entry in subfield OSEL. For each option, specify OSEL, followed by a space, and the refinements, each separated by a space. The entry is concluded by a $.
	OSEL	OFC	Enter OFC, followed by a space, and datafill subfield OFC if a treatment name is required.
	OFC	see subtable	Enter a treatment name that is contained in the office treatment subtable, TMTCNTL.TREAT.

Datafill example

Refer to examples in the description of table ACHEAD.

NSCHEAD (continued)

XLASEL = all entries

Table AMAXLAID must be datafilled prior to selecting option AMAXLAID.

Field descriptions for conditional datafill (Sheet 1 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	DFOP	NODFOP or DFOP	Default options. Enter NODFOP if there are no default options. Enter DFOP, and datafill subfield OSEL and its refinements. The default options only apply if a tuple with XLASEL equal to RTE or CONT is chosen in the CODE table. If the entry in field DFOP is equal to DFOP, this field is a vector that consists of a number of options and must be ended by $. Each option, consisting of subfield OSEL and refinements dependent on the entry in subfield OSEL, is separated from the next by a space. The various refinements are described in subfield OSEL. For each option, specify the option selector, followed by a space, and the refinements, with each refinement separated from the next by a space.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 2 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	OSEL	ACF, AMAXLAID, CALLCTRL, CAMA, CDN, CDNRTE, CLASS, CLIOVRD, CONSUME, CPCRTE, CPMCALL, DDIDX, DEST, EXTCIC, IAA, LNET, MM, MZONE, NETSRV, OSS, PCC, PF, PNRF, PRESEL, PRIVL, QFT, SETCDN, TELETAXE, TOC, VPN, or XLT	Option selector. The following options can be selected: Enter ACF, followed by a space, and datafill subfield ACF if the area code fence is defined. Enter AMAXLAID, followed by a space, and datafill subfield XLAID to specify an automatic message accounting (AMA) identity from within table AMAXLAID. Enter CALLCTRL, followed by a space, and datafill subfield CALLCTRL. The entry in subfield CALLCTRL indicates who has control of the call: the calling party, the called party, or both. Enter CAMA, followed by a space, and datafill subfield CLDFMT. The entry in CLDFMT indicates whether the International automatic message accounting (ICAMA) record is generated with the the originally-signaled directory number (DN) or the final Public Switched Telephone Network (PSTN) number. Enter CDN, followed by a space, and datafill subfield CDN to select the nature of address field. This field is used to identify the called party of the Initial Address message (IAM). It is used for Australian ISDN user part (AISUP) call translations.

Field descriptions for conditional datafill (Sheet 3 of 14)

Field	Subfield or refinement	Entry	Explanation and action
			Enter CDNRTE to route a call using the called number name (CDNNAME) from table CDNCHAR. If the CDNNAME is present on the incoming call or is set by the SETCDN option, translation proceeds to table CDNUXLA. The CDNRTE option does not have refinements. Enter CLASS, followed by a space, and datafill subfield CLASS if the class of the dialed digits can be determined. Enter CLIOVRD, followed by a space, and enter data for refinement CLIOVRD. This subfield indicates calling line identity override. Enter CONSUME, followed by a space, and datafill subfield CONDIGS to specify the number of digits that are consumed during translation. Enter CPCRTE to route the call using the calling party category (CPCNAME) from table CPCCHAR. If the CPCNAME is present on the incoming call, translation proceeds to table CPCUXLA. The CPCRTE option does not have refinements. Enter CPMCALL, followed by a space, and datafill subfield CPMCALL to specify call billing against the called party instead of the calling party for intra-office calls. Enter DDIDX, followed by a space, and enter data for refinement DDIDX. This option indicates a destination discount applies to the call. Enter DEST, followed by a space, and datafill subfield DEST if the destination is known. Enter EXTCIC, followed by a space, and enter data for refinements CICSIZE, SKIPDIGS, and SOURCE. The EXTCIC option indicates the external carrier identification code. This option is supported for TOPS calls.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 4 of 14)

Field	Subfield or refinement	Entry	Explanation and action
			Enter IAA, followed by a space, and enter data for refinement IAA_INDEX. The IAA option generates or modifies IAA message parameters based on datafill in table IAACTRL. Enter LNET, followed by a space, and datafill subfield LNET if a logical network is required, for metering. Enter MM, followed by a space, and datafill subfields MIN and MAX if the minimum and maximum dialed digits are known. Enter MZONE, followed by a space, and datafill subfield MZONE if metering is to be done on the call. Enter NETSRV and datafill refinement NETSRV_NAME to indicate a Japan network service. Enter OSS to indicate operator signaling services. This subfield does not have refinements. Enter PCC, followed by a space, and datafill subfield PCCDR if a pseudo country code is required. Enter PF, followed by a space, and datafill subfield PFDIGS if there are prefix digits in the digit stream. Enter PNRF to invoke the ported number recognition function. LNP applications in Germany use the PRNF. The PNRF option does not have refinements. Enter PRESEL, followed by a space, and datafill refinement PRESEL to provide the necessary information used to index into the PCIXLA table. Enter PRIVL, followed by a space, and datafill subfield PRIVL if the user is a privileged user (for example, operators).

Field descriptions for conditional datafill (Sheet 5 of 14)

Field	Subfield or refinement	Entry	Explanation and action
			Enter QFT followed by ON or OFF to indicate if an outgoing route is capable of QSIG feature transparency. ***Note:*** Operating company personnel must not add the QFT ON option to a route unless the far-end node is QFT-capable. Enter SETCDN, followed by a space, and enter data for refinement CDNNAME. The SETCDN option assigns the called number name (CDNNAME) from table CDNCHAR to the call. Enter TELETAXE. This option does not have refinements. Enter TOC, followed by a space, and datafill subfield CHG, for the type of charge if the type of charge messaging is selected. Enter VPN, followed by a space, and datafill subfields ONNET and BILLABLE if the call routes through a service switching point (SSP) and the Australian VPN - SSP software package (NTXH49AA or NTXH49AB) is in the switching unit. Enter XLT, followed by a space, and datafill subfield XLASYS if the call is to proceed to another translation system.
	ACF	0 to 29	Area code fence. If OSEL = ACF, enter the number of digits between the beginning of the digits to currently index the table, and the end of the area code.
	BILLABLE	Y or N	Virtual private network billable call. If OSEL = VPN, enter Y (yes) if an automatic message accounting (AMA) record is required for each VPN call. Otherwise enter N (no). An AMA record is not generated if an address complete message (ACM) of address complete, no charge is returned, or if the call terminates in the SSP on a line with the free number terminating (FNT) option.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 6 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	CALLCLASS	PRESELECT OVERRIDE, CSN, or TRUNK	Preselection call processing. If the entry in subfield OSEL is PRESEL, datafill this refinement. Enter the preselection call class type that is associated with the call. ***Note:*** Calltype CSN and TRUNK are available under the PRESEL option. These call classes are not needed for German Carrier Selection, and are not supported. The same applies to the Continue option of CONT. For the German market, only NOCONT is supported.
	CALLCTRL	CALLING, CALLED, or MUTUAL	Call control. If OSEL = CALLCTRL, enter one of the three following values to specify the party who has control of the call. If the entry is CALLING and the calling party goes onhook first, the call is released immediately. If the called party goes onhook first, the called party is allowed to reanswer within a datafilled reanswer time out or until the calling party goes onhook. If the time out expires or if the calling party goes onhook, the calling party releases the call and the called party is set to idle. If the entry is CALLED and the called party goes onhook first, the call is released immediately. If the calling party goes onhook first and does not reanswer, the connection is not released until the called party goes onhook. There are no time outs, and the calling party is allowed to reanswer until the called party goes onhook. If the entry is MUTUAL and either party goes onhook the call is released immediately. ***Note 1:*** Calls to lines with the ESG option must have CALLCTRL(CALLED). ***Note 2:*** Calls terminating on an International Traffic Operator Position System (ITOPS) must have CALLCTRL(CALLED).
	CDNNAME	alphanumeric string	Called number name. If the entry in subfield OSEL is SETCDN, enter data for refinement CDNNAME.

Field descriptions for conditional datafill (Sheet 7 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	CHG	SEND_ CHARGE or SEND_NO_ CHARGE	Charge. If OSEL = TOC, enter SEND_CHARGE to set the answer message (BTUP ANM) type of answer (TOA) string sent out from a node to SEND_CHARGE. Enter SEND_NO_CHARGE to set the answer message (BTUP ANM) type of answer (TOA) string sent out from a node to SEND_NO_CHARGE.
	CICSIZE	1 to 4	CIC size. If the entry in subfield OSEL is EXTCIC, enter data for this refinement. This field indicates the number of digits in the CIC. This field operates on the B (called) number, so it is assumed that the system signals the CIC as part of the B number. The MAP display indicates the range is 0 to 4. The system does not allow an entry of 0.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 8 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	CLASS	ATT, CNTL, COLL, DATT, EMRG, IAGRP, ICNTL, INTL, IOPRA, LCL, NATL, OPRA, RURAL, SPEC, or UNKW	Translation class. If OSEL = CLASS, enter the translation class determined by the dialed digits. This can be used for screening or billing purposes as described under CLASS in screening and charging options. The translation classes are defined as follows: • ATT (attendant console) • CNTL (continental) • COLL (collect) • DATT (dial attendant) • EMRG (emergency) • AGRP (inter-agent group) • CNTL (inter-continental) • INTL (international) • OPRA (international operator assisted) • LCL (local) • NATL (national) • OPRA (operator assisted) • RURAL (rural) • SPEC (special) • UNKW (unknown)
	CLDFMT	CURRENT or POSTXLA	Called format. If OSEL = CAMA, enter either CURRENT or POSTXLA to produce the required ICAMA record format. If the entry is CURRENT, an ICAMA record is produced with the signaled DN (without translation). If the entry is POSTXLA, an ICAMA record is produced with PSTN number resulting from translations.

Field descriptions for conditional datafill (Sheet 9 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	CLIOVRD	CNA, CNB	Calling line identity override. If the entry in subfield OSEL is CLIOVRD, enter data for refinement CLIOVRD. Enter CNA to allow the calling number for each call. Enter CNB to block the calling number for each call.
	CONDIGS	numeric (0 to 29 digits)	Consumed digits. If OSEL = CONSUME, enter a 0- to 11-digit number to explicitly define the number of digits consumed during call processing.
	CONTINUE	CON or NOCON	Consume digits. The default options apply if a tuple with field XLASEL set to CONT or DMOD is chosen in the CODE tables. The default case is not to consume digits (that is, the next table is indexed using the same digits as the current table, except for ignoring prefix digits). However, under certain conditions, the next table is indexed starting with the digits following the index to the current table (in other words, translations absorb or consume the current index digits). An example of this is when an area code is found in table FACODE. Table OFCCODE is indexed with the digits following the area code (the office code), so the digits used to index table FACODE are consumed. This does not mean that the digits are deleted from the digit register. They remain there and are outpulsed unless explicitly deleted in the CODE or RTE tables. The CON option only means that the digits are not used to index the next table. Enter CON and translation consumes the current index digits, if the next table is indexed starting with the digits following the index to the current table. Enter NOCON if digits are not to be consumed (the next table is indexed using the same digits as the current table, except the prefix digits).
	CPMCALL	Y or N	Called party metering. If OSEL = CPMCALL, enter Y (yes) if calls are billed against the called party for intra-office calls. Enter N (no) for the default value of billing against the calling party for intra-office calls.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 10 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	DDIDX	1 to 63 or DEFAULT	Destination discount index. If the entry in subfield OSEL is DDIDX, enter data for this refinement. Enter the destination discount index number.
	DEST	0 to 1023	Destination route list index. If OSEL = DEST, enter the number in the route list, of the same translation system, that the call is routed to.
	IAA_INDEX	0 to 1024	Interadmission accounting index. If the entry in subfield OSEL is IAA, enter data for this refinement. Enter the value that indexes the corresponding tuple in table IAACTRL.
	LNET	alphanumeric (1 to 16 characters)	Logical network. If OSEL = LNET, enter the logical network name the call is on. The logical network name must have been previously datafilled in table LNETWORK. The entry in this field is used by the international metering system to determine a tariff for the call.
	MAXIDX	C, F, 9, or STD	Maximum index. Enter C if the translation tables are to be indexed by dialed digits hexadecimal B (*) and hexadecimal C (#) in addition to digits in the range 0 to 9. Enter F if the translation tables are to be indexed by dialed digits in the range 0 to 9, and hex digits B, C, D, E, and F. Enter STD or 9 if the translation tables are to be indexed by dialed digits in the range 0 to 9. The default entry is 9.
	MAX	0 to 30	Maximum digits. If OSEL = MM, enter the maximum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MIN	0 to 30	Minimum digits. If OSEL = MM, enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.

Field descriptions for conditional datafill (Sheet 11 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	MZONE	0 to 63	Metering zone. If OSEL = MZONE, enter the metering zone of the call in the logical network as defined by selector LNET. The entry in this field is used by the international metering system to determine a tariff for the call.
	NETSRV_NAME	IPHS, DPHS, MOBILE, DA, TELEGRAM, or NCC	Network service name. If the entry in subfield OSEL is NETSRV, datafill this refinement. The entry in this field determines the parameters in an outgoing IAM message. Enter IPHS to indicate a call to an independent personal handyphone system subscriber. Enter DPHS to indicate a call to a dependent personal handyphone system subscriber. Enter MOBILE to indicate a call to a mobile subscriber. Enter DA to indicate a call to the directory assistance operator. Enter TELEGRAM to indicate a call to the Telegram office. Enter NCC to indicate a call routed to one of the following networks: • New Common Carrier serving international toll traffic • New Common Carrier serving national toll traffic
	NOA	INTL, LOCAL, NATL or NET	Nature of address. Enter the required called party nature of address. • INTL (international) • LOCAL (local) • NATL (national) • NET (Intelligent Network Services)

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 12 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	ONNET	Y or N	Call on virtual private network. If OSEL = VPN, enter Y if the call stays within the defined virtual private network. Otherwise enter N (no). Overlapped outpulsing is only supported on off-network calls. Calls processed without the ONNET subfield set to Y are off-network calls. Meridian digital centrex (MDC) calls are treated as off-network calls, and therefore overlapped outpusling is supported for MDC calls.
	PCCDR	000 to 999	Pseudo country code digits. If OSEL = PCC, enter the three-digit pseudo country code (PCC). If a two-digit PCC is required, it must be padded by a leading zero. The pseudo country code is used to record a particular pseudo country code. This can be extracted for use by system logic later, for example, two-stage outpulsing.
	PFDIGS	0 to 24	Number of prefix digits. If OSEL = PF, enter the number of prefix digits. If prefix digits have been identified in a previous table, then this number is added to the existing value. prefix digits are not stored in call detail records, outpulsed, or used to index the next translation table. ***Note:*** If refinements PF and CONSUME are both datafilled for the same tuple, only the entry for the greater of the two values is processed; the other entry is ignored.
	PFXAMA	0 to 4 digits, or N	Called party number prefix in AMA. If NOA is set to NTL, datafill PFXAMA with 0011. If NOA is set to NATL, datafill PFXAMA with 0. If NOA is set to LOCAL or NET, datafill PFXAMA with N.
	PRIVL	Y or N	Privileged user. If OSEL = PRIVL, enter Y (yes) if the user is a privileged user (for example, operator). Otherwise, enter N (no).

Field descriptions for conditional datafill (Sheet 13 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	SKIPDIGS	0 to 24	Skip digits. If the entry in subfield OSEL is EXTCIC, enter data for this refinement. This field indicates the number of digits to skip before removing the carrier digits from the digit stream. This field operates on the B (called) number, so it is assumed that the system signals the CIC as part of the B number.
	SOURCE	PRESUB or DIALED	Carrier identification code source. If the entry in subfield OSEL is EXTCIC, enter data for this refinement. This field specifies the source of the CIC as follows: • PRESUB - presubscribed. Table TRKGRP defines the CIC. • DIALED - dialed. The subscriber enters the CIC when dialing a call.
	STOPRTMR	Y or N	Stop remote timer. Enter Y (yes) to disable the address complete message (ACM) timer of the remote switch. Default is N (no).
	XLAID	FREE, GENERIC1, GENERIC2, or GENERIC3	AMA translation identifier. If OSEL = AMAXLAID, enter the AMA translation identifier to be used against table AMAXLAID.

NSCHEAD (continued)

Field descriptions for conditional datafill (Sheet 14 of 14)

Field	Subfield or refinement	Entry	Explanation and action
	XLASYS	AC, AM, CT, DN, FA, FT, NIL, NSC, OFC, or PX	Translation system. If OSEL = XLT, enter the next translation system to use, followed by a space, and datafill subfield XLANAME (the instance of the translation system). The choice of translation systems are: • AC (access) • AM (ambiguous) • CT (country) • DN (directory number) • FA (foreign area) • FT (utility) • NIL • NSC (number service code) • OFC (office) PX (prefix) ***Note:*** The XLASYS value NIL must not be datafilled by the operating company. NIL is only used to satisfy internal software functionality.
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. If OSEL = XLT, enter the translation name of the table instance within the XLASYS that the call is routed to.

Table history

APC010

Added field TLC_CHARGE to option TLC in the FEATINFO selector.

APC009

Added option NETSRV to selectors CONT and RTE.

Added option JES to selector FEATINFO.

APC008.1

The following updates were introduced in APC008.1 to table AMHEAD:

- Field CHKCCR was added to all subscriber types (SUBSCTYP) that are part of the SUBSCRN option of selector FEATINFO VALIDATE.
- Field EARLYCPG was added to selector FEATINFO.
- Option IAA was added to selectors ROUTE and CONT.

GL04

Added FLEXCHG option to the CONT and RTE selectors. Added CHGIND option to the CONT and RTE selectors. Added ISUPPREF option to the CONT and RTE selectors.

APC006

PERSONAL subscriber type added to SUBSCRN option of FEATINFO VALIDATE.

NA005

The following updates were introduced to table AMHEAD in NA005:

- increased the number for universal translations support to 30 digits, affecting the following options, subfields or selectors:
  - ACF
  - AFTER
  - CONSUME
  - DEL
  - DMOD
  - DNRTE
  - INSRT
  - MAX
  - MIN
  - PF
  - REPL
- added option SF and its refinement SFDIGS to selector DNRTE.
- added note about potential conflict with refinements PFIGS and CONSUME.

NSCHEAD (end)

APC04

Subfield CDN of selectors CONT and RTE was modified to incorporate subfields NOA, STOPRTMR, and PFXAMA.

BCS35

Add CGNDN and refinements PRDFXCLI and INSRTCLI.

Add CPMCALL to CONT and RTE selectors.

Change range of values for MAXIDX.

Supplementary information

This section provides information on datafilling table NSCHEAD for specific applications, and product descriptive information related to table NSCHEAD.

Direct interaction with office parameters:

- ICAMA_REQUESTED in table OFCVAR
- IAA_REQUESTED in table OFCVAR
- IMEI_ACCEPTABLE_FOR_EMRG_CALL in table OFCVAR

NSCRTE

Table name

Number Service Code Route Table

Functional description

Table NSCRTE is a member of the universal translation tables. The universal translation tables are organized to translate the incoming digit string in segments. Table NSCRTE translates the number service code digit segment, together with tables NSCHEAD and NSCCODE.

For related information, refer to table ACRTE. For a description of the universal translation tables, see table ACHEAD.

Datafill sequence and implications

Table NSCHEAD must be datafilled before tables NSCRTE and NSCCODE.

Table size

Refer to table ACRTE.

Datafill

Field names, subfield names, and valid data ranges for table NSCRTE are described in table ACRTE.

Datafill example

Refer to table ACRTE.

Table history

NA017

Feature 59035336 introduces the Supergroup (SG) option.

BCS35

Table NSCRTE created.

NWMAOCR

Table name

Network Management Automatic Out-of-Chain Reroute (NWMAOCR)

Functional description

Table NWMAOCR lists the following information for a maximum of 64 (0-63) automatic out-of-chain reroutes:

- route subtable number assigned to AOCR
- index to be activated in the reroute subtable
- activating CLLI used to activate the control
- percent overflow threshold of the activating CLLI that must be exceeded before the control is activated
- overflow CLLI of the group to which traffic is to be rerouted. If there is a group control on this CLLI, it should be removed
- overflow percentage on the CLLI that deactivates the reroute if it is active

The AOCR control is activated when the percent overflow on the activating CLLI is greater than its threshold and the percent overflow on the overflow CLLI is less than or equal to its threshold. The AOCR control is deactivated when the percent overflow on the activating CLLI is less than or equal to its threshold or the percent overflow on the overflow CLLI is greater than its threshold.

The check is done every five minutes to activate or deactivate the control.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table NWMAOCR.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
AOCR		0-63	AUTOMATIC OUT OF CHAIN REROUTE NUMBER. Enter the number assigned to the automatic out-of-chain reroute by the operating company.
RRTNO		0-255	REROUTE SUBTABLE NUMBER. Enter the reroute number of the NWMRROUT table to which the automatic out-of-chain reroute number is assigned.

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
RRTSUB		0-15	REROUTE SUBTABLE INDEX. Enter the Index into the NWMRROUT subtable to which the automatic out-of-chain reroute number is assigned.
ACTCLLI		alphanumeric	ACTIVATE CLLI. Enter the CLLI that activates the control.
ACTPCT		0-100	ACTIVE PERCENTAGE. Enter the percentage overflow threshold on the active CLLI that has to be exceeded to activate the control.
OVFLCLLI		alphanumeric	OVERFLOW CLLI. Enter the CLLI of the group to which traffic is to be rerouted. If a group control is active on the CLLI the AOCR control is removed if activated.
OVFLPCT		0-100	OVERFLOW PERCENTAGE. Enter the percentage overflow threshold on the overflow CLLI that must be exceeded to deactivate the reroute if it is active.

Datafill example

The following example shows sample datafill for table NWMAOCR.

```
AOCR  RRTNO  RRTSUB   ACTCLLI  ACTPCT  OVFLCLLI  OVFLPCT
-------------------------------------------------------
   0      0       0   TERMBX01     50  HULLPQ1077X0   30
```

NWMCLLI

Table name

Network Management CLLI (NWMCLLI)

Functional description

Table NWMCLLI table specifies the following information for each CLLI:

- whether the route is a final one
- two values for the percentage of overflow for the trunk group that initiates a system printout
- two values for the connections for each circuit for each hour for the trunk group that initiates a system printout
- two values for the attempts for each circuit for each hour or the trunk group that initiates a system printout.

The above sets of values are for use by the Operational Measurement Report table.

Table size

The maximum effective size for this table is 8191 tuples.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table NWMCLLI.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CLLI		alphanumeric	COMMON LANGUAGE LOCATION IDENTIFIER. Enter the CLLI of the trunk group to which the data entry applies.
FINAL		N or Y	FINAL ROUTE. Enter Y when the trunk group is a final route; otherwise, enter N. When the command DISPLAY FINALS is input from the network management MAP terminal, all trunk groups with this field equal to Y display. An entry of Y in this field can be used for any trunk group whether it is a final route or not and display on the network management MAP terminal when using the above command.

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
PCO1		0-100	FIRST PERCENTAGE OF OVERFLOW. Enter the first value of the percentage of overflow on the trunk group that initiates a system printout.
PC02		0-100	SECOND PERCENTAGE OF OVERFLOW. Enter the second value of overflow on the trunk group that initiates a system printout.
CCH1		0-255	FIRST CONNECTIONS FOR EACH CIRCUIT FOR EACH HOUR. Enter the first value of connections for each circuit for each hour that initiates a system printout.
CCH2		0-255	SECOND CONNECTIONS FOR EACH CIRCUIT FOR EACH HOUR. Enter the second value of connections for each circuit for each hour that initiates a system printout.
ACH1		0-255	FIRST ATTEMPTS FOR EACH CIRCUIT FOR EACH HOUR. Enter the first value of attempts for each circuit for each hour that initiates a system printout.
ACH2		0-255	SECOND ATTEMPTS FOR EACH CIRCUIT FOR EACH HOUR. Enter the second value of attempts for each circuit for each hour that initiates a system printout.

Datafill example

The following example shows sample datafill for table NWMCLLI.

```
CLLI        FINAL  PC01  PC02  CCH1  CCH2  ACH1  ACH2
-------------------------------------------------------
OTWAON230IT0    Y   10     10   10      0     0     0
```

NWMIDOC

Table name

Network Management Internal Dynamic Overload Control Table

Functional description

Table NWMIDOC lists the following information for each of the two levels of Dynamic Overload Control, called machine congestion levels 1 and 2 (MC1 and MC2):

- signal distribution (SD) group and point assignments
- ON threshold and the length of time the threshold is exceeded before the control is activated
- OFF threshold and the length of time the threshold is exceeded before the control is deactivated

Dynamic Overload Control levels are triggered by the machine. Levels MC1 and MC2 are triggered by either the length of the multifrequency (MF) receiver wait queue, or from CPU usage percentage for call processing.

Dynamic Overload Control level MC3 is triggered if the office has lost call processing ability. For additional information on Internal Dynamic Overload Control (IDOC) level 3, see office parameter SDOC3_ENABLE in table OFCOPT and alarm SD point SDOC3CUTOFF in table ALMSD.

Datafill sequence and implications

Tables NWMSD and NWMSDPT need to be datafilled prior to table NWMIDOC for the implementation of IDOC controls.

This change is needed since NWMIDOC is also used for NWMSILC (Network Management Selective Incoming Load Controls) controls. For implementing SILC control, in the DMS 250, the datafill sequence is not important.

Table size

0 to 3 tuples

Datafill

The following table lists datafill for table NWMIDOC.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
IDOCLEV		1 to 3	*Internal dynamic overload control level* Enter the Internal Dynamic Overload Control (IDOC) level.
MFONTHLD		0 to 100	*Multifrequency ON threshold* Enter the threshold that activates the control. For levels 1 and 2, the range is 0 to 100. For level 3, enter 1 to satisfy the table editor. An entry outside this range is invalid. There is no default value for this field.
MFONFILT		0 to 15	*Multifrequency ON filter* Enter the number of 1-min intervals the ON threshold value must exceed before the control is activated. For levels 1 and 2, the range is 0 to 15. For level 3, enter 1 to satisfy the table editor. There is no default value for this field.
MFOFTHLD		0 to 100	*Multifrequency OFF threshold* Enter the threshold that deactivates the control. For levels 1 and 2, the range is 0 to 100. For level 3, enter 1 to satisfy the table editor. An entry outside this range is invalid.
MFOFFILT		0 to 15	*Multifrequency OFF filter* Enter the number of 1-min intervals the OFF threshold value reaches before the control is deactivated. For levels 1 and 2, the range is 0 to 15. For level 3, enter 1 to satisfy the table editor.
CPONTHLD		0 to 100	*CPU ON threshold* Enter the threshold that activates the control. For levels 1 and 2, the range is 0 to 100. For level 3, enter 1 to satisfy the table editor. An entry outside this range is invalid.

NWMIDOC (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CPONFILT		0 to 15	*CPU ON filter* Enter the number of 1-min intervals the ON threshold value must exceed before the control is activated. For levels 1 and 2, the range is 0 to 15. For level 3, enter 1 to satisfy the table editor. There is no default.
CPOFTHLD		0 to 100	*CPU OFF threshold* Enter the threshold that deactivates the control. For levels 1 and 2, the range is 0 to 100. For level 3, enter 1 to satisfy the table editor. An entry outside this range is invalid.
CPOFFILT		0 to 15	*CPU OFF filter* Enter the number of 1-min intervals the OFF threshold value is reached before the control is deactivated. For levels 1 and 2, the range is 0 to 15. For level 3, enter 1 to satisfy the table editor.
SDGROUP		0 to 511	*Signal distribution group* Enter the signal distribution (SD) group, in table NWMSD, of the SD point assigned to the IDOC.
SDPT		0 to 6	*Signal distribution point* Enter the SD point in table NWMSDPT, assigned to the IDOC.

Datafill example

The following example shows sample datafill for table NWMIDOC.

MAP display example for table NWMIDOC

```
IDOCLEV MFONTHLD MFONFILT MFOFTHLD MFOFFILT CPONTHLD CPONFILT
CPOFTHLD
CPOFFILT SDGROUP SDPT
_____________________________________________________________________________

      1        2        2        2        2        4        2
4
       2       0    4
      2        3        2        2        2        5        2
4
       2       0    5
      3        1        1        1        1        1        1
1
       1       0    6
```

NWMPPLN

Table name

Network Management Preplan Control (NWMPPLN)

Functional description

Table NWMPPLN lists for each preplan (maximum 256) the maximum number of trunk groups (1-32) that can be assigned to the preplan.

The Network Management Preplan (PREPLANS) table lists the following information for each preplan:

- short CLLI to which the preplan control applies
- type of control which applies to the preplan

The following types of control can be applied:

- directional reservation equipment (DRE)
- protective reservation equipment (PRE)
- cancel to (CANT)
- cancel from (CANF)
- skip (SKIP)
- incoming trunk busy (ITB)
- selective trunk reservation (STR)

Table size

Memory is allocated for table NWMPPLN by the value of field SIZE for Item NWMPPLN in table SYSDATA.

The length of table PREPLANS is dependent upon the values of field NCTRLS in table NWMPPLN. The size of table PREPLANS is specified in field SIZE for item PREPLANS in the table SYSDATA.

Field descriptions for table NWMPPLN

The following table describes field names, subfield names, and valid data ranges for table NWMPPLN.

Field	Subfield or refinement	Entry	Explanation and action
PPLN		0-255	PREPLAN NUMBER. Enter the preplan number.
NCTRLS		0-32	NUMBER OF PREPLAN CONTROLS. Enter the maximum number of trunk group controls that can be assigned to the preplan number.
CCS		Y or N	COMMON CHANNEL SIGNALING. If value is Y, an entry in table CCSDOC may refer to a control in this preplan. If value is N, an entry in table NWMSCPT may refer to this preplan.

NWMSCPT

Table name

Network Management Scan Point Table

Functional description

Table NWMSCPT identifies the function performed by each of the assigned scan points in the network management scan groups.

For related information, refer to table NWMSC.

Datafill sequence and implications

The following tables must be datafilled before table NWMSCPT:

- CLLI
- NWMSC
- NWMPPLN
- TMINV

Table size

0 to 256 tuples

Memory is automatically allocated for seven scan points for each of the scan groups specified in table DATASIZE by field SIZE with field DATSKEY is set to NWMSC.

Datafill

The following table lists datafill for table NWMSCPT.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
SCGRPPT		see subfields	*Scan group and point* This field is the key to the table and consists of subfields SCGROUP and SCPT.
	SCGROUP	0 to 255	*Scan group* Enter the scan group to which the scan point belongs. This entry corresponds to field SCGROUP in table NWMSC.

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	SCPT	0 to 6	*Scan point* Enter the scan point number.
NORMST		0 or 1	*Normal state* This entry specifies the normal state of the scan point. Enter 0 (zero) if the scan point is normally off or open. Enter 1 if the scan point is normally on or closed.
SCDATA		see subfield	*Scan data* This field consists of subfield SCPTTYP and its refinements.
	SCPTTYP	PPLNRRTEor TKNMB	*Scan point type* Specify the scan point type. Enter PPLN for preplanned control and datafill refinemenat PPLNNO. Enter RRTE for key reroute and datafill refinements RRTNO and RRTSUB. Enter TKNMB for trunk network management busy if the scan point is associated with a trunk network management busy (which allows the operating company to select any outgoing or two-way trunk circuit or group of trunk circuits and remove them from or return them to service). Datafill refinement TDATA.
	PPLNNO	0 to 255	*Preplanned control number* If the entry in subfield SCPTTYP is PPLN, datafill this refinement. Enter the preplanned control number with which the scan point is associated. See tables NWMPPLN and PREPLANS.
	RRTNO	0 to 1023	*Reroute number* If the entry in subfield SCPTTYP is RRTE, datafill this refinement. Enter the reroute number of table REROUTE with which the scan point is associated.

NWMSCPT (continued)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	RRTSUB	0 to 15	*Reroute subtable index* If the entry in subfield SCPTTYP is RRTE, datafill this refinement. Enter the index into subtable REROUTE.NWMRROUT with which the scan point is associated.
	TDATA	see subfields	*Trunk data* If the entry in subfield SCPTTYP is TKNMB, datafill this refinement. This field consists of subfield CTRLTYP.
	CTRLTYP	CKT or GRP	*Control type* If only one circuit of a trunk group is to be busied, enter CKT and datafill refinements CLLI and CKTNO as explained below. If a complete trunk group is to be busied, enter GRP and datafill refinement CLLI only.
	CLLI	alphanumeric (1 to 16 characters)	*Common language location identifier* Enter the common language location identifier (CLLI) assigned to the trunk group for which one circuit or the entire trunk group is to be busied. The CLLI must appear in table CLLI.
	CKTNO	0 to 9999	*Circuit number* If the entry in refinement CTRLTYP is CKT, datafill this refinement. Enter the external trunk circuit number that is to be busied.

Datafill example

The following example shows sample datafill for table NWMSCPT.

NWMSCPT (end)

MAP display example for table NWMSCPT

```
SCGRPPT NORMST                                  SCDATA
_______________________________________________________________

    0 0      0                           PPLN   0
```

NWMSD

Table name

Network Management Signal Distributor Group (NWMSD)

Functional description

The NWMSD table identifies the signal distributor circuit location and the type of card for each signal distributor group assigned to network management. A signal distributor group consists of seven signal distributor points numbered 0-6.

Each signal distributor card consists of 14 signal distributor points that make up two signal distributor groups. Each signal distributor group is assigned an arbitrary network management signal distributor group number (0-511).

Each network management signal distributor group has an associated network management signal distributor point subtable (NWMSDPT). Each subtable is automatically allocated memory for seven signal distributor points, and each point is automatically assigned as spare, network management signal distributor type (NWMSDTYPE) equal to FREE, and NORMAL state (NORMST) equal to 0.

Signal distributor points can be assigned to the following types of network management functions.

- Trunk Group Busy (TGB). If the signal distributor point is assigned to the trunk group busy feature, the signal distributor point can be assigned to a maximum of 32 CLLIs. When all trunks assigned to the CLLIs are busy, the signal distributor point is activated, which lights a trunk group busy lamp.
- Internal Dynamic Overload Control (IDOC). A signal distributor point can be assigned to each of the network management dynamic overload control levels 1-3. When dynamic overload for the given level is triggered automatically (levels 1 and 2) or manually (level 3), the signal distributor point is activated, which can be transmitted to a subtending office.

Datafill sequence and implications

Datafill table CLLI before table NWMSD. Table NWMSD has a pseudo-fixed common language location identifier (CLLI) code of NWMSD. If NWMSD is not datafilled in table CLLI, additions to table NWMSD are not possible.

Table size

Table size increases immediately upon restart.

Field descriptions for table NWMSD

The following table describes field names, subfield names, and valid data ranges for table NWMSD.

Field	Subfield or refinement	Entry	Explanation and action
NWMSDGRP		0 to 511	NETWORK MANAGEMENT SIGNAL DISTRIBUTOR GROUP. Enter the network management signal distributor group number assigned to the signal distributor group.
TMTYPE		MTM, TM2, TM4, ATM, TM8, OAU, T8A, TMA, MMA, RSM, TAN, STM, RMM, PTM, DTM, CTM	TRUNK MODULE TYPE. Enter the type of trunk module on which the signal distributor card is located.
TMNO		0 to 2047	TRUNK MODULE NUMBER. Enter the trunk module number assigned to the miscellaneous trunk module on which the signal distributor card is located.
TMCCTNO		0 to 29	TRUNK MODULE CIRCUIT NUMBER. Enter the trunk module circuit number to which the network management signal distributor group is assigned.
CARDCODE		2X55AA, 2X57AA	CARDCODE. Enter the NT Code to which the network management signal distributor group is assigned.

Datafill example for table NWMSD

The following example shows sample datafill for table NWMSD.

NWMSD (end)

NWMSDDRP	TMTYPE	TMNO	TMCKTNO	CARDCODE
500	MTM	200	20	2X5LAA

NWMSDPT

Table name

Network Management Signal Distributor Point Table

Functional description

Table NWMSDPT is controlled by table NWMSD. Entries to table NWMSDPT are not added as free points with a normal state (NORMST) equal to 0 (zero). Points must be added to the table as they are assigned.

The POS command has two parameters: signal distribution (SD) group and SD point. Once positioned on a table entry, a point can be assigned to the following types of network management functions.

Trunk Group Busy (TGB)

If the SD point is assigned to the Trunk Group Busy (TGB) feature, the SD point can be assigned a maximum of 32 common language location identifiers (CLLI). If all trunks assigned to the CLLIs are busy, the SD point is activated, which in turn lights a trunk group busy lamp.

Internal Dynamic Overload Control (IDOC)

A SD point can be assigned to each of the network management Dynamic Overload Control (DOC) levels 1 and 2. When DOC is activated, the assigned SD point distributes signals to a subtending office.

To assign Internal DOC (IDOC) level 3, see office parameter SDOC3_ENABLE in the table OFCOPT and alarm SD point SDOC3CUTOFF in table ALMSD.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table NWMSDPT.

Table size

0 to 512 tuples

Memory is dynamically allocated in table DATASIZE in field SIZE with field DATSKEY set to NWMSDPT.

NWMSDPT (continued)

Datafill

The following table lists datafill for table NWMSDPT.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
SDGRPPT		see subfields	*Signal distributor group point* This is the key field that uniquely identifies each entry. The field consists of subfields SDGROUP and SDPOINT.
	SDGROUP	0 to 511	*Network management signal distributor group point* This is the signal distributor group of the point being defined. It must be an element of table NWMSD.
	SDPOINT	0 to 6	*Signal distributor point* Enter the number of the signal distributor (SD) point.
NORMST		0 or 1	*Normal state* Enter the number of the normal state of the SD point (0 [zero] if the normal state is off or open, 1 if the normal state is on or closed).
SDDATA		see subfield	*Signal distributor data* This field consists of subfield SDPTTYP.
	SDPTTYP	IDOC or TGB	*Signal distributor point type* If the SD point is assigned to Internal Dynamic Overload Control (IDOC), enter IDOC and datafill refinement IDOCLEV. If the SD point is assigned to feature Trunk Group Busy and the entry is first for the SD point, enter TGB and datafill refinement TGB_CLLILIST. If the entry is not first for the SD point, leave this field blank.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	IDOCLEV	1, 2, or 3	*Internal Dynamic Overload Control level* If the entry in subfield SDPTTYP is IDOC, datafill this refinement. Enter the IDOC level assigned to the SD point.
	TGB_CLLILIST	alphanumeric (up to 16 characters)	*Trunk group busy common language location identifier* If the entry in subfield SDPTTYP is TGB, datafill this refinement. Enter up to 32 common language location identifier (CLLI) codes that are assigned to each of the trunk groups in table CLLI. If less than 32 codes are required, end the list with a $ (dollar sign).

Datafill example

An example of datafill is shown below for the seven SD points in network management SD group 0 for table NWMSDPT.

SD points 0 to 2 are assigned to individual trunk groups for the Trunk Group Busy feature.

SD point 3 is assigned to more than one trunk group for the Trunk Group Busy feature.

SD points 4 and 5 are assigned to IDOC levels 1 and 2 respectively.

NWMSDPT (end)

MAP display example for table NWMSDPT

```
SDGRPPT NORMST
                                                                SDDATA
_____________________________________________________________________________

    0 0      0
TGB (OTWAON23CG00) $

    0 1      0
TGB (SMFLON1801T0) $

    0 2      0
TGB (TOROON0101T0) $

    0 3      0
TGB (TOROON0101T0) (VANCBC0104T0) (WNDSON1201T0) $

    0 4      0
                                                              IDOC 1

    0 5      0
                                                              IDOC 2
```

NX25

Table name

X.25 Physical Links (NX25) table

Functional description

Table NX25 defines the X.25 physical links and enables the 6X91BA card for the DMS/DV1 call history information processing system (CHIPS). The X.25 link specifies the interface between data terminal equipment and data circuit termination equipment operating on a public packet switching network. Table NX25 establishes the connection between the 6X91BA firmware and the X.25 Level 3 utility.

The 6X91BA card, an intelligent peripheral of the UCS DMS-250 switch equipment, is used to implement the link levels. Each 6X91BA card implements one physical link.

Datafill sequence and implications

Datafill the following tables after table NX25:

- NPACSESS
- SESSDEF
- DPFTDEF
- DPFTSTAT

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table NX25.

(Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
NX25NO		0 to 29	NX25 NUMBER. Enter the number identifying the 6X91BA card.
IOCNO		0 to 19	IOC NUMBER. Enter the number identifying the IOC where the card is placed.
IOCCKTNO		0 to 35	IOC CIRCUIT NUMBER. Enter the number identifying the slot in the IOC where the card is placed. Entry must be a multiple of 4.
HEQPEC		6X91BA	HARDWARE EQUIPMENT ENGINEERING CODE. Enter the card code 6X91BA.

NX25 (continued)

(Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
BAUD		B110, B134PTS, B150, B300, B600, B1200, B1800, B2000, B2400, B3600, B4800, B7200, B9600, B19200	BAUD RATE. Enter the baud rate of the card.
APPL		NX25SLP, NX25MLP, MCCS, CAC, TESTPFS, NCSPVC, MTXLAPB, SLP,MLP	APPLICATION. Enter the physical file system (PFS) application allowed to use the data link controller card: • NX25SLP=single link procedure • CAC=call authorization center • NX25MLP=multilink procedure • MCCS=mechanized calling card service • TESTPFS=PFS test • NCSPVC=network control service private virtual connection
L2CONFIG		DTE, DCE	This field determines if the UCS DMS-250 switch is the DTE or DCE.
T1		8 to 255	TIMER T1. Enter the value in 100ms. units of the level 2 T1 timer. Recommended values are: NX25SLP, NX25MLP, MCCS, CAC, TESTPFS = 50 (5 seconds), and NCSPVC = 8 (8 seconds)
N1		1 to 230	Enter the size of the I-field or user data field in a level 2 I-frame. Recommended values are: NX25SLP, MCCS, CAC, TESTPFS, NCSPVC = 131, and NX25MLP = 133
N2		1 to 255	The number of transmission attempts for a frame. This corresponds directly to the level 2 N2 system parameter. Recommended values are: NX25SLP, NX25MLP, MCCS, CAC, TESTPFS = 4

(Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
WINDOW		1 to 7	L2 WINDOW. Enter the size of the level 2 window. Recommended values are: NX25SLP, NX25MLP, MCCS, CAC, TESTPFS = 7, and NCSPVC = 2
ADMIN		Vector of up to 16 characters	INFORMATION FIELD. Enter the information pertaining to the link termination point. The text should convey useful information. This text may eventually appear as part of a log that pertains to a particular link.

Datafill example

The following example shows sample datafill for table NX25.

```
NX25NO          IOCNO   IOCCKTNO    HEQPEC      BAUD
APPL    L2CONFIG    T1  N1  N2  WINDOW      ADMIN
_____________________________________________________
0               2       28          6X91BA      B9600
NX25SLP     DCE 50  131 4   7   9           DALL_NO.1
```

OCCINFO

Table name

Other Common Carrier Information

Functional description

Table OCCINFO defines the attributes for carriers that provide service for the DMS switch and screens calls for carrier compatibility. For example, table OCCINFO permits systems to send international traffic only to carriers that can handle international traffic.

For related information, refer to table OCCRDIG.

Datafill sequence and implications

Complete the following tables before table OCCINFO.

- OCCNAME

Table size

0 to 1000 tuples

You can enter attributes in table OCCINFO for up to 999 carriers. One tuple exists for the nil carrier (NILC).

Datafill

The following table lists datafill for table OCCINFO.

Field descriptions (Sheet 1 of 8)

Field	Subfield	Entry	Explanation and action
CARRNAME	MAP display example for table AMATKOPT	alphanumeric (1 to 16 characters)	Carrier name. Enter the carrier name or an abbreviation of the carrier name as it appears in table OCCNAME. ***Note:*** USE_PREVIOUS is not valid datafill for the CARRNAME field.
CARRNUM		numeric (0000 to 9999)	Carrier number. Enter the carrier access code (CAC). The CAC is equal to the XXXX digits in the equal access (EA) prefixes (10XXXX or 950YXXXX).

Field descriptions (Sheet 2 of 8)

Field	Subfield	Entry	Explanation and action
ACCESS		EAP, FGC, INTERIM, OTC, TRANS, or NONE	Access arrangement. Enter one of the following access types accepted by the carrier to handle a call: • EAP-equal access plan dialing over feature group D (FGD) signaling • FGC-feature group C (FGC) dialing over FGC signaling • INTERIM-interim dialing over FGD signaling • OTC-FGC dialing over FGC signaling (local billing) • TRANS-both interim and EAP dialing over FGD signaling • NONE-no access ***Note:*** Wireless calls do not support value OTC.
ORIGCARR		Y or N	Original carrier. Enter Y (yes) to define this carrier name as the original carrier. Otherwise, enter N (no). Define one carrier name as the original carrier for each unique carrier number. If two or more carrier names contain with the same carrier number, define one (and only one) of the duplicate carriers as the original carrier by typing "Y" in this field.
INTER		Y or N	Inter-local access and transport areas (LATA). Enter Y if the carrier can handle traffic between LATAs. Otherwise, enter N.
INTNTL		Y or N	International. Enter Y if the carrier can handle international traffic. Otherwise, enter N.
INTRA		Y or N	Intra-LATA. Enter Y if the carrier can handle traffic within the same LATA. Otherwise, enter N.
ANI		Y or N	Automatic number identification (ANI). Enter Y if the carrier requires that ANI digits be sent with the called number. Otherwise, enter N.

OCCINFO (continued)

Field descriptions (Sheet 3 of 8)

Field	Subfield	Entry	Explanation and action
FANI		Y or N	Flexible automatic number identification (FANI). FANI II codes can be used to identify line originators. Enter Y if the carrier can receive FANI information digits in the place of ANI information digits from TOPS and end offices. Otherwise, enter N.
ONISCRN		Y or N	Operator number identification (ONI) screening. Enter Y if ONI traffic requires a screen by an operator or centralized automatic message accounting (CAMA) position before outpulsing to the carrier. Otherwise, enter N.
AD1		Y or N	Abbreviated dialing number one. Enter Y if you can access the carrier using abbreviated dialing. Otherwise, enter N.
OVERLAP		Y or N	Overlap. Enter Y if the carrier receives digits from the access tandem (AT) or the equal access end office (EAEO) using overlap outpulsing. Otherwise, enter N.
INTERS		Y or N	Inter-state. Enter Y if the carrier can handle traffic between states. Otherwise, enter N.
INTRAS		Y or N	Intra-state. Enter Y if the carrier can handle traffic within the same state. Otherwise, enter N.

Field descriptions (Sheet 4 of 8)

Field	Subfield	Entry	Explanation and action
TERMREC		LONG or SHORT	Terminating access record. Enter the length of the terminating access record produced for the carrier. The LONG format includes the same informational fields as the SHORT format, plus the following fields: • service observed • operator action • service feature • overseas indicator • carrier connect date • carrier connect time • elapsed time from carrier • inter-LATA or international carrier (IC/INC) call event status If the additional fields are not necessary, enter SHORT for the short format. Refer to the applicable automatic message accounting (AMA) reference guide for a more detailed description of record termination.
OCCSEPNO		numeric (0 to 127)	Other common carrier (OCC) separation number. Enter the OCC separation number used for the carrier in the traffic separation measurement system (TSMS).
CONTMARK		+	Continuation mark. Enter + to indicate that additional information for this tuple exists in the next record.
OPSIG		FGRPC, FGRPD, or NONE	Operator signaling. Enter the type of operator signaling provided by the carrier. The availability of this field eliminates the need to establish two carriers with the same access code in table OCCINFO to enable transitional or EAP carriers for FGC operator signaling.

OCCINFO (continued)

Field descriptions (Sheet 5 of 8)

Field	Subfield	Entry	Explanation and action
PICIND		Y or N	Presubscription indicator. Enter Y if the carrier receives the presubscription indicator. Otherwise, enter N. Complete this field for every entry in table OCCINFO.
NOA950		Y or N	Nature of address indicator. Enter Y to specify that the nature of address indicator in the calling party number parameter is a binary value of 1111110 (network specific: 950+ call from public station, hotel/motel line, or non-equal access end office [EAEO]). Otherwise, enter N. The default value of N causes no change in the existing operation of the switch.
INCCPN		Y or N	Include calling party number. Enter Y if the existing operation of the switch requires no change. Enter N to indicate that the calling party number parameter is absent from any initial address message (IAM) sent to this carrier. The default value for this field is Y.
DTMFIND		Y or N	Rotary dial or dual-tone multifrequency (DTMF) indicator. Enter Y if the carrier receives the DTMF indicator on operator services calls routed directly to the carrier. Otherwise, enter N. Complete field DTMFIND for every entry in table OCCINFO. Field DTMFIND is active only if feature package NTX888AA (Equal Access Operator Services Signaling [EAOSS]) is present.

Field descriptions (Sheet 6 of 8)

Field	Subfield	Entry	Explanation and action
OPSERV		Y or N	Operator services. Enter Y if the carrier accepts EAOSS and does not require the operating company to process 10XXX+0 and 00 calls to the carrier. Enter N if the carrier does not accept EAOSS and requires the operating company to process 10XXX+0 and 00 calls to the carrier. For example, for feature group C (FGC) carriers that provide their own operator services and do not accept feature group D (FGD) signaling, set field OPSERV to N to indicate that the carrier cannot accept EAOSS. The Traffic Operator Position System (TOPS) access tandem (AT) converts EAOSS signaling to FGC signaling for those carriers. Complete field OPSERV for every entry in table OCCINFO. Field OPSERV is active only if feature package NTX888AA (Equal Access Operator Services Signaling [EAOSS]) is present.
CACBLOCK		Y or N	Carrier access code (CAC) blocking. Enter Y if the carrier blocks all calls dialed with a CAC. Otherwise, enter N. Complete field CACBLOCK for every entry in table OCCINFO. Field CACBLOCK is active only if feature package NTX989AA (Carrier Access Code Blocking for IC/INC) is present.
CTDOA		Y or N	Carrier toll deny operator assisted. Enter Y to block operator assisted (OA) calls to this carrier if the subscriber has the carrier toll denied (CTD) line option enabled for this particular carrier. Otherwise, enter N. The default value for this field is N.
CMCMON		Y or N	Cellular mobile carrier (CMC) monitor. Enter Y to monitor the connection between the CMC and the inter-LATA or international carrier (IC/INC), and to place the called directory number in the originating IC/INC and terminating CMC billing records. Otherwise, enter N.

OCCINFO (continued)

Field descriptions (Sheet 7 of 8)

Field	Subfield	Entry	Explanation and action
SCRNWATS		Y or N	Enhanced wide area telephone service (WATS) screening. Enter Y if the carrier requires band screening on digits dialed from an enhanced WATS line. Otherwise, enter N. Field SCRNWATS is only applicable if feature package NTXA16AA (Enhanced WATS Operation [POTS]) is present.
CRMCRA		Y or N	Circuit reservation and acknowledgement messages. Enter Y if a circuit reservation message (CRM) is sent out from an access tandem (AT) to an inter-exchange carrier (IXC) on FGD calls outgoing over signaling system 7 (SS7) access-to-carrier (ATC) trunks, and if a subsequent circuit reservation acknowledgement (CRA) message is received at the AT from the IXC on FGD calls incoming to the AT on either multifrequency (MF) intertoll (IT) or superCAMA (SC) trunks. Otherwise, enter N.
ATPINCL		Y or N	Access transport parameter (ATP) included. Enter Y if the ATP is in the outgoing ISDN user part (ISUP) initial address message (IAM). Enter N if the ATP is discarded. This field is only applicable for TR444 calls (basic rate access [BRA] to ISUP calls).
INTRAOPR		Y or N	Intra-LATA operator. Enter Y if the carrier can handle 0- intra-LATA operator calls. Otherwise, enter N. The default value for this field is N.
INCASA		Y or N	In-call service access. This field determines whether Access to Messaging applies to calls handled by the carrier in table OCCINFO.
INTRCOIN		Y or N	Intra-LATA toll coin. Designates if a carrier can handle intra-LATA toll coin traffic. The default value for this field is N.

Field descriptions (Sheet 8 of 8)

Field	Subfield	Entry	Explanation and action
	CARRIER	alphanumeric	Intra-LATA toll coin route carrier. Represents the carrier that handles intra-LATA toll coin traffic. If the route carrier can handle intracoin traffic, field INTRCOIN is set to Y. The default value for this field is NILC.
ARBLKPVT		Y or N	Automatic Recall blocking of private calls. This field indicates whether a carrier can complete AR calls to private numbers. When set to Y (yes), and the applicable office parameter in table OFCENG (AR_BLOCK_PRIVATE_RES or AR_BLOCK_PRIVATE_CTX) is CARSCRN, AR activation attempts routed by the carrier are blocked, and sent to treatment. When set to N (no), the CASOP feature allows AR activation attempts to complete. Note: When the ACCESS field in this table is OTC (operating telephone company), all AR activation attempts to a private DN can complete regardless of the entry specifiied in field ARBLKPVT.

Datafill example

The following example shows sample datafill for table OCCINFO.

The example shows datafill for carrier CARR2 with carrier number 320, inter-LATA traffic, and an EAP access state.

MAP display example for table OCCINFO

```
CARRNAME CARRNUM ACCESS ORIGCARR INTER INTNTL INTRA ANI FANI ONISCRN
AD1 OVERLAP INTERS INTRAS TERMREC OCCSEPNO OPSIG PICIND NA0950
INNCCPN DTMFIND OPSERV CACBLOCK CTDOA CMCMON SCRNWATS CRMCRA ATPINCL
INTRAOPR INCASA INTRCOIN ARBLKPVT
---------------------------------------------------------------------
UNT2 0202 TRANS Y Y Y N Y N N Y Y Y N LONG 61 FGRPD N N Y N N N N N N
N N N Y N Y
```

OCCINFO (end)

Table history

NA012

Added FANI II explanation to table OCCINFO.

NA010

Feature Hawaiian Tel Phantom CIC creates table PCIC, which must be datafilled before table OCCINFO.

The meaning of field FANI is changed to include TOPS offices.

NA008

Feature Equal Access for DMS-100 Wireless added access arrangement restrictions for EA on the DMS-100 Wireless switch in release LWW00805 (NA008).

NA007

Added field INCASA.

NA006

Added fields INTRCOIN and CARRIER in accordance with the Intra-LATA PIC Enhancements feature.

Added field ARBLKPVT for CMS AR Screening of private Call (CASOP).

OCCMAP

Table name

Equal Access List Of Other Common Carrier Mapping Table

Functional description

Table OCCMAP is a read-only table that displays the reverse mapping used to convert a four-digit Carrier Identification Code (CIC) into a carrier index for table OCCINFO. The contents of table OCCMAP can be changed by setting field ORIGCARR to Y or N in table OCCINFO.

Table OCCMAP is used by certain services (such as Enhanced 800 Service) to convert a CIC returned from the database into an index into table OCCINFO.

For related information, refer to table OCCINFO.

Datafill sequence and implications

Table OCCMAP is read-only. Manual additions, deletions, and changes are not allowed. Because of this, there is no requirement to datafill other tables prior to table OCCMAP.

Table OCCMAP can only be written to through dump and restore procedures. Dump and restore procedures for table OCCINFO must be completed prior to dump and restore procedures for table OCCMAP.

Table size

0 to 1000 tuples

OCCMAP (continued)

Datafill

The following table lists datafill for table OCCMAP.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CICKEY		numeric(0000 to 9999)	*Carrier identification code key* This field contains a four-digit numeric value that specifies the Carrier Identification Code (CIC) key. Values outside of the 0000 to 9999 range are not valid and will not appear as entries for this field.
NAME		alphanumeric (1 to 16 characters)	*Carrier name* This field contains the code assigned to the trunk group member in table CLLI.

Datafill example

The following example shows sample datafill for table OCCMAP.

MAP display example for table OCCMAP

```
CICKEY  NAME
_____________________________________________________________
  0110   SSP
  0111   AG1
  0120   MCI
  0124  BUSY
  0222   AG2
  0333   AG3
  0444   AG4
  0488   ITT
  0555   AG5
  0666   AG6
  0777   GTE
  0888   TR1
  0999   TR2
```

Table history

BCS36

Table OCCMAP was introduced.

OCCNAME

Table name

Equal Access List of Other Common Carrier Names Table

Functional description

Table OCCNAME consists of one field (OCCNAME) and serves two functions for translations:

- It provides a list of connected carriers. There are 1000 tuples to accommodate 999 carriers and 1 null carrier (NILC). The office default carrier is considered the same as any other inter-LATA (local access and transport area) carrier (IC) or international carrier (INC). NILC is added internally as the last carrier of the list.
- It establishes the spelling standard for carrier names. Other tables that require carrier names are OCCINFO, TRKGRP, and STDPRT.

For related information, refer to table OCCRDIG.

Datafill sequence and implications

Complete table CLLI before table OCCNAME.

Complete table OCCINFO after table OCCNAME.

Table size

0 to 1000 tuples

Datafill

The following table lists datafill for table OCCNAME.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
OCCNAME		alphanumeric (1 to 16 characters)	Other common carrier name. Enter the carrier name or an alphanumeric abbreviation of the carrier name or enter the reserved carrier name USE_PREVIOUS if the generic recursive pretranslator is to be used. If the reserved carrier name USE_PREVIOUS is entered, a screen message appears to inform the operating company personnel that this carrier name has been datafilled.

Datafill example

The following example shows sample datafill for table OCCNAME.

MAP display example for table OCCNAME

```
OCCNAME
_____________________________________________________________
MCI
NONAME
```

Table history

NA010

Added entry for table OCCINFO under heading "Datafill sequence and implications."

NA006

Added description of screen message that appears after datafilling USE_PREVIOUS in accordance with the Dial Plan Translations Enhancements feature.

Supplementary information

None

OCCRDIG

Table name

Equal Access Other Common Carrier R Digit Table

Functional description

Overview

Equal access was created as a result of the divestiture of AT&T. As the name implies, it allows subscribers equal access to carriers that are equal in type, quality, and transmission, yet not necessarily equal in price.

The former territory of AT&T is divided into nonoverlapping local access and transport areas (LATA). These boundaries are generally based on a breakdown of the densest population areas; they have nothing to do with geographic, state, or city boundaries.

Traffic within a LATA is served by intra-LATA carriers, and traffic between LATAs is served by inter-LATA carriers (IC). International traffic is served by an international carrier (INC) or by an inter-LATA carrier serving as an INC.

Equal access is implemented in feature packages NTX186AA (Equal Access End Office) and NTX386AA (Access Tandem Switch). The Equal Access Other Common Carrier tables and forms are listed in the following table.

Functional description of table OCCRDIG

For calls to a numbering plan area (NPA) in world zone 1 but outside the continental United States, table OCCRDIG provides the regional code to outpulse to the access tandem (AT) or INC. The regional code is a single digit prefixed by 01. The code, written in the generic form 01R, follows the carrier identification digits during the first stage of the outpulsing sequence.

Equal access other common carrier tables

Table name	Form number	Form title
OCCRDIG	2357A, B	Equal Access Other Common Carrier R Digit Table Record
OCCNAME	2356A, B	Equal Access List of Other Common Carrier Names Table Record
OCCINFO	2355A, B	Equal Access Other Common Carrier Information Table Record

The possible values for the R digit follow:

- 0 reserved NPA
- 3 Canada
- 5 Mexico
- 7 Alaska
- 8 Hawaii
- 9 Caribbean

Datafill sequence and implications

The following tables must be datafilled before table OCCRDIG:

- CLLI
- OCCNAME
- LATANAME
- TRKGRP
- TRKSGRP
- OFRT
- OCCINFO
- LINEATTR
- LATAXLA

Table size

0 to 1000 tuples

OCCRDIG (continued)

Datafill

The following table lists datafill for table OCCRDIG.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
OCCRSNPA		numeric(200 to 999)	*Other common carrier R digit serving numbering plan area* Enter a valid NPA within world zone 1, but outside the continental United States.
OCCRDIG		numeric(0 to 9)	*Other Common Carrier R digit* Enter the R digit value for the region where the NPA defined in field OCCRSNPA is located. The values correspond to regions as follows: • 0 reserved NPA • 3 Canada • 5 Mexico • 7 Alaska • 8 Hawaii • 9 Caribbean The default value is 1.
OUTCNUS		Y or N	*Outside continental US* Specify whether the region defined in field OCCRDIG is outside the continental United States. Enter Y (yes) if the NPA defined in field OCCRSNPA is not reserved and is within a specific region that is outside the continental United States. Enter N (no) if the NPA defined in OCCRSNPA is reserved (700, 800, or 900) and is not within a specific region.

Datafill example

The following example shows sample datafill for table OCCRDIG.

OCCRDIG (end)

MAP display example for table OCCRDIG

```
OCCRSNPA    OCCRDIG     OUTCNUS
____________________________________________________________
213         1           Y
014         4           N
```

OCCSRV

Table name

Equal Access Other Common Carrier Service Data Table

Functional description

Table OCCSRV provisions 0ZZ/1NX codes for operator assist and direct dial call types on a carrier by carrier basis. The codes are used by AIN respsonse translation simplification features in an access tandem switch. The table contains carrier data for services or applications. This table contains fields KEY and OPTIONS. Field KEY represents the carrier name taken from table OCCNAME. Field OPTION contains the 0ZZ/1NX codes for FGD translations.

Datafill sequence and implications

The following tables must be datafilled before table OCCSRV.

- OCCNAME
- OCCINFO

Table size

The system dynamically allocates table size according to datafill.

Datafill

The following table lists datafill for table OCCSRV.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
KEY		None	Key. This field requires no datafill. Tuples in table OCCNAME define the key for this table.
	OPTIONS	See subfields	This field consists of subfield NSC0ZZ, NSC1NX, NSCOP0ZZ, NSCOP1NX and their refinements.
	NSC0ZZ	Three character alphanumeric string (N, 1 to 0 B to F)	NSC0ZZ. Datafill the 0ZZ value for FGD translation for national direct dial calls.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	NSC1NX	Three character alphanumeric string (N, 1 to 0 B to F)	NSC1NX. Datafill the 1NX value for FGD translation for international direct dial calls.
	NSCOP0ZZ	Three character alphanumeric string (N, 1 to 0, B to F)	NSCOP0ZZ. Datafill the 0ZZ value for FGD translation for national operator assist calls.
	NSCOP1NX	Three character alphanumeric string (N, 1 to 0, B to F)	NSCOP1NX. Datafill the 1NX value for FGD translation for international operator assist calls.

Datafill example

The following example shows sample datafill for table OCCSRV.

MAP display example for table OCCSRV

```
KEY                                                    OPTIONS
_____________________________________________________________
MCI  (NSC0ZZ 088)(NSCOP0ZZ 099)(NSC1NX 155)(NSCOP1NX 156)
ATT  (NSC0ZZ 077)(NSCOP0ZZ 066)(NSC1NX 177)(NSCOP1NX 171)
```

Table history

NA009

Feature COOR: AIN Response Translation Part 2 introduces table OCCSRV.

Supplementary information

None

OCCTSINT

Table name

Other Common Carrier Traffic Separation Intersection (OCCTSINT)

Functional description

Table OCCTSINT is used in an Equal Access End Office with the Equal Access Traffic Separation Measurement System (EATSMS) when there is a need to separate Equal Access traffic by LATA and state attributes (in addition to traffic separation by type of call [DD, OA, NP] in table TFANINT), as follows:

- IntraLATA-IntraState (LDSRA)
- IntraLATA-InterState (LDSER)
- InterLATA-IntraState (LDIRA)
- InterLATA-InterState (LDIER)

The data used to determine state and LATA attributes needed to peg the appropriate operational measurements (OM) register are defined in subtable HNPACONT.ATTRIB.

Each entry in table OCCTSINT contains two traffic separation numbers:

- the traffic separation number of the carrier selected for the call found in table OCCINFO, field OCCSEPNO
- the traffic separation number of the carrier trunk group selected to carry the call found in table TRKGRP, field TRAFSNO

For each unique instance of carrier separation number and carrier trunk group separation number, table OCCTSINT has four registers corresponding to the four categories mentioned above. Each of these registers contains an OM register number which is an index into OM group EATSMS.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table OCCTSINT.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
INDX		CARRIN, TRNKOUT	INDEX.
	CARRIN	0-127	INCOMING TRAFFIC SEPARATION NUMBER FOR EQUAL ACCESS. Enter the incoming traffic separation number assigned to the equal access carrier. The default range is from 0 to 15 and can be extended to range from 0 to 127 by means of datafill in office parameter OCCTS_IN_MAX_NUMBER.
	TRNKOUT	0-2048	OUTGOING TRAFFIC SEPARATION NUMBER FOR EQUAL ACCESS. Enter the enhanced traffic separation number of the destination in an equal access call. The default range is from 0 to 15 and can be extended to range from 0 to 127 by means of datafill in office parameter OCCTS_OUT_MAX_NUMBER.
LDSRA		0-2047	REGISTER NUMBER FOR INTRASTATE INTRALATA CALL. Enter the register number to be pegged in OM group EATSMS when the call is an IntraState IntraLATA call. The default range is 0 to 225 and can range up to 2047 by means of datafill in office parameter NO_OCCTS_OM_REGISTERS.
LDIRA		0-2047	REGISTER NUMBER FOR INTERSTATE INTRALATA CALL. Enter the register number to be pegged in OM group EATSMS when the call is an InterState IntraLATA call. The default range is 0 to 225 and can range up to 2047 by means of datafill in office parameter NO_OCCTS_OM_REGISTERS.

OCCTSINT (end)

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
LDSER		0-2047	REGISTER NUMBER FOR INTRASTATE INTERLATA CALL. Enter the register number to be pegged in OM group EATSMS when the call is an IntraState InterLATA call. The default range is 0 to 225 and can range up to 2047 by means of datafill in office parameter NO_OCCTS_OM_REGISTERS.
LDIER		0-2047	REGISTER NUMBER FOR INTERSTATE INTERLATA CALL. Enter the register number to be pegged in OM group EATSMS when the call is an InterState InterLATA call. The default range is 0 to 225 and can range up to 2047 by means of datafill in office parameter NO_OCCTS_OM_REGISTERS.

Datafill example

The following example shows sample datafill for table OCCTSINT.

```
INDX
        LDSRA   LDIRA   LDSER   LDIER
8  12       4       5       6       7
```

OCLDBUSY

Table name

Originating Called Party Busy (OCLDBUSY) table

Functional description

The Carrier Advanced Intelligent Network (CAIN) uses trigger tables to set triggering criteria. A call requiring CAIN services subscribes to a CAIN group (table CAINGRP), which, in turn, subscribes to one or more trigger sets.

> ***Note:*** A CAIN group subscribes to a trigger set defining the point in call (PIC), trigger detection point (TDP), and trigger.

Table OCLDBUSY defines the trigger criteria for the *O_Called_Party_Busy* trigger at the *O_Called_Party_Busy* TDP of the *Send_Call* PIC (PIC 7). When the datafilled trigger criteria is met, the datafilled action is performed. Available actions are: ignore the current trigger, leave trigger detection point, continue with no trigger, query the service control point (SCP), or attempt the next route in the route list.

> ***Note:*** Attempting the next route in a route list is known as route advancing.

Refer to the *UCS DMS-250 NetworkBuilder Application Guide* for CAIN services information.

Datafill sequence and implications

Datafill a valid CAIN group in table CAINGRP before datafilling table OCLDBUSY.

Table size

0 to 65,535 tuples

OCLDBUSY (continued)

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table OCLDBUSY.

OCLDBUSY field descriptions (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
OCLDBUSYKY		see subfields	NETWORK BUSY KEY. Datafill the 4-part key: CAINGRP, CRITERA, DIGTYPE, and FROMDIGS.
	CAINGRP	Valid CAIN group datafilled in table CAINGRP	CAIN GROUP. Enter a valid CAIN group datafilled in table CAINGRP.
	CRITERIA		CRITERIA. Enter RTEAVAIL or RTESDONE to qualify the action.
		RTEAVAIL	Enter RTEAVAIL to indicate routes are still available in the routing list.
		RTESDONE	Enter RTESDONE to indicate no routes are available in the routing list.
	DIGTYPE	INFO, ANI, XLAADDR, ADDR, CIC	DIGIT TYPE. Enter the digit type used in the FROMDIGS-TODIGS range. Enter INFO (information digits), ANI (automatic number identification), XLAADDR (translated address), ADDR (address) or CIC (carrier identification code).
	FROMDIGS	Up to 24 digits (0 to 9, *, #)	FROM DIGITS. Enter the first number used to define the range of digits. ***Note:*** Only enter * or # as the first digit. The digit values from least to greatest are: 0 1 2 3 4 5 6 7 8 9 * #.
TODIGS		Up to 24 digits (0 to 9, *, #)	TO DIGITS. Enter the second number used to define the range of digits. ***Note:*** Only enter * or # as the first digit. The digit values from least to greatest are: 0 1 2 3 4 5 6 7 8 9 * #.

OCLDBUSY field descriptions (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
TRIGACT			TRIGGER ACTION. Enter the action call processing performs when trigger criteria is met. Enter one of the following: IGNORE, LEAVE_TDP, CONT_NOTRIG, QUERY, or NEXTCNRTE.
		IGNORE	IGNORE - CAIN call processing ignores these calls and regular switch processing continues.
		QUERY	QUERY - CAIN call processing queries the SCP.
		NEXTRTE	NEXTRTE - CAIN call processing attempts the next route. ***Note:*** A TRIGACT of NEXTRTE is only available when CRITERIA is RTEAVAIL.
		NEXTCNRTE	NEXTCNRTE - CAIN call processing attempts the next CAIN route. ***Note:*** A TRIGACT of NEXTCNRTE is only available when CRITERIA is RTEAVAIL.
		LEAVE_TDP	LEAVE TRIGGER DETECTION POINT. Ignore the fact that a match was made, and continue call processing at the next trigger detection point.
		CONT_NOTRIG	CONTINUE WITH NO TRIGGER. Ignore the fact that a match was made and continue the call without further CAIN processing.
OPTIONS			OPTIONS. Datafill this field to specify optional CAIN features. Enter up to 7 options. ***Note:*** Currently, the available options are only valid for a TRIGACT of QUERY.
		NIL	Enter NIL to remove an option.

OCLDBUSY (continued)

OCLDBUSY field descriptions (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
		BUFFER	Enter BUFFER to activate digit buffering while the SCP is queried. The collected digits are delivered during conversational digit collection.
		GT	Enter GT to identify the global title used to identify the SCP handling the query. Datafill the GT_VALUE refinement.
		T1OVFLGT	This option the global title to use for SCP querying after a T1 timeout occurs on the default global title. Datafill the GT_VALUE refinement.
		ACGOVFLGT	ACG OVERFLOW GT. This option specifies the global title to use for requerying when query is blocked by an ACG control. Datafill the GT_VALUE refinement.
	GT_VALUE		GLOBAL TITLE VALUE. Enter one of the following: CAIN_CLID, CAIN_ADDR, or CAIN_FEAT.
		CAIN_CLID	Enter CAIN_CLID to send overflow queries to the SCP associated with the CAIN_CLID_GT global title defined in table C7GTTYPE.
		CAIN_ADDR	Enter CAIN_ADDR to send overflow queries to the SCP associated with the CAIN_ADDR_GT global title defined in table C7GTTYPE.
		CAIN_FEAT	Enter CAIN_FEAT to send overflow queries to the SCP associated with the CAIN_FEAT_GT global title defined in table C7GTTYPE. Datafill the GT_DIGITS refinement.
	GT_DIGITS	0 to 4095	Enter the digits associated with CAIN_FEAT_GT from table C7GTTYPE.
	VERSION	V0, V1, V2, V3, V4, V5	VERSION. This option controls the CAIN protocol version for outgoing messages.

OCLDBUSY field descriptions (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
		STREAM	STREAM. This option controls the NetworkBuilder protocol stream.
	STREAM	UCS05, UCS06, UCS07, UCS08, UCS09, UCS11	Enter one of the following values: UCS05, UCS06, UCS07, UCS08, UCS09, UCS11.

Datafill example

The following example shows sample datafill for table OCLDBUSY.

```
OCLDBUSYKY TODIGS TRIGACT OPTIONS
--------------------------------
OCLDBUSY RTEAVAIL ADDR 214220 214220 NEXTRTE $
OCLDBUSY RTESDONE ADDR 214220 214220 QUERY (GT CAIN_ADDR) $
```

Table history

UCS14

Added new option, STREAM (SR 60105565).

UCS12

Updated to include editorial changes.

UCS11

Updated the VERSION option to include a new value V5 (AX1373).

UCS09

Added VERSION to the option vector (AX0973). Added option ACGOVFLGT to the option vector (AX0976).

UCS07

Expanded field TRIGACT to include the entries LEAVE_TDP, NEXTCNRTE, and CONT_NOTRIG.

Subfield DIGTYPE is expanded and option T1OVFLGT is added.

OCLDBUSY (end)

UCS06

Table OCLDBUSY is created.

OFCAUT

Table name

Office Autoprovisioning

Functional description

Table OFCAUT lists the office parameters that can be used with autoprovisioning. For office parameters for which autoprovisioning is active, the switch continuously monitors each parameter for low resources. On detection of a low resource, the switch automatically increases the resource to a safe level so that call processing can continue.

The use of table OFCAUT is optional. Operating companies can choose the office parameters to autoprovision by selecting them in table OFCAUT. Autoprovisioning for each parameter is controlled by the setting of the ACTIVE field. Office parameters that you can select for autoprovisioning are listed in the Table , "Office parameters that the switch can autoprovision," on page 749.

You can select or deselect office parameters for autoprovisioning at any time. When a parameter is activated in table OFCAUT, it is removed from manual provisioning and is monitored and its value is set by the autoprovision facility. If you deactivate a parameter in table OFCAUT, it is removed from autoprovisioning and you can adjust its setting manually in table OFCENG.

Certain parameters exist only in table OFCAUT and cannot be provisioned manually.

The autoprovisioning facility is designed to operate without manual intervention. If a parameter is selected for autoprovisioning, software detects low resources and automatically extends its resource pool. Autoprovisioning is designed so that resources in the “Extend by amount” (field EXTENDBY) are rarely used. Resources in the “Extend by amount” field are typically used only in rare conditions of heavy traffic.

Datafill sequence and meaning

There is no requirement to enter datafill into other tables before table OFCAUT.

Table size

Up to 200 tuples

OFCAUT (continued)

Datafill

The following table lists datafill for table OFCAUT.

Field descriptions (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
POOLNAME		32 alphanumeric characters maximum	Parameter name. Office parameter or internally set parameter that is allowed to use autoprovisioning. See Table , "Office parameters that the switch can autoprovision," on page 749 for a listing of the available parameters. The parameters that are selected for autoprovisioning are controlled by the setting of field ACTIVE.
ACTIVE		Y or N	Active. Enter Y to activate autoprovisioning for the parameter. If N is entered, the parameter reverts to manual provisioning. The default value is N. If necessary, contact Nortel Networks' Technical Assistance Service for assistance in choosing the parameters to autoprovision.
HWM		0 to 4 294 967 295	High water mark. Enter the maximum number of pool elements ever used by the parameter. This parameter value is set by system software regardless of the parameter activation status. Operating company personnel cannot change the HWM value.
INUSE		0 to 4 294 967 295	In use elements. The total number of elements currently in the INUSE pool. This parameter value is set by system software regardless of the parameter activation status.
ALLOC		0 to 4 294 967 295	Allocated elements. The total number of elements allocated to the parameter pool. This value cannot exceed the MAXSIZE value. This parameter value is set by system software regardless of the parameter activation status.
MEMUSAGE		0 to 4 294 967 295	Memory usage. The amount of memory used by the parameter pool. This parameter value is set by system software regardless of the parameter activation status.

Field descriptions (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
MAXSIZE		0 to 4 294 967 295	Maximum size. The maximum number of elements that can be allocated to the parameter pool. If the ALLOC value and the MAXSIZE value are equal, call derision may occur. This parameter value is set by system software regardless of the parameter activation status.
EXTENDBY		0 to 4 294 967 295	Extend by amount. The amount by which the parameter pool is increased when the system detects a shortage of resources. This parameter value is set by system software regardless of the parameter activation status.
EXTENDAT		0 to 4 294 967 295	Extend point. The value that triggers additional resources to be allocated to the parameter. This point is reached when the EXTENDAT field value is greater than the number of free elements (ALLOC - INUSE). This parameter value is set by system software regardless of the parameter activation status.

The following table lists the office parameters that you can select for autoprovisioning. To select a parameter for autoprovisioning, change the entry in field ACTIVE to Y. To provision a parameter manually, set the entry in field ACTIVE to N. For complete details about each office parameter, refer to its description in the *Office Parameters Reference Manual*.

Office parameters that the switch can autoprovision (Sheet 1 of 4)

Office parameter table	Parameter name
OFCENG	ACD_OVERFLOW_BLOCKS
OFCENG	AIN_NUM_00_PARA_EXT_BLKS
OFCENG	AIN_NUM_01_00_EXT_BLKS
OFCENG	AIN_NUM_EXT_BLKS
OFCENG	AIN_NUM_PROCESSING_EXT_BLKS
OFCENG	CFD_EXT_BLOCKS
OFCENG	CFW_EXT_BLOCKS

OFCAUT (continued)

Office parameters that the switch can autoprovision (Sheet 2 of 4)

Office parameter table	Parameter name
OFCENG	CFZ_EXT_BLOCKS
OFCENG	CRS_PRU_POOL1_SIZE
OFCENG	CRS_PRU_POOL2_SIZE
OFCENG	CRS_PRU_POOL3_SIZE
OFCENG	CRS_SUBRU_POOL1_SIZE
OFCENG	CRS_SUBRU_POOL2_SIZE
OFCENG	CRS_SUBRU_POOL3_SIZE
OFCENG	CRS_SUBRU_POOL4_SIZE
OFCENG	CRS_SUBRU_POOL5_SIZE
OFCENG	KSHUNT_EXT_BLOCKS
OFCENG	MAX_NUM_WIDEBAND_CALLS
OFCENG	NO_OF_CRITICAL_FTR_DATA_BLKS
OFCENG	NO_OF_FTR_CONTROL_BLKS
OFCENG	NO_OF_FTR_XLA_BLKS
OFCENG	NO_OF_HIS_CONTROL_BLKS
OFCENG	NO_OF_HIS_DATA_BLKS
OFCENG	NO_OF_HUGE_EXT_BLKS
exists only in table OFCAUT	NO_OF_INAP_LARGE_STORES
exists only in table OFCAUT	NO_OF_INAP_MEDIUM_STORES
exists only in table OFCAUT	NO_OF_INAP_SMALL_STORES
OFCENG	NO_OF_LARGE_EXT_BLKS
OFCENG	NO_OF_LARGE_FTR_DATA_BLKS
OFCENG	NO_OF_MEDIUM_EXT_BLKS

Office parameters that the switch can autoprovision (Sheet 3 of 4)

Office parameter table	Parameter name
OFCENG	NO_OF_MEDIUM_FTR_DATA_BLKS
OFCENG	NO_OF_PVN_EXTBLK
OFCENG	NO_OF_PVN_TERM_EXTBLK
OFCENG	NO_OF_SC_EXT_BLKS
exists only in table OFCAUT	NO_OF_SIE_SUSP_EXT_BLKS
OFCENG	NO_OF_SMALL_EXT_BLKS
OFCENG	NO_OF_SMALL_FTR_DATA_BLKS
exists only in table OFCAUT	NO_OF_WT_BILL_EXT_BLOCKS
OFCENG	NO_OF_X_LARGE_FTR_DATA_BLKS
OFCENG	NO_OF_XLARGE_EXT_BLKS
OFCENG	NUM_DCR_EXT_BLKS
OFCENG	NUM_IBN_IXLA_EXT_BLOCKS
OFCENG	NUM_INDA_EXT_BLKS
exists only in table OFCAUT	NUM_NAOC_EXT_BLKS
OFCENG	NUM_OF_INWATS_EXT_BLOCKS
OFCENG	NUM_OF_NSC_EXT_BLK
OFCENG	NUM_OF_NT_RECORDING_UNITS
OFCENG	NUM_OF_RTEB_EXTBLKS
OFCENG	NUM_RC_EXT_BLKS
OFCENG	NUM_XLAS_EXT_BLKS
OFCENG	NUMBER_OF_DITM_EXTENSION_BLOCKS
OFCENG	NUMBER_OF_EBOF_MEDIUM_AUX_BLOCKS
OFCENG	NUMIBNCQEXTBLK

OFCAUT (continued)

Office parameters that the switch can autoprovision (Sheet 4 of 4)

Office parameter table	Parameter name
OFCENG	NUMPERMEXT

Note: Some of the parameters listed above exist only in table OFCAUT, which means they do not exist in table OFCENG, OFCOPT, OFCSTD, or OFCVAR. These parameters are autoprovisioned and cannot be made inactive or controlled manually. The resources they control are known as permanent pools. Refer to the descriptions of such parameters in the *Office Parameters Reference Manual* under table OFCAUT.

Datafill example

The following example shows sample datafill for table OFCAUT.

MAP display example for table OFCAUT

```
            POOLNAME  ACTIVE    HWM    INUSE    ALLOC
  MEMUSAGE    MAXSIZE    EXTENDBY     EXTENDAT
_____________________________________________________________
   NO_OF_SMALL_EXT_BLKS   Y       0       0     501
 14028      32767          1000            500
   NO_OF_MEDIUM_EXT_BLKS  Y       0       0     1501
162108      32767          1000            800
   NO_OF_LARGE_EXT_BLKS   Y       0       0     1501
312208      32767          1000            500
   NO_OF_XLARGE_EXT_BLKS  Y       0       0     501
204408      32767           800            500
   NO_OF_HUGE_EXT_BLKS    Y       0       0     1016
820928      32767          1000            500
   NO_OF_SMALL_FTR_BLKS   Y       0       0     801
 25632      32767          1000            800
   NO_OF_MEDIUM_FTR_BLKS  Y       0       0     1001
 48048      32767          2000           1000
   NO_OF_LARGE_FTR_BLKS   Y       0       0     801
 70488      32767          1200            800
```

Table history

TL13

New parameters added for autoprovisioning.

CSP10

Data schema table OFCAUT was introduced.

Additional information

Even when CRS POOL parameters are autoprovisioned by table OFCAUT, the switch can generate CRS POOL alarms. You can set the CRS POOL alarm threshold using office parameters CRS_ALARM_MAJOR_THRESHOLD and CRS_ALARM_CRITICAL_THRESHOLD. Refer to the *Office Parameters Reference Manual* for instructions.

OFCCODE

Table name

Office Code Table

Functional description

Table OFCCODE is a member of the universal translation tables. The universal translation tables are organized to translate the incoming digit string in segments. Table OFCCODE translates the office code digit segment, together with tables OFCHEAD and OFCRTE.

For related information, refer to table ACCODE. For a description of the universal translation tables, see table ACHEAD.

Datafill sequence and implications

Table OFCHEAD must be datafilled before tables OFCCODE and OFCRTE.

Table size

Refer to table ACCODE.

Datafill

Field names, subfield names, and valid data ranges for table OFCCODE are described in table ACCODE.

Datafill example

Refer to table ACCODE.

Table history

Refer to table ACCODE.

NWMSD

Table name

Network Management Signal Distributor Group (NWMSD)

Functional description

The NWMSD table identifies the signal distributor circuit location and the type of card for each signal distributor group assigned to network management. A signal distributor group consists of seven signal distributor points numbered 0-6.

Each signal distributor card consists of 14 signal distributor points that make up two signal distributor groups. Each signal distributor group is assigned an arbitrary network management signal distributor group number (0-511).

Each network management signal distributor group has an associated network management signal distributor point subtable (NWMSDPT). Each subtable is automatically allocated memory for seven signal distributor points, and each point is automatically assigned as spare, network management signal distributor type (NWMSDTYPE) equal to FREE, and NORMAL state (NORMST) equal to 0.

Signal distributor points can be assigned to the following types of network management functions.

- Trunk Group Busy (TGB). If the signal distributor point is assigned to the trunk group busy feature, the signal distributor point can be assigned to a maximum of 32 CLLIs. When all trunks assigned to the CLLIs are busy, the signal distributor point is activated, which lights a trunk group busy lamp.
- Internal Dynamic Overload Control (IDOC). A signal distributor point can be assigned to each of the network management dynamic overload control levels 1-3. When dynamic overload for the given level is triggered automatically (levels 1 and 2) or manually (level 3), the signal distributor point is activated, which can be transmitted to a subtending office.

Datafill sequence and implications

Datafill table CLLI before table NWMSD. Table NWMSD has a pseudo-fixed common language location identifier (CLLI) code of NWMSD. If NWMSD is not datafilled in table CLLI, additions to table NWMSD are not possible.

Table size

Table size increases immediately upon restart.

NWMSD (end)

Datafill example for table NWMSD

The following example shows sample datafill for table NWMSD. In the example, memory is allocated for 20 network management signal distributor groups, Item 2, quantity equal to 20. Assignments are shown for four groups.

```
     NWMSDDRP       TMTYPE       TMNO     TMCKTNO

         0            MTM          0        18
         1            MTM          0        19
         2            MTM          3        20
         3            MTM          3        21

CARDCODE
2X57AA
```

OFCHEAD

Table name

Office Code Head Table

Functional description

Table OFCHEAD is a member of the universal translation tables. The universal translation tables are organized to translate the incoming digit string in segments. Table OFCHEAD translates the office code digit segment, together with tables OFCCODE and OFCRTE.

For related information, refer to tables ACCODE and ACRTE. For a description of the universal translation tables, refer to table ACHEAD.

Datafill sequence and implications

Refer to table ACHEAD.

Table size

Memory is automatically allocated to a maximum of 2047 tuples. The size is initially set to 64 and the table extends itself automatically.

Datafill

Field names, subfield names, and valid data ranges for table OFCHEAD are described in table ACHEAD.

Datafill example

Refer to table ACHEAD.

Table history

Refer to table ACHEAD.

OFCRTE

Table name

Office Code Route Table

Functional description

Table OFCRTE is a member of the universal translation tables. The universal translation tables are organized to translate the incoming digit string in segments. Table OFCRTE translates the office code digit segment, together with tables OFCHEAD and OFCCODE.

For related information, refer to table ACRTE. For a description of the universal translation tables, see table ACHEAD.

Datafill sequence and implications

Table OFCHEAD must be datafilled before tables OFCRTE and OFCCODE.

Table size

Refer to table ACRTE.

Datafill

Field names, subfield names, and valid data ranges for table OFCRTE are described in table ACRTE.

Datafill example

Refer to table ACRTE.

Table history

NA017

Feature 59035336 introduces the Supergroup (SG) option.

OFFCCODE

Table name

Office Code (OFFCCODE) table

Functional description

The Carrier Advanced Intelligent Network (CAIN) uses trigger tables to set triggering criteria. A call requiring CAIN services subscribes to a CAIN group (table CAINGRP), which, in turn, enables one or more trigger sets.

> ***Note:*** A CAIN group subscribes to a trigger set defining the point in call (PIC), trigger detection point (TDP), and trigger.

Table OFFCCODE defines the trigger criteria for the *Office_Code* trigger at the *Info_Analyzed* TDP of the *Analyze_Information* PIC (PIC 4). When the datafilled trigger criteria is met, the datafilled action is performed. Available actions are: ignore the current trigger, block the call, leave trigger detection point, continue with no trigger, query the service control point (SCP).

When the switch encounters an OFFCCODE trigger it checks table OFFCCODE and if a match is found, returns one of the values from the TRIGACT field.

Refer to the *UCS DMS-250 NetworkBuilder Application Guide* for CAIN services information; refer to the *UCS DMS-250 LNP Application Guide* for LNP information.

Datafill sequence and implications

The CAINGRP entry must be a valid entry in table CAINGRP.

Table size

One million tuples

OFFCCODE (continued)

Datafill

The following table lists datafill for table OFFCCODE.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
OFFCCODEKY			OFFICE CODE KEY. Datafill the CAINGRP and FROMDIGS refeinements.
	CAINGRP		Carrier Advanced Intelligent Network Group. The entry here is a valid CAIN group from table CAINGRP.
	FROMDIGS	up to 10 numeric digits (0-9)	FROM DIGITS. Enter the digits used to match against the called party number.
TODIGS		up to 10 numeric digits (0-9)	TO DIGITS. Enter the digits used to match against the called party number.
ACTION			TRIGGER ACTION. This field describes how the SSP should react when a digit string match is made for the given CAINGRP and digits.
	TRIGACT	IGNORE	IGNORE. Ignore the fact that a match was made at this trigger, but continue at the same trigger detection point.
		BLOCK	BLOCK. Block the call.
		QUERY	QUERY. Send a query to the SCP. Datafill the TRIGCRIT refinement.
		LEAVE_TDP	LEAVE TRIGGER DETECTION POINT. Ignore the fact that a match was made, and continue call processing at the next trigger detection point.
		CONT_NOTRIG	CONTINUE WITH NO TRIGGER. Ignore the fact that a match was made and continue the call without further CAIN processing.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	TRIGCRIT	NPA, NPA_NXX, NPA_NXXX, NPA_NXXXX, NPA_NXXXXX, NPA_NXXXXXX, or LNP_OFCD	TRIGGER CRITERIA. Trigger criteria is only allowed when the ACTION is QUERY. This refinement supplies the trigger criteria for querying the SCP.
OPTION		NIL	OPTIONS. This is an options vector, but no options apply to OFFCCODE at this time.

Datafill example

The following example shows sample datafill for table OFFCCODE.

MAP display example for table OFFCCODE

```
OFFCCODEKY TODIGS ACTION OPTIONS
_______________________________
LNPGRP 201 201 CONT_NOTRIG $
LNPGRP 202 209 QUERY NPA_NXXXXXX $
LNPGRP 210 210 LEAVE_TDP $
LNPGRP 211 211 IGNORE $
LNPGRP 212 212 BLOCK $
```

Table history

UCS09

Updated table size from 64k to one million tuples (AX0992).

UCS08

Removed trigger table.

UCS07

Table OFFCCODE is created.

OFFHKDEL

Table name

Off-Hook Delay (OFFHKDEL) table

Functional description

This table supports the *Offhook_Delay* trigger. The switch encounters this trigger when the Service Switching Point (SSP) receives enough information (the initial set of address digits) to process the call. The switch sends the collects digits to the Service Control Point (SCP), which in turn provides directions to the switch as to how call processing must proceed for this particular call.

This functionality allows the technician, through datafill, to interrupt the dialing plan and query the SCP when the switch has collected the initial set of address digits. Table OFFHKDEL checks digit strings when the switch evaluates the *Offhook_Delay* trigger contains data for the *Offhook_Delay* trigger. This table also contains a list of digit types describing the context in which it checks digit strings.

Refer to the *UCS DMS-250 NetworkBuilder Application Guide* for CAIN services information.

Datafill sequence and implications

Enter data into table OFFHKDEL after table CAINGRP.

Table size

The table size is 64 K or one million tuples. The table size is dependent on the datafilled range of digilator ids.

Datafill

The following table lists datafill for table OFFHKDEL.

Field descriptions (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
OFFHKKEY			OFF HOOK DELAY. Datafill the 3-part key consisting of: CAINGRP, DIGTYPE, and FROMDIGS.
	CAINGRP	Valid CAIN group datafilled in table CAINGRP	CAIN GROUP. Enter a valid CAIN group datafilled in table CAINGRP.
	DIGTYPE	INFO, ANI, XLAADDR, ADDR, CIC, ADIN	DIGIT TYPE. Enter the digit type used in the FROMDIGS-TODIGS range. Enter INFO (information digits), ANI (automatic number identification), XLAADDR (translated address), ADDR (address), CIC (carrier identification code), or ADIN (authcode database index).
	FROMDIGS	Up to 24 digits (0 to 9, *, #)	FROM DIGITS. Enter the first number used to define the digit range. ***Note:*** Only enter * or # as FROMDIGS first digit. The digit values from least to greatest are: 0 1 2 3 4 5 6 7 8 9 * #.
TODIGS		Up to 24 digits (0 to 9, *, #)	TO DIGITS. Enter the second number used to define the digit range. ***Note:*** Only enter * or # as TODIGS first digit. The digit values from least to greatest are: 0 1 2 3 4 5 6 7 8 9 * #.
ACTION	TRIGACT		TRIGGER ACTION. Enter the action call processing performs when trigger criteria is met. Enter one of the following: IGNORE, LEAVE_TDP, CONT_NOTRIG, BLOCK, QUERY.
		IGNORE	IGNORE - CAIN call processing ignores these calls and regular switch processing continues.

OFFHKDEL (continued)

Field descriptions (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
		BLOCK	BLOCK - CAIN call processing blocks the call and AINF treatment is applied.
		QUERY	QUERY - CAIN call processing queries the SCP. Datafill the TRIGACT and ERRACT refinements when TRIGACT=QUERY.
		LEAVE_TDP	LEAVE TRIGGER DETECTION POINT. Ignore the fact that a match was made, and continue call processing at the next trigger detection point.
		CONT_NOTRIG	CONTINUE WITH NO TRIGGER. Ignore the fact that a match was made and continue the call without further CAIN processing.
OPTIONS		Vector of up to 12multiples	OPTIONS. Datafill this field to specify optional CAIN features. Enter up to 3 options. ***Note:*** Currently, the available options are only valid for a TRIGACT of QUERY.
		NIL	Enter NIL to remove an already datafilled option.
		BUFFER	Enter BUFFER to activate digit buffering while the SCP is queried.
		GT	Enter GT to identify the global title used to identify the SCP handling the query. Datafill the GT_VALUE refinement.
		T1OVFLGT	This option the global title to use for SCP querying after a T1 timeout occurs on the default global title. Datafill the GT_VALUE refinement.
		ACGOVFLGT	ACG OVERFLOW GT. This option specifies the global title to use for requerying when query is blocked by an ACG control. Datafill the GT_VALUE refinement.
	GT_VALUE		GLOBAL TITLE VALUE. Enter one of the following: CAIN_CLID, CAIN_ADDR, or CAIN_FEAT.

Field descriptions (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
		CAIN_CLID	Enter CAIN_CLID to send overflow queries to the SCP associated with the CAIN_CLID_GT global title defined in table C7GTTYPE.
		CAIN_ADDR	Enter CAIN_ADDR to send overflow queries to the SCP associated with the CAIN_ADDR_GT global title defined in table C7GTTYPE.
		CAIN_FEAT	Enter CAIN_FEAT to send overflow queries to the SCP associated with the CAIN_FEAT_GT global title defined in table C7GTTYPE. Datafill the GT_DIGITS refinement.
	GT_DIGITS	0 to 4095	Enter the digits associated with CAIN_FEAT_GT from table C7GTTYPE.
		VERSION	VERSION. This option controls the CAIN protocol version for outgoing messages.
	VERSION	V0, V1, V2, V3, V4, V5	Enter one of the following values: V0, V1, V2, V3, V4 or V5.
		DIGITS	DIGITS. This option allows CAIN to restrict the ability to query the SCP unless the number of address digits matches the number defined by this option.
	DIGITS	7, 10	DIGITS. Enter one of two values.provided. ***Note:*** The DIGITS option will only allow the call to query if the number digits collected matches what is datafilled by this option.

OFFHKDEL (continued)

Field descriptions (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
		STREAM	STREAM. This option controls the NetworkBuilder protocol stream.
	STREAM	UCS05, UCS06, UCS07, UCS08, UCS09, UCS11	Enter one of the following values: UCS05, UCS06, UCS07, UCS08, UCS09, UCS11.

Datafill example

The following example shows sample datafill for table OFFHKDEL.

MAP display example for table OFFHKDEL

```
OHDKEY     TODIGS    ACTION      OPTIONS
_____________________________________________________
COLLGRP    ADDR       222   222    QUERY  $
```

Table history

UCS14

Added new, STREAM (SR 60105565). Added new option field, DIGITS (A60008693).

UCS12

Updated to include editorial changes.

UCS11

Updated the VERSION option to include a new value V5 (AX1373).

UCS09

Added VERSION to the option vector (AX0973). Added option ACGOVFLGT to the option vector (AX0976).

UCS08

Feature AX0201 created table OFFHKDEL.

Supplementary information

None.

OFFHKIMM

Table name

Off-Hook Immediate (OFFHKIMM)

Functional description

The Carrier Advanced Intelligent Network (CAIN) uses trigger tables to set triggering criteria. A call requiring CAIN services subscribes to a CAIN group (table CAINGRP), which, in turn, subscribes to one or more trigger sets.

> ***Note:*** A CAIN group subscribes to a trigger set defining the point in call (PIC), trigger detection point (TDP), and trigger.

Table OFFHKIMM defines the trigger criteria for the *Off_Hook_Immediate* trigger at the *Origination_Attempt* TDP of the *O_Null* PIC (PIC 4). When the datafilled trigger criteria is met, the datafilled action is performed. Available actions are: ignore the CAIN framework, leave trigger detection point, continue with no trigger, block the call, or query the service control point (SCP).

> ***Note:*** The *Off_Hook_Immediatel* trigger only supports originating loop start or ground start DAL agencies.

Refer to the *UCS DMS-250 NetworkBuilder Application Guide* for CAIN services information.

Datafill sequence and implications

Datafill a valid CAIN group in table CAINGRP before datafilling table OFFHKIMM.

Table size

0 to 4095 tuples

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table OFFHKIMM.

OFFHKIMM field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
OFFHKIMMKY		Valid CAIN group datafilled in table CAINGRP	OFF-HOOK IMMEDIATE KEY. Enter a valid CAIN group datafilled in table CAINGRP.
ACTION		see subfield	ACTION. ACTION consists of one subfield: TRIGACT.
	TRIGACT		TRIGGER ACTION. Enter the action call processing performs when trigger criteria is met. Enter one of the following: IGNORE, LEAVE_TDP, CONT_NOTRIG, BLOCK, QUERY.
		IGNORE	IGNORE - CAIN call processing ignores these calls and regular switch processing continues.
		LEAVE_TDP	LEAVE TRIGGER DETECTION POINT. Ignore the fact that a match was made, and continue call processing at the next trigger detection point.
		CONT_NOTRIG	CONTINUE WITH NO TRIGGER. Ignore the fact that a match was made and continue the call without further CAIN processing.
		BLOCK	BLOCK - CAIN call processing blocks the call and AINF treatment is applied.
		QUERY	QUERY - CAIN call processing queries the SCP. Datafill the ERRACT refinement when TRIGACT=QUERY.
		QUERYSCU	QUERY the SERVICE CONTROL UNIT. When the switch obtains trigger action QUERYSCU from the database, the call enters the server mode and becomes a PSN call.

OFFHKIMM (continued)

OFFHKIMM field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
OPTIONS			OPTIONS. Datafill this field to specify optional CAIN features. Enter up to 7 options. ***Note:*** Currently, the available options are only valid for a TRIGACT of QUERY.
		NIL	Enter NIL to remove an option.
		BUFFER	Enter BUFFER to activate digit buffering while the SCP is queried. The collected digits are delivered during conversational digit collection.
		GT	Enter GT to identify the global title used to identify the SCP handling the query. Datafill the GT_VALUE refinement.
		T1OVFLGT	This option the global title to use for SCP querying after a T1 timeout occurs on the default global title. Datafill the GT_VALUE refinement.
		ACGOVFLGT	ACG OVERFLOW GT. This option specifies the global title to use for requerying when query is blocked by an ACG control. Datafill the GT_VALUE refinement.
	GT_VALUE		GLOBAL TITLE VALUE. Enter one of the following: CAIN_CLID, CAIN_ADDR, or CAIN_FEAT.
		CAIN_CLID	Enter CAIN_CLID to send overflow queries to the SCP associated with the CAIN_CLID_GT global title defined in table C7GTTYPE.
		CAIN_ADDR	Enter CAIN_ADDR to send overflow queries to the SCP associated with the CAIN_ADDR_GT global title defined in table C7GTTYPE.
		CAIN_FEAT	Enter CAIN_FEAT to send overflow queries to the SCP associated with the CAIN_FEAT_GT global title defined in table C7GTTYPE. Datafill the GT_DIGITS refinement.

OFFHKIMM field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	GT_DIGITS	0 to 4095	Enter the digits associated with CAIN_FEAT_GT from table C7GTTYPE.
		VERSION	VERSION. This option controls the CAIN protocol version for outgoing messages.
	VERSION	V0, V1, V2, V3, V4, V5	Enter one of the following values: V0, V1, V2, V3, V4 or V5.
		STREAM	STREAM. This option controls the NetworkBuilder protocol stream.
	STREAM	UCS05, UCS06, UCS07, UCS08, UCS09, UCS11	Enter one of the following values: UCS05, UCS06, UCS07, UCS08, UCS09, UCS11.

TRIGACT=QUERY

When TRIGACT=QUERY, datafill the following refinement:

TRIGACT=QUERY refinement datafill

Refinement	Subfield or refinement	Entry	Explanation and action
ERRACT			ERROR ACTION. Enter the action the switch performs in response to a fatal application error associated with the query. Enter one of the following: ROUTE or TREAT.
		ROUTE	ROUTE - CAIN call processing releases control of the call and in-switch routing continues.
		TREAT	TREAT - CAIN call processing applies AINF treatment and any other treatment prescribed before the query.

Datafill example

The following example shows sample datafill for table OFFHKIMM.

OFFHKIMM (end)

```
OFFHKIMMKY ACTIONI OPTIONS
--------------------------
OFFGRP IGNORE $
OFFGRP2 QUERY ROUTE (GT CAIN_CLID) $
OFFGRP3 QUERY TREAT (BUFFER) $
OFFGRP4 QUERY TREAT (T1OVFLGT CAIN_CLID) $
```

Table history

UCS14

Added new option, STREAM (SR 60105565).

UCS12

Updated to include editorial changes.

UCS11

Updated the VERSION option to include a new value V5 (AX1373).

UCS09

Added VERSION to the option vector (AX0973). Added option ACGOVFLGT to the option vector (AX0976).

UCS08

PRS BY80632 adds trigger action QUERYSCU for SCU calls.

UCS07

Subfield TRIGACT is expanded to include the entries LEAVE_TDP and CONT_NOTRIG.

Option T1OVLFGT is added.

UCS06

Table OFFHKIMM was created.

OFRT

Table name

Office Route (OFRT) table

Functional description

The route reference tables OFRT, OFR2, OFR3, and OFR4 are used if an originating call is being translated and a preceding stage identifies a route reference index.

A route reference index points to

- a list of up to eight alternate routes
- a treatment list (in table OFRT only)

List of alternate routes

If translation of the call points to a route reference index in table OFRT, from other than treatment table TMTCNTL.TREAT, or in subtable RTEREF, the route list must be a list of alternate route list elements in order of preference.

A route list is composed of one to eight elements (nine elements for selectors DCRT and NODE only). The PRODUCT NAME switch allows nine elements to be datafilled, but the only time nine routes are valid is if the first selector is DCRT or NODE. If DCRT or NODE is not the first selector, then only eight routes are supported. Each element usually contains the identity of a trunk group from which an idle outgoing trunk (if any) is selected. If no idle trunk is available, the system advances to the next element in the list.

ATTENTION

Incorrect datafill can create an infinite loop that causes call deaths and traps.

Unlike line translations, circular hunt configurations should not be set up in trunk routing. An example of the type of datafill to be avoided is shown below.

OFRT (continued)

Example of an infinite loop in table OFRT

```
TOP
RTE
_____________________________________________________________
 801 (N D MIKE1 O N N) (T OFRT 802) $
 802 (N D MIKE2 O N N) (T OFRT 803) (TRMT BUSY) $
 803 (N D MIKE3 O N N) (T OFRT 801) $
```

The switch routes to treatments S D BUSY directly by CLLI.

A route list element defines a combination of the following elements by means of predefined route selectors:

- next stage in call translation (proceed to) unconditionally or with conditions
- digit manipulation of the received digits that may already have been manipulated in preceding stages of translation
- redefinition of various factors associated with the originator of the call, such as charging, billing, screening, and type of call
- outpulsing of digits or signals or both, and generation of tones

Treatment route list

If translation of the call results in a treatment code and table TMTCNTL.TREAT points to a route reference index in table OFRT, the route list must be a list of tones, announcements, or states applied in the order listed.

Treatment routes

For information on treatment routes, refer to the description of subtable TMTCNTL.TREAT.

Note on Cancel Normal Charges Field CANCNORC

If the call does not result in an abortive treatment and the called party goes off hook, and if the type of call is NP (no prefix), the PRODUCT NAME switch takes appropriate action depending on where the call originated. For a call incoming on a trunk group, off-hook signal is returned.

If the call results in an abortive treatment, the normal procedure is not to charge the caller even if the type of call indicates a chargeable call. Canceling normal charges results in appropriate action to charge the caller even if the type of call indicates a nonchargeable call.

If field CANCNORC is set to Y (yes), then a nonrevenue call is assumed and is reflected in the call code of the bearer capability (BC) Automatic Message Accounting (AMA) record.

Selector descriptions

For descriptions of the route element selectors used by the PRODUCT NAME switch, see subtable RTEREF.

General

Table OFRT is required for route lists that are pointed to from tables other than HNPACONT and FNPACONT.

The following tables can specify a route list in table OFRT:

- HNPA Control (HNPACONT)
- CALL Attribute (CALLATTR) (ISDN PRI calls)
- FNPA Control (FNPACONT)
- Position (POSITION)
- Standard Pretranslator (STDPRTCT.STDPRT)
- Trunk Group (TRKGRP)
- Network Management Reroute (REROUTE.NWMRROUT)
- EXDGTRTE (Extended Digit Routing)
- TERMRTE (Termination Routing)

An element in a route list can point to another route list in table OFRT. It can be any route list, except the route list to which the element is assigned.

Routes defined in the HNPACONT and FNPACONT tables have their routes defined in the HNPACONT and FNPACONT subtables.

Memory requirements

Memory is allocated dynamically for table OFRT. The maximum number of route lists is 1024.

Table size

0 to 1024 tuples

OFRT (continued)

Field descriptions

The following table describes field names, subfield names, and valid data ranges for tables OFRT OFR2, OFR3, and OFR4.

(Sheet 1 of 5)

Field	Subfield or refinement	Entry	Explanation and action
RTE		0 to 1023	ROUTE INDEX. Enter a route index. Translation table index this routing table through the RTE field.
RTELIST			ROUTE LIST. Datafill the RTESEL subfield and its refinements. Enter up to 9 RTELSTs.
	RTESEL		ROUTE SELECTOR. Enter one of the following and datafill the appropriate refinements: S, T, N, MN, ISA, TS, RT, TC, DN, SQ, NQ, QH, ST, CND, NOT, RX, NIL, INS, NODE, DCRT, TPBX, NPOS, MEM, FEAT, NPOSDN, EXDS, TRMT, SX, GW_N_ROUTE, GW_MN_ROUTE, AFR_ROUTE, QSCP_ROUTE, QFLEXSTC_ROUTE

(Sheet 2 of 5)

Field	Subfield or refinement	Entry	Explanation and action
		S	Enter S for toll switching unit routing. The S selector is available for the following trunks: • outgoing ONAL • two-way ONAL • intermachine trunk (IMT) • intertoll • standard digit manipulation (digit deletion or prefixing) when the ABC digits dialed are represented in table HNPACODE by code types FNPA and FRTE: — Delete the ABC digits from the outpulsed digits when the dialed ABC digits equal the connecting NPA (CONNGNPA) specified in the trunk group data. The system deletes NPA and outpulses seven digits when DNPA equals CONNPA (ONAL). — Prefix 1 and outpulse 1 + 10 digits when the dialed ABC digits are not equal to the connecting NPA (CONNGNPA) specified in the trunk group data. The system prefixes 1 and outpulses 1 + 10 digits when the DNPA does not equal CONNPA (ONAL). — Use standard 10-digit outpulsing when the call terminates on an IMT. Refer to the RTESEL=S section for refinement datafill.
		T	Enter T to index another routing table for the appropriate routing list. Refer to the RTESEL=T section for refinement datafill.

OFRT (continued)

(Sheet 3 of 5)

Field	Subfield or refinement	Entry	Explanation and action
		N	Enter N when standard digit manipulation cannot be performed for the following trunks: • outgoing ONAL • two-way trunk group ONAL • IMT • intertoll Route selector N cancels standard digit manipulation automatically and requires that digit deleting and prefixing be specified. • Delete three digits and prefix 1 to outpulse 1 + 7 digits when the dialed ABC digits are equal to the connecting NPA (CONNGNPA). Prefix 1 and outpulse 1 + 7 digits when DNPA = CONNPA (ONAL). • Do not delete digits and prefix of N to outpulse ten digits when the dialed ABC digits are not equal to the connecting NPA (CONNGNPA) and prefix is not required. Outpulse ten digits when DNPA=CONNPA (ONAL) and prefix is not required. • Do not delete digits and prefix 1 to outpulse 1 + 10 digits when CONNPA=DNPA for those areas of the country requiring 1 + 10 digit outpulsing. Refer to the RTESEL=N or NPOS section for refinement datafill.
		ISA	Enter ISA for primary rate access interface routing. Refer to the RTESEL=ISA section for refinement datafill.
		SQ	Enter SQ for queuing with standard digit manipulation. Refer to the RTESEL=SQ section for refinement datafill.
		NQ	Enter NQ for queuing with nonstandard digit manipulation. Refer to the RTESEL=NQ section for refinement datafill.

(Sheet 4 of 5)

Field	Subfield or refinement	Entry	Explanation and action
		QH	Enter QH to specify the time, in seconds, that a call queues for trunk groups. QH is considered a queue point, and is placed after a trunk group or several trunk groups in the route list. Trunk groups with queuing capabilities are queued upon for the time period specified in field QTIME. Refer to the RTESEL=QH section for refinement datafill.
		ST	Enter ST for same table routing. If all routes in a specified route list are busy, the ST selector allows additional route choices by pointing to another route reference index number with associated route choices. This is a means of *chaining* route lists. Refer to the RTESEL=ST section for refinement datafill.
		CND or NOT	Enter CND for Time of Day routing, Satellite Screening routing, and Long Distance Sensitive routing. The CND selector can be replaced by the NOT selector if a route list should not be used during a specific time range or under specific conditions (Satellite Screening or Long Distance Sensitive routing). The Not Condition (NOT) selector uses the same data fields as the CND selector. Refer to the RTESEL=CND or NOT section for refinement datafill.
		RX	Enter RX if the Adaptive Routing Package NTX340AA, containing the Retranslation capability is purchased. The fields associated with selector RX contain information that point the system to the DIGMAN table. Table DIGMAN performs digit substitution and digit replacement for more efficient adaptive routing. Adaptive route is the method of delivering ONNET calls over OFFNET facilities when the ONNET facilities are busy or unavailable. Refer to the RTESEL=RX section for refinement datafill.

OFRT (continued)

(Sheet 5 of 5)

Field	Subfield or refinement	Entry	Explanation and action
		NIL	Enter NIL to remove a RTESEL.
		AFR_ROUTE, QSCP_ROUTE, or QFLEXSTC_ROUTE	There is no refinement datafill for RTESEL=AFR_ROUTE, QSCP_ROUTE, or QFLEXSTC_ROUTE
		TPBX	Enter TPBX for tandem public branch exchange routing. Refer to the RTESEL=TPBX section for refinement datafill.
		MEM	Enter MEM for member number routing. Refer to the RTESEL=MEM section for refinement datafill.
		FEAT	Enter FEAT to find a USS7 IMT identified as GVPN in the FEATTYPE field. Call processing sends the correct facility code digits, STS, and 6- or 7-digit address code. Refer to the RTESEL=FEAT section for refinement datafill.
		EXDS	Enter EXDS for extended digit screening. Refer to the RTESEL=EXDS section for refinement datafill.
		TRMT	Enter TRMT to route to treatment. Refer to the RTESEL=TRMT section for refinement datafill.
		SX	The SX selector allows for additional provisioning of the RTEATTR table index. The RTEATTR table index allows attributes for the call to be applied based on the particular route destination chosen. Refer to the RTESEL=SX section for refinement datafill.
		MN, TS, RT, TC, DN, NPOSDN, INS, NODE, DCRT, GW_S_ROUTE, GW_N_ROUTE, GW_MN_ROUTE, NPOS	The PRODUCT NAME switch does not support these selectors.

RTESEL=S

When RTESEL=S, datafill the following refinements:

Refinement	Subfield or refinement	Entry	Explanation and action
CONNTYPE		D, A, T, CROUTING	CONNECTION TYPE. Enter D. The PRODUCT NAME switch does not support A, T, or CROUTING.
CLLI		Valid CLLI datafilled in table CLLI	COMMON LANGUAGE LOCATION IDENTIFIER. Enter a valid CLLI.

RTESEL=T

When RTESEL=T, datafill the following refinements:

(Sheet 1 of 2)

Refinement	Subfield or refinement	Entry	Explanation and action
EXTRTEID			EXTERNAL ROUTE IDENTIFIER. Datafill the 2-part field consisting of TABID and KEY.
	TABID		TABLE IDENTIFIER. Enter one of the following tables: OFRT, OFR2, OFR3, OFR4, EXDGTRTE, RRTE, TOPSAMA, TOPS, or TTL4.
		OFRTOFR2OFR3OFR4EXDGTRTERRTE	When EXTRTEID=OFRT, OFR2, OFR3, OFR4, EXDGTRTE, or RRTE, datafill the KEY refinement.
	KEY	0 to 1023	KEY. Enter the number of the routing list in the datafilled table (field TABID).
		TOPSAMA or TOPS	When EXTRTEID=TOPSAMA or TOPS, datafill the KEY refinement.
	KEY	Valid call origination	KEY. Enter the call origination from the datafilled table (field TABID).

OFRT (continued)

(Sheet 2 of 2)

Refinement	Subfield or refinement	Entry	Explanation and action
		TTL4	When EXTRTEID=TTL4, datafill the KEY refinement.
	KEY	0 to 7	KEY. Enter the number of the routing list in the datafilled table (field TABID).

RTESEL=N

When RTESEL=N, datafill the following refinements:

Refinement	Subfield or refinement	Entry	Explanation and action
CONNTYPE		D, A, T, CROUTING	CONNECTION TYPE. Enter D. The PRODUCT NAME switch does not support A, T, or CROUTING.
CLLI		Valid CLLI datafilled in table CLLI	COMMON LANGUAGE LOCATION IDENTIFIER. Enter a valid CLLI.
DELDIGS		0 to 15	DELETE DIGITS. Enter the number of digits to delete before outpulsing. Enter 3 to remove area code digits.
PRFXDIGS		Up to 11 digits (0 to 9) or N	PREFIX DIGITS. Enter the prefix digits. Enter N for none.
CANCNORC		Y or N	CANCEL NORMAL CHARGE. Enter N. The PRODUCT NAME switch does not support this field.

RTESEL=ISA

When RTESEL=ISA, datafill the following refinements:

(Sheet 1 of 2)

Refinement	Subfield or refinement	Entry	Explanation and action
OHQ		Y or N	OFFHOOK QUEUING. Enter Y if the trunk group is eligible for offhook queuing; otherwise, enter N for no offhook queuing.
CBQ		Y or N	CALL BACK QUEUE. Enter Y if call back queuing is allowed on this route; otherwise, enter N.
EXP		Y or N	EXPENSIVE. Enter Y is this route choice is considered expensive; otherwise, enter N.
CLLI		Valid CLLI datafilled in table CLLI	COMMON LANGUAGE LOCATION IDENTIFIER. Enter a valid CLLI.
CALLTYPE			Enter one of the following and datafill the appropriate refinement: PUB, PVT, INWATS, WATS, FX, or TIE.
		PUB	Enter PUB for public call type. When CALLTYPE=PUB, datafill the OATYPE, TNS, NPOS, and DMI refinements.
	OATYPE	NONE, 0M, 0P	OPERATOR ACCESS TYPE. Enter the type of operator access required on this call.
	TNS	0 to 999NC	TRANSIT NETWORK IN SETUP. Enter the transit network number to request in the SETUP message. If no TNS is required, enter N. If the TNS should be determined from the call's originator, enter C.
	NPOS	Y or N	NO CALLING NUMBER IDENTIFICATION REQUIRED. Enter Y to indicate that calling number identification is not required. Otherwise, enter N.
	DMI	0 to 32767	DIGIT MANIPULATION INDEX. Enter the digit manipulation index in table DIGMAN to use to do any called party number modification prior to transmission.

OFRT (continued)

(Sheet 2 of 2)

Refinement	Subfield or refinement	Entry	Explanation and action
		PVTINWATS FXTIE	When CALLTYPE=PVT, INWATS, FX, or TIE, datafill the FACNUM, NPI, and DMI refinements.
	FACNUM	0 to 1023	FACILITY NUMBER. Enter the facility number to include in the network specific facility (NSF) selector.
	NPI	E164PVT	Enter the type of number for the calling number delivery.
	DMI	0 to 32767	DIGIT MANIPULATION INDEX. Enter the digit manipulation index in table DIGMAN to use to do any called party number modification prior to transmission.
		WATS	When CALLTYPE=WATS, datafill the ZONE, NPI, and DMI refinements.
	ZONE	0 to 9, A, B, C, AUTO	ZONE. Enter the OUTWATS zone number to include in the NSF selector.
	NPI	E164PVT	Enter the type of number for the calling number delivery.
	DMI	0 to 32767	DIGIT MANIPULATION INDEX. Enter the digit manipulation index in table DIGMAN to use to do any called party number modification prior to transmission.

RTESEL=SQ

When RTESEL=SQ, datafill the following refinements:

(Sheet 1 of 2)

Refinement	Subfield or refinement	Entry	Explanation and action
CONNTYPE		D, A, T, CROUTING	CONNECTION TYPE. Enter D. The PRODUCT NAME switch does not support A, T, or CROUTING.

(Sheet 2 of 2)

Refinement	Subfield or refinement	Entry	Explanation and action
CLLI		Valid CLLI datafilled in table CLLI	COMMON LANGUAGE LOCATION IDENTIFIER. Enter a valid CLLI.
OHQ		Y or N	OFFHOOK QUEUING. Enter Y if the trunk group is eligible for offhook queuing; otherwise, enter N for no offhook queuing.

RTESEL=NQ

When RTESEL=NQ, datafill the following refinements:

Refinement	Subfield or refinement	Entry	Explanation and action
CONNTYPE		D, A, T, CROUTING	CONNECTION TYPE. Enter D. The PRODUCT NAME switch does not support A, T, or CROUTING.
CLLI		Valid CLLI datafilled in table CLLI	COMMON LANGUAGE LOCATION IDENTIFIER. Enter a valid CLLI.
DELDIGS		0 to 15	DELETE DIGITS. Enter the number of digits to delete before outpulsing. Enter 3 to remove area code digits.
PRFXDIGS		Up to 11 digits (0 to 9) or N	PREFIX DIGITS. Enter the prefix digits. Enter N for none.
CANCNORC		Y or N	CANCEL NORMAL CHARGE. Enter N. The PRODUCT NAME switch does not support this field.
OHQ		Y or N	OFFHOOK QUEUING. Enter Y if the trunk group is eligible for offhook queuing; otherwise, enter N for no offhook queuing.

OFRT (continued)

RTESEL=QH

When RTESEL=QH, datafill the following refinements:

Refinement	Subfield or refinement	Entry	Explanation and action
QTIME		0 to 255	QUEUE TIME. Enter the time in seconds that the call is in queue for the trunk group.

RTESEL=ST

When RTESEL=ST, datafill the following refinements:

Refinement	Subfield or refinement	Entry	Explanation and action
RTEREF		0 to 1023	ROUTE REFERENCE. Enter the route reference number of the next route list to use from this table.

RTESEL=CND or NOT

When RTESEL=CND or NOT, datafill the following refinements:

(Sheet 1 of 3)

Refinement	Subfield or refinement	Entry	Explanation and action
CNDSEL			CONDITIONAL SELECTOR. Enter one of the following and datafill the appropriate refinement: ALWAYS, RND, SNPA, EA, TOD, and CALLCHR
		ALWAYS	Enter ALWAYS to specify that a specific route or route list always applies regardless of time-of-day. There is no refinement datafill for ALWAYS.
		RND	When CNDSEL=RND, datafill the PERCENT refinement.
	PERCENT	0 to 100	PERCENTAGE. Enter a percentage.

(Sheet 2 of 3)

Refinement	Subfield or refinement	Entry	Explanation and action
		SNPA	SERVING NUMBERING PLAN AREA. When CNDSEL=SNPA, datafill the SNPA_CND_RTE refinement.
	SNPA_CND_RTE	000 to 999	SNPA CONDITIONAL ROUTE. Enter an SNPA.
		EA	EQUAL ACCESS. When CNDSEL=EA, datafill the EA_CND_RTE refinement.
	EA_CND_RTE	INTNL, PIC, CAC	EQUAL ACCESS CONDITIONAL ROUTE. Enter INTNL, PIC, or CAC.
		TOD	TIME OF DAY. When CNDSEL=TOD, datafill the TODNAME and TIMES refinements.
	TODNAME	NILTODNMT OD250	TIME OF DAY NAME.
	TIMES	0 to 9, A to F	TIMES. Enter the time range or group of ranges for which a predetermined route or route list is not applied.
		CALLCHR	When CNDSEL=CALLCHR, datafill the CALLCHR refinement.
	CALLCHR	DIGDATA or SAT	CALL CHARACTERISTICS. Enter DIGDATA (digit data) or SAT (satellite routing).
		STS	SERVING TRANSLATION SCHEME. When CNDSEL=STS, datafill the STS_CND_RTE refinement. The ability to conditionally route based on STS or OPART is performed only for treated calls.
	STS_CND_RTE	STS or OPART	STS CONDITIONAL ROUTING. Enter STS or OPART (originating partition). When STS_CND_RTE=STS, datafill the STS refinement. When STS_CND_RTE=OPART, datafill the OPART refinement.
	STS	000 to 999	SERVING TRANSLATION SCHEME. Enter a valid STS datafilled in table HNPACONT.
	OPART	000 to 999	ORIGINATING PARTITION.

OFRT (continued)

(Sheet 3 of 3)

Refinement	Subfield or refinement	Entry	Explanation and action
RTETYPE			Enter one of the following and datafill the appropriate refinement: ST, T, or SK.
		ST	Enter ST for same table routing. When RTETYPE=ST, datafill the RTEREF refinement.
	RTEREF	0 to 1023	ROUTE REFERENCE. Enter the route reference number of the next route list to use from this table.
		T	Enter T for other table routing. When RTETYPE= T, datafill the TABNAME refinement.
	TABNAME		TABLE NAME. Enter one of the following and datafill the appropriate refinement: OFRT, OFR2, OFR3, OFR4, IRTE, RRTE, OPERRTE, or EXDGTRTE.
		SK	Enter SK for skip route. When RTETYPE= SK, datafill the SKIPNUM refinement.
	SKIPNUM	0 to 7	SKIP NUMBER. Enter the number of elements to skip within the same route list, to which translation routes when the condition is met.

TABNAME=OFRT, OFR2, OFR3, OFR4, RRTE, or EXDGTRTE

When TABNAME=OFRT, OFR2, OFR3, OFR4, RRTE, or EXDGTRTE, datafill the following refinement:

Refinement	Subfield or refinement	Entry	Explanation and action
INDEX		0 to 1023	INDEX. Enter the number of the routing list in the datafilled table.

TABNAME=OPERRTE

When TABNAME=OPERRTE, datafill the following refinement:

Refinement	Subfield or refinement	Entry	Explanation and action
RRTNO		0 to 999	ROUTE NUMBER. Enter the carrier number of the routing list in the datafilled table.

TABNAME=RRTE

When TABNAME=RRTE, datafill the following refinement:

Refinement	Subfield or refinement	Entry	Explanation and action
XLASYS			Enter one of the following and datafill the appropriate refinement: NIL, AC, PX, CT, FA, OFC, AM, FT, NSC
		NIL	Enter NIL.
		AC, PX, CT, FA, OFC, AM, FT, NSC	When XLASYS=AC, PX, CT, FA, OFC, AM, FT, or NSC, datafill the XLANAME refinement.
	XLANAME	NIL	Enter NIL.
RTEREF		0 to 1023	ROUTE REFERENCE. Enter the number of the routing list in the datafilled table.

RTESEL=RX

When RTESEL=RX, datafill the following refinements:

(Sheet 1 of 2)

Refinement	Subfield or refinement	Entry	Explanation and action
STS		000 to 999	SERVING TRANSLATION SCHEME. Enter the STS that requires retranslation.
TYPECALL		DD, OA, NP, NL	CALL TYPE. Enter the type of call: DD (direct dial), OA (operator assisted), NP (nonpulsing), or NL (new line)

OFRT (continued)

(Sheet 2 of 2)

Refinement	Subfield or refinement	Entry	Explanation and action
DMI		0 to 32767	DIGIT MANIPULATION INDEX. Enter the digit manipulation index in table DIGMAN used to build the OFFNET number.
BILLDMI		0 to 32767	BILL DIGIT MANIPULATION INDEX. Enter 0. The PRODUCT NAME switch does not support this field.
OPTION		RC	This is an optional field. When OPTION=RC, datafill the RCNAME refinement.
	RCNAME	NILNAME	

RTESEL=TPBX

When RTESEL=TPBX, datafill the following refinements:

Refinement	Subfield or refinement	Entry	Explanation and action
CLLI		Valid CLLI datafilled in table CLLI	COMMON LANGUAGE LOCATION IDENTIFIER. Enter a valid CLLI.
DMI		0 to 32767	DIGIT MANIPULATION. This field indexes table DIGMAN.
DISA		Y or N	This field marks the call as DISA or tandem PBX dialing.

RTESEL=MEM

When RTESEL=MEM, datafill the following refinements:

Refinement	Subfield or refinement	Entry	Explanation and action
CLLI		Valid CLLI datafilled in table CLLI	COMMON LANGUAGE LOCATION IDENTIFIER. Enter a valid CLLI.
MEMNUM		0 to 9999	MEMBER NUMBER. Enter the member number associated with the member number in table TRKMEM.
UPPERMEM		0 to 9999	UPPER MEMBER. enter the upper limit for the range.

RTESEL=FEAT

When RTESEL=FEAT, datafill the following refinements:

Refinement	Subfield or refinement	Entry	Explanation and action
FEATTYPE		IVPN, I800, IDDD, GVPN	FEATURE TYPE. This field indicates that the international feature is activated on a specific ISUP IMT. GVPN indicates that a global virtual private network (GVPN) call is being routed over the USS7 Gateway IMT trunk.
CLLI		Valid CLLI datafilled in table CLLI	COMMON LANGUAGE LOCATION IDENTIFIER. Enter a valid CLLI.

RTESEL=EXDS

When RTESEL=EXDS, datafill the following refinements:

Refinement	Subfield or refinement	Entry	Explanation and action
CUST_NAME		Up to 8 alphanumeric characters	CUSTOMER NAME. This field indicates call processing translations are to continue in table EXDGTSCR.

OFRT (continued)

RTESEL=TRMT

When RTESEL=TRMT, datafill the following refinements:

Refinement	Subfield or refinement	Entry	Explanation and action
RTETRMT		Valid treatment datafilled in table TMTCNTL	ROUTE TREATMENT. Enter a valid treatment.

RTESEL=SX

When RTESEL=SX, datafill the following refinements:

Refinement	Subfield or refinement	Entry	Explanation and action
CLLI		Valid CLLI datafilled in table CLLI	COMMON LANGUAGE LOCATION IDENTIFIER. Enter a valid CLLI.
ATTR_INDEX		Valid range datafilled in table RTEATTR	ROUTE ATTRIBUTE. Enter an index into the RTEATTR table.

Datafill example

The following example shows sample datafill for table OFRT.

```
RTE                                RTELIST
_______________________________________________________________
1                                     (S D DAL220TWDTGS) $
25 (CND STS STS 611 ST 220) (CND STS OPART 111 ST 222) $
```

Table history

UCS08

The STS refinement was added for RTESEL=CND or NOT.

UCS06

Added SX route selector.

OFR2

Table name

Office Route-2 Table

Functional description

Table OFR2 is an exact duplicate of table OFRT.

Refer to table OFRT for full details of the use and the datafill for table OFR2.

Datafill sequence and implications

Refer to table OFRT.

Table size

0 to 1024 tuples

Datafill

Refer to table OFRT.

Datafill example

Refer to table OFRT.

Release history

NA017

Feature 59035336 introduces the Supergroup (SG) option.

OFR3

Table name

Office Route-3 Table

Functional description

Table OFR3 is an exact duplicate of table OFRT.

Refer to table OFRT for full details of the use and the datafill for table OFR3.

Datafill sequence and implications

Refer to table OFRT.

Table size

0 to 1024 tuples

Datafill

Refer to table OFRT.

Datafill example

Refer to table OFRT.

Release history

NA017

Feature 59035336 introduces the Supergroup (SG) option.

OFR4

Table name

Office Route-4 Table

Functional description

Table OFR4 is an exact duplicate of table OFRT.

Refer to table OFRT for full details of the use and the datafill for table OFR4.

Datafill sequence and implications

Refer to table OFRT.

Table size

0 to 1024 tuples

Datafill

Refer to table OFRT.

Datafill example

Refer to table OFRT.

Release history

NA017

Feature 59035336 introduces the Supergroup (SG) option.

OFRT selector CND

RTESEL = CND

Route selector CND permits the specification of a condition before routing as specified. If the condition is met, then the instructions of this route element are executed. Otherwise, they are skipped and translation searches for instructions in the next route element.

Only the following conditions are supported for GSF Equal Access:

- CAC
- INTNL
- PIC

List of conditions

ALWAYS—ALWAYS: (all types of DMS-100 family) The condition is always met. This is most useful when making temporary changes (that is, change the condition to ALWAYS instead of rewriting the whole element).

CALLCHR—CALL CHARACTERISTIC: (Integrated Business Network [IBN]) The condition is met if the call characteristic specified is assigned in table CALLCHR.

COSMAP—CLASS OF SERVICE MAPPING: (IBN) Table COSMAP is accessed at mMapping nName COSMAP to determine if the condition is met.

EA—EQUAL ACCESS END OFFICE (EAEO): Condition is met if the call is equal access and the call matches the specified subcondition as follows:

CAC—CARRIER ACCESS CODE Condition is met if the call is equal access and the carrier access code 10XXX is dialed.

INTNL—INTERNATIONAL Condition is met if the call is equal-access international.

PIC—PRIMARY INTER-LATA CARRIER: This condition must be used for inter-LATA call routing from an EAEO to an access tandem (AT) that includes the TOPS inter-LATA carrier service (TICS). When the PIC condition is used, table OFRT is set up such that the primary route is taken for non-PIC calls and the secondary route is taken for PIC calls.

PKT—Condition is met if the originator is on the ENET (Enhanced Network) fabric as opposed to a packet network. The selector allows different routes for calls from ENET and packet based originators. It appears only in CS2000.

OFRT selector CND (continued)

Feature 59007393 MSH InterWorking Trunk Selection modified trunk selection so that the fabric of the trunk member chosen would match the fabric of the origiantor if possible. Succession switches allow arbitrarily mixing of packet based and ENET based trunks within a group. Several trunk selection algorithms were changed so that this optimization would occur automatically.

With the addition of BICC and SIP_T trunk groups additional flexibility is required so that traffic may be sent to SIP_T groups from packet based originators or ENET based TDM groups from ENET originators.

INTERLATA—INTER-LATA (DMS-200 AT): This condition can be used in an office with feature package NTX821AA (Tandem Operator Routing Service). It routes interLATA and intra-LATA traffic to different destinations from the same office route.

The main application is routing of equal access operator traffic to operating telephone company (OTC) operator trunks and interexchange carrier (IEC) operator trunks in a DMS-200 AT.

NRR—NETWORK BLOCKING REROUTE (MARS): This condition may be used in an office with feature AD2641 ((FI) MARS- Meridian Automatic Route Selection). The condition is met if there are no available outgoing trunks at any one of the tandem switches in the path during an ISDN user part (ISUP) or a primary access rate (PRA) call from an originating switch.

Note: The CND NRR option is not supported in GSM offices.

RND—PERCENTAGE OF CALLS SELECTED RANDOMLY: (all types of DMS-100 family switches) The DMS decides that the condition is met on a random basis to ensure that the specified percentage of calls take this route element.

SITE—SITE: This condition can be used in a remote switching center (RSC) where trunks are connected to remotes creating a network of alternate routes for completing a call. The most efficient route for a specific call then depends on the site of the originator.

TOD—TIME OF DAY (IBN): Table TIMEODAY is accessed at fields TODNAME and TIMES to determine if the condition is met.

TOPEAALT—TOPS EQUAL ACCESS ALTERNATE CARRIER (TOPS with the feature AF1781 [Alternate Carrier Selection]): The condition is met if the call is routed to an alternate carrier and the call is not at a TOPS position.

OFRT selector CND (continued)

TOPEACLS—TOPS EQUAL ACCESS CLASS OF SERVICE (TOPS): The condition is met if the class of service of an incoming call matches the entry in field TOP_CND_RTE.

TOPEAXFR—TOPS EQUAL ACCESS CARRIER TRANSFER (TOPS with feature AF1781 [Alternate Carrier Selection]): The condition is met if the call is marked as a carrier transfer call by a TOPS operator (XFR IC indicated on the TOPS operator display prior to the call being released).

SNPA—CONDITIONAL ROUTING BASED ON SNPA (conditional routing based on SNPA): The condition is met if the SNPA for the call is equal to the SNPA datafilled in field SNPA_CND_RTE in table OFRT.

MIGRATE—Identifies lines which are in the process of migrating from a collapsing office into a Call Server Complex (CS2000). The migrating lines are pre-datafilled in the new office, but are blocked from terminations by the existence of the MIGRATE option until the physical move is complete. Terminations to the DN on the CS2000 are avoided by routing to the collapsing site while the DN is still in service. This is accomplished during the routing stage of call processing by using a conditional route selector (CND MIGRATE) in tables HNPACONT:RTEREF, FNPACONT:RTEREF, OFRn and IBNRTn. When the CND MIGRATE conditional selector is encountered, terminating calls are completed to DNs which are not assigned the MIGRATE option. The call is redirected via an office route or trunk CLLI to the collapsing office for DNs which are assigned the MIGRATE option.

List of routing options

- Route to specified table at specified index
- Route to another route list in this table
- SK: Route after skipping specified number of route elements

OFRT selector CND (continued)

Datafill

The following table lists the datafill for table OFRT selector CND.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
RTE		1 to 1023or blank	*Route reference index* If the record is the first in the route list, enter the route reference number assigned to the route list. Otherwise, leave the entry blank. An entry outside of this range is invalid. ***Note:*** Field MAXRTE of tables HNPACONT, FNPACONT, and FNPACONT.FNPASTS is automatically extended to the highest route index used in field RTE of subtables HNPACONT.RTEREF, FNPACONT.RTEREF, and FNPACONT.FNPASTS.RTEREF respectively.
RTELIST		see subfield	*Route list* This field consists of subfields RTESEL and refinements CONDITION and CONDRTE.

OFRT selector CND (continued)

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
	RTESEL	CND	*Route selector* Enter CND.
	CONDITION	see subfields	*Condition* This field consists of condition selector CNDSEL and CNDSEL refinement subfields as follows: CNDSEL and Refinements ALWAYS - None CALLCHR - CALLCHR COSMAP - COSMAP EA - EA_CND_RTE INTERLATA - None MIGRATE - None NNR - None PKT - ENET RND - PERCENT SITE - SITE TOD - TODNAME and TIMES TOPEAALT - None TOPEACLS - TOP_CND_RTE TOPEAXFR - None SNPA - SNPA_CND_RTE

CNDSEL = ALWAYS

Use condition ALWAYS if translation proceeds as specified in field CONDRTE unconditionally.

This condition is most useful when making temporary changes (that is, change the condition to ALWAYS instead of rewriting the whole element).

OFRT selector CND (continued)

Datafill field CNDSEL as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CNDSEL	ALWAYS	*Condition selector* Enter ALWAYS if transfer is always required.

CNDSEL = CALLCHR (IBN)

Use condition CALLCHR (call characteristic) if translation proceeds as specified in field CONDRTE on condition that the call characteristic specified in field CALLCHR is assigned in table CALLCHR. Otherwise, the call proceeds as specified in the next tuple.

Datafill fields CNDSEL and CALLCHR as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CNDSEL	CALLCHR	*Condition selector* Enter CALLCHR as the type of condition tested.
	CALLCHR	DIGDATA SAT	*Call characteristic* Enter the name of the entry in table CALLCHR that contains the characteristic upon which the transfer is dependent.

CNDSEL = COSMAP (IBN)

Use condition COSMAP (class of service) if translation proceeds as specified in field CONDRTE on condition that the network class of service (NCOS) assigned to the call passes the class of service screening. Otherwise, the call proceeds as specified in the next tuple.

OFRT selector CND (continued)

Datafill fields CNDSEL and COSMAP as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CNDSEL	COSMAP	*Condition selector* Enter COSMAP as the type of condition tested.
	COSMAP	alphanumeric	*Class of service map* Enter the name of the entry in table COSMAP that contains the NCOS mapping upon which the transfer is dependent.

CNDSEL = EA (EAEO)

Use condition EA (equal access) if translation proceeds as specified in field CONDRTE on condition that the EA call matches the characteristics defined in field EA_CND_RTE. Otherwise, the call proceeds as specified in the next tuple.

Datafill fields CNDSEL and EA_CND_RTE as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CNDSEL	EA	*Condition selector* Enter EA as the type of condition tested.
	EA_CND_RTE		*Condition sub-selector* Enter one of the following:
		CAC	*Equal access carrier access code* Enter CAC as the condition sub-selector tested for an equal access call where 10XXX was dialed. ***Note:*** Condition CAC is supported by GSF Equal Access.

OFRT selector CND (continued)

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
		INTNL	*Equal access International* Enter INTNL as the condition sub-selector tested for an equal access international call. ***Note:*** Condition INTNL is supported by GSF Equal Access.
		PIC	*Equal access presubscribed interexchange carrier* Enter PIC as the type of condition tested for an equal access call.This condition is used for inter-LATA call routing from an EAEO to an AT that includes the Traffic Operator Position System (TOPS) inter-LATA carrier service (TICS) software. If the PIC condition sub-selector is used, table OFRT is set up such that the primary route is taken for non-PIC calls and the secondary route is taken for PIC calls. ***Note:*** Condition PIC is supported by GSF Equal Access.

CNDSEL = INTERLATA (DMS-200 AT)

Condition INTERLATA can be used provided that the following conditions are met:

- The feature package NTX821AA (Tandem Operator Services Routing Package) is present.
- Table TRKLATA contains at least one tuple for each incoming trunk for which this conditional selector is used.
- Table DATAXLA is datafilled.

The condition INTERLATA is true or false as follows:

- INTERLATA condition is true for all international calls. Tables TRKLATA and LATAXLA are not used for international calls.
- INTERLATA condition is false for all 0- calls. Tables TRKLATA and LATAXLA are not used for 0- calls.
- INTERLATA condition is false for all privilege calls.

OFRT selector CND (continued)

- INTERLATA condition is false for all other calls if an entry is not found in either table TRKLATA or table LATAXLA.
- If an entry is found in both tables TRKLATA and LATAXLA, INTERLATA condition is true if table LATAXLA field LATAINTER and INTERLATA condition is false if table LATAXLA field LATAINTRA.

The originating trunk group CLLI and the calling number index into table TRKLATA to obtain the originating local access and transport area (LATA) of the call. For operator number identification (ONI) and automatic number identification (ANI)-fail calls, the digits 000 are the calling digits.

The originating LATA and the called number index into table LATAXLA to determine the inter-LATA or intra-LATA status of the call.

If the above condition is met, translation proceeds as specified in field CONDRTE. Otherwise, the call proceeds as specified in the next tuple.

Datafill field CNDSEL as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CNDSEL	INTERLATA	*Condition selector* Enter INTERLATA as the type of condition tested.

CNDSEL = MIGRATE

Use condition MIGRATE if translation proceeds as specified in field CONDRTE unconditionally.

This condition occurs when the terminator has the MIGRATE option. Translation does not proceed unconditionally.

OFRT selector CND (continued)

Datafill field CNDSEL as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CNDSEL	MIGRATE	Enter MIGRATE if the call is to be transferred to a route list or element based on the assignment of the MIGRATE line option to the terminating DN.

CNDSEL = NRR (MARS)

Use condition NRR (network blocking reroute) is used in an office with feature AD2641 ((FI) MARS-Meridian Automatic Route Selection). The condition is met if there are no available outgoing trunks at any one of the tandem switches in the path on an ISDN user part (ISUP) or a primary access rate (PRA) call from an originating switch.

Note: The CND NRR option is not supported in GSM offices.

In a corporate network with PRA or ISUP facilities, the tandem switch sends a release message back to the originating switch if it has no available outgoing trunks. If the call is over PRA, the release message has the cause of ISDN_NO_CHANNEL_OR_CIRCUIT_AVAILABLE. If the call is over ISUP, the release message has a cause of CI_NO_CIRCUIT_AVAILABLE.

The originating switch upon receiving the release message is programmed using selector CNDSEL(NRR) to re-route the call instead of terminating the call in a treatment to the end user based on the cause.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CNDSEL	NRR	*Condition selector* Enter NRR as the type of condition tested. ***Note:*** The CND NRR option is not supported in GSM offices.

CNDSEL = PKT

The PKT ENET CND selector determines the fabric of the originator of the call at the time routing is done to decide which branch to take. The call originator is not always obvious in the case of custom calling features.

In the case of call forwarding, the originator of the call and not the CFW base station is used. For example, if A calls B and B is call forwarded to C then the PKT ENET CND selector will use A's fabric to make it's routing decision.

In the case of 3WC and CXR (call transfer) the agent with the 3WC/CXR is the call originator. For example, if A calls B and then B flashes and calls C, the PKT ENET CND selector will use B's fabric to make it's routing decision. B may in fact talk to C before hanging up and transferring the call.

> ***Note:*** Traver does not specify the switching fabric of the originator for trunk originated calls. ENET is assumed for TDM trunk groups and the packet network is assumed for DPT (BICC and SIP_T) trunk groups.
>
> The DPT SPM is considered an ENET peripheral.

Datafill fields CNDSEL and CND_PKT_RTE as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CNDSEL	PKT	*Condition selector* Enter PKT as the type of condition tested.
	CND_PKT_RTE	ENET	Condition Sub-selector Enter ENET as the condition sub-selector.

CNDSEL = RND

Use condition RND (percentage of call selected randomly) if translation proceeds as specified in field CONDRTE based on the percentage specified on a random basis. Otherwise, the call proceeds as specified in the next tuple.

OFRT selector CND (continued)

Datafill fields CNDSEL and PERCENT as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CNDSEL	RND	*Condition selector* Enter RND as the type of condition tested.
	PERCENT	0 to 100	*Percent* Enter the percentage of calls affected.

CNDSEL = SITE

Use condition SITE in a remote switching center (RSC) where trunks are connected to remotes creating a network of alternate routes for completing a call. The most efficient route for a specific call then depends on the site of the originator.

Translation proceeds as specified in field CONDRTE on condition that the site of the originator of the call matches the entry specified in field SITE. Otherwise, the call proceeds as specified in the next tuple.

To optimize this condition, trunk groups must be unique by site and all the trunk members of that trunk group must belong to that specific site.

Datafill fields CNDSEL and SITE as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CNDSEL	SITE	*Condition selector* Enter SITE as the type of condition tested.
	SITE	HOST or alphanumeric	*Site name* Enter HOST or a site name datafilled in table SITE.

CNDSEL = TOD (IBN)

Use condition TOD (time of day) if translation proceeds as specified in field CONDRTE on condition that one of the times specified in field TIMES is compatible with one of the times specified in table TIMEODAY. Otherwise, the call proceeds as specified in the next tuple.

OFRT selector CND (continued)

Up to 14 of the times specified in table TIMEODAY are entered. No spaces are left between the times.

Datafill fields CNDSEL, TODNAME, and TIMES as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CNDSEL	TOD	*Condition selector* Enter TOD as the type of condition tested.
	TODNAME	alphanumeric	*Time of day name* Enter the name assigned to the entry in table TIMEODAY to which translation routes.
	TIMES	0 to 9 or A to F	*Times* Enter the times at which the transfer to another route list or element occurs. An entry outside of this range is invalid.

CNDSEL = TOPEAALT

Use condition TOPEAALT (TOPS equal access alternate carrier) feature AF1781 for TOPS. The call precedes as specified in field CONDRTE on condition that the call has been routed to an alternate carrier and the call is not at a TOPS position. Otherwise, the call proceeds as specified in the next tuple.

Datafill field CNDSEL as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CNDSEL	TOPEAALT	*Condition selector* Enter TOPEAALT as the type of condition tested.

CNDSEL = TOPEACLS

Use condition TOPEACLS (TOPS equal access class of service) if the call proceeds as specified in field CONDRTE on condition that the class of service of an incoming call matches with field TOP_CND_RTE. Otherwise, the call proceeds as specified in the next tuple.

OFRT selector CND (continued)

There must be as many route list elements as there are classes of service.

Datafill fields CNDSEL and TOP_CND_RTE as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CNDSEL	TOPEACLS	*Condition selector* Enter TOPEACLS as the type of condition tested.
	TOP_CND_RTE		*TOPS equal access class of service* Enter one of the following values:
		EACOIN	Equal access coin
		EAHOTEL	Equal access hotel
		EARBILL	Equal access restricted billing lines
		EACAMA	Equal access 1+ type calls that do not require operator assistance
		EACAMAFL	Equal access centralized automatic message accounting (CAMA) ANI fail (for example, 1+ CAMA type non-operator calls that are ANI fail) ***Note:*** This entry is equivalent to the former EANONANI.
		EACAMONI	Equal access CAMA ONI (for example, 1+ CAMA type non-operator calls that are ONI)
		EAOTHOPR	Equal access other operator (for example, all other operator- assisted type calls that have ANI success)
		EAOPANIF	Equal access other operator ANI fail (for example, all other operator assisted type calls that have ANI failure)
		EAOPONI	Equal access other operator ONI (for example, all other operator assisted type calls that are ONI)

OFRT selector CND (continued)

CNDSEL = TOPEAXFR

Use condition TOPEAXFR (TOPS with the alternate carrier selection feature) if the call proceeds as specified in field CONDRTE on condition that the call is marked as a carrier transfer call by a TOPS operator (XFR IC indicated on the TOPS operator display prior to the call being released). Otherwise, the call proceeds as specified in the next tuple.

Datafill field CNDSEL as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CNDSEL	TOPEAXFR	*Condition selector* Enter TOPEAXFR as the type of condition tested.

CNDSEL = SNPA

Use condition SNPA (conditional routing based on SNPA feature) if the call proceeds as specified in field CONDRTE on condition that the SNPA for the call is equal to the SNPA datafilled in field SNPA_CND_RTE. Otherwise, the call proceeds as specified in the next tuple.

Datafill fields CNDSEL and SNPA_CND_RTE as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CNDSEL	SNPA	*Condition selector* Enter SNPA as the type of condition tested.
	SNPA_CND_RTE	numeric (3 digits)	*Conditional route SNPA*Enter the three-digit code for the SNPA.

OFRT selector CND (continued)

Routing options

Each of the above formats with route selector CND have field CONDRTE which is datafilled as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CONDRTE	see subfields	*Conditional route* This field consists of subfields RTETYPE, RTEREF, SKIPNUM, EXTRTEID, TABNAME, and INDEX.

Route to specified route list in this (same) table

If the call is transferred to another route list in the same table, datafill fields RTETYPE and RTEREF as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	RTETYPE	ST	*Route type* Enter ST (same table) as the route type.
	RTEREF	1 to 1023	*Route reference number* Enter the route reference number (must be a higher number in the same table) to which translation transfers if the condition is met. Entries outside the indicated range are invalid.

OFRT selector CND (continued)

Route after skipping specified number of route elements

If the call skips to another route element within the same route list, datafill fields RTETYPE and SKIPNUM as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	RTETYPE	SK	*Route type* Enter SK (skip) as the route type.
	SKIPNUM	0 to 7	*Skip number* Enter the number of elements to skip within the same route list if the condition is met.

Route to specified table at specified index

If the call is transferred to another route list in table OFRT, datafill fields RTETYPE and EXTRTEID as follows.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	RTETYPE	T	*Route type* Enter T (transfer) as the route type.
	EXTRTEID	see subfields	*External route identifier* This field consists of subfields TABNAME and INDEX.
	TABNAME	OFRT, OFR2, OFR3, or OFR4	*Table name* Enter the office route table name that translation transfers to if the condition is met. An entry outside of this range is invalid.
	INDEX	1 to 1023	*Route reference index* Enter the route reference index number in table OFRT, that translation transfers to if the condition is met. An entry outside of this range is invalid.

OFRT selector CND (continued)

Datafill example

The following examples show sample datafill for table OFRT selector CND.

Example 1

An example of datafill for extending a route list that requires more than eight route elements is shown below. The last element in the route list contains the conditional selector ALWAYS, and transfers to a higher route list in the same table.

MAP display example for table OFRT selector CND

```
RTE                                          RTELIST
_____________________________________________________________

5                          (CND ALWAYS) (ST 25) $
```

Example 2

An example of datafill for call passing class of service if the class of service service mapping MAP1 is performed on its NCOS or time-of-day NCOS, skip three elements in the route list, otherwise go to next element in route list is shown below.

MAP display example for table OFRT selector CND

```
RTE                                          RTELIST
_____________________________________________________________

2                     (CND COSMPAP MAP1) (SK 3) $
```

Example 3

An example of datafill for a call that has previously been over a satellite link and go to route list 35 in table OFR4, otherwise, go to next element in route list is shown below.

OFRT selector CND (continued)

MAP display example for table OFRT selector CND

```
RTE                                          RTELIST
_____________________________________________________________

 5                 (CND CALLCHR SAT) (T OFR4 35) $
```

Example 4

An example of time equal to the times specified in table TIMEODAY for routes 4 and F for time of day name CUST01, skip one element in route list is shown below.

MAP display example for table OFRT selector CND

```
RTE                                          RTELIST
_____________________________________________________________

 28                    (CND TOD CUST01 4F) (SK 1) $
```

Example 5

An example of a call distributed randomly on a specified percentage basis is shown below.

MAP display example for table OFRT selector CND

```
RTE                                          RTELIST
_____________________________________________________________

 10   (CND RND 25) (SK 1) (S D TRUNK1) (S D TRUNK2) (CND
RND 50)
(T OFRT 1) $
```

This result in 75% of all calls routed to RTEREF 0 attempting to use TRUNK1. All attempts to use TRUNK2, and 50% of any calls that have not terminated yet then try OFRT 1. The remainder get no circuit treatment.

OFRT selector CND (continued)

Example 6

An example of possible datafill for table OFRT is shown below.

MAP display example for table OFRT selector CND

```
 RTE                                                RTELIST
_____________________________________________________________

 3       (CND INTERLATA) (SK 2) (S D OTCOPERATOR1) (CND
ALWAYS) (SK 1) (S D IECOPERATOR1) $
   4       (CND INTERLATA) (SK 2) (S D OTCOPERTATOR2)
(CND ALWAYS) (SK 1) (S D IECOPERATOR1) $
```

Example 7

An example of possible datafill for conditional selectors TOPEAALT and TOPEAXFR is shown below.

MAP display example for table OFRT selector CND

```
 RTE                                                RTELIST
_____________________________________________________________

  60 (CND TOPEAALT) (SK 1) (T OFRT 62) (T OFR2 61)$
  61 (S D ALTCAR2) (T OFR3 62)$
  62 (S D OGEACAR2)$
 130 (CND TOPEAXFR) (SK 1) (T OFRT 132) (T OFR4 131)$
 131 (S D ALTCAR2) (T OFRT 132)$
 132 (S D OGEACAR2)$
```

Example 8

An example of possible datafill for conditional selector SNPA is shown below.

OFRT selector CND (continued)

MAP display example for table OFRT selector CND

```
RTE                                          RTELIST
_____________________________________________________________

507        (CND SNPA 619) (ST 508) (T OFRT 509)$
508        (S D OG619TRK)$
509        (CND SNPA 407) (ST 510) (T OFRT 511)$
510        (S D OG407TRK)$
511        (CND SNPA 613) (ST 512) (S D T120)$
512        (S D OG613TRK)$
```

Example 9

An example of datafill for table OFRT, along with MIGRATE is shown below.

MAP display example for table OFRT selector CND

```
TABLE OFNRT
_____________________________________________________________

520 (CND MIGRATE SK 2)(DN 214 520 4)(CND ALWAYS SK 1)(T OFRT 895) $
```

Example 10

An example of possible datafill for conditional selector PKT is shown below.

MAP display example for table OFRT selector CND

```
TABLE OFRT
POS 888

(CND PKT ENET SK 2)
(S D MYSIPGRP)
(CND ALWAYS SK 1)
(S D MYTDMGRP)
$
```

OFRT selector CND (end)

Table history

SN06 (DMS)

Added the PKT condition and related datafill, for CS2000 operation. Feature A89007340.

Added CND and NOT conditional routes to table OFRT selector CND for feature A00001207.

OFTRREQ

Table name

Originating Feature Requested (OFTRREQ) table

Functional description

The Carrier Advanced Intelligent Network (CAIN) uses trigger tables to set triggering criteria. A call requiring CAIN services subscribes to a CAIN group (table CAINGRP), which, in turn, subscribes to one or more trigger sets.

> ***Note:*** A CAIN group subscribes to a trigger set defining the point in call (PIC), trigger detection point (TDP), and trigger.

Table OFTRREQ defines the trigger criteria for the *O_Feature_Requested* trigger at the *O_Feature_Requested* TDP of the *Collect_Information* PIC (PIC 3). When the datafilled trigger criteria is met, the datafilled action is performed. Available actions are: ignore the CAIN framework, leave trigger detection point, continue with no trigger, block the call, and request a feature.

Refer to the *UCS DMS-250 NetworkBuilder Application Guide* for CAIN services information; refer to the *UCS DMS-250 Programmable Service Node (PSN) Application Guide* for PSN information.

Datafill sequence and implications

Enter data into table CAINPRT before table OFTRREQ. Enter a valid CAIN group into table CAINGRP before datafilling table OFTRREQ.

Table size

0 to 65,535 tuples.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table OFTRREQ.

OFTRREQ field descriptions (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
OFTRREQKY		see subfields	CUSTOMIZED DIALING PLAN KEY. Datafill the 2-part key: CAINGRP and FROMDIGS.
	CAINGRP	Valid CAIN group datafilled in table CAINGRP	CAIN GROUP. Enter a valid CAIN group datafilled in table CAINGRP.

OFTRREQ (continued)

OFTRREQ field descriptions (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	DIGTYPE	INFO, ANI, ADDR, CIC	DIGIT TYPE. Enter the digit type used in the FROMDIGS-TODIGS range. Enter INFO (information digits), ANI (automatic number identification), ADDR (address) or CIC (carrier identification code).
	FROMDIGS	Up to 24 digits (0 to 9, *, #)	FROM DIGITS. Enter the first number used to define the collected address range. ***Note:*** Only enter * or # as the first digit. The digit values from least to greatest are: 0 1 2 3 4 5 6 7 8 9 * #.
TODIGS		Up to 24 digits (0 to 9, *, #)	TO DIGITS. Enter the second number used to define the range of the collected address. ***Note:*** Only enter * or # as the first digit. The digit values from least to greatest are: 0 1 2 3 4 5 6 7 8 9 * #.
ACTION		see subfield	ACTION. ACTION consists of one subfield: TRIGACT.
	TRIGACT		TRIGGER ACTION. Enter the action call processing performs when trigger criteria is met. Enter one of the following: IGNORE, LEAVE_TDP, CONT_NOTRIG, BLOCK, or FEAT.
		IGNORE	IGNORE - CAIN call processing ignores these calls and regular switch processing continues.
		LEAVE_TDP	LEAVE TRIGGER DETECTION POINT. Ignore the fact that a match was made, and continue call processing at the next trigger detection point.
		CONT_NOTRIG	CONTINUE WITH NO TRIGGER. Ignore the fact that a match was made and continue the call without further CAIN processing.
		BLOCK	BLOCK - CAIN call processing blocks the call and AINF treatment is applied.

OFTRREQ field descriptions (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
		FEAT	FEATURE - CAIN call processing queries the SCP and performs a feature. See TRIGACT=FEAT for refinement datafill.
OPTIONS			OPTIONS. Datafill this field to specify optional CAIN features. Enter up to 7 options. ***Note:*** Currently, the available options are only valid for a TRIGACT of FEAT.
		NIL	Enter NIL to remove an option.
		PRTNM	Enter PRTNM to identify a pretranslator. Datafill the EXTPRTNM refinement.
	EXTPRTNM	valid pretranslator datafilled in table STDPRTCT	Enter a pretranslator name.
		BUFFER	Enter BUFFER to activate digit buffering while the SCP is queried. The collected digits are delivered during conversational digit collection.
		REORIG	Enter REORIG to allow reorigination at OFTRREQ.
		GT	Enter GT to identify the global title used to identify the SCP handling the query. Datafill the GT_VALUE refinement.
		T1OVFLGT	This option the global title to use for SCP querying after a T1 timeout occurs on the default global title. Datafill the GT_VALUE refinement.
		ACGOVFLGT	ACG OVERFLOW GT. This option specifies the global title to use for requerying when query is blocked by an ACG control. Datafill the GT_VALUE refinement.
	GT_VALUE		GLOBAL TITLE VALUE. Enter one of the following: CAIN_CLID, CAIN_ADDR, or CAIN_FEAT.

OFTRREQ (continued)

OFTRREQ field descriptions (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
		CAIN_CLID	Enter CAIN_CLID to send overflow queries to the SCP associated with the CAIN_CLID_GT global title defined in table C7GTTYPE.
		CAIN_ADDR	Enter CAIN_ADDR to send overflow queries to the SCP associated with the CAIN_ADDR_GT global title defined in table C7GTTYPE.
		CAIN_FEAT	Enter CAIN_FEAT to send overflow queries to the SCP associated with the CAIN_FEAT_GT global title defined in table C7GTTYPE. Datafill the GT_DIGITS refinement.
	GT_DIGITS	0 to 4095	Enter the digits associated with CAIN_FEAT_GT from table C7GTTYPE.
		VERSION	VERSION. This option controls the CAIN protocol version for outgoing messages.
	VERSION	V0, V1, V2, V3, V4, V5	Enter one of the following values: V0, V1, V2, V3, V4 or V5.
		STREAM	STREAM. This option controls the NetworkBuilder protocol stream.
	STREAM	UCS05, UCS06, UCS07, UCS08, UCS09, UCS11	Enter one of the following values: UCS05, UCS06, UCS07, UCS08, UCS09, UCS11.

TRIGACT=FEAT

When TRIGACT=FEAT, datafill the following refinement:

TRIGACT=FEAT refinement datafill (Sheet 1 of 3)

Refinement	Subfield or refinement	Entry	Explanation and action
FEAT			FEATURE. Enter the feature required.
		CARD	Enter CARD to collect calling card information and datafill the COLLTYPE refinement.
	COLLTYPE		COLLECTION TYPE. Enter up to 5 COLLTYPEs.

TRIGACT=FEAT refinement datafill (Sheet 2 of 3)

Refinement	Subfield or refinement	Entry	Explanation and action
		NIL	Enter NIL to remove an already datafilled collection type.
		CAINPRT	CAIN PRETRANSLATOR. This is the index to table CAINPRT.
		PIN	PERSONAL IDENTIFICATION DIGITS. Enter a resource index (0 to 4095), interrupt status (Y or N), minimum digits (0 to 24), maximum digits (0 to 24), and a timer value (0 to 15).
		CARD	CARD. Enter a resource index (0 to 4095), interrupt status (Y or N), minimum digits (0 to 24), maximum digits (0 to 24), and a timer value (0 to 15). ***Note:*** You cannot provision a card and auth collectible in the same tuple.
		AUTH	AUTHORIZATION CODE. Enter a resource index (0 to 4095), interrupt status (Y or N), minimum digits (0 to 24), maximum digits (0 to 24), and a timer value (0 to 15). ***Note:*** You cannot provision a card and auth collectible in the same tuple.
		ADDR	ADDRESS. Enter a resource index (0 to 4095), interrupt status (Y or N), minimum digits (0 to 24), maximum digits (0 to 24), and a timer value (0 to 15).
		ACCT	ACCOUNT CODE. Enter a resource index (0 to 4095, interrupt status (Y or N), minimum digits (0 to 24), maximum digits (0 to 24), and a timer value (0 to 15).
		ANNC	ANNOUNCEMENT. Enter a resource index (0 to 4095) and interrupt status (Y or N), minimum digits (0 to 24), maximum digits (0 to 24), and a timer value (0 to 15).
		AUTH	Enter AUTH to collect authorization information and datafill the COLLTYPE refinement.
	COLLTYPE		COLLECTION TYPE. Enter up to 5 COLLTYPEs.

OFTRREQ (continued)

TRIGACT=FEAT refinement datafill (Sheet 3 of 3)

Refinement	Subfield or refinement	Entry	Explanation and action
		NIL	Enter NIL to remove an already datafilled collection type.
		CAINPRT	CAIN PRETRANSLATOR. This is the index to table CAINPRT.
		PIN	PERSONAL IDENTIFICATION DIGITS. Enter a resource index (0 to 4095), interrupt status (Y or N), minimum digits (0 to 24), maximum digits (0 to 24), and a timer value (0 to 15).
		CARD	CARD. Enter a resource index (0 to 4095), interrupt status (Y or N), minimum digits (0 to 24), maximum digits (0 to 24), and a timer value (0 to 15).
		AUTH	AUTHORIZATION CODE. Enter a resource index (0 to 4095), interrupt status (Y or N), minimum digits (0 to 24), maximum digits (0 to 24), and a timer value (0 to 15).
		ADDR	ADDRESS, Enter a resource index (0 to 4095), interrupt status (Y or N), minimum digits (0 to 24), maximum digits (0 to 24), and a timer value (0 to 15).
		ACCT	ACCOUNT CODE. Enter a resource index (0 to 4095), interrupt status (Y or N), minimum digits (0 to 24), maximum digits (0 to 24), and a timer value (0 to 15).
		ANNC	ANNOUNCEMENT. Enter a resource index (0 to 4095) and interrupt status (Y or N), minimum digits (0 to 24), maximum digits (0 to 24), and a timer value (0 to 15).
		ADDR	Enter ADDR to play a resource without collecting any digits.
	COLLTYPE		COLLECTION TYPE. Enter up to 5 COLLTYPEs.
		NIL	Enter NIL to remove an already datafilled collection type.
		ANNC	ANNOUNCEMENT. Enter a resource index (0 to 4095) and an interrupt status (Y or N).

TRIGACT=CAINPRT

When TRIGACT=CAINPRT, datafill the following refinement:

TRIGACT=CAINPRT refinement datafill

Refinement	Subfield or refinement	Entry	Explanation and action
CAINPRT			Index into table CAINPRT
		RSRCIND	CAIN resource to be played for the collectible. Enter a resource index (0 to 4095).
		INTERRUPT	Enter an interrupt status (Y or N).
		TIMER	Set the PSIG timer value (0 to 15).

Note: The CAIN610 SOC is required for this tuple to be processed.

Datafill example

The following example shows datafill for table OFTRREQ.

```
OFTRREQKY TODIGS ACTION OPTIONS
------------------------------------------------------------
OFTRGRP ADDR 0 9 FEAT CARD CARD 15 Y 16 16 Y ADDR 18 N 10 10
$ $
UA_GRP CIC 444 444 FEAT CARD CAINPRT UA_PRT 8 Y  15
```

Table history

UCS14

Added new option, STREAM (SR 60105565).

UCS12

Updated to include editorial changes.

UCS11

Updated the VERSION option to include a new value V5 (AX1373).

UCS09

Added VERSION to the option vector (AX0973). Added option ACGOVFLGT to the option vector (AX0976).

OFTRREQ (end)

UCS08

Feature AX0199 adds CAINPRT as a new selector in COLLTYPE.

UCS07

Subfield TRIGACT is expanded to include the entries LEAVE_TDP and CONT_NOTRIG.

The option T1OVFLGT is added.

UCS05

Table OFTRREQ was created.

OIECREO

Table name

Originating Interexchange Carrier Reorigination trigger (OIECREO) table

Functional description

The Carrier Advanced Intelligent Network (CAIN) uses trigger tables to set triggering criteria. A call requiring CAIN services subscribes to a CAIN group (table CAINGRP), which, in turn, subscribes to one or more trigger sets.

> ***Note:*** A CAIN group subscribes to a trigger set defining the point in call (PIC), trigger detection point (TDP), and trigger.

Table OIECREO defines the trigger criteria for the *O_IEC_Reorigination* trigger. When the datafilled trigger criteria are met, the datafilled action is performed. Available actions are: ignore the current trigger, block the call, leave trigger detection point, continue with no trigger, invoke the PSN framework, or query the service control point (SCP).

Refer to the *UCS DMS-250 Programmable Service Node (PSN) Application Guide* for PSN information.

Refer to the *UCS DMS-250 NetworkBuilder Application Guide* for CAIN services information; refer to the *UCS DMS-250 Programmable Service Node (PSN) Application Guide* for PSN information.

Datafill sequence and implications

Datafill a valid CAIN group in table CAINGRP before table OIECREO.

Table size

0 to 65,535 tuples

OIECREO (continued)

Datafill

The following table lists datafill for table OIECREO.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
OIECREKY		see subfields	ORIGINATING INTER-EXCHANGE CARRIER REORIGINATION. Datafill the 3-part key consisting of: CAINGRP, DIGTYPE, and FROMDIGS.
	CAINGRP	Valid CAIN group datafilled in table CAINGRP	CAIN GROUP. Enter a valid CAIN group datafilled in table CAINGRP.
	DIGTYPE	INFO, ANI, XLAADDR, ADDR, CIC, ADIN	DIGIT TYPE. Enter the digit type used in the FROMDIGS-TODIGS range. Enter INFO (information digits), ANI (automatic number identification), XLAADDR (translated address), ADDR (address), CIC (carrier identification code), or ADIN (authcode database index).
	FROMDIGS	Up to 24 digits (0 to 9, *, #)	FROM DIGITS. Enter the first number used to define the digit range. ***Note:*** Only enter * or # as FROMDIGS first digit. The digit values from least to greatest are: 0 1 2 3 4 5 6 7 8 9 * #.
TODIGS		Up to 24 digits (0 to 9, *, #)	TO DIGITS. Enter the second number used to define the digit range. ***Note:*** Only enter * or # as TODIGS first digit. The digit values from least to greatest are: 0 1 2 3 4 5 6 7 8 9 * #.
TRIGACT		OIECREO_ ACTION_ AREA	TRIGGER ACTION. Enter the action call processing performs when trigger criteria is met. Enter one of the following: IGNORE, BLOCK, QUERY, LEAVE_TDP, CONT_NOTRIG, or COLLINFO.

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
		IGNORE	IGNORE - CAIN call processing ignores these calls and regular switch processing continues.
		BLOCK	BLOCK - CAIN call processing blocks the call and AINF treatment is applied.
		QUERY	QUERY - CAIN call processing queries the SCP. Datafill the TRIGACT and ERRACT refinements when TRIGACT=QUERY.
		LEAVE_TDP	LEAVE TRIGGER DETECTION POINT. Ignore the fact that a match was made, and continue call processing at the next trigger detection point.
		CONT_ NOTRIG	CONTINUE WITH NO TRIGGER. Ignore the fact that a match was made and continue the call without further CAIN processing.
		COLLINFO	COLLECT INFORMATION. Sends the call back to the **Collect_Information** PIC to execute the reorigination dialing plan.
OPTIONS			OPTIONS. Datafill this field to specify optional CAIN features. Enter up to 3 options. ***Note:*** Currently, the available options are only valid for a TRIGACT of QUERY.
		NIL	Enter NIL to remove an already datafilled option.
		BUFFER	Enter BUFFER to activate digit buffering while the SCP is queried.
		GT	Enter GT to identify the global title used to identify the SCP handling the query. Datafill the GT_VALUE refinement.
	GT_VALUE		GLOBAL TITLE VALUE. Enter one of the following: CAIN_CLID, CAIN_ADDR, or CAIN_FEAT.

OIECREO (continued)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
		CAIN_CLID	Enter CAIN_CLID to send overflow queries to the SCP associated with the CAIN_CLID_GT global title defined in table C7GTTYPE.
		CAIN_ADDR	Enter CAIN_ADDR to send overflow queries to the SCP associated with the CAIN_ADDR_GT global title defined in table C7GTTYPE.
		CAIN_FEAT	Enter CAIN_FEAT to send overflow queries to the SCP associated with the CAIN_FEAT_GT global title defined in table C7GTTYPE. Datafill the GT_DIGITS refinement.
	GT_DIGITS	0 to 4095	Enter the digits associated with CAIN_FEAT_GT from table C7GTTYPE.
		VERSION	VERSION. This option controls the CAIN protocol version for outgoing messages.
	VERSION	V0, V1, V2, V3, V4, V5	Enter one of the following values: V0, V1, V2, V3, V4 or V5.
		STREAM	STREAM. This option controls the NetworkBuilder protocol stream.
	STREAM	UCS05, UCS06, UCS07, UCS08, UCS09, UCS11	Enter one of the following values: UCS05, UCS06, UCS07, UCS08, UCS09, UCS11.

Datafill example

The following example shows sample datafill for table OIECREO.

MAP display example for table OIECREO

```
OIECREKY   TODIGS   ACTION         OPTIONS
_____________________________________________________
COLLGRP    ADDR  222 222    QUERY $
```

Table history

UCS14

Added new option, STREAM (SR 60105565).

UCS12

Updated to include editorial changes.

UCS11

Updated the VERSION option to include a new value V5 (AX1373).

UCS09

Added VERSION to options vector (AX0973).

UCS08

Feature AX0186 created table OIECREO.

OMACC

Table name

Operational Measurements Accumulator (OMACC) table

Functional description

Table OMACC records the period of time that the accumulating registers collect data for a specified accumulating class of operational measurements (OM).

For related information, see the description of table OMPRT.

Datafill sequence and meaning

You do not need to enter data in other tables before you enter data in table OMACC.

For a one-night process (ONP), table OMACC restores before tables OMACCGRP, OMACCFLD, OMACCKEY, OMACCTOT, and OMTOTAL.

Table size

0 to 30 tuples

The system allocates memory for a maximum of 30 entries in table OMACC.

Datafill

Datafill for table OMACC appears in the following table.

Field descriptions (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
CLASS		alphanumeric	*Class name*. The use of command OMCLASS causes the system to enter data in this field. This action establishes an operational measurements (OM) class. The field contains the name of the accumulating or history class of OMs for which to establish accumulating periods.
ENABLED		Y or N	*Enabled*. Enter Y (yes) to enable the accumulating class. Enter Y if accumulation of data during the specified period occurs. For other conditions, enter N (no).

Field descriptions (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
PRECSN		SPRECISION DPRECISION HPRECISION HISTPRECISI ON	*Precision*. Enter SPRECISION for single precision, DPRECISION for double precision, HPRECISION for holding precision, and HISTPRECISION for history precision.
WHEN		see subfield	*When*. This field contains subfield REP.
	REP	AUTO MONTHLY WEEKLY DAILY HOURLY HALFHOURL Y DAYTIME HISTORY DEVWEEK or DEVDAY	*Repetition*. Enter the period of time that OMs for an enabled class accumulate. Enter AUTO for holding classes. This value cannot change, this value is read-only. The setting of the accumulating period occurs in field OMXFER in table OFCENG. If AUTO appears in table OMACC, enter AUTO in subfield REP in tables OMPRT and OMTAPE. For an OMXFER rate of ×15, enter AUTO in subfield REP in tables OMACC and OMPRT. If the OMXFER rate is ×30 and a report each 0.5 h is a requirement, the following are possible datafill combinations for subfield REP: • table OMACC with AUTO setting and table OMPRT with AUTO setting • table OMACC with HALFHOURLY setting and table OMPRT with HALFHOURLY setting • table OMACC with AUTO setting and table OMPRT with HALFHOURLY setting • table OMACC with HALFHOURLY setting and table OMPRT with AUTO setting Enter MONTHLY to specify one accumulation of OMs in a month. Enter refinements FROMDAYOFM, FROMTIME, TODAYOFM, and TOTIME where REP= MONTHLY.

OMACC (continued)

Field descriptions (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	REP (continued)		You can obtain a set of data for a full month. For this even to occur, refinements FROMDAYOFM and TODAYOFM, and refinements FROMTIME and TOTIME must have the same values. For example, MONTHLY 1 0 C00 1 0 C00 corresponds to the period from midnight at the start of the month to the following. Refinement MONTHLY 1 0 C00 1 0 C00 corresponds to. the values to midnight at the end of the last day of the month. Enter WEEKLY to specify one accumulation of OMs each week. Enter data in refinements FROMDAYOFW, FROMTIME, TODAYOFW, and TOTIME where REP=WEEKLY. Enter DAILY to specify one accumulation of OMs each day of each week. Enter data in refinements FROMTIME and TOTIME where REP=DAILY. To obtain a full 24 h set of data for a DAILY accumulation, refinements FROMTIME and TOTIME must have the same values. For example, DAILY 12 C00 12 C00 corresponds to every 24 h from 12 noon to 12 noon. Enter HOURLY to specify a continuous succession of accumulations of OMs each hour. Enter data in refinement STARTUP where REP=HOURLY or HALFHOURLY. Enter HALFHOURLY to specify a continuous succession of accumulations of OMs each 0.5 h. Enter refinement STARTUP where REP=HOURLY or HALFHOURLY.

Field descriptions (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	REP (continued)		The DAYTIME is like DAILY, except the use of this value specifies OM accumulation for a specified block of days each week. If you enter DAYTIME, enter data in refinements FROMDAYOFW, TODAYOFW, FROMTIME, and TOTIME where REP=DAYTIME. The HISTORY appears only for history classes. This value cannot change. This value is read-only. See refinements SNAPSHOTS and XFER where REP=HISTORY. Enter DEVWEEK to specify one accumulation of OMs each week. Enter refinements DOW and WHEN where REP= DEVWEEK. Enter DEVDAY to specify one accumulation of data each day of the week. Enter refinement WHEN where REP=DEVDAY.

REP = MONTHLY

If the entry in subfield REP is MONTHLY, enter data in refinements FROMDAYOFM, FROMTIME, TODAYOFM, and TOTIME as the following table describes.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	FROMDAY OFM	1 to 31	*From day of month*. Enter the day of the month that data collection starts.
	FROMTIME	see subfields	*From time*. This refinement consists of subfields HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour of the day that data collection starts.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the time of the hour, in 15 min intervals, that data collection starts.
	TODAYOFM	1 to 31	*To day of month*. Enter the day of the month that data collection stops.

OMACC (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	TOTIME	see subfields	*To time*. This refinement consists of subfields HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour of the day that data collection stops.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the time of the hour, in 15 min intervals, that data collection stops.

REP = WEEKLY

If the entry in subfield REP is WEEKLY, enter data in refinements FROMDAYOFW, FROMTIME, TODAYOFW, and TOTIME as the following table describes.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	FROMDAY-OFW	SU, MO, TU, WE, TH, FR, or SA	*From day of week*. Enter the day of the week that data collection starts.
	FROMTIME	see subfields	*From time*. This refinement contains subfields HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour of the day that data collection starts.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the time of the hour, in 15 min intervals, that data collection starts.
	TODAYOFW	SU, MO, TU, WE, TH, FR, or SA	*To day of week*. Enter the day of the week that data collection stops.
	TOTIME	see subfields	*To time*. This refinement contains subfields HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour of the day that data collection stops.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the time of the hour, in 15 min intervals, that data collection stops.

REP = DAILY

If the entry in subfield REP is DAILY, enter data in refinements FROMTIME and TOTIME as the folowing table describes.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	FROMTIME	see subfields	*From time*. This refinement consists of subfields HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour of the day that data collection starts.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the time of the hour, in 15 min intervals, that data collection starts.
	TOTIME	see subfields	*To time*. If the entry in subfield REP is DAILY, enter this refinement. This refinement consists of subfields HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour of the day that data collection stops.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the time of the hour, in 15 min intervals, that data collection stops.

REP = HOURLY or HALFHOURLY

If the entry in subfield REP is HOURLY or HALFHOURLY, enter data in refinement STARTUP as the following table describes.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	STARTUP	C00, C15, C30, or C45	*Startup*. If the entry in subfield REP is HOURLY, enter this refinement. This refinement defines the time past the hour that the first accumulating period starts. This time is also dependent on the value in field OMXFER in table OFCENG. Enter the time of the hour, in 15 min intervals, that data collection starts.

OMACC (continued)

REP = DAYTIME

If the entry in subfield REP is DAYTIME, enter data in refinements FROMDAYOFW, TODAYOFW, FROMTIME, and TOTIME as the following table describes.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	FROMDAY-OFW	SU, MO, TU, WE, TH, FR, or SA	*From day of week*. Enter the day of the week that data collection starts.
	TODAYOFW	SU, MO, TU, WE, TH, FR, or SA	*To day of week*. Enter the day of the week that data collection stops.
	FROMTIME	see subfields	*From time*. This refinement consists of subfields HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour of each day of the FROMDAYOFW to TODAYOFW period that data collection starts.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the time of the hour, in 15 min intervals, that data collection starts.
	TOTIME	see subfields	*To time*. This refinement consists of subfields HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour during each day of the FROMDAYOFW to TODAYOFW period that data collections stops.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the time of the hour, in 15 min intervals, that data collection stops.

Note: Refinement FROMTIME specifies the block of days. Refinement TOTIME does not specify the block of days. If the period of accumulation overlaps midnight, accumulation continues into the day following the entry refinement TODAYOFW contains.

REP = HISTORY

If the entry in subfield REP is HISTORY, with the use of command OMCLASS, the following occurs. The system enters the subfields that appear in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	SNAPSHOTS	1 to 6	*Number of snapshots*. This read-only field specifies the number of history registers for each measurement.
	XFER	T5, T10, T15, T20, or T30	*Transfer attribute*. This read-only field specifies the time, in minutes, that a single history register is current. A value of T5 causes the history register to cycle every five min.

REP = DEVWEEK

If the entry in subfield REP is DEVWEEK, enter data in refinements DOW and WHEN as the following table describes.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	DOW	SU, MO, TU, WE, TH, FR, or SA	*Day of week*. Enter the day of the week that data collection occurs.
	WHEN	see subfields	*When*. This refinement consists of sub-refinements HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour of the day that data collection starts.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the time of the hour, in 15 min intervals, that data collection starts.

OMACC (end)

REP = DEVDAY

If the entry in subfield REP is DEVDAY, enter data in refinement WHEN as the following table describes.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	WHEN	see subfields	*When*. This refinement consists of subfields HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour of the day that data collection starts.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the time of the hour, in 15 min intervals, that data collection starts.

Datafill example

Sample datafill for table OMACC appears in the following example.

MAP example for table OMACC

```
     CLASS  ENABLED        PRECSN                          WHEN
  ------------------------------------------------------------
  EADAS30M        N    SPRECISION                         AUTO
  EADAS60M        N    SPRECISION                         AUTO
  EADAS24H        N    SPRECISION                         AUTO
    PREV5M        N    SPRECISION                         AUTO
    CURR5M        N    SPRECISION                         AUTO
```

Table history

BASE06

Field PRECSN was added in accordance with Non-Data Tables to Tables (OM).

Additional information

There is no additional information.

OMACCFLD

Table name

Operational Measurements Accumulator Field (OMACCFLD) table

Functional description

- Table OMACCFLD contains the operational measurement (OM) configuration data associated with the OM CI command OMACCFLD. Use this table to perform the following actions:
- add an OM field to an accumulating class
- delete an OM field from an accumulating class

This table provides an alternate interface to OM accumulating information. Before the introduction of this table, access to this information only occurred through use of OM CI commands.

The addition or deletion of tuples from this table is the same as activating the OM CI command OMACCFLD.

Datafill sequence and meaning

Enter data in tables OMACC and OMACCGRP before you enter data in table OMACCFLD.

Table size

0 to 960 000 tuples

Datafill

Datafill for table OMACCFLD appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
OMFIELD	CLASS GROUP and FIELD	see subfields	*OM field*. This field is the key for the table. This field contains a correct accumulating class, a correct OM group, and a field entry.
	CLASS	a maximum of 8 alphanumeric characters	*Accumulating class*. Enter the name of the accumulating class. For example, TEST1. Enter a maximum of 30 accumulating classes.

OMACCFLD (end)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	GROUP	a maximum of 8 alphanumeric characters	*Group*. Enter the OM group name. For example, TRK.
	FIELD	ALL or FIELD	*Fields*. Enter ALL if addition or deletion of all the fields in the specified OM group must occur. Enter FIELD if the addition or deletion of separate register fields must occur. Enter data in the refinement field.
	field	a maximum of 8 alphanumeric characters	Enter the field name. For example, RCVSZ2.
OMDATA		ADD or DELETE	*OM data*. Enter ADD to add fields to the accumulating class. Enter DELETE to delete fields from the accumulating class.

Datafill example

Sample datafill for table OMACCFLD appears in the following example.

MAP example for table OMACCFLD

```
CLASS    GROUP          FIELD OMDATA
_____________________________________________________________
PREV5M    RCVR FIELD  RCVSZRS DELETE
PREV5M    RCVR FIELD   RCVSZ2 DELETE
PREV5M    RCVR FIELD  RCVOVFL DELETE
PREV5M    RCVR FIELD  RCVQOCC DELETE
PREV5M    RCVR FIELD RCVQABAN DELETE
PREV5M    RCVR FIELD  RCVTRU2 DELETE
PREV5M  TRMTCM FIELD  TCMUNDT DELETE
PREV5M  TRMTCM FIELD  TCMPDIL DELETE
```

OMACCGRP

Table name

Operational Measurements Accumulator Groups (OMACCGRP) table

Functional description

Table OMACCGRP holds the operational measurement (OM) configuration data associated with the OM CI command OMACCGRP. Use this table to assign or delete OM groups to or from accumulating classes. Before, the OM CI command OMCLASS defined the accumulating classes.

Before the introduction of this table, access of OM accumulating information could only occur through use of OM CI commands. This table provides an alternate interface to OM accumulating information.

Tuples in table OMACCGRP update with use of the OMACCGRP command to add or delete OM groups from accumulating classes.

Datafill sequence and meaning

Use the class names that you can use as the first part of the key in table OMACCGRP to update table OMACC. Perform this action before you enter table OMACCGRP. Use the table editor or the OMCLASS command to perform these updates.

Table OMTOTAL restores before table OMACCGRP during a one-night process (ONP)

Table size

0 to 30 000 tuples

Datafill

Datafill for table OMACCGRP appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
OMGRP	CLASS and GROUP	See subfields	*OM group*. This field is the key for the table. The field consists of a correct accumulating class and a group.
	CLASS	a maximum of eight alphanumeric characters	*Accumulating class*. Enter the accumulating class name, for example, TEST1. Enter a maximum of 30 accumulating classes.

OMACCGRP (end)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	GROUP	ALL or GROUP	*Group*. Enter ALL if the accumulating class must have all OM groups defined on the switch added or deleted. Enter GROUP if an accumulating class must have an individual OM group added or deleted. Enter refinement ONEGRP.
	ONEGRP	a maximum of eight alphanumeric characters	*OM group*. Enter the OM group name, for example, TRK.
OMDATA		ADD or DELETE	Enter ADD if the accumulating class must have an OM group or groups added or deleted. Enter DELETE if the acculumating class must have an OM group or groups deleted.

Datafill example

Sample datafill for table OMACCGRP appears in the following table.

MAP example for table OMACCGRP

```
CLASS            GROUP OMDATA
_____________________________________________________________
PREV5M GROUP      RCVR    ADD
PREV5M GROUP    TRMTCM    ADD
PREV5M GROUP    TRMTER    ADD
PREV5M GROUP    TRMTFR    ADD
PREV5M GROUP    TRMTRS    ADD
PREV5M GROUP      RADR    ADD
PREV5M GROUP    EACARR    ADD
PREV5M GROUP       CBK    ADD
PREV5M GROUP       PRP    ADD
PREV5M GROUP  NWMTGCNT    ADD
```

OMACCKEY

Table name

Operational Measurements Accumulator Key table

Functional description

Table OMACCKEY holds the operational measurement (OM) configuration data associated with the OM CI command OMACCKEY. The operating company uses this table to select specified tuples in an accumulating group and OM class. The operating company selects these tuples for output to a printing device.

This table provides an alternate interface to OM accumulating data. Before the introduction of this table, access to OM accumulating data only occurred with the OM CI commands.

When you use the OM CI command OMACCKEY, the system updates table OMACCKEY.

Datafill sequence and meaning

Enter data in tables OMACC and OMACCGRP before you change the datafill in table OMACCKEY.

Table size

0 to 1 966 080 000 tuples

Datafill

Datafill for table OMACCKEY appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
OMKEY	CLASS GROUP NODE and KEY	see subfields	*OM key*. This field is the key for the table. This field contains a correct accumulating class, a correct OM group, a node entry, and a key entry.
	CLASS	a maximum of 8 alphanumeric characters	*Accumulating class*. Enter the accumulating class name. For example, TEST1. You can enter a maximum of 30 accumulating classes.

OMACCKEY (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	GROUP	a maximum of 8 alphanumeric characters	*Group*. Enter the name of the OM group that contains the registers.
	NODE	CM, FP, AP	*Node*. Enter the node name. The node name indicates if the computing module (CM), file processor (FP) or application processor (AP) has the OM configuration of this tuple. ***Note:*** When S/DMS operational measurements (SOM) are not active, the only correct entry for this field is CM. If the entry in this field is AP or FP, enter data in refinement NODENO
	KEY	ALL or KEY	*Field key*. Enter ALL to add or delete all fields in the OM group. Enter KEY to add or delete one field. If you enter KEY, enter data in refinement KEY_VALUE.
	NODENO	0 to 255	*Node number*. Enter the node number.
	KEY_VALUE	0 to 65 536	Enter the added or deleted key.
OMDATA		ADD or DELETE	Enter ADD to add fields. Enter DELETE to delete fields.

Datafill example

Datafill for table OMACCKEY appears in the following example.

MAP example for table OMACCKEY

```
CLASS     GROUP    NODE       KEY  OMDATA
_____________________________________________________
TEST1    GROUPA     CM  KEY    8  DELETE
TEST2    GROUPA     CM  KEY   57  DELETE
TEST3    GROUPA     CM  KEY  245  DELETE
TEST1    GROUPB     FP 0   ALL    DELETE
TEST4    GROUPX     CM  KEY    1  DELETE
TEST4    GROUPY     AP 1 KEY   1  DELETE
TEST4    GROUPY     AP 1 KEY   2  DELETE
```

OMACCTOT

Table name

Operational Measurements Accumulator Total table

Functional description

Table OMACCTOT holds the operational measurement (OM) configuration data associated with the OM CI command OMACCTOT. This table can specify that an accumulating group and OM class only require OM totals. This table can specify that an accumulating group and OM class do not require OM totals.

This table provides an alternate interface to OM accumulating data. Before the introduction of this table, access to OM accumulating data only occurred with the OM CI commands.

When you use the OM CI command OMACCTOT, the system updates table OMACCTOT.

Datafill sequence and meaning

You must enter data in tables OMACC and OMACCGRP before you enter data in table OMACCTOT.

Table size

0 to 30 000 tuples

Datafill

Datafill for table OMACCTOT appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
ACCTTKEY	CLASS and GROUP	see subfields	*Accumulating total key*. This field is the key for the table. This field contains a correct accumulating class and a correct OM group.
	CLASS	a maximum of 8 alphanumeric characters	*Accumulating class*. Enter the accumulating class name. For example, TEST1. You can enter a maximum of 30 accumulating classes.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	GROUP	a maximum of 8 alphanumeric characters	*OM group*. Enter OM group name. For example, TRK.
OMDATA		ON or OFF	Enter ON to activate the capability. Enter OFF to deactivate the capability.

Datafill example

Sample datafill for table OMACCTOT appears in the following example.

MAP example for table OMACCTOT

```
CLASS     OMTOT
_____________________________________________________________
TEST1    GROUPX
TEST2    GROUPX
TEST2    GROUPZ
TEST3    GROUPA
TEST4    GROUPC
TEST4    GROUPF
TEST4    GROUPN
```

OMDATA

Table name

Operational Measurement Data (OMDATA)

Functional description

The Operational Measurement Data (OMDATA) table datafills the classes to output to the file processor.

Datafill sequence and implications

Table OMTAPE must be datafilled before table OMDATA; however during a dump and restore, table OMACC must be datafilled before table OMDATA to maintain existing datafill.

Table size

The minimum size of this table is 0; the maximum is 32 tuples.

Field descriptions

The following table describes field names, subfield names, and valid data ranges for table OMDATA.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Heading
NUMBER		0-31	OM DATA SCHEDULE NUMBER.
ACTIVE		Y or N	ACTIVE. This field determines whether the OM class is to be output by way of the distributed recording manager (DRM) to the file processor. The default is N.
CLASS		ACTIVE or HOLDING	CLASS. Enter OM data class. This field determines which accumulating registers the OM data comes from.
WHEN			WHEN. This field determines the OM time specification. Complete subfield REP and refinements
	REP	see below	REPETITION. This field determines the time period when OM data is output. Make selection as follows:
		AUTO	Enter AUTO for holding classes. This value cannot be changed.

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Heading
		HISTORY	Enter HISTORY to output OM data accumulated in the history registers. Complete SNAPSHOTS and XFER refinements.
		HALFHOURLY	Enter HALFHOURLY to output OM data every half hour. Complete STARTUP refinement.
		MONTHLY	Enter MONTHLY to output OM data monthly. Complete FROMDAYOFM, subfield, FROMTIME subfield and refinements, TODAYOFM subfield, and TOTIME subfield and refinements.
		DAYTIME	Enter DAYTIME to output OM data for a specific block of days each week. Complete FROMDAYOFW, TODAYOFW, FROMTIME, and TOTIME subfields and refinements.
		DAILY	Enter DAILY to output OM data each day of each week. Complete FROMTIME and TOTIME subfields and refinements.
		WEEKLY	Enter WEEKLY to output OM data on a weekly basis. Complete FROMDAYOFW, FROMTIME, TODAYOFW, and TOTIME subfields and refinements.
		HOURLY	Enter HOURLY to output OM data on a hourly basis. Complete STARTUP subfield.
		DEVWEEK	Enter DEVWEEK to output OM data for a specific day for each week. Complete DOW and WHEN subfields and refinements.
		DEVDAY	Enter DEVDAY to output OM data each day of one week. Complete WHEN subfield and refinements.

OMDATA (continued)

REP = HISTORY

The following describes the field names, subfield names, and valid data ranges when REP is HISTORY.

Field	Subfield or refinement	Entry	Explanation and action
HISTORY	SNAPSHOTS	1-6	NUMBER of SNAPSHOTS. Enter the number of history registers for each measurement.
	XFER	T5, T10, T15, T20, or T30	TRANSFER. Enter the time in minutes a single history register is current. For example, if entry is T5, the history register cycles every 5 minutes.

REP = HOURLY or HALFHOURLY

The following describes the field names, subfield names, and valid data ranges when REP is HOURLY or HALFHOURLY.

Field	Subfield or refinement	Entry	Explanation and action
HOURLY or HALFHOURLY	STARTUP	C00, C15, C30, or C45	STARTUP. Enter the time, in 15-minute intervals, past the hour or halfhour the OM data is output.

REP = MONTHLY

The following describes the field names, subfield names, and valid data ranges when REP is MONTHLY.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
MONTHLY	FROMDAYOFM	1-31	FROM DAY OF MONTH. Enter the day of month the OM data is output.
	FROMTIME	see subfields.	
	HR	0-23	HOUR. Enter the hour of the day the OM data is output.

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	MIN	C00, C15, C30, C45	MINUTE. Enter the time of the hour, in 15-minute intervals, the OM data is output.
	TODAYFM	1-31	TO DAY OF MONTH. Enter the day of the month the output of the OM data stops.
	TOTIME	see subfields.	
	HR	0-23	HOUR. Enter the hour of the day the output of OM data stops.
	MIN	C00, C15, C30, C45	MINUTE. Enter the time of the hour, in 15-minutes intervals, the output of OM data stops.

REP = DAYTIME

The following describes the field names, subfield names, and valid data ranges when REP is DAYTIME.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
DAYTIME	FROMDAYOFW	SU, MO, TU, WE, TH, FR, or SA	FROM DAY OF WEEK. Enter the day of week the output of OM data starts. Select entry as follows: • SU (Sunday) • MO (Monday) • TU (Tuesday) • WE (Wednesday) • TH (Thursday) • FR (Friday) • SA (Saturday)
	TODAYOFW	SU, MO, TU, WE, TH, FR, or SA	TO DAY OF WEEK. Enter the day of week the output of OM data stops.

OMDATA (continued)

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	FROMTIME	see subfields.	FROM TIME. This refinement specifies the block of days. If time period overlaps midnight, the OM data output continues into the day following the entry for TODAYOFW.
	HR	0-23	HOUR. Enter the hour of the day the OM data is output.
	MIN	C00, C15, C30, C45	MINUTE. Enter the time of the hour, in 15-minute intervals, the OM data is output.
	TOTIME	see subfields.	TO TIME.
	HR	0-23	HOUR. Enter the hour of the day the output of OM data stops.
	MIN	C00, C15, C30, C45	MINUTE. Enter the time of the hour, in 15-minutes intervals, the output of OM data stops.

REP = DAILY

The following describes the field names, subfield names, and valid data ranges when REP is DAILY.

Field	Subfield or refinement	Entry	Explanation and action
DAILY	FROMTIME	see subfields.	
	HR	0-23	HOUR. Enter the hour of the day the OM data is output.
	MIN	C00, C15, C30, C45	MINUTE. Enter the time of the hour, in 15-minute intervals, the OM data is output.
	TOTIME	see subfields.	
	HR	0-23	HOUR. Enter the hour of the day the output of OM data stops.
	MIN	C00, C15, C30, C45	MINUTE. Enter the time of the hour, in 15-minutes intervals, the output of OM data stops.

REP = WEEKLY

The following describes the field names, subfield names, and valid data ranges when REP is HISTORY.

Field	Subfield or refinement	Entry	Explanation and action
WEEKLY	FROMDAYOFW	SU, MO, TU, WE, TH, FR, or SA	FROM DAY OF WEEK. Enter the day of week the output of OM data starts. Select entry as follows: • SU (Sunday) • MO (Monday) • TU (Tuesday) • WE (Wednesday) • TH (Thursday) • FR (Friday) • SA (Saturday)
	FROMTIME	see subfields.	FROM TIME.
	HR	0-23	HOUR. Enter the hour of the day the OM data is output.
	MIN	C00, C15, C30, C45	MINUTE. Enter the time of the hour, in 15-minute intervals, the OM data is output.
	TODAYOFW	SU, MO, TU, WE, TH, FR, or SA	TO DAY OF WEEK. Enter the day of week the output of OM data stops.
	TOTIME	see subfields.	TO TIME.
	HR	0-23	HOUR. Enter the hour of the day the output of OM data stops.
	MIN	C00, C15, C30, C45	MINUTE. Enter the time of the hour, in 15-minutes intervals, the output of OM data stops.

OMDATA (continued)

REP = DEVWEEK

The following describes the field names, subfield names, and valid data ranges when REP is DEVWEEK.

Field	Subfield or refinement	Entry	Explanation and action
DEVWEEK	DOW	SU, MO, TU, WE, TH, FR, or SA	DAY of WEEK. Enter the day of week the OM data outputs. Select entry as follows: • SU (Sunday) • MO (Monday) • TU (Tuesday) • WE (Wednesday) • TH (Thursday) • FR (Friday) • SA (Saturday)
	WHEN		WHEN. This field determines what time of the day the OM data outputs.
	HR	0-23	HOUR. Enter the hour of day the OM data outputs.
	MIN	C00, C15, C30, C45	MINUTE. Enter the time of the hour, in 15-minutes intervals, the output of OM data outputs.

REP = DEVDAY

The following describes the field names, subfield names, and valid data ranges when REP is DEVDAY.

(Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
DEVDAY	WHEN		WHEN. This field determines what time of the day the OM data outputs.

(Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	HR	0-23	HOUR. Enter the hour of day the OM data outputs.
	MIN	C00, C15, C30, C45	MINUTE. Enter the time of the hour, in 15-minutes intervals, the output of OM data outputs.

Datafill example

The following example shows datafill for table OMDATA.

NUMBER	ACTIVE	CLASS	REP
31	N	HOLDING	AUTO

OMDEV

Table name

Operational Measurements Device Table

Functional description

The system uses table OMDEV to enter dedicated output devices for operational measurements (OM). Table OMDEV contains field DEVNAME. This field specifies an output device or disk volume name, and field EBCDIC. Field EBCDIC specifies if the system uses the ASCII (American Standard Code for Information Interchange) or EBCDIC (Extended Binary-coded Decimal Interchange Code) output character standard for output.

In table OMPRT, the entry in field OUTDEV specifies the dedicated output device to which the system sends a report. This entry corresponds to the entry in field DEVNAME in table OMDEV. The system sends OMs to a dedicated output device. The system does not send other data to the device.

The system uses entry in field DEVNAME to print OM buffered reports. The output device must not be a guaranteed device. A guaranteed device continues to run despite call processing or the maintenance load. A guaranteed device continues to run if the DMS switch is under a heavy load.

For additional information on OM buffered reports, see table OMPRT.

Datafill sequence and meaning

You do not need to enter data in other tables before you enter data in table OMDEV.

Table size

1 to 32 tuples

This table contains one tuple that you cannot change or delete. Use the ADD command of table control to add more tuples to a maximum of 32 different devices.

Datafill

Datafill for table OMDEV appears in the following table.

xxxField descriptions

Field	Subfield or refinement	Entry	Description
DEVNAME		alphanumeric (1 to 16 characters)	*Device or volume name*. Enter the device or volume name of the dedicated output device that receives OM buffered reports. Dedicated devices are for the field application.
EBCDIC		Y or N	*EBCDIC output character standard*. Enter Y if the EBCDIC output character standard applies. Enter N if the ASCII output character standard applies.

Datafill example

Sample datafill for table OMDEV appears in the following example.

In this example, one tuple is always present in table OMDEV. You cannot delete or change this tuple. The device name of the dedicated output devices is SINK. The system does not use the EBCDIC output character standard. The ASCII output is in effect.

MAP example for table OMDEV

```
DEVNAME EBCDIC
_____________________________________________________________
   SINK      N
```

OMGRPORD

Table name

Operational Measurements Group Order Table

Functional description

Table OMGRPORD allows the operating company to define the order of the operational measurements (OM) group outputs in each OM accumulating class. The OM accumulating classes are the entries in table OMACC. The operating company can arrange the OM outputs according to the desired priority through the entry of data in table OMGRPORD. If you do not enter data in table OMGRPORD, the output priority of the classes depends on default values.

The group name of an OM accumulating class must be present in table OMGRPORD, the system generates the output of that group. The system generates the output according to the default groups that table OMGRPORD defines. If an OM accumulating class name is not present in table OMGRPORD, the system generates the output in default order.

For additional information, see table OMPRT.

Datafill sequence and meaning

You do not need to enter data in other tables before you enter data in table OMGRPORD.

Note: You must delete an OM group from table OMGRPORD before you delete a tuple from an accumulating class.

Table size

The system allocates memory for this table. Each OM accumulating class requires 64 words of protected data store.

Datafill

Datafill for table OMGRPORD appears in the following table.

Field descriptions

Field	Subfield or refinement	Entry	Description
CLASS		alphanumeric (a maximum of 8 characters)	*Class name*. Enter the class name for the OM accumulating class that the OMCLASS commands define.
ORDER		0 to 255	*Order*. Enter the order of the output in the class for the group name.
GRPNAME		alphanumeric (a maximum of 8 characters)	*Group name*. Enter the correct OM group name. The OM group name is part of the class name that you enter in field CLASS through command OMACCTAB.

Datafill example

Sample datafill for table OMGRPORD appears in the following example.

MAP example for table OMGRPORD

```
CLASS  ORDER  GRPNAME
_____________________________________________________
TAPE   0      TRK
TAPE   1      ANN
TAPE   2      AMA
JOHN   0      RCVR
JOHN   1      AMA
JOHN   5      NMC
```

Note: Operating companies can add new group names between JOHN 1 and JOHN 5.

OMKEYORD

Table name

OMKEYORD

Functional description

Table OMKEYORD records the operational measurements (OM) tuple order on the switch. During a One Night Process (ONP), the system transfers the OM tuple order information from OMKEYORD to the new software load. The new software load uses the OM tuple order information to order the multiple tuple OM groups for that office.

Datafill sequence and meaning

You must enter data in table VIRTGRPR before you enter data in table OMKEYORD.

Table size

0 to 16 383 000

Datafill

Datafill for table OMKEYORD appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Description
OMORDKEY		see subfields	*OM order key* This field is the key to the table. This field contains subfields OMGROUP and OMTUPLE.
	OMGROUP	alphanumeric (3 to 8 characters)	*OM group*. This subfield is an OM group name, for example, FTRQ.
	OMTUPLE	numeric (0 to 16383)	*OM tuple*. This subfield is the index number of the OM tuple, for example, 0.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Description
OMORDPI		numeric (0 to 16383)	*OM order print index*. This field contains the OM tuple index that the system prints. This OM tuple index is the same as the OM tuple index from the old software load. A value of 16383 indicates that the tuple is a hole tuple. A hole tuple keeps the correct OM tuple order in the new software load. A hole tuple replaces an OM tuple from the old software load deleted in the new software load.
OMORDCV		alphanumeric (1 to 76 characters)	*OM order tuple name*. This field contains the name of the OM tuple. This field represents the name of field OMORDPI. For example, FTRQAGENTS.

Datafill example

Sample datafill for table OMKEYORD appears in the following example.

MAP example for table OMKEYORD

```
OMORDKEY OMORDPI OMORDCV
-------------------------------------------------------

FTRQ 0   0       FTRQAGENTS

FTRQ 1   16383   HOLE TUPLE

FTRQ 2   1       FTRA8WAREAS
```

Table history

BASE08

Table OMKEYORD was introduced in BASE08.

OMPRT

Table name

Operational Measurements Printer Table

Functional description

The operational measurements (OM) system collects and reports OMs.

An OM is a number that indicates the quantity of a specified aspect of switch performance. For example, the number of central message controller (CMC) faults in the last hour is an operational measurement.

A set of registers provides each measurement count. These registers can be one of the following types:

- **Active -** The system updates these registers with each event or sample.
- **Holding -** These registers generate OM reports. The OM reports represent snapshots of the Active registers.
- **Accumulating -** These registers calculate measurements over a long period of time. At the end of the period, the register generates a report.
- **History -** These registers store the OM counts of the holding registers for specified periods. After each register stores the count of the holding register, the system cycles the register. A new register stores the count from the holding register the next time a transfer to the history register is necessary. Each class can have a maximum of six history registers, to provide the past history of the class.

Active counts increase each time a measured event occurs. To prevent data skewing in generated reports, the system can transfer active counts to a set of parallel registers. These registers are holding registers. Data skewing can occur if an active count increases while the system generates the count. The system generates data from the holding registers.

The office parameter OMXFR in table OFCENG determines the transfer period. The transfer period can be 15 min or 30 min. The transfer of active count to holding count occurs for each count at the same time. The system resets the active counts to zero after each transfer.

The operating company (OC) defines accumulating registers. These registers gather the contents of corresponding holding registers over long periods of time, like a day or week. The system adds the contents of the holding register to the accumulating register after each active-to-holding transfer is complete. The system resets the accumulating register to zero at the start of the accumulating period.

This table can define history classes of measurements. A history class is a set of measurements. Each history class has a repeated series of rotating registers. The following are common for each measurement in a single class:

- the number of registers in the series
- the period of the cycle

The two values are attributes of the class. The snapshot attribute is the number of registers for each measurement. The transfer attribute is the length of time that a single register is current.

This feature causes the active-to-holding transfer period to change to 5 min. Parameter OMXFR defines the active-to-holding transfer period. After each active-to-holding transfer, the system checks each history class. The system performs this check to determine if a holding-to-history transfer is necessary. If this transfer is necessary, every measurement in the history class sets the current history register to the contents of the holding register. The system increases or recycles the identity of the current history register.

Before you can enter data in a table, the OC must define the accumulating and history classes. The MAP command OMCLASS defines an OC name (DEMO) and the accumulating register size. Examples of accumulating register size are single or double. An example of an OC name and register size definition is OMCLASS DEMO SINGLE.

Command OMCLASS can define a history class (EXAMPLE), with the snapshot (3) and transfer (15 min) attributes. An example of a history class, snapshot, and transfer attribute definition is OMCLASS EXAMPLE HISTORY 3 15. The MAP command OMACCTAB defines the measurements of groups that the system registers. The system places tuples in table OMACC when you use OMCLASS. To enable the history or accumulating class, change the field ENABLE in OMACC to Y (yes).

Field WHEN in table OMACC for a history class contains the keyword HISTORY. Two subfields that contain the snapshot and transfer attributes follow the keyword. Use the OMCLASS command to specify these attributes. You cannot use the table editor to change field WHEN for history classes. To change the attributes of a history class, use command OMACCTAB to remove member measurements. Issue the OMCLASS command again on the same class to specify the new attributes.

Classes HALFHOUR, OFCBSYHR, DAY, TRUNKHR, MONTH, and TAPE are for the normal or standard collection of operational measurements.

OMPRT (continued)

Classes SPECIAL 1 to 24 are for OC functions other than the normal or standard collection of OMs.

> ***Note:*** For BCS36 and later versions, commands OMACCGRP and OMACCFLD replace command OMACCTAB. Refer to the *Operational Measurements Reference Manual* for additional information on these commands.

The system allows a maximum of six historical registers for each measurement in each class.

The system controls the scheduling of the transfer of accumulating and history classes to the output device. The system controls the scheduling from tables OMPRT and OMTAPE.

The predefined system performs the holding of the accumulating class. A holding class that is present contains every OM group and every register in each group. Use the command OMCLASS to define subsets of holding registers, like accumulating classes. An example of an accumulating class is OMCLASS <class name> HOLDING. In table OMACC, specify field WHEN as auto.

The AUTO in table OMPRT or OMTAPE generates a report after every transfer from an active class to a holding class.

The total number of accumulating, holding, and history classes cannot exceed 30.

For additional information on operational measurements, see the NTPs that appear in the next table.

OM reference manuals

Title
Basic Administration Procedures
Service Problem Analysis Administration Guide
Operational Measurements Reference Manual

See the appropriate table for the office parameters associated with operational measurements. The tables that contain these office parameters appear in the next table..

Office parameter tables

Office parameter	Table name
OMHISTORYON	OFCOPT
OMINERLANGS	OFCOPT
OMPRTFORMAT	OFCENG
OMTAPESUPPRESSION	OFCENG
OMTELCOLABEL	OFCENG
OMXFR	OFCENG

Functional description of table OMPRT

Table OMPRT contains values that govern the measurement class, timing, and other parameters. The system requires these values to perform a data copy process from a holding or accumulating register to the output device. The system performs a transfer of the data to the output device. The facilities of the DMS-100 family logging mechanism and the routing and reporting subsystem transfer data to the output device. The logging mechanism collects output reports from every part of the system. The system files these reports in the order of log report numbers.

The OMPR and OMRS logs contain the OM reports. Datafill in tables LOGDEV and LOGCLASS associates each report with specified output devices. The LOGUTIL is the medium that generates OMPR and OMRS log reports. A LOGUTIL search does not support OMPR and OMRS log reports. The key to table OMPRT relates each tuple to the log report number of the desired output in OMPR and OMRS. When table OMPRT contains measurement group, class, timing, and other data, the routing and reporting subsystem routes the output report. The subsystem routes the report to the associated output device at the scheduled times. The key reference to the log report number triggers this process.

A description of the relationship of the logging mechanism to the routing and reporting subsystem appears in the *Input/Output System Reference Manual*. Refer to *Log Report Manual* for additional details.

OMPRT (continued)

Buffering of OMPR reports

Table OMPRT provides buffering of OMPR reports. The system first saves a buffered OMPR report in a disk buffer. The system retrieves the report from the disk and sends the report to a dedicated output device. The system does not transfer buffered reports to the output device. Only buffered OM data uses an output device, like a printer. If the system uses the output device for other purposes, the system does not generate OM reports properly.

Field BUFFOUT (Buffered Output) determines if the system sends a report buffered or unbuffered to the output device. If field BUFFOUT is Y when the report is output, the system saves the entry in the disk buffer. Field WHEN in the same tuple specifies the scheduled output. The system retrieves the report from the disk. The system sends the report to the output device when the CPU has available capacity. If the entry in field BUFFOUT is N, the system prints the report unbuffered. The system sends the report to the log system.

Field OUTDEV specifies the dedicated output device to which the system sends the report. This field corresponds to an entry in field DEVNAME in table OMDEV. When you enter data in field OUTDEV, the device must be available for output. The device must be available because the OM system attempts to output the device when a report is available. This device can receive OM buffered reports.

The system sends buffered reports to disk in a compressed format. This format allows support for OM commands OMACCFLD, OMACCKEY, OMTOTAL, and OMACCTOT. Table OMGRPORD controls the OM group output order. The system does not support tuple suppression. If the system retrieves a report from the disk buffer, the system outputs the report. The system outputs the report according to the specifications when the system sends the report to disk.

Feature AG0355 (OM Output Robustness) also applies to these reports. If data overwriting occurs, the system sends truncated reports to disk. When the system outputs the report, the system prints a message.

The system maintains output of buffered OM data to a dedicated output device during warm and cold restarts. The system can reroute the output in mid stream. A restart can occur when the system writes OM buffered data. When this condition occurs, the output continues after the restart from the beginning of the report. The system can route OM buffered data generated on one device to another device without loss of data.

If the output device fails during a write operation, the system raises a major alarm (OMBRFAIL). The system raises the alarm in the EXT level of the MAP terminal. File system errors or incorrect deletion of the buffer can cause this failure. Attempts to start the OMBR system without a successful create

(CREATE) of the buffer can cause this failure. If the system raises or clears the alarm, the system generates a standard EXT software alarm log. The command string OMBR;STATUS informs the operating company personnel of the OMBR failure and that maintenance is necessary. The operating company performs maintenance to stop the system, investigate the cause of the failure, and recreate the buffer.

If the output device fails during a read operation or the output to the drive stops, the system generates log OM2115. The system raises minor alarm OMBRSTOP. The system raises this alarm in the EXT level of the MAP terminal. The operating company personnel choose when to start the report again through CI commands. The operating company can restart the report after the device problem clears or the system routes the report to another device. If the operating company ignores the problem for an extended period of time, the disk buffer fills. The system sends OM data unbuffered to the log system. The system continues to buffer reports after the output device problem clears.

If the dedicated output device is a device that supports files, the subsystem associates a filename with the output. The device can support files to which filenames can append (example disk). In this occurrence, the filename is OMBRyymmddhhmm where <yymmddhhmm> is the time of the first report. The other devices have a separate file for each report. In these occurrences, the filename is OMrrrRyymmddhhmm, where <rrr> is the report number and the time is as described earlier.

Datafill sequence and meaning

You do not need to enter data in other tables before you enter data in table OMPRT.

Table size

0 to 32 tuples

The system allocates memory for each report number in table OMPRT.

OMPRT (continued)

Datafill

Datafill for table OMPRT appear in the following table.

Field descriptions (Sheet 1 of 5)

Field	Subfield or refinement	Entry	Description
REPNO		200 to 231	*Report number*. Enter the number assigned to a specified output report. A maximum of 32 different output reports can occur at one time.
ACTIVE		Y or N	*Active*. Enter Y if the report number is active. Enter N if the report number is not active.
SUPZERO		Y or N	*Suppress zeros*. If the entry is Y, the system transfers tuples that contain data other than zero to the output device. If the entry is N, the system transfers each tuple to the output device.
PRTSPEC		see subfields	*Print specification*. This field contains subfield ID.
	ID	ALL ALLCLASS ALLGROUP or ONETAB	*Identification*. Enter the required type of output report. For each table, enter ALL and leave refinements NAME, CLASS, and GROUP blank. For each table in a specified class, enter ALLCLASS. Enter data in refinement CLASS. Leave refinements NAME and GROUP blank. For each table in a specified group, enter ALLGROUP. Enter data in refinement GROUP. Leave refinements NAME and CLASS blank. For one table specified by group and class, enter ONETAB. Enter data in refinements NAME, GROUP, and CLASS.
	NAME	see subfields	*Name*. This field contains subfields GROUP and CLASS.

Field descriptions (Sheet 2 of 5)

Field	Subfield or refinement	Entry	Description
	GROUP	alphanumeric	*Operational measurement group*. Enter the group of OMs that the system transfers to the output device. See the *Operational Measurements Manual*, for a list of OM group names used in every switching unit. For switching units where office parameter OFFICETYPE in table OFCSTD equals OFF100OESD, OFF200OESD, or OFFCOMBOESD.
	CLASS	alphabetic	*Class name*. Enter the name of the accumulating or history class of OMs that the system transfers to the output device.
WHEN		see subfields	*When*. This field contains subfield REP. The values for this field specify when and the frequency of system transfers of OMs to the output device.

OMPRT (continued)

Field descriptions (Sheet 3 of 5)

Field	Subfield or refinement	Entry	Description
	REP	AUTO, MONTHLY, WEEKLY, DAILY, HOURLY, HALFHOUR-LY, DEVDAY, DEVWEEK, DAYTIME, or HISTORY	*Repetition*. Enter the specified time or period of time over which transfers to the output device occur. Entry AUTO specifies that the system transfers a report to the output device every time the system updates holding registers. The system can transfer a report when the total period defined in table OMACC ends. Entry MONTHLY specifies that the system transfers a report to the output device during a specified period. Refinements FROMDAYOFM, FROMTIME, TODAYOFM, and TOTIME define this period. Entry WEEKLY specifies that the system transfers a report to the output device during a specified period. Refinements FROMDAYOFW, FROMTIME, TODAYOFW, and TOTIME define this period. Entry DAILY specifies that the system transfers a report to the output device during a specified period. Refinements FROMTIME and TOTIME specify this period. Entry HOURLY specifies that the system transfers a report to the output device every hour. The output starts at the time that refinement STARTUP defines.

Field descriptions (Sheet 4 of 5)

Field	Subfield or refinement	Entry	Description
	REP (continued)		Entry HALFHOURLY specifies that the system transfers a report to the output device every half hour. Output starts at the time that refinement STARTUP defines. Entry DEVDAY specifies that the system transfers a report to the output device one time every day. The output occurs at the time that refinement WHEN defines. Entry DEVDAY can associate with a WEEKLY accumulating class. If this condition applies. DEVDAY provides a daily readout of the accumulating count of OMs in the class. Entry DEVDAY provides a readout during the period set in table OMACC. Entry DEVWEEK specifies that the system transfers a report to the output device one every week. The output occurs at the time that refinements DOW and WHEN define. Entry DEVWEEK can associate with a monthly accumulating class. If this condition applies. Entry DEVWEEK provides a readout of the accumulating count of OMs in the class every week. Entry DEVWEEK provides a readout during the period set in table OMACC.

OMPRT (continued)

Field descriptions (Sheet 5 of 5)

Field	Subfield or refinement	Entry	Description
			Entry DAYTIME specifies that the system transfers a report to the output device each day of the block of days. Refinements FROMDAYOFW and TODAYOFW define this block of days during the period that refinements FROMTIME and TOTIME specify. The block of days refers to FROMTIME. The block of days does not refer to TOTIME. If the period overlaps midnight, reports continue to the day that follows TODAYOFW. Enter HISTORY for the history classes. You cannot change this value. This value is read-only. ***Note:*** You cannot use C15 and C45 when the OM transfer period is 30 min. The OFCENG parameter OMXFR and OFCOPT parameter OMHISTORYON control the OM transfer period.

REP = AUTO

If the value of subfield REP is AUTO, go to field BUFFOUT in Table Table , "Field descriptions" on page -859.

REP = MONTHLY

If the value of subfield REP is MONTHLY, enter data in refinements FROMDAYOFM, FROMTIME, TODAYOFM, and TOTIME as in the following description.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Description
	FROMDAY OFM	1 to 31	*From day of month*. Enter the day of the month when the transfer of a collection of OMs starts for an active report number to the output device.
	FROMTIME	see refinements	*From time*. This field contains refinements HR and MIN.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Description
	HR	0 to 23	*Hour*. Enter the hour of the day when the transfer of a collection of OMs starts for an active report number.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the minute of the hour when the transfer of a collection of OMs starts for an active report number to the output device. The minute entry can be C00, C15, C30, or C45.
	TODAYOFM	1 to 31	*To day of month*. Enter the day of the month when the transfer of a collection of OMs stops for an active report number to the output device.
	TOTIME	see refinements	*To time*. This field contains refinements HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour of the day when the transfer of a collection of OMs stops for an active report number to the output device.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the minute of the hour when the transfer of a collection of OMs stops for an active report number to the output device. The minute entry can be C00, C15, C30 or C45.

OMPRT (continued)

REP = WEEKLY

If the value of subfield REP is WEEKLY, enter data in refinements FROMDAYOFW, FROMTIME, TODAYOFW, and TOTIME. A description of this process appears in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	FROMDAY-OFW	SU, MO, TU, WE, TH, FR, or SA	*From day of week*. Enter the day of the week when the transfer of a collection of OMs starts for an active report number to the output device.
	FROMTIME	see refinements	*From time*. This field consists of refinements HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour of the day when the transfer of a collection of OMs starts for an active report number to the output device.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the minute of the hour when the transfer of a collection of OMs starts for an active report number to the output device. The minute entry can be C00, C15, C30, or C45.
	TODAYOFW	SU, MO, TU WE, TH, FR, or SA	*To day of week*. Enter the day of the week when the transfer of a collection of OMs stops for an active report number to the output device.
	TOTIME	see refinements	*To time*. This field consists of refinements HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour of the day when the transfer of a collection of OMs stops for an active report number to the output device.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the minute of the hour when the transfer of a collection of OMs stops for an active report number to the output device. The minute entry can be C00, C15, C30, or C45.

REP = DAILY

If the value of subfield REP is DAILY, enter data for refinements FROMTIME and TOTIME as in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Description
	FROMTIME	see refinements	*From time*. This field consists of refinements HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour of the day when the transfer of a collection of OMs starts for an active report number to the output device.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the minute of the hour when the transfer of a collection of OMs starts for an active report number to the output device. The minute entry can be C00, C15, C30, or C45.
	TOTIME	see refinements	*To time*. This field consists of refinements HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour of the day when the transfer of a collection of OMs stops for an active report number to the output device.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the minute during the hour when the transfer of a collection of OMs stops for an active report number to the output device. The minute entry can be C00, C15, C30, or C45.

REP = HOURLY

If the value of subfield REP is HOURLY, enter data for refinement STARTUP as in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Description
	STARTUP	C00, C15, C30, or C45	*Startup*. Enter the minute of each hour when the system transfers the collection of OMs for an active report number to the output device. The minute entry can be C00, C15, C30, or C45.

OMPRT (continued)

REP = HALFHOURLY

If the value of subfield REP is HALFHOURLY, enter data for refinement STARTUP as in the previous table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Description
	STARTUP	C00, C15 C30, or C45	*Startup*. Enter the minute of the half-hour when the system transfers the collection of OMs for an active report number to the output device. The minute entry can be C00, C15, C30, or C45.

REP = DEVDAY

If the value of subfield REP is DEVDAY, enter refinement WHEN as in the previous table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Description
	WHEN	see refinements	*When*. This field contains refinements HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour of the day when the system transfers the collection of OMs for an active report number to the output device.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the minute of the hour when the system transfers the collection of OMs for an active report to the output device. The minute entry can be C00, C15, C30, or C45.

REP = DEVWEEK

If the value of subfield REP is DEVWEEK, enter data for refinements DOW and WHEN as in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Description
	DOW	SU, MO, TU, WE, TH, FR, and SA	*Day of week*. Enter the day of the week when the system transfers the collection of OMs for an active report number to the output device.
	WHEN	see refinements	*When*. This subfield consists of refinements HR and MIN.
	HR	0 to 23	*Hour*. Enter the hour of the day when the system transfers the collection of OMs for an active report number to the output device.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the minute of the hour when the system transfers the collection of OMs for an active report to the output device. The minute entry can be C00, C15, C30, or C45.

REP = DAYTIME

If the value of subfield REP is DAYTIME, enter data for refinements FROMDAYOFW, TODAYOFW, FROMTIME, and TOTIME. A description of this process appears in the following table. The order of fields is different than normal.

Note: The block of days refers to FROMTIME. The block of days does not refer to TOTIME. If the period overlaps midnight, reporting continues to the day that follows TODAYOFW.

OMPRT (continued)

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Description
	FROMDAY-OFW	SU, MO, TU, WE, TH, FR, or SA	*From day of week*. Enter the day of the week when the transfer of a collection of OM starts for an active report number to the output device.
	TODAYOFW	SU, MO, TU, WE, TH, FR, or SA	*To day of week*. Enter the day of the week when the transfer of a collection of OM stops for an active report number to the output device.
	FROMTIME	see refinements	*From time*. This subfield consists of refinements HR and MIN.
	HR	0 to 23	*Hour* . Enter the hour during each day of the FROMDAYOFW to TODAYOFW period. The transfer of a collection of OM starts for an active report number to the output device during this period.
	MIN	C00, C15, C30, or C45	*Minute*. Enter the minute of the hour of each day of the FROMDAYOFW to TODAYOFW period. The transfer of a collection of OM starts for an active report to the output device during this period. The minute entry can be C00, C15, C30, or C45.
	TOTIME	see refinements	*To time* . This subfield consists of refinements HR and MIN.
	HR	0 to 23	*Hour* . Enter the hour during each day of the FROMDAYOFW to TODAYOFW period. The transfer of a collection of OM stops for an active report number to the output device during this period.
	MIN	C00, C15 C30, or C45	*Minute*. Enter the minute during the hour of each day of the FROMDAYOFW to TODAYOFW period. The transfer of a collection of OM stops for an active report number to the output device during this period. The minute entry can be C00, C15, C30, or C45.

REP = HISTORY

If the value of subfield REP is HISTORY, values for refinements SNAPSHOTS and XFER as in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Description
	SNAPSHOTS	1 to 6	*Number of snapshots*. This read-only field indicates the number of history registers for each OM.
	XFER	T5, T10, T15, T20, or T30	*Transfer attribute*. This read-only field indicates the time, in minutes, that a single history register is current. For example, if the value is T5, the history register cycles every 5 min.

For all tuples

For each tuple, enter data in fields BUFFOUT and OUTDEV.

Field descriptions

Field	Subfield or refinement	Entry	Description
BUFFOUT		Y or N	*Buffered output*. Enter Y if the system buffers the report on disk. In other occurrences, enter N. The default value, if the field is blank, is N.
OUTDEV		alphanumeric (1 to 16 characters)	*Output device*. Enter the output device, entered earlier in table OMDEV, to which the system sends the buffered output. Entry SINK is the null device. Entry SINK is always present in table OMDEV. Field OUTDEV does not have meaning if the entry in field BUFFOUT is equal to N. The default value for this field is SINK.

Datafill example

Sample datafill for table OMPRT appears in the following example.

OMPRT (continued)

MAP example for table OMPRT

```
REPNO ACTIVE SUPZERO                    PRTSPEC
                          WHEN BUFFOUT OUTDEV
_____________________________________________________
  200      N       N                       ALL
   MONTHLY  1  0 C00  1  0 C00       N   SINK

  201      N       N                       ALL
   MONTHLY  1  0 C00  1  0 C00       N   SINK

  202      N       N                       ALL
   MONTHLY  1  0 C00  1  0 C00       N   SINK

  203      N       N                       ALL
   MONTHLY  1  0 C00  1  0 C00       N   SINK

  204      N       N                       ALL
   MONTHLY  1  0 C00  1  0 C00       N   SINK

  205      N       N                       ALL
   MONTHLY  1  0 C00  1  0 C00       N   SINK

  206      N       N                       ALL
   MONTHLY  1  0 C00  1  0 C00       N   SINK

  208      N       N                       ALL
   MONTHLY  1  0 C00  1  0 C00       N   SINK

  209      N       N                       ALL
   MONTHLY  1  0 C00  1  0 C00       N   SINK

  210      N       N                       ALL
   MONTHLY  1  0 C00  1  0 C00       N   SINK
```

Table history

CSP05

Command OMACCGRP and OMACCFLD replaced command OMACCTAB in CSP05. A note about BCS36 and later versions information was added. The note was referenced out to the *Operational Measurements Reference Manual* in CSP05.

BCS36

Reference in the section ``Functional description of table OMPRT'' was removed in BCS36. This section stated that the definition of history classes of

measurement could occur if the operating company had the OM Holding Class Enhancements feature. This feature is mandatory.

Digital Switching Systems

UCS DMS-250

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