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DND Forms Release 10.0.1
User's Manual
Volume I - Reference Information

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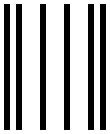
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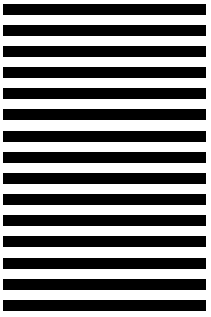
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Overview

Purpose

This manual was produced to assist users in performing tasks on the DACS II Network Director (DND).

Scope

This manual describes how to interpret and operate the DND Graphical User Interface (GUI) and DND Forms User Interface by providing reference information and step-by-step procedures.

Intended audience

This manual is intended for customers who have experience with DACS II operation and maintenance.

In addition, users of the DND Graphical User Interface, should be familiar with:

- Basic Netscape navigation
- Mouse button operations
- Basic UNIX navigation in a GUI environment (i.e., Common Desktop Environment, Solaris, etc.).

Reason for issue

This issue of this document supports DND GUI Release 5.0.1 and DND Forms Release 10.0.1.

About This Release

Overview

DACS II Network Director (DND) enables you to manage a communications network from a UltraSparc 30 or UltraSparc 60 workstation. DND provides a Netscape-based Graphical User Interface (GUI) and a Forms-based User Interface (UI).

The GUI provides alarm management, operator functions, and most system administration functions. From the GUI, you can create a network of elements. Each node in the network is represented by an icon on the network map. The nodes and the interties on the network map display alarm information and provide access to provisioning forms and status information.

The UI provides an interface which was previously available with the I-2000 Controller. The UI is available from screen addressable terminals and terminal emulators. The UI provides forms for alarm management, service provisioning, and most system administration functions.

Network Elements

DND supports two classes of Network Elements (NE):

- Digital Access Cross-Connect System (DACS)
- Simple Network Management Protocol (SNMP).

The DACS network elements include:

- DACS II CEF (Capacity Expansion Frame)
- DACS II Non-CEF (2 or 3 bays)
- DACS II SBF (Single-Bay Frame)
- DACS II ESBF (Enclosed Single-Bay Frame)
- DACS II ISX (Integrated Shelf Cross-Connect)
- DACS II AX (Release 9.03 and beyond)

The SNMP network elements include:

- DACS II AX (pre-Release 9.03)
- ACCULINK Access Controller (AAC)
- Integrated Access Communications Server (IMACS)
- Packet Star PSAX2300 Access Concentrator (PSAX)
- "Other" type SNMP devices.

About This Release (Continued)

DND's Full and Remote Provisioning Services

The DND provides variable support depending on the type of network element it is servicing. For example, DACS network elements are *fully* provisionable by the DND while SNMP network elements are *remotely* provisionable.

When network elements are fully provisionable, the DND provides a local database and local user interfaces to manage the ports and services on the element. Remotely provisionable NEs are provisioned via telnet or other passthrough services at the element. All DND managed elements (DACS and SNMP) have alarm monitoring capabilities and equipment views.

Note that the AX is contained on both NE lists in the previous section because DND's level of support depends on the AX release. Beginning with DND GUI Release 5.0.1/DND Forms Release 10.0.1, DACS II AX Release 9.03 equipment (and beyond) is fully serviced by the DND. As a result, the DND now provides circuit and port provisioning and permits database audit syncs to be performed for newer AX equipment. Termination Naming and Termination Circuit Mapping functions provided for 'SNMP' elements are not supported in the newer AXs.

Older AX equipment (pre-Release 9.03) is still serviced by the DND as it has been in prior releases. As a result, the provisioning and audit sync functionality is not available for older AXs, however Termination Naming and Termination Circuit Mapping functions are supported.

Communication Links

A DACS communicates with DND over the following links:

- X.25
- SNIDER
- TCP/IP.

DACS Functionality

The DND GUI and the DND Forms Interfaces provide access to DACS functions.

SNMP Functionality

SNMP devices communicate with DND using SNMP over a LAN. All SNMP functionality is accessed through the DND GUI interface.

About This Release (Continued)

Terms Used

These terms are used throughout this manual:

DACS - refers to the DACS II CEF, Non-CEF, SBF, ESBF, DACS II ISX, and DACS II AX (Release 9.03 and beyond).

DACS II AX 4/11 or *DACS II AX* - refers to both the DACS II AX 4 and 11 slot versions.

Frame and *DACS* may be used interchangeably, or they may be used together when describing more than one DACS.

SNMP nodes - refers to any of the SNMP network elements: DACS II AX 4/11 (pre-Release 9.03), IMACS, AAC, PSAX, and the Other-type SNMP devices.

The Glossary provides definitions for other terms used in this manual.

DND GUI and Forms Changes

The DND GUI Release 5.0.1 and Forms Release 10.0.1 contains:

- GUI-only enhancements
- GUI and Forms enhancements

A major portion of these enhancements are for DACS II AX Release 9.03 and above which is equipment provisionable through SNMP. Since older DACS II AX equipment is still being supported, a description of what DND will support is also provided.

About This Release (Continued)

DND GUI Only Enhancements

The following describes DND GUI Release 5.0.1 enhancements for DACS II AX software Releases 9.03 or later.

- **NE Provisioning**

  NE Provisioning now provides an option for automatic upload of the DACS II AX's current slot configuration after communication is restored between the DND and the DACS II AX. The automatic upload is optional and may be turned off by the DND user.

  The DACS II AX's equipment view now displays the additional configuration according to the DND database and offers access to provisioning forms by clicking on the view. The equipment view form must be refreshed to display the current configuration and alarm state.

- **DACS II AX Port Equipment Provisioning**

  The DND now manages Octal E1T1 card with E1 and T1 ports and a T3 card with embedded T1 ports and a T3 port. This enhancement supports provisioning for each of these ports on the DACS II AX from the DND. There are also new DACS II AX Provisioning reports, including:

  — T1/E1 Port Report

  — T3 Port Report

New Features and Enhancements for Release 5.0.1 DND GUI Only

- **DACS II AX Circuit Provisioning**

  This feature enables provisioning of two-way, two-point DACS II AX circuits, which are now managed by the DND.

  This enhancement supports the following features:

  — activation/deletion of circuits

  — continue network circuit provisioning

  — network circuit trace

  — circuit provisioning and channel usage reports.

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About This Release (Continued)

New Features and Enhancements for Release 5.0.1 DND GUI Only, (Continued)

- **DACS II AX Circuit Provisioning (Continued)**

  Full duplex circuits may be activated or deleted through the "activation/ deletion of circuits" feature. The "continue network circuit" provisioning feature allows a user to provision additional circuits connected to a current circuit. The "network circuit trace" feature offers a graphical view of the network elements and interties associated with a circuit. Circuit provisioning and channel usage reports are also available.

  The DAX II AX allows up to five connection maps to be configured. The GUI may be used to change which map is designated as Active, and to activate, delete, and modify circuits on different maps.

- **Alarm Management**

  All existing alarm management features in the DND apply to the DACS II AX R9.03 (and beyond) including NE summary, new alarms summary, equipment views and port alarm reports. Complete alarm information is now maintained in the DND database.

  The Port Alarm report for the DACS II AX (Release 9.03 and greater) will contain all alarm information. In addition, a circuit alarm report is available to identify circuits with alarms.

- **Local Events Processing**

  The DACS II AX sends change events to the DND when provisioning information at the DACS II AX is changed at the DACS II AX. The DND receives these events and processes them in order to maintain data consistency with the DACS II AX. This function is called Echoed Response Processing (ERP) at the DND.

  An ERP log contains a record of all ERP actions at the DND and an ERP log report is provided to view all contents of the log.

- **Management System Interface Enhancements**

  The SNMP Northbound and Northbound G2 Serial Alarm Interfaces to DND have been updated as follows to accommodate the DACS II AX.

  — The SNMP Northbound Interface now provides SNMP trap reporting capability for DACS II AX alarms and events. T1/E1 port and circuit provisioning and database synchronization of the DND and DACS II AX are also available through this interface.

  — The Northbound G2 Serial Alarm Interface now transmits alarm notifications for the DACS II AX.

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About This Release (Continued)

New Features and Enhancements for Release 5.0.1 DND GUI Only, (Continued)

- **DACS II AX Audit/Synchronization**

  This feature allows DND system administrators to:

  — Compare (audit) the DND and DACS II AX (facility) databases to note the differences

  — Compare and adjust (synchronize) the DND and DACS II AX databases to eliminate those differences

  — Upload all Circuit, Device, and Port data from the DACS II AX and store it in the DND database.

- **Miscellaneous Form Changes**

  — Revised the Network Locator command from *Locate on Map* to *Set Working Node*. This command also reconfigures the Provisioning... and Reports... button's pull-down menus to display only those choices that apply to the selected node. Menus are also reconfigured when you select a site from a popup list of sites on a form.

  — Increased the length of the multi-select, combo boxes on the NE Provisioining, Network Partitioning, and Database Backup/Restore forms.

  — A display-only, *Port Name* field has been added to the Termination Name and Termination Circuit Mapping forms.

About This Release (Continued)

New Features for DND GUI Release 5.0.1 and DND Forms Release 10.0.1

The following new features and enhancements support DND GUI Release 5.0.1 and Forms Release 10.0.1:

- **End to End Circuit Provisioning**

  End to End Circuit Provisioning ("A-to-Z" connections) allows the user to specify two end-points and request the DND to obtain a data path through the network and make that connection. This release provides basic end to end capability and directly controls the DACS elements. The DND searches for a minimum node path.

  The circuit may contain any element type managed by the DND, however only the DACS II (CEF, ISX) or DACS II AX elements will actually be provisioned by the DND. Other element types, e.g., AAC and PSAX will be included in the end to end circuits assuming that they have predefined paths set up in the DND database using the termination cross connect capability.

- **SNMP Processing**

  The SNMP Provisioning Interface now supports additional functionality for DACS II and DACS II ISX including:

  — Test Access capability for DACS II CEF/ISX Circuits

  — A way to initiate data synchronization between the DND and the DACS II CEF/ISX

- **Security Enhancements**

  The following security enhancements are associated with this release.

  — Optional Password Aging Value

  — User Login Restriction

  — Browser/Server Password Encryption

  The 'Optional Password Aging Value' allows system administrators to assign password aging values to user logins or to restrict the frequency of when a user may change a password. The 'User Login Restriction' feature provides system administrators the ability to restrict a user's access to only the DND GUI or the DND Forms interface. The 'Browser/Server Password Encryption' enhancement enables all data values associated with passwords used on the DND main login, User Administration, and Network Element Provisioning forms to be sent to the DND server in an encrypted form.

About This Release (Continued)

DACS II AX Support List

While the DND GUI Rel. 5.0.1/DND Forms Rel. 10.0.1 provides an enhanced method for provisioning DACS II AX Release 9.03 equipment (and beyond), the older DACS II AX equipment is still supported in DND.

The following table lists each function supported in the newest DND release and its corresponding older DND function, if applicable.

New DND Function (For GUI 5.0.1/Forms 10.0.1) (DACS II AX R9.03 and greater)	Older DND Function (Older DACS II AX Equipment)
DACS II AX Audit/Synchronization	Not applicable
DACS II AX Circuit Provisioning	Termination Naming/Termination Mapping
DACS II AX Port Provisioning	Termination Naming/Termination Mapping
Enhanced NE Provisioning Support, e.g., ■ Auto Upload Device Configuration Data ■ Auto Device Sync ■ Equipment view	Limited NE Provisioning Support ■ Equipment view
Alarm information now maintained in the DND database (for newer AXs)	Alarm Information maintained on the AX.
Local Events Processing	Alarm Log Record
Provisioning Reports	N/A

Manual Contents

Overview

This manual is divided into two volumes:

- Volume I: Reference Information
- Volume II: General Tasks.

Volume I provides background information, screen images, and field descriptions. Volume II provides step-by-step procedures for many of the tasks you can complete using the DND. It is advisable to read over the reference material prior to beginning any procedures.

General Tasks and Supporting Elements

The chapters in Volume II are divided into General Tasks (GT) and Supporting Elements (SE). GTs are the major tasks performed by users, and SEs are sub-tasks within a GT.

When possible, there is a correspondence between the reference chapter numbers in Volume I and the GTs in Volume II. There is also a correspondence, where applicable, between the general GUI tasks and the general Forms user tasks in Volume II. For example, the general tasks related to reference Chapter 5, NE Provisioning begin at GT-5.1G for the DND GUI interface and GT 5.1U for DND Forms user interface.

SEs are associated with a GT and are usually located immediately after the GT. Some SEs are reusable in other GTs in that particular chapter and in the GTs of other chapters. When a GT step references an SE, the Reference column of the GT will note which SE to locate. GTs and SEs follow a similar numbering scheme. For example, *SE 5.1.1G* indicates the first SE in GT 5.1G.

Volume I: Reference Information

Volume I: DND Reference Information contains the following sections:

- **About This Manual** - provides information on manual content, related documentation, ordering documentation, and a description of the new features for this release.
- **Chapter 1: Introduction** - provides information on the DND system and its features.

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Manual Contents (Continued)

Volume I: Reference Information, Continued

- **Chapter 2: Getting Started** - provides information on logging in and out of the system, setting DND environment variables, configuring the network elements, setting up printers, and using the DND system.
- **Chapter 3: DND Screens and Form Navigation** - provides general information on using the DND GUI and Forms interfaces.
- **Chapter 4: System Administration** - provides information on login ports, link administration, printer set-up, and other system administration functions.
- **Chapter 5: Network Element Provisioning** - provides information on the network elements that can be provisioned through DND.
- **Chapter 6: End User Provisioning** - provides information on how end users fit into the network and how to use the End User Provisioning form.
- **Chapter 7: Intertie Provisioning** - provides information on the different types of interties and its provisioning form.
- **Chapter 8: DACS II, DACS II ISX NPC Provisioning** - provides information on NPC provisioning actions, such as creating, restoring, modifying, and deleting NPCs from DACS IIs, and its provisioning form.
- **Chapter 9: DACS II AX Port Provisioning -** provides information on provisioning T1/E1 ports on an Octal T1/E1 module and provisioning T1 or T3 ports on a T3 module.
- **Chapter 10: Circuit Provisioning** - provides circuit provisioning and end to end circuit provisioning for DACS II and DACS II AX network elements. For DACS II network elements, it includes information on reconfiguration plans and circuit provisioning actions, such as activating, modifying, deleting, and alternate routing. For DACS II AX network elements, it includes the activating, modifying, deleting, and changing active maps provisioning actions. This chapter also describes circuit trace for both network elements.
- **Chapter 11: MMFG Provisioning -** provides information on MMFG provisioning actions, such as creating, restoring, modifying, and deleting MMFGs from a DACS, and its provisioning form.
- **Chapter 12: Termination Naming and Circuit Mapping -** provides information on the provisioning of an SNMP termination and using the assigned terminations to provision SNMP termination circuit maps.

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Manual Contents (Continued)

Volume I: Reference Information, Continued

- **Chapter 13: Subrate Provisioning** - provides information on provisioning DS0 channels, and establishing subrate cross connections.
- **Chapter 14: Equipment Views** - provides information on displaying, provisioning, and interpreting the equipage and alarm severity of any managed element site and units in the network.
- **Chapter 15: Partitioning** - provides information on what partitioning is, how to assign nodes to partitions, and how to assign user access to a partition.
- **Chapter 16: User Administration -** provides information on how to establish logins for DND operators and system administrators.
- **Chapter 17: Report Operations** - provides information on generating and displaying reports, and the content of alarm messages.
- **Chapter 18: DACS II Database Audit/Synchronization -** provides information on database audit and synchronization actions to monitor and sync the DACS and DND databases, and its associated form.
- **Chapter 19: DACS II AX Audit/Synchronization -** provides information on auditing and synchronizing DND and DACS II AX databases.
- **Chapter 20: Reconfiguration Plans -** provides information and examples on circuit reconfiguration and automatic reconfiguration plans.
- **Chapter 21: Test Ports and Test Access** - provides information on Test access, such as setting up connections in Monitor, Split, and Hub modes to test potentially faulty circuits.
- **Chapter 22: Backup and Restore** - provides information on backing up and restoring the DND database and report formats.
- **Chapter 23: 24-Hour Performance Monitoring** - provides information on setting up and browsing 24-hour performance monitoring data.
- **Chapter 24: Task Administration**- provides information on scheduling tasks. For DND Forms, this chapter also covers managing the print queue.
- **Chapter 25: DACS Message/Passthrough** - provides information on communicating directly to DACS equipment [including DACS II AX (pre-Release 9.03), IMACS, AAC, PSAX, and the Other-type SNMP devices] using DACS Message/Passthrough or telnet.
- **Chapter 26: Outage Logs** - provides information on maintaining records on circuit and NPC outages.

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Manual Contents (Continued)

Volume I: Reference Information, Continued

- **Chapter 27: Fault Management and Alarm Surveillance** - provides information on alarm logging, retrieving a list of all active alarms in the system and acknowledging alarms.
- **Chapter 28: DND Interfaces -** provides information on specialized interfaces for management system connectivity to the DND. The DND provides an open SNMP management interface as well as other alarm and customer-specific interfaces.

Volume II: General Tasks

Volume II: DND General Tasks include procedures to support the actions described in the reference chapters.

DND Functions

With DND, you can perform four types of functions:

- DND functions, which are related to setting up and keeping the DND system running properly. For example, printer administration, user administration, backup/restore, and database backup/restore are DND functions.
- Full provisioning functions, i.e., provisioning, monitoring, and reporting on the DACS II, DACS II ISX, and DACS II AX (Release 9.03 and beyond). For example, circuit, NPC, and subrate provisioning are full provisioning services performed locally at the DND.
- Remote provisioning functions, which are related to the DACS II AX (prior to Release 9.03), AAC/IMACS, PSAX, and Other-type SNMP nodes. For example, DND provides telnet for SNMP provisioning, and the SNMP Alarm Log for reporting SNMP alarms.
- Network provisioning functions, i.e., functions that effect DACS and SNMP network elements. For example, NE Provisioning and partitioning must be done for SNMP nodes and DACS nodes.

Manual Contents (Continued

Content Summary The following table summarizes the contents of this user's manual. For each chapter, the table lists the functional area covered in the chapter, and the related General Tasks (GTs) in Volume II for DND GUI and DND Forms.

Ch	Reference Chapter	Function	DND GUI GTs	DND Forms GTs
2	Getting Started	DND	2.1G - 2.5G	2.1U - 2.13U
3	DND Screens and Form Navigation	DND	3.1G - 3.2G	Not Applicable
4	System Administration	DND	4.1G - 4.8G	4.1U - 4.12U
5	NE Provisioning	SNMP and DACS nodes	5.1G - 5.10G	5.1U - 5.7U
6	End User Provisioning	SNMP and DACS nodes	6.1G - 6.3G	Not Applicable
7	Intertie Provisioning	SNMP and DACS nodes	7.1G - 7.5G	Not Applicable
8	DACS II, DACS II ISX NPC Provisioning	DACS	8.1G - 8.8G	8.1U - 8.9U
9	DACS II AX Port Provisioning	SNMP	9.1G - 9.4G	Not Applicable
10	Circuit Provisioning	SNMP and DACS	10.1G - 10.20G	10.1U - 10.10U
11	MMFG Provisioning	DACS	11.1G - 11.5G	Not Applicable
12	Termination Naming and Circuit Mapping	SNMP	12.1G - 12.7G	Not Applicable
13	Subrate Provisioning	DACS	Not Applicable	13.1U - 13.3U
14	Equipment Views	SNMP and DACS nodes	Not Applicable	Not Applicable
15	Partitioning	SNMP and DACS nodes	15.1G	Not Applicable
16	User Administration	DND	16.1G - 16.7G	16.1U - 16.6G
17	Report Operations	All	17.1G - 17.5G	17.1U - 17.8U
18	Database Audit/ Synchronization	DND	18.1G - 18.5G	18.1U - 18.6U
19	DACS II AX Audit Synchronization	SNMP	19.1G - 19.9G	Not Applicable
20	Reconfiguration Plans	DACS	Not Applicable	20.1U - 20.3U
21	Test Port and Test Access	DACS	21.1G - 21.11G	21.1U - 21.13U

Ch	Reference Chapter	Function	DND GUI GTs	DND Forms GTs
22	Backup and Restore	DND	22.1G - 22.3G	22.1U - 22.13U
23	24-Hour Performance Monitoring	DACS	(Same as Forms)	23.1U - 23.3U
24	Task Administration	DACS	24.1G - 24.2G	24.1U - 24.4U
25	DACS Message/Passthrough	SNMP and DACS nodes	25.1G - 25.2G	25.1U - 25.7U
26	Outage Logs	DACS	26.1G	26.1U - 26.2U
27	Fault Management and Alarm Surveillance	DND	27.1G - 27.5G	27.1U
28	DND Interfaces	DND	28.1G	Not Applicable

Manual Contents (Continued)

Appendices

- **Appendix A: Summary of Fields for Customized Reports** - provides information on Forms Interface and GUI report form fields that can be customized using the DND Forms Interface.
- **Appendix B: Error Messages** - provides a full list of the error messages that can appear on the **Command Response** field located on each form or the Status Summary window located on the DND Main screen.
- **Abbreviations and Acronyms** - provides the definitions for the acronyms used throughout this document.
- **Glossary** - defines the terms used throughout this document.
- **Index** - allows you to quickly locate information on topics covered in the document. To use the index, look up a topic you want and turn to the page references listed by that topic.

Additional Documentation

Overview

The following documents provide additional information on DND, DACS II, and DACS II ISX. These documents may prove useful when using the DACS II Network DIrector with DACS II and DACS II ISX.

Documents

DACS II Network Director (DND):

Document Number	Document Title
365-353-882	*DACS II Network Director (DND)* *Release 5.0.1/10.0.1* *Software Release Description*
365-353-881	*DACS II Network Director (DND)* *Release 5.0.1/10.0.1* *Installation Manual*

DACS II:

Document Number	Document Title
365-353-295	*DACS II Release 9.1.1 User's Guide*
365-353-271	*DACS II Operation and Maintenance, Release 9.0 MML, 1.544-Mbit/s Interface*
365-353-272	*DACS II Commands and Messages, Release 9.0 MML, 1.544-Mbit/s Interface*
365-353-273	*DACS II Quick Reference Guide, Release 9.0 MML, 1.544-Mbit/s Interface*
365-353-291	*DACS II Operation and Maintenance, Release 9.0 MML, 2.048-Mbit/s Interface*
365-353-292	*DACS II Commands and Messages, Release 9.0 MML, 2.048-Mbit/s Interface*
365-353-293	*DACS II Quick Reference Guide, Release 9.0 MML, 2.048-Mbit/s Interface*
IPH903	*DACS II Installation Procedures Handbook (DACS II CEF and Non-CEF)*
IPH903I	*DACS II Installation Procedures Handbook (DACS II ESBF and ECEF)*

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Additional Documentation (Continued)

Documents, Continued

DACS II ISX:

Document Number	Document Title
365-359-103	*DACS II ISX Operations and Maintenance, Release 3.1.2 MML*
365-359-104	*DACS II ISX Commands and Messages, Release 3.1.2 MML*
365-359-105	*DACS II ISX Quick Reference Guide, Release 3.1.2 MML*
365-359-080	*DACS II ISX Installation Manual, Release 2.0 and 3.0*
365-059-079	*DACS II ISX Installation Manual, Expansion Shelf*

NOTE:
Be sure to obtain the documents that support the DACS II or DACS II ISX release that is running with your DND system.

DACS II AX 4/11:

Document Number	Document Title
365-359-207	*DACS II AX 4/11 Release 9.03 User's Guide*

PacketStar PSAX 2300 Access Concentrator:

Document Number	Document Title
255-700-049R6.1.0	*PacketStar PSAX 2300 Access Concentrator Release 6.1 User's Guide*

(Continued on next page)

Additional Documentation (Continued)

Documents, Continued

Other:

To obtain information and documentation for the Integrated Multiple Access Communication Server (IMACS), contact the product vendor (Premisys Communications) at:

http://www.premisys.com.

To obtain information and documentation for the ACCULINK Access Controller (AAC), contact the product vendor (Paradyne Corporation) at:

http://www.paradyne.com/products/ovr_csu.html.

Netscape and CDE Reference Information

Netscape offers on-line context sensitive and content help. Entering a form field by using the mouse or the <tab> key will reveal very brief descriptions of the toolbar element. For more detailed help, click Help... in the Netscape Menu Bar to reveal a table of contents of Netscape topics.

If you are on the DND host, you can retrieve on-line DND documentation by clicking anywhere on the background screen, and selecting the **Programs** --> **DND Docs** selections from the pull-down menus.

If you are on either a DND client workstation or a PC, then a Help... button is provided on the DND main screen. This provides access to the DND documentation.

The Common Desktop Environment (CDE) has content on-line help. On the lower left hand side of the control panel at the bottom of the screen, click the "**?**" icon to reveal a table of contents of CDE topics.

How to Order Documentation

Document Ordering

Documentation for the DND, DACS II, DACS II ISX, DACS II AX, and the PacketStar PSAX 2300 can be ordered through the Customer Information Center (CIC). Many documents are available in hard copy and on compact disk. For more information, call:

1-888-LUCENT-8 (1-888-582-3688)
1-317-322-6416 (Outside North America)

OR write:

Customer Information Center
ATTN: Customer Service Representative
2833 N. Franklin Road
Indianapolis, IN 46219

OR go to:
/http://www.lucentdocs.com/

Click on **Documents** to locate, order, and/or download customer information products.

NOTE:
For automatic updates (for one year), request that the document be given "standing order" status.

Introduction

1

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Background

Introduction

This chapter provides an overview of the capabilities and features of the DACS II Network Director (DND).

Objectives

This chapter provides background information to help you perform the following:

1. State the features and functions of DND
2. State the types of provisioning supported by DND.

Related information

For related information refer to these documents:

- *DACS II* and *DACS II ISX Operation and Maintenance Guide*
- *DACS II Network Director Installation Manual*
- *DACS II Network Director Software Release Description*

Network Description

Network Overview

The DACS II Network Director (DND) is a network management system that allows you to provision and monitor networks with up to 316 network elements, including up to 60 DACS II and DACS II ISX elements and - if the element has an SNMP control interface - 256 SNMP nodes.

DND supports up to 32 simultaneous login sessions, including the console.

DND Advantages

DND has the following advantages:

- DND enables you to view the state of your entire network in a graphical user interface with representations for network elements and interties. DND alerts you when and where new alarms occur.
- Equipment views help you quickly isolate problems and view the current equipage information.
- DND provides easy access to provisioning forms, reports, and alarm information directly from the map icons and also from pull-down menus from the DND task bar.
- DND provides access to most DACS II, DACS II ISX, and DACS II AX (Release 9.03 or greater) functions. DND automatically generates DACS commands based on the user's entries on the DND GUI and UI forms.
- DND provides consolidated telnet access for provisioning SNMP nodes.

Network Description (Continued)

Network Diagram

The elements of the configuration are the DACS frames, SNMP nodes, and the DND. Figure 1-1 shows a Sun Ultra 60/450 Creator 3D which supports up to 60 DACS II and DACS II ISX frames. DND is also available on a Sun Ultra 30 Model 300 to support up to 30 DACS frames.

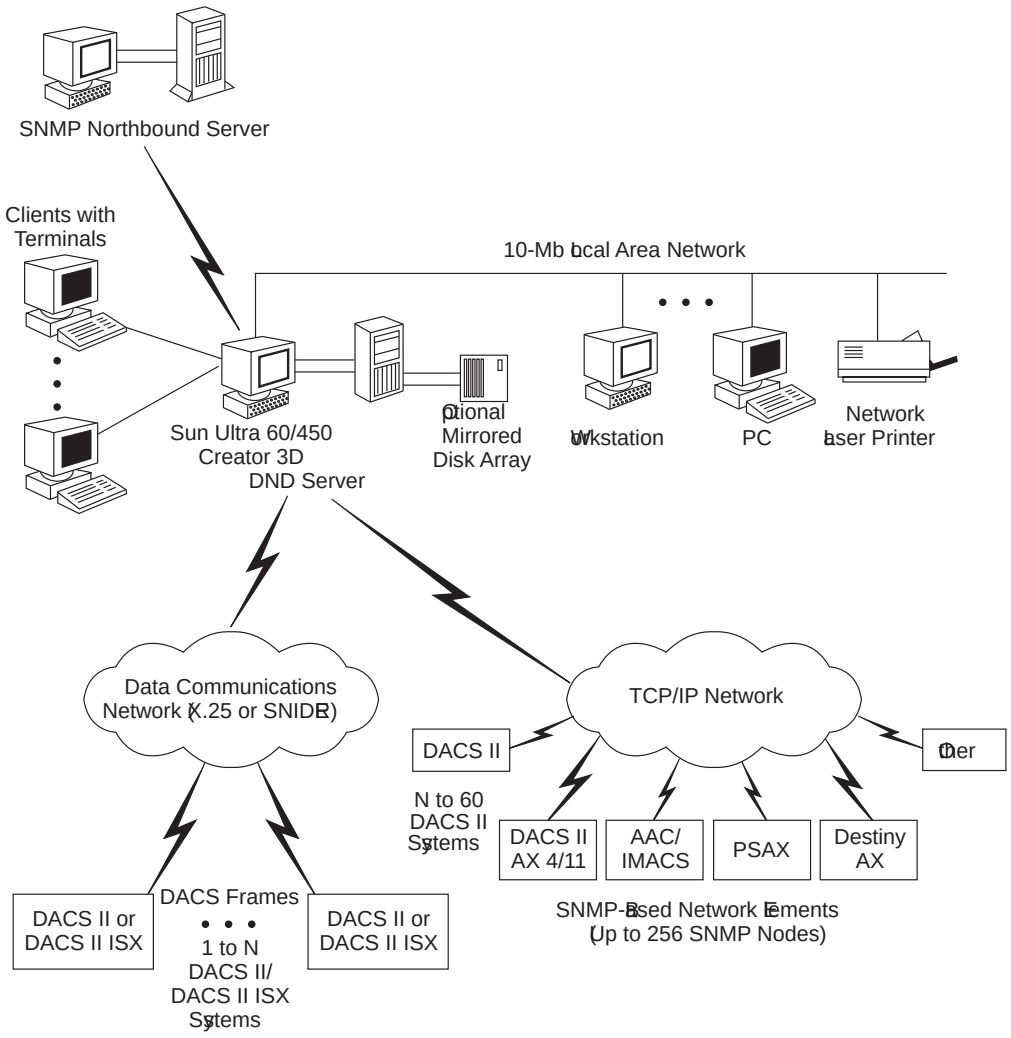


Figure 1-1. Sample DND Network Configuration

Network Elements - DACS System

DACS System

A Digital Access and Cross-connect System (DACS) is a device for cross-connecting, or switching, between transmission lines that have been time-division multiplexed. DACS is used for cross-connecting DS0 and N x 64 Kbps signals.

DND can manage up to 60 DACS network elements including:

- DACS II CEF (Capacity Expansion Frame)
- DACS II Non-CEF
- DACS II SBF/ESBF (Single-Bay Frame/Enclosed Single-Bay Frame)
- The DACS II ISX (Integrated Shelf Cross-Connect).

The DACS II and DACS II ISX communicate with DND over an X.25, SNIDER, or TCP/IP link. For additional information on the DACS system, refer to the *DACS II* or *DACS II ISX Operation and Maintenance Guides*.

The DND now supports two versions of DACS II AX equipment based on the equipment's AX release. For more information, refer to *Supported Versions of the DACS II AX* described later in this chapter.

Communications Link to DACS

The DND allows you to configure DACS frames and establish either synchronous or asynchronous communications links to the DACS.

NOTE:
Ensure that all network connections are in place before installing DND.

The three possible connections between the DND and the DACS it controls are:

- X.25 Packet Data Network (PDN)
- SNIDER direct
- TCP/IP (for DACS II CEF and DACS II AX Release 9.03 and greater only).

Network Elements - DACS System (Continued)

PDN X.25 Diagram

Figure 1-2 shows the PDN X.25 configuration.

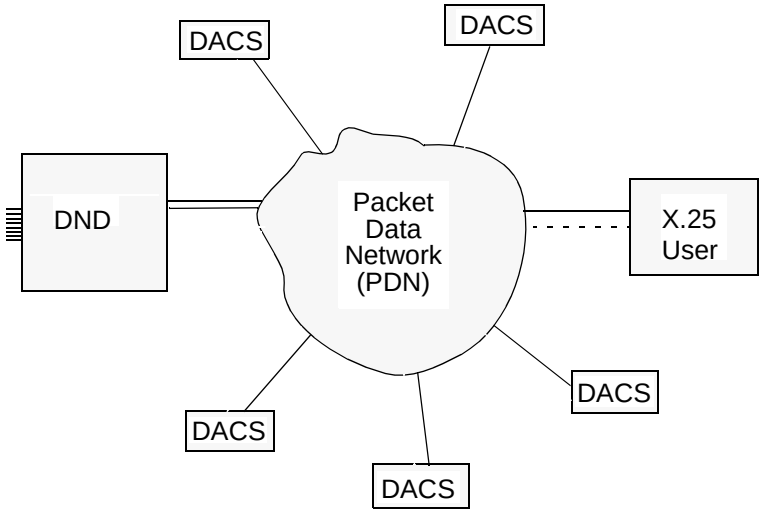


Figure 1-2. PDN X.25 Configuration

DND and the PDN X.25 Network

In the X.25 network, each DACS and the DND become nodes. The user terminals are peripheral to DND. Communication between DND and a DACS is defined by the International Telecommunication Union (ITU-T) standard X.25 Data Terminal Equipment/Data Circuit-terminating Equipment (DTE/DCE) interface.

X.25 Link Protection

The X.25 network supports link protection. You can provision the DACS to provide link protection and use one to four links on the DND to distribute traffic. You can designate any two of the four X.25 links on the DND as Primary or Secondary links to the DACS.

If the Primary link fails, the DND will automatically switch to the Backup link, but it will not automatically switch back when the Primary is fixed. The Backup link will need to fail for the DND to switch back to the fixed Primary or communications can manually be switched back to the Primary Link.

Network Elements - DACS System (Continued)

DND and the SNIDER Network

Figure 1-3 shows a direct configuration that uses the SNIDER protocol (asynchronous data link), instead of the X.25. The DACSs can be directly connected to DND or accessed remotely by modems.

SNIDER Diagram

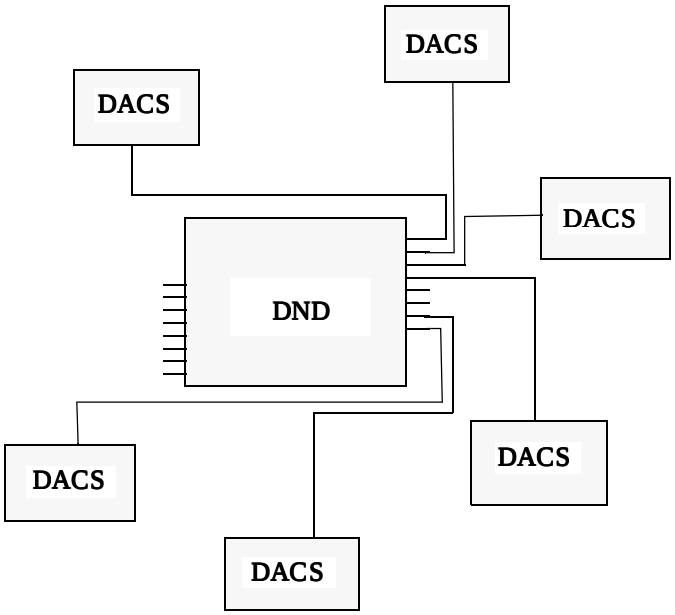


Figure 1-3. Point-to-point SNIDER Configuration

Network Elements - DACS System (Continued)

DND and the TCP/IP Network

Figure 1-4 shows the configuration that uses the TCP/IP protocol (telnet link). The DACS II systems (Release 9.0 or later) can be accessed remotely using a LAN connection. Before the TCP/IP connection can be used, the IP address for the link must be set up.

TCP/IP Diagram

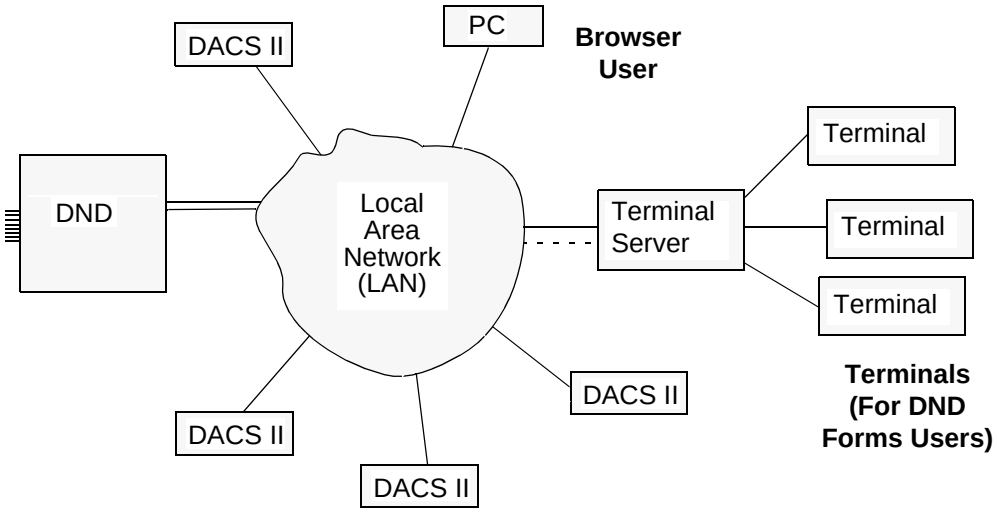


Figure 1-4. TCP/IP Configuration

Network Elements - SNMP Nodes

SNMP Nodes

SNMP is Simple Network Management Protocol. SNMP is a standard network protocol that is used primarily to manage TCP/IP networks.

DND processes alarms and provides telnet access to these SNMP devices: the DACS II AX 4/11, ACCULINK Access Controller (AAC), PSAX, and Integrated Multiple Access Communications Server (IMACS). In addition, DND does alarm handling for other SNMP devices.

DND can manage up to 256 SNMP nodes.

Communications Link to SNMP Nodes

DND communicates with network elements on the TCP/IP network using SNMP. DND can send SNMP Get and Set requests to the SNMP device and DND can receive SNMP traps.

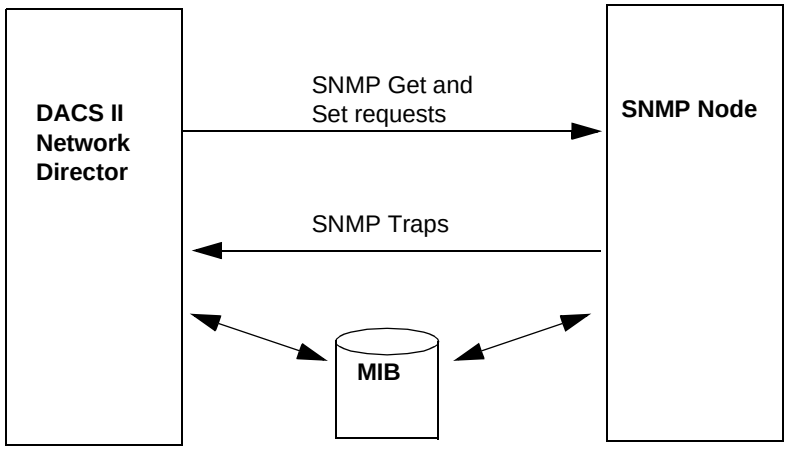


Figure 1-5. Communication between DND and SNMP Node

The management information accessed through SNMP is conceptually organized into a database called the *Management Information Base* or *MIB*. DND supports MIB II as defined in RFC1213, as well as some of the enterprise MIBs of the AAC, IMACS, DACS II AX 4/11, and PSAX.

(Continued on next page)

Network Elements - SNMP Nodes (Continued)

Communications Link to SNMP Nodes, Continued

SNMP traps appear in the SNMP Alarm Log. When DND receives an alarm from an SNMP node, the new Alarm Summary arrow appears next to the element on the network map and the icon color indicates the highest alarm severity. If enabled, the audible alarm will sound and the audible alarm icon (a bell) will appear under the new Alarm Summary arrow. Users can display the SNMP Alarm Report for detail on the alarm.

DACS II AX

The DACS II Access Cross-Connect (AX) is a compact 3/1/0 digital cross-connect system available in two configurations: the DACS II AX 11, which has 11 application card slots; and the DACS II AX 4, with 4 application card slots. The DACS II AX is provisionable with a range of high density cards, providing DS1, E1, DS3, test access, and analog voice ports.

Supported Versions of the DACS II AX

DND supports both 11 slot model and 4 slot model DACS II AX chassis types. It also provides two different levels of support to older and newer DACS II AX equipment as follows.

Beginning with DND GUI Release 5.0.1/DND Forms Release 10.0.1, DACS II AX Release 9.03 equipment (and beyond) is serviced by the DND. As a result, the DND provides circuit and port provisioning and permits database audit syncs to be performed for newer AX equipment. Termination Naming and Termination Circuit Mapping functions are not supported in the newer AXs.

Older AX equipment (pre-Release 9.03) is still serviced by the DND as it has been in prior releases. As a result, the provisioning and audit sync functionality is not available for older AXs, however Termination Naming and Termination Circuit Mapping functions are still supported.

Network Elements - SNMP Nodes (Continued)

AAC and IMACS

The ACCULINK Access Controller (AAC) and Integrated Multiple Access Communications Server (IMACS) are very similar units. They provide cross-connect and grooming capabilities on a wide variety of interfaces and formats. Consult the *IMACS and AAC Reference Guides* for details and sample applications.

The IMACS and AAC are standalone units. They are not associated with a DACS.

Supported Versions of the AAC and IMACS

DND supports the following AAC and IMACS chassis types and software versions:

- Chassis Types:
  - Two-sided chassis: the IMACS 800
  - Front-loading chassis: the IMACS 600
  - Front-loading chassis: the IMACS 900.
- Software Versions
  - Version 3.6
  - Version 3.8
  - Version 4.x
  - Version 5.x.

LAN Connectivity for AAC or IMACS

DND communicates with an AAC or IMACS over a LAN.

Some versions include a Management Channel Concentrator (MCC) card which allows the AAC or IMACS to be directly connected to the LAN.

Software versions 3.6 and 3.8 do not offer any direct LAN connectivity. To connect to the LAN from an AAC or IMACS running version 3.6 or 3.8, you must use a AAC/IMACS (with MCC Card) to provide LAN connectivity. The network management traffic from the LAN destined for the remote 3.6/3.8 unit is routed through the MCC unit over a T1 or E1 link.

(Continued on next page)

Network Elements - SNMP Nodes (Continued)

LAN Connectivity for AAC or IMACS, Continued

The following options are available for connecting the remote 3.6/3.8 unit to the MCC unit:

- Option 1: Facility Data Link (FDL)

  This option can be used when the FDL is available on the ESF T1 link (Sa4 of E1 link) between the two units. The WAN card of both units are provisioned to send the network management traffic on the FDL of a WAN T1 link.

- Option 2: Timeslot 24 (31 for E1)

  If the FDL of the T1 is not available, the remote unit can be provisioned to place its network management traffic on timeslot 24 of its WAN card T1 link.

  The network management traffic is put in B7R (B4R for E1) format of timeslot 24. Correspondingly, the MCC unit is provisioned to place the network management traffic for the remote unit on timeslot 24 of the same T1 in B7R format.

  With this option, timeslot 24 is unavailable for customer traffic.

- Option 3: FDL and B7R combination

  If a DACS II is between the MCC unit and remote unit, the network management traffic between the DACS and the remote unit can be placed in the FDL of the T1 (Sa4 of E1). Network management traffic between the MCC unit and the DACS II can be placed in any DS0 using B7R format (B4R for E1 links). The DACS II can cross-connect the B7R (B4R for E1) network management traffic in the DS0 coming from the MCC unit to the FDL on the T1 link (Sa4 of E1 link) going to the remote unit. See Figure 1-6.

The above options can be applied for routing network management traffic through a network of IMACS/AAC units. Refer to the IMACS/AAC documentation and the *DND Installation Manual* for details.

Network Elements - SNMP Nodes (Continued)

Sample AAC/ IMACS Network

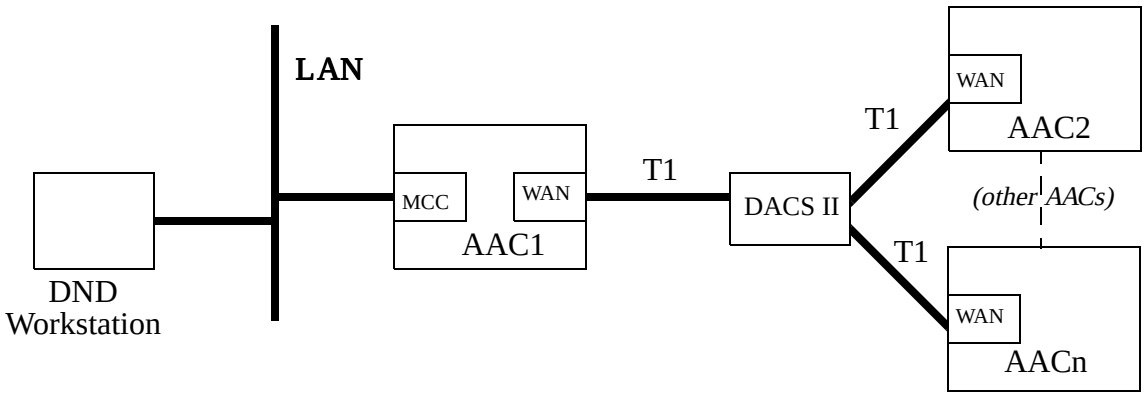


Figure 1-6. Sample AAC Network

The remote AACs (AAC2 through AACn) can be configured to send their IP management traffic either on the 4K T1 FDL or on timeslot 24 in B7R format. B7R is a 4K protocol. (For E1 links, management traffic can be sent either in Sa4 of the E1 or on timeslot 31 in B4R format, when Sa4 is not available. B4R is a 4K protocol.)

Timeslot 24 is unusable for any other customer traffic when it carries the IP management traffic.

The DACS II can cross-connect the IP management traffic from the remote AACs into B7R format in any DS0s on the T1 link to AAC1. The DS0s carrying IP management traffic cannot be used for customer traffic.

The MCC (on AAC1) can take up to 128 B7R format DS0s for concentration onto a single 10 base T ethernet port.

(Continued on next page)

Network Elements - SNMP Nodes (Continued)

Sample AAC/ IMACS Network, Continued

A similar configuration can be set up using E1 links. In this case, the remote AACs use either National Bit 4 (Sa4) or timeslot 31 (B4R format) when National Bit 4 is not available. The DACS II can cross-connect the Sa4 traffic into B4R format timeslots on the E1 link to the AAC1.

PSAX 2300

The *PacketStar PSAX2300 Access Concentrator (PSAX)* is managed by the DND as a separate network element. It provides access to ATM networks and can be used to network constant rate circuit services from a DACS II.

Sample PSAX Network

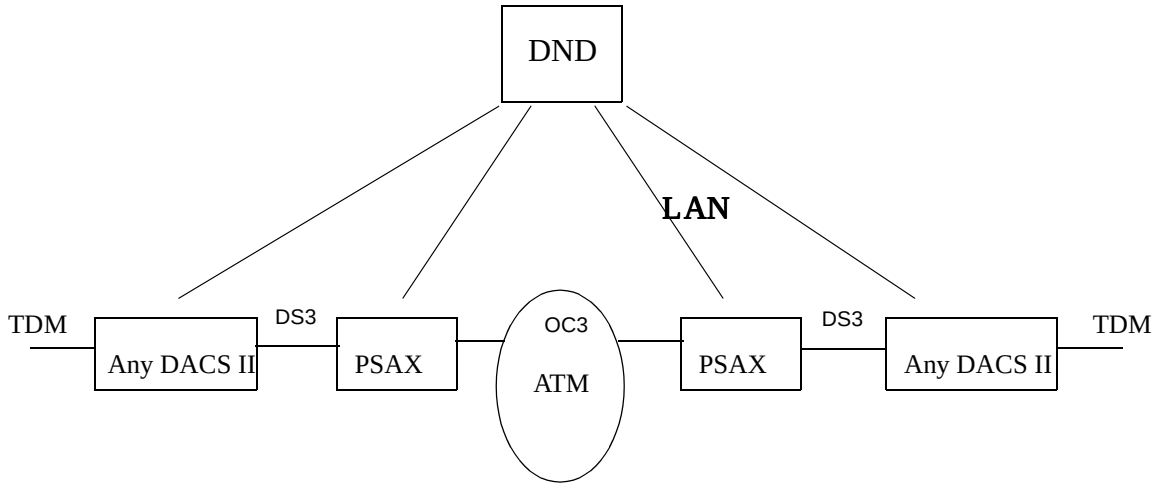


Figure 1-7. Sample PSAX Network

(Continued on next page)

Network Elements - SNMP Nodes (Continued)

Other SNMP Nodes

You can identify other SNMP nodes through DND. Since these elements are basically unknown to DND, alarm processing is limited to the MIB-II parameters as defined in RFC1213. Enterprise vendor-specific MIBs are not supported.

If a network element supports the MIB-II parameters as defined in RFC-1213, then the DND is capable of performing basic management functions on that network element. The DND will be able to receive generic trap information from the element; information will be logged to the alarm log, and the new alarm summary indicator will be raised.

The DND will also be able to obtain basic "normal/abnormal" status for that node. On the network map, the node will display as a 'green' or 'red' node respectively. For more information, refer to *Chapter 28, DND Interfaces*.

Minimum Setup Requirements

Overview

The DND will only be supported with the specified hardware platform. All customers, therefore, currently on any I-2000 platform will be required to upgrade their hardware.

Server Requirements

The DND server has the following minimum hardware and software requirements:

- One of the following:
  - — Sun Ultra 30 Model 300 to support up to 30 DACS frames
  - — Sun Ultra 60/1360 (60/2360) or 60/1450 (60/2450) Creator 3D to support up to 60 DACS frames and 256 SNMP elements.

  The choice of single CPU vs. dual CPU is highly customer-driven and dependent on network size and activity. The following table offers some guidelines, each assumes that the Graphical User Interface is enabled.

UltraSparc Model	No. of CPUs	No. of DACS interfaces (max)	No. of SNMP interfaces (max)	No. of User Interfaces (max)
Sun Ultra 30 Model 300	single	30	0	16
Sun Ultra 60/1360 Creator 3D	single	30	10	16
Sun Ultra 60/2360 Creator 3D	dual	60	256	16
Sun Ultra 60/1450 Creator 3D	single	30	30	16
Sun Ultra 60/1450 Creator 3D	single	0	150	16
Sun Ultra 60/2450 Creator 3D	dual	60	256	32

- The Sun Ultra 60/1360 or 60/2360 Creator 3D must include:
  - — Single (60/1360): 256 Mb RAM Dual (60/2360): 512 Mb RAM
  - — 9 Gb UltraSCSI Internal Hard Disk Drive
  - — Creator Graphics Video Card
  - — 20-inch Color Workstation Monitor.

(Continued on next page)

Minimum Setup Requirements (Continued)

Server Requirements, Continued

- The Sun Ultra 60/1450 or 60/2450 Creator 3D must include:
  - Single (60/1450): 512 Mb RAM Dual (60/2450): 1 Gb RAM
  - 18 Gb/10,000 RPM UltraSCSI Internal Hard Disk Drive
  - Creator Graphics Video Card
  - 20-inch Color Workstation Monitor

  If the Disk Mirroring option is purchased, the server must also include:
  - UltraSCSI Host Adapter (Internal PCMCIA Card)
  - VHDCI to 68 Pin SCSI Cable
  - StorEdge Multipack Disk Enclosure
  - Veritas Volume Manager 3.0.2 Software.
- Sun Solaris 2.6 (5/98) Operating System
- Netscape Communicator 4.5 and Java Toolkit (per license)
- FastTrack 3.01 Web Server
- Informix Standard Engine 5.10
- HP LaserJet 4050N Printer
- For SNMP element control:
  - SNMP Research BRASS agent.
- For SNMP Northbound Management Interface:
  - SNMP Research MASTER agent.
- For X.25 option:
  - HSIP driver Version 2, High Speed Interface card and drivers
  - SunLink 9.1, X.25 software.
  - 16-port central data serial expansion unit.
- For SNIDER option:
  - 32-port central data serial expansion unit
  - 16-port central data serial expansion unit.

DND Features

Overview

DND features are packaged into basic configurations called releases. Future releases are anticipated to be available on a periodic basis for support of DND enhancements and new DACS features or support of new elements.

Operational Features

The operational features in DND are:

- Element management and graphical display
- DND Workspace used to create, modify, and save network maps
- Point and click to select menu choices and field values in the DND GUI
- Login and password protection. Support of up to 32 simultaneous sessions and 128 different logins
- Selection of communication with individual DACS through the X.25, SNIDER, or TCP/IP interfaces
- Control of 1 through 60 DACS in DACS II Releases 6 and higher, and DACS II ISX Releases 1.1 and higher
- DACS Command Line Access - send an MML message directly to the DACS and display the DACS output (expert DACS user mode)
- Alarm monitoring for 1 to 256 SNMP nodes
- Telnet access to DACS II, DACS II AX 4/11 (prior to Release 9.03), AAC, IMACS, and PSAX
- DACS and SNMP alarm logging
- DACS and SNMP visual and audible notification
- Network-based printing of reports
- Querying of database from report forms
- Interfaces available for various Northbound Network Managers
- Context-sensitive and Content help.

DND Features (Continued)

Element Monitoring Features

DND provides:

- New Alarms Summary visual and audible indication
- Intertie alarm indication
- Fault management and network-wide alarm surveillance display.

The DACS monitoring features in DND are:

- Alarm log and alarm reports (DACS II and AX)
- Audit and synchronization of the local database, including:
  - Upload DND database with DACS provisioning data (DACS II and AX)
  - NPC/Port and channel/circuit audit (DACS II and AX)
  - Scheduled NPC/port, channel or alarm synchronization between the DND and a DACS (i.e., DACS II and AX).
- User-defined names (IDs) for DACS circuits and NPCs/Ports (DACS II and AX)
- Message log recovery (DACS II only)
- Alarm intervention display (DACS II only)
- 24-hour performance monitoring statistics (DACS II only)
- Automatic database update for echoed responses of commands made directly at the DACS (i.e., DACS II and AX)
- Network-wide alarm surveillance (DACS II and AX).

The SNMP monitoring features in DND are:

- Monitoring (polling) for communication failures
- Validation of IP address and software release information
- Alarm log and SNMP Alarm Report
- Monitoring for lost alarm traps (sequence number gap)
- Termination Naming
- Termination Circuit Mapping (cross-connect record)
- End-to-end circuit trace.

DND Features (Continued)

DACS II, SNMP, and DACS II AX Provisioning Features

The DACS II provisioning features in the DND are:

- Facility (NPC) provisioning
- MMFG (DS3 termination) provisioning
- DND supports circuit provisioning for:
  - Two-point circuits
  - Contiguous, Alternating, and Random N x 64 Kbps circuits
  - One-way cross-connections
  - Virtual broadcast (one-way) circuits
  - Symmetric voice circuits
  - Polling data circuits
  - TS0 to Non-TS0 CEPT circuits.
- Altrouting, preempting, and normalizing of circuits
- Circuit trace capability
- Test port provisioning
- Test access connection capability
- Audit/synchronization of local database.

The SNMP provisioning features in the DND are:

- Centralized telnet access to these SNMP-based network elements: DACS II AX 4/11 (pre-AX Release 9.03), AAC, IMACS, and PSAX
- NPC and Circuit Provisioning via the SNMP Northbound Interface
- Termination naming and circuit mapping.

(Continued on next page)

DND Features (Continued)

DACS II, SNMP, and DACS II AX Provisioning Features (Continued)

The DACS II AX (Release 9.03 and higher) provisioning features in the DND include:

- Facility Port provisioning
- Circuit Provisioning for:
  - Two-point circuits
  - Contiguous, Alternating, and Random N x 64 Kbps circuits
- Circuit trace capability
- Audit/synchronization of local database

DND Features (Continued)

DACS Provisioning Feature: Database Audit and Synchronization

The DND maintains its own databases in order to track its operations and record the state of the circuits on the DACS frames. You can back up or restore databases to or from tape.

The information in the databases is accessible by the operator as printed or displayed reports. The report generation functions of the DND are very flexible and let you create report templates (using the Forms Interface) and individual reports as required.

There are occasions when the DND and DACS databases may not correspond; that is, they can have become inadvertently out of synchronization. As part of its repertoire of administrative functions, DND supports automatic or scheduled synchronization of:

- NPC provisioning data
- Circuit provisioning data
- Alarm data.

Provisioning and synchronization features performed by the DND for DACS II AX (Release 9.03 and higher) include:

- Port Provisioning
- Circuit Provisioning
- Device Information synchronization.

Network Security

The security of the network is an important concern, especially because a network can contain many elements and, therefore, has a greater risk of intrusion. Within DND, the system administrator assigns logins and passwords. In addition, access to the network is also limited.

A customer also has the ability to restrict intranet/internet access into their DACS. How this is performed depends on who is providing the LAN connection and is beyond the scope of this document. Many third party sources can be contracted to configure and setup LAN configurations and internet services.

Getting Started

2

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Background

Purpose

The purpose of this chapter is to familiarize users with DND start-up tasks, Element configuration information, the Common Desktop Environment (CDE), and the DND GUI and DND Forms interfaces.

Objectives

This chapter provides background information to help you perform the following:

1. Select which configuration procedures need to be completed for your DND
2. Log in and out of the CDE and DND
3. Select the proper login ports
4. Describe the printer setup.

Related tasks

For related tasks, see the following General Tasks in Volume II:

DND GUI:

- Logging in to the DND GUI System GT 2.1G
- Logging out of the DND GUI System GT 2.2G
- Configuring the DACS II AX for Communicating with DND GT 2.3G
- Configuring the AAC/IMACS for Communicating with DND GT 2.4G
- Configuring the PSAX for Communicating with DND GT 2.5G

Configuration Tasks:

- Configuring the DACS II for MML Input Language for User DAX GT 2.1U
- Configuring the DACS II for SNIDER Protocol GT 2.2U
- Configuring DACS II for X.25 Protocol GT 2.3U
- Configuring DACS II for TCP/IP Protocol GT 2.4U
- Configuring DACS II for 24-Hour Performance Monitoring GT 2.5U
- Turning on Message Logging GT 2.6U
- Turning on Alarm Intervention GT 2.7U
- Changing Environment Variables GT 2.8U

(Continued on next page)

Background (Continued)

Related tasks, Continued

Configuration Tasks, Continued:

- Setting/Changing Default Values for NPC and Circuit Provisioning Forms GT 2.9U
- Setting the Time Zone GT 2.10U

DND Forms Logging In/Out Tasks:

- DND Forms: Logging In From a Terminal GT 2.11U
- DND Forms: Logging In From a Workstation GT 2.12U
- DND Forms: Logging Out of the DND System GT 2.13U

Related information

For related information refer to the following:

- *DACS II and DACS II ISX Operation and Maintenance Manuals*
- *DACS II Network Director Installation Manual*
- *DACS II AX 4/11 User's Guide*
- *IMACS and AAC Reference Guide.*
- *PacketStar PSAX2300 Access Concentrator User's Guide*

Configuration Information

Overview

There are three components which must be configured before you can use DND to provision a DACS or SNMP node:

- The DACS
- The DND
- The SNMP node.

Configuring the DACS

Configure the DACS port(s) that will be connected to the DND. Configuration is performed directly at the DACS using the DACS commands.

NOTE:
This does not apply to DACS II AX.

Configure the DACS for the following:

- MML language
- SNIDER, X.25, or TCP/IP protocol
- 24-hour performance monitoring schedule (optional)
- Turn on the Message Logging feature (optional)
- Turn on Alarm Intervention (optional).

For additional information on configuring the DACS system, refer to GT 2.1U through GT 2.7U in Volume II.

Configuring the DND

Before using DND, check the following on the DND host machine:

- Accuracy of time zone setting
- Settings for environment variables
- Default values for NPC and Circuit Provisioning forms.

For additional information, refer to this chapter and procedures GT 2.8U through GT 2.10U in Volume II.

Configuration Information (Continued)

Configuring the SNMP Node

In order for DND to communicate with the SNMP node, set-up is required on both ends: DND and at the SNMP node.

There are three critical pieces of information:

- **IP Address for SNMP node**: You must supply DND with the actual IP address which identifies the SNMP node to DND.
- **IP Address for DND**: You must supply the actual IP address of DND to the SNMP node so that SNMP traps can be sent to DND.
- **Community**: The community string is the password used to access the SNMP node. DND must use the community string that is set in the SNMP node.

For the setup procedure for the AAC/IMACS, refer to GT 2.4G. For the setup procedure for the DACS II AX, refer to GT 2.3G. For the setup procedure for the PSAX, refer to GT 2.5G.

After completing the setup procedures, use the NE Provisioning form to identify the NE in DND. Refer to GT 5.1G.

The Common Desktop Environment (CDE)

Overview

The CDE used by the DND is part of Sun's Solaris 2.6. The CDE is the window management system for DND on Sun workstations. It manages the login and displays for the user.

Logging on the CDE

You can log in to the DND GUI from the DND host workstation, a client workstation (UltraSparc 5), or a PC running Netscape.

When operators or administrators log in at a client workstation (connected via a LAN), there are two levels of user logins required for operation of the DND GUI:

- CDE Login
- DND Login (refer to section "Logging in to the DND GUI" on Page 2-12).

To set up a CDE Login, an administrator will need to perform the following:

1. Login to the CDE and DND system using the default login (dacsadm), as discussed in the *DND Installation Manual.*
2. Refer to *Chapter 16, User Administration*, to create additional user logins.

When the DND server workstation or the client workstation is turned on, the screen immediately prompts the user for a login and then a password. Once these are entered, the user enters the CDE.

See GT 2.1G for the procedure for logging in to the DND GUI.

CDE Toolbar

The CDE toolbar appears by default at the bottom of the monitor screen. The CDE toolbar is shown in Figure 2-1.



Figure 2-1. CDE Toolbar

The Common Desktop Environment (CDE) (Continued)

Items on the CDE Toolbar

The CDE Toolbar includes:

- Clock - This time is local to the workstation.
- Date - Double-click on the date to bring up the CDE calendar manager, which may be useful, but is not needed for the DND.
- Virtual Workspaces - Four default virtual workspaces are defined by the CDE and are named One, Two, Three and Four, respectively.

  To enter a virtual work environment, click on the associated button.

  To change the name of a virtual workspace, double-click on the name in the box and edit the name on the button.
- Visual Preferences - Click on this icon to change the Window colors, backdrop wallpaper, or window select methods.
- Help - Click on the **?** icon for help information on the CDE.

Console Window

When using the DND, it is recommended that a console window remain open at all times. System status messages are often displayed in the console window. To open the Console Window, right-click anywhere on the CDE wallpaper, select *Programs* from the Workspace Menu, then select *Console*.

The Netscape Browser

Overview

The Netscape browser is used to access the DND GUI. A link to the URL address of your DND server (link button in the Netscape Personal Toolbar) has already been established at installation time.

When logged into the DND, it is recommended that the DND Main window be displayed in all virtual workspaces. This is done by clicking the Window Menu icon in the upper left hand corner of the DND Main Window (which is displaying the network map), and selecting the choice *Occupy All Workspaces*.

Loading Netscape

To access Netscape from a workstation, right-click anywhere on the CDE workspace to reveal a pull-down menu. Select the **Programs** option, which will reveal another pull-down menu. Select the **DND GUI** option. The Netscape browser will automatically start up on the workstation. Click dnd user interface to start the DND GUI on the Netscape browser.

NOTE:
If an error message appears on the bottom of the DND Main Window and the error is not related to improper login, then the DND has not been installed correctly on your workstation. Consult your next level of support.

Netscape Toolbars

The default Netscape environment will display only the Personal Toolbar. On the Personal Toolbar, two buttons are provided - one to connect to the Netscape Server Selector (for turning the server on/off), and the other to connect to the DND server and start the DND GUI.

The other toolbars, the Location Toolbar and Navigation Toolbar, are minimized by default. These are not required for DND operation and should not be used ordinarily. These would be used for visiting other web sites.

Moving to another web site will log the user off of the DND after a timeout interval. Other operations, normal to "browsing" such as "Back", "Forward" are not to be used while connected to the DND.

The **File** pull-down menu on the top of the Netscape browser may be used for printing and/or saving reports files. Preferences can also be set for font size preferences and other browser preferences. These are not necessary for DND operation.

The Netscape Browser (Continued)

Loading the DND GUI

To access the DND GUI from a workstation, click dnd user interface located on Netscape's Personal Toolbar. The URL address to the DND server is linked to this button, and the DND Main Window with Login screen will appear.

To access the DND GUI from a PC, you need to set up a bookmark for the DND URL using the Netscape Bookmarks tool. Refer to GT 2.1G for details.

Logging in to the DND GUI

The DND GUI can not be utilized until the user has entered a DND login name and password. Default logins and passwords are set for dacsadm (administrator) and ems (generic operator) at installation. Other logins/passwords are set up by the system administrator.

NOTE:
Users logging in to the console as *dacsadm* have unrestricted use of the UNIX system. Other users will have restricted use of the UNIX system.

(Continued on next page)

The Netscape Browser (Continued)

Logging in to the DND GUI, Continued

Before logging in, the DND Workspace (refer to *Chapter 3, DND Screens and Form Navigation*) will not display the DACS network map or alarm indications. Figure 2-2 displays what the screen looks like before logging in the DND GUI.



Figure 2-2. DND GUI: Login/Logout Window

The Netscape Browser

Logging out of the DND GUI

When you log out of the DND GUI, you will receive the same screen as is pictured in Figure 2-2. The DND pictured is waiting for a user to log in. Click **File** from the top of Netscape window to reveal a pull-down menu. Selecting the **Exit** option will exit you from the Netscape browser.

If there are unsaved changes in the DND Workspace, such as changes to grouping information or map icons, you will receive a warning when you try to log out. To save changes, click Workspace in the DND Task Bar, then select **Save to Server**. Only a user with administration privileges can **Save to Server**.

In addition to logging out from the DND GUI, the DND GUI will automatically log off a user if the following conditions exist:

- The browser loses communication with the DND server for a couple of minutes
- A different URL address is entered in the **Netsite:** field in Netscape's Location Toolbar

Logging in to the DND UI

Methods

You can log in to the DND User Interface (UI) using any of these methods:

- From a terminal/PAD through an X.25 port
- From a directly connected terminal
- From a terminal by modem
- Using a TCP/IP login
- Using telnet from a LAN-based PC
- Using a PC terminal emulator.

Log in procedures are described in GT 2.11U and GT 2.12U.

Login Ports

Ports used for Terminals

The default DND hardware configuration comes equipped with a 16-port Serial Expansion Unit (SEU). All of these ports can be configured for terminal login.

The ports are numbered 1 through 16 on the unit. The ports are made available for login via the LOGIN PORTS form on the DND Forms User Interface. Ports that are restored via this form can be connected to a "dumb" terminal and the DND Forms User Interface can be accessed from this terminal.

The 16-port SEU can be used for DACS SNIDER communications, but at a reduction in the number of ports available for logging in to DND.

Ports used for SNIDER communications

An optional 32-port SEU is available. It is used for SNIDER communications to a DACS and to increase the numbered login ports to 32. A DACS can be configured for SNIDER communications via:

- DND GUI: the DACS ADMINISTRATION form
- DND Forms Interface: the FRAME ADMINISTRATION form.

Port Numbers

If you have both the 16-port SEU and the optional 32-port SEU, DND will number the ports sequentially from 1 to 48 as shown in Table 2-1. Only the first 32 DND line ports are available for terminal login.

Table 2-1. DND Line Port Numbers

Unit	SEU Port Number	DND Line Port Number
First unit: 16-port SEU (default)	1 to 16	1 to 16
Second unit: 32-port SEU (optional)	1 to 32	17 to 48

Environment Variables

Overview

To insure proper operation of DND, you may need to check for the proper values of some of the environmental variables used by DND. Also, you can vary the values to achieve different operational effects.

Specifications for Environment Variables

The following tables provide detail on the definitions and valid entries for environment variables.

Table 2-2 describes the environment variables, their purposes and their values. Refer to GT 2.8U for the procedure for setting environment variables.

CAUTION:
If a variable appears in the variable file, but does not appear in the table, it is recommended that you **do not** *alter it.*

Table 2-2. Environment Variables

Variable	Description
AGE_RTRV_ALM_SUMMARY	The amount of time (in seconds) to age a request to retrieve the alarm summary info (priority of action) at the DACS. Subsequent requests are dropped during the time one is being aged. Setting this variable to a high value will prevent clogging the DACS with requests for the alarm summary during times of high alarm activity. The default is **15** seconds. The allowed range is **15** seconds to **86400** seconds (once a day). For example, setting this variable to 900 will result in retrieving the alarm summary information from the DACS once every 15 minutes during times of high alarm activity. This retrieve is triggered when an alarm is idled and when an NPC is restored.

Table 2-2. Environment Variables (Continued)

Variable	Description
ALARM_DEV	The device name of the alarm monitor port. The default is **/dev/term/b** for Solaris. By default, the alarm device is disabled. **NOTE:** The alarms port environment variable, ALARM_DEV and the G2 interface environment variable, G2_INTERFACE, should not be set to the same serial device.
ALARM_DEV_SPEED	The baud rate of the alarm monitor port. The default is **19200**. Other possible values are **1200**, **2400**, **4800** and **9600**.
ALARM_RECALC_FREQ	The frequency that the DND should recalculate alarms on 1 DACS or SNMP node. The DND maintains a network wide list of all active alarms on all managed nodes. When an alarm becomes active, the alarm is added to the list. When an active alarm is cleared, the alarm is removed from the list. Through this environment variable, the DND can periodically recalculate (refresh) the list of active alarms in the network to be consistent with the alarm information in the frame databases. One network node is recalculated per the specified interval. The range is **2** to **30** minutes. The default is **5** minutes.
BROWSE_TIMEOUT	The time, in seconds, for which the DND will wait for a response from a circuit BROWSE **Action**. At the end of that time, the DND will return control of the terminal to the user. The default is **1800** seconds (30 minutes). The range is **60** through **3600** seconds (1 through 60 minutes).

Table 2-2. Environment Variables (Continued)

Variable	Description
BROWSER_POLL_TIMEOUT	The timeout value for browser network map polling. If polling does not occur for BROWSER_POLL_TIMEOUT seconds then the DND will automatically log off the user on that browser. The default is **75** seconds. Timeout may occur if the user uses the browser to connect to another web site, or if the network connection fails. The timeout will release this "slot" for use by another browser.
BTCHLOOP	Whether or not the enhanced test access feature is enabled. It it is enabled, the DND will execute channel loop and release actions. Otherwise, the DND will ignore them. A value of **1** enables. Any other value disables. The default is **0**.
BTEMI	Replaced by G2_INTERFACE.
BTHOTSTANDBY	Whether or not the hot standby feature is enabled. It it is disabled, the DND will process echoed responses normally. A value of **1** enables. Any other value disables. The default is **0**.
BTLP	Whether or not messages will be sent to the Event Management System Alarm Logging Printer. The default of **no value** presumes that this interface is not present. Otherwise, enter the name of a printer for BTLP. (Refer to section "DECServer Printer" on Page 2-33.) The recommended name is **btlp**.
BTLP_ALARM_STATE	Ignored if BTLP is not set. Which DACS alarm messages, by alarm state, are sent to the Event Management System Alarm Logging Printer Interface. The default is **all alarm messages**, regardless of alarm state.

Table 2-2. Environment Variables (Continued)

Variable	Description
BTLP_DATE_FORMAT	Ignored if neither G2_INTERFACE or BTLP are set. The format of the date string in messages to the Event Management System Alarm Logging Printer Interface. The default is the **UNIX long time value**. For example, for the date to appear as: 2_digit_month/2_digit_day/2_digit_year hour:min:sec use the following line: %m/ %d/ %y %H:%M:%S For references on specifier details, refer to *Chapter 28, DND Interfaces*.
BTLP_EXCLUDE	Ignored if BTLP is not set. Controls which frame alarm messages are sent to the Event Management System Alarm Logging Printer Interface. The default is **only to send non-NPC alarms**: 65011 65021 65031 65035 65036 65041 65045 65046 65061 33351
BTLP_EXCLUDE_AX	Ignored if BTLP is not set. Controls which AX alarm messages are sent to the BT Alarm Logging Printer Interface. The default is to send **all alarms** to this interface. The following messages numbers are the only two generated by the DND (not the AX). 19000 - Detection of a gap in AX trap sequence numbers (i.e., lost a trap). 19001 - Communication link state change between the DND and AX.

Table 2-2. Environment Variables (Continued)

Variable	Description
BTLP_FMT_STRING	Ignored if BTLP is not set. The format of output messages to the Event Management System Alarm Logging Printer Interface. The default is: ae\n\ttid\t%d\n\teqtype\t%1\n\teqid\t%E\n\tcondtype\t%C\n\ \talarmtype\t%F\n\talarm_state\t%V\n\tdacsmsgno\t%m\n\tsummary\t%n\n\ \ttime\t%T\n\tnpc_id\t%N\n\tckts\t%K\n\n Descriptions of the specifiers are listed in Table 2-3.
BTLP_MAXG2BUNDLE	The maximum number of alarms in a single btlp G2 message. The default is **1** alarm. The allowed range is **1** to **1000**.
COMMAND_TIMEOUT	The time for which the DND will wait for a response from the DACS to a command issued by the user during a multiplexed passthrough session. At the end of that time, DND will return control of the terminal to the user. The default is **60** seconds. The range is **15** through **180** seconds.
CSCAN_CUD	The interface to ITM-NM/XMC can be restricted to accept calls only when the Call User Data is provided in the XMC to DND X.25 call. When this variable is enabled, the XMC is required to include the CSCAN_CUD string in the Call User Data field of the X.25 call.
CSCANLOGPATH	The interface to ITM-NM/XMC maintains a recovery log for event messages. If the link between ITM and DND goes down, then the log is used to send all unsent messages. This variable determines the location/name of the (binary) data file which holds the log.
D2_MIN_TG	For DACS II. This variable specifies the minimum number to be used as a test group ID when using Test Access.
D2_MAX_TG	For DACS II. This variable specifies the maximum number to be used as a test group ID when using Test Access.

Table 2-2. Environment Variables (Continued)

Variable	Description
D2_MIN_NPCTG	For DACS II. This variable specifies the minimum number to be used as an NPC test group ID when using Test Access.
D2_MAX_NPCTG	For DACS II. This variable specifies the maximum number to be used as an NPC test group ID when using Test Access.
DACS_HIST_SIZE	The maximum number of characters in a single history log. The default is **60000**. The range is **60000**-**600000**.
DACS_TIMEOUT	The timeout for frame commands. The default is **180** seconds (three minutes). The range is **180-600** (ten minutes).
DATE_FORMAT	The format of the date in the alarm report, the history log report header, the non-NPC alarm events sent to the DACScan, and all other DND reports. The default of **no value** obtains a format of ddmmmyy. A value of **AMERICAN** changes it to mm**/**dd**/**yy and a value of **EUROPEAN** changes it to dd**/**mm**/**yy.
FDX_LOOP_CKT	Controls the two-way loopback circuit for DND. The default value is **0**, which denies provisioning of two-way loop circuits. A value of **1** allows to you to provision two-way loop back circuits, echo response processing, and audit/synchronization.
G2_ALARM_STATE	Defines which DACS alarm messages, by alarm state, are sent over the DND G2 interface. The default is to **send all alarm messages** regardless of alarm state. The values can be **OOS**, **CRIT**, **MAJ**, **MIN**, **INFO**, **IDLD**. For example: G2_ALARM_STATE="CRIT MAJ IDLD" sends only critical, major, and idled message alarms.

Table 2-2. Environment Variables (Continued)

Variable	Description
G2_DATE_FORMAT	Ignored if BTEMI is not set. The format of the date string in messages sent over the DND G2 interface. The default is the **UNIX long time value**. For example, to have the date appear as: hour:min:sec 2_digit_month/2_digit_day/ 2_digit_year use the following line: %H:%M:%S %m/ %d /%y For references on specifier details, refer to *Chapter 28, DND Interfaces*.
G2_EXCLUDE	Defines which DACS alarm messages (by iitl) are sent over the DND G2 interface. The default is to **send all alarms**. For example: G2_EXCUDE="01201 01301 01331" will exclude messages 01201, 01301, and 01331
G2_FMT_STRING	Defines the format of G2 output messages to the DND G2 interface. The default format is: ae\n\ttid\t%d\n\teqtype\t%1\n\teqid\t%E\n\tcondtype\t%C\n\ \talarmtype\t%F\n\talarm_state\t%V\n\tdacsmsgno\t%m\n\tsummary\t%n\n\ \ttime\t%T\n\tnpc_id\t%N\n\tckts\t%K\n\n For references on specifier details, refer to *Chapter 28, DND Interfaces*.

Table 2-2. Environment Variables (Continued)

Variable	Description
G2_INTERFACE	Defines whether or not alarm messages are forwarded over the DND G2 interface. The default of no value presumes this interface is not present. If a value is entered, it should be the name of the serial device that the Northbound Manager is hardwired to. For example: G2_INTERFACE="" disables the DND G2 interface and: G2_INTERFACE="/dev/term/a" will enable the DND G2 interface and cause alarm messages to be sent over the /dev/term/a serial service in a G2 format. **NOTE:** The alarms port environment variable, ALARM_DEV, and the G2 interface environment variable, G2_INTERFACE, should not be set to the same serial device.
G2_MAX_PRINT_QUEUED	The maximum number of G2 jobs that can be queued in printer. The default value of **no value** indicates there is no limit. The allowed range is **500** to **2000** jobs.
G2_MAXG2BUNDLE	The maximum number of alarms in a single G2 message. The default is **1**. The allowed range is **1** to **1000**.
G2_SPEED	Defines the baud rate of the DND G2 interface. The default is **9600**. Other possible values are **1200, 2400, 4800,** and **19200**. It is recommended that this variable be set to the highest possible speed.
IDLE_THRESHOLD	This variable is used to define the idle threshold which will logoff an idle user interface session. This variable is set per DND. It is recommended that this variable be set when starting a DND, and then it will apply to all user interface sessions brought up after that.

Table 2-2. Environment Variables (Continued)

Variable	Description
INFO_ALARMS	Authorization to alter the DND algorithm for processing DACS II 0.65011 CGA/PBA messages. Two alterations are available, specified by **PA** and **MINOR**. The default is no value. In that case, the algorithm is not altered. For both **PA** and **MINOR** record the alarm in the DND alarm log and NPC databases, and transmit the DACS II output message from the alarm monitoring port exactly as it was received from the DACS. The difference is in the severity recorded for the alarm and therefore appearing in reports. For a value of **PA**, the severity will be made the same as the priority of action (pa) field, except that, if the "pa" field has a value of **A** (autonomous), the severity is made minor. For a value of **MINOR**, the severity will depend on the value of the alarm state field. For an **MI** or a **DMA**, the severity will be made minor; for a **PMA**, the severity will be made the same as the pa field.
ISX_MIN_TG	For DACS II ISX. This variable specifies the minimum number to be used as a test group ID when using Test Access.
ISX_MAX_TG	For DACS II ISX. This variable specifies the maximum number to be used as a test group ID when using Test Access.
ISX_MIN_NPCTG	For DACS II. This variable specifies the minimum number to be used as an NPC test group ID when using Test Access.
ISX_MAX_NPCTG	For DACS II. This variable specifies the maximum number to be used as an NPC test group ID when using Test Access.

Table 2-2. Environment Variables (Continued)

Variable	Description
ITM_INTERFACE	The interface that will be used for communication with the ITM-NM/XMC if the ITM-NM/XMC feature is enabled on the DND. The options are: ■ X25 - ASN interface messages over an X.25 interface. ■ IP - ASN interface messages over TCP/IP. If the ITM-NM/XMC is not enabled on the DND feature diskette, the interface software is turned off and this variable is not used.
LINES_PER_PAGE	The number of lines per page in DND reports sent to the printer. The default for HP Laser Jet 4000 8.5 by 11.0 inch paper is 60 lines per page. Consult the printer user's manual for default lines per page for other paper types (e.g. A4 paper). This variable is not applicable to printing via the browser interface.
LOG_TIMEOUT	The message timeout interval for messages being received during a DACS message log recovery (i.e., it is used to time messages between the START and END indicators). The default is **180** seconds (3 minutes). If the interval between any two messages exceeds this time, the recovery log action will fail.
MAX_ALM_LOGS	The maximum number of alarms in the alarm log. The default is **10000**. The allowed range is **100**-**10000**. Once this number of records is inserted in a frame's alarm log, the next alarm will cause the number of alarms in the log to be reduced to the value contained in the SAVE_ALMS variable.
MAX_CBIT_ALMS	The maximum size of the C-bit alarm log. The default is **1500** alarms.
MAX_ERP_LOGS	The maximum number of echoed response messages in the ERP log. The default is **1000**. The allowed range is **100-10000**. Once this number of records is inserted in the ERP log, the next echoed response will cause the number of messages in the log to be reduced to the value contained in the SAVE_ERPS variable.

Table 2-2. Environment Variables (Continued)

Variable	Description
MAX_PM_LOGS	The maximum number of messages in the 24-Hour PM log. The default is **1000**. The allowed range is **100-1000**. Once this number of records is inserted in a DACS' PM log, the next record entry will cause the number of records in the log to be reduced to the value contained in the SAVE_PM_LOGS variable.
MAXALMAGED	The maximum number of alarms to be stored for aging for a single DACS frame. This is to prevent potential exhaustion of dynamically allocated memory (the place where aging alarms are stored). The larger the number of frames controlled by a DND, the smaller amount of memory per frames. The default maximum number is **300**.
MAXCMDLOG	The maximum size of the command log. The default is **200** records.
MAXEXPIREAGED	The maximum number of alarms to be stored for aging for a single second in time. This is to prevent potential CPU realtime problems where the total number of alarms to be processed in one second, or sequential seconds may cause the alarms to starve other processes for real time. The default value is **5**. If more than this number of alarms are to be stored in one second, then the aging time for that alarm is increased by one second, to effectively "spread" out the alarm processing over time.
MINCMDLOG	The remaining number of command log entries after the maximum has been reached. The default is **100** records.
PM24HR_NONFT	Enables the 24-Hour Performance Monitoring feature. **YES** makes the Performance Monitoring feature available. The Performance Monitoring feature is available for CEPT type NPCs only. No Performance Monitoring data is stored or processed for non-CEPT NPCs.

Table 2-2. Environment Variables (Continued)

Variable	Description
RP_DACS_TIMEOUT	The number of seconds the DND will wait before timing out commands associated with a restoration plan. The default is **1800** (30 minutes). The range is **180** (3 minutes) **- 86400** (24 hours).
SAVE_ALMS	The number of alarms to leave in the alarm log when the maximum has been reached. The default is **600**. Allowed values are **1** through **1 less than the value of MAX_ALM_LOGS**.
SAVE_CBIT_ALMS	The remaining number of alarms in the C-bit alarm log after the maximum size has been reached and some alarms have been removed from the C-bit alarm log. The default number is **1498** alarms.
SAVE_ERPS	The number of echoed response messages to leave in the ERP Log when the maximum number of messages has been reached. The default is **60**. The allowed range is **1** to **1 less than the value of MAX_ERP_LOGS**.
SAVE_PM_LOGS	The number of entries to leave in the 24-Hour PM log when the maximum has been reached. The default is 60. Allowed values are **1** through **1 less than the value of MAX_PM_LOGS**.
SEND_ALARM_EVENTS	Authorization to send alarm event messages to a network controller connected to the DND in accordance with the appropriate interface agreement. The default is **no value**. A **YES** value sends the messages.
SEND_NON_NPC_ALARMS	Authorization to send non-NPC alarm messages to a network controller connected to the DND in accordance with the appropriate interface agreement. The default is no value. A **YES** value sends the messages.
SESSION_TIMEOUT	The time in minutes over which the DND will wait for some activity during a multiplexed passthrough session. After that time, the DND will end the idle session autonomously and will return the user to the previous menu. The default is **480** minutes (8 hours). The range is **0** through **10080** (1 week).

Table 2-2. Environment Variables (Continued)

Variable	Description
SH_TMOUT	The DND shell inactivity timer. This variable sets the shell TMOUT variable when a user logs in to the system as an DND user. When TMOUT seconds have elapsed with no terminal activity, a 60-second warning displays. If there is no further activity, the shell times out and the user is logged off. The SH_TMOUT variable is set by the user login .profile. It is disabled when an DND user interface session is started and is imposed again when the user quits the DND interface. Examples: SH_TMOUT=0 no timer (unlimited login time) SH_TMOUT=1800 30-minute timeout (default) If the value for SH_TMOUT is changed, users who are currently logged in, must log out and log in again for the new timeout value to take effect. The IDLE_THRESHOLD variable performs a similar function for the DND user interface.
SITENAME_SIZE	Controls the number of characters allowed in the **Site Name** field on the FRAME ADMINISTRATION form. If not set, the field is a maximum of 17 characters. The value range of this variable is **18-24**.
SLNKX25DBIT	Toggle for the D-Bit option for the SunLink X.25 communication package. If this is set, delivery confirmation is requested for X.25 data packets. (This is end to end.) The default value for this variable is **NULL**. A value of **1** enables the D-Bit option.

Table 2-2. Environment Variables (Continued)

Variable	Description
SNMP_ACT_ALM_ POLL_INTERVAL	Sets how frequently (in seconds) all of the in-service SNMP network elements (NEs) should be polled in order to update the active alarm table. The default is **900** (every 15 minutes). The allowed range is **60** (once a minute) to **86400** (once a day). Alarm Polling is used as a mechanism for recovering from missed traps. Specifically a trap clear can be missed and DND will have no indication this has occurred. This value should be tuned proportionately to the number of SNMP NEs being managed by the DND.
SNMP_MAX_ALM_LOGS	The maximum number of alarm records in the SNMP alarm log. The default is 5000. The allowed range is **100-5000**. Once this number of records is inserted in an SNMP alarm log, the next alarm will cause the number of alarms in the log to be reduced to the value contained in the SNMP_SAVE_ALMS variable.

Table 2-2. Environment Variables (Continued)

Variable	Description
SNMP_POLL_INTERVAL	Sets how frequently (in seconds) all of the SNMP NEs should be polled by the SNMP TRAP process. Polling is used to check if the DND can communicate with the SNMP NE. The default is **30**. The allowed range is **30** to **240** (every 4 minutes). **NOTE:** If the NE dies or the TCP/IP link to an NE goes down, polling is the only way to know something has occurred. Polling is also used to determine if a trap (alarm) from the NE was lost. This value should be tuned proportionately to the number of SNMP NEs being managed by the DND.
SNMP_SAVE_ALMS	The number of SNMP alarm records that remain in the SNMP alarm log when the maximum has been reached. The default is **500**. Allowed values are **1** through **1 less than the value of SNNP_MAX_ALM_LOGS**.
X25BRXDBIT	For delivery confirmation for X.25 data packets. The default value is **NULL**. Otherwise, a value of **1** will enable delivery confirmation.

Time Zone

Overview

The UNIX operating system automatically keeps track of time. The system administrator can obtain the current time and time zone information by using the **date** command. Internally, all time is maintained at Greenwich Mean Time (GMT), and adjusted to local time according to the time zone setting.

Time Zone Changes

Generally, the time zone information is set on the workstation at installation time and regional Alternate Time Zone (ATZ) adjustments take place accordingly. For example, Daylight Savings Time (DST) is an ATZ. The start and end dates and times at which an ATZ begins and ends may vary from country to country and from region to region. The UNIX operating system generally maintains this information accurately and adjusts the time properly for the ATZ transitions.

Timezone Command

If, however, time is not correctly adjusted to the ATZ automatically for your region, or you wish to change the time zone according to a different country/region, then a DND tool will allow for direct correction of that. The **timezone** command is provided to do this. Once the time zone information is adjusted this way, then the time zone will need to be adjusted for each year, in January, or as soon thereafter as is practical.

The procedure for setting the time zone is in GT 2.10U.

Printer Setup

Default Printer Type

The printer configuration was set at hardware installation time. A single default printer is defined for the system. The default printer type is HP Laser Jet.

Available Default Printer Configurations

The available "default" configurations for the printer are:

- A LAN-based printer
- A locally-connected parallel port printer
- A serial printer on a DECServer.

LAN-based Printer

In this configuration, the printer is connected to a 10 Megabit Local Area Network (LAN). This network printer can be shared by other computers on the LAN. This printer is set up using the **jetadmin** tool supplied by HP, before the DND Install script is run. The instructions for setup of this printer are included in the *DND Installation Manual.*

Locally-connected Printer

In this configuration, the printer is connected directly to the parallel port on the back of the workstation. When the DND Install script is run at DND installation time, if a printer has not been previously defined, then the locally-connected parallel port configuration is automatically set up by the DND Install script.

DECServer Printer

Tools and scripts are provided by the DND software so that printers can be connected to the serial ports of the DECServer 700. The setup of this printer type requires modification of some UNIX system files and the setup of printer filters. The instructions for setup of this printer are included in the *DND Installation Manual.*

Printer Setup (Continued)

Printer Naming

The CONSOLE PRINTER, as described in the DND Forms, is the "default" printer for the workstation. The default printer is typically named *lp* or *Printer*. Additional printers that are defined (such as DECServer 700 serial printers) will be listed by their UNIX names in the DND Forms. The following UNIX commands may be useful:

lpstat -d identifies the system default printer

lpstat -v identifies all printers.

Printer Usage

DND provides the following printer operations:

- Report printouts — After a report is generated, it can be printed from the REPORT OPERATIONS menu.
- Screen printouts — You can print any of the screens available from the DND Forms interface by using the PRINT function key.
- Logging of DACS messages to the printer — A DND administrator can direct DACS MML messages to a printer from the PRINTER MANAGEMENT form. Alarm messages or all messages from a DACS can be directed to a printer.

  NOTE: Not applicable to DACS II AX.
- Printer controls — A DND administrator can use the PRINTER MANAGEMENT form to enable or disable printers, and to list or cancel print jobs. Users can list or cancel their own print jobs using selections from the TASK ADMINISTRATION menu.
- Printer assignment — A printer can be assigned to a user, when a user login is added using the USER MANAGEMENT form. All print requests from the user will be sent to the assigned printer.

Netscape Printing

Printing from a Netscape Window

To print the contents of a Netscape window, click **File** from the top of Netscape window to reveal a pull-down menu. Select the **Print** option.The following items below are the ONLY items that can be printed from a Netscape window:

- Response to a DACS Message
- Response to a Report
- A Circuit Trace Table or an Altroute Table.

WARNING:
Do not attempt to print the DND GUI forms or the DACS network map. The browser will freeze.

DND GUI: Summary of Menus and Forms

Overview

The table below includes a comprehensive listing of menu selections, from the highest level on the left (the buttons on the DND Task Bar) and moving to the lowest level to the right. At the lowest level is typically a form. Nearly all forms include a **Action:** field. The Action identifies the task you want to perform. The table summarizes the **Actions** available.

DND GUI Task Table

Table 2-3. DND GUI Task Table

Main Task Button	Second Level	Action/Third Level
Alarms	Network Element Summary	■ Click on a site with a red arrow next to it to display its Alarm Summary Report. ■ Right-click on a site to display a menu with applicable provisioning options.
	Alarm Surveillance	
	Clear All New Alarm Indicators	
	Clear All Audible Alarm Indicators	
	Disable/Enable Audible Alarm	
Provisioning (NETWORK:)	NE Provisioning*	CREATE RESTORE BRESTORE MODIFY REMOVE DELETE MODIFY CHGSITE

Table 2-3. DND GUI Task Table (Continued)

Main Task Button	Second Level	Action/Third Level
Provisioning (NETWORK:), Continued	End User Provisioning*, ***	CREATE DELETE MODIFY
	NE Partitioning	MODIFY
	Intertie Provisioning***	CREATE DELETE MODIFY ADDNPCS DELNPCS
	Network Circuit Provisioning	ACTIVATE DELETE MODIFY
Provisioning (DACS II, DACS II ISX)	Circuit Provisioning	ACTIVATE DELETE MODIFY PEND DEACTIVATE COMBINE ALTROUTE NORMALIZE ADDLEG DELLEG CHGRPATH TRACE
	NPC Provisioning	CREATE RESTORE MODIFY REMOVE DELETE LOOPBACK
	MMFG Provisioning	CREATE RESTORE MODIFY REMOVE DELETE

Table 2-3. DND GUI Task Table (Continued)

Main Task Button	Second Level	Action/Third Level
Provisioning (DACS II, DACS II ISX), Continued	Database Audit/Synchronization	ALARM SYNC CHANNEL AUDIT CHANNEL SYNC NPC AUDIT NPC SYNC SUBRATE AUDIT** SUBRATE SYNC** UPLOAD ABORT
	Test Access	MONITOR SPLIT HUB TERMINATE UNTERMINATE RELEASE LOOP TEST SET
	DACS Message	
	Outage Log	INSERT MODIFY DELETE DESTROY
Provisioning (DACS II AX)	Circuit Provisioning	ACTIVATE MODIFY CHANGE ACTIVE MAP DELETE TRACE
	Port Provisioning	ACTIVATE MODIFY DELETE
	Database Audit/Synchronization	CIRCUIT AUDIT CIRCUIT SYNC DEVICE AUDIT DEVICE SYNC PORT AUDIT PORT SYNC UPLOAD ABORT LOAD AX CIRCUITS

Table 2-3. DND GUI Task Table (Continued)

Main Task Button	Second Level	Action/Third Level
Provisioning (DACS II AX [Pre-Rel. 9.03], PSAX, AAC, IMACS, OTHER)	Termination Name	CREATE DELETE MODIFY
	Termination Circuit Mapping	CREATE DELETE MODIFY TRACE
ADMINISTRA-TION:	Telnet	
	Task Administration	LIST TASKS DELETE TASKS DELETE ALL TASKS
	User Administration	CHANGE PASSWORD USER MODIFY USER ADD USER DELETE
	System Name Change	
	Printer Administration	LIST CANCEL ENABLE DISABLE LOG ALL LOG ALARMS STOP LOGGING
	System Shutdown	SHUTDOWN REBOOT DND REBOOT DND UPDATE
	System Date/Time	
	Frame Date/Time Synchronization	
	Database Backup/Restore	BACKUP RESTORE
	SNMP NB Provisioning	

Table 2-3. DND GUI Task Table (Continued)

Main Task Button	Second Level	Action/Third Level
Reports [ALARMS (DACS II, DACS II ISX)]	DACS Alarm Log Report	
	Circuit Alarm Report	
	NPC Alarm Report	
	Common Equipment Alarm Report	
	Alarm Query Report	
	Outage Report	OUTAGE INFORMATION
	24-Hour Performance Monitoring Report	PM COUNTS BY NPC AND DATE PM COUNTS BY NPC AND PARAM AVERAGE PM COUNTS BY DATE AVERAGE PM COUNTS BY NPC PM ERROR REPORT
Reports (ALARMS (DACS II AX)	Circuit Alarm Report	
	Port Alarm Report	
Reports [ALARMS (PSAX, AAC, IMACS, OTHER)]	Alarm Log Report	
	Port Alarm Report	

Table 2-3. DND GUI Task Table (Continued)

Main Task Button	Second Level	Action/Third Level
Reports (PROVISIONING (DACS II, DACS II ISX))	Circuit Report	CIRCUIT CONNECTIONS CIRCUIT OPTIONS CIRCUIT INFORMATION CIRCUIT AVAILABILITY
	Channel Report	
	Test Access Report	
	NPC Report	NPC IDS NPC NUMBERS
	Audit/Synchronization Report	ALARM SYNC CHANNEL AUDIT CHANNEL SYNC NPC AUDIT NPC SYNC SUBRATE AUDIT** SUBRATE SYNC** UPLOAD
	Echoed Response Processing Report	CIRCUIT NPC TEST ACCESS
	MMFG Provisioning Report	
	History Log Report	
	Message Log Report	
	Integrated Test Set Log Report	
	Frames/Links Report	PORTS FRAME CONTROL LINK CONNECTIVITY PROVISIONING
Reports (PROVISIONING - DACS II AX [Rel. 9.03 and later])	Circuit Report	CIRCUIT CONNECTIONS CIRCUIT OPTIONS CIRCUIT INFORMATION CIRCUIT AVAILABILITY
	Channel Report	
	T1E1 Port Report	
	T3 Port Report	
	Audit/Synchronization Report	
	Echoed Response Processing Report	

Table 2-3. DND GUI Task Table (Continued)

Main Task Button	Second Level	Action/Third Level
Reports (PROVISIONING PSAX, AAC, IMACS, [DACS II AX [Pre-Rel. 9.03], OTHER)	Termination Name Report	CHANNELS INTERTIE INFO REMARKS ALARMS
	Termination Mapping Report	MAPPINGS REMARKS ALARMS
	Communications Report	
Reports (ADMINISTRA-TION)	User Administration Report	USER PARTITION USER CONNECTIVITY USER LOGINS
	Task Schedule List Report	LIST
	Task Schedule Results Report	RESULTS
	Customize PM Report Formats	CREATE DELETE MODIFY
Workspace	Save to Server*	
	Revert To Saved	
	Select All	
	Select All Non-grouped Nodes	
	Unselect All	
	Create Group From Selections	
	Expand All Groups	
	Condense All Groups	
	Show User Name And Partition	
	Clear Working Node	
	Unzoom	
Session	User Login	
	Logoff	
Help	Help Table Of Contents	Help Topic

* Administrator privileged functions.
** This option appears if the X.50 subrate feature is enabled.
*** This option does not appear when the EMS-only options are turned on.

DND Forms: Summary of Menus And Forms

Overview

Table 2-4 lists menu selections starting at the highest level to the left and moving to the lowest level to the right. At the lowest level is typically a form. Nearly all forms include an **Action** field. The **Action** identifies the task you want to perform. This table summarizes the **Action**s available.

DND Forms Task Table

Table 2-4. DND Forms Task Table

Main Menu Option	Second Level	Action/Third Level
PROVISIONING	CIRCUIT	ACTIVATE MODIFY PEND DELETE DEACTIVATE ALTROUTE NORMALIZE COMBINE BROWSE ADDLEG DELLEG CHGRPATH
	TEST PORT	CREATE TP DIGROUP DELETE TP DIGROUP CREATE TEST PORT DELETE TEST PORT
	NPC	BROWSE CREATE DELETE REMOVE RESTORE MODIFY QUERY LOOPBACK

Table 2-4. DND Forms Task Table (Continued)

Main Menu Option	Second Level	Action/Third Level
PROVISIONING (Continued)	NPC	BROWSE CREATE DELETE REMOVE RESTORE MODIFY QUERY LOOPBACK
	RECONFIGURATION PLAN	CREATE DESTROY BOOT INSERT REMOVE CHANGE EXECUTE IDLE CHECK ABORT CLEAN
	AUTOMATIC RECONFIGURATION PLAN	CREATE DESTROY INSERT REMOVE CHANGE EXECUTE IDLE CHECK CLEAN ABORT
	ESTABLISHED DS0 CHANNELS[1]	ACTIVATE MODIFY DELETE DEACTIVATE BROWSE
	SUBRATE CROSS CONNECT[1]	ACTIVATE MODIFY DELETE DEACTIVATE BROWSE

Table 2-4. DND Forms Task Table (Continued)

Main Menu Option	Second Level	Action/Third Level
PROVISIONING (Continued)	NPC	BROWSE CREATE DELETE REMOVE RESTORE MODIFY QUERY LOOPBACK
	RECONFIGURATION PLAN	CREATE DESTROY BOOT INSERT REMOVE CHANGE EXECUTE IDLE CHECK ABORT CLEAN
	AUTOMATIC RECONFIGURATION PLAN	CREATE DESTROY INSERT REMOVE CHANGE EXECUTE IDLE CHECK CLEAN ABORT
	ESTABLISHED DS0 CHANNELS[1]	ACTIVATE MODIFY DELETE DEACTIVATE BROWSE
	SUBRATE CROSS CONNECT[1]	ACTIVATE MODIFY DELETE DEACTIVATE BROWSE

Table 2-4. DND Forms Task Table (Continued)

Main Menu Option	Second Level	Action/Third Level
PROVISIONING (Continued)	NPC ROLL	
	24-HOUR PERFORMANCE[2]	BROWSE RESET
SYSTEM ADMINISTRATION	LOGIN PORTS	RESTORE REMOVE
	X.25 LINK ADMINISTRATION	RESTORE REMOVE
	FRAME ADMINISTRATION	CREATE RESTORE BRESTORE REMOVE DELETE MODIFY CHGSITE
	NAME CHANGE	
	PRINTER ADMINISTRATION	ENABLE DISABLE LIST CANCEL LOGALL LOGALARMS STOPLOGGING
	SHUTDOWN	QUIT IMMEDIATE 1 MINUTE 5 MINUTE 10 MINUTE NO
	DATE AND TIME	
	SYNCHRONIZE FRAME DATE & TIME	

Table 2-4. DND Forms Task Table (Continued)

Main Menu Option	Second Level	Action/Third Level
DATABASE ADMINISTRATION	DATABASE AUDIT/SYNCHRONIZATION	ALARM SYNC CHANNEL AUDIT CHANNEL SYNC NPC AUDIT NPC SYNC UPLOAD ABORT
	BACKUP/RESTORE	DATABASE BACKUP/RESTORE (TAPE) LOG BACKUP/ RESTORE (TAPE) LOG BACKUP/ RESTORE (DISKETTE) REPORT FORMAT BACKUP/RESTORE (DISKETTE) FORMAT DISKETTE
	ENTER OUTAGE DATA	INSERT CHANGE DELETE DESTROY
TASK ADMINISTRATION	TASK MANAGEMENT	LIST DELETE
	PRINTER QUEUE STATUS	LIST CANCEL
USER ADMINISTRATION	USER MANAGEMENT	ADD CHANGE DELETE
	CHANGE PASSWORD	

Table 2-4. DND Forms Task Table (Continued)

Main Menu Option	Second Level	Action/Third Level
PASSTHROUGH	MULTIPLEXED PASSTHROUGH	
	PASSTHROUGH	
	FRAME COMMAND SCRIPT	EDIT DELETE EXECUTE ABORT DOSREAD DOSWRITE
PASSTHROUGH ABORT		
REPORT OPERATIONS	CIRCUITS	CIRCUIT CONNECTIONS CIRCUIT OPTIONS CIRCUIT INFORMATION CIRCUIT AVAILABILITY
	NPCS	NPC IDS NPC NUMBERS
	CHANNELS	CHANNEL USAGE
	ALTROUTES/PREEMPTIONS	ALTROUTED CIRCUITS PREEMPTED CIRCUITS
	OUTAGES	
	TEST PORT	TEST PORT STATUS TEST PORT PROVISIONING
	TEST ACCESS	
	FRAMES/LINKS	PROVISIONING LINK STATUS LINK CONNECTIVITY FRAME CONTROL

Table 2-4. DND Forms Task Table (Continued)

Main Menu Option	Second Level	Action/Third Level
REPORT OPERATIONS (Continued)	USER ADMINISTRATION	USER LOGINS
	NPC ALARMS	
	CIRCUIT ALARMS	
	ALARM LOG	
	AUDIT/SYNCHRONIZATION RESULTS	ALARM SYNC CHANNEL AUDIT CHANNEL SYNC NPC AUDIT NPC SYNC UPLOAD
	NPC ROLL RESULTS	
	ECHOED RESPONSE PROCESSING	CKT NPC TA
	TASK SCHEDULE LIST	
	TASK SCHEDULE RESULTS	
	LOST RESPONSE LOG	CIRCUIT NPC FRAME
	HISTORY LOG	SCREEN PRINTER DOS DISKETTE
	SCRIPT LOG	SCREEN PRINTER DOS DISKETTE
	DISPLAY LAST GENERATED REPORT	SCREEN PRINTER DOS DISKETTE
	EDIT CUSTOM REPORT FORMAT	CREATE DELETE MODIFY RENAME
	ALARM QUERY	

Table 2-4. DND Forms Task Table (Continued)

Main Menu Option	Second Level	Action/Third Level
REPORT OPERATIONS (Continued)	DISPLAY ALARM QUERY	SCREEN PRINTER DOS DISKETTE
	RECONFIGURATION SUB-MENU	RECONFIGURATION PLANS RECONFIGURATION PLANS ALTROUTE RECONFIGURATION PLAN RESULTS AUTO RECONFIGURATION PLAN RESULTS
	ESTABLISHED DS0 CHANNELS[1]	
	SUBRATE CIRCUITS [1]	
	COMMON EQUIPMENT ALARMS	
	24-HOUR PERFORMANCE[2]	
TEST ACCESS		MONITOR SPLIT HUB TERMINATE UNTERMINATE RELEASE LOOP CHLOOP CHUNLOOP
LOGOFF		

[1] This option appears if the X.50 subrate feature is enabled.
[2] This option appears if the 24-hour Performance Monitoring feature is enabled.

DND Screens and Form Navigation

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Background

Purpose

The purpose of this chapter is to familiarize users with the DND GUI and the DND Forms interface. Users will be able to recognize text, buttons, field names, and other relevant information relating to the DND GUI and the DND Forms interface.

Objectives

This chapter provides background information to help you perform the following:

DND GUI:

- Identify a network map
- Identify the alarm severity indicated by the color of icons and interties
- Use the mouse to click and drag network elements and End User icons across the DND Workspace
- Organize network elements into groups
- Navigate through GUI form fields using the mouse or tab key.

DND Forms:

- Navigate through the menus and forms
- Use the DND Forms function keys.

Related tasks

For related tasks for DND GUI, see the following General Tasks in Volume II:

- Replacing the DND GUI Workspace Background Image GT 3.1G
- Replacing the DND GUI Mini-Map Background Image GT 3.2G

Related information

For related information refer to the:

- *DACS II* and *DACS II ISX Operation and Maintenance Guide*
- *DACS II Network Director Installation Manual.*

DND GUI: The DND Main Window

Overview

The DND Main window is a Netscape browser window displaying the DND Workspace. The DND Workspace displays the network map, a collection of group icons, network element icons, End User icons, and interties illustrating the connections and elements that exist in the DACS network. The DND GUI 's straight-forward interface allows users to manipulate these network elements to the configuration of their DACS networks.

All DND tasks start from this window by:

1. Clicking the specified task button located in the DND Task Bar or clicking a network element icon
2. Selecting the appropriate, specific task which appears on the pull-down menu.

Background Picture

The DND Workspace displays the DACS network map on a background picture in .gif format.The image on the DND Workspace is a .gif file. This image can be changed to any .gif figure you choose.

Ideally, you should have two replacement images: one for the full-size Network Map and another for the mini-map. The replacement for the full-size Network Map should have the same dimensions as the original images. Otherwise, the size of the replacement image may affect or warp the size of the DND Workspace.

DND GUI: The DND Main Window (Continued)

Navigation Using the Mouse

While navigating through the DND Workspace or forms, the following terms are used throughout this manual to distinguish mouse functions from one another:

- **Select** or **Click** - quick press and release of the left mouse button.
- **Right-click** - press right mouse button. You may be required to hold down the right mouse button or quickly release it. For example, to access a pull-down menu from a map icon, on the PC, right-click and release; from a workstation, right-click and hold.
- **Left-click** - quick press and release of left mouse button.
- **Double-click** - two quick mouse clicks.
- **Control-click** - press and hold down the Control key and quickly press and release left mouse button.
- **Shift-click** - press and hold down the Shift key and quickly press and release left mouse button.
- **Drag** - **Click** on a icon and hold of the left mouse button, while sliding the mouse pointer across the screen. This will move the icon across the screen with the mouse.
- **Drop** - let go of the left mouse button after performing a **Drag**.
- **Enter** (information in a field) - place the mouse cursor in a field to type information.

Navigation Using the Tab Key

The General Tasks in this manual are written assuming you will use your mouse to navigate through the fields and buttons on the form. Alternatively, you can use the Tab key on your keyboard to move between fields and buttons.

The field or button that is active will be highlighted by a dotted rectangle around it (in the case of combo boxes and text fields, a slightly heavy rectangle will be shown on around the inner border of the field). If a text field is highlighted, you can type into the field. When a button is highlighted, you can press the RETURN key or the spacebar on your keyboard to activate it. For other fields, you will still need the mouse to perform selections.

DND GUI: The DND Main Window (Continued)

On-line Help

There are two types of on-line help:

1. The **Context-Sensitive** Help - On each form, when the cursor is clicked within a field, or the Tab key is used to move from field to field, a brief field description, or helpful tip, appears just above the form's Message field to aid users in completing the forms.
2. The **Content** Help - When the Help... button, located in the DND Menu Bar, is clicked, a table of contents will appear listing relevant on-line documents, including this manual. Clicking on the document names will reveal its help information.

DND Main Window Usage

The Netscape window used for the DND Main window should only be used for DND operations. If you need to use a Netscape window for another purpose, open a separate Netscape window to avoid being logged out of the DND Main window.

Additional Netscape Help

For additional assistance with Netscape, click *Help* located on the Netscape Menu bar to display a menu of help items.

DND GUI: The DND Main Window (Continued)

DND Main Window

Figure 3-1 displays the DND Main window and an example of a DND Network Map.

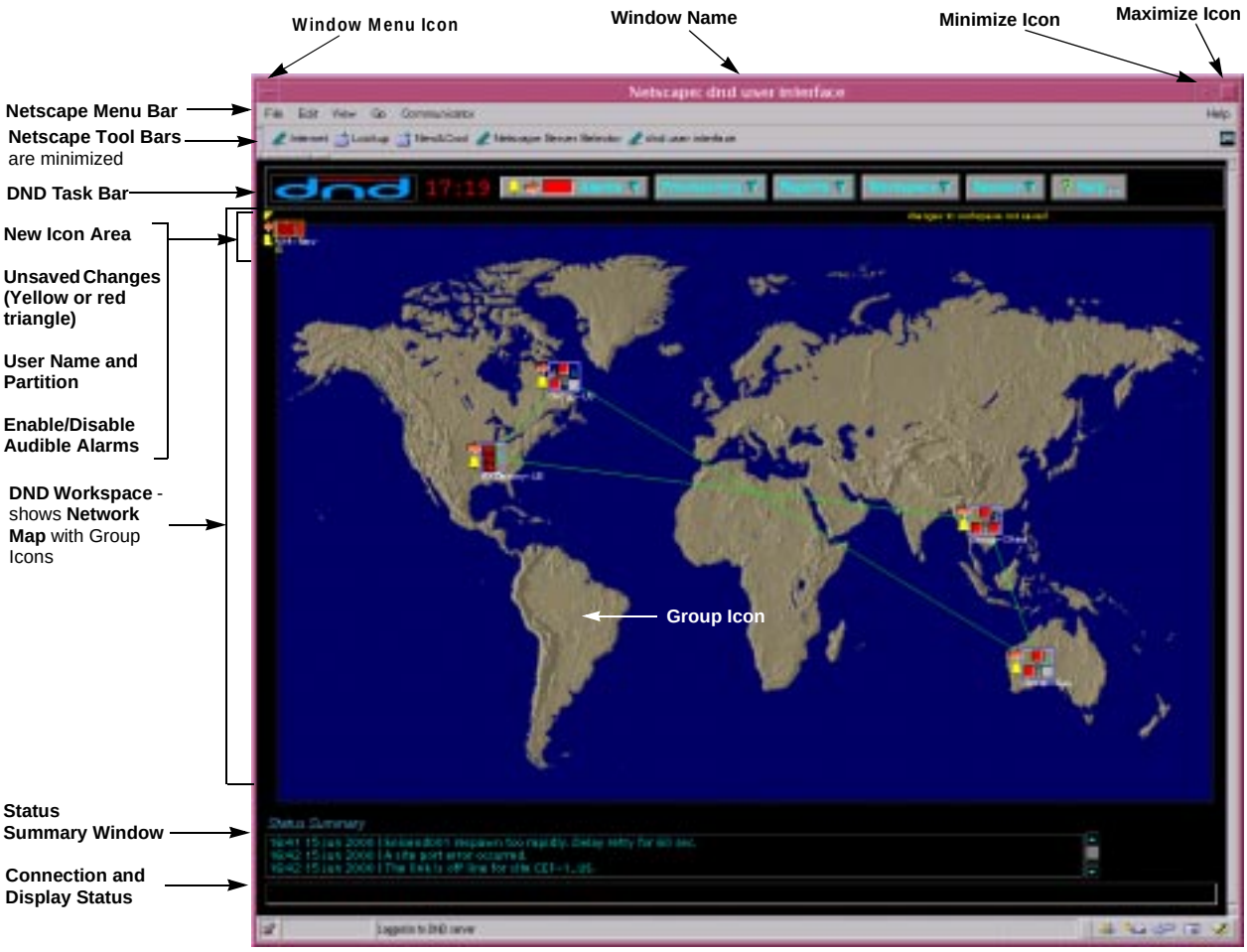


Figure 3-1. DND GUI: Main Window

NOTE:
The Window Menu Icon, Window Name, Minimize Icon, and Maximize Icon apply only to the recommended CDE. Use of OpenLook or any other window manager may change the window frame decoration.

DND GUI: Parts of the DND Main Window

Window Menu Icon

Click the Window Menu Icon to reveal a pop-up menu of actions for the window. Double-click this icon to close the window and exit the DND GUI.

Window Name

The title of the Netscape window. The Window Name also appears on every form and report display.

Minimize Icon

Click the Minimize Icon to minimize the window.

Maximize Icon

Use the Maximize Icon for the following:

- If the square icon is raised, click it to maximize the window to full screen
- If square icon is recessed, click it to make the window smaller

Netscape Menu Bars

The Netscape Menu bars are used for Netscape operations, but are, however, not necessary for DND activation. By default, these bars will appear minimized to conserve screen space. To display a tool bar, click the triangle of the minimized tool bar.

DND Task Bar



The DND Task Bar is composed of the DND logo, system time (24 hour clock), and system task buttons. The task buttons will be used to perform provisioning, report operation, and other DND GUI tasks.

DND GUI: Parts of the DND Main Window (Continued)

DND Logo



The DND logo acts as a processing indicator for the system. When a user logs on to the DND GUI, a red line will appear as part of the logo. The line indicates connectivity between the GUI (front end) and the DND server (back end). The connectivity line will flash a light from left (front end) to right (back end), indicating the connection is being activated.

Periodically, the server sends polling information (current alarm status and time of day information) to the DND GUI. This is indicated by a flash of light along the connectivity line from right to left.

When the DND is retrieving a form, a light flashes from left to right, indicating a request from the GUI to the server for the form. This is also indicated by the "Logged in to DND server" message that appears in the Main Status field on the DND GUI Main Window. Once the form has been retrieved, the bright light quickly flashes back from right to left, sending the form from the server to the GUI. The polling flashes from right to left will begin appearing again.

The logo display is an indicator of approximate message activity between the front-end and back-end, and is not necessarily synchronized with actual messages, i.e. message transactions may be completed before indicated on the logo display.

When a user is logged off, the red line disappears from the DND logo and the flashing light is discontinued.

DND GUI: Parts of the DND Main Window (Continued)

DND Task Bar Buttons

The descriptions of the DND Task Bar buttons are in Table 3-1.

Table 3-1. DND GUI: Task Bar Buttons

Button	Description
Alarms...	Displays the menu for selecting: ■ The NE Summary window ■ The Alarm Surveillance window ■ To clear all new alarm indicators ■ To clear all audible alarm indicators ■ To enable/disable the audible alarm.
Provisioning	Displays the menu for ALL provisioning-related tasks.
Reports	Displays the menu for ALL reports, except intertie reports.
Workspace	Displays the Workspace menu, which allows the user to manipulate groups and save Network Map changes to the server. **NOTE:** On DND systems where the network map display is disabled, Workspace does not appear.
Session	Displays the menu with choices for login and logoff.
Help...	Displays on-line content help for available on-line documentation.

DND GUI: Parts of the DND Main Window (Continued)

DND Workspace

The area of the DND Main window where the Network Map is created, modified, and monitored for alarm status. The DND Main window can contain the complete Network Map, as shown in Figure 3-1 or it can contain a zoomed-in view of a particular area of the Network Map as shown in Figure 3-2.

Network Map

The picture that displays the graphical representation of the DACS network. The network map can include icons that represent individual elements in the DACS network and icons that represent groups of elements.

There are map icons for each of the following: groups, DACS II, DACS II ISX, End User, intertie, DACS II AX, IMACS, AAC, PSAX, and Other-type nodes. The icons can be moved anywhere on the Network Map. The color of the interties and icons indicate alarm status. Each of these icons are described under "Map Icons."

New Icon Area/ Unsaved Changes

Area on the DND Workspace where a newly created icon initially appears. Drag and drop the icon to the appropriate place on the DND Workspace.

A yellow triangle appears in the top left corner of the Network Map if any changes have been made to the Workspace, but they have not been saved to the server. Also, the message *changes to workspace not saved* appears under the Workspace button. This triangle will turn red when workspace changes get saved by another user that might conflict with the unsaved changes in this workspace. A similar warning message indicating this will also appear under the Workspace button.

To save Workspace changes, click Workspace in the DND Task Bar, then select **Save to Server**. Only a user with administration privileges can **Save to Server**.

User Name and Partition

This area on the DND Workspace can show the User Name and Partition. To show this information, click Workspace in the DND Task Bar, then select **Show User Name and Partition**. By default, User Name and Partition are not shown.

NOTE:
This feature is not available on DND systems where the network map display is disabled.

DND GUI: Parts of the DND Main Window (Continued)

Enable/Disable Audible Alarms

In addition to using the User Administration form, a user can temporarily disable the audible alarm feature from the browser. To do this, click Alarms... in the DND Task Bar, then select **Disable Audible Alarm**. An audible alarm disabled notification appears on the DND Workspace. This action overrides the Audible Alarm enabled selection from the User Administration form.

To re-enable the audible alarm, click Alarms... in the DND Task Bar, then select **Enable Audible Alarm**. The disabled notification on the DND Workspace disappears.

Status Summary Window

The Status Summary Window displays all system status messages, audit/sync statistics, echoed response messages, error messages, etc.

Connection and Display Status Line

The Connection and Display Status Line displays the server connection and user interface status.

DND GUI: Zooming

Description

Zooming lets you focus on a section of the network map and enlarge it to the full-size of the Netscape window. When you use zooming, the complete Network Map is shown in a miniature-version in the lower right corner of the map. Figure 3-2 shows a zoomed-in view of the Network Map with a variety of map icons.

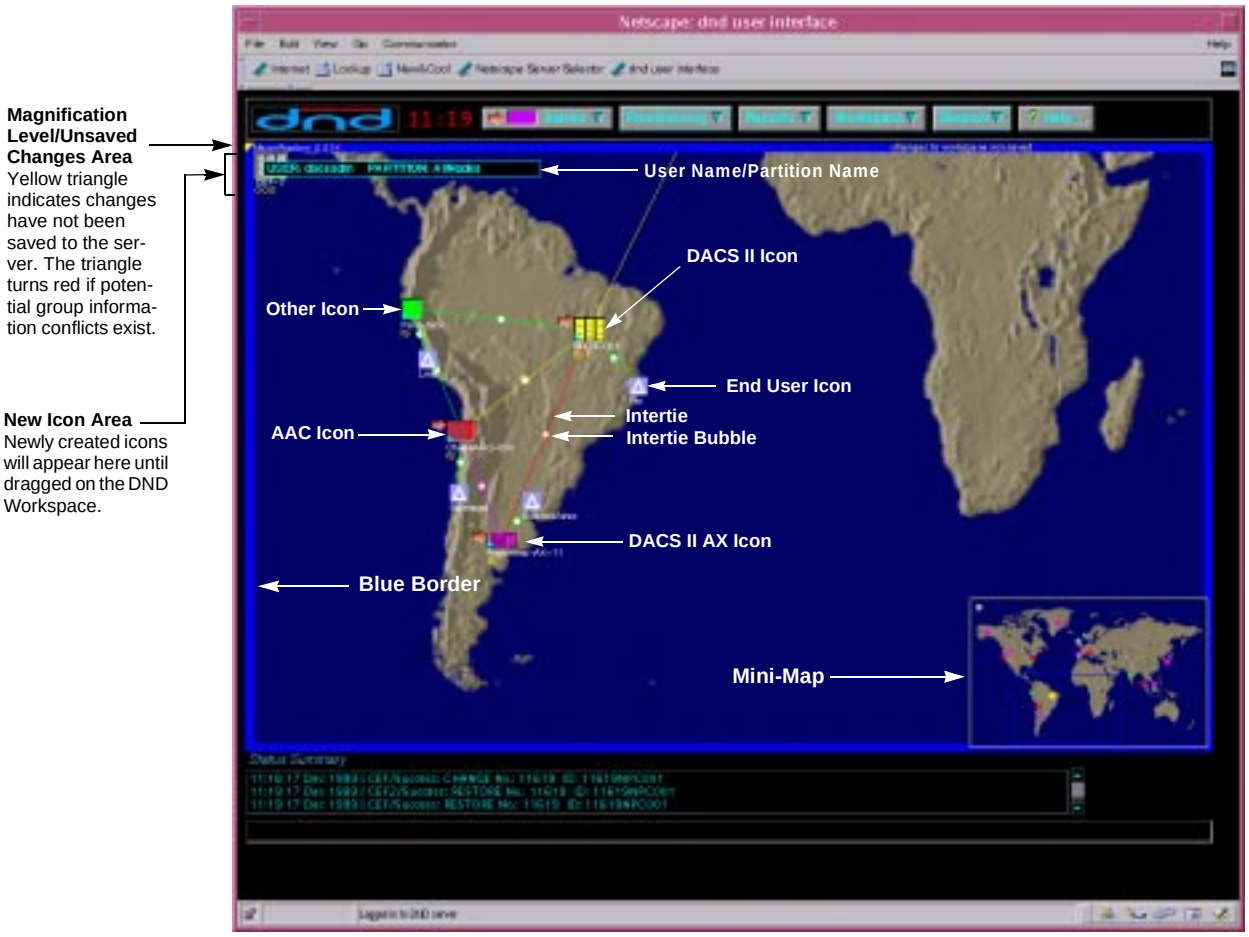


Figure 3-2. DND GUI: Zoomed View of Network Map

DND GUI: Zooming (Continued)

Zooming Actions

Table 3-2 describes the zooming and mini-map actions on the Network Map.

Table 3-2. DND GUI: Zooming and Mini-Map Actions

To:	Action:
Zoom in on an area of the Network Map	**Workstation**: Hold down right mouse button and drag diagonally. Release when outline appears around desired area. **PC**: Double-click either mouse button and drag diagonally. Release when outline appears around desired area. (Note: DND may constrain vertical or horizontal direction of outlined area.)
Unzoom and return to full-size Network Map	**Method 1**: Click Workspace in the DND Task Bar, then select **Unzoom**. **Method 2**: Right-click on an empty spot on the Network Map, then select **Unzoom** from the pop-up menu.
Move the mini-map	Hold down left mouse button and drag map to new position. The map remains in the new position for the remainder of your login session.
Change zoom area from the mini-map	From the mini-map, you can change the zoom area displayed in the Netscape window. Use same buttons as you use on the Network Map. **Workstation**: Hold down right mouse button and drag diagonally. Release when outline appears around desired area. **PC**: Double-click either mouse button and drag diagonally. Release when outline appears around desired area. (Note: DND may constrain vertical or horizontal direction of outlined area.)

DND GUI: Zooming (Continued)

Features of the Zoom View

When you zoom in on an area of the Network Map, the following features appear in the Netscape Window, as shown in Figure 3-2:

- Magnification Level - indicates the magnification level of the zoom.
- New Icon Area/Unsaved Changes - new nodes without an assigned map position appear in the top left corner of the zoom view. Drag and drop the icon to the appropriate place on the DND Workspace.
- A yellow triangle appears in this area if changes have been made to the Workspace, but have not been saved. Also, the message *changes to workspace not saved* appears under the Workspace button.

  If changes to group information occur on the server while other changes to group information are made locally, the triangle turns to red to indicate a potential conflict that can destroy another user's changes upon doing a **Save to Server**.

  To save Workspace changes, click Workspace in the DND Task Bar, then select **Save to Server**. Only a user with administration privileges can **Save to Server**.
- Blue border - displays around outer edge of zoomed view.
- Mini-map - displays a miniature-version of the complete Network Map. A blue box on the mini-map indicates the area that is being displayed in the zoom view.

Things to Keep in Mind

When you zoom in on an area of the Network Map:

- Try to locate the icons in the center of the zoom area. If an icon is at the edge of the area, it may not appear in the zoomed view.
- You can move icons anywhere within the zoomed view. You cannot move the icons outside of the zoomed view.
- If the zoomed view does not contain the icons you want, unzoom and try again, or select a new zoom area from the mini-map.
- When you log in to DND, the Network Map is always displayed full-size.
- If you want to refresh the map data with the last saved changes, select click Workspace in the DND Task Bar, then select **Revert to saved.**

DND GUI: Zooming (Continued)

Zooming and Grouping

When you zoom on an area of the Network Map that includes groups:

- If you are zooming on a group, the group may automatically expand in the zoomed view if the magnification level is equal or greater than the "Auto expand from zoom" setting in Group Properties. If the group does not appear at all in the zoomed view, you may want to change the Auto expand zoom Magnification setting. For details, see "Group Properties Form" on Page 3-44.
- If you manually expand a group, the group remains expanded regardless of the magnification level.

DND GUI: Working Node Selection

Working Node

As network maps grow and more groups are created, it becomes difficult to locate specific sites on the map. When you select a node on the map or on the NE SUMMARY window and choose *Set Working Node* option from a node's icon menu, a target locator displays on the Network Map around the group in which the site is located. It also effects the Provisioning... and Reports... buttons by reconfiguring their pull-down menus to display only those choices that apply to the selected node. These menus also reconfigure when you select a site from a popup list of sites on a form.

The Working Node feature is useful when performing many actions on a single node. When a GUI form is selected from the Provisioning or Reports pull-down menu, the Working Node is automatically set as the default site in the selected GUI form.

This locator will help you find the site selected from the node or NE SUMMARY window as you zoom and expand the groups and sub-groups within the locator target. A locator also appears on the zoom mini-map. To clear the target, select the *Clear Working Node* option from the Workspace pull-down menu.

(Continued on next page)

DND GUI: Working Node Selection (Continued)

Working Node (Continued)

Figure 3-3 below illustrates the Working Node indicator around a site in a zoomed Network Map.

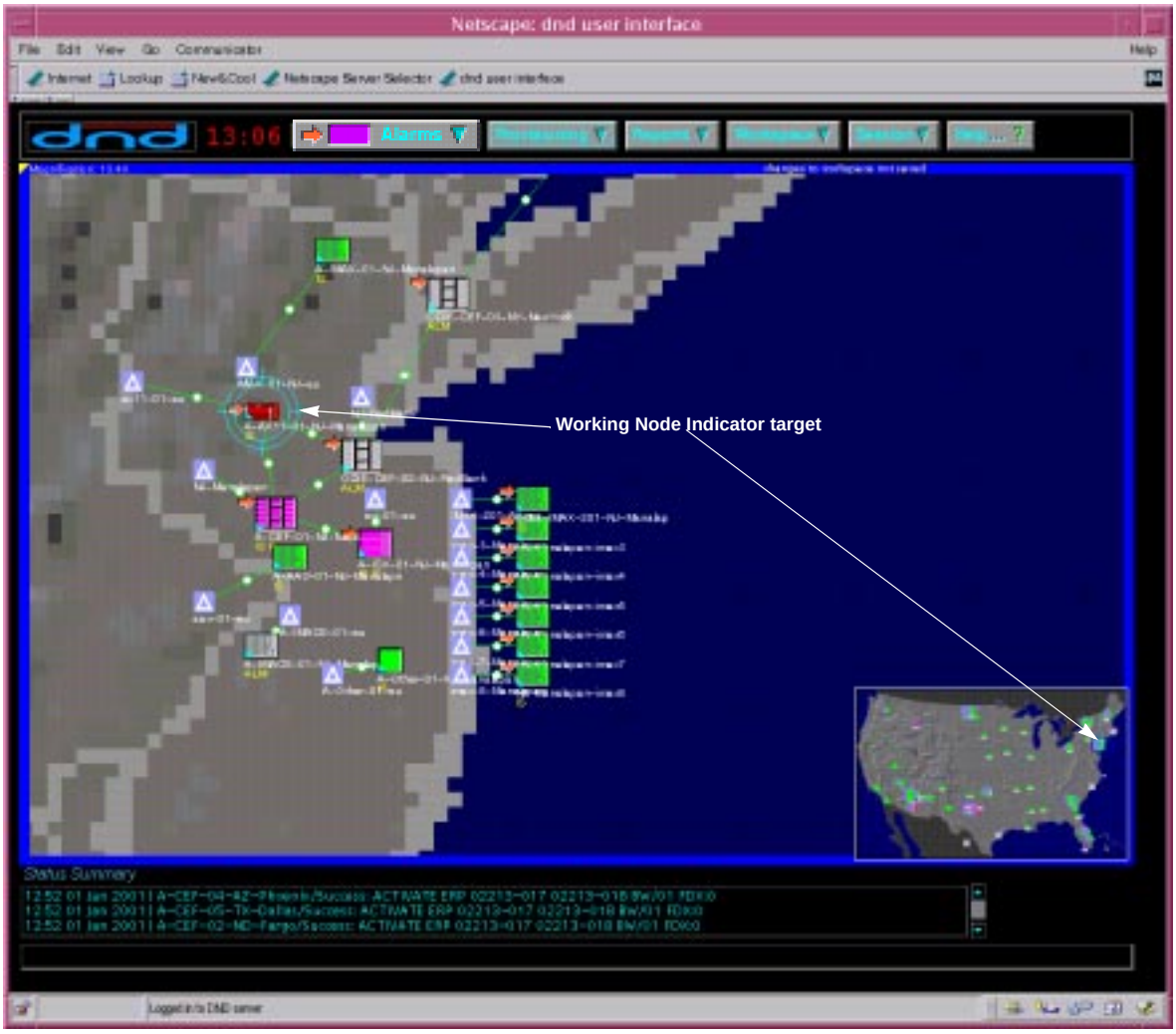


Figure 3-3. Working Node Indicator

DND GUI: Map Icons

Overview

Each of the map icons that can appear on the Network Map are described in the following sections.

Pull-down Menus from Map Icons

A pull-down menu is available from each map icon or an intertie node. To access these pull-down menu:

Table 3-3. DND GUI: Accessing Map Icon Pull-down Menus

From:	Action:
Workstation	Right-click and hold down the mouse button on the icon/ intertie, then select an option from the pull-down menu.
PC	Right-click and release the mouse button without moving the mouse, then select an option from the pull-down menu.

Unsaved Changes


Customer1

A blue border appears around a map icon when there have been changes made, such as map position or group information, but the changes have not been saved. To save these changes, click Workspace in the DND Task Bar, then select **Save to Server**. Only a user with administration privileges can **Save to Server**.

DND GUI: Map Icons (Continued)

Alarm Severity Color Scheme

The icon color indicates the system's highest alarm state for DACS II, DACS II ISX, DACS II AX, AAC/IMACS/PSAX and Other equipment. Refer to this table to determine the highest alarm severity for map icons.

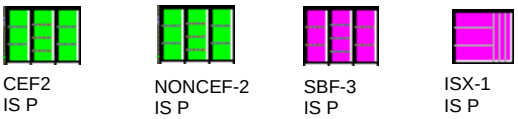
Table 3-4. DND GUI: Color Scheme for DACS Alarm Severity

Color	Alarm State
Green	No alarms present or informational alarms only.
Yellow	Highest alarm state is a Minor alarm
Red	Highest alarm state is a Major alarm
Magenta	Highest alarm state is a Critical alarm
Grey	The element is indicating Out-of-Service (OOS), Query (QRY), Error (ERR), or Alarm (ALM).

DND GUI: Map Icons (Continued)

DACS II and DACS II ISX Icons

The DACS II and DACS II ISX icons represent existing DACS systems grown and restored in the DND network. They include the following distinguishable icons for the DACS II and DACS II ISX.



NOTE:
All DACS II frames (CEF, Non-CEF, E/SBF) use the same icon.

Note that:

- Icons can be moved within the DND Workspace
- The icon will change to the color of the highest existing alarm severity detected on that frame.
- Underneath the icon is the DACS name (user-defined) and its DACS state.
- A blue triangle appears in the bottom left corner of the icon if the node is part of a group.

DACS II/DACS II ISX Alarm States

The DACS II and DACS II ISX states are described in Table 3-5.

Table 3-5. DND GUI: DACS II and DACS ISX Alarm State Descriptions

Alarm States	Description
IS P	In-Service, Primary
IS B	In-Service, Backup is "primary" line
OOS	Out-of-Service
AS	An Audit/Synch command is in progress
QRY	A Query command is in progress
ERR	Error - Provisioning error due to databases being out of sync
ALM	DACS in alarm

DND GUI: Map Icons (Continued)

DACS II and DACS II ISX Icon Menu

You can perform DACS II/DACS II ISX and other provisioning actions directly from a pull-down menu from the DACS icon. The pull-down menu has the following options:

Table 3-6. DACS II/DACS II ISX Icon Menu

If you select...	...Then DND will display...
Set Working Node	A target locator on the network map around the group in which a site is located.
Circuit Provisioning...	The CIRCUIT PROVISIONING form with the appropriate DACS II/DACS II ISX name automatically filled in.
NPC Provisioning...	The NPC PROVISIONING form with the appropriate DACS II/DACS II ISX name automatically filled in.
MMFG Provisioning...	The MMFG PROVISIONING form with the appropriate DACS II/DACS II ISX name automatically filled in.
Intertie Provisioning...	The INTERTIE PROVISIONING form with the appropriate DACS II/DACS II ISX name automatically filled in as SITE 1. **NOTE:** The Intertie Provisioning option is not available when Element Management only functions are enabled.
Database Audit/ Synchronization...	The DATABASE AUDIT/SYNCHRONIZATION form with the appropriate DACS II/DACS II ISX name automatically filled in.
Test Access...	The TEST ACCESS form with the appropriate DACS II/ DACS II ISX name automatically filled in.
NE Provisioning...	The NE PROVISIONING form with the appropriate DACS II/DACS II ISX name and information automatically filled in.

If you select...	...Then DND will display...
End User Provisioning...	The END USER PROVISIONING form with the appropriate DACS II/DACS II ISX name automatically filled in. **NOTE:** The End User Provisioning option is not available when Element Management only functions are enabled.
DACS Message...	The DACS MESSAGE form with the appropriate DACS II/DACS II ISX name.
Telnet...	A telnet window will appear, connecting the DND to the selected DACS. **NOTE:** The telnet window will only appear if the DACS is provisioned for telnet communications.
DACS Alarm Log Report...	An Alarm Log Report for the DACS II/DACS II ISX.
Equipment View	The Equipment View for the DACS II/DACS II ISX.
Condense <parent group name>	If the SNMP is part of a group, this option is listed. It allows you to condense the group.
Remove from all groups	If the SNMP is part of a group, this option is listed. This option allows you to remove the DACS from its group, making it not a member of any group.

DND GUI: Map Icons (Continued)

DACS II AX Icons

Beginning with DND GUI Release 5.0.1/DND Forms Release 10.0.1, DACS II AX Release 9.03 equipment (and beyond) is fully serviced by the DND. As a result, the DND now provides circuit and port provisioning and permits database audit syncs to be performed for newer AX equipment. Termination Naming and Termination Circuit Mapping functions are not supported in the newer AXs.

Older AX equipment (pre-AX Release 9.03) is still serviced by the DND as it has been in prior releases. As a result, the provisioning and audit sync functionality is not available for older AXs, however Termination Naming and Termination Circuit Mapping functions are supported.

The following DACS II AX icons represent new and old AX systems grown and restored in the DND network.



The icons look the same for both equipment types however each type contains different state and menu data.

Note that:

- Icons can be moved within the DND Workspace
- The icon will change to the color of the highest existing alarm severity detected on that frame.
- Underneath the icon is the DACS II AX name (user-defined) and its state, i.e., IS for In Service.
- A blue triangle appears in the bottom left corner of the icon if the node is part of a group.

The remainder of this section shows Alarm States and the Menu structure for new AX equipment. Information on the older AX equipment is located in the next section, along with a description of the AAC/IMACS/PSAX and Other nodes.

DND GUI: Map Icons (Continued)

DACS II AX State

The DACS II AX states are described in Table 3-5.

Table 3-7. DND GUI: DACS II AX Alarm State Descriptions

DACS II AX State	Description
IS	In-Service
OOS	Out-of-Service
AS	An Audit/Synch command is in progress
QRY	A Query command is in progress
ERR	Error - Provisioning error due to databases being out of sync
ALM	DACS II AX in alarm

DACS II AX Icon Menu

You can perform DACS II AX and other provisioning actions directly from a pull-down menu from the AX icon. The pull-down menu has the following options:

Table 3-8. DACS II AX Icon Menu

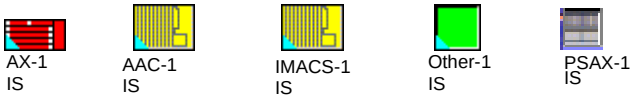
If you select...	...Then DND will display...
Set Working Node	A target locator on the network map around the group in which a site is located.
Circuit Provisioning...	The DACS II AX CIRCUIT PROVISIONING form with the appropriate DACS II AX name automatically filled in.
Port Provisioning...	The DACS II AX PORT PROVISIONING form with the appropriate DACS II AX name automatically filled in.
Intertie Provisioning...	The INTERTIE PROVISIONING form with the appropriate DACS II AX name automatically filled in. **NOTE:** The Intertie Provisioning option is not available when Element Management only functions are enabled.
Database Audit/ Synchronization...	The DACS II AX DATABASE AUDIT/ SYNCHRONIZATION form with the appropriate DACS II AX name automatically filled in.

If you select...	...Then DND will display...
NE Provisioning...	The NE PROVISIONING form with the appropriate DACS II AX node name and information automatically filled in.
End User Provisioning...	The END USER PROVISIONING form with the appropriate DACS II AX node name automatically filled in. **NOTE:** The End User Provisioning option is not available when Element Management only functions are enabled.
Termination Name...	The TERMINATION NAME form with the appropriate DACS II AX node name automatically filled in.
Termination Circuit Mapping...	The TERMINATION CIRCUIT MAPPING form with the appropriate DACS II AX node name automatically filled in.
Telnet...	From a workstation, DND will display the login prompt for the AX node. Once you successfully log in, you can use the device's native user interface for management. From a PC, DND will display instructions for using the telnet application available from your PC to access the AX node.
Alarm Log Report...	An Alarm Log Report for the AX node.
Equipment View	The Equipment View for the AX/AAC/IMACS or PSAX node. Applies only to older DACS II AX, IMACS, AAC, and PSAX. Does not apply to Other-type nodes.
Condense <parent group name>	If the AX equipment is part of a group, this option is listed. It allows you to condense the group.
Remove from all groups	If the AX equipment is part of a group, this option is listed. This option allows you to remove the DACS from its group, making it not a member of any group.

DND GUI: Map Icons (Continued)

DACS II AX/AAC/ IMACS/PSAX/ Other Icons

Each DACS II AX/AAC/IMACS/PSAX and Other node is represented by an icon. Each of these nodes have a user-defined name. The icon color indicates the highest alarm state. A blue triangle appears in the bottom left corner of the icon if the node is part of a group.



NOTE:
The IMACS and AAC SNMP nodes use the same icon.

DACS II AX/AAC/ IMACS/PSAX/ Other State

The DACS II AX/AAC/IMACS/PSAX/Other states are described in Table 3-9.

Table 3-9. DND GUI: DACS II AX/AAC/IMACS/PSAX/Other Alarm State Descriptions

DACS II AX/AAC/ IMACS/PSAX/Other States	Description
IS	In-Service
OOS	Out-of-Service
QRY	Query - DND is querying the DACS II AX/AAC/ IMACS/PSAX or Other type node for release and type information.
ERR	Error - indicates that the DACS II AX/AAC/IMACS/ PSAX or Other type node has an unsupported release or is an unsupported type.
ALM	Alarm - indicates a loss of communication.

DND GUI: Map Icons (Continued)

DACS II AX/AAC/ IMACS/PSAX/ Other Node Icon Menu

You can obtain a menu of actions directly from the DACS II AX/AAC/IMACS/PSAX or Other type node icon. The pull-down menu contains the following choices:

Table 3-10. DACS II AX/AAC/IMACS/PSAX/Other Icon Menu

If you select...	...Then DND will display...
Set Working Node	A target locator on the network map around the group in which a site is located.
Intertie Provisioning...	The INTERTIE PROVISIONING form with the appropriate DACS II AX/AAC/IMACS/PSAX or Other node name automatically filled in. **NOTE:** The Intertie Provisioning option is not available when Element Management only functions are enabled.
NE Provisioning...	The NE PROVISIONING form with the appropriate DACS II AX/AAC/IMACS/PSAX or Other node name and information automatically filled in.
End User Provisioning...	The END USER PROVISIONING form with the appropriate DACS II AX/AAC/IMACS/PSAX or Other node name automatically filled in. **NOTE:** The End User Provisioning option is not available when Element Management only functions are enabled.
Termination Name...	The TERMINATION NAME form with the appropriate DACS II AX/AAC/IMACS/PSAX or Other node name automatically filled in.
Termination Circuit Mapping...	The TERMINATION CIRCUIT MAPPING form with the appropriate DACS II AX/AAC/IMACS/PSAX or Other node name automatically filled in.

If you select...	...Then DND will display...
Telnet ...	From a workstation, DND will display the login prompt for the DACS II AX/AAC/IMACS/PSAX or Other node. Once you successfully log in, you can use the device's native user interface for management. From a PC, DND will display instructions for using the telnet application available from your PC to access the DACS II AX/AAC/IMACS/PSAX or Other node.
Alarm Log Report...	An Alarm Log Report for the DACS II AX/AAC/IMACS/ PSAX or Other node.
Equipment View	The Equipment View for the DACS II AX/AAC/IMACS or PSAX node. Applies only to older DACS II DACS II AX, IMACS, AAC, and PSAX. Does not apply to Other-type nodes.
Condense <parent group name>	If the DACS II AX/AAC/IMACS/PSAX or Other equipment is part of a group, this option is listed. It allows you to condense the group.
Remove from all groups	If the DACS II AX/AAC/IMACS/PSAX or Other equipment is part of a group, this option is listed. This option allows you to remove the DACS from its group, making it not a member of any group.

DND GUI: Map Icons (Continued)

Intertie

Interties represent connections, or trunk lines, between network elements. NPCs or ports are provisioned on either side of the intertie to define the physical connection, however, NPCs cannot be provisioned on the side of the intertie connected to an End User.



Direct Intertie Indirect Intertie

NOTE:
Interties are not displayed when Element Management only functions are enabled.

Intertie Alarm Severity Color Scheme

Interties change color if at least one NPC or port connected to it is in alarm. The color reflects the highest alarm state of an NPC or port on the intertie. The color scheme is described in Table 3-11.

Table 3-11. DND GUI: Intertie Color Scheme

Color	State of Intertie
Green	No alarms on any NPCs on the intertie.
Yellow	Highest alarm state of an NPC on the intertie is a Minor alarm.
Red	Highest alarm state of an NPC on the intertie is a Major alarm.
Magenta	Highest alarm state of an NPC on the intertie is a Critical alarm.

Intertie Bubble

Each intertie has an intertie bubble (circular or square) located in the center. A circular bubble indicates a direct trunk connection, and the square bubble indicates an indirect connection (e.g. SONET ring, etc.).The bubble is used to select the intertie with the mouse pointer to reveal the intertie's pull-down menu.

DND GUI: Map Icons (Continued)

Intertie Bubble Menu

You can obtain a menu of actions directly from the intertie. The pull-down menu contains the following choices:

If you select...	...Then DND will display...
Intertie Provisioning	The INTERTIE PROVISIONING form.
Intertie Port Report	The INTERTIE PORT REPORT for the selected intertie.
Intertie Alarm Report	The INTERTIE ALARM REPORT for the selected intertie.

Creating an Intertie

There are several ways to access the INTERTIE PROVISIONING form:

- Select the Provisioning task bar button, then select Intertie Provisioning
- Right-click a map icon, then select Intertie Provisioning from the menu
- Press Shift left-click on a map icon, then drag the intertie line to the element to be connected and release. The Intertie Provisioning form appears with data already filled in.

Identifying NPCs and Ports in an Intertie

On a DACS II or DACS II ISX, NPCs are assigned to interties. NPCs are assigned by NPC ID, extended number, or hierarchical number.

On an AAC/IMACS or a DACS II AX, equipment ports are assigned to interties. The naming scheme is provided by the equipment.

Table 3-12. Intertie Port Numbering Scheme for DACS II AX, AAC/IMACS or Other Nodes

Equipment	Slot	Port
DACS II AX	1-11	1-8
AAC/IMACS	P 1-4 W 1-4 U 1-8	P 1-132 W 1-8 U 1-8
Other	1-99	1-999

DND GUI: Map Icons (Continued)

End User Icons



Customer1

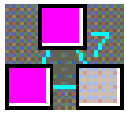
End User icons represents End User equipment. All End Users have the same color and design. The status of End User equipment cannot be monitored by the DND.

For additional information, refer to *Chapter 6, End User Provisioning*.

NOTE:
End Users are not displayed when Element Management only functions are enabled.

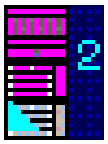
DND GUI: Map Icons (Continued)

Group Icons



GROUP-NJ

Standard Group Icon



DEST_AX-NJ

Destiny AX Icon

Group icons represent a collection of network elements (NE) and sub-groups.

There are two types of group icons represented on the Network Map: the standard group icon and the Destiny AX icon.

Standard Group

A standard group can contain any number of DACS II, DACS II ISX, DACS II AX, IMACS, AAC, PSAX, and Other-type SNMP nodes. A standard group also contains the end-users and interties associated with an NE.

Destiny AX

A Destiny AX is a single entity, but treated as a group by the DND. A Destiny AX contains exactly one PSAX network element and at least one DACS II AX element (up to 7 DACS II AX network elements in total). When a PSAX is grouped with a DACS II AX, the Destiny AX icon is displayed.

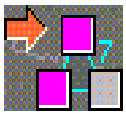
Group Icon Information

The group icon contains several pieces of information:

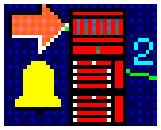
- Number - The number next to the group icon represents the number of network elements and sub-groups in the group. Each sub-group is counted as one. End-users and interties are not counted.
- Name - Underneath the icon is the group name. A group is automatically assigned a name, but the user can create a new name for a group.
- Alarm Severity - The icon color indicates the group's highest alarm state and the existence of any out-of-service nodes.
- Member - If a blue triangle appears in the bottom left corner of the group icon, the group is a member of another group.

DND GUI: Map Icons (Continued)

Group Alarm Severity Color Scheme



New Alarm Indicator



New Alarm Indicator with Audible Alarm

When a new alarm occurs in a group, the New Alarm Indicator arrow appears next to the group icon.

If the audible alarm feature is enabled, the Audible Alarm Indicator (bell) will appear under the New Alarm Indicator. For details, see "New Alarm Indicator" later on page 3-51.

The network element icon color indicates the group's highest alarm state and the existence of any out-of-service nodes. The color scheme is described in Table 3-13.

Table 3-13. DND GUI: Group Color Scheme

Color	State of Group
Green	No alarms or only informational alarms in the group.
Yellow	Highest alarm state of the group is a Minor alarm
Red	Highest alarm state of the group is a Major alarm
Magenta	Highest alarm state of the group is a Critical alarm
Grey	Indicates that the group contains one or more out-of-service nodes.

DND GUI: Map Icons (Continued)

Group Icon Menu

You can obtain a menu of actions directly from the group icon. The pull-down menu provides the following choices:

If you select...	...Then...
Group properties	The Group Properties form. From this form you can assign a name to the group and set a magnification level for the auto-expand feature. When you zoom in on the group, the group will automatically expand when the specified magnification level is reached.
Expand	The group expands so that the elements in the group are displayed. Sub-groups must be expanded separately.
Delete	The group is deleted. The elements in the group are not deleted.
Condense <parent group name>	If the group is member of another group, this option is listed. It allows you to condense the parent group.
Remove from all groups	If the group is part of another group, this option is listed. This option allows you to remove the group from all groups that it is in.

For additional information, refer to "DND GUI: Grouping."

DND GUI: Grouping

Definition

Grouping allows you to represent a group of network elements with a single group icon. Grouping can be used to improve the appearance of the Network Map and to create a sensible hierarchy of network elements. Figure 3-4 shows how several map icons can be represented by a single group icon on the Network Map.

A blue triangle in the bottom left corner of a map icon indicates that the node is a member of a group.

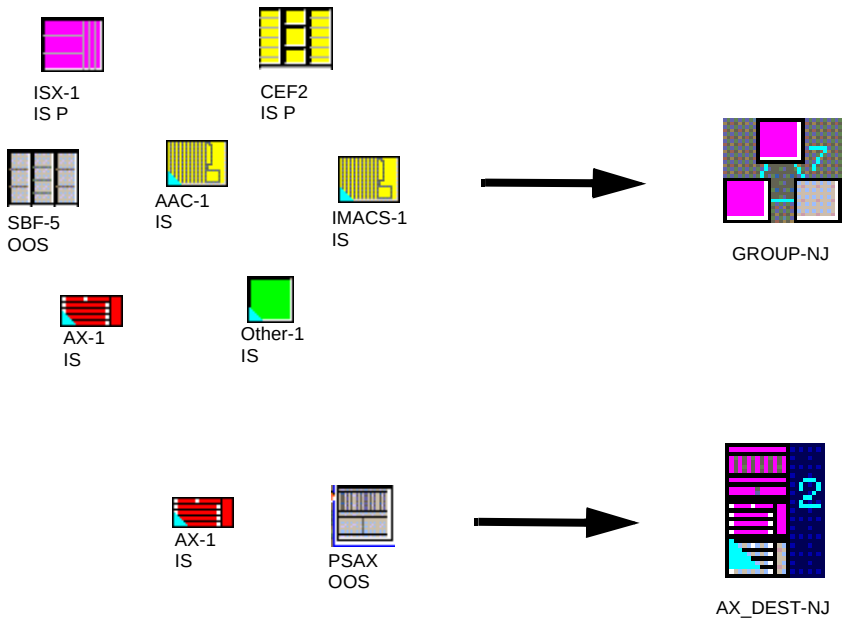


Figure 3-4. DND GUI: Nodes can be grouped

DND GUI: Grouping (Continued)

Why use grouping?

DND can support 60 DACS frames and 256 AAC/IMACS/PSAX or Other nodes. Each of these nodes is represented on the Network Map by an icon. In addition, there are icons for End Users and interties. The Network Map can become overcrowded with icons. Grouping allows you to represent many network elements with a single icon.

When you organize network elements into groups, you have the flexibility of looking at the network from two levels: a group level or an individual network element level.

What is in a group?

A standard group can contain any number of network elements: DACS II, DACS II ISX, DACS II AX, IMACS, AAC, PSAX, Other-type SNMP nodes and any associated end-users. A group can also contain sub-groups.

The Destiny AX is a single entity, but considered a group, which contains only the following nodes:

- exactly one PSAX
- At least one (up to 7) DACS II AX nodes.

DND GUI: Grouping (Continued)

Rules for Grouping

There are a few rules that apply to groups:

- A group can consist of one or more elements that do not belong to any other groups.
- A group can contain individual network elements and sub-groups. Each sub-group must belong to the same "parent" group.

  For example, in Figure 3-5, Group A_1 and A_2 are sub-groups contained in parent Group A. NE_1 is a network element that belongs to Group A and no other group. A_3 is a sub-group contained in A_2.

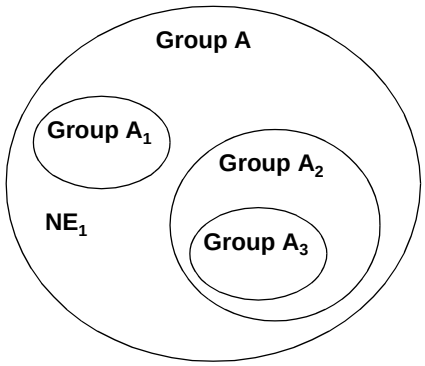


Figure 3-5. DND GUI: Groups and Subgroups

This type of hierarchy is helpful when organizing network elements geographically, as shown in Figure 3-6.

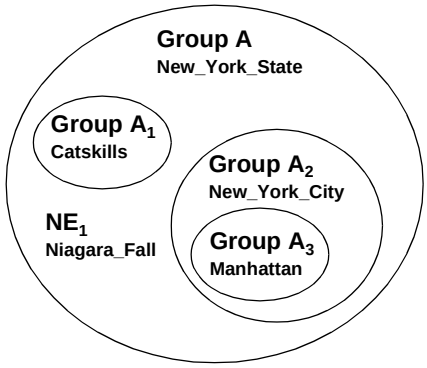


Figure 3-6. DND GUI: New York Example of Groups and Subgroups

(Continued on next page)

DND GUI: Grouping (Continued)

Rules for Grouping (Continued)

- Each sub-group counts as one node. For example, Group A shown in Figure 3-6 contains three nodes: Groups A_1, A_2, and NE_1. A_2 contains one node: A_3.
- A group member cannot be shared between two "parent" groups. In Figure 3-7, Group AB is invalid.

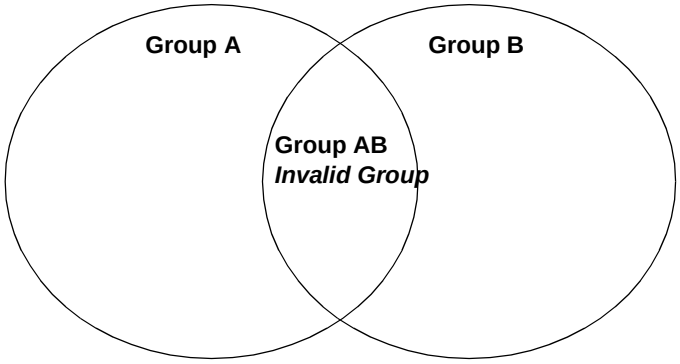


Figure 3-7. DND GUI: Two Parent Groups Not Allowed

- Each sub-group counts as one node in a group.
- An element can be added to an existing group if it belongs to the same parent group.
- An element can be added to an existing group if the element does not already belong to another parent group.
- Newly created groups always appear condensed. For all users, all groups are shown condensed upon initial login.
- If multiple users try to save changes to grouping information, users receive the following warning:

  WARNING: You are about to save group information that might conflict with changes made by another user.

  It is recommended that a single user makes changes to grouping information, to avoid overwriting information. The last changes saved are the changes that take effect.

DND GUI: Grouping (Continued)

Grouping and Partitioning

Grouping allows you to represent a collection of nodes with a single icon. Partitioning allows you to restrict user access to nodes. If a user is assigned a partition which includes at least one node in a group, the user will see the group icon on the Network Map. The user will only be able to view and administer nodes in the user's partition.

Group Properties Form

To display the Group properties form:

- From a workstation, right-click and hold the mouse button on the group icon to display a pull-down menu, then select **Group properties**.
- From a PC, right-click and release the mouse button on the group icon, then select **Group properties**.

The **Group properties** option allows you to modify the attributes of a group. The Group Properties form displays, as shown in Figure 3-8.



Figure 3-8. DND GUI: Group Properties Form

DND GUI: Grouping (Continued)

Field Descriptions

The table below describes the fields and field values on the Group Properties form:

Table 3-14. DND GUI: Group Properties Form Field Descriptions

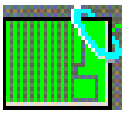
Field Name	Description
Group Name	Displays the name currently assigned to the group. When a group is created, it is automatically assigned a unique name.
New Group Name (optional)	(Text field) To rename a group, enter a name in this field. Spaces are not allowed.
Auto expand from zoom?	(Options field) Check this option if you want the group to automatically expand when a specified magnification level is reached.
Auto expand zoom Magnification	(Text field) Enter the magnification level. For example, enter 2 to specify two times original size.

Modifying Group Properties

If more than one user is modifying group properties at the same time, there is a possibility of potential conflict. After the first user performs a **Save to Server** operation, then the other users are warned that their changes may overwrite the data already saved on the server by another user.

It is recommended that a single user makes changes to grouping information, to avoid overwriting information. The last changes saved are the changes that take effect.

Selecting and Deselecting Nodes when creating groups



IMACS-1

When you select a node to be included in a group, a ring or halo appears in the top right corner of the icon.

To select a node to be included in a group, press Control left-click.

To deselect a selected node, press Control left-click again.

DND GUI: Grouping (Continued)

Grouping Actions

Table 3-15 summarizes the grouping actions.

Table 3-15. DND GUI: Grouping Actions

Task	Required Action
To create a group	1. Select nodes to be included in the group one of the following ways: ■ To individually select each node to be included in the group, press Control left-click on each node. ■ To select all nodes, select the Workspace task bar button, then select **Select all**. ■ To select all nodes that are not in a group, select the Workspace task bar button, then select **Select all non-grouped nodes.** 2. Select the Workspace task bar button, then select **Create group from selection**. The new group icon appears in the center of the selected nodes with a white border on it. This border indicates that the new group information has not been saved to the server. 3. To save the changes made, select the Workspace task bar button, then select **Save to server**.
To add a member to an existing group	1. Press Control left-click on the network element. Drag and drop in group (release the left mouse button) when the circle appears around the target group. 2. To save the changes made, select the Workspace task bar button, then select **Save to server**.
To de-select all selected nodes when creating groups	Select the Workspace task bar button, then select **Unselect All**. This removes the halos from the node icons.
To de-select individual nodes when creating groups	Press Control left-click on the node. This removes the halo from the node icon.

Table 3-15. DND GUI: Grouping Actions (Continued)

Task	Required Action
To remove a node from all groups	1. Display pull-down menu from group icon: ■ For PC, right-click and release the mouse button. ■ For workstation, right-click and hold down the mouse button. 2. Select **Remove from all groups**. 3. To save the changes to the Workspace, select the Workspace task bar button, then select **Save to server**.
To expand a group	1. Display pull-down menu from group icon: ■ For PC, right-click and release the mouse button. ■ For workstation, right-click and hold down the mouse button. 2. Select **Expand**.
To expand all groups	Select the Workspace task bar button, then select **Expand all groups**.

Table 3-15. DND GUI: Grouping Actions (Continued)

Task	Required Action
To condense a group	1. Display pull-down menu from group icon: ■ For PC, right-click and release the mouse button. ■ For workstation, right-click and hold down the mouse button. 2. Select **Condense <group name>**.
To condense all groups	Select the Workspace task bar button, then select **Condense all groups**.
To delete a group	1. Display pull-down menu from group icon: ■ For PC, right-click and release the mouse button. ■ For workstation, right-click and hold down the mouse button. 2. Select **Delete**. **NOTE:** The members formerly contained in the deleted group are not members of any group, even if the deleted group was itself a member of a group.

NOTE:
All groups are shown condensed upon initial login.

DND GUI: DND GUI Forms

Overview

In this section, you will be introduced to the form conventions used in DND GUI.

DND GUI Sample Form

Figure 3-9 illustrates the parts of a typical DND GUI form.

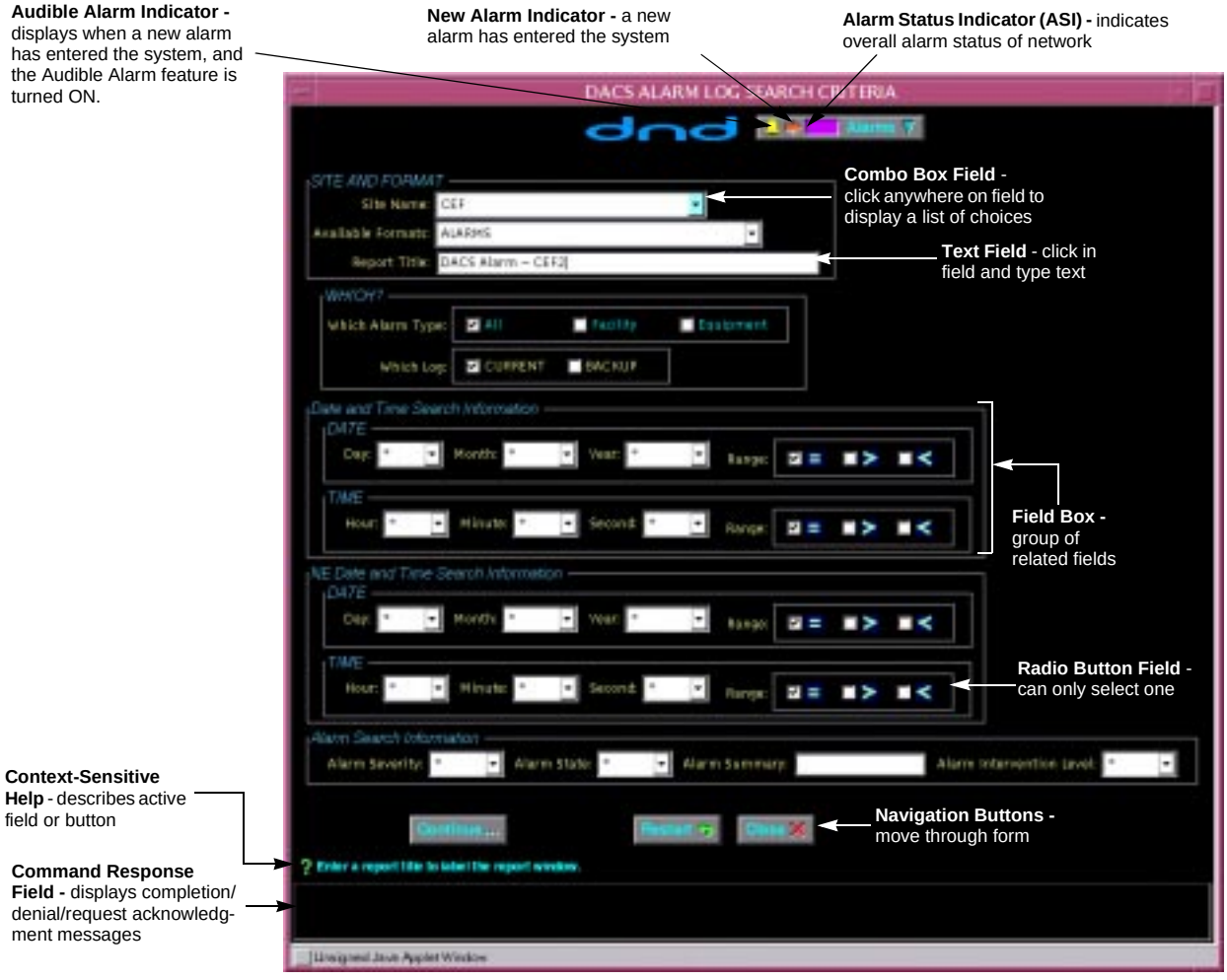


Figure 3-9. DND GUI: Sample DND GUI Form

DND GUI: Parts of a Form

Alarm Status Indicator (ASI)

The Alarm Status Indicator (ASI) shows the overall alarm status of the network. This will appear at the top of every DND GUI form.

ASIs appear also on Equipment View subassemblies (for a DACS II), indicating the overall alarm status for a particular subassembly. On the Equipment View of individual circuit packs, the ASIs appear as "LEDs."

NOTE:
The ASI does not appear on DND forms when the network map is disabled.

New Alarm Indicator

The New Alarm Indicator is a red arrow which indicates that a new alarm has occurred somewhere in the network. The New Alarm Indicator appears on the top of every DND GUI form, and on the Alarms... button in the DND Task Bar. The New Alarm Indicator can also appear to the upper left of a network element icon or group icon on the Network Map. The New Alarm Indicator can also appear to the upper left of a network element icon in the NE Summary window.

An alarm is no longer considered new when it has been displayed in a report retrieved from the Alarm Summary window. After all new alarms have been viewed in this manner, the red arrow disappears until more new alarms occur.

When a New Alarm Indicator appears with a network element icon on either the Network Map or the NE Summary window, you can left-click on it to obtain the Alarm Log Report for all new alarms.

When a New Alarm Indicator appears to the upper left of a group icon on the Network Map, right-click on the arrow and hold the mouse button to obtain a menu containing all elements of that group which contain new alarms. While holding down the mouse button, you can select one of the elements from the menu and obtain an alarm log report for all new alarms.

DND GUI: Parts of a Form (Continued)

Audible Alarm Indicator

When the audible alarm feature is set and there are new alarms, the chosen sound will play at the specified interval as provisioned using the USER ADMINISTRATION form. The sound will continue to play until the NE Summary Alarm Log Report has been viewed (unless the Audible Alarm feature is manually disabled).

The Audible Alarm Indicator is a bell-shaped figure beside the network element icon (under the red arrow) in the Network Map, in the NE Summary display, and on the Alarms... button in the DND Task Bar. The audible alarm indicator will be displayed beside a group icon if any of its contained elements has an audible alarm indicator.

The audible alarm feature is enabled and customized via the USER ADMINISTRATION form per individual user. In addition, when the feature is enabled via the form, it can be temporarily disabled and re-enabled via pull-down selection from the DND Task Bar.

Box; Field Box

A Field Box is a collection of related fields, i.e., The **Control Options** box, indicated by a thin border drawn around the related fields, usually with a caption in the top left corner.

DND GUI: Parts of a Form (Continued)

Combo Box Field

A Combo Box field is a field with a down arrowhead located to the far right. Clicking anywhere on the field will display a pull-down dialog window containing the choices for that field.

The field automatically contains a default value. To change the field entry, select a choice from the pull-down list. Only ONE choice can be selected.

Multiselect Combo Box Field



A Multiselect Combo Box field is a combo box which allows you to select more than one entry. By default, all entries are selected in a multiselect combo box.

For example, a multiselect combo box appears on the NE PROVISIONING form allowing you to select user partitions for a network element.

To select entries in a multiselect combo box:

- To select a single entry, click on it. Previously selected entries are deselected.
- To select subsequent non-consecutive entries, press Control-click on each entry. To deselect an individual entry, press Control-click again.
- To select a single range of entries, click on the first entry, then press Shift-click on the last entry.
- To select a subsequent range of entries, Control-click on the first entry, then drag to the last entry or press Shift-click on the last entry.

You can use the SPACEBAR instead of a mouse click in any of the above actions.

To scroll through the entries in a multiselect combo box, use the scroll bars at the side of the box or the up and down arrow keys on your keyboard.

Type the first character of an entry to display and select the first matching entry from the list of entries.

Text Field

A field where the user can type in text. Select the field to make it active and begin typing desired information into the field.

DND GUI: Parts of a Form (Continued)

Radio Button Field

A Radio Button Field is an on/off button field that appears as a group of checkboxes. Click once to select/turn on a choice (a check appears). You can only select ONE of the choices from a Radio button field.

Checkbox Field

A Checkbox Field is an on/off button field. Click once to select/turn on a choice (an "**X**" appears in the field), and click again to deselect the choice. You can select as many choices as are available in the field.

Navigation Buttons

The Navigation buttons are used to navigate through the form, execute commands, and close the form.

Table 3-16 describes the key navigation buttons found on various forms.

Table 3-16. DND GUI: Key Navigation Buttons on GUI Forms

Button	Description
Continue... 	Continue... moves the user forward through the DND GUI form, retaining all previously selected and entered information on the form. As the form transitions, the following message appears in the **Command Response** field: *"Request sent to server, please stand by"* During form transition, pressing a button will have no effect until the transition is fully complete. Field defaults are displayed as you move forward. If mandatory fields have incorrect, insufficient, or no data, a denial message will appear in the **Command Response** field and forward movement is terminated.
Close 	Close exits the form. If Close is clicked in the middle of an action, all selected and entered data is lost.

(Continued on next page)

DND GUI: Parts of a Form (Continued)

Navigation Buttons, Continued

Table 3-16. DND GUI: Key Navigation Buttons on GUI Forms, Continued

Part	Function
Execute 	When Execute is clicked, the command on the form is sent to DND to perform the action. When processing is completed on the specified action: ■ If data entered is error-free, the new data is entered into the DND and the completion message is displayed in the **Command Response** field, or... ■ If any of the data is incorrect, a denial message is displayed in the **Command Response** field. The new status of the system will be updated on the network map.
Back 	Back moves the user one transition stage backward. All previously selected and entered information is retained on the form. Clicking Back continuously will move the user backward one stage at a time until the initial form window appears. Back disappears when the initial stage of the form is reached.
Restart 	Restart returns the form back to its initial state. All previously entered and selected data is lost.
New Action 	New Action appears on Provisioning forms only. It is displayed in the **What's Next?** box AFTER an **Action** has been executed. New Action provides a means to perform the next logical **Action**, retaining all previously selected and entered information on the form.
Start 	When Start is clicked, the action on the form is initiated.

DND GUI: Parts of a Form (Continued)

Context-Sensitive Help

The Context-Sensitive Help provides a brief description of the active field or button. Help is displayed if it is defined for a particular field or button and the form object (field or button) accepts input focus (is active). Input focus is moved by either clicking on a form object or tabbing through the form objects.

Command Response Field

The **Command Response** field will contain the following sample messages:

- Immediately after clicking Execute, the following message will appear in the **Command Response** field:

  Request sent to server, please stand by.

  Wait for the DND to complete its processing.

- When a command is processed successfully by the DND, the completion message displays in this field.



- When the command can not be processed, this field becomes red and displays an appropriate denial message.



- If a command is being processed in the background, the following message appears in the **Command Response** field:

  The command will be executed in the background.

(Continued on next page)

DND GUI: Parts of a Form (Continued)

Command Response Field, Continued

- If a command times out, usually DND has timed out waiting for a response from the network element. The following message appears in the **Command Response** field:

  The browser interface failed waiting for a completion response from the system. The command (job number <n>) may still be in progress and complete later.

  If the command does complete later, then a message appears in the **Status** line in the browser:

  An unexpected message or a completion message to a previous command which timed out has been received by this browser (job number <n>).

DND GUI: Navigating through Forms

Form Limitations on the PC

On a PC, you may have up to four DND GUI forms displayed on the screen at one time. (The NE Summary window, login screen, or equipment views are not considered forms.) If you have too many forms displayed, this message is displayed:

> *You have reached a system limit for forms - please close an existing Provisioning or Reports form and try again.*

On a workstation, there is no system limit on the number of forms displayed.

The Expansion of Forms

The forms are designed to walk you through each stage of the form, expanding as needed as the information is filled into it. Clicking Continue... moves the user to the next stage of the form if the information has been correctly supplied.

The expansion of the form depends on the complexity of the action performed and varies between different forms. For example, creating an NPC requires more stages and intermediate processes than creating an intertie. By the same token, the actions within the same form can require a different number of stages. For instance, creating a DACS requires more stages and intermediate processes than modifying a DACS.

Modifying Information on a Form

Most forms transition through several sections before a complete action is ready to be executed. Transitions are effected by clicking Continue if the information already entered is acceptable to the DND. Once Continue is clicked, all previously completed fields will appear in read-only mode. These fields cannot be changed unless you click Back "n" times until you reach the section of the form you want to edit. Once you have made your changes, click Continue "n" times to reach the section of the form where you left off. The information on the form will be preserved.

DND GUI: Navigating through Forms (Continued)

Executing an Action

By entering data through the form, you set up an action to be performed on a DACS (or whichever database(s) is selected). The DND will not allow you to perform an improperly timed or ill-prepared operation, so it incorporates a number of consistency checks after clicking Execute, and in some cases, when moving between form stages. Wait for the DND to complete this process before proceeding with another **Action**.

DND will execute the command immediately or in the background (i.e., Audit/ Synchronization **Actions**). If the command is executed immediately, the form is frozen until the system returns a response. If the command is executed in the background, then the form is available to perform another **Action**.

DND GUI: Navigating through Forms (Continued)

Form Expansion Example

The following set of screens illustrate the expansion of the *CREATE* **Action** for the END USER PROVISIONING form.

There are four transition stages to the expansion form. Most forms begin similarly to this one. Press Continue... to progress to the next stage.



Figure 3-10. DND GUI: Stage 1, Select Action and Element Type

(Continued on next page)

DND GUI: Navigating through Forms (Continued)

Form Expansion Example, Continued

The number of these stages varies depending on complexity of form and action.



Figure 3-11. DND GUI: Stage 2, Enter Information

(Continued on next page)

DND GUI: Navigating through Forms (Continued)

Form Expansion Example, Continued

The appearance of the Execute button indicates that all of the necessary information is entered, and the DND is ready to process this action.



Figure 3-12. DND GUI: Stage 3, Review Entered Information; Execute Action

(Continued on next page)

DND GUI: Navigating through Forms (Continued)

Form Expansion Example, Continued

Each provisioning form provides New Action navigation button(s) to direct you to the next logical action for the current form. The Report forms do not provide this feature.



Figure 3-13. DND GUI: Stage 4, Action Completed; Perform Next Action

DND GUI: Navigating through Forms (Continued)

Selecting a What's Next Option

The What's Next options help users choose the next logical **Action** after the current **Action** is executed. Most provisioning forms offer a What's Next box displaying special buttons to guide users to the next **Action**, which may or may not be on the same provisioning form.

Most General Tasks will have a What's Next step at the end of its task. These What's Next options will be similar for all the General Tasks in the same chapter.

Displaying Provisioning Forms

All General Tasks in the manual assume you will display a provisioning form by clicking Provisioning form the DND Task Bar. You can also display provisioning forms by right-clicking on a DACS icon (or the Intertie Bubble for the INTERTIE PROVISIONING form) and selecting the desired provisioning form from the pull-down menu.

If you right-click on the desired icon or intertie bubble, the DND will display some of the provisioning forms for you with the information of the particular NE/intertie. This can save you a few keystrokes and mouse clicks.

DND GUI: Control Options Box on DACS Provisioning Forms

Description

Located on some DACS provisioning forms, the Control Options box is a group of checkbox fields used for specifying the following command information:

- The Reconcile Mode
- The Scheduling Options Mode

The Reconcile Mode

The **Reconcile Mode** determines the database(s) in which to store the new information generated by the current **Action**. The **Reconcile Mode** choices are as follows:

- **DND and DACS** - (default) Updates both the DACS and DND databases
- **DND only** - Updates only the DND (local) database
- **DACS only** - Updates only the DACS (facility) database

Ideally, the DACS and DND databases should be kept consistent, however, there may exist situations where you would only want to change the DACS or DND databases individually. For example, if you are installing the DND at a site where NPCs have already been provisioned, you can perform NPC Provisioning **Actions** (Chapter 8, DACS II, DACS II ISX NPC Provisioning) and specify the **DND only** option, provisioning those NPCs in the DND database as well.

DND GUI: Control Options Box on DACS Provisioning Forms (Continued)

The Scheduling Mode

The **Scheduling Mode** (sometimes called the **Execution Mode**) determines when an **Action** is executed. The Scheduling Mode choices are as follows:

- **Immediate** - (default) Performs the current Action immediately after pressing Execute.
- **Schedule** - Performs the current Action at the date and time specified.

When **Schedule** is selected, a Scheduling Options box appears on the form



Figure 3-14. DND GUI: The Control Options Box: with *SCHEDULE* selected

DND GUI: Control Options Box (Continued)

Scheduling Options Field Descriptions

Table 3-17 describes the fields and values in SCHEDULING OPTIONS:

Table 3-17. DND GUI: Scheduling Options Field Descriptions

Field	Description
DATE	(Combo box) The date of the first scheduled execution. The fields are: **Day** - day of the **Month** (1 through 31) **Month** - month in the **Year** (Jan through Dec) **Year** - The year (1990 through 2037) The default is the current date and time.
TIME	(Combo box) The time of the first scheduled execution. The fields are: **Hour** - The hour on a 24 hour clock (00 through 23) **Minute** - The minute (00 through 59)
Number of times	(Text field) Two numerical digits. A value specifying the number of times the task is to execute. (default=01). The value 00 obtains indefinitely repeated execution.
Interval	(Text field) The number of **Scale** units between successive executions of the **Action**. (01 through 99)
Scale	(Combo box) The type of units in which the **Interval** is expressed. The choices are: **Minutes** - increments of **Interval** minutes **Hours** - increments of **Interval** hours **Days** - increments of **Interval** days

DND Forms: Starting DND Forms

Starting DND Forms

Refer to tasks GT 2.11U and GT 2.12U.

Display Console Window

Open a DND Console window and keep it open at all times while DND is in operation. If resource problems occur, an error message displays in the DND Console window. To open the Console Window, select *Programs* from the Workspace Menu, then select *Console*.

DND Forms Main Menu

When you start DND Forms, the DND Main Menu displays, as shown in Figure 3-15. The DND Main Menu provides access to the submenus and forms you use to administer DND.

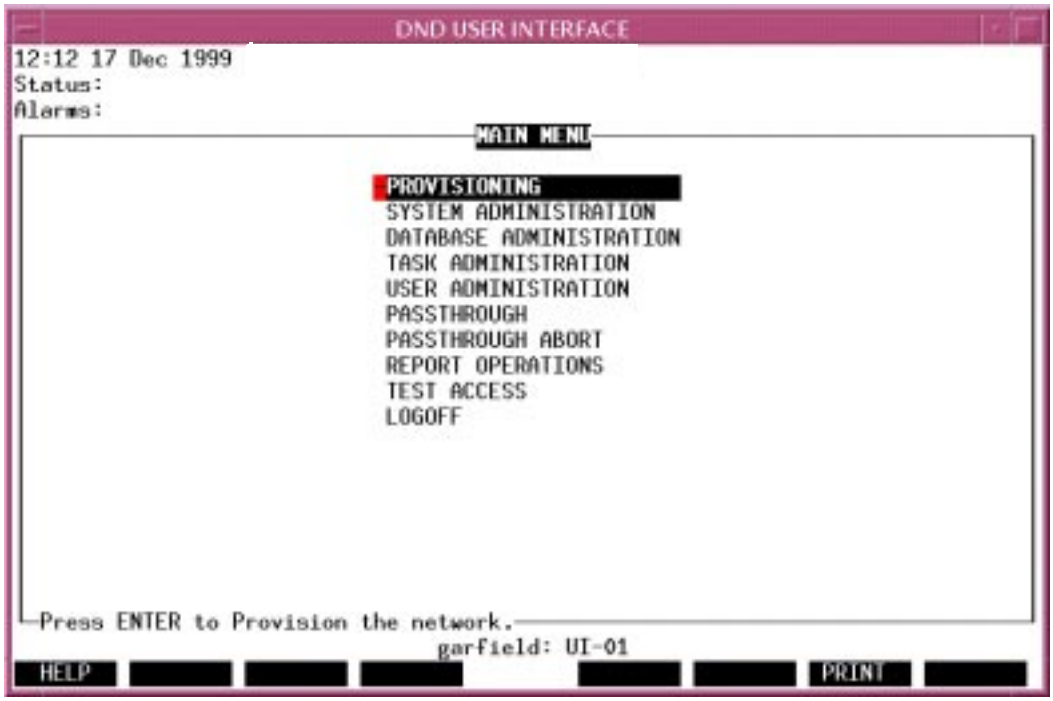


Figure 3-15. DND Forms: DND Main Menu

DND Forms: Navigating DND Menus

Selecting Options from a DND Menu

To select an option from any of the DND menus and submenus, use either of the following methods:

- Use the arrow keys to locate the cursor on your selection, then press Enter.
- Type the first letter of your choice. If more than one option begins with the same letter, type the first several letters to match just that option.

  For example, since three options begin with the letter P, type PR to select PROVISIONING. Use Ctrl + x to clear the field of existing entries before making a new entry (does not apply to vt220).

For a complete list of menu control keystrokes, refer to Table 3-18.

Table 3-18. DND Forms: DND Menu Control Keystrokes

Keystrokes	Function
^	Return to the MAIN MENU.
?	Pop-up Help menu for current item.
Enter Return Ctrl + j Ctrl + m	Select an item from the menu.
Ctrl + a	Get an alarm report.
Ctrl + b Pg Dn	Scroll down a page.
Ctrl + d	Scroll menu down a line.
Ctrl + c	Return to the MAIN MENU from a second level menu; log the user off from the MAIN MENU level.

Table 3-18. DND Forms: DND Menu Control Keystrokes (Continued)

Keystrokes	Function
Ctrl + n Ctrl + i ↓	Move to the next item.
Ctrl + f Pg Up	Scroll up a page.
Ctrl + u	Scroll menu up a line.
Ctrl + h	Erase the last character in the pattern matching buffer.
Ctrl + o	Output the screen to the printer.
Ctrl + p ↑	Move to the previous item. *When connected to the DND using the X.25 network, pressing Ctrl + p will disconnect you from the network. Use the ↑ key to move to a previous item.*
Ctrl + w	Refresh the screen.
Ctrl + x	Clear the pattern matching buffer.
Ctrl + z	Move to the previous pattern match.

NOTE:
The pattern matching buffer holds keystrokes as you type them. For example, typing p places "p" in the pattern matching buffer. Ctrl + z moves to the next menu selection beginning with p. Ctrl + x and Ctrl + h clear the p.

DND Forms: The DND Forms

Sample Form

The DND menus lead to the DND forms. On the forms, you enter values in fields and select function keys to complete an operation. Figure 3-16 displays a sample DND Forms screen.

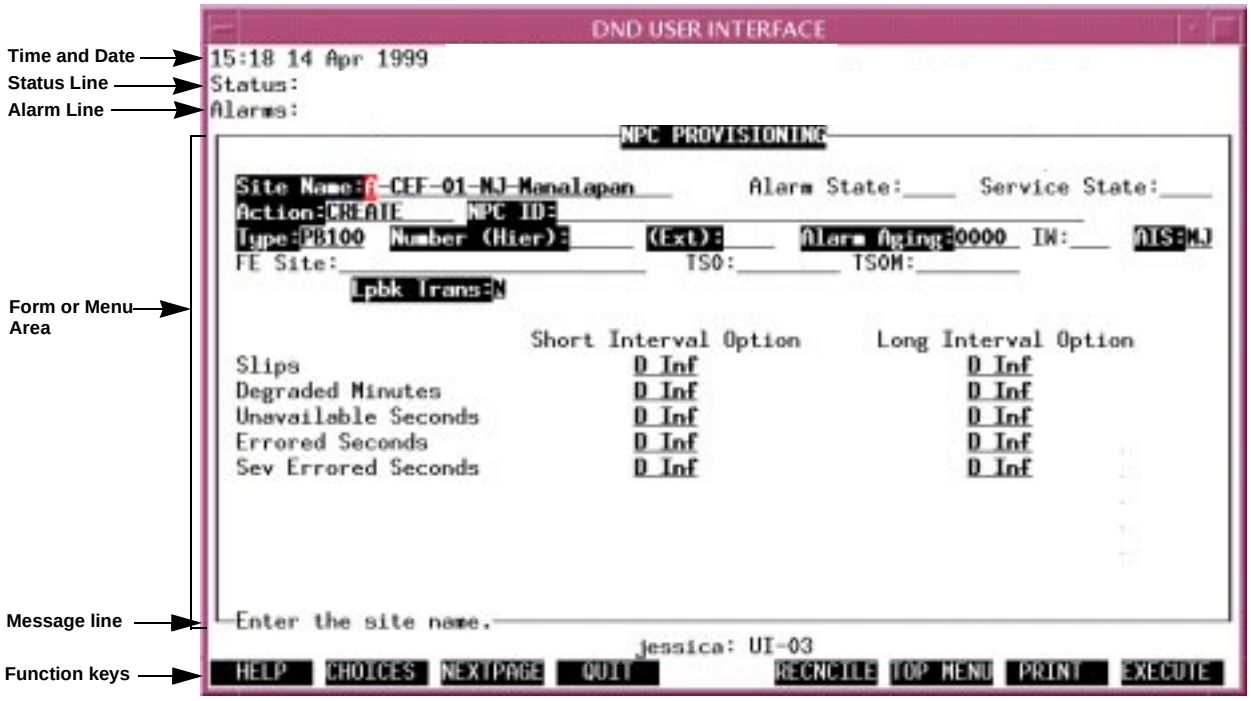


Figure 3-16. DND Forms: Sample DND Form

DND Forms: The DND Forms (Continued)

Parts of the DND Forms

The parts of the DND form are:

- **Time and Date line**: Supplies the current time, date and DND software release number.
- **Status line**: Contains the most recent message about DND status. For example, when you enter passthrough mode on a SNIDER link, a message appears that passthrough is in progress for that DACS. This status line also provides the status of background processes, such as preplanned reconfigurations and report generation. As new status messages occur, old ones are replaced.
- **Alarm line**: Shows unacknowledged DACS alarms from any supported DACS that have occurred since user login. Press Ctrl + a to display a report of the most recent alarms for the chosen DACS and clear the alarm indication from the alarm line. For more information, see *Chapter 27, Fault Management and Alarm Surveillance*.
- **Form or menu area**: Displays the DND menu or form.
- **Message line**: Displays a one-line text prompt, an error message, or the completion status of the last command you requested.
- **Function keys**: Contains the labels for the function keys in effect for the screen displayed. Also called soft keys.
- **Host name and UI number:** Displays the host name of the workstation and a user interface session number (**UI-00** to **UI-15**). This number is used to identify the user commands and print jobs associated with a user interface session.

NOTE:
The host name and UI number display when the terminal is set to display 25 lines (24 "terminal" lines and one separate line for function keys). If the host name and UI number do not appear on your terminal, check the terminal settings.

DND Forms: Navigating through the DND Forms

Entering Data on DND Forms

To enter data into a field on a DND form, type your entry and press Enter.

If the entry is in the correct format for that field, the cursor automatically moves to the next user-entry field.

If the entry is not in the correct format for that field, an error message is displayed with a request to re-enter the information. To remove the contents of the field and start over, type Ctrl + x (not supported for vt220). Once the information in the field is correct, the cursor advances to the next field.

Tab (does not apply to vt220) can be used to move forward between fields that can be modified.

Insert and Overlay Typing Modes

By default, when the cursor enters a field, INSERT typing mode is in effect. Each keystroke appears to the left and the cursor character with characters to the right are moved to the right. To switch to OVERLAY typing mode, press Esc (not available on vt220).

Esc switches between INSERT and OVERLAY typing modes. Whenever you move to a new field, the typing mode automatically switches to INSERT mode.

Mandatory Fields

Some fields require an entry. For example, **NPC ID** in an NPC PROVISIONING form. You are not allowed to continue filling out the form until the field contains a valid value.

DND Forms: Navigating through the DND Forms (Continued)

Form Control Keystrokes

For a complete list of the allowed keystrokes for forms and passthrough, refer to the following two tables.

Table 3-19. DND Forms: Form Control Keystrokes

Keystrokes	Function
Enter Ctrl + m	Enter the information in the field.
Ctrl + a	Get an alarm report.
Ctrl + b	Move down a page in the CHOICES (F2) menu list.
Ctrl + d	Move down one choice in the CHOICES (F2) menu list.
Ctrl + e	Move to a position just to the right of the last input character of the field.
Ctrl + f	Move up a page in the CHOICES (F2) menu list.
Ctrl + g	Delete the word at the cursor.
Ctrl + h	Backspace and erase a character.

Table 3-19. DND Forms: Form Control Keystrokes (Continued)

Keystrokes	Function
Ctrl + i Tab Ctrl + m	Request new line. For single-line fields, move to the next field. For multi-line fields, operation depends on whether insert or overlay editing mode is in effect at the time of the request. For insert mode, a cursor at the beginning of a field or on the last line moves to the next field. Otherwise, the text on the current line, to the cursor's right, moves to the next line. The cursor itself moves to the beginning of the next line. For overlay mode, a cursor at the beginning of a field moves to the next field. If the cursor is on the last line of the field, all data from the cursor position to the end of the line is erased, and then the cursor moves to the next field. Otherwise, all data from the cursor position to the end of the line is erased, and the cursor moves to the beginning of the new line.
Ctrl + k	Clear to the end of the field.
Ctrl + l	Move left to a field.
Ctrl + n	Move to the next field.
Ctrl + o	Output the screen to the printer.
Ctrl + p ↑	Move to the previous field. *When connected to the DND using the X.25 network, pressing* Ctrl + p *will disconnect you from the network. Use the* ↑ *key to move to a previous item.*
Ctrl + r	Move right to a row.
Ctrl + u	Move up one choice in the CHOICES (F2) menu list.
Ctrl + q	Move to the next line of a multiline field.
Ctrl + s	Move to the previous line of a multiline field.

Table 3-19. DND Forms: Form Control Keystrokes (Continued)

Keystrokes	Function
Ctrl + t	Move to the previous word in the field.
Ctrl + v	Delete a character.
Ctrl + w	Refresh the screen.
Ctrl + x	Clear the field.
Ctrl + y	Delete the line at the cursor.
Ctrl + z	Move to the previous listed choice.
Esc	Toggle the editing mode between insert and overlay. In insert mode (the default), new text is inserted at the current character position, while existing text gets moved to the right. In overlay mode, entered text overlays (replaces) existing text in the field. In either mode, the cursor advances one character position as you enter each character.

Table 3-20. DND Forms: Passthrough Control Keystrokes

Keystrokes	Function	Application
Home	Position the cursor at the input line.	Full PASSTHROUGH only
Ctrl + a	Get an alarm report.	All
Ctrl + b	Scroll back a page.	Full only
Ctrl d	Scroll forward a line.	Full only
Ctrl + e	EXIT from passthrough	Full only
Ctrl + f	Scroll forward a page.	Full only
Ctrl + h	Backspace and erase a character.	All

Table 3-20. DND Forms: Passthrough Control Keystrokes (Continued)

Keystrokes	Function	Application
Ctrl + l	Move to the last page of the buffer.	Full only
Ctrl + o	Output the screen to the printer.	All
Ctrl + t	Move to the top of the buffer.	Full only
Ctrl u	Scroll back a line.	Full only

DND Forms: Function Keys

Function Keys on Your Keyboard

The function keys F1 through F8 across the top of the DND keyboard perform the DND functions that are shown along the bottom of each DND screen. The functions may change from screen to screen. For a DEC vt220, the function keys are F7 through F14.

NOTE:
If the VT220 function keys F7 through F14 must be changed to other keys, refer to the System V curses and terminfo section of the SunOS documentation.

NOTE:
The function keys are under software control and cannot be programmed by the user. However, some terminals permit user function keys in addition to system function keys. In that case, DND uses the system function keys and users can still program the user function keys. See your terminal user's guide for instructions on how to program the user function keys.

DND Forms: Function Keys (Continued)

Description of Function Keys

Table 3-21 describes the function keys that commonly appear on DND forms.

Table 3-21. DND Forms: Function Keys

Keystrokes	Function
CHOICES	Displays a pop-up window showing the list of choices available for this field.
EXECUTE	Sends the requested operation to the DND for processing. In most cases, a pop-up window is displayed asking you if "you are sure?" about the command you are about to execute.
FIRST	Moves the selection highlighting to the first list item.
HELP	Displays a brief help message for the field where the cursor is located.
LAST	Moves the selection highlighting to the last list item.
NEXT	Moves the selection highlighting to the next list item.
PREVIOUS	Moves the selection highlighting to the previous list item.
PRINT	Prints the current screen.
RECNCILE	Provides the following choices about updating the database after selecting a provisioning **Action**: *Site and Local* - Updates DACS and DND database. (default) *Site Only* - Updates only the DACS database. *Local Only* - Updates only the DND database.
QUIT	Returns to the previous menu.
TOP MENU	Returns to the MAIN MENU.

Unimplemented Function Keys

If you press a blank function key or If a key that does not apply to the current operation, you may receive the following message:

```
Unimplemented Function Key.
```

DND Forms: RECNCILE Function Key

The Reconcile Function

The RECNCILE function enables you to choose the database(s) in which to store the new information generated by the current **Action**. The choices are as follows:

- **Site and Local** - (default) Updates both the DACS and DND databases
- **Local only** - Updates only the DND (local) database
- **Site only** - Updates only the DACS (facility) database. This feature allows you to update the DACS only, without using passthrough mode. Fields that would normally effect just the DND database are ignored.

After you choose the database(s) to update, press EXECUTE. If you press a key other than EXECUTE, the database selection reverts back to the default. Both databases will be updated.

Ideally, the DACS and DND databases should be kept consistent, however, there may be situations when you want to change the DACS or DND databases individually. For example, if you are installing the DND at a site where NPCs have already been provisioned, you can perform NPC Provisioning **Actions** (Chapter 8, DACS II, DACS II ISX NPC Provisioning) and specify the **Local only** option to update only the DND database.

Constraints for Database Selection

There are a few constraints to be aware of when you choose to update the DND database only, the DACS database only, or both:

- If you select a database and go back and change information on the form then press EXECUTE, the database selection returns to the default and both the local and site databases will be updated.
- When you use `local only` mode, you must enter valid data. Since DND does not cross-check every parameter in the form and the DACS does not do any cross-checking for `local only` mode, it is possible to update the DND database with invalid circuit or provisioning attributes.

  For example, if you store an illegal `TC` value, a later attempt to synchronize the circuit, will fail. To prevent this type of failure, consult your local network engineering staff or refer to the DACS Command and Message Manuals for proper value pairs.

DND Forms: RECNCILE Function Key (Continued)

Database Selection Window

Figure 3-17 shows the Database Selection Window. This window appears when you press RECNCILE.

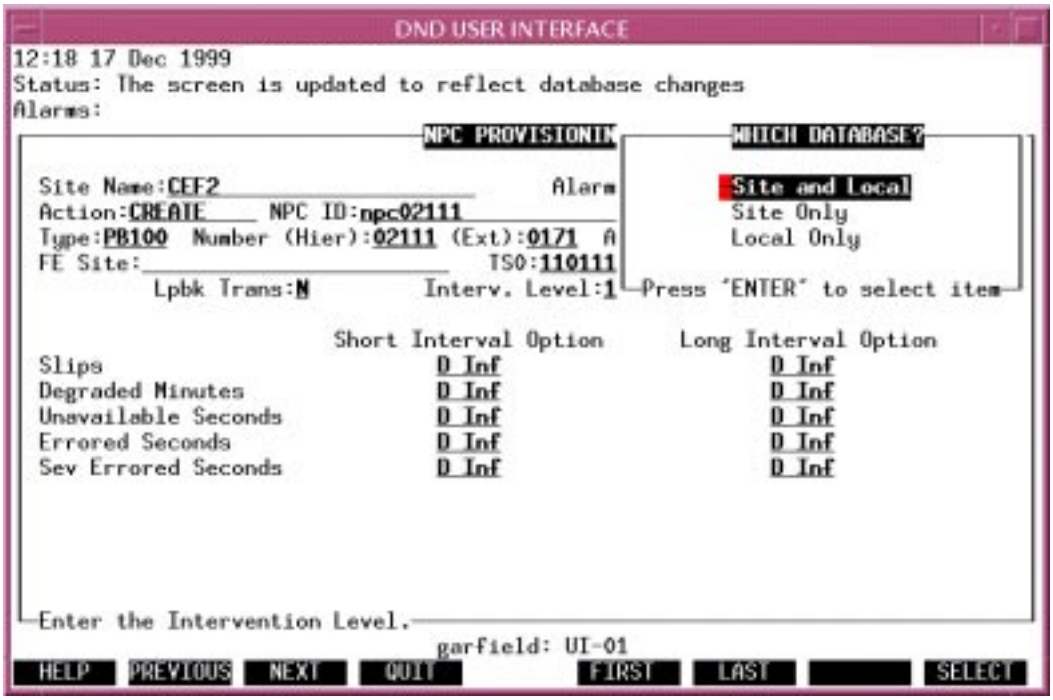


Figure 3-17. DND Forms: Database Selection Window

DND Forms: EXECUTE Function Key

The Execute Function

When you press EXECUTE, DND may respond in one of the following ways, depending on the **Action**:

- A CONFIRMATION WINDOW displays "ARE YOU SURE?". You can confirm the action or cancel it.
- An EXECUTION MODE WINDOW displays. This window enables you to schedule the action or execute it immediately. Figure 3-18 shows the Execution Mode Window.
- DND begins making a number of consistency checks. If DND determines that the command cannot succeed, a COMMAND RESPONSE WINDOW displays, and an error message appears at the bottom of the screen. Press Enter to clear the COMMAND RESPONSE WINDOW from the screen then correct the error.
- DND displays a COMMAND RESPONSE WINDOW containing information about the command execution. For example, for database audit/ synchronization, the COMMAND RESPONSE WINDOW states that the command will be executed in the background.

The Execution Time

When a command is sent to the DACS, the DACS has a set time in which to reply. DND waits a period equal to the time stored in the `DACS_TIMEOUT` environment variable and then displays a `timeout error` message in the COMMAND RESPONSE box. The default is three minutes. For more information, refer to "Environmental Variables" in Chapter 2, Getting Started.

DND Forms: EXECUTE Function Key (Continued)

The Confirmation Window

The Confirmation Window prompts you to confirm the action. Choose **YES** to continue or choose **NO** to cancel the action. Figure 3-18 shows the Confirmation Window.

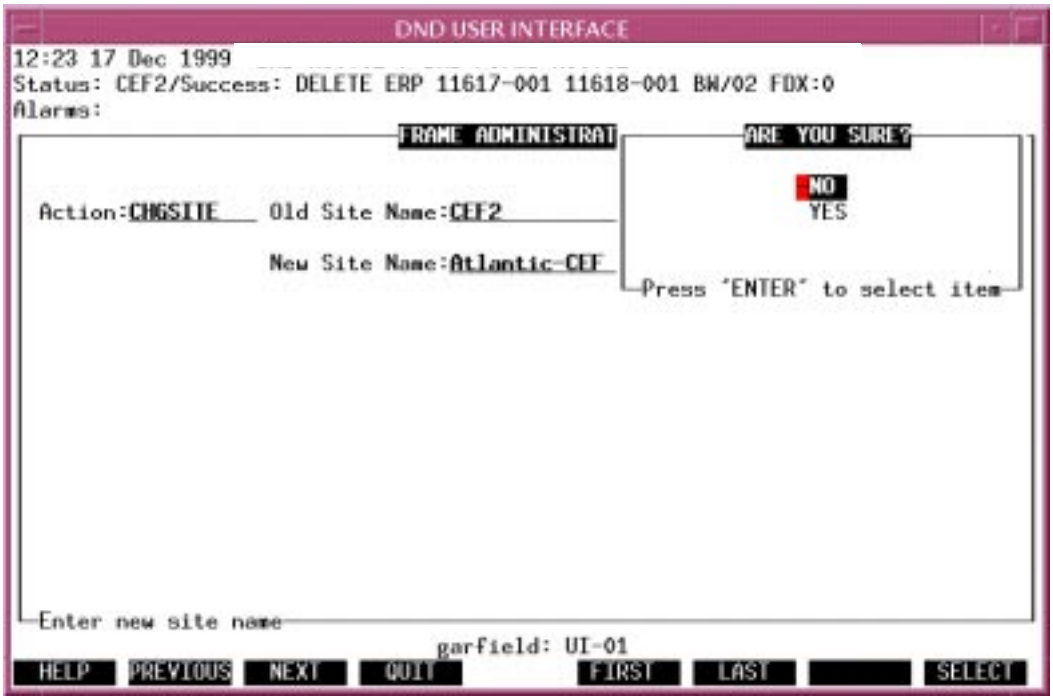


Figure 3-18. DND Forms: Confirmation Window

DND Forms: EXECUTE Function Key (Continued)

The Execution Mode Window

The **Execution Mode** determines when an **Action** is executed. The Execution Mode choices are as follows:

- **IMMEDIATE** - (default) Performs the current **Action** immediately after pressing Enter.
- **YES** - Performs the current **Action** immediately after pressing Enter.
- **SCHEDULE** - Performs the current **Action** at the date and time specified. When **SCHEDULE** is selected, a Task Scheduling Window appears on the form.
- **QUIT** - Cancels the current **Action**.
- **NO** - Cancels the current **Action**.

Figure 3-19 shows the Execution Mode Window.

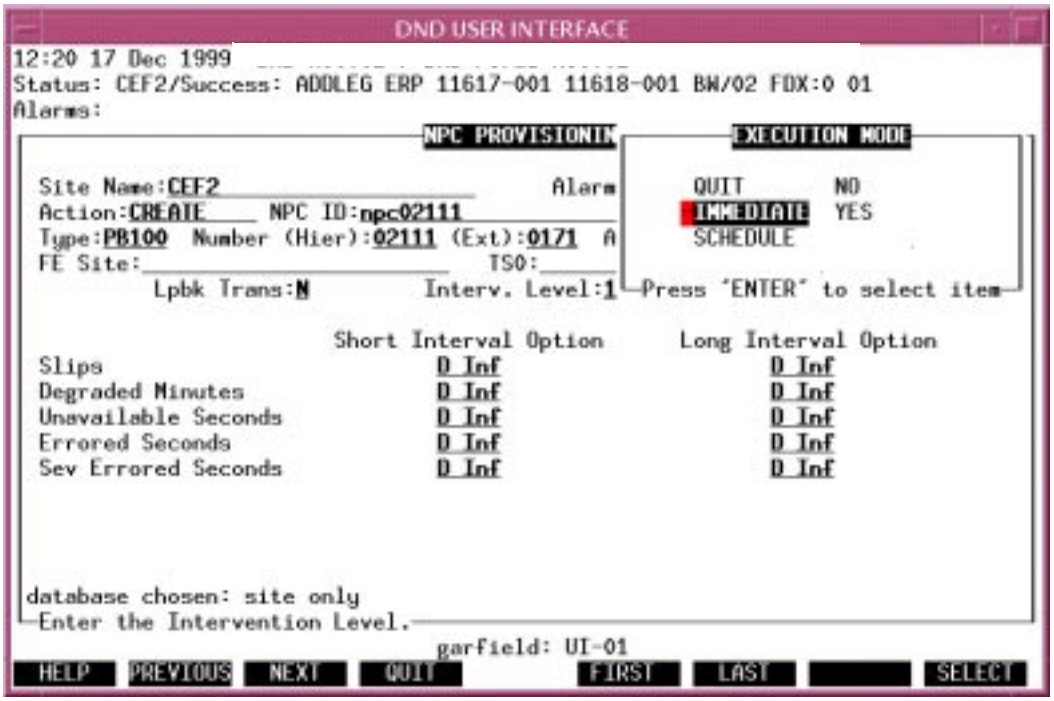


Figure 3-19. DND Forms: Execution Mode Window

DND Forms: EXECUTE Function Key (Continued)

The Task Scheduling Window

When **SCHEDULE** is selected, a Task Scheduling Window appears on the form. DND provides the capability of executing the operation in the foreground or in the background. It can be scheduled to run in the background once, repeatedly, or indefinitely at a specified frequency. Figure 3-20 shows the Task Scheduling Window.

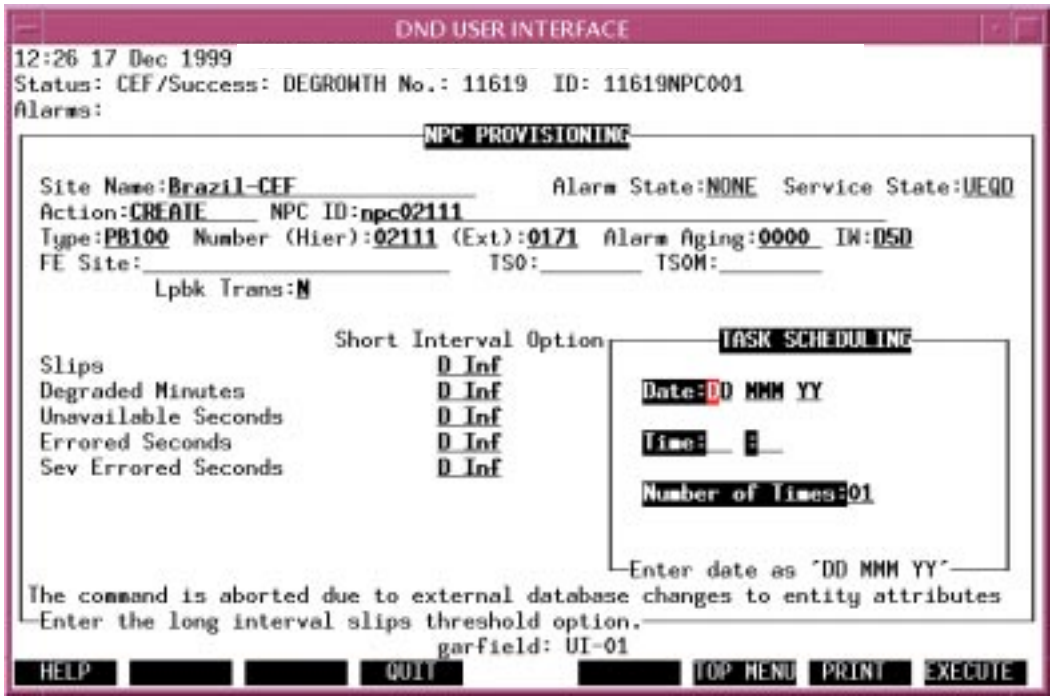


Figure 3-20. DND Forms: Task Scheduling Window

DND Forms: EXECUTE Function Key (Continued)

Task Scheduling Window Field Descriptions

Table 3-22 describes the fields and values for the Task Scheduling Window.

Table 3-22. DND Forms: Scheduling Options Field Descriptions

Field	Description
DATE	(Combo box) The date of the first scheduled execution. The fields are: **Day** - day of the **Month** (1 through 31) **Month** - month in the **Year** (Jan through Dec) **Year** - The year (1990 through 2037) The default is the current date and time.
TIME	(Combo box) The time of the first scheduled execution. The fields are: **Hour** - The hour on a 24 hour clock (00 through 23) **Minute** - The minute (00 through 59)
Number of times	(Text field) Two numerical digits. A value specifying the number of times the task is to execute. (default=01). The value 00 obtains indefinitely repeated execution.
Interval	(Text field) The number of **Scale** units between successive executions of the **Action**. (01 through 99)
Scale	(Combo box) The type of units in which the **Interval** is expressed. The choices are: **Minutes** - increments of **Interval** minutes **Hours** - increments of **Interval** hours **Days** - increments of **Interval** days

System Administration

4

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Background

Purpose

The purpose of this chapter is to introduce the user to the system administration capabilities available from DND.

To use the system administration options:

- From the DND GUI interface, select the options from the Administration section of the Provisioning menu
- From the DND Forms interface, select menu options from the SYSTEM ADMINISTRATION menu.

Objectives

This chapter provides background information to help you perform the following:

1. Name the DND System
2. Administer printers
3. Set the Date and Time
4. Synchronize the Frame Date/Time with DND
5. Shutdown and reboot DND
6. Administer login, X.25, and SNIDER ports (DND Forms Interface only).

Related tasks

For related tasks, see the following General Tasks in Volume II:

DND GUI:

- Enabling a Printer GT 4.1G
- Disabling a Printer GT 4.2G
- Displaying Print Jobs Queued GT 4.3G
- Removing Prints Jobs Queued GT 4.4G
- Printing/Stop Printing Output or Frame Alarms GT 4.5G
- Shutting Down DND GT 4.6G
- Setting the Date and Time GT 4.7G
- Synchronizing Frame Date & Time GT 4.8G

(Continued on next page)

Background (Continued)

Related Tasks (Continued)

DND Forms:

■ Enabling a Login Port	GT 4.1U
■ Disabling a Login Port	GT 4.2U
■ Placing an X.25 Line in Service	GT 4.3U
■ Removing a Line From Service	GT 4.4U
■ Enabling a Printer	GT 4.5U
■ Disabling a Printer	GT 4.6U
■ Displaying Print Jobs Queued	GT 4.7U
■ Removing Prints Jobs Queued	GT 4.8U
■ Printing/Stop Printing Output or Frame Alarms	GT 4.9U
■ Shutting Down DND	GT 4.10U
■ Setting the Date and Time	GT 4.11U
■ Synchronizing Frame Date & Time	GT 4.12U

Related information

For related information refer to the:

- *DACS II and DACS II ISX Operation and Maintenance Manuals.*

DND Forms: System Adminstration Menu

Overview

The SYSTEM ADMINISTRATION menu provides the options used to change and monitor DND system parameters. When you select SYSTEM ADMINISTRATION from the MAIN MENU, the menu is displayed, as shown in Figure 4-1.

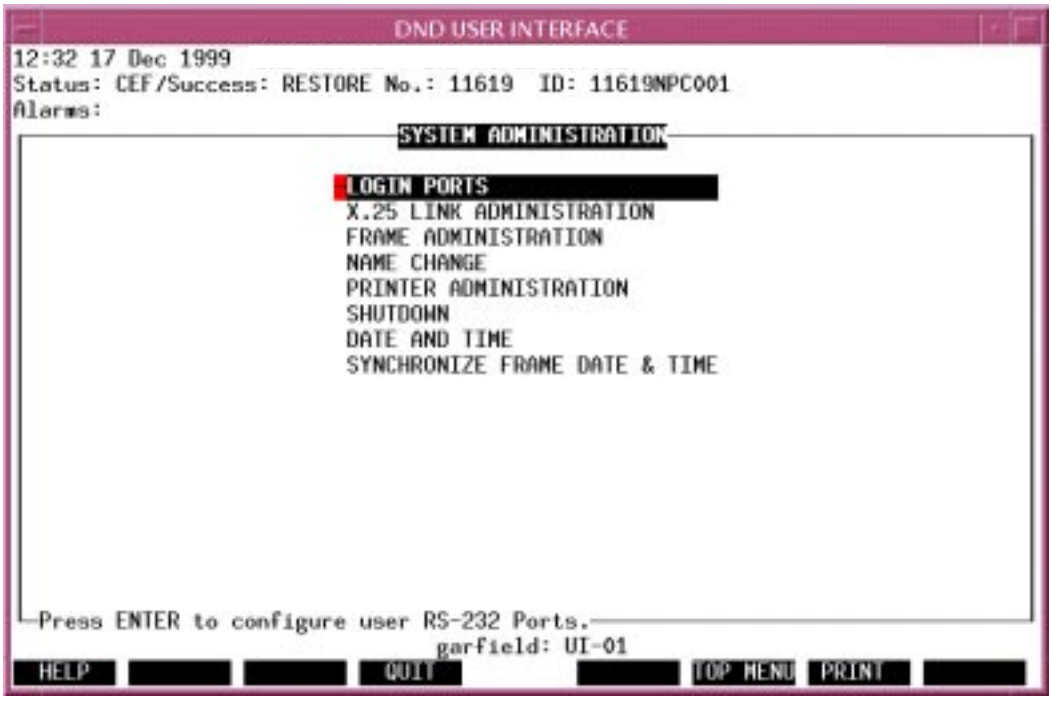


Figure 4-1. DND Forms: SYSTEM ADMINISTRATION Menu

DND Forms: System Adminstration Menu (Continued)

Menu Options

The SYSTEM ADMINISTRATION menu lists these options:

- **LOGIN PORTS** - allows you to enable or disable an asynchronous port used by a terminal operator to access the DND computer
- **X.25 LINK ADMINISTRATION** - allows you to restore or remove service from a synchronous line to a DACS using X.25 protocol
- **FRAME ADMINISTRATION** - allows you to identify each DACS that communicates with DND. FRAME ADMINISTRATION also enables you to remove service and restore service to the DACS. FRAME ADMINISTRATION is covered in *Chapter 5, NE Provisioning*.

  Before selecting FRAME ADMINISTRATION, make sure that the DACS has been configured as described in *Chapter 2, Getting Started*.
- **NAME CHANGE** - enables you to change the name given to your DND system. This name appears on backups.
- **PRINTER ADMINISTRATION** - provides the actions needed to manage print jobs and enable and disable printers.
- **SHUTDOWN** - provides the capability to shutdown the DND computer
- **DATE AND TIME** - Allows you to reset the date and time.
- **SYNCHRONIZE FRAME DATE & TIME** - enables you to change the date and time on a DACS to the time and date on the DND.

DND Forms: Login Ports

Purpose

LOGIN PORTS allows a system administrator to enable, disable, or set the line speed for asynchronous login ports used by terminal operators to access DND. A login port must be restored before an operator can log in on it. Restoring the port places a login prompt on the terminal.

If you have an optional 32 port SEU in addition to the standard 32 port SEU, then only the standard 32 port SEU is available for login ports.

Sample Screen

When you select LOGIN PORTS from the SYSTEM ADMINISTRATION menu, the LOGIN PORTS ADMINISTRATION form is displayed, as shown in the Figure 4-2.

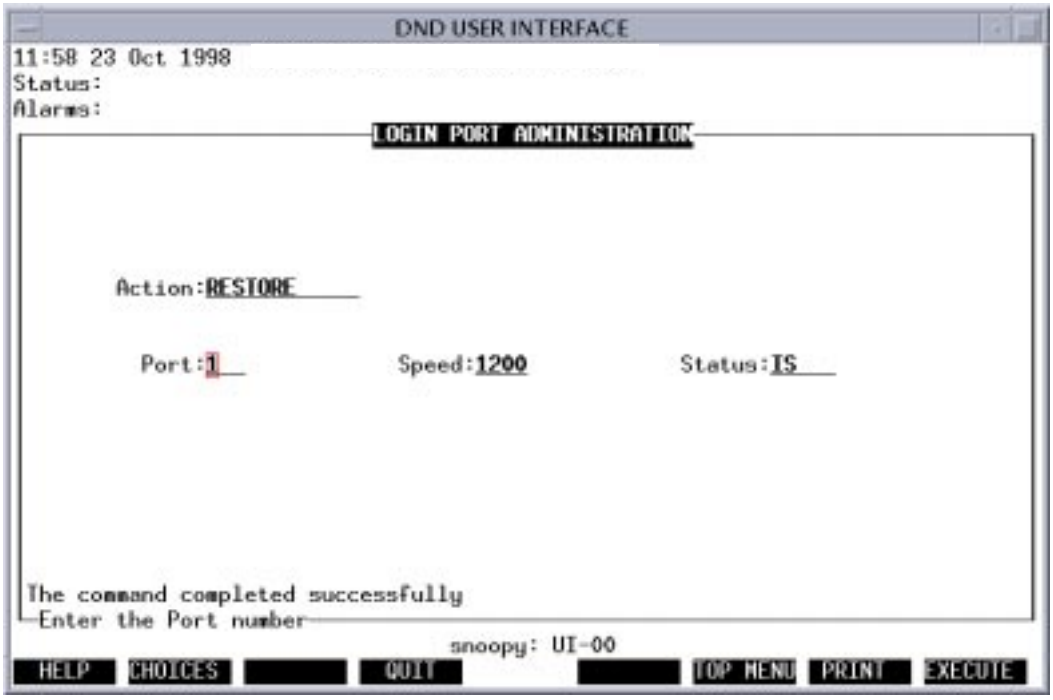


Figure 4-2. DND Forms: LOGIN PORT ADMINISTRATION Form

DND Forms: Login Ports (Continued)

Displaying Port Status

To display the current status of all asynchronous ports, press CHOICES from the **Port** field on the LOGIN PORT ADMINISTRATION form.

A pop-up window displays the available ports, their **Status**, the user log-in, if there is one, and the **Speed**.

If you have a port configured as a SNIDER link to a DACS, a * appears before the port number and the Site Name is listed after the port number. You may not enable a SNIDER link as a login port. An example is shown in Figure 4-3.

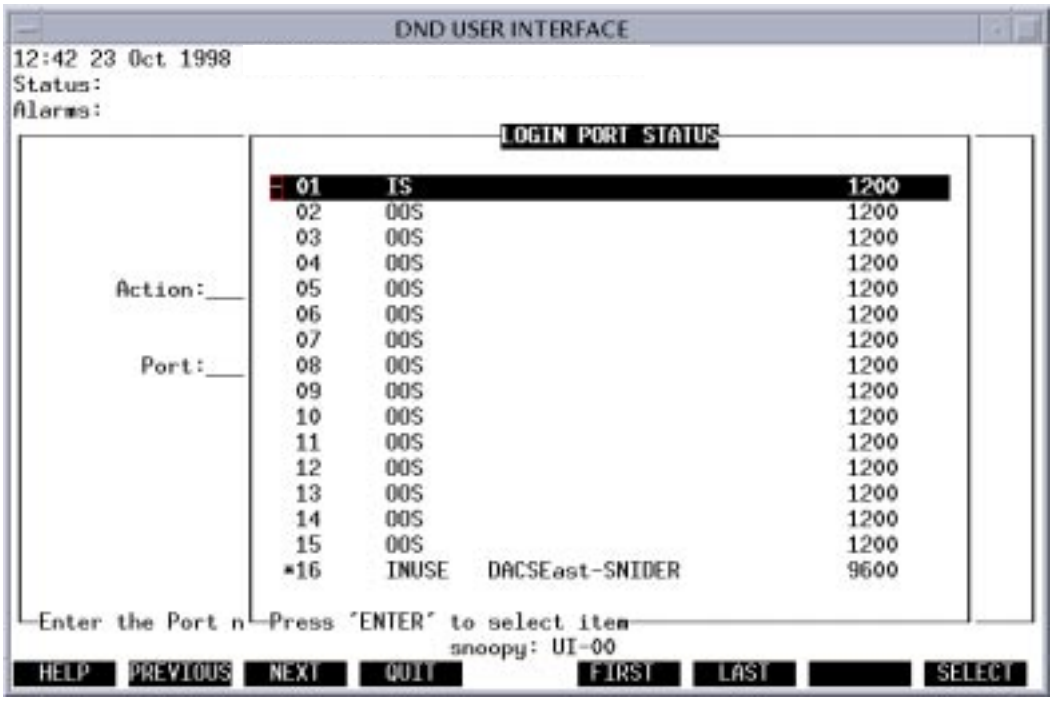


Figure 4-3. LOGIN PORT STATUS Pop-Up Window

DND Forms: Login Ports (Continued)

Field Descriptions

The field values for the LOGIN PORTS ADMINISTRATION form are described in Table 4-1.

Table 4-1. DND Forms: Field Descriptions for the LOGIN PORTS ADMINISTRATION Form

Field	Description
Action	Mandatory. The values are: *RESTORE* Enable the port. *REMOVE* Disable the port.
Port	Mandatory. Numeric, 1 through the number of asynchronous lines up to 32. **CAUTION:** *You can REMOVE an INUSE port by a remote terminal, but the user will be logged off. You cannot REMOVE an INUSE port by a DACS.*
Speed	Mandatory. Numeric. The baud rate to be in effect. The possible values are *1200*, *2400*, *4800*, and *9600*.
Status	Not accessible to the user. ■ *NULL* - The port has not yet been restored in this database. **CAUTION:** *INUSEThe port is currently in use. You can display the login by pressing* CHOICES *when the cursor is in* **Port***.S. You may not enable it as a login port.*

Table 4-1. DND Forms: Field Descriptions for the LOGIN PORTS ADMINISTRATION Form (Continued)

Field	Description
Status, Continued	**CAUTION:** *You can REMOVE an INUSE port by a remote terminal, but the user will be logged off. You cannot REMOVE an INUSE port by a DACS.* ■ *IS* - The port is ready for remote login and may not be preempted by a DACS. To disable it, enter a *REMOVE* **Action**. ■ *OOS* - The port is no longer available for remote login without restoral, but may be utilized by a DACS. To enable it, enter a *RESTORE* **Action**.

DND Forms: X.25 Link Adminstration

Purpose

Select the X.25 LINK ADMINISTRATION option from the SYSTEM ADMINISTRATION MENU to enable or disable an X.25 link. An X.25 link is used to access a synchronous line for communication with a DACS using X.25 protocol.

Sample Screen

When you select X.25 LINK ADMINISTRATION from the SYSTEM ADMINISTRATION menu, the X.25 LINK ADMINISTRATION form is displayed, as shown in Figure 4-4.

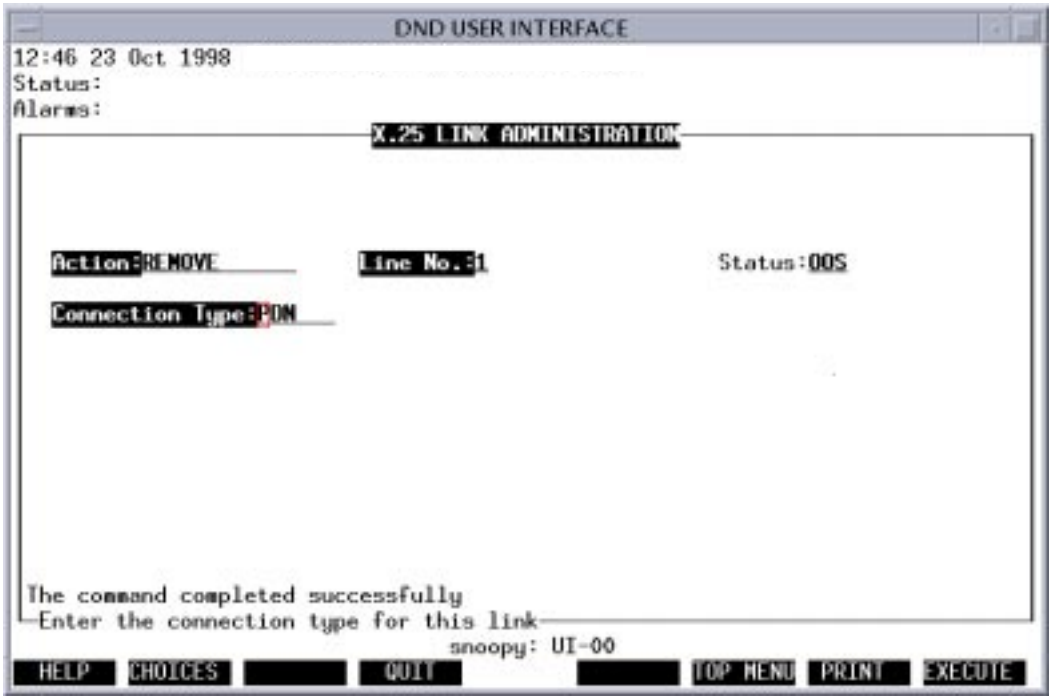


Figure 4-4. DND Forms: X.25 LINK ADMINISTRATION Form

DND Forms: X.25 Link Adminstration (Continued)

Field Descriptions

The field values for the X.25 LINK ADMINISTRATION form are described in Table 4-2.

Table 4-2. DND Forms: Field Descriptions for the X.25 LINK ADMINISTRATION Form

Field	Description

Action	Mandatory. The values are:
	■ *RESTORE* - Places the X.25 link in service. The **Status** must be *OOS*; otherwise, the **Action** is denied and a message is displayed:
	`Link already in service`
	■ *REMOVE* - Removes the X.25 link from service. This **Action** is allowed whether the **Status** indicates *IS*, in service, or *OOS*, out of service.
	A rejection with the message:
	`There are active circuits on this link. Link not removed.`
	refers to extant packet-level connections to the DACS. To remove the link, you must first place the DACS sites in an OOS **Site Status** through FRAME ADMINISTRATION.

Line No.	Mandatory, one numeric character. The physical line number of the link supporting the connection. Entries are one through four.
Status	The status of the link, not user-accessible. *IS* — In service. The link can support switched virtual circuits (SVCs). A DACS can be placed in service on this link. *OOS* — Out of service. A DACS cannot be placed in service on this link.

Table 4-2. DND Forms: Field Descriptions for the X.25 LINK ADMINISTRATION Form (Continued)

Field	Description
Connection Type	Not accessible through DND. The information shown reflects how the links were set up during installation. If X.25 links have been configured during installation, this field assumes the appropriate value. If X.25 links have not been configured, then this field is blank, and any attempt to *RESTORE* a line is rejected. ■ *PDN* - Packet data network. The network acts as DCE for the connection, and DND acts as DTE. The X.25 link must be connected to a PDN. Up to 250 virtual circuits are supported. ■ *DIRECT* - DND acts as DCE for the connection. The X.25 link must be connected directly to an X.25 port of the DACS II ISX frame through a synchronous modem eliminator. At this time, DND does not support *DIRECT* connections.

System Name Change

Purpose

This feature is used to change the name of the DND system. The DND system name appears on backups.

The fields on the SYSTEM NAME CHANGE form can be retrieved from the SNMP MIB-II system group when the DND is configured with the SNMP Northbound option.

DND GUI: Sample Screen

The SYSTEM NAME CHANGE form is shown in Figure 4-5.

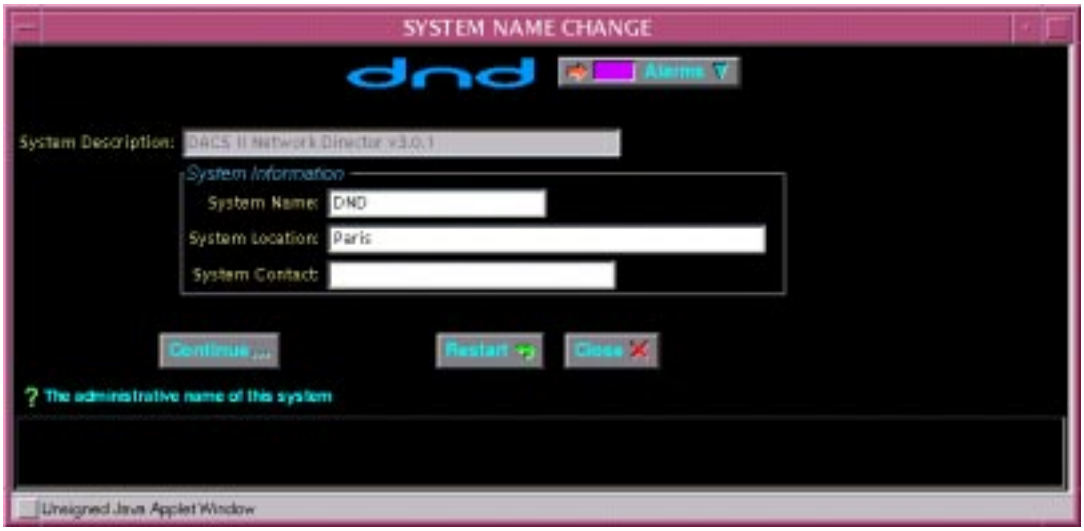


Figure 4-5. DND GUI: SYSTEM NAME CHANGE Form

System Name Change (Continued)

DND GUI: Field Descriptions

The field values for the SYSTEM NAME CHANGE form are described in Table 4-3.

Table 4-3. DND GUI: Field Descriptions for the SYSTEM NAME CHANGE Form

Field	Description
System Description	(Read only field) Indicates the DND system's release number.
System Name	Mandatory. Up to 23 characters. This field automatically displays the current system name. Highlight name and type in the new system name.
System Location	Optional. Up to 47 characters. Enter the location where the system resides.
System Contact	Optional. Up to 31 characters. Enter a contact name for the system.

System Name Change (Continued)

DND Forms: Sample Screen

Select NAME CHANGE from the SYSTEM ADMINISTRATION menu to change the name of the DND system.The SYSTEM NAME CHANGE form is shown in Figure 4-6.

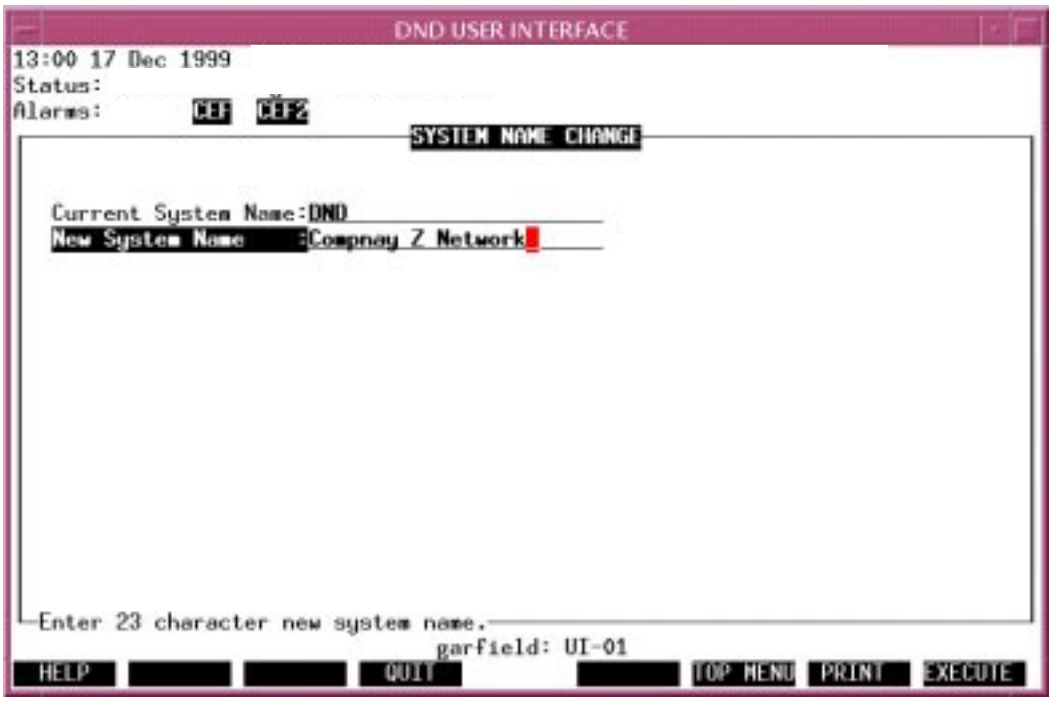


Figure 4-6. DND Forms: SYSTEM NAME CHANGE Form

DND Forms: Field Descriptions

Field values for the SYSTEM NAME CHANGE form are described in Table 4-4.

Table 4-4. DND Forms: Field Descriptions for the SYSTEM NAME CHANGE Form

Field	Description
Current System Name	Mandatory. This field automatically displays the current system name.
New System Name	Mandatory. Can contain up to 23 characters.

Printer Administration

Purpose

DND provides **Action**s that allow the system administrator to:

- Enable or disable the printer
- List and cancel print jobs
- Allow printer logging of the Alarm Messages or DACS Messages from one or more DACS.

NOTE:
From the DND Forms interface, users can list or cancel their own print jobs using selections from the TASK ADMINISTRATION menu. From the DND GUI, users can perform all printer administration actions from the PRINTER ADMINISTRATION form.

What Can Be Printed from the DND Forms interface

From the DND Forms interface, DND supports printing of screens, DACS output, and reports. Printing can be done from the REPORTS selections, and by pressing the PRINT key for screens that offer the option of screen printing.

Printer Administration (Continued)

DND GUI: Sample Screen

When you select PRINTER ADMINISTRATION from the **Provisioning** menu, the PRINTER ADMINISTRATION form is displayed. A sample of the PRINTER ADMINISTRATION form is shown in Figure 4-7.



Figure 4-7. DND GUI: PRINTER ADMINISTRATION Form

Printer Adminstration (Continued)

DND GUI: Field Descriptions

The field values for the PRINTER ADMINISTRATION form are described in Table 4-5.

Table 4-5. DND GUI: Field Descriptions for the PRINTER ADMINISTRATION Form

Field	Description
Action	Mandatory. Enter the action to be performed with regard to the printer job. ■ *ENABLE* - Enables the printer. ■ *DISABLE* - Disables the printer. ■ *LIST* - Displays the printer queue. ■ *CANCEL* - Cancels any printer job. ■ *LOGALL* - Logs the DACS output messages to the printer. ■ *LOGALARMS* - Logs the DACS alarm messages to the printer. ■ *STOPLOGGING* - Cancels message logging for the DACS.
Printer Name	(Combo box) The list of available printers.
Printer Status	The status of the printer: *ENABLED* or *DISABLED*.

Printer Adminstration (Continued)

DND Forms: Sample Screen

When you select PRINTER ADMINISTRATION from the SYSTEM ADMINISTRATION menu, the PRINTER MANAGEMENT form is displayed. A sample of the PRINTER MANAGEMENT form is shown in Figure 4-8.

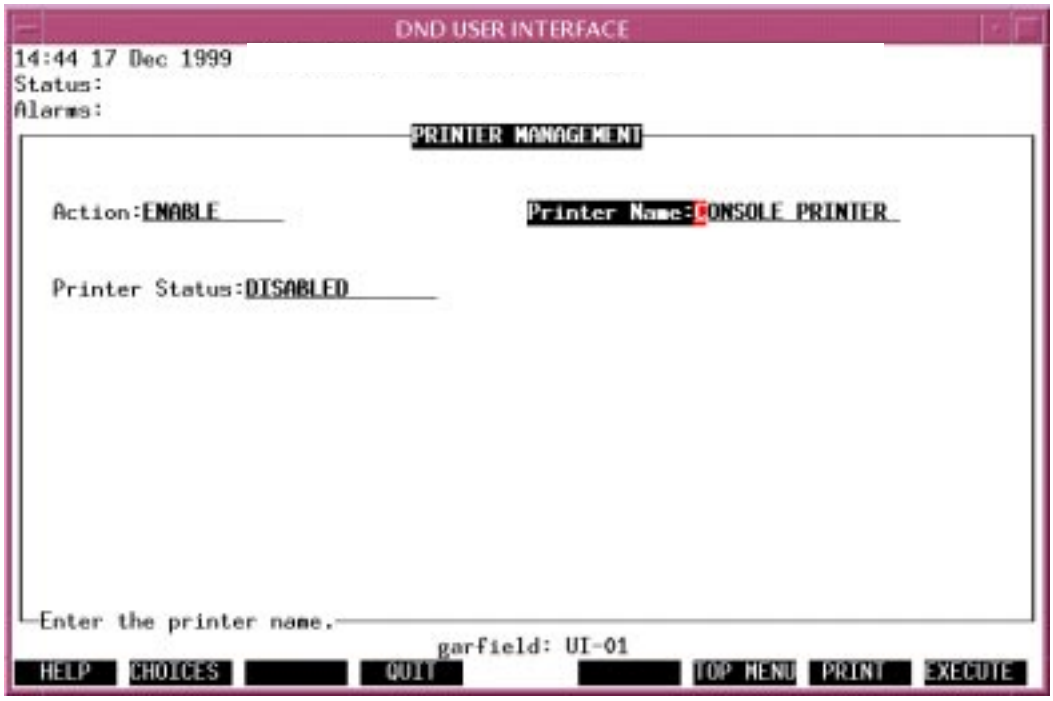


Figure 4-8. DND Forms: PRINTER MANAGEMENT Form

Printer Adminstration (Continued)

DND Forms: Field Descriptions

The field values for the PRINTER MANAGEMENT form are described in Table 4-6.

Table 4-6. DND Forms: Field Descriptions for the PRINTER MANAGEMENT Form

Field	Description
Action	Mandatory. Enter the action to be performed with regard to the printer job. *ENABLE* Enables the printer. *DISABLE* Disables the printer. *LIST* Displays the printer queue. *CANCEL* Cancels any printer job. *LOGALL* Logs the DACS output messages to the printer. *LOGALARMS* Logs the DACS alarm messages to the printer. *STOPLOGGING* Cancels message logging for the DACS.
Printer Name	Press CHOICES when the cursor is in the **Printer** field to display the available printers. Use the display to select a printer.
Printer Status	The status of the printer.

Shutdown

Purpose

Use the SHUTDOWN option to shutdown or restart the DND computer.

CAUTION:
Execute SHUTDOWN before removing power from DND. Important files may be damaged or corrupted.

DND GUI: Sample Form

Figure 4-9 shows the DND GUI System Shutdown form.



Figure 4-9. DND GUI: System Shutdown

Shutdown (Continued)

DND Forms: Sample Form

Figure 4-10 shows the DND Forms System Shutdown form.

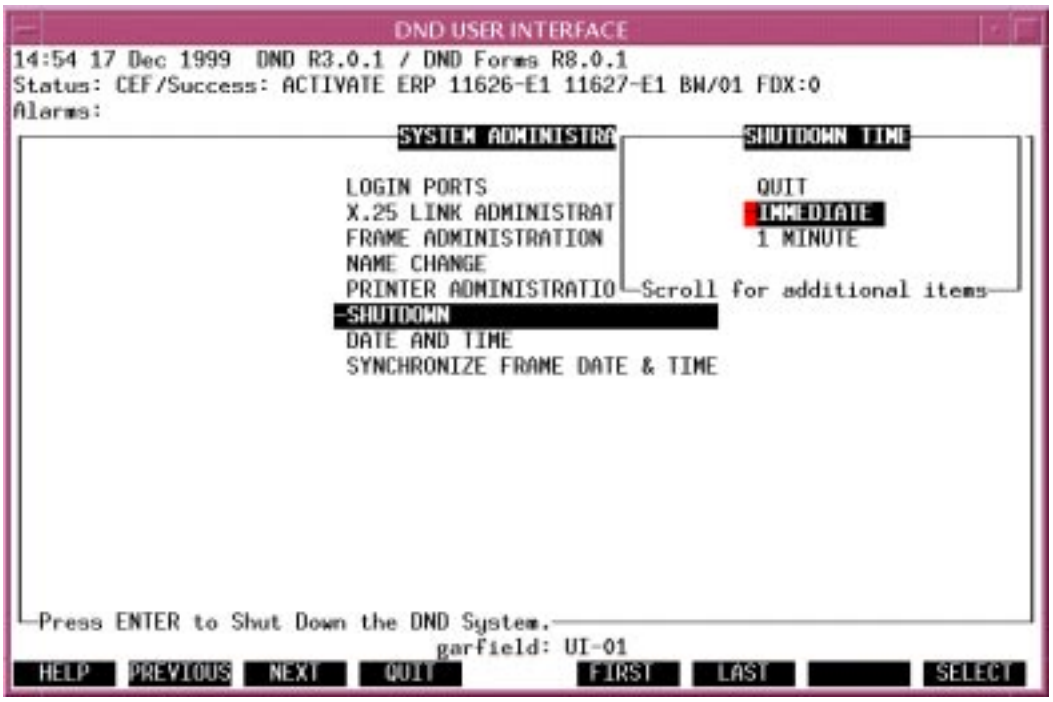


Figure 4-10. DND Forms: System Shutdown

Shutdown (Continued)

Shutdown Type and Time

To shutdown or restore DND, you specify two options: Shutdown Type and Shutdown Time.

- SHUTDOWN TYPE enables you to specify the type or shutdown:

`QUIT`	(Forms only) Do not execute a shutdown.
`SHUTDOWN`	Shut down the computer and DND. This is done as preparation for powering down the computer.
`REBOOT`	Shut down and restart the computer and the DND.
`DND REBOOT`	Shut down and only restart DND. The workstation continues to run; only the DND software restarts.
`DND UPDATE`	Only shut down DND, update the port information in the DND database and restart. This procedure compares the hardware configuration to the DND database and, if required, modifies to DND database. The **/etc/passwd** is updated from the DND database.
`NO`	(Forms only) Do not execute a shutdown.

- SHUTDOWN TIME enables you to specify when to begin the shutdown:

`QUIT`	(Forms only) Do not execute a shutdown.
`IMMEDIATE`	Shut down immediately.
`1 MINUTE`	Shut down after 1 minute.
`5 MINUTES`	Shut down after 5 minutes.
`10 MINUTES`	Shut down after 10 minutes.
`NO`	(Forms only) Do not execute a shutdown.

After DND Shuts Down

A number of messages will be displayed as DND shuts down. When the software has finished shutting down, follow the established policy regarding turning off the hardware or leaving it on.

Date and Time

Purpose

Occasionally, it may be necessary to reset the DND computer date and time. Be sure to notify the users that you are going to reset the date and time.

NOTE:
Setting the Date and Time *must* be done from the console.

Resetting the DND date and time may affect time-dependent activities, such as the execution of scheduled tasks, and timeouts on commands to a DACS, as well as on terminating passthrough sessions, or other tasks. We suggest that you shut down and restart immediately after resetting the date and time, so that all time parameters also will be reset.

DND GUI: Sample Form

Figure 4-11 shows the DND GUI System Date/Time form. Select an entry for each field.



Figure 4-11. DND GUI: System Date/Time Form

Date and Time (Continued)

DND Forms: Sample Form

When you select DATE AND TIME from the SYSTEM ADMINISTRATION menu, the DATE AND TIME ADMINISTRATION form is displayed, as shown in Figure 4-12.

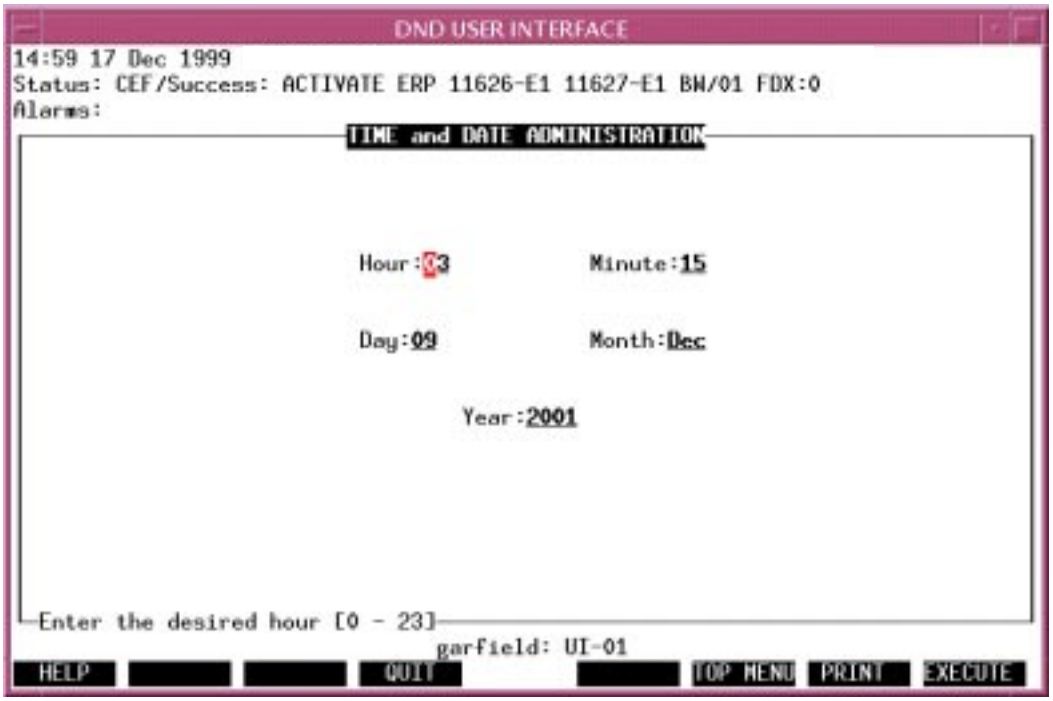


Figure 4-12. DND Forms: TIME AND DATE ADMINISTRATION Form

Date and Time (Continued)

DND Forms: Field Descriptions

The field values for the TIME AND DATE ADMINISTRATION form are described in Table 4-7.

Table 4-7. DND Forms: Field Descriptions for the TIME AND DATE ADMINISTRATION Form

Field	Description
Hour	Valid entries are 0-23. For example, 12 am is hour 0, 1 pm is hour 13. Leading zeroes are not required. However, if a leading zero is omitted, you must press Enter to move to the next field.
Minute	Valid entries are 00-59.
Day	Valid entries are 1-31.
Month	The first three letters of the name of the month. For example, Jan, Feb, Mar, ... Dec. Upper or lower case letters may be used.
Year	The four digits of the year. Valid entries are 1990 to 2037.

Synchronize Frame Date & Time

Purpose

Select the SYNCHRONIZE FRAME DATE &TIME option to synchronize the date and time on a DACS or AX with the date and time on the DND computer.

NOTE:
AX date and time synch is only available from the GUI.

DND GUI: Sample Form

Figure 4-13 shows the DND GUI form for Synchronize Frame Date & Time. To synchronize the Date and Time on a DACS with DND, select the Site Name, click Continue, then click Execute.



Figure 4-13. DND GUI: Synchronize Frame Date & Time

Synchronize Frame Date & Time (Continued)

DND Forms: Sample Form

Figure 4-14 shows the DND Forms *SYNCHRONIZE FRAME DATE & TIME* option. Select *SYNCHRONIZE FRAME DATE AND TIME* fromthe SYSTEM ADMINISTRATION menu. Select the DACS to synchronize in the WHICH DACS? pop-up window.

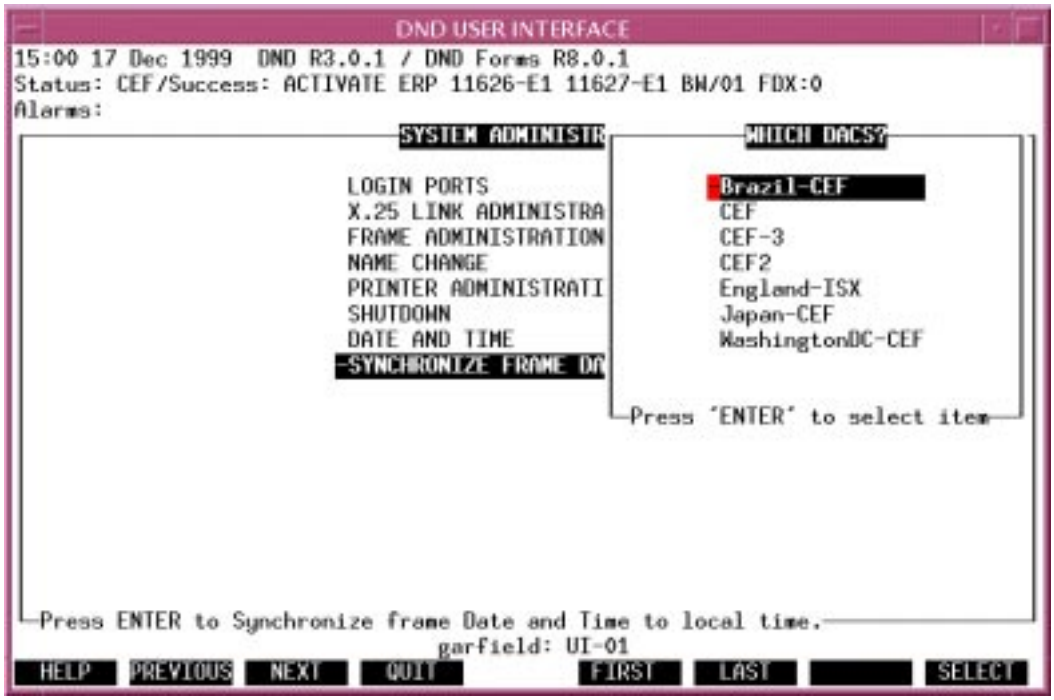


Figure 4-14. DND Forms: Synchronize Frame Date & Time

Synchronize Frame Date & Time (Continued)

Possible Synchronization Results

When you attempt to synchronize the date and time on the DACS with DND, the command may complete successfully or fail.

The command is successful if the DACS time is set to within one second of the DND time. A message, *The command completed successfully*, means that the time has been successfully reset.

A failure can happen when the DACS is too busy to respond to DND within one second of the request. For example, a DACS may be too busy during backup-memory transfers, error recovery, and other maintenance conditions. If a failure occurs, you will get a message, *Frame time is within* X *seconds of local time*. The time has been reset, but not to within one second.

A failure can also happen if DND cannot complete the synchronization. In that case, an explanation of denial is displayed.If the time synchronization fails, try to reset again.

On the AX, the command may fail if the AX software release is older than 9.03 or if the AX is not in service.

NE Provisioning

5

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Background

Introduction

The DACS Network can include several types of network elements (NEs): DACS II, DACS II ISX, DACS II AX, IMACS, AAC, PSAX, and Other-type SNMP nodes. You must identify each network element that will be managed by DND. The information you enter is used to set up communications between the network element and DND.

Menu Options

To identify a network element:

- From the DND GUI interface, select the Provisioning button from the DND task bar, then select **NE Provisioning**.
- From the DND Forms interface, select SYSTEM ADMINISTRATION from the DND Main Menu, then select FRAME ADMINISTRATION.

From the DND GUI, you can provision any of the supported types of network elements. From the DND Forms interface, you can only provision DACS II and DACS II ISX elements.

Objectives

This chapter provides background information to help you perform the following:

1. Create an SNMP-based Network Element, including the DACS II AX, IMACS, AAC, PSAX, and Other-type SNMP node.
2. Restore a DACS II AX, AAC, PSAX, and IMACS
3. Modify a DACS II AX, AAC, PSAX, and IMACS
4. Create a DACS (with X.25, SNIDER, or TCP/IP links)
5. Restore a DACS
6. Restore a backup link for a DACS (for X.25 only)
7. Modify a DACS
8. Remove a DACS
9. Change the site name of an NE
10. Delete an NE.

Background (Continued)

Related tasks

For related tasks, see the following General Tasks in Volume II:

DND GUI:

■ Configuring the DACS II AX for Communicating with the DND	GT 2.3G
■ Configuring the AAC/IMACS for Communicating with the DND	GT 2.4G
■ Configuring the PSAX for Communicating with the DND	GT 2.5G
■ Creating an SNMP-based Network Element	GT 5.1G
■ Creating a DACS, X.25 Link	GT 5.2G
■ Creating a DACS, SNIDER Link	GT 5.3G
■ Creating a DACS, TCP/IP Link	GT 5.4G
■ Restoring a DACS	GT 5.5G
■ Restoring a Backup Link (X.25 Only)	GT 5.6G
■ Modifying a DACS	GT 5.7G
■ Changing the Name of a DACS	GT 5.8G
■ Removing a DACS	GT 5.9G
■ Deleting a DACS	GT 5.10G

DND Forms:

■ Creating a DACS, X.25 Link	GT 5.1U
■ Creating a DACS, SNIDER Link	GT 5.2U
■ Restoring a DACS	GT 5.3U
■ Restoring an X.25 Backup Link	GT 5.4U
■ Modifying a DACS	GT 5.5U
■ Removing a DACS	GT 5.6U
■ Deleting a DACS	GT 5.7U

Background (Continued)

Related information

For related information, see:

- *DACS II Network Director Software Release Description*
- *DACS II and DACS II ISX Operation and Maintenance Manuals*
- *DACS II AX 4/11 User's Guide*
- *IMACS and AAC Reference Guides*
- *PacketStar PSAX2300 Access Concentrator User's Guide*

DACS II AX Retrofit Information

Description

The DND now supports both *unmanaged* and *managed* AX equipment, the latter of which is supported by DACS II AX software Release 9.0.3 and above. As a result, the DND's link restoral process determines whether or not an AX's generic value has changed, indicating that its status has changed from 'unmanaged' to 'managed'.

WARNING:

If the status has changed, that is, the DND detects a software release upgrade to DACS II AX Release 9.03 or greater, the DND deletes termination names and termination maps from its database. The DND Administrator may then use the UPLOAD command to retrieve the device, port, and circuit information from the AX.

The intertie information contained in the DND network map is not affected by the change.

NE Provisioning Actions

Summary of Actions

Both the DND GUI NE PROVISIONING form and the DND Forms FRAME ADMINISTRATION form provides these actions:

- *CREATE* - use to initially create the network element in the DND database. Through the CREATE action, you identify the communications parameters that enable DND to communicate with the NE.
- *RESTORE* - tells the DND to start communications with the network element, query its type and release information for validity, and begin monitoring the communications path for messages.
- *REMOVE* - tells DND to disable communications.
- *MODIFY* - modifies the attributes and communications parameters for the network element, most of which require the element to be removed from service.
- *CHGSITE* - enables you to change the name of the element.
- *DELETE* - removes the element from the DND database.

All of these actions are available for all NE types.

DND GUI: SNMP Nodes

SNMP Nodes

DND can manage up to 256 SNMP nodes.

SNMP is Simple Network Management Protocol. SNMP is a standard network protocol that is used primarily to manage TCP/IP networks. DND communicates with network elements on the TCP/IP network using SNMP.

DND processes alarms and provides telnet access to these SNMP devices: the DACS II AX 4/11, ACCULINK Access Controller (AAC), Integrated Multiple Access Communications Server (IMACS), and *PacketStar PSAX2300 Access Concentrator* (PSAX) . In addition, DND does alarm handling for other SNMP devices.

Communications Protocol Information

In order for DND to communicate with the SNMP node, set-up is required on both ends: DND and at the SNMP node.

There are three critical pieces of information:

- **IP Address for SNMP node**: You must supply DND with the actual IP address which identifies the SNMP node to DND.
- **IP Address for DND**: You must supply the actual IP address of DND to the SNMP node so that SNMP traps can be sent to DND.
- **Community**: The community string is the password used to access the SNMP node. DND must use the community string that is set in the SNMP node.

For the setup procedure for the AAC/IMACS, refer to GT 2.3G. For the setup procedure for the the DACS II AX, refer to GT 2.4G. For the setup procedure for the PSAX, refer to GT 2.5G. These procedures do not apply to Other-type SNMP nodes. No procedure can be supplied for Other-type SNMP nodes.

After completing the setup procedures, use the NE Provisioning form to identify the NE in DND. Refer to GT 5.1G.

DND GUI: SNMP Nodes

DND GUI: Sample Form

To create, modify, remove, or restore a network element as a DACS II AX, AAC, IMACS, PSAX, or other SNMP node, use the NE PROVISIONING Form:



Figure 5-1. DND GUI: NE Provisioning Form for SNMP Node

DND GUI: SNMP Nodes

Fields for NE Provisioning Form for SNMP

Table 5-1 describes the field values for the NE PROVISIONING form, when the Element Type is a DACS II AX, AAC, IMACS, or Other-type SNMP node.

Table 5-1. DND GUI: SNMP Field Descriptions for the NE PROVISIONING Form

Field Name	Description
Action	(Combo box) Mandatory. Valid choices are: ■ *CREATE* - Provisions a new NE in DND with the name **New Site Name**. The NE database is created. ■ *REMOVE* - Disconnects the NE. ■ *RESTORE* - *RESTORE* puts the equipment in-service. **NOTE:** When newer DACS II AX equipment (Release 9.03 or greater) is restored, all termination names and cross connects are automatically deleted from the database. ■ *DELETE* - Deletes the NE and related data from the DND database. ■ *MODIFY* - Allows you to change the Location, IP Address, or Community for an NE. ■ *CHGSITE* - Changes the **Site Name** for the selected NE.
Element Type	Select one of the SNMP-type network elements: DACS II AX, IMACS, AAC, PSAX, or Other-type SNMP node.
New Site Name	(Text field) Mandatory. 1 through *n* characters (as specified in the `SITENAME_SIZE` environment variable) from the set 0-9, A-Z, a-z, /, _, and -. All other characters are illegal. Blanks are not allowed within a name.
Location	(Text field) Location of NE. Up to 13 characters. This is an informational field only.

Table 5-1. DND GUI: SNMP Field Descriptions for the NE PROVISIONING Form (Continued)

Field Name	Description
Assign to Partition(s)	(Multi-select combo box). By default a new NE belongs to all 10 partitions. You can selectively assign/un-assign the NE from partitions using this field.
IP Address	(Text field) Specify the IP address of the SNMP node using dot notation.
Community	(Text field) Specify the community string (password) that both DND and the SNMP node will use to communicate. Be sure to use the proper community string as provisioned at the element. ■ The default for AAC/IMACS is *Manager*. ■ For PSAX, and Other, the default is *public*. ■ For DACS II AX, the default is *private,* however, use the string which identifies 'read/write' privileges for the SNMP agent.

DND GUI: SNMP Nodes (Continued)

States of an SNMP Node

All state changes for an SNMP node are recorded in the SNMP Alarm Log.

The state changes you will see most often are:

- *QRY* indicates that DND is querying the SNMP node for release and type information.
- *IS* indicates that the network element has been successfully restored and is in-service.
- *OOS* indicates that the network element is out of service.
- *ALM* indicates a loss of communication.
- *ERR* indicates that the SNMP node has an unsupported release or is an unsupported type. For example, this error occurs if the type of element is set to AAC and the actual NE is a DACS II AX.
- *AS* indicates that an audit sync has occurred to an AX network element (Releases 9.03 and greater only).

DACS Links

Overview

A DACS II or DACS II ISX can be connected to the DND system via one of the three types of links:

- X.25 link
- SNIDER link
- TCP/IP link

NOTE:
A DACS II AX is connected as an SNMP node.

Creating a DACS with a X.25 Link

The X.25 link is a synchronous connection from the DND to the DACS. The configuration is assumed to be a PDN connection. The lines between the DND and the DACS must be identified. You must enter a primary Network Address for the primary line and you may enter an optional backup line.

There are up to four lines between the DND and the PDN, identified in the DACS network. The lines must physically exist. At initial system start-up, all 4 lines are OOS.

Additionally, you can provision X.25 lines in the X.25 PROVISIONING form in the DND Forms Interface. For the DND Forms Interface, you must complete the X.25 PROVISIONING form before you can provision a DACS using X.25.

X.25 Setup

The X.25 transmission parameters are assigned at installation. The default settings of the X.25 path, as provided by the X.25 software package, are used and should provide acceptable service for most configurations. If these need to be changed, this can be done with the "x25tool" provided with the X.25 package. This tool can only be run by the root user and should only be used with the aid of Lucent Technical Support and your X.25 service provider.

Assignment of network addresses for each of the DACS X.25 links must be available when the DACS connection is provisioned. These are provided by your X.25 service provider.

DACS Link (Continued)

X.25 Line Numbering Scheme

Numbering of the X.25 links from the DND begins with the number 1, but the physical line ports, however, begin with port 0. The following table shows the mapping of the physical port numbering (as provided on the X.25 cable at the workstation) and the DND link numbering (as provided on the forms):

Table 5-2. X.25 Line Port Numbers

X.25 Physical Port Number	DND Link Number
0	1
1	2
2	3
3	4

Link Assignment and Link Redundancy

The choice of which X.25 link to assign to a DACS should be made such that traffic is distributed across all available links for best performance. One or two local X.25 links can be assigned for communications to a DACS. The second link provides redundancy in case the first link should fail. Switching of service is non-revertive in the case of failure.

Provisioning X.25 at the DACS

The X.25 line at the DACS must be properly provisioned at the DACS. Refer to GT 2.3U for the procedure.

X.25 Configurations

Introduction

There are several ways to configure the primary and backup lines in an X.25 configuration.

Fully Backed-Up Configuration

Figure 5-2 shows a configuration for DACS II, where line *1* and line *2* are two links from the DND computer to the X.25 network. net_ad_1 is the **Network Address** of one link from the X.25 network to the DACS and net_ad_2 is the **Network Address** of another. An example of a **Network Address** is a telephone number, such as *5555555555*.

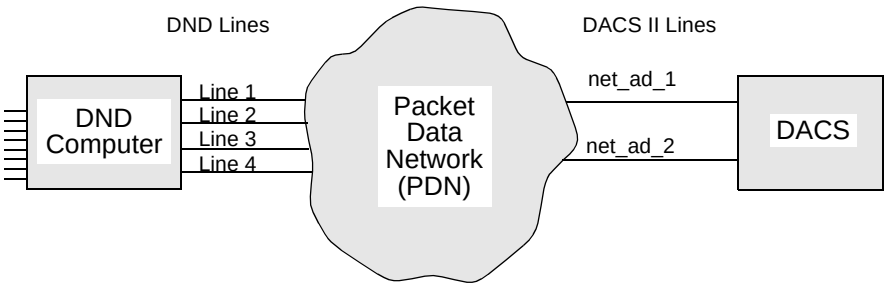


Figure 5-2. Fully Backed-up Configuration (DACS II)

This configuration backs up the entire path from DND to the DACS:

- **Primary Line**: *1*
- **Network Address**: net_ad_1
- **Backup Line**: *2*
- **Network Address**: net_ad_2

A break in line *1* establishes a backup path through line *2,* and a break in net_ad_1 establishes a backup path through net_ad_2.

X.25 Configurations (Continued)

Backup of Link to Frame Only

Figure 5-3 shows a configuration where line 1 is the link to the DND computer. This configuration may apply if line *2* is not present or you do not wish to use it to back up line *1.*

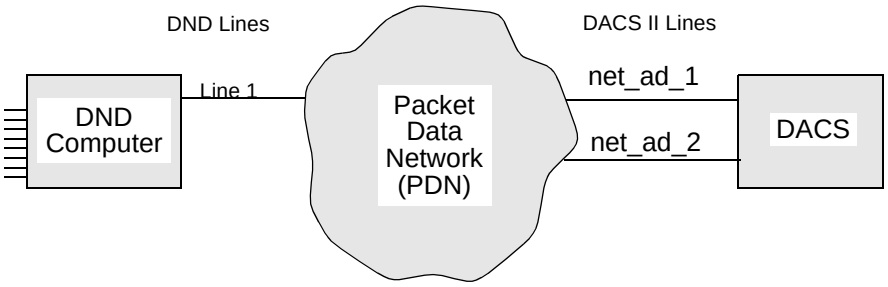


Figure 5-3. Backup of Link to Frame Only (DACS II)

This configuration backs up the lines to the DACS only:

- **Primary Line**: *1*
- **Network Address**: net_ad_1
- **Backup Line**: *1*
- **Network Address**: net_ad_2

Line 1 acts as both the primary and backup line. A break in net_ad_1, establishes a backup path through net_ad_2. There is no separate line acting as a backup for line 1.

X.25 Configurations (Continued)

Backup of DND Link Only

Figure 5-4 shows a configuration where only line *1* is backed up. This configuration may apply if the DACS has only one link available.

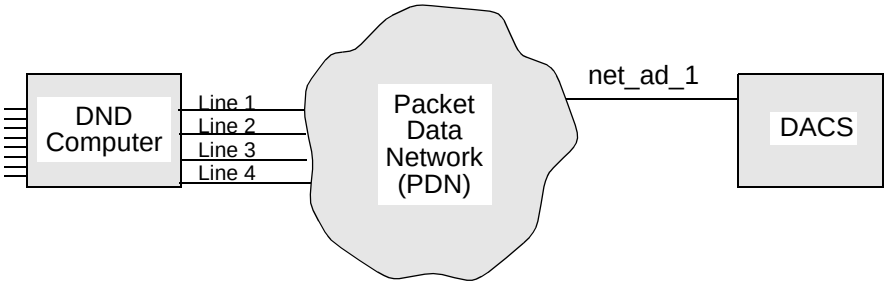


Figure 5-4. Backup of DND Link Only

This configuration backs up the link to the DND only:

- **Primary Line**: *1*
- **Network Address**: net_ad_1
- **Backup Line**: *2*
- **Network Address**: net_ad_1

The path in both the primary and backup case goes through net_ad_1, which is, not backed up.

RESTORE and BRESTORE Actions

DND attempts to establish communication over an X.25 link when it receives a *RESTORE* **Action** or a *BRESTORE* **Action**, or when the SVC is lost to a DACS that was previously restored on the primary line.

If you are executing a *RESTORE*, and are using only the primary line, or if the primary line has been restored without a backup line and the SVC has been lost, DND makes up to two attempts to establish communication through the **Primary Line** and **Network Address**. A third try is preceded by a random delay. If all three fail, DND begins the three-try sequence again, to an indefinite number of attempts, only terminated when it succeeds, or you enter a *REMOVE* **Action**.

(Continued on next page)

X.25 Configurations (Continued)

RESTORE and BRESTORE Action, Continued

If you are executing a *BRESTORE*, DND goes through the same cycle of attempts, over the **Backup Line** and its **Network Address**.

If the SVC is lost to a DACS that was previously restored with both a primary and a backup line, DND makes up to two attempts to restore communication over the primary line, then one attempt over the backup line, then one more attempt over the primary line, ending the cycle with a random delay. Then it starts the cycle again, up to an indefinite number of attempts.

The X.25 interface provides a cause code and a diagnostic code to the DND when a link is broken.

DND then displays one of three diagnostic messages in the DND **Status** field:

Primary link n *is down for site* sitename*, cause* xx *diag* yy*.*
Backup link n *is down for site* sitename*, cause* xx *diag* yy*.*
Net addr mmm *is down for site* sitename*, cause* xx *diag* yy*.*

For the meanings of xx and yy in each case, refer to *Managing SunLink® X.25 9.1* by Sun MicroSystems Inc.

DND GUI: DACS with X.25 Link

NE Provisioning Form, X.25 Link

Figure 5-5 shows an example of a NETWORK ELEMENT PROVISIONING form for a DACS with an X.25 link.



Figure 5-5. DND GUI: NE Provisioning Form, DACS with X.25 Link

SNIDER Link

Creating a DACS with a SNIDER Link

The SNIDER link is a direct link between the DND and the DACS. You must select a line and enter the line **Baud Rate** to identify the connection line. It is suggested that SNIDER links be provisioned from highest to lowest number, as indicated in the **Line Number:** dialog box.

DND GUI: NE Provisioning Form, SNIDER Link

Figure 5-6 shows an example of a NETWORK ELEMENT PROVISIONING form for a DACS with a SNIDER link.

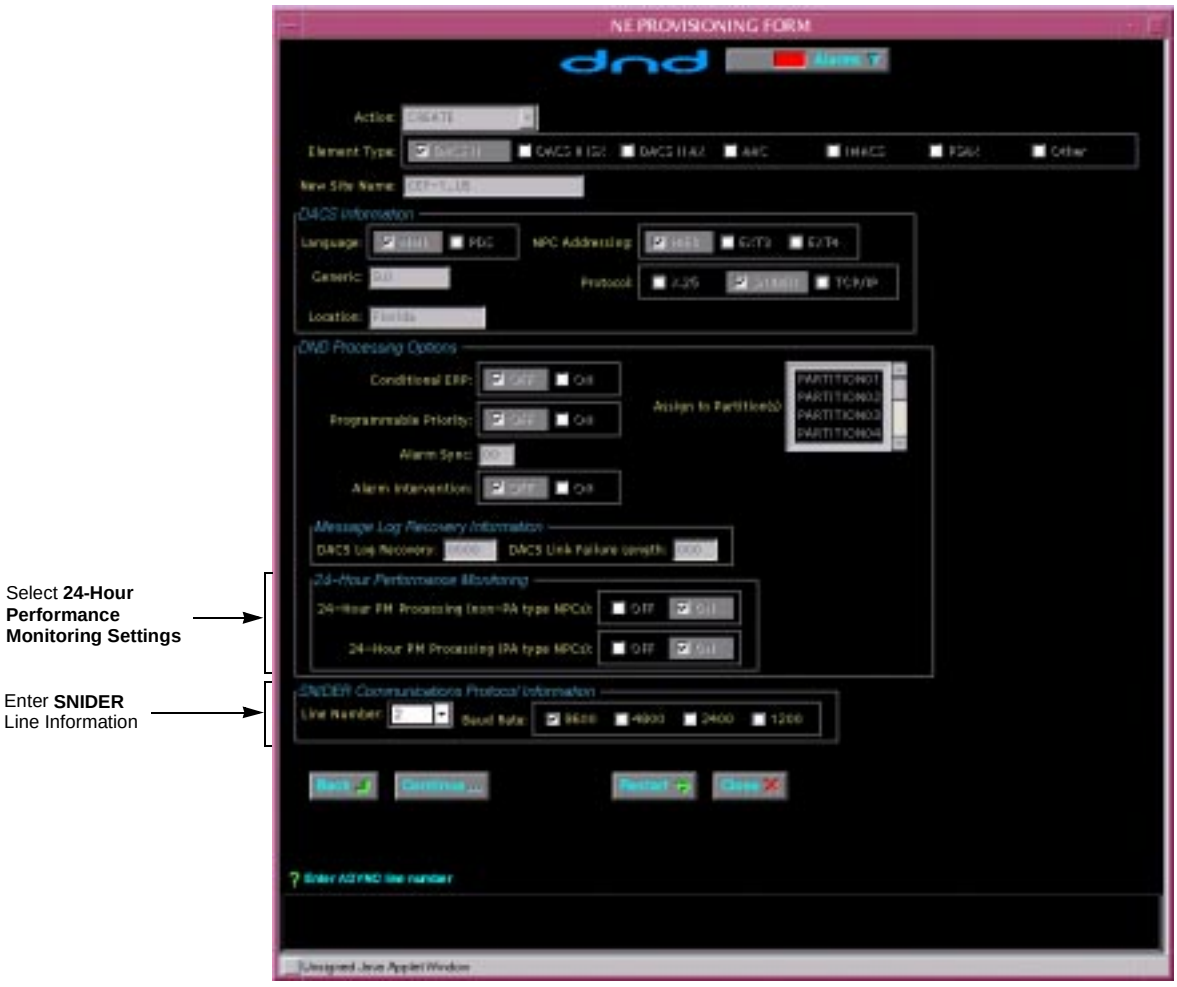


Figure 5-6. DND GUI: Network Element Provisioning Form, DACS with SNIDER Link

SNIDER Link (Continued)

SNIDER Line Numbering Scheme

If you have chosen the SNIDER connection option, then you may have a 32-port Serial Expansion Unit (SEU). Before you create the DACS in the DND database, the SNIDER link at the DACS needs to be provisioned properly or it will not work. See GT 2.2U. The following table shows the corresponding line port numbers as displayed on the DACS and how they are numbered in DND.

If you have the optional 32 port SEU installed, use ports 33 to 64 to provision the SNIDER link at the DACS when assigning the ports. (Ports 1-32 can also be used for login ports.)

Table 5-3. SNIDER Line Port Numbers

Unit	SEU Port Number	DND Line Port Number
First unit: 32-port SEU (default)	1 to 32	1 to 32
Second unit: 32-port SEU (optional)	1 to 32	33 to 64

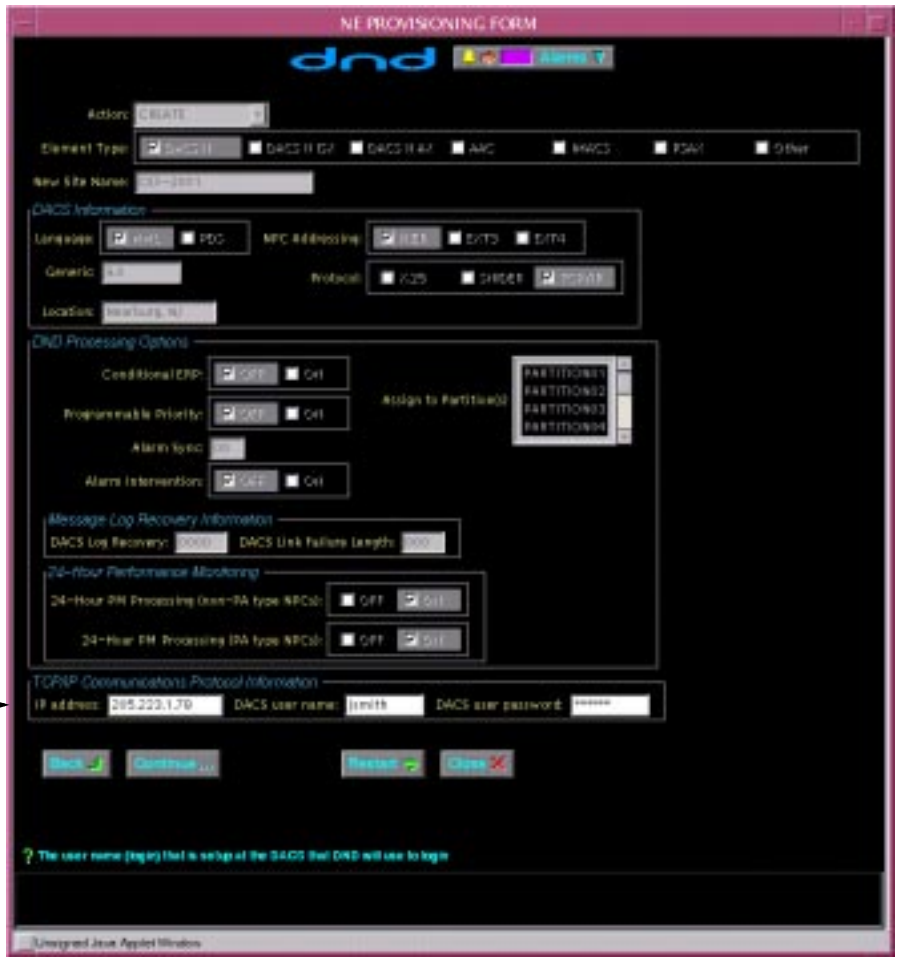
TCP/IP Link

Creating a DACS with a TCP/IP Link

The TCP/IP link is a direct link between the DND and the DACS. You must select an IP address for the DACS and enter a user name and password.

DND GUI: NE Provisioning Form, TCP/IP Link

Figure 5-7 shows an example of a NETWORK ELEMENT PROVISIONING form for a DACS with a TCP/IP link.



Enter **TCP/IP** Communication Protocol Information

Figure 5-7. DND GUI: Network Element Provisioning Form, DACS with TCP/IP Link

DACS Provisioning Verification

Site Status

When a DACS is restored, DND queries the DACS for the language, generic, and NPC addressing format. During this time, the **Site Status** for the DACS is set to *QRY* (query).

If the DACS and DND databases match, the **Site Status** will change to *IS P* or *IS B*.

If there are differences between the DACS and DND databases, the **Site Status** will change to *ERR* (error). The errors will appear on the Status Summary window on the DND Main window.

The DND will also place the DACS into an *ERR* state if the query of information to the DACS times out at the DND. When a DACS enters the *ERR* state, the DND will periodically retry the query of information every 3 to 5 minutes in order to try to clear the *ERR* state. Even though the link is established and will not be affected, a new link restoral message will be issued to the system which will reinitiate the query of the DACS provisioning data. If the query of information succeeds and matches the DND database, then the DND will place the DACS into the in-service state (*IS*). If an error occurs, then the reason will appear on the Status line and the state will remain in *ERR*.

In both the *QRY* and *ERR* conditions, the DACS continues to process echo responses and DACS alarms. Provisioning commands, however, cannot be processed, such as cross connect. Non-provisioning commands, such as reports and passthrough are allowed.

NOTE:
If you modify the Type, Protocol, Language, NPC Addressing, Generic, or Line Information, first remove the DACS from service, enter the modifications, then restore the DACS to service. You must also remove the DACS from service before switching to a backup X.25 link, or from a backup link to a primary link.

Changing the Site Name of a Network Element

Definition

You assign a **Site Name** to a network element, when you create it. The **Site Name** is used to identify the network element on other forms and on reports.

DND GUI: The CHGSITE Action

In the DND GUI, you use the *CHGSITE* Action on the NE PROVISIONING form to change the site name of a network element. The NE PROVISIONING form prompts you for the following information:

- **Current Site Choices**.
- **New Site Name**

DND GUI: Sample Form

Figure 5-8 shows the *CHGSITE* action on the NETWORK ELEMENT PROVISIONING form.

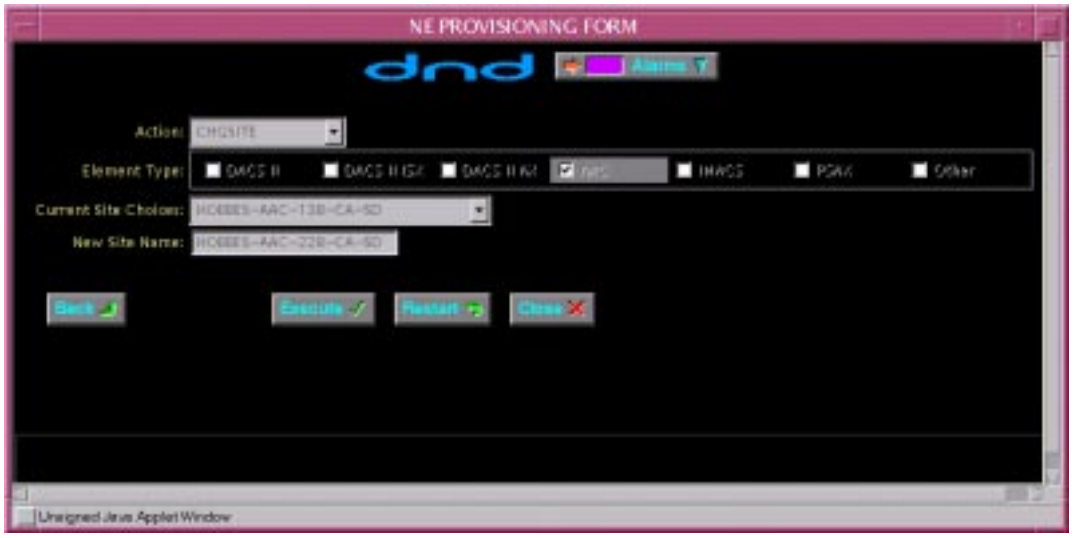


Figure 5-8. DND GUI: NE Provisioning Form, CHGSITE Action

Changing the Site Name of a Network Element (Continued)

DND Forms: The CHGSITE Action

In DND Forms, you can change the **Site Name** assigned to a DACS by selecting the *CHGSITE* **Action** on the FRAME ADMINISTRATION form. See Figure 5-9.

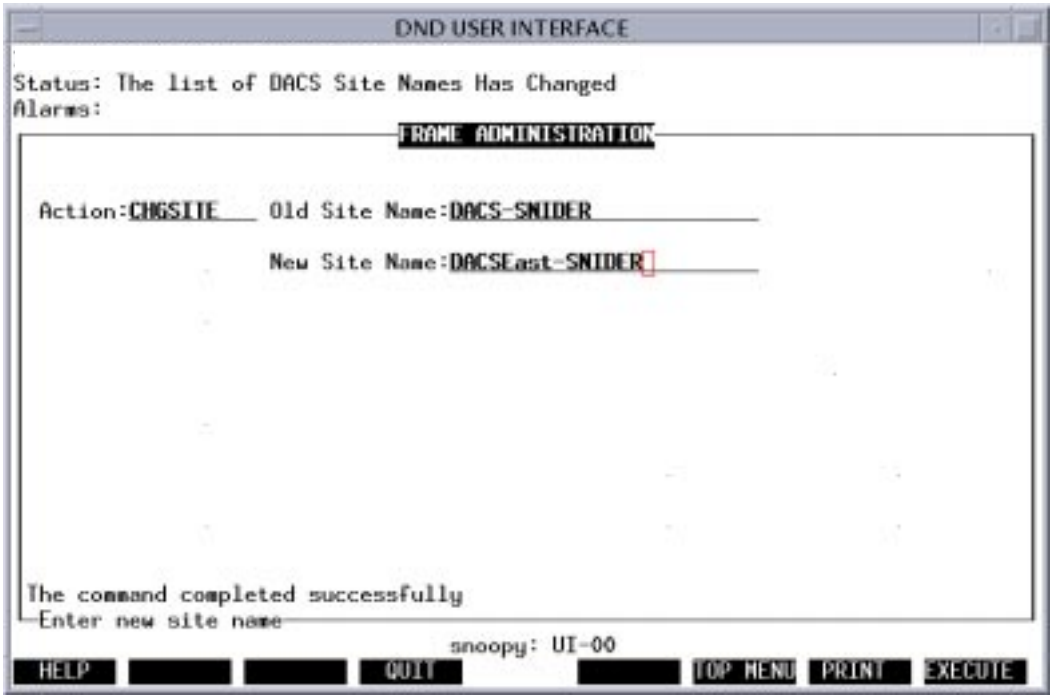


Figure 5-9. DND Forms: CHGSITE Action on FRAME ADMINISTRATION Form

DND Forms: Entering Site Name on DND Forms

There are two ways to enter a **Site Name** in the field in the DND Forms interface:

- Type in a valid **Site Name** as defined through FRAME ADMINISTRATION.
- Press CHOICES to display the list of site names. Select the **Site Name** from the list and press ENTER. Your choice appears in the **SIte Name** field on the form.

DND GUI: Deleting an NE

The DELETE Action

The *DELETE* **Action** removes the network element from the DND database. When performing the *DELETE* **Action**, the following field will appear on the form:



Figure 5-10. The CONFIRM Checkbox

If the **Confirm:** check box is not selected before clicking Execute, DND will display a denial message informing you to confirm the action by checking the **Confirm:** box. Click Back to select the **Confirm:** box and click Execute to complete the action.

NOTE:
You cannot *DELETE* a site if it is connected to an intertie.

DND GUI: Field Descriptions for NE Provisioning Form for DACS

Fields

The table below describes in detail the fields and field values on the NE PROVISIONING form when a DACS is being provisioned.

Table 5-4. DND GUI: Field Descriptions for the NE PROVISIONING Form

Field Name	Description
Action	(Combo box) Mandatory. Valid choices are: ■ *CREATE* - Provisions a new DACS in DND with the name **New Site Name** and sets the **DACS Status** to OOS. The DACS database is created. ■ *RESTORE*/*BRESTORE* - Establishes the administrative link to the DACS using the **Network Address** specified on the form. *RESTORE* uses the **Primary Line** first and *BRESTORE* uses the **Backup Line** first. *BRESTORE* is not available for the SNIDER or TCP/IP **Protocol**. ■ *REMOVE* - Disconnects the administrative link between the DND and the DACS specified in **Current Site Choices**. ■ *DELETE* - Deletes the DACS and related data from the DND database. ■ *MODIFY* - Changes the DACS provisioning information. The DACS must be OOS to change the following fields: **DACS Type**, **Protocol**, **Primary Line**, **Backup Line**, **Network Address, IP Address**, **DACS User Name**, **DACS User Password**, and **Baud Rate**; to change other fields, the DACS can be IS. The *MODIFY* **Action** cannot change the **Site Name**. ■ *CHGSITE* - Changes the **Site Name** for the selected DACS.
Element Type	Select either DACS II or DACS II ISX. ■ *DACS II* - The DACS is a DACS II, Releases 6.0 and higher. ■ *DACS II ISX* - The DACS is a DACS II ISX, Releases 1.1 and higher.

Table 5-4. DND GUI: Field Descriptions for the NE PROVISIONING Form (Continued)

Field Name	Description
New Site Name	(Text field) Mandatory for the *CREATE* Action. 1 through *n* characters (as specified in the `SITENAME_SIZE` environment variable) from the set 0-9, A-Z, a-z, /, _, and -. All other characters are illegal. Blanks are not allowed within a name.
Automatic Device Sync	(Radio button) Select this option to request an automatic device synchronization to occur between DND and a DACS II AX when communications to the DACS is restored. The DACS II AX is always the master database. **NOTE:** Applies only to devices in managed, DACS II AX equipment of Release 9.03 and above. If this box is checked for unmanaged equipment, the automatic sync request is ignored.
Current Site Choices	(Combo box - For all **Actions** except *CREATE*) The name of the DACS where the requested **Action** will take place. Clicking this field will display a list of DACS names. By default, the list appears alphabetically.
Location	(Text field) Location of NE. Up to 13 characters. This is an informational field only.
Conditional ERP	(Radio buttons) The selection or nonselection of conditional echoed response processing for this DACS. ■ *ON* - Process NPC and circuit echoed response messages only on condition that all NPCs cited in the message are already in the DND database. ■ *OFF* - Process echoed response messages unconditionally (the DND will respond to all provisioning echoed responses).

Table 5-4. DND GUI: Field Descriptions for the NE PROVISIONING Form (Continued)

Field Name	Description
Programmable Priority	(Radio buttons) This field allows you to specify whether to activate/deactivate the Programmable Priority feature for a DACS. When an NPC or another hardware component goes down, there are many DACS alarm messages that are generated and queued based on the order they are received. When Programmable Priority is set to *ON*, any MML command entered from the DACS with the keyword "*PRIOUT*" is automatically prioritized and placed before other messages in the DACS queue. This request only impacts the order of the output and does not change the execution of commands. The choices are: ■ *ON* - Default value ■ *OFF* - Activates this feature on a frame-by-frame basis Available for DACS II, Release 7.0 and above.
Alarm Sync	(Text field) 2 numeric digits, where *nn* = 00 to 99. Enables an optional automatic alarm sync to take place when communications to a DACS is restored. The number *nn* represents the number of hours between autonomous alarm sync actions. ■ *00* - Option is disabled; no alarm sync if the **DACS Status** becomes *IS*, *IS P* or *IS B*. ■ *nn* - Provided more than nn hours have elapsed since last auto alarm sync, when the **DACS Status** becomes IS, IS P or IS B again, query the DACS and update the **Alarm State** information for the DACS. For more information, refer to the NPC PROVISIONING chapter. Example: If *nn*=01 and communications to the DACS are down for more than one hour, then an alarm sync takes place when communications to the DACS are restored.
Assign to Partition(s)	(Multi-select combo box). By default a new NE belongs to all 10 partitions. You can selectively assign/un-assign the NE from partitions using this field.

Table 5-4. DND GUI: Field Descriptions for the NE PROVISIONING Form (Continued)

Field Name	Description
Alarm Intervention	(Radio Buttons) Turns the Alarm Intervention feature on or off on the DND. The choices are: ■ *NO* - Default value ■ *YES* - Activates this feature on a frame-by-frame basis Available for DACS II, Release 8.2.3 and later and DACS II ISX, Release 3.1 and later. See Chapter 2, Getting Started for information on turning on the Alarm Intervention Feature at the DACS.
DACS Log Recovery	Optional. (Applies to DACS II Release 8.2.3, or greater, and to DACS II ISX Release 3.1, or greater.) This field has a maximum of 4 numeric characters with a value of 0 to 2000. The default is 0. If 0 is selected, the DND will not retrieve messages from the DACS message log after link restoration. If a number from 1 to 2000 is selected, the DND will retrieve the messages only if the number of messages it must retrieve is less than the value entered in this field. Available for DACS II, Release 8.2.3 and later and DACS II ISX, Release 3.1 and later.
DACS Link Failure Length	Optional. This field has a maximum of 3 numeric characters with a value of 0 to 999. The default is 0. If the length of the link failure is greater than the number of seconds entered in this field, the DND will retrieve the messages from the DACS Messsge Log after link restoration. Available for DACS II, Release 8.2.3 and later and DACS II ISX, Release 3.1 and later.

Table 5-4. DND GUI: Field Descriptions for the NE PROVISIONING Form (Continued)

Field Name	Description
24-Hour PM Processing (non-PA type NPCS)	(Optional; Radio buttons) Select whether 24-Hour Performance Monitoring counts for non-PA type NPCs will be processed. The choices are: ■ *OFF* - PM counts not processed ■ *ON* - PM counts are processed. This selection must match the Performance Monitoring setting established at the DACS (refer to GT 2.5U) **NOTE:** If only the DND Forms-based 24-Hour Performance Monitoring feature for CEPT NPCs is desired, then this setting need not be turned *ON*.
24-Hour PM Processing (PA type NPCS)	(Optional; Radio buttons) Select whether 24-Hour Performance Monitoring counts for PA type NPCs will be processed. The choices are: ■ *OFF* - PM counts not processed ■ *ON* - PM counts are processed. This selection must match the Performance Monitoring setting established at the DACS (refer to GT 2.5U) **NOTE:** If only the DND Forms-based 24-Hour Performance Monitoring feature for CEPT NPCs is desired, then this setting need not be turned *ON*.
Language	Mandatory. Specifies the command language to be used for frame commands generated by DND. You must independently insure that this value conforms to the way the DACS is configured according to the instructions in Chapter 2: Getting Started. *MML* Use HuMan-Machine Language. MML is the *only* language allowed for DND when the **Action** is *CREATE*.

Table 5-4. DND GUI: Field Descriptions for the NE PROVISIONING Form (Continued)

Field Name	Description
NPC Addressing	(Radio buttons) Mandatory. Specifies the type of NPC addressing to be used in DACS commands generated by DND. You must independently insure that this value conforms to the way the DACS is configured. ■ *HIER* - Use hierarchical addressing ■ *EXT3* - Use 3-digit extended addressing ■ *EXT4* - Use 4-digit extended addressing For the *CREATE* **Action**, this field defaults to the appropriate value for the Type of DACS. The default for DACS II ISX is *EXT3*, which also is the only valid choice for those systems. Changing to some other value will prevent DND from communicating properly with the DACS.
Generic	(Text field) Mandatory. Two significant characters. Enter the generic in the form x.y. For example, for Release 7.0.3, enter 7.0.
Protocol	(Radio buttons) Mandatory. The transmission protocol to be used over the path between DND and the frame. ■ *SNIDER* - Serial asynchronous communication; the configuration is direct. You must enter a line **Speed** ■ *X.25* - Synchronous communication. You must enter a **Network Address** for the primary line and for the backup line if one was configured ■ *TCP/IP* - Telnet communication. You must enter an IP address for the DACS and a user name and password.
Location	(Text field) Optional. Up to 13 characters. States the physical location of the DACS. This is an informational field only.
X.25 Link Information Line1 - Line4	(Read-only fields - X.25 Only) Displays connection status of each line (IS or OOS). The Service State is set by the X.25 ADMINISTRATION form in the DND Forms Interface.
Primary Line	(Radio buttons) The number of the line that will be used for communication between the DND computer and the network or DACS.

Table 5-4. DND GUI: Field Descriptions for the NE PROVISIONING Form (Continued)

Field Name	Description
Backup Line	(Radio buttons) The number of the backup line to be used for communication between the DND computer and the network or DACS.
Network Address	(Text field) Appears only for the X.25 **Protocol**. A maximum of 15 numeric characters. Contains the PDN address for the X.25 connection to the DACS. This must be provided for the **Primary Line** and the **Backup Line**, if a **Backup Line** is specified.
Line Number	(Combo box - SNIDER Only) Two numeric characters. Select the tty port number on the DND ports card for this connection. If a line is being used as a login port or for another DACS, it will not be displayed as a **Line Number** choice.
Baud Rate	(Radio buttons - SNIDER Only) The baud rate for this DND SNIDER port. Values are **1200**, **2400**, **4800**, and **9600**. You must independently insure that this value conforms to the way the DACS is configured.
IP Address	(Text field - TCP/IP Only) The Internet Protocol address at the DACS. See Chapter 2, Getting Started. Applies only to DACS II, Release 9.0 and later. See GT 5.4G for additional information.
Dacs User Name	(Text field - TCP/IP Only) Upper case. The DACS user name previously provisioned at the DACS and used to establish a telnet session to a DACS. See Chapter 2, Getting Started. Applies only to DACS II, Release 9.0 and later. See GT 5.4G for additional information.
DACS User Password	(Text field - TCP/IP Only) Upper case. The DACS user password previously provisioned at the DACS and used to establish a telnet session to a DACS. See Chapter 2, Getting Started. Applies only to DACS II, Release 9.0 and later. See GT 5.4G for additional information.

DND Forms: FRAME ADMINISTRATION Form

Purpose

Select FRAME ADMINISTRATION from the SYSTEM ADMINISTRATION menu to enter information identifying a DACS or to remove or restore service to the DACS.

The type of information specified in the form includes such items as:

- DACS Site Name
- DACS Type (DACS II or DACS II ISX)
- Network Protocol (X.25, SNIDER, or TCP/IP)

NOTE:
A Network Protocol of TCP/IP is a display only field for MODIFY, REMOVE, RESTORE, and DELETE actions. It is not possible to CREATE a DACS with a TCP/IP link using the DND Forms. This is only possible from the DND GUI. The other actions are allowed.

DND Forms: FRAME ADMINISTRATION Form (Continued)

Sample Screen for X.25

Figure 5-11 shows an example of a FRAME ADMINISTRATION form for a DACS II using X.25 protocol.

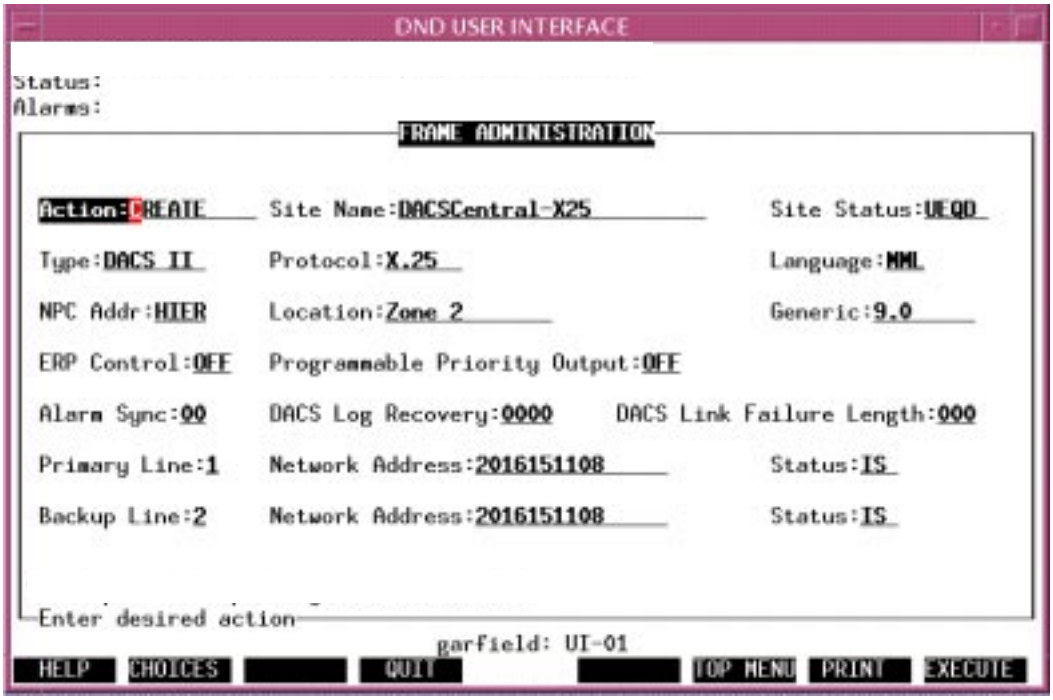


Figure 5-11. DND Forms: FRAME ADMINISTRATION Form for DACS using X.25 Protocol

DND Forms: FRAME ADMINISTRATION Form (Continued)

Sample Screen for SNIDER

Figure 5-12 shows an example of a FRAME ADMINISTRATION form for a DACS II using SNIDER protocol.

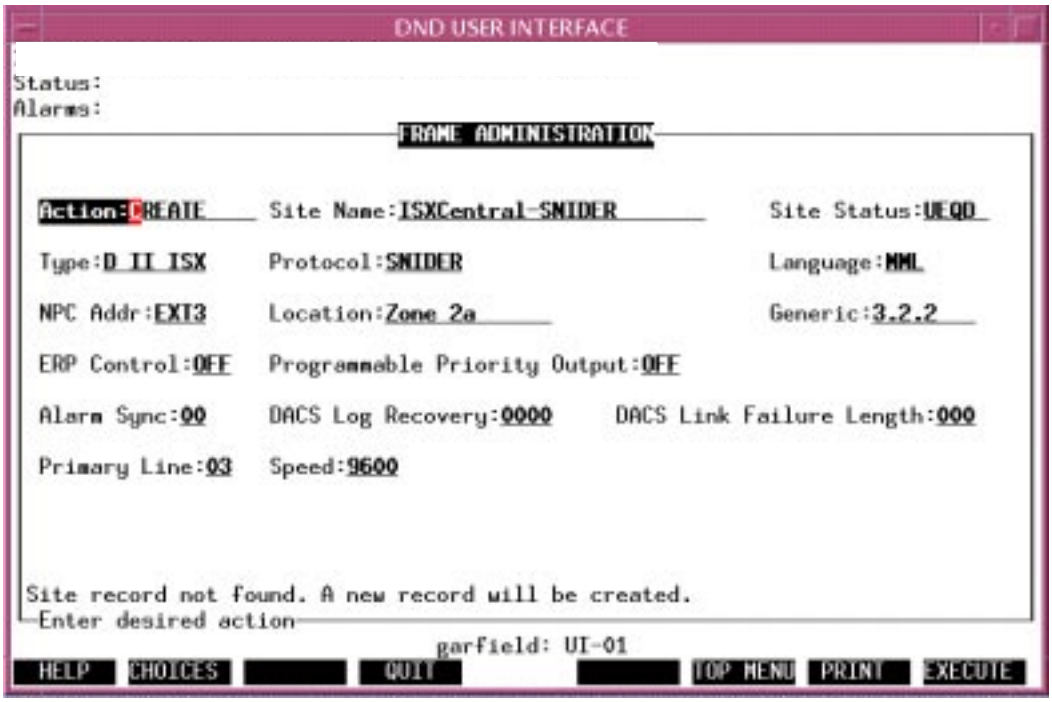


Figure 5-12. DND Forms: FRAME ADMINISTRATION Form for DACS using SNIDER Protocol

DND Forms: FRAME ADMINISTRATION Form (Continued)

Field Descriptions

The field values for the FRAME ADMINISTRATION form (for DACS frames only) are described in Table 5-5.

Table 5-5. DND Forms: Field Descriptions for the FRAME ADMINISTRATION Form

Field	Description
Action	Mandatory. Valid entries are: ■ *CREATE* - Provisions a new DACS in DND as a **Site Name** and sets the **Site Status** to *OOS*. The frame's database(s) is(are) created. ■ *RESTORE*- Establishes the administrative link to the DACS using the **Primary Line**. ■ *BRESTORE* - Establishes the administrative link to the DACS using the **Backup Line** and **Network Address** specified on the form. If none were specified, the request is denied. Not available for a **Protocol** of *SNIDER*. ■ *REMOVE* - Disconnects the virtual administrative link between the DND and the DACS specified in **Site Name**. ■ *DELETE* - Deletes the DACS and related data from the DND database. ■ *MODIFY* - Changes non-link information of this form when the **Site Status** is either *IS* or *OOS*. For changing line and network data: **Type**, **Protocol**, **Primary Line**, **Backup Line**, **Network Address** and **Speed**, the **Site Status** must be *OOS*. The *MODIFY* **Action** does not access **Site Name**. ■ *CHGSITE* - Changes the **Site Name** for the selected DACS.

Table 5-5. DND Forms: Field Descriptions for the FRAME ADMINISTRATION Form (Continued)

Field	Description
Site Name	Mandatory. 1 through *n* characters (as specified in the SITENAME_SIZE environment variable) from the set 0-9, A-Z, a-z, /, _, and -. All other characters are illegal. Blanks are not allowed within a name. The name of the DACS where the requested **Action** will take place. Pressing CHOICES displays WHICH DACS? with a list of the DACS names. These names were established during frame administration, described in this chapter.
Site Status	The status of the DACS, not user-accessible. ■ *IS P* - For SNIDER. In service. ■ *IS n* - For X.25. In service on line n, where n is *P* for primary or *B* for backup. A *RESTORE* for the DACS referenced in **Site Name** has successfully been completed and a message has been received saying that this link is on-line. Communications are active. ■ *OOS* - Out of service. Communications are not currently active, because the DACS has been created, but has not yet been restored or the DACS has been removed. ■ *UEQD* - Unequipped. Either a *CREATE* has never been done for this DACS, or a *DELETE* was done on it. ■ *ALM* - The DACS has been *RESTORED*, but the communication to the DACS is not currently active. ■ *AS* - An audit/sync is in progress on this DACS. ■ *QRY* - Query. The DACS is in-service but is in a "query" state. DND queries the DACS to verify the language, generic, and NPC addressing information. On an X.25 link, the query is in progress. On a SNIDER link, the query is sent when communications are established, which may be some time after the link is placed in service.

Table 5-5. DND Forms: Field Descriptions for the FRAME ADMINISTRATION Form (Continued)

Field	Description
Site Status, Continued	■ *ERR* - The information entered through the Frame Administration form is inconsistent with the connected DACS or the query to the DACS (*QRY*) failed. This condition must be corrected before any other commands can be entered into the system. In this condition, the DACS will still continue to process echo responses and DACS alarms. ■ *RCY* - Recovery. A message log recovery is in progress. The DACS state may transition to the *RCY* state if the link to the DACS is manually or automatically re-established and the DACS Log Recovery and DACS Link Failure Criteria are set and satisfied.
Type	Mandatory. Specifies the type of DACS. ■ *DACS II* - The frame is a DACS II. The **Language** *must* be *MML*. ■ *DACS II ISX* - The frame is a DACS II ISX, Releases 1.0 and higher.
Protocol	Mandatory. The transmission protocol to be used over the path between DND and the frame. ■ *SNIDER* - The configuration is direct. You must enter a line **Speed**. ■ *X.25* - The configuration is PDN. In the PDN case, you must enter a **Network Address** for the primary line and for the backup line if one was configured. ■ TCP/IP - A Network Protocol of TCP/IP is a display only field for MODIFY, REMOVE, RESTORE, and DELETE actions. It is not possible to CREATE a DACS with a TCP/IP link using the DND Forms. This is only possible from the DND GUI. It is possible to MODIFY a DACS to a TCP/IP protocol from another type of protocol. The other actions are allowed.

Table 5-5. DND Forms: Field Descriptions for the FRAME ADMINISTRATION Form (Continued)

Field	Description
Language	Mandatory. Specifies the command language to be used for frame commands generated by DND. You must independently insure that this value conforms to the way the DACS is configured according to the instructions in Chapter 2: Getting Started. ■ *MML* - Use HuMan-Machine Language. MML is the *only* language allowed for DND when the **Action** is *CREATE*.
NPC Addr	Mandatory. Specifies the type of NPC addressing to be used in DACS commands generated by DND. You must independently insure that this value conforms to the way the DACS is configured according to the instructions in Chapter 2, Getting Started. ■ *HIER* - Use hierarchical addressing. ■ *EXT3* - Use 3-digit extended addressing. ■ *EXT4* - Use 4-digit extended addressing. For the *CREATE* **Action**, this field defaults to the appropriate value for the Type of DACS. The default for DACS II ISX is *EXT3*, which also is the only valid choice for those systems. Changing to some other value will prevent DND from communicating properly with the DACS.
Location	Optional. Up to 13 characters. States the physical location of the DACS. This is an informational field only.
Generic	Mandatory. Up to eight printable characters. The first must be numeric. States the DACS software release number of DACS II or DACS II ISX software running at **Site Name**. For release 7 of DACS II, the entry *7.0* is required. This field distinguishes between releases prior to 7, Release 7, and subsequent releases.

Table 5-5. DND Forms: Field Descriptions for the FRAME ADMINISTRATION Form (Continued)

Field	Description
ERP Control	The selection or nonselection of conditional echoed response processing for this DACS. ■ *ON* - Process NPC and circuit echoed response messages only on condition that all NPCs cited in the message are already in the DND database. ■ *OFF* - Process echoed response messages unconditionally. The default, if the **Action** is *CREATE*.
Alarm Sync	The selection or nonselection of NPC alarm synchronization for this DACS. ■ *00* - Do not update the DND database with information concerning the DACS's current alarms when the **Site Status** becomes *IS*, *IS P* or *IS B*. ■ nn - Provided nn hours have elapsed since the last alarm sync was completed, query the DACS and update the **Alarm State** information for the DACS. For more information, refer to Chapter 8: NPC Provisioning.
Message Log Recovery	Optional. (Applies to DACS II Release 8.2.3, or greater, and to DACS II ISX Release 3.1, or greater.) This field has a maximum of 4 numeric characters with a value of 0 to 2000. The default is 0. If 0 is selected, the DND will not retrieve messages from the DACS message log after link restoration. If a number from 1 to 2000 is selected, the DND will retrieve the messages only if the number of messages it must retrieve is less than the value entered in this field.
DACS Link Failure	Optional. (Applies to DACS II Release 8.2.3, or greater, and to DACS II ISX Release 3.1, or greater.) This field has a maximum of 3 numeric characters with a value of 0 to 999. The default is 0. If the length of the link failure is greater than the number of seconds entered in this field, the DND will retrieve the messages from the DACS Messsge Log after link restoration.

Table 5-5. DND Forms: Field Descriptions for the FRAME ADMINISTRATION Form (Continued)

Field	Description
Programmable Priority Output	This field allows you to specify whether to activate/ deactivate the Programmable Priority feature. When an NPC or another hardware component goes down, there are many DACS alarm messages that are generated and queued based on the order they are received. When Programmable Priority is set to *ON*, any MML command entered from the DACS with the keyword "*PRIOUT*" is automatically prioritized and placed before other messages in the DACS queue. This request only impacts the order of the output and does not change the execution of commands. This option can be specified on a frame-by-frame basis. The values are: ■ *OFF* - Default value. ■ *ON* - Activates this feature on a frame-by-frame basis. This field is only available for DACS II, Release 7.0 and higher.
Primary Line	(X.25 and SNIDER only.) It is not possible to CREATE a DACS with TCP/IP Protocol or to MODIFY a DACS to a TCP/IP Protocol.) The number of the line that will be used for communication between the DND computer and the network or DACS in the case of the X.25 configuration, or between the DND computer and the DACS in the case of the SNIDER configuration. This link must be In Service (**Status** of *IS*, see LINK PROVISIONING). ■ **For X.25 -** One numeric character. Enter the physical line number of the primary connection. Valid entries are 1 through 4. ■ **For SNIDER -** Two numeric characters. Enter the tty port number on the DND ports card for this connection, provided that the line has not been restored as a login port.

Table 5-5. DND Forms: Field Descriptions for the FRAME ADMINISTRATION Form (Continued)

Field	Description
Backup Line	(X.25 only) The number of the line to be used as the backup path from the DND computer to the network. This link must be *IS*. Specifying the same line as in **Primary Line** means that you are making the primary and backup links to the network the same; i.e., no backup.
Network Address	Appears only for a **Protocol** of X.25. A maximum of 15 numeric characters. For a primary line, this field contains the PDN address for the X.25 connection to the DACS. For a backup line, this field contains the PDN address for the backup line. The address specifies the link from the network to the DACS. Specifying the same address for primary and backup lines means that you are making the primary and backup links the same; i.e., no backup link to the DACS.
Status	A display-only field, which can appear twice, once for the primary line and once for the backup line. It displays the status of the link associated with the **Network Address**. The **Status** can be *IS* or *OOS*.
Speed	Values are *1200*, *2400*, *4800*, and *9600*. The baud rate for this DND SNIDER port. You must independently insure that this value conforms to the way the DACS is configured as described in Chapter 2, Getting Started. This field only appears if the **Protocol** is *SNIDER*.

NOTE:
If a DACS II or DACS II ISX is created from the DND Forms interface, the Alarm Intervention feature is defaulted to OFF. If a DACS is modified, the Alarm Intervention field is not changed and cannot be changed from the DACS DND Forms FRAME ADMINISTRATION Form.

End User Provisioning

6

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Background

Introduction

An End User is the term used for remote equipment (i.e. customer equipment, switching equipment, etc.) connected to a Network Element which is not controlled by the DND. The provisioning functionality of an End User is limited — End Users can be represented on the Network Map and alarms received by their associated Network Element are processed, but the provisioning of the End User equipment is not supported on the DND.

End User provisioning is performed at the DND GUI.

Objectives

This chapter provides background information to help you perform the following:

1. Create an End User
2. Modify an End User
3. Delete an End User.

Related tasks

For related tasks, see the following DND GUI General Tasks in Volume II:

- Creating an End User GT 6.1G
- Modifying an End User GT 6.2G
- Deleting an End User GT 6.3G

Related information

For related information see:

- *Chapter 3, DND Screens and Form Navigation*
- *Chapter 7, Intertie Provisioning*.

The End User Provisioning Form

End User Provisioning Form

Figure 6-1 shows an example of an END USER PROVISIONING form.

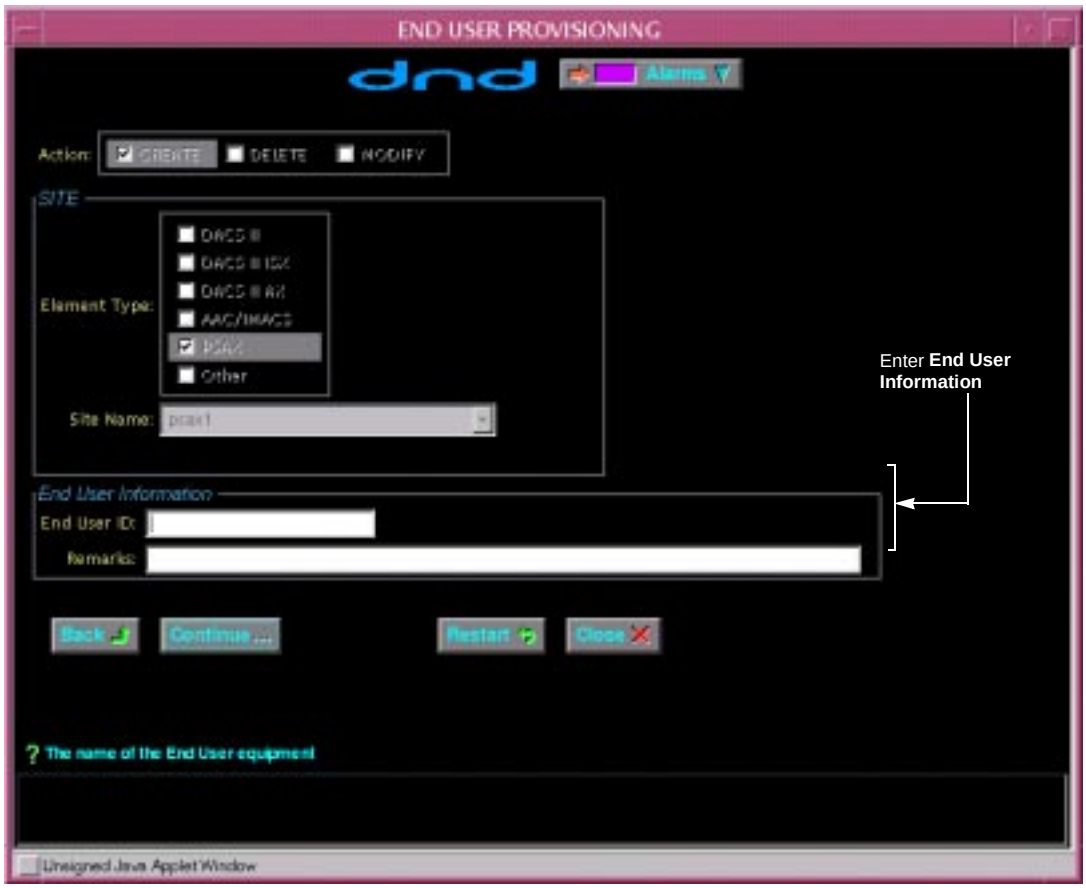


Figure 6-1. END USER PROVISIONING Form, *CREATE* Action

The End User Provisioning Form (Continued)

End User Information

End User equipment is associated with a corresponding Network Element (DACS or SNMP sites). End User equipment is typically located at customer sites, and is therefore, not controlled by the DND. However, they are a part of the network, and the DND GUI provides a graphical representation of them.

End User Icons

End User equipment for each site is represented by one icon, but the End User icon can represent multiple pieces of End User equipment.

Once created, the new End User icon will appear in the center of its associated Network Element icon.

NOTE:
Only one End User icon is allowed per Network Element.

End Users and Interties

An End User cannot be deleted if it is connected to an intertie.

The End User Provisioning Form (Continued)

Field Descriptions

The field values for the END USER PROVISIONING form are described in Table 6-1:

Table 6-1. Field Descriptions for the END USER PROVISIONING Form

Field Name	Description
Action	(Radio buttons) Mandatory.Valid choices are: ■ *CREATE* - Establish an End User in the DND database. The End User corresponds to a particular Network Element. Cannot create more than one End User icon per site ■ *MODIFY* - Change **End User Information**, such as **End User ID** and **Remarks** ■ *DELETE* - Remove an End User from the DND database
Element Type	(Radio buttons) Select the Network Element type to associate with the End User. The choices are: ■ DACS II ■ DACS II ISX ■ DACS II AX ■ AAC/IMACS ■ PSAX ■ Other.

Table 6-1. Field Descriptions for the END USER PROVISIONING Form (Continued)

Field Name	Description
Site Name	(Combo box) Mandatory. Select the Network Element name to which the End User corresponds. By default, the list appears alphabetically. To change the sorting order, modify the setting for the SORT_NAME_BY variable using the DND Forms Interface. The list of choices in this field is dynamic, and changes depending on the **Action** and **Element Type**. For example, if the **Action** is CREATE and the **Element Type** is DACSII, the list of choices in **Site Name** will only be DACS II sites that do not already have End Users provisioned.
End User ID	(Text field) Mandatory. Must be unique. 1 through 24 characters from the set 0-9, A-Z, a-z, /, _, and -. All other characters are illegal. Blanks are not allowed within a name. Enter a name for the End User in the *CREATE* action; will be carried over to the *MODIFY* and *DELETE* actions. This name is the label of the End User icon on the network map.
Remarks	(Text field) Optional. 0-72 characters. Free field to enter information about the End User, such as location, usage, etc.

Intertie Provisioning

7

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Background

Introduction

An intertie is the graphical representation of a physical connection (trunk lines, DS1/E1, DS3/STS1 lines, etc.) between either two Network Elements or between a Network Element and an End User. The connection is depicted by a straight line between the two entities with a circular or rectangular "bubble" point in the center of the line (refer to *Chapter 3, DND Screens and Form Navigation*) for selection purposes.

Intertie provisioning is performed at the DND GUI.

Objectives

This chapter provides reference information to help you perform the following:

1. Create an intertie
2. Modify an intertie
3. Add Ports to/Delete Ports from an intertie
4. Delete an intertie.

Related tasks

For related tasks, see the following DND GUI General Tasks in Volume II:

- Creating an Intertie GT 7.1G
- Modifying an Intertie GT 7.2G
- Adding Ports to an Intertie GT 7.3G
- Deleting Ports from an Intertie GT 7.4G
- Deleting an Intertie GT 7.5G

Related information

For related information see:

- *Chapter 3, DND Screens and Form Navigation*
- *Chapter 5, NE Provisioning*
- *Chapter 6, End User Provisioning*.

The Intertie Provisioning Form

Intertie Types

There are two different types of interties:

- Direct interties - a trunk from one Network Element has a direct connection to another Network Element or End User. All interties between a Network Element and an End User will default to the DIRECT **Intertie Type**. You will not be able to change this default. Direct interties are displayed graphically with a circular "bubble" in the middle.
- Indirect interties - a trunk from one Network Element is indirectly connected to another Network Element through another network, i.e., through a SONET ring. The trunk information is routed through the network, and comes out of the network on a different trunk line. Indirect interties are displayed graphically with a rectangular "bubble" in the middle.

NOTE:
Interties cannot be created between two End Users.

The Intertie Provisioning Form (Continued)

Sample Form #1 Figure 7-1 shows an INTERTIE PROVISIONING form for an intertie between two Network Elements (NE-to-NE).

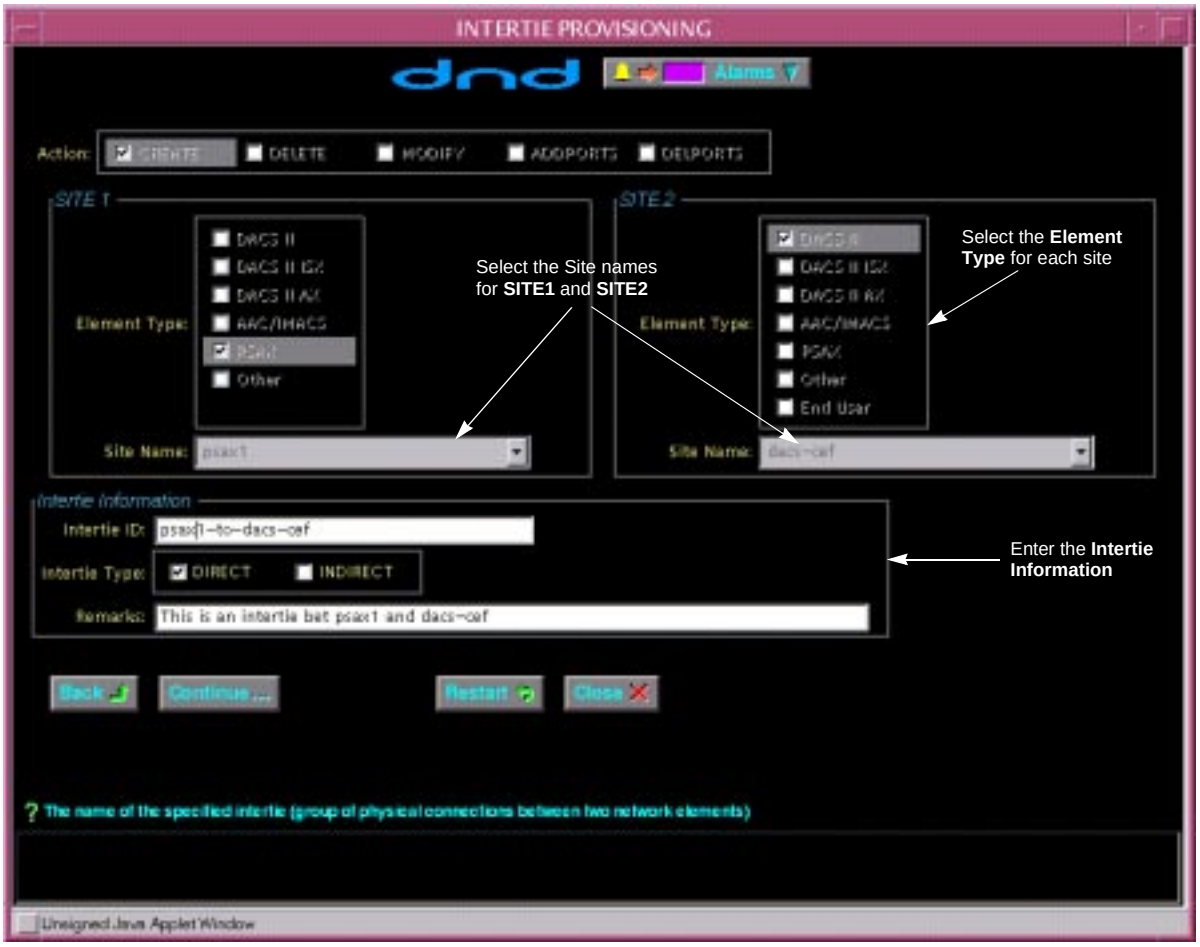


Figure 7-1. INTERTIE PROVISIONING Form, NE-to-NE

The Intertie Provisioning Form (Continued)

Sample Form #2 Figure 7-2 shows an INTERTIE PROVISIONING form for an intertie between a Network Element and an End User (NE-to-EU).



Figure 7-2. Intertie Provisioning Form, NE-to-EU

The Intertie Provisioning Form (Continued)

Intertie Ports

NPCs, MMFGs, and SNMP ports (all are considered ports) are assigned to and deleted from (via *ADDPORTS* and *DELPORTS* actions) interties at Network Element (NE) nodes to create network paths of information flow throughout the DND network. On the form, the intertie information will appear in read-only mode, and can only be changed by performing a *MODIFY* action.

Port Assignment

For an NE-to-NE intertie, ports are assigned in pairs - one NPC/MMFG (DACS frames) or SNMP port for each Network Element site. For an NE-to-EU intertie, ports are assigned only to the Network Element site. Figure 7-3 provides an example.

NOTE:
Ports need not be provisioned when they are added to the intertie.

Circuit Trace

To display the circuit network path, perform a Circuit Trace (refer to *Chapter 10, Circuit Provisioning*).

The Intertie Provisioning Form (Continued)

Port Speed

Ports can run at differents speeds. When adding ports to an intertie, you must specify the port speed. This speed will be applicable for the port (or ports) on both sides of the intertie. The port speed choices are limited by the type of sites connected to the intertie. Table 7-1 illustrates the following rules on intertie port speeds:

- DS0 speed is only for SNMP-to-End User interties
- DS3 speed is not allowed for DACS II ISX.

Table 7-1. Intertie Types and Associated Port Speeds

	DACS II (CEF, Non-CEF, SBF)	DACS II ISX	SNMPs - DACS II AX, AAC, IMACS, "Other"	PSAX	End User
DACS II (CEF, Non-CEF, SBF)	DS1, DS3	DS1	DS1, DS3	DS1, DS3	DS1, DS3
DACS II ISX		DS1	DS1	DS1	DS1
SNMPs - DACS II AX, AAC, IMACS, "Other"			DS1, DS3	DS1, DS3	DS0, DS1, DS3
PSAX				ATM	DS1, DS3

NOTE:

1. In the Table above, DS1 refers to either DS1 or E1.
2. In the Table above, DS3 refers to either DS3 or STS1 (only valid for DACS II AX).
3. If an MMFG (DS3 port on a DACS II CEF) is added to an intertie, then any NPC associated with the MMFG cannot be added to the intertie. Technically, the NPC has already been added to the intertie.
4. When adding ports to an intertie connected to an SNMP, all ports in a given slot must have the same speed.

The Intertie Provisioning Form (Continued)

Slot Cards

There are many different types of cards used for ports, depending on the type of network element. Table 7-2 shows a network element and an example of a type of card type and an associated speed associated with the card.

Table 7-2. Network Elements and Associated Cards Example

	DS0	DS1/E1	DS3/STS1	ATM
DACS II (CEF, Non-CEF, SBF)	-	NPC	MMFG	-
DACS II ISX	-	NPC	-	-
DACS II AX	Octal Voice Module	Quad Port Data Sync, Octal T1/E1 Module	DS3 Module STS1 Module	-
AAC/ IMACS	E&M Card	WAN Card	-	-
PSAX		E1 IMA	Channelized DS3 card	OC-3 Card

The Intertie Provisioning Form (Continued)

Sample Form #3

Figure 7-3 shows an example of using the INTERTIE PROVISIONING form to add ports to the intertie.

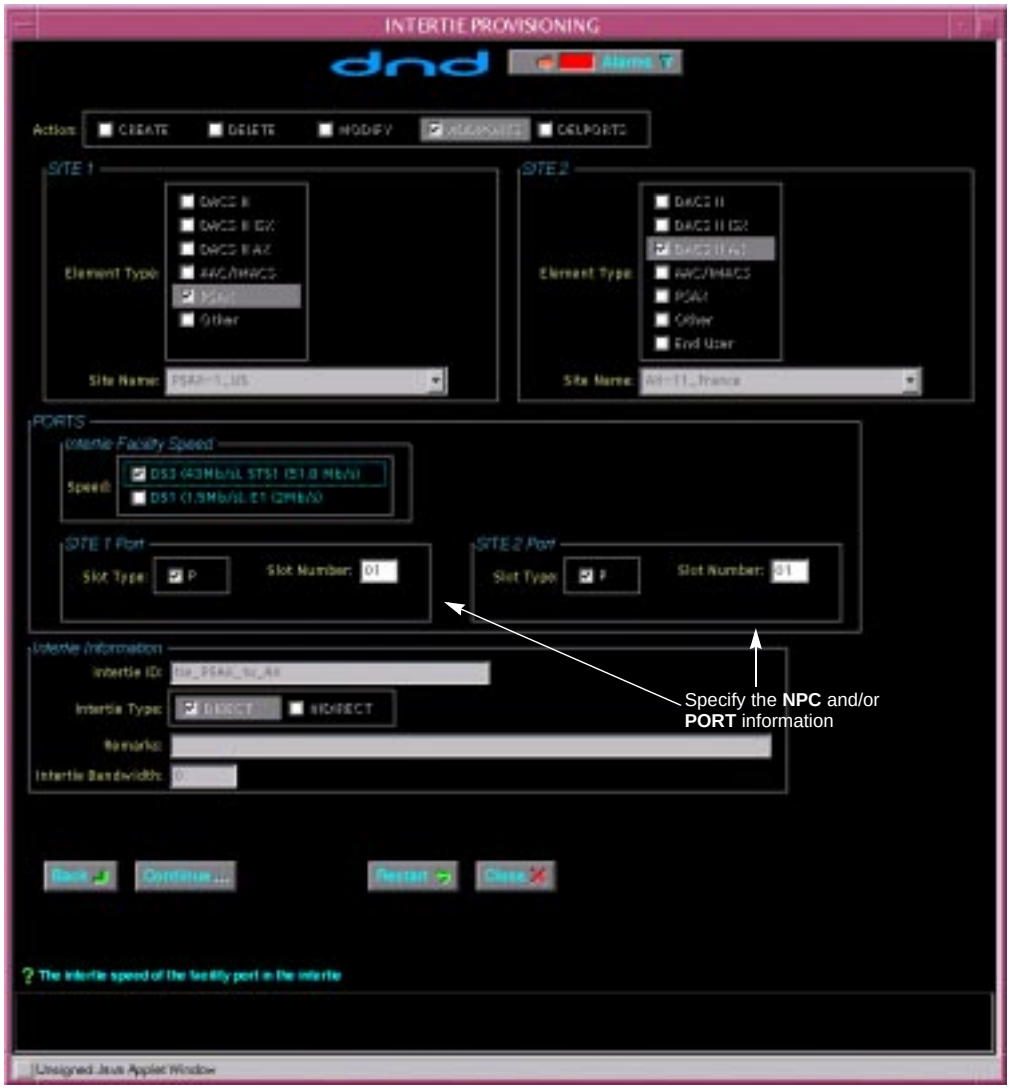


Figure 7-3. Intertie Provisioning Form, *ADDPORTS* Action

The Intertie Provisioning Form (Continued)

Field Descriptions

The field values for the INTERTIE PROVISIONING form are described in Table 7-3:

Table 7-3. Field Descriptions for the INTERTIE PROVISIONING Form

Field Name	Description
Action	(Combo box) Mandatory. Valid choices are: ■ *CREATE* - Establishes an intertie between two DND site entities, NE-to-NE or NE-to-EU connection. ■ *DELETE* - Deletes the intertie and related data from the DND database. ■ *MODIFY* - Change the **Intertie Information,** which includes the **Intertie ID**, **Intertie Type** and **Remarks**. ■ *ADDPORTS* - Adds ports (in pairs for NE-to-NE, a single port for NE-to-EU) to the intertie. ■ *DELPORTS* - Deletes the ports (in pairs for NE-to-NE, a single port for NE-to-EU) from the intertie.
Site Name	(Combo box) Mandatory. (For SITE 1 and SITE 2, if SITE 2 is a Network Element) Name of the Site entity. If SITE 2 is an End User, select the End User check box. By default, the list appears alphabetically. To change the sorting order, modify the setting for the SORT_NAME_BY variable using the DND Forms Interface.
Speed (Port)	(Radio buttons) The speed designated to ports added to both sides of the intertie. The speeds displayed are dependent on the type of sites connected to the intertie. Valid choices are: ■ ATM (virtual path) ■ DS3 (43 Mb/s), STS1 (51.8 Mb/s - For DACS II AX only) ■ DS1 (1.5Mb/s), E1 (2Mb/s) ■ DS0 (64 kb/s)

Table 7-3. Field Descriptions for the INTERTIE PROVISIONING Form (Continued)

Field Name	Description
Slot Number	(Text field) Mandatory. Enter the number of the slot for the **SLOT TYPE** previously selected. 1 or 2 digits. ■ DACS II AX slots: *01* through *11* ■ PSAX slots: *01* through *15* ■ AAC/IMACS slots: P and W: *01* through *04* U: *01* through *08* ■ "Other" type slots: *01* through *99*.
Slot Type	(Radio buttons - appears only for DACS II AX, AAC/IMACS, PSAX, and "Other" type SNMP elements.) Mandatory. Select the type of port to add to/delete from/modify on the intertie. Some typical choices are: ■ *P* - Server card (ISDN, ADPCM, IMUX, or FRS cards) used for providing internal services. ■ *U* - User card (voice, data, and alarm cards) ■ *W* - Wan card For the DACS II AX this field is read-only and can only be *P*. For the PSAX this field is read-only and can only be *P*. For the AAC/IMACS, the choices are *P, U,* or *W.* For the "Other" type SNMP, the choices are any letter from *A* through *Z.*
Port Number	(Text field) Mandatory. Up to 3 digits. Enter the number of the port for the **SLOT NUMBER** previously selected. ■ DACS II AX ports: P: *01* through *28* ■ PSAX ports: P: *01* through *28* ■ AAC/IMACS ports: P: *01* through *28* U: *01* through *08* W: *01* through *08* ■ "Other" type ports: *001* through *999*.

Table 7-3. Field Descriptions for the INTERTIE PROVISIONING Form (Continued)

Field Name	Description
VPI	(Text field - appears only for ATM speed) Virtual Port Interface. Range is 0-4095
VCI	(Text field - appears only for ATM speed) Virtual Channel Interface. Range is 0-65535
Intertie ID	(Text field) Mandatory. Enter the name you create for the intertie. Must be unique. 1 through 24 characters from the set 0-9, A-Z, a-z, /, _, and -. All other characters are illegal. Blanks are not allowed within a name.
Intertie Type	(Radio buttons) Mandatory. Types are: ■ *Direct* - direct connection between nodes; NE-to-EU interties default to Direct. ■ *Indirect* - connection between two NE nodes via a network, such as a SONET ring.
Remarks	(Text field - Optional) Free field to enter information about the intertie.
Intertie Bandwidth	(Read-only field) Appears on the form after ports have been added/deleted from it, indicates the bandwidth size (number of ports assigned to each side) before the execution of the current form.
NPC Specifier/NPC	(Radio buttons and text field - only appears on the form for interties with DACS II and/or DACS II ISX sites) Mandatory. Three choices for entering NPC data: ■ *ID* - If selected, Enter the NPC name in the **NPC:** field ■ *Hier* - If selected, enter the NPC's hierarchical number in the **NPC:** field ■ *Extd* - If selected, enter the NPC's extended number in the **NPC:** field.

Table 7-3. Field Descriptions for the INTERTIE PROVISIONING Form (Continued)

Field Name	Description
MMFG Specifier/ MMFG	(Radio buttons and text field - only appears on the form for interties with DACS II CEF sites) Mandatory. Two choices for entering MMFG data: ■ *ID* - If selected, Enter the MMFG name in the **MMFG:** field ■ *Number* - If selected, enter the MMFG number in the **MMFG:** field. The MMFG Number is <Unit # on DACS>-<MMFG #>, where MMFG # can be any number from 1-6, for example 11-4.
New Intertie Bandwidth	(Read-only field) Appears on the form after an *ADDPORTS/DELPORTS* **Action** has executed. It indicates the bandwidth after the execution of the form.

Intertie Features

Features

Interties allow you to perform the following:

- Graphically monitor intertie NPC/MMFG/SNMP port alarm status
- Perform actions using the intertie "bubble"

Creating Interties from the Network Map

Interties can be create directly from the network map by:

1. Press the Shift key and hold while Right-clicking and holding on the SITE 1 Network Element icon.
2. Drag mouse towards the SITE 2 Network Element icon. A circle appears around the TO icon, and the intertie line is drawn on the map.
3. Release the mouse button once the pointer has reached the FROM icon.

Once the intertie drawing is completed, the INTERTIE PROVISIONING form will automatically appear on the screen, with the SITE 1 and SITE 2 information pre-populated.

Deleting Ports from an Intertie

A port cannot be deleted from an intertie if there is a termination provisioned on it.

Intertie Alarms

Similar to Network Elements, interties can have alarms if an NPC/MMFG/SNMP port connected to it at either Network Element site goes into alarm. Intertie alarms are indicated by the color of the intertie line, as described in Table 7-4.

Table 7-4. Intertie Alarm Color Scheme

Alarm Color	Explanation
Green	**No** port alarms
Yellow	The highest alarm state of any port on the entire intertie is a **Minor** alarm.
Red	The highest alarm state of any port on the entire intertie is a **Major** alarm.
Magenta	The highest alarm state of any port on the entire intertie is a **Critical** alarm.

Intertie Features (Continued)

Intertie Menu

With the intertie "bubble," you can obtain intertie information or perform intertie actions directly from the intertie graphic. Right-click and hold the mouse button on the intertie "bubble" to display a pull-down menu (see Figure 7-4) with the choices described in Table 7-5:

Table 7-5. Intertie Pull-Down Menu Choices

If you select...	...Then DND will display...
Intertie Provisioning...	The INTERTIE PROVISIONING form to perform an action on the intertie
Intertie Port Report...	A report on the ports associated with the intertie
Intertie Alarm Report...	An alarm report for the ports associated with the intertie

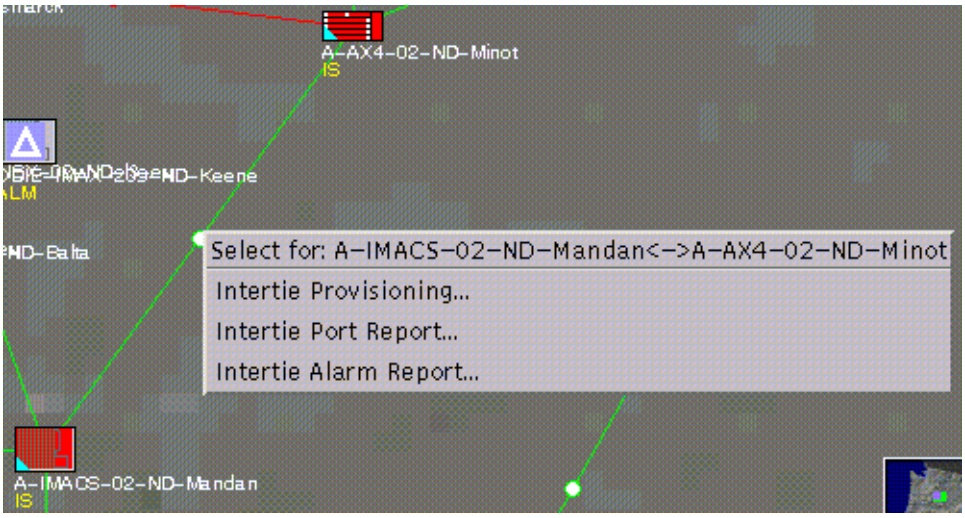


Figure 7-4. Intertie Menu

DACS II, DACS II ISX NPC Provisioning

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Background

Introduction

Network Processing Circuits (NPCs), circuit building blocks, must be provisioned before circuits can be created. Provisioning takes place on two different levels:

- **Physical Provisioning** — Individual lines are brought to a DACS and are terminated there at circuit cards. Make sure unit and shelf equipment is In-Service and that the proper type of cards are inserted before beginning. This level of provisioning is beyond the scope of this manual, and must have already taken place before the DND can create service.
- **Logical Provisioning** — This action takes place on the DND. One of the primary functions of the DND is to simplify this operation for you. When an NPC is provisioned, you identify the operational characteristics of the NPC by using a form. These characteristics include the NPC type xyz values (e.g. E1 vs. DS1, signaling type), Performance Monitoring threshold information, and others. These characteristics are sent to the DACS in the form of MML commands and also saved in the local DND database. Once an NPC is provisioned at the DND and at the DACS, the channels of that NPC are available for cross connect.

Objectives

This chapter provides background information to help you perform the following:

1. Create NPCs
2. Restore NPCs
3. Modify NPCs
4. Remove NPCs
5. Delete NPCs
6. Place an NPC in Loopback Mode
7. Remove an NPC from Loopback Mode
8. Query an NPC
9. Browse NPCs.

Background (Continued)

Related tasks

For related tasks, see the following General Tasks in Volume II:

DND GUI:

■ Creating NPCs	GT 8.1G
■ Creating a DSPU NPC	GT 8.2G
■ Restoring NPCs on a DACS	GT 8.3G
■ Modifying NPCs	GT 8.4G
■ Removing NPCs from a DACS	GT 8.5G
■ Deleting NPCs from a DACS	GT 8.6G
■ Placing an NPC in Loopback Mode	GT 8.7G
■ Removing an NPC from Loopback Mode	GT 8.8G

DND Forms:

■ Creating an NPC	GT 8.1U
■ Restoring an NPC on a DACS	GT 8.2U
■ Modifying an NPC	GT 8.3U
■ Removing an NPC from a DACS	GT 8.4U
■ Deleting an NPC from a DACS	GT 8.5U
■ Placing an NPC in Loopback Mode	GT 8.6U
■ Removing an NPC from Loopback Mode	GT 8.7U
■ Querying an NPC	GT 8.8U
■ Browsing NPCs	GT 8.9U

Related information

For related information see:

- *DACS II and DACS II ISX Operation and Maintenance Manual*
- *DACS II Network Director Installation Manual.*

General Information

Major Actions

The major NPC provisioning actions are *CREATE, RESTORE, REMOVE*, and *DELETE*. These actions are based on the DACS concepts of "create equipment," "place in service," "remove from service," and "disconnect equipment."

DND GUI: Modifying NPCs

Most fields can be modified while the NPC is In-Service. When modifying fields which need to be Out-of-Service (OOS), make sure to select the Remove NPC checkbox during the MODIFY Action. DND will *REMOVE* the NPC, make the necessary changes, and *RESTORE* it back to service.

NPC Type and Parameters

The NPC is designated by **mnxyz**, where:

- **mn** refers to the NPC Type
- **xyz** refers to the NPC Parameters.

The NPC type, specified by the first two letters of the **NPC Type** field on the NPC PROVISIONING form, indicates the circuit pack type. The NPC parameters, the last 3 numbers or letter-number combination, indicates specific conditions relating to that circuit type. The **mnxyz** parameters may differ between NPC types. For additional information, refer to the NPC Provisioning chapter in the *DACS II* and *DACS II ISX Operation and Maintenance Manual*.

A default NPC type can be set by the DND administrator. This NPC Type will appear as the NPC Type for the *CREATE* **Action** on the NPC PROVISIONING form. Other options can also be defaulted. For additional information on setting the `ui_dval` file, refer to "Setting/Changing Default Values for NPC and Circuit Provisioning Forms" in GT 2.9U.

NPC provisioning profiles based on **NPC Type** can be created and made available for public or private use. Field values are specified once in a profile and can be re-used as is or modified when you *CREATE* new NPCs. For more information, refer to "DND GUI: NPC Profiles" on Page 8-38.

NPC Types

NPCs

The class of NPC is specified by the first two letters of the NPC **Type** field on the NPC PROVISIONING form. The DND system does not support every type of NPC supported by the DACS II and DACS II ISX, but it does support the NPCs listed in Table 8-1.

Table 8-1. NPC Types

NPC Type	Description
PA/PB/PC	■ E1 NPCs, define 30 or 31 64kb/sec channels ■ 2 NPCs on a DPC card ■ PB/PC defined for a 120/75 ohm (twisted pair/ coax) ■ PA supports either 120/75 ohm ■ PA supports clear channel ■ ISX only supports PA
DE/DA	■ DS1 NPCs (NAS), define 24 64kb/s channels ■ 2 NPCs on a DDC card ■ ISX only supports DA
TE/TA	■ DS3U NPCs, 28 NPCs on a MUX circuit pack ■ Similar to DE/DA type NPCs
TH	■ Hybrid DS3U NPCs, 28 NPCs on a MUX circuit pack ■ Similar to PA type NPCs
MB	■ DSPU type NPC ■ Digital Multipoint bridge (broadcast/symmetrical conference ■ DACSII (only supports DSPU)
MJ/SR	■ DSPU type NPC ■ Subrate circuits, subrate broadcast ■ DACS II (only supports DSPU)

(Continued on next page)

NPC Types (Continued)

NPCs, Continued

Table 8-1. NPC Types (Continued)

NPC Type	Description
CB	■ DSPU type NPC ■ France Telcom C-bit Processor ■ DACS II only
SP	■ Digital Signal Processor ■ France Telcom C-bit Processor ■ ISX only
SD	■ DSP NPCs ■ define for DDS/X.50 Subrate ■ ISX only
ST	■ DSP NPCs ■ Integrated Test Set ■ DACS II only
Virtual	■ implied, not created by DND ■ DACS II only

NPC Types (Continued)

NPC Types Table

The NPC **Types** are correlated in Table 8-2.

Table 8-2. NPC Provisioning Types

	PB	*PC*	*PA*	*DE*	*TE*	*TH*	*DA*	*TA*	*MB*	*MJ*	Virtual	*CB*	*SP*	*SR*	*ST*
DACS II before R6.0	X	X		X	X				X	X	X				
DACS II, R6.0 and higher	X	X	X	X	X		X	X	X	X	X	X		X	
DACS II, R8.0 and higher	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DACS II, R9.0 and higher															X
DACS II ISX R1.1 and higher			X				X						X		

NPC Availability

The NPCs available are dependent on the type of units that are grown on a particular DACS. Therefore, not every type of NPC is available for every DACS. For example, if there are no DS3 units grown, there cannot be a DS3 NPC in that DACS. For additional information on growing units on a DACS, refer to the *DACS II* and *DACS II ISX Operation and Maintenance Guides*.

DND Supported NPC Addressing

NPC Specifiers

There are three ways to specify an NPC. The choices are:

- **ID** - The name used to identify the NPC. This is defined when performing the *CREATE* **Action**.
- **Hier** - A logical hierarchical numbering scheme; it identifies the unit identifier, module identifier, and the NPC number all in one 5-digit number. Figure 8-1 illustrates an example of a hierarchical number.

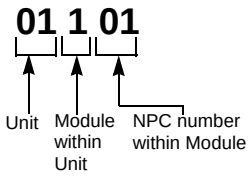


Figure 8-1. Hierarchical Number Example

- **Extended** - A sequential 3-digit or 4-digit numbering scheme of NPCs in the DACS.

The DACS II can be set to recognize either numbering scheme. This is described in the *Chapter 5, NE Provisioning*.

Specifying New or Existing NPCs

When specifying a new NPC, you must:

- Know the number of the NPC you are going to use (**Hier** or **Extd**)
- Give the NPC a name (**ID**)

When specifying a previously created NPC, you must:

- Know either the NPC name (**ID**) or number (**Hier** or **Extd**), or...
- Specify the NPC identifier in the **NPC:** field

DND Supported NPC Addressing (Continued)

DND GUI: Specifying Conditions

When specifying NPCs, note the following conditions:

- If **Hier** - All five digits of the hierarchical NPC number are relevant and it is necessary to enter all five. Leading and trailing spaces are not allowed.
- If **Extd** - Lead zeros are not necessary to enter for extended NPC numbers. Enter the significant extended digits and the DND will fill in the other digits once Continue... is clicked. Trailing spaces are not allowed.
- If **ID** - The **ID** field is case-sensitive. ID characters must match exactly. A large number of characters are available and spaces between letters are allowed. Leading and trailing spaces are not allowed.

DND GUI: NPC Number Display

Once an NPC number has been entered and the form has been transitional (Continue... is clicked), the DND will display all three formats (**Hier**, **Extd** and **ID**). When one number scheme is selected, the other is generated and displayed by the DND. The conversion algorithm depends on the NPC type. The NPC Number equivalents are illustrated in the following three tables.

DND Supported NPC Addressing (Continued)

NPC Number Conversion

Table 8-3. NPC Number Equivalents for DACS II FTU Type Units

Extended	Hierarchical	Extended	Hierarchical
0001 to 0160	01101 to 01440	1761 to 1920	12101 to 12440
0161 to 0320	02101 to 02440	1921 to 2080	13101 to 13440
0321 to 0480	03101 to 03440	2081 to 2240	14101 to 14440
0481 to 0640	04101 to 04440	2241 to 2400	15101 to 15440
0641 to 0800	05101 to 05440	2401 to 2560	16101 to 16440
0801 to 0960	06101 to 06440	9961	99101
0961 to 1120	07101 to 07440	9962	99102
1121 to 1280	08101 to 08440	9963	99103
1281 to 1440	09101 to 09440	9964	00104
1441 to 1600	10101 to 10440	9965	99105
1601 to 1760	11101 to 11440	9966	99106

Table 8-4. NPC Number Equivalents for DACS II DSPU Type Units

Extended	Hierarchical	Extended	Hierarchical
0001 to 0002	01101 to 01102	...	...
0021 to 0022	01201 to 01202	0301 to 0302	02801 to 02802
...	...	...	...
0141 to 0142	01801 to 01802	2401 to 2402	16101 to 16102
0161 to 0162	02101 to 02102	...	...
0181 to 0182	02201 to 02202	2541 to 2542	16801 to 16802

(Continued on next page)

DND Supported NPC Addressing (Continued)

NPC Number Conversion, Continued

Table 8-5. NPC Number Equivalents for DACS II DS3U Type Units

Extended	Hierarchical	Extended	Hierarchical
0001 to 0160	01101 to 01620	...	...
016A to 016H	01621 to 01628	2401 to 2560	16101 to 16620
0161 to 0320	02101 to 02620	256A to 256H	16621 to 16628
032A to 032H	02621 to 02628		

NPC Numbering for TH-type NPCs on HMXR cards

NPC Numbering for the TH-type NPCs on a Hybrid DS3 HMXR card is slightly different from other MXR cards. The range of TH-type NPCs (1 through 28) is the same as other MXR types, however, every 4th NPC on the HMXR does not exist (i.e. cannot be provisioned). This means that NPCs 4, 8, 12, 16, 20, 24, and 28 on the HMXR card cannot be provisioned at the DACS II. If attempted, a denial will be issued by the DACS II.

Performance Monitoring

Description

In the DND GUI, the PERFORMANCE MONITORING SPECIFICATION form is displayed when the Specify PM Options button is clicked on the NPC PROVISIONING form. The PERFORMANCE MONITORING SPECIFICATION form allows you to set the thresholds for generating various types of facility performance alarms. These fields are available for PA/PB/PC/DE/TE/TH NPC Types. For all other NPC types, the Specify PM Options button is inactive. A DACS II does not send a facility performance alarm message until a parameter error rate has exceeded a stored threshold.

Data Sets

For North American Standard (NAS) type NPCs (DA/DE/TA/TE) PM thresholds for each parameter are defined in terms of data sets 0,1,2, and 3. Data set 0 is defined at the DACS by default. The other optional data sets must be provisioned directly at the DACS using the `ED-OPT-T1` command.

For CEPT type NPCs (PA/PB/PC/TH) PM thresholds are defined in terms of an alarm severity and a data set. The alarm severities are Informational, Minor, Major or Critical. The data sets are defined in terms of Default (D), 1,2 and 3. Additionally, the PM monitoring for a PM attribute can also be turned off (defined as NONE). The default data set defined by the DACS is D (e.g. Default Informational, Default Minor, etc.). The other optional data sets must be provisioned directly at the DACS using the `ED-OPT-T1` command.

NOTE:
If a data set is *not* defined in the DACS, it will reject requests for a data set value.

CEPT Threshold Setting

To choose a threshold setting for a CEPT NPC, use the following format:

n ccc

where:

n	is 1, 2, 3, or D, referring to data set 1, data set 2, data set 3 or the default data set.
ccc	is *Cri*, *Maj*, *Min*, or *Inf*, referring to alarm severities of Critical, Major, Minor or Informational. *D Inf* is the default.

To disable performance monitoring for an attribute, choose `NONE`.

Performance Monitoring (Continued)

CEPT Performance Parameters

For example, an entry of *D Inf* in the **15 Minute Count** of **Degraded Minutes** means use the threshold of the default data set for a **DM1H** alarm and send the alarm with informational severity when the threshold is exceeded.

Example: If the default threshold on errored seconds is 5, you enter *D Maj* under the **15 Minute Count** for **Errored Seconds**. If during any 15-minute period the number of errored seconds detected by the NPC exceeds 5 seconds, an *ERS15M* alarm of severity *MAJ* is asserted and is reported on DND terminals connected to the DACS. After the next 15-minute interval with less than 5 errored seconds, the DACS will clear the alarm and send a message to the DND indicating that the performance alarm has been cleared.

Table 8-6. Alarms for CEPT NPC Performance Parameters for PB/PC Types

	Near End 15 Minute Count	Near End 24 Hour Count
Slips	SLIP15M alarm	SLIP24H alarm
Unavailable Seconds	US15M alarm	US24H alarm
Errored Seconds	ERS15M alarm	ERS24H alarm
Severly Errored Seconds	SERS15M alarm	SERS24H alarm
Degraded Minutes	DM1H alarm	DM24H alarm

Performance Monitoring (Continued)

CEPT Performance Parameters, PA/TH-Type NPCs

The performance monitoring capabilities of Type PA/TH NPCs is more sophisticated. These parameters along with the alarms resulting from their thresholds being exceeded are shown in the next table, organized by near end (NE) and far end (FE).

Table 8-7. Alarms For CEPT NPC Performance Parameters For Type PA/TH

	Near End 24 Hour Count	Far End 24 End Count	Near End 15 Minute Count	Far End 15 Minute Count
CRC Block Errors	CRCDAILY	FEBEDAILY	CRC15MIN	FEBE15MIN
Errored Seconds	ESDAILY	FESDAILY	ES15MIN	FES15MIN
Severely Errored Seconds	SESDAILY	FSESDAILY	SES15MIN	FSES15MIN
Unavailable Seconds	UASDAILY	FUASDAILY	UAS15MIN	FUAS15MIN
Framing Errors	FRERDAILY		FRER15MIN	
Out-of-Frame Seconds	OFSDAILY		OFS15MIN	
Controlled Slip Seconds	CSSDAILY		CSS15MIN	
Coding Violations	CVDAILY		CV15MIN	
Unavailable Time Count	UATCDAILY		UATC15MIN	
Multiframe Errors	MERDAILY		MER15MIN	

NOTE:
Not all options will appear for all PA-Type NPCs.

Performance Monitoring (Continued)

NAS Threshold Setting

The possible selections of field values for an NAS NPC are: **n**

where: **n** is 0, 1, 2, or 3, referring to data sets 0, 1, 2, or 3. The default is 0.

The types of performance parameters are classified in Table 8-8.

Table 8-8. Alarms For NAS NPC Performance Parameters

	Minor Alarm Option	Major Alarm Option
Slips	SLIP, severity Minor	SLIP, severity Major
Bit Error Rate	BER, severity Minor	BER, severity Major
Frame Alignment	COFA, severity Minor	COFA, severity Major
Errored Seconds		severity Major
Severe Errored Seconds		severity Major

A severity of *Minor* is not defined for **Errored Seconds** and **Severe Errored Seconds** for NAS NPCs.

DND GUI: The NPC Provisioning Form

NPC Provisioning Form

This is an example of the NPC PROVISIONING form after it has been filled in. On this form, the NPC to *CREATE* is identified. The DND displays a default value for the **NPC Type:**. You can click Continue... to accept the default, or click Specify XYZ Detail to change the NPC Type.

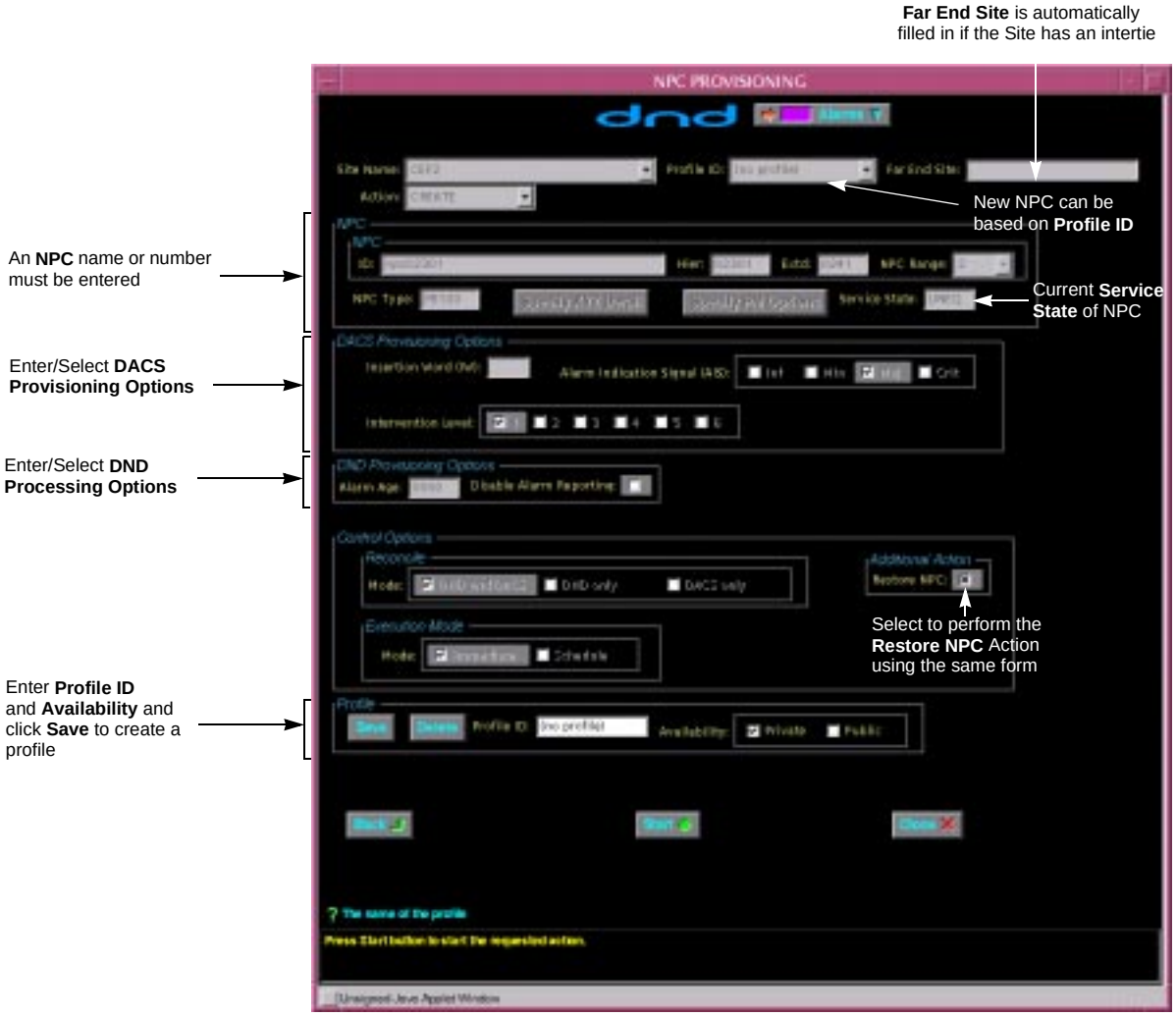


Figure 8-2. DND GUI: NPC Provisioning Form, Section 1: *CREATE* Action

DND GUI: The NPC Provisioning Form (Continued)

NPC XYZ Options Form

This is an auxiliary form to the NPC PROVISIONING form. Use this form to specify the NPC Type and parameters. To display this form, click Specify XYZ Details on the NPC PROVISIONING form. When this form is completed, the original NPC PROVISIONING form will appear with Specify XYZ Details inactive and Specify PM Options active.



Figure 8-3. DND GUI: NPC Provisioning Form, Section 2: *NPC XYZ Options* (PB/PC Type)

When all XYZ options have been selected, click Continue... to display all fields in read-only mode. Click Apply to apply these changes to the NPC PROVISIONING form.

If you click Close, you will lose all information entered on the form.

DND GUI: The NPC Provisioning Form (Continued)

Performance Monitoring Specification Form

This is another auxiliary form to the NPC PROVISIONING form. Use this form to specify the performance monitoring options. To display this form, click Specify PM Options on the NPC PROVISIONING form. When completed, the original NPC PROVISIONING form will appear with both the Specify XYZ Details and Specify PM Options buttons inactive.



Figure 8-4. DND GUI: NPC Provisioning Form, Section 3: *Performance Monitoring Options* (PA Type)

(Continued on next page)

DND GUI: The NPC Provisioning Form (Continued)

Performance Monitoring Specification Form, Continued

After Apply to Selected is clicked, click Continue... and then Apply to return back to the NPC PROVISIONING form.

If you click Close on the NPC PROVISIONING form while the PERFORMANCE MONITORING SPECIFICATION form active, when Apply is clicked, the NPC PROVISIONING form will reappear with the same information it contained when the PERFORMANCE MONITORING SPECIFICATION form was initially displayed.

NOTE:
To change the defaults that are selectable for the NPC Provisioning form, the NPC XYZ OPTIONS form, and the PERFORMANCE MONITORING OPTIONS form, use the `ui_dval.ini` environment variable. For additional information, refer to *Chapter 2, Getting Started*.

DND GUI: The NPC Provisioning Form (Continued)

Field Descriptions The field values for the NPC PROVISIONING form are described in Table 8-9.

Table 8-9. DND GUI: Field Descriptions for the NPC PROVISIONING Form

Field	Description
Site Name	(Combo box) Mandatory. Select the name of the DACS where the requested **Action** will take place. Clicking this field will display a list of DACS names. By default, the list appears alphabetically.
Profile ID (top of form)	(Combo box) Optional. For the *CREATE* Action only, select an NPC profile that will be used as a basis for a new NPC. The profile and the new NPC must have the same **NPC Type**.
Alarm State	(Read-only field) The status of an alarm currently being received or asserted by this NPC. This field is under software control of the DND and cannot be changed by the user. The possible values are: ■ *OOS* - The NPC has been removed from service autonomously. ■ *CGA* - The alarm is a carrier group alarm (NAS). ■ *PBA* - The alarm is a primary block alarm (CEPT). ■ *PERF* - *T*he alarm is a performance alarm of major severity. ■ *MAJ* - The alarm is of major severity and is not a performance alarm. ■ *MINR* - The alarm is of minor severity. ■ *NONE* - No alarm is asserted.

(Continued on next page)

DND GUI: The NPC Provisioning Form (Continued)

Field Descriptions, Continued

Table 8-9. DND GUI: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
Service State	(Read-only field) The status of the NPC. This field cannot be changed by the user except as the result of an **Action**. Possible values: ■ *UEQD* - Unequipped. The NPC referenced by the **NPC ID** is not currently recorded in the DND and/or DACS databases (equipped). To place it there, use the *CREATE* **Action**. ■ *OOS* - Out of service. The NPC is currently equipped, but is not operable. To place it in service, use the *RESTORE* **Action**. To unequip it, use the *DELETE* **Action**. ■ *IS* - In service. The NPC is equipped and operable (ready for CIRCUIT PROVISIONING). To remove it from service, use the *REMOVE* **Action**. On currently unmapped channels in an NPC that is *IS*, the disconnect channel code is asserted repeatedly if there is one; otherwise, the NPC's **Insertion Word** is used as the default disconnect code. ■ *0 IS* - With reference to DSPU NPCs (DMB, CB102 circuit pack, and subrate NPCs), side 0 is in service and side 1 is out of service. ■ *1 IS* - With reference to DMB, CB102 circuit pack, and subrate NPCs, side 1 is in service and side 0 is out of service.

(Continued on next page)

DND GUI: The NPC Provisioning Form (Continued)

Field Descriptions, Continued

Table 8-9. DND GUI: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
Action	(Combo box) Mandatory. Valid choices are: ■ *CREATE* - Adds a new NPC. ■ *RESTORE* - Places the specified NPC in service. An NPC must be in service before it can be used for CIRCUIT PROVISIONING. ■ *MODIFY* - Changes allowed combinations of fields for the specified NPC. These combinations are stated under "NPC Types" on Page 8-8. Constraints on possible new values of **NPC Type** are also stated there. **NOTE:** If **OOS** is selected, changing the **Type** or **Insertion Word** of an *IS* NPC results in the DND placing the NPC in *OOS* **Service State** before making the change and then doing a *RESTORE* after the change. However, if **OOS** is unselected, the *MODIFY* is denied. **NOTE:** Only those fields whose specification on the form differs from the DND database cause changes to be sent to the DACS. In particular, if the value is correct in the DND but is not correct in the DACS, a *MODIFY*, even in *DACS Only* mode, will not correct the value in the DACS.

(Continued on next page)

DND GUI: The NPC Provisioning Form (Continued)

Field Descriptions, Continued

Table 8-9. DND GUI: Field Descriptions for the NPC PROVISIONING Form, (Continued)

Field	Description
Action (Continued)	■ *REMOVE* - Removes the specified NPC from service. **NOTE:** Removing an NPC with active circuits may result in transmission loss for those circuits. An NPC carrying red-lined circuits cannot be removed unless **Unconditional (INCL)** (the "inclusive" keyword) is selected. ■ *DELETE* - Deletes the specified NPC. An NPC must be removed from service before it can be deleted. ■ *LOOPBACK* - Allows you to start, change, and stop the loopback setting on an NPC. You can select *LOOPBACK* for NPCs that are out of service (*OOS*), or in service (*IS*). In addition these actions can also be applied to a traffic-carrying NPC.
NPC Specifier	(Radio buttons) Choose a method for identifying the NPC. The choices are: ■ *ID* - NPC ID ■ *Hier* - hierarchical number ■ *Extd* - extended number.
NPC	(Text field) Based on your selection in the **NPC Specifier** field, enter the NPC's identifier in this field. Enter one of the following: an NPC ID, a hierarchical number, or an extended number.

(Continued on next page)

DND GUI: The NPC Provisioning Form (Continued)

Field Descriptions, Continued

Table 8-9. DND GUI: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
NPC Type	(Text field) Mandatory. The NPC Types are: ■ *PA* - For DACS II, Generic 6.0 and higher, and DACS II ISX Release 1.0, the hardware is a TG192 enhanced dual primary circuit (EDPC) supporting a CEPT 75/120-ohm NPC with enhanced functionality. *PA100* is the default value for ISX systems. Type *PAxCz* provides clear, framed E1 cross-connections and *PAxDz* provides clear, unframed E1 cross-connections. Support of *PA*-Type NPCs is expanded to include the setting, modifying and querying of performance monitoring thresholds. And finally, you can provision and query the TS0 receive (**NFS**) spare bit manipulation settings. ■ *DE* - The hardware is a dual digroup card (DDC) supporting a NAS NPC for channelized DS1 signals or a TG80 Card for clear unframed DS1 signals (*DE9y9*). ■ *TA* - For DACS II, release 6.0 only, the hardware is a KCR5 and 6 within a DS3 card. **Type** *TAxy9* provides clear unframed cross-connections.

(Continued on next page)

DND GUI: The NPC Provisioning Form (Continued)

Field Descriptions, Continued

Table 8-9. DND GUI: Field Descriptions for the NPC PROVISIONING Form, (Continued)

Field	Description
NPC Type (Continued)	■ *TE* - The hardware is a DS3 card for channelized or clear unframed DS1 (*TE9y9*). ■ *TH* - The hardware is a Hybrid DS3U. ■ *MB* - The hardware is a DMB card for DMB multipoint cross-connections. *xyz* must be *100*. ■ *MJ* - Multipoint Junction Unit (supported for NPC PROVISIONING, but not for CIRCUIT PROVISIONING). ■ *SR* - Subrate (supported for NPC PROVISIONING, but not for CIRCUIT PROVISIONING). ■ *SD* - For subrate provisioning for X.50 and X.57. The only supported option for this type is *SD111*. ■ *ST* - For Intergrated Test Set. The only supported options for this type are ST100 (2.048-Mb/s interfaces) and ST110 (1.544-Mb/s interfaces). For *PA, PB, PC, DA/TA* and *DE* types, the *xyz* defines facility characteristics. For example, for *DE* types, *xyz* defines the framing format (x is 1-3), the line and signaling format (*y* is 0, 1, 2, 4), and the channel-counting sequence (*z* is 0 or 4). See the DACS I/O manuals.
New ID	(Text field) Appears for the *MODIFY* **Action** only. Specify the new name (if desired) for the NPC.
NPC Range	(Combo box) Optional. Select an NPC Range value if provisioning more than one NPC. The maximum range number is dependent on the module type. The provisioning action will be repeated on *n* NPCs, where *n* is the range given here. The default, *n=1*, denotes the NPC given by the **NPC Specifier**.

(Continued on next page)

DND GUI: The NPC Provisioning Form (Continued)

Field Descriptions, Continued

Table 8-9. DND GUI: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
Side	(Radio buttons) Appears for types *MB, MJ, a*nd *SR* only. Specifies the side when the **Action** will change the **Service Status** of a duplex DSPU NPC. The choices are *0* or *1*. A value is required when the **Action** is *REMOVE* or *RESTORE*.
Alarm Age	(Text field) The number of seconds after a *CGA* or *PBA* message has been received or asserted, before action is taken by the DND. The choices are: ■ *x* - Age the alarm *x* seconds, where *x* is *1* through *9999* ■ *0* - Do not age the alarm, but act immediately (default)
Disable Alarm Reporting	(Checkbox) When selected, the DND will not display when new alarms have entered the system (no New Alarm Indicator). This corresponds to an **Alarm Aging** value of *-1* at the DND Forms Interface.
Insertion Word	(Text field) Two hex digits for NAS, 3 for CEPT, [*0-9, A-F/a-f*]. Specifies the 8-bit code transmitted by an *IS* NPC on unassigned channels. The third digit of a CEPT **Insertion Word** contains signaling-channel data. The default for NAS NPCs is *7F* and for CEPT is *D5D*. **NOTE:** On DACS II, Release 6.0, and DACS II ISX Release 1.0 frames, a *0* in the 7th bit (from the right) position generates a D4 yellow alarm for the NPC when the **Insertion Word** is transmitted

(Continued on next page)

DND GUI: The NPC Provisioning Form (Continued)

Field Descriptions, Continued

Table 8-9. DND GUI: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
Alarm Indication Signal (AIS)	(Radio buttons) The user-defined severity of an AIS alarm on this NPC. The choices are: ■ *Inf* - An AIS alarm is to be an Informational alarm ■ *Min* - An AIS alarm is to be a Minor alarm ■ *Maj* - An AIS alarm is to be *a* Major alarm ■ *Crit* - An AIS alarm is to be a Critical alarm. Available only for CEPT NPCs in DACS II Release 7.1 and higher, and DACS II ISX Release 2.1 and higher.
Intervention Level	(Available only for CEPT NPCs in DACS II R8.2.3 and higher/DACS II ISX R3.1 and higher.) This field appears if alarm intervention on the DACS and DND is turned ON. Set the alarm intervention level. Valid choices are: ■ 1 (Highest level) ■ 2 ■ 3 ■ 4 ■ 5 ■ 6 (Lowest level).

(Continued on next page)

DND GUI: The NPC Provisioning Form (Continued)

Field Descriptions, Continued

Table 8-9. DND GUI: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
Far End Site	(Read-only field) Displays the name of the DACS/End User which is at the far end of the intertie, as entered by INTERTIE PROVISIONING. If this NPC is not assigned to an intertie, then this field is blank.
(NPC 2) ID	(Text field) Mandatory. 1 through 41 characters from the printable ASCII character set, excluding *, \‘, [,], ^, “, %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored. An identifier, or name used to identify the second NPC of a DMB board. DMB NPCs must be grown in pairs. The *CREATE* **Action** associates the name and number. Only one **ID** can be associated with an NPC number within a DACS, and also, an **ID** can be associated with only one NPC. An **ID** uniquely identifies an NPC.
(NPC 2) Hier/Extd	(Read-only fields) Appears for **NPC Type** *MB* only. **Hier** indicates the hierarchical NPC 2 number. **Extd** indicates the extended NPC 2 number.

(Continued on next page)

DND GUI: The NPC Provisioning Form (Continued)

Field Descriptions, Continued

Table 8-9. DND GUI: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
TS0	(Text field) Time slot 0 transmit. Eight characters. Appears for CEPT NPCs only, and is accessible via the *MODIFY* **Action**. Describes how to process bits in time slot 0 for transmission. A single character is entered for each bit. The bit values are: ■ *P* - Cross-connect this bit position unchanged. ■ *0* - Overwrite the incoming bit with a *0* for this position. ■ *1* - Overwrite the incoming bit with a *1* for this position. ■ *V* - For **NPC Type** *PA* only, invert the value of this bit. ■ "-" - Leave setting for this bit unchanged. If either of the two rightmost bits is *P*, both must be *P*. Use either upper or lower case for *P* or *V*. The default is *11011111*.
TS0M	(Text field) Time slot 0 monitor. Eight characters. The field appears for CEPT NPCs only, and is accessible via the *MODIFY* **Action**. Describes what Time Slot 0 bits are to be monitored by the DACS. A single character is entered for each bit. The bit values are: ■ *0* - Stop monitoring the signal in this bit position. ■ *1* - Start monitoring the signal in this bit position. Whenever the DACS detects a change in a monitored TS0 bit, it generates an autonomous message. The default is *00000000*.

(Continued on next page)

DND GUI: The NPC Provisioning Form (Continued)

Field Descriptions, Continued

Table 8-9. DND GUI: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
NFS	(Text field) Non-frame word setting. Nine characters. This field appears for Type *PA* only, and is accessible by the *MODIFY* **Action**. Specifies how the spare bits in timeslot 0 are to be handled when they are cross-connected to a timeslot other than 0. This is a special case of the spare bit manipulation feature. Refer to the discussion of TS0 to non-TS0 cross-connects in the "Introduction" in Chapter 9, Circuit Provisioning. The field format is: *abcdefghi* where: ■ *a* - Is bit 1 of the FW ■ *bcdefghi* - Are bits 1-8 of the NFW Enter a single character for each bit. The bit values are: ■ *P* - Pass unchanged. ■ *V* - Pass inverted, except for bit c. ■ *0* - Set output to 0, except for bit c. ■ *1* - Set output to 1, except for bit c. ■ "-" - Leave setting for this bit unchanged. Bit *c* is passed unchanged in every case. If *h* or *i* are set to *P*, then the other of the two must be set to *P*. The creation default is *PPPPPPPPP*.

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DND GUI: The NPC Provisioning Form (Continued)

Field Descriptions, Continued

Table 8-9. DND GUI: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
Inclusive (INCL)	(Checkbox) Appears for the *REMOVE* **Action** only. It is parallel to the INCL selection of the **Circuit Options** field on the CIRCUIT PROVISIONING form; however, where the CIRCUIT PROVISIONING option applies to disconnecting or deactivating a circuit. When selected on the NPC PROVISIONIG form, it allows the DND to *REMOVE* an NPC that is carrying a red-lined circuit.
Remove NPC (OOS)	(Checkbox) Appears for the *MODIFY* **Action** only. When selected, the DND will *REMOVE* an NPC if it is necessary, make the selected modifications, and *RESTORE* the NPC using the same form.
Delete NPC	(Checkbox) Appears for the *REMOVE* **Action** only. When selected, the DND will *REMOVE* and *DELETE* an NPC using the same form.
Restore NPC	(Checkbox) Appears for the *CREATE* **Action** only. When selected, the DND will *CREATE* and *RESTORE* an NPC using the same form.
Loopback Transmission	(Radio buttons) This option can be changed while a loopback is active to change the loopback signal transmission or the Performance Monitoring options. The choices are: ■ *A* - Starts looping the signals. Also sends AIS downstream or upstream, turns off facility Performance Monitoring, freezes alarm and parameter counts for the NPC

(Continued on next page)

DND GUI: The NPC Provisioning Form (Continued)

Field Descriptions, Continued

Table 8-9. DND GUI: Field Descriptions for the NPC PROVISIONING Form, (Continued)

Field	Description
Loopback Transmission (Continued)	■ *B* - (PA type NPCs only) Starts looping the signals. Also sends AIS downstream or upstream and continues normal Performance Monitoring and alarm processing for the NPC ■ *C* - (PA type NPCs only) Starts looping the signal and transparently passes through the received signal. Turns off facility Performance Monitoring and freezes alarm and parameter counts for the NPC ■ *T* - Starts looping the signal and transparently passes through the received signal. Continues facility Performance Monitoring and alarm processing for the NPC ■ *N* - Stops looping the signal
Loopback Direction	(Radio buttons) This is a one character field to indicate the direction of the loopback. This is a mandatory field when the action selected is *LOOPBACK* and the NPC is a *PA* type. ■ *F* - Facility Loopback. This loops the incoming 2 Mbit/s bipolar signal back to the facility ■ *E* - Equipment loopback. This loops the outgoing 2 Mbit/s signal back to the DACS II equipment. This option is not applicable to PB/PC type NPCs ■ *N* - Stop loopback

(Continued on next page)

DND GUI: The NPC Provisioning Form (Continued)

Field Descriptions, Continued

Table 8-9. DND GUI: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
Reconcile Mode	(Radio buttons) Select the database where the current **Action** will take place. The choices are: ■ *DND and DACS* - Perform the **Action** to both the DND and DACS databases (default) ■ *DND only* - Perform the **Action** to the DND database only ■ *DACS only* - Perform the **Action** to the DACS database only
Execution Mode	(Radio buttons/Combo boxes and Text fields also if *Schedule* is selected) Select when the current **Action** should take place. The choices are: ■ *Immediate* - Executes the **Action** as soon as Execute is clicked ■ *Schedule* - Executes the **Action** at a time and frequency selected by the user. After selecting *Schedule*, click Continue... to display the following combo box fields: — **DATE** fields: **Day:** (01 thru 31) **Month:** (Jan thru Dec) **Year:** (1990 thru 2037) — **TIME** fields: **Hour:** (00 thru 23) **Minute:** (00 thru 59) — **REPEAT** fields: **Number of times** (enter any number) If number of times is set to "00", then the task repeats an infinite number of times (forever). **Interval** (enter any number) **Scale:** (**None/Minutes/Hours/Days**)

DND GUI: The NPC Provisioning Form (Continued)

Field Descriptions, Continued

Table 8-9. DND GUI: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
Profile ID (bottom of form)	(Text field) Specify a Profile ID to be saved or deleted. The Profile ID can include 11 alphanumeric characters. Spaces are not allowed.
Availability	(Radio buttons) For a new profile, indicate if the profile should be available to: ■ *PUBLIC* - all DND users ■ *PRIVATE* - Only your login.

DND GUI: NPC Profiles

Description

Specify field values once in a profile and save the profile to the database. Later, re-use the profile to *CREATE* new NPCs.

The NPC PROVISIONING form allows you to define profiles based on NPC Type and use them to create new NPCs with the same NPC Type.

A profile is identified by a **Profile ID** and contains all NPC provisioning information, including XYZ Detail and PM Options. Control Options are not saved as part of a profile. Each profile is marked as available for public use by all DND users, or for private use by your own login.

Profiles are based on NPC Type and can only be used to create NPCs of the same type. When you create a new NPC based on a profile, you can modify any of the provisioning information except NPC Type.

Actions for NPC Profiles

From the NPC PROVISIONING form, you can perform these NPC Profile Actions:

- To create a profile:

  Specify **Action:** *CREATE* and supply all NPC parameters including NPC Type. In the **Profile** box at the bottom of the NPC PROVISIONING form, enter a **Profile ID**, specify the profile's availability, then click Save. If you also want to execute the form and create a new NPC, click Execute.

- To create a new NPC from a profile:

  Specify **Action:** *CREATE*, select a **Profile ID**, enter NPC Number and NPC ID, modify data fields if necessary, select Control Options, and click Execute.

- To delete a profile:

  In the **Profile** box at the bottom of the NPC PROVISIONING form, type a **Profile ID** and click Delete.

Figure 8-5 displays the **Profile** box.



Figure 8-5. DND GUI: NPC PROVISIONING Form - *Profile* Box

DND GUI: NPC Range

Description

The NPC PROVISIONING form allows you to specify a range of NPCs to provision at a time. Once the first **NPC** in the range and the **NPC Range:** is specified, the DND computes the NPCs within the range accessing the next available NPCs in the NPC Module (NPM). The number of NPCs available in the range is dependent on the module type. Figure 8-6 displays the **NPC Range:** field.

The **NPC Range:** specifies a number *n* where the **Action:** is repeated on *n* consecutive NPCs, if possible. Refer to "Rules for NPC Ranges" on Page 8-41.

NOTE:
DND will specify consecutive blocks of available NPCs, beginning with the NPC number entered.



Figure 8-6. DND GUI: NPC PROVISIONING Form - *NPC Range:* Field

DND GUI: NPC Range (Continued)

NPC RANGE SPECIFICATION Form

The NPC RANGE SPECIFICATION form is automatically displayed on the screen when the **NPC Range:** is selected. This form, shown in Figure 8-7, displays the NPCs selected for the range, and allows the user to enter an **ID:** name for each NPC in the range for the *CREATE* **Action**.

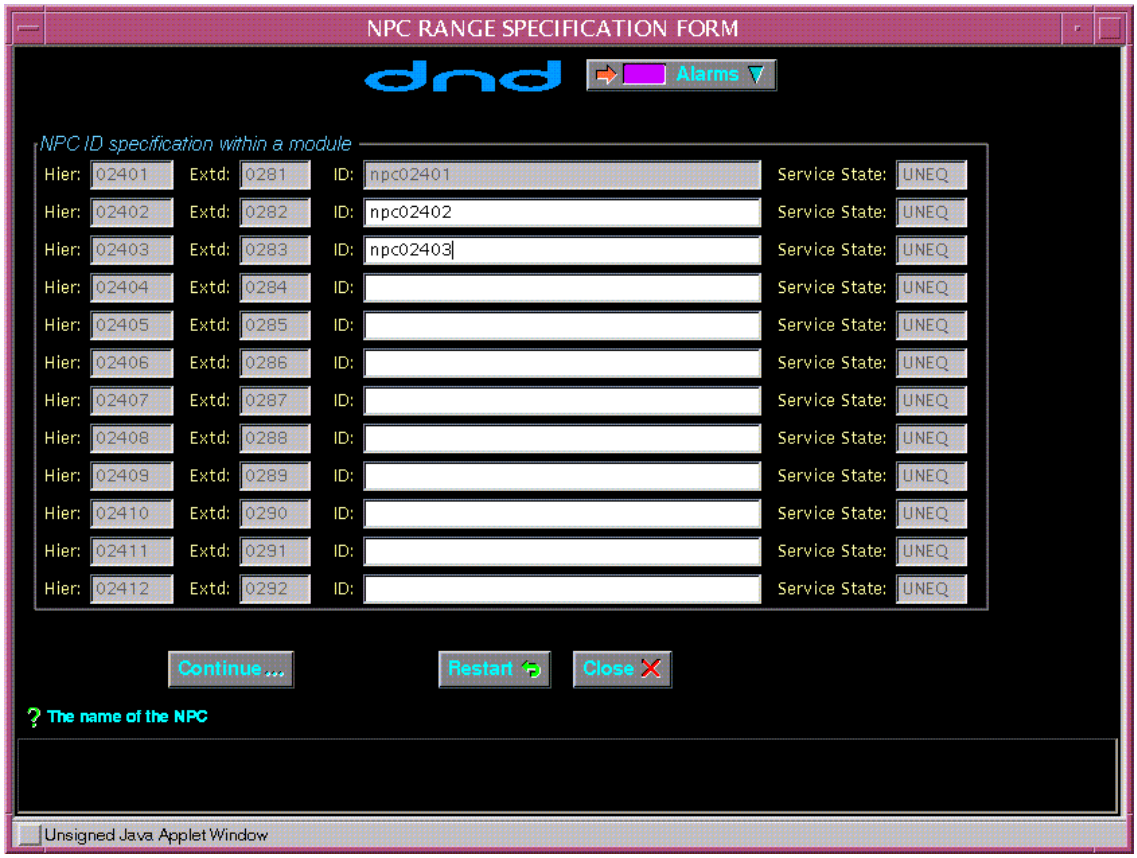


Figure 8-7. DND GUI: NPC RANGE SPECIFICATION Form - *CREATE* Action

NOTE:
The NPC **ID:** fields are "editable" for the *CREATE* **Action**, and read-only for other NPC provisioning actions.

DND GUI: NPC Range (Continued)

NPC Types Allowed

The NPC Range feature applies only to all DS1/E1 NPC types within a module and DS1 within a DS3 NPC types (TA/TE/TH).

Using Profiles

Profiles can be applied to a range of NPCs. Since all NPCs in the range will have the same attributes, profiles will speed up the provisioning process.

Rules for NPC Ranges

The following rules apply when provisioning a range of NPCs:

- If any NPC IDs (**ID:** field) are not entered on the NPC RANGE SPECIFICATION form, DND will provision the NPCs in the range with assigned **ID:** names and bypass the NPCs with empty **ID:** fields.

  For example, if an **NPC Range:** of 10 is entered, and only the first 5 NPCs and the 10th NPC have names entered on the NPC RANGE SPECIFICATION form, then only the first 5 and the 10th NPC will be provisioned.

- DND will only restore NPCs which are OOS. If a range of NPCs are restored, DND will restore the NPCs in the range with a **Service State:** of OOS, and bypass the NPCs with other service states.

  This concept also applies to the *GROW*, *DELETE*, and *REMOVE* actions. If the DND detects a conflict in **Service State:** with particular NPCs, those NPCs will be bypassed.

- When an **NPC Range:** is specified, DND will not allow the modification of **ID:** names. To change an NPC **ID:**, an NPC must be modified individually.

- A provisioning action cannot be scheduled for a range of NPCs.

DND Forms: NPC Provisioning Form

Overview

When you use the DND Forms interface for NPC Provisioning, the fields that appear on the screen are dependent on the entries in the **Type**: and the **Action**: fields. The following screen examples show the variations of the NPC PROVISIONING form that can appear for the *CREATE* **Action**.

CEPT NPC Provisioning Form (Types PB/PC)

The CEPT NPC Provisioning form appears by default. Default values provided by the DACS appear in the **Type**:, **IW**:, **TSO**:, and **TSOM**: fields.

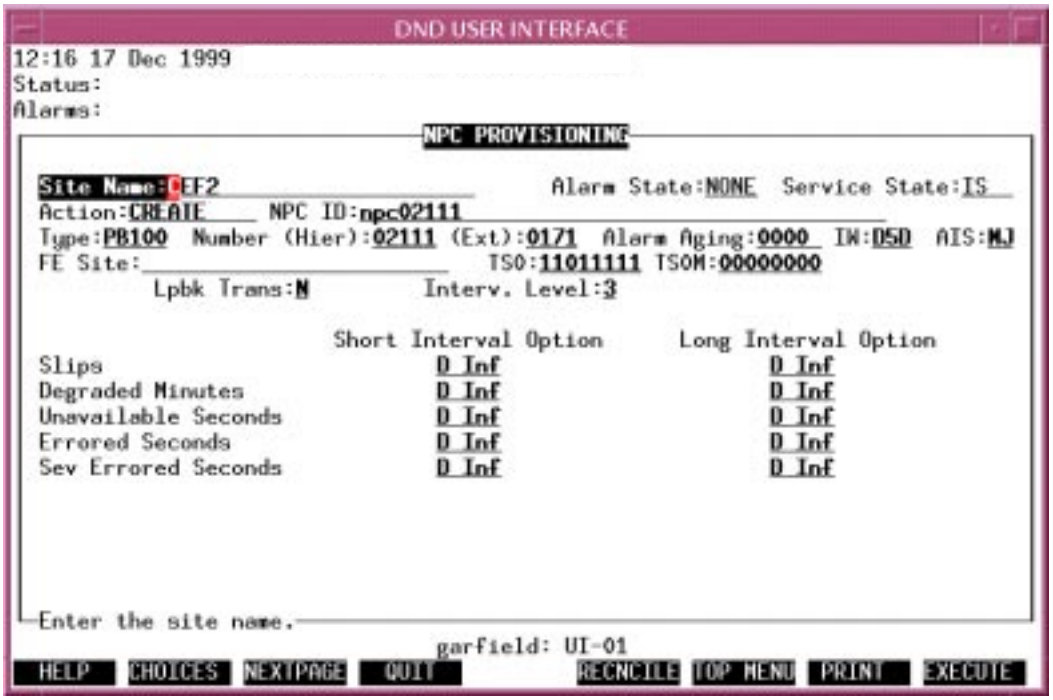


Figure 8-8. DND Forms: CEPT NPC Provisioning Form (Types PB/PC)

DND Forms: NPC Provisioning Form (Continued)

Subrate NPC Provisioning Form (Type SD)

The Subrate NPC Provisioning form appears if an SD111 is entered for the NPC **Type**.

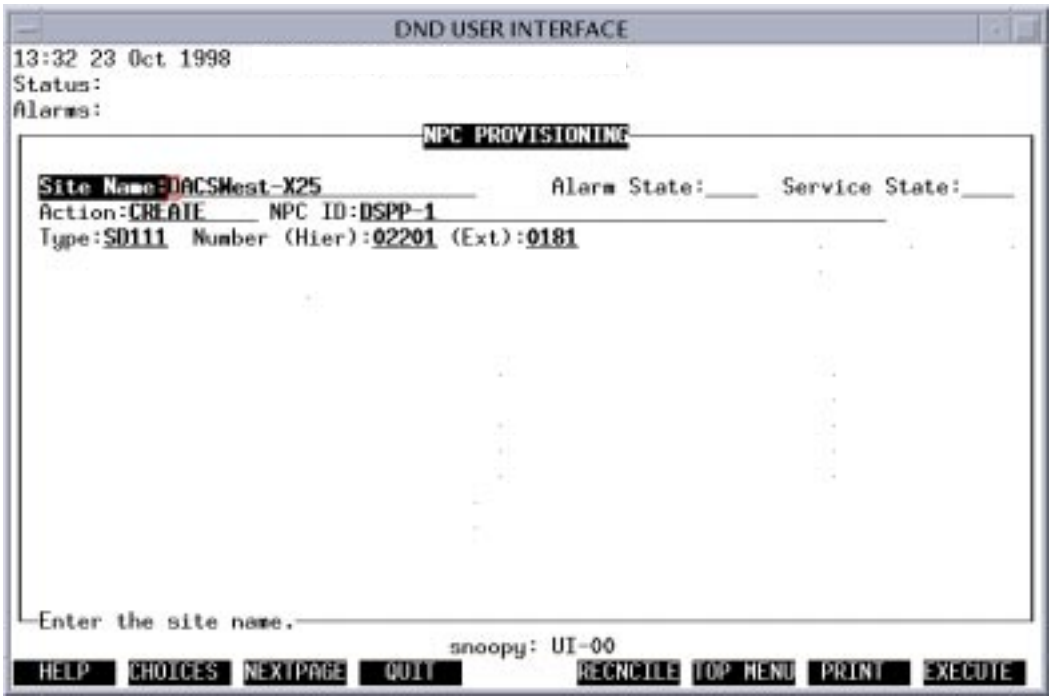


Figure 8-9. DND Forms: Subrate NPC Provisioning Form (Type SD)

DND Forms: NPC Provisioning Form (Continued)

Enhanced CEPT NPC Provisioning Form (Type PA/TH)

The Enhanced CEPT NPC Provisioning form appears if a PA or TH type NPC is entered for the NPC **Type**.

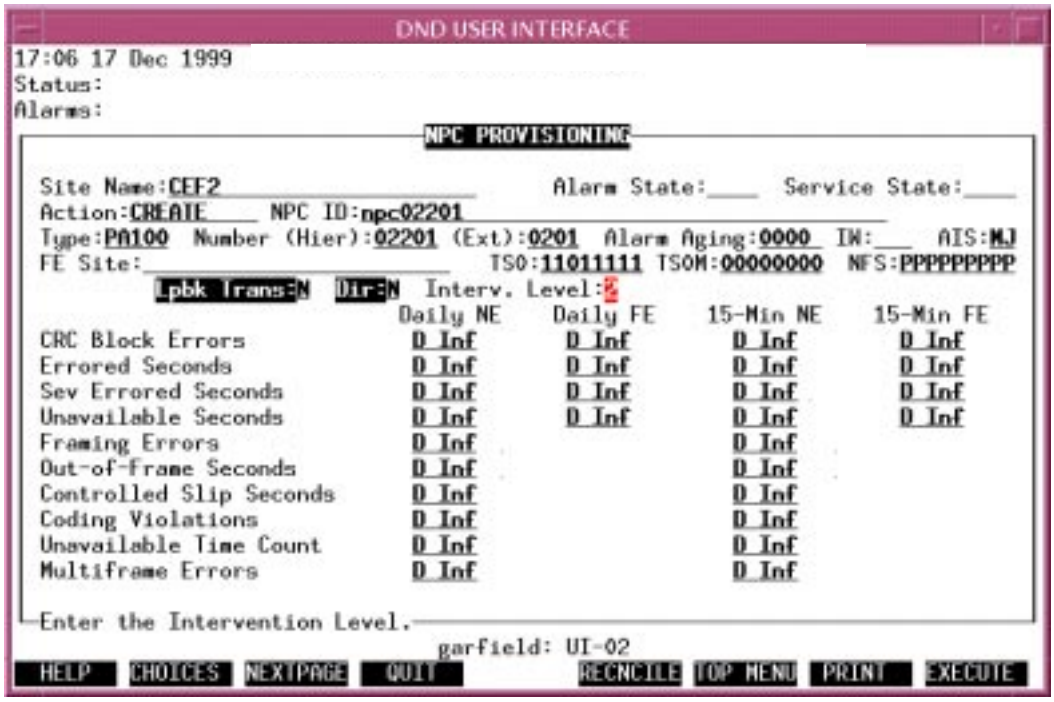


Figure 8-10. DND Forms: Enhanced CEPT NPC Provisioning Form (Type PA or TH)

DND Forms: NPC Provisioning Form (Continued)

NAS NPC Provisioning Form (Type DE/TE)

The NAS NPC Provisioning form appears if a DE or TE type NPC is entered for the NPC **Type**.

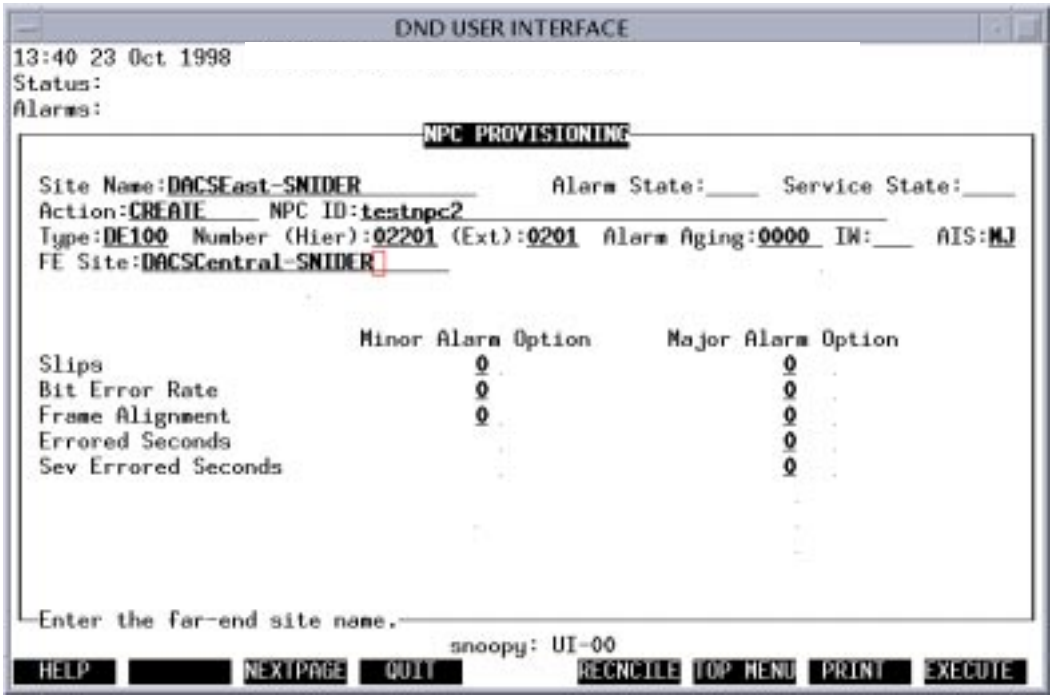


Figure 8-11. DND Forms: NAS NPC Provisioning Form (Type DE/TE)

DND Forms: NPC Provisioning Form (Continued)

Enhanced NAS NPC Provisioning Form (Type DA/TA)

The Enhanced NAS NPC NPC Provisioning form appears if a DA or TA type NPC is entered for the NPC **Type**.

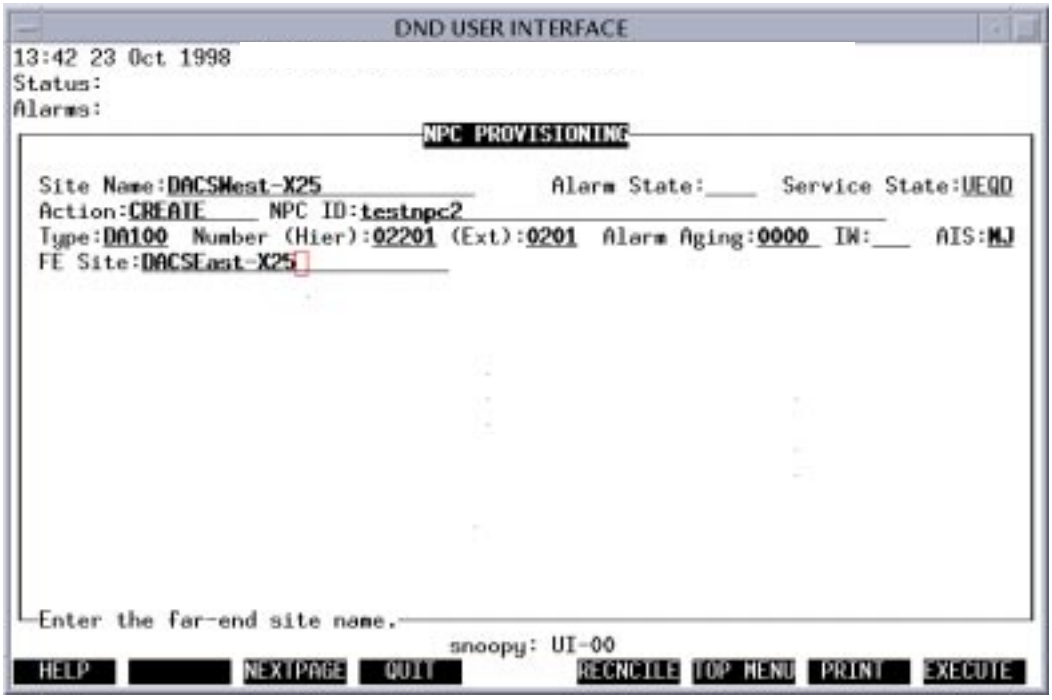


Figure 8-12. DND Forms: Enhanced NAS NPC Provisioning Form (Type DA/TA)

DND Forms: NPC Provisioning Form (Continued)

Clear DS1 NAS NPC Provisioning Form (Type DE9*y*9)

The Clear DS1 NAS NPC NPC Provisioning form appears if a DE9*y*9 type NPC is entered for the NPC **Type**.

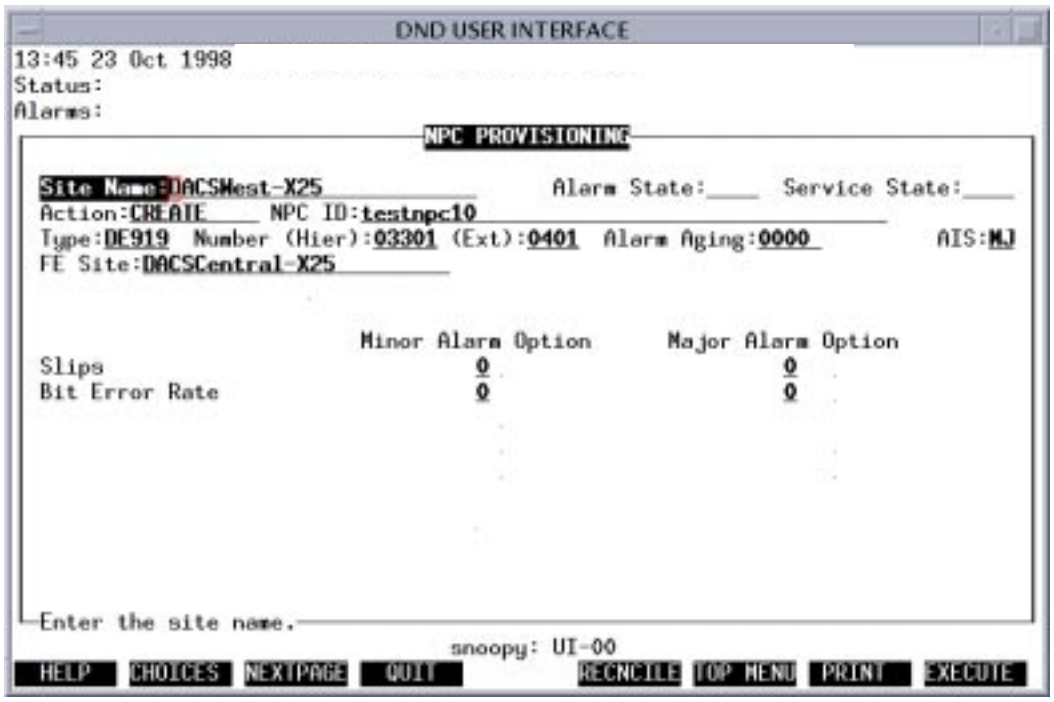


Figure 8-13. DND Forms: DS1 NAS NPC Provisioning Form (Type DE9*y*9)

DND Forms: NPC Provisioning Form (Continued)

Clear DS1 through DS3 NAS NPC Provisioning Form (Type TE9*y*9)

The Clear DS1 through DS3 NAS NPC Provisioning form appears if a TE9*y*9 type NPC is entered for the NPC **Type**.

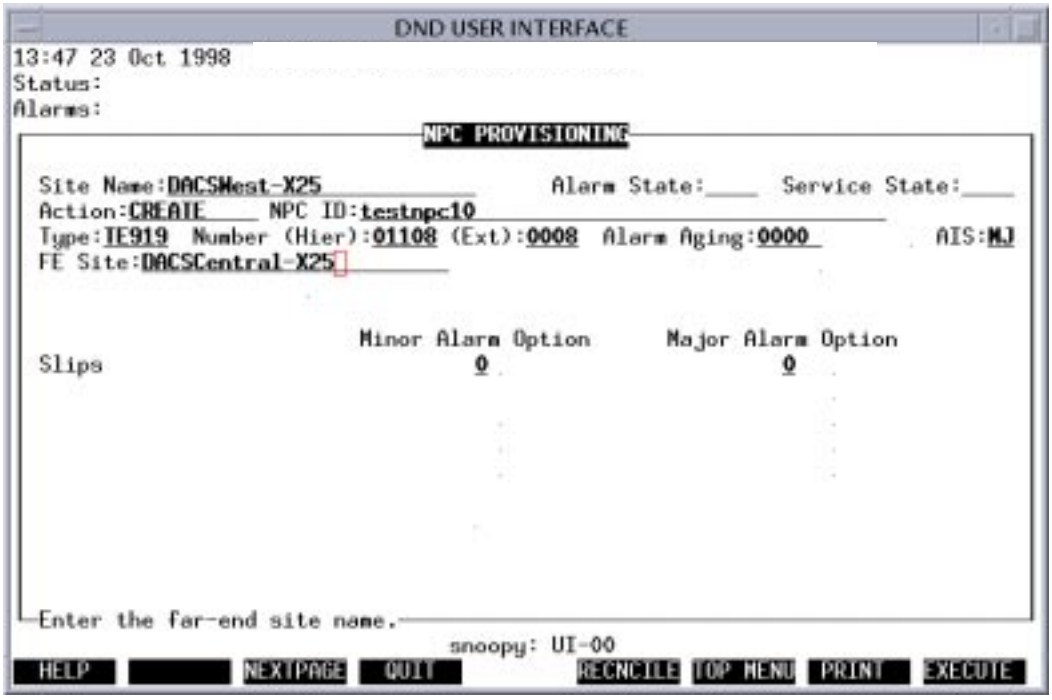


Figure 8-14. DND Forms: DS1 NAS NPC Provisioning Form (Type TE9*y*9)

DND Forms: NPC Provisioning Form (Continued)

DMB NPC Provisioning Form (Type MB)

The DMB NPC Provisioning form appears if a MB type NPC is entered for the NPC **Type**.

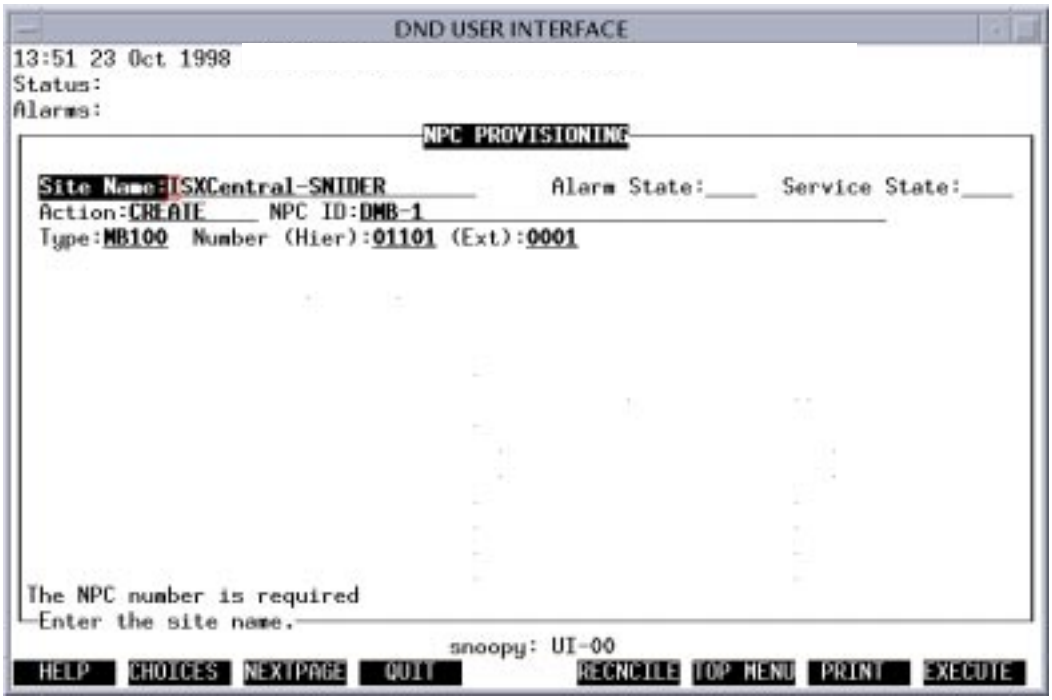


Figure 8-15. DND Forms: DMB NPC Provisioning Form (Type MB)

DND Forms: NPC Provisioning Form (Continued)

Field Descriptions

The field values for the NPC PROVISIONING form are described in Table 8-10.

Table 8-10. DND Forms: Field Descriptions for the NPC PROVISIONING Form

Field	Description
Site Name	Mandatory. The name of the DACS where the requested **Action** will take place. Enter or press CHOICES to select a Site Name. Site Names are created from the FRAME ADMINISTRATION form. See *Chapter 5, NE Provisioning* for more details.
Alarm State	The status of an alarm currently being received or asserted by this NPC. This field is under software control of the DND and cannot be changed by the user. The possible values are: ■ *OOS* - The NPC has been removed from service autonomously. ■ *LOS* - The alarm is a loss-of-signal alarm. ■ *CGA* - The alarm is a carrier group alarm (NAS). ■ *PBA* - The alarm is a primary block alarm (CEPT). ■ *PERF* - The alarm is a performance alarm of major severity. ■ *CRIT* - The alarm is of critical severity. ■ *MAJ* - The alarm is of major severity and is not a performance alarm. ■ *MINR* - The alarm is of minor severity. ■ *INFO* - The alarm is an informational alarm. ■ *NONE* - No alarm is asserted. ■ *blanks* - The NPC is not yet registered in the DND database.

Table 8-10. DND Forms: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
Service State	The status of the NPC. This field cannot be changed by the user except as the result of an **Action**. Possible values: ■ *UEQD* - Unequipped. The NPC referenced by the **NPC ID** is not currently recorded in the DND and/or DACS databases (equipped). To place it there, use the *CREATE* **Action**. ■ *OOS* - Out of service. The NPC is currently equipped, but is not operable. To place it in service, use the *RESTORE* command. To unequip it, use the *DELETE* command. ■ *IS* - In service. The NPC is equipped and operable (ready for CIRCUIT PROVISIONING). To remove it from service, use the *REMOVE* **Action**. On currently unmapped channels in an NPC that is *IS*, the disconnect channel code (DCC of the cross-connect disconnect command) is asserted if there is one; otherwise, the NPC's **IW** is used as the default disconnect code. ■ *0 IS* - With reference to DMB, CB102 circuit pack, and subrate NPCs, side 0 is in service and side 1 is out of service. ■ *1 IS* - With reference to DMB, CB102 circuit pack, and subrate NPCs, side 1 is in service and side 0 is out of service.

Table 8-10. DND Forms: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
Action	■ *CREATE* - Adds a new NPC. ■ *DELETE* - Deletes the specified NPC. An NPC must be removed from service before it can be deleted. ■ *MODIFY* - Changes allowed combinations of fields for the specified NPC. These combinations are stated under "NPC Types" on Page 8-8. Constraints on possible new values of **Type** are also stated there. **NOTE:** If **OOS** is set to *Yes*, changing the **Type** or **IW** of an *IS* NPC results in the DND placing the NPC in *OOS* **Service State** before making the change and in doing a *RESTORE* after the change. However, if **OOS** is set to *No*, the *MODIFY* is denied. **NOTE:** Only those fields whose specification on the form differs from the DND database cause changes to be sent to the DACS. In particular, if the value is correct in the DND but is not correct in the DACS, a *MODIFY*, even in *Site Only* mode, will not correct the value in the DACS. ■ *RESTORE* - Places the specified NPC in service. An NPC must be in service before it can be used for CIRCUITPROVISIONING. ■ *QUERY* - Requests the current state of the NPC from the DACS and displays the data received upon successful completion of the *QUERY*. This is especially useful for displaying the current performance monitoring counts on the NPC.

Table 8-10. DND Forms: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
Action (Continued)	■ *REMOVE* - Removes the specified NPC from service. **NOTE:** Removing an NPC with active circuits may result in transmission loss for those circuits. An NPC carrying red-lined circuits cannot be removed unless **INCL** is *YES*. ■ *BROWSE* - Gives you read-only access to the DND database for retrieving and scrolling NPC records. You can use wild-card characters (*?), in the **NPC ID** field only, to match any character or set of characters. ■ *LOOPBACK* - Allows you to start, change, and stop the loopback setting on an NPC. You can select *LOOPBACK* for NPCs that are out of service (*OOS*), or in service (*IS*). In addition this actions can also be applied to a traffic-carrying NPC.
NPC ID	Mandatory. 1 through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, ", %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored. An identifier, or name, associated with the specified **Number**. The *CREATE* **Action** associates the name and number. Only one **NPC ID** can be associated with a **Number** within a DACS, and also, an **NPC ID** can be associated with only one NPC. An **NPC ID** uniquely identifies an NPC.

Table 8-10. DND Forms: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
Type	■ *PA* - For DACS II, Generic 6.0 and higher, and DACS II ISX Release 1.0, the hardware is a TG192 enhanced dual primary circuit (EDPC) supporting a CEPT 75/120-ohm NPC with enhanced functionality. *PA100* is the default value for ISX systems. **Type** *PAxCz* provides clear, framed E1 cross-connections and *PAxDz* provides clear, unframed E1 cross-connections. Support of *PA*-**Type** NPCs is expanded to include the setting, modifying and querying of performance monitoring thresholds. And finally, you can provision and query the TS0 receive (**NFS**) spare bit manipulation settings. ■ *PB/PC* - The hardware is a TG182, TG185, TG187, or TG192 dual primary circuit (DPC) supporting a CEPT 75-ohm (PC-type) or 120-ohm (PB-type) NPC with the following PA-type capabilities: — Setting, modifying and querying of performance monitoring thresholds. — Provision and query the TS0 receive (**NFS**) spare bit manipulation settings. ■ *DE* - The hardware is a dual digroup card (DDC) supporting a NAS NPC for channelized DS1 signals or a TG80 Card for clear unframed DS1 signals (*DE9y9*). ■ *TA* - For DACS II, release 6.0 only, the hardware is a KCR5 and 6 within a DS3 card. **Type** *TAxy9* provides clear unframed cross-connections. ■ *TE* - The hardware is a DS3 card for channelized or clear unframed DS1 (*TE9y9*). ■ *TH* - The hardware is a HMXR card for channelized or clear E1. ■ *MB* - The hardware is a DMB card for DMB multipoint cross-connections. xyz must be *100*.

Table 8-10. DND Forms: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
Type, Continued	■ *MJ* - Not available. ■ *SR* - Not available. ■ *SD* - For subrate provisioning for X.50 and X.57. The only option for this type is *SD111*. ■ *ST* - For Intergrated Test Set. The only supported options for this type are ST100 (2.048-Mb/s interfaces) and ST110 (1.544-Mb/s interfaces). For *PA, PB, PC, DA/TA*, *DE* and *TH* types, the xyz defines facility characteristics. For example, for *DE* types, xyz defines the framing format (x is *1-3*), the line and signaling format (y is *0*, *1*, *2*, *4*), and the channel-counting sequence (z is *0* or *4*). See the DACS I/O manuals.
Number (Hier)	For *CREATE*, either this field or **(Ext)** must be entered. The DND converts and fills in the other. The number of the NPC in hierarchical (hier) numbering. Hierarchical numbers have the following format: xxyzz where: xx Is the shelf or unit number in the range *01* to *16*. For units less than *10*, the leading 0 is required. y Is the module number in the range *1* to *8*. zz Is the NPC within the module, ranging from *01* through *40*. Not all units are allowed in all frames, nor all positions in all units and modules. A module or shelf of a certain type is associated with a definite range of numbers. If you enter a number within that range, the **Type** field must be compatible with the type of NPC belonging to the number. If it is not, an error message is displayed: *NPC type is inconsistent with FTMI type*
(Ext)	The number of the NPC in extended numbering. The range is *1* through *256H*. (A through H apply to TE/TA NPCs within a DS3.) Some NPC numbers may not be allowed in a frame, depending on the frame's equipage.

Table 8-10. DND Forms: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
SIDE	This field appears for types *MB, MJ*, and *SR* only. Specifies the side when the **Action** will change the **Service Status** of a duplex NPC. Values are *0* or *1*. A value is required when the **Action** is *REMOVE* or *RESTORE*.
Alarm Aging	The number of seconds after a *CGA* or *PBA* message has been received or asserted, before action is taken by the DND. The default is *0*. ■ x - Age the alarm x seconds, where x is *1* through *9999*. ■ *0* - Do not age the alarm, but act immediately. ■ *-1* - Ignore the alarm.
IW	Insertion Word. 2 hex digits for NAS, 3 for CEPT, [*0-9*, *A-F*/*a-f*]. Specifies the 8-bit code transmitted by an *IS* NPC on unassigned channels. The third digit of a CEPT **IW** contains signaling-channel data. The default for NAS NPCs is *7F* and for CEPT is *D5D*. This is an open field and the DND lets you enter any 2- or 3-character **IW**. But for NAS (*DE*) NPCs only, two characters are allowed, and entering three sends a *bad syntax* message to the DACS and also displays it on the DND prompt line. If this happens, correct the **IW** and execute again. For CEPT NPCs, if you do not enter a third digit, it is supplied by the DND. On DACS II, Release 6.0, and DACS II ISX Release 1.0 frames, a *0* in the 7th bit (from the right) position generates a D4 yellow alarm for the NPC when the **IW** is transmitted on a NAS NPC.
AIS	The user-defined severity of an AIS alarm on this NPC. ■ *MJ* - An AIS alarm is to be major. ■ *MN* - Minor. ■ *MI* - A maintenance information alarm. ■ *CR* - A critical alarm. (Applies to CEPT NPCs for DACS II Release 7.1 and higher and DACS II ISX Release 2.1 and higher.)

Table 8-10. DND Forms: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
FE Site	Far end site. 1-24 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, “, %. Blanks are allowed in the name, but leading and trailing blanks are ignored. The name of the DACS at the far end of the facility terminating on the specified NPC. This field appears only for types *PA*, *PB*, *PC*, *DA/TA* and *TE/DE*, and is informational.
Upper NPC ID	Mandatory. 1 through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, “, %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored. An identifier, or name, associated with the specified **Number**. The *CREATE* **Action** associates the name and number. Only one **NPC ID** can be associated with a **Number** within a DACS, and also, an **NPC ID** can be associated with only one NPC. An **NPC ID** uniquely identifies an NPC.
Upper NPC No (Hier)	This field appears for type *MB* only. A number in hierarchical format automatically assigned to the NPC specified in **Upper NPC ID**.
(Ext)	This field appears for type *MB* only. A number in extended format automatically assigned to the NPC specified in **Upper NPC ID**.

Table 8-10. DND Forms: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
TS0	Time slot *0* transmit. Eight characters. The field appears for CEPT NPCs only, and is accessible via the *MODIFY* **Action**. Describes how to process bits in time slot 0 for transmission. A single character is entered for each bit. The bit values are: ■ *P* - Cross-connect this bit position unchanged. ■ *0* -Overwrite the incoming bit with a *0* for this position. ■ *1* - Overwrite the incoming bit with a *1* for this position. ■ *V* - For **Type** *PA* only, invert the value of this bit. If either of the two rightmost bits is *P*, both must be *P*. Use either upper or lower case for *P* or *V*. The default is *11011111*.
TS0M	Time slot 0 monitor. Eight characters. The field appears for CEPT NPCs only, and is accessible via the *MODIFY* **Action**. Describes what Time Slot *0* bits are to be monitored by the DACS. A single character is entered for each bit. The bit values are: ■ *0* - Stop monitoring the signal in this bit position. ■ *1* - Start monitoring the signal in this bit position. Whenever the DACS detects a change in a monitored TS0 bit, it generates an autonomous message. The default is *00000000*.

Table 8-10. DND Forms: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
NFS	Non-frame word setting. Nine characters. This field appears for **Type** *PA* only, and is accessible by the *MODIFY* **Action**. Specifies how the spare bits in timeslot 0 are to be handled when they are cross-connected to a timeslot other than 0. This is a special case of the spare bit manipulation feature. Refer to the description of TS0 to non-TS0 cross-connects in Chapter 9, Circuit Provisioning. The field format is: abcdefghi where: a is bit 1 of the FW bcdefghi are bits 1-8 of the NFW Enter a single character for each bit. The bit values are: ■ *P* - Pass unchanged. ■ *V* - Pass inverted, except for bit c. ■ *0* - Set output to 0, except for bit c. ■ *1* - Set output to 1, except for bit c. Bit c is passed unchanged in every case. If h or i are set to *P*, then the other of the two must be set to *P*. The creation default is *PPPPPPPPP*.
INCL	This field appears for the *REMOVE* **Action** only. It is analogous to the INCL selection of the **Options** field on the CIRCUIT PROVISIONING form; however, where the CIRCUIT PROVISIONING option applies to disconnecting or deactivating a circuit, this **INCL** field applies to removing an NPC. ■ *YES* - Allow an NPC that is carrying a red-lined circuit to be removed. ■ *NO* - Deny removal of an NPC that is carrying a red-lined circuit.

Table 8-10. DND Forms: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
OOS	This field appears for the *MODIFY* **Action** only. ■ *YES* - Allow the NPC to be taken out of service if the modification requires. ■ *NO* - Deny any modification that would result in the NPC being taken out of service.
Lpbk Trans	This option can be changed while a loopback is active to change the loopback signal transmission or the Performance Monitoring options. ■ *A* - Starts looping the signals. Also sends AIS downstream or upstream, turns off facility Performance Monitoring, freezes alarm and parameter counts for the NPC. ■ *B* - **(PA type NPCs only)** Starts looping the signals. Also sends AIS downstream or upstream and continues normal Performance Monitoring and alarm processing for the NPC. ■ *C* - **(PA type NPCs only)** Starts looping the signal and transparently passes through the received signal. Turns off facility Performance Monitoring and freezes alarm and parameter counts for the NPC. ■ *T* - Starts looping the signal and transparently passes through the received signal. Continues facility Performance Monitoring and alarm processing for the NPC. ■ *N* - Stops looping the signal.
Interv. Level	(Available only for CEPT NPCs in DACS II R8.2.3 and higher/DACS II ISX R3.1 and higher.) This field appears if alarm intervention on the DACS is turned ON. Set the alarm intervention level. Valid choices are: ■ 1 (Highest level) ■ 2 ■ 3 ■ 4 ■ 5 ■ 6 (Lowest level).

Table 8-10. DND Forms: Field Descriptions for the NPC PROVISIONING Form (Continued)

Field	Description
Dir	Direction. This is a one character field to indicate the direction of the loopback. This is a mandatory field when the action selected is *LOOPBACK* and the NPC is a *PA* type. ■ *F* - Facility Loopback. This loops the incoming 2 Mbit/s bipolar signal back to the facility. ■ *E* - Equipment loopback. This loops the outgoing 2 Mbit/s signal back to the DACS II equipment. This option is not applicable to PB/ PC type NPCs. ■ *N* - Stop loopback.

DND Forms: NPC Query Action

NPC Query Action

The *QUERY* **Action** retrieves provisioning and performance monitoring status information for an NPC from the DACS and displays it on the screen. Figure 8-16 shows a sample page 1 for an NPC query.

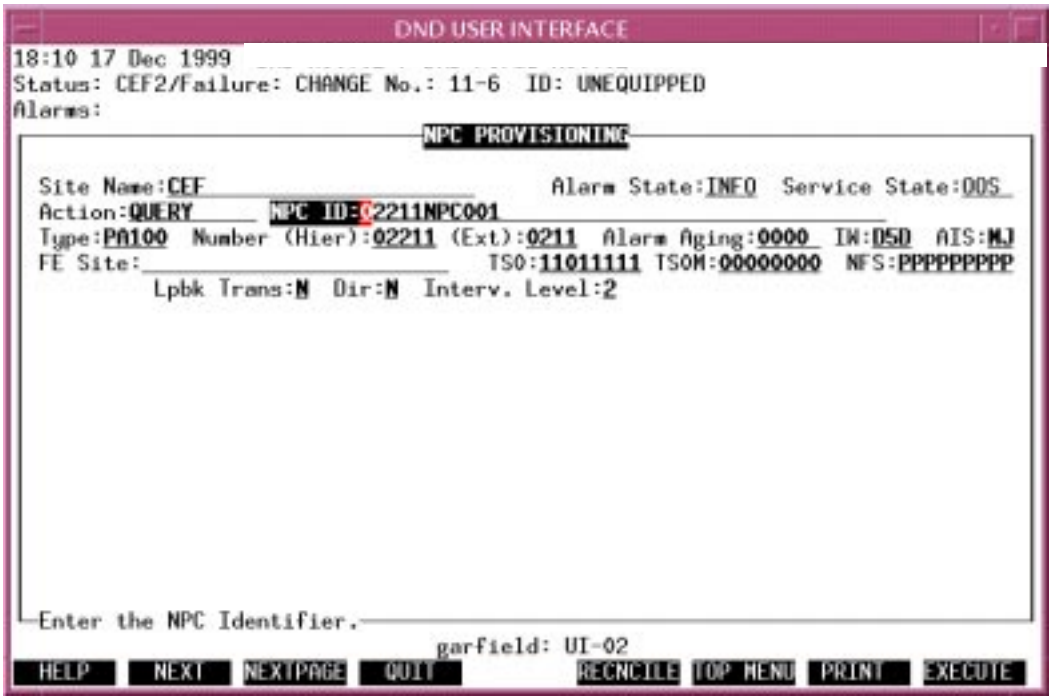


Figure 8-16. DND Forms: NPC Query Action

For PA type NPCs only, an NPC query produces two pages of information.

NOTE:
A *<<MISMATCH>>* message may appear if there is a mismatch between the data obtained from the DACS and the data in the DND database. In that case, all information on the form reflects the DACS values.

DND Forms: NPC Browse Action

NPC Browse Action

Use the *BROWSE* **Action** to retrieve a range of NPCs or NPCs that match the criteria you specify. Figure 8-17 shows an example of the results of a BROWSE **Action**.

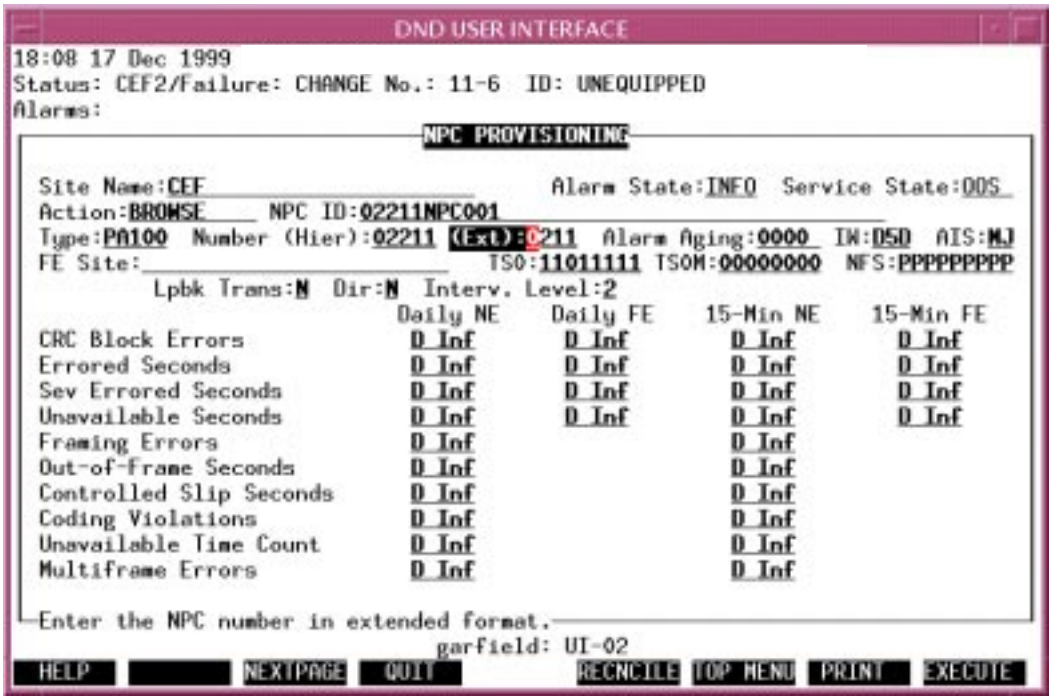


Figure 8-17. DND Forms: NPC Browse Action

NPC Provisioning ERP

Description

An echoed response is a message that is sent from a DACS to the DND when the DND does not expect a response; for example, when a change in NPC Provisioning is entered through the DACS console, through a passthrough command to the DACS, or by some other means not initiated by a DND form. Such provisioning would cause the DACS and DND databases to differ if the DND did not respond to the echoed response message.

The DND, therefore, is designed to process the echoed messages from the DACS. For example, if it receives a message that the DACS has created an NPC, DND creates an NPC in the local database. Likewise, the DND also executes a *RESTORE*, *REMOVE*, *MODIFY*, or *DELETE* when specified by the message.

Controlling ERP

You can partially control the DND response to a message of this type. Under DACS Administration, if the **Conditional ERP** is set to *YES*, the DND database does not create the NPC. DND processes echoed response messages only if the NPC is already in the DND database. The database is updated and event messages are posted on the Status Line of the DND Forms User Interface (Status Summary Window for GUI). If the NPC is not in the DND database, the message is not processed and no action of any kind is taken.

When **Conditional ERP** is set to *No*, the DND responds to every echoed response message, (i.e.will create NPCs if it receives a DACS echoed response message).

Notification of ERP Messages

When the DND processes an echoed response message, event messages are posted on the Status Line of the DND Forms User Interface.

In addition, details about the echoed response message are logged in the DND database. To retrieve these details, from the DND Forms Main Menu, select REPORT OPERATIONS, then select ECHOED RESPONSE PROCESSING.

NPC Provisioning ERP (Continued)

NPC ID ERP Assignment

If the DND must create an NPC that is not in the DND database at all, it automatically assigns an **NPC ID** in the following format:

nnnnn**NPC00**m

where:

nnnnn	Is the NPC number as represented at the DACS. The nnnnn is in hierarchical format if the DACS is provisioned for hierarchical format, or in extended format if provisioned for extended numbering.
m	Is a sequence number assigned to this NPC record. The number is incremented with each new NPC activated by this method.

The default values used by the *CREATE* **Action** are the same as those specified under "Field Descriptions." They are displayed on the screens.

CAUTION:
You **SHOULD AVOID** *creating* **NPC ID***s from the NPC PROVISIONING form according to the ERP scheme.*

NPC Provisioning ERP (Continued)

ERP Messages

With any other DND **Action**, an action generated in ERP can succeed or fail. The result of the attempt is reported in the Status Summary Window Line at the bottom top of the DND Main Window in the following format:

```
database/result:action explanation
```

where:

database	Is the **Site Name** field value for this frame.
result	Is one of these values: *SUCCESS* The action succeeded. *ERROR* The action failed.
action	Is a terse English description of the attempted action.
explanation	Is the **NPC ID** field value or an error message.

More detailed information can be obtained with the Echoed Response Processing Report which can be run from the GUI and the DND Forms User Interface.

DACS II AX Port Provisioning

9

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Background

Introduction

This chapter describes how to provision:

- T1/E1 ports on an Octal T1/E1 card
- T1 ports embedded in a T3 card
- T3 ports on a T3 card.

DACS II AX Port Provisioning actions are *RESTORE, MODIFY,* or *REMOVE for* T1/E1 Ports or MODIFY for T3 Ports.

NOTE:
DACS II AX Port Provisioning is available beginning with DND Release 5.0.1/DND Forms Release 10.0.1 to support DACS II AX Release 9.0.3 equipment (and beyond). Port provisioning is only supported on OctalE1T1 and T3 cards.

Objectives

This chapter provides background information to help you:

1. Restore a T1/E1 Port
2. Modify a T1/E1 Port
3. Remove a T1/E1 Port
4. Modify a T3 Port
5. Modify a Range of T1/E1 ports
6. Provision Ports Using Profiles

Related tasks

For related tasks, see the following General Tasks in Volume II:

DND GUI:

- **Restoring a T1/E1 Port** **GT 9.1G**
- **Modifying a T1/E1 Port** **GT 9.2G**
- **Removing a T1/E1 Port** **GT 9.3G**
- **Modifying a T3 Port** **GT 9.4G**

Background (Continued)

Related information

For related information, refer to the:

- *DACS II AX User's Guide*

DND GUI: DACS II AX Port Provisioning Form, T1/E1 Ports

Overview

The DACS II AX PORT PROVISIONING form provides the options used to restore, modify, and remove a DACS II AX T1/E1 port. Each of these actions require that the ports exist in the DND database. Ports are automatically created by the DND when the associated slot is configured on the AX.

Restoring a T1/E1 Port

A DACS II AX T1/E1 port must exist in the DND database and must be Out of Service (OOS) in order to be restored. When a DACS II AX T1/E1 port is restored, its Service State changes to *In Service*.

After *Restore* actions are accepted by DND, appropriate commands are sent to the AX (if the Reconcile Mode is "DND and AX"). An appropriate message is also sent to the Northbound Interface, if provisioned.

Modifying a T1/E1 Port

The *Modify* action is used to modify port parameters for DACS II AX T1/E1 ports which are either in an In Service or an Out of Service state.

A *Modify* Action is processed for T1/E1 ports if:

- the slot containing the port is configured with an Octal T1/E1 or a T3 card
- the card resides in the slot in the equipment nest
- a successful response occurs after the port's updated parameters are sent to the DACS II AX.

After *Modify* actions are accepted by DND, appropriate commands are sent to the AX (if the Reconcile Mode is "DND and AX"). An appropriate message is also sent to the Northbound Interface, if provisioned.

Removing a T1/E1 Port

A DACS II AX T1/E1 port must exist on the DND database and must be In Service in order to be removed. When a DACS II AX T1/E1 port is removed, its Service State changes to Out of Service.

(Continued on next page)

DND GUI: DACS II AX Port Provisioning Form, T1/E1 Ports (Continued)

Removing a T1/E1 Port, Continued

After *Remove* actions are accepted by DND, appropriate commands are sent to the AX (if the Reconcile Mode is "DND and AX"). An appropriate message is also sent to the Northbound Interface, if provisioned.

DACS II AX Port Provisioning

When you select *PORT PROVISIONING* from the PROVISIONING TASK menu then enter the appropriate slot/port information for T1/E1 ports, the DACS II AX Port Provisioning form is displayed, as shown in Figure 9-1.

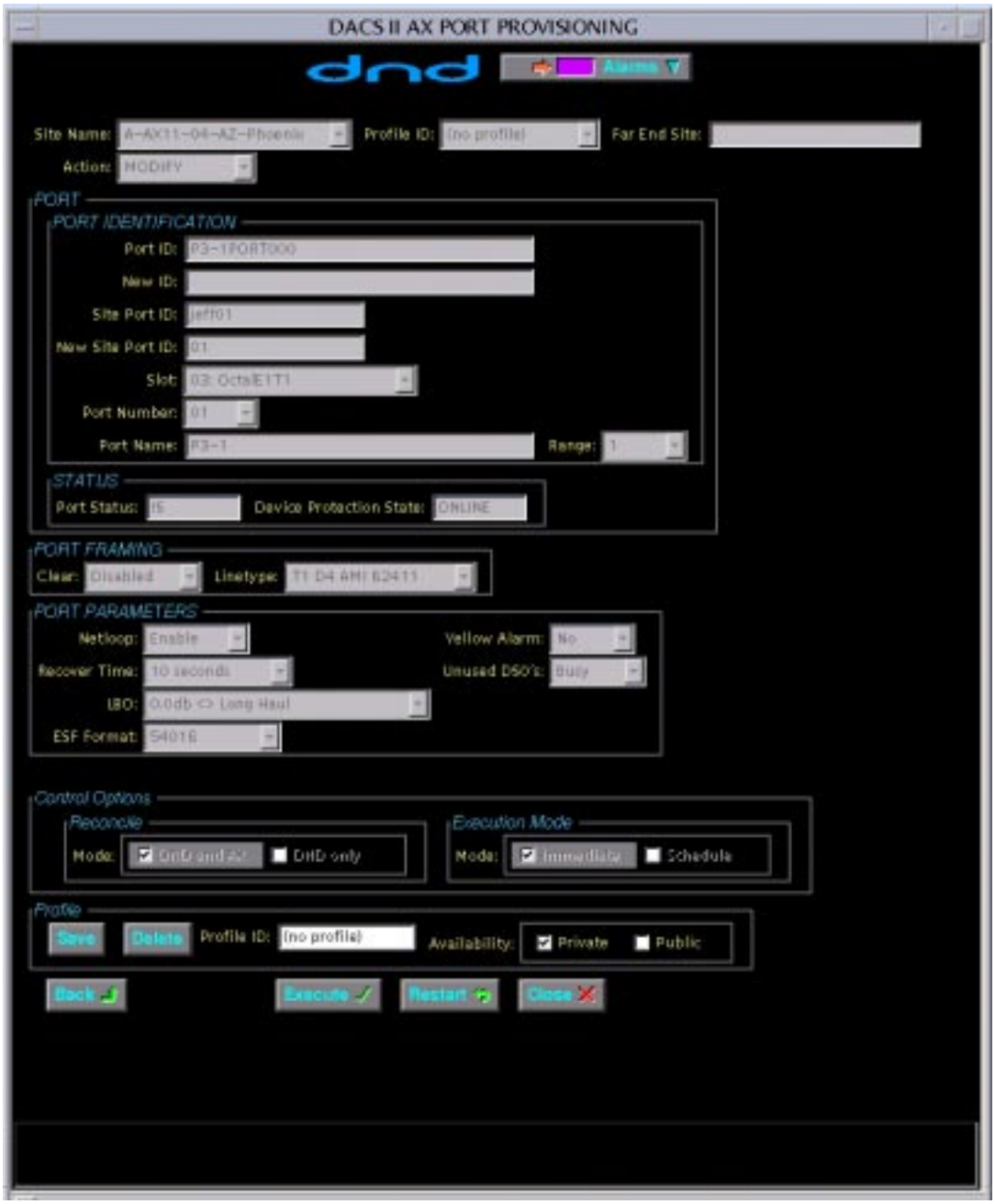


Figure 9-1. DND GUI: DACS II AX Port Provisioning Form, *MODIFY T1/E1* Action

DND GUI: DACS II AX Port Provisioning Form, T1/E1 Ports (Continued)

Field Descriptions

The field values for the DACS II AX Port Provisioning form are described in Table 9-1.

Table 9-1. DND GUI: Field Descriptions for the DACS II AX PORT PROVISIONING Form

Field	Description
Site Name	(Combo box) Mandatory. Select the name of the DACS II AX where the requested **Action** will take place. Clicking this field displays a list of DACS II AX names which by default are listed alphabetically. **NOTE:** The selected DACS II AX must reside in the DND database and must be In Service only if the reconcile mode is DND and AX.
Profile ID (top of form)	(Combo box) Optional. Select an existing profile to be used for the action to be selected. (Applies to *MODIFY* actions only).
Far End Site	Displays the name of the network element at the Far End.
Action	(Combo box) Mandatory. Choose one of the following. ■ *RESTORE* - Places the specified port in service. ■ *MODIFY* - Changes allowed parameters for the specified port. ■ *REMOVE* - Removes a T1/E1 port from service.
Port Specifier	(Check boxes) Mandatory. Choose a method to identify the port. Choices are *ID* (to specify a port by Port ID) and *SLOT/PORT* to specify a port by Slot and Port Number.

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DND GUI: DACS II AX Port Provisioning Form, T1/E1 Ports (Continued)

Field Descriptions, Continued

Table 9-1. DND GUI: Field Descriptions for the DACS II AX PORT PROVISIONING Form, (Continued)

Field	Description
Port ID	(Text field). If you selected **ID** in the **Port Specifier** field, enter up to 41 characters to identify each port (DND name).
Type of Port	(Check boxes). For the entered **Port ID**, choose T1/E1 to identify port type.
Slot	(Text field). If you selected **Slot/Port** in the **Port Specifier** field, choose the slot number from the combo box corresponding to the OctalE1T1 card. **Slot** number values correspond with the DACS II AX type being used. For example: ■ For DACS II AX4 type, slot values are x=01 through 04. ■ For DACS II AX11 type (without redundancy), slot values are x=01 through 11 ■ For DACS II AX11 type (with redundancy), slot values are x=01 through 11 **NOTE:** 01 and 11 are not selectable if they are configured as protection slots.
Clear	(Check box) Choose "Disabled" if a channelized port is desired. Choose "Unframed" or "Framed" if a clear channel or port is desired. Only applies to OctalE1T1 cards.

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DND GUI: DACS II AX Port Provisioning Form, T1/E1 Ports (Continued)

Field Descriptions, Continued

Table 9-1. DND GUI: Field Descriptions for the DACS II AX PORT PROVISIONING Form, (Continued)

Field	Description
Line Type	(Combo box) Choose the line type to use for ports. Only applies to an OctalE1T1 card only. A subset of the following list is selectable based on the Clear value. ■ E1 ■ E1-CRC ■ E1-CAS ■ E1-CAS-CRC **NOTE:** "E1" refers to E1-NSA when the clear value is disabled. It refers to an E1 Clear channel signal when the clear value is "unframed" or "framed". ■ T1 ESF B8ZS ■ T1 ESF AMI 62411 ■ T1 D4 B8ZS ■ T1 D4 AMI 62411 ■ T1 B8ZS ■ T1 AMI **NOTE:** "T1 B8ZS" and "T1 AMI" only apply to clear T1s, i.e., when the Clear value is "unframed" or "framed".

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DND GUI: DACS II AX Port Provisioning Form, T1/E1 Ports (Continued)

Field Descriptions

Table 9-1. DND GUI: Field Descriptions for the DACS II AX PORT PROVISIONING Form, (Continued)

Field	Description
Port Number	(Combo box) Identifies a port number on the device identified by the slot number. This may be 1 to 8 for Octal T1E1 cards or 1 to 28 for T3 cards.

Port Name	This will display the DND Port Name according to `Pnn-p (HS)` convention used by DND (and used for reports output to identify a particular port).
	
	where:
	`nn=slot number`
	`p=port number`
	`(HS)= High Speed (only for T3, HDS3, etc., ports)`

Range	(Combo box) Optional. Select a port range value if provisioning more than one port. The maximum range number is dependent on the slot type, e.g., 8 for OctalE1T1 and 28 for T1s in a T3. The provisioning action will be repeated on *n* ports, where *n* is the range given here.
Service State	Displays the service state of the port, i.e., IS or OOS.
Device Protection State	Displays the device protection state. A value of "Online" indicates the device is unprotected. "STBY" indicates that the device is protected.
New ID	(Text field) For the Modify action only, select a new DND ID for the port.

(Continued on next page)

DND GUI: DACS II AX Port Provisioning Form, T1/E1 Ports (Continued)

Field Descriptions, Continued

Table 9-1. DND GUI: Field Descriptions for the DACS II AX PORT PROVISIONING Form (Continued)

Field	Description
New Site Port ID	(Text field) For the Modify action only, select a new AX Site Port ID for the port.
Framing	(Check box) Only applies to T1s embedded in a T3. Choose "ESF" or "D4".
Density	(Checkbox) Determines the line coding for T1s embedded in a T3 only. Choose "Clear" for B8ZS, "62411" for AMI.
NetLoop	(Combo box) Choose "Enable" to specify that the port should respond to a loop diagnostic received from the network supplier, otherwise choose "Disable".
Yellow Alarm	(Combo box) Choose "Yes" to cause the module to discard data and send a yellow alarm if it is a red alarm condition after a 3-second period, otherwise choose "No".
Recover Time	(Combo box) Choose the number of seconds the port will wait to stop sending the yellow alarm when coming out of a red alarm condition.
Unused DS0's	(Combo box) Choose a value to specify whether data transmitted over unused DS0s is *Idle* or *Busy*. Applies to channelized ports only.
LBO	(Combo box) Choose a value to specify the line build out. Only applies to T1s on and OctalE1T1 card.
Long Haul	(Combo box) Choose a value to specify the line build out. Only applies to E1s on and OctalE1T1 card.

(Continued on next page)

DND GUI: DACS II AX Port Provisioning Form, T1/E1 Ports (Continued)

Field Descriptions, Continued

Table 9-1. DND GUI: Field Descriptions for the DACS II AX PORT PROVISIONING Form, (Continued)

Field	Description
ESF Format	(Combo box) Choose a value to specify the type of ESF network commands to which the port should respond.
Reconcile Mode	(Radio buttons) Select the database where the current **Action** will take place. The choices are: ■ *DND and AX* - Perform the **Action** to both the DND and AX databases (default) ■ *DND only* - Perform the **Action** to the DND database only
Execution Mode	(Radio buttons) Select whether the **Action** will be executed immediately (**Immediate** Mode) or at a later date and/or time (**Schedule** Mode).

DND GUI: DACS II AX Port Provisioning Form, T1/E1 Ports (Continued)

Field Descriptions, Continued

Table 9-1. DND GUI: Field Descriptions for the DACS II AX PORT PROVISIONING Form, (Continued)

Field	Description
Scheduling Options Mode	Select when the current **Action** should take place. The choices are: ■ *Immediate* - Executes the **Action** as soon as Execute is clicked. ■ *Schedule* - Executes the **Action** at a time and frequency selected by the user. After selecting *Schedule*, click Continue... to display the following combo box fields: — **DATE** fields: **Day:** (01 thru 31) **Month:** (Jan thru Dec) **Year:** (1990 thru 2037) — **TIME** fields: **Hour:** (00 thru 23) **Minute:** (00 thru 59) — **REPEAT** fields: **Number of times** (enter any number) **Interval** (enter any number) **Scale:** (**None/Minutes/Hours/Days**)
Profile ID	(Text field) Specify a Profile ID to be saved or deleted. This ID can include 12 alphanumerics; spaces are not allowed.

DND GUI: DACS II AX Port Provisioning Form, T3 Ports

Overview

The DACS II AX Port Provisioning form provides the options used to modify a DACS II AX T3 port.

Modifying a T3 Port

Modify is the only Action permitted for T3 Ports. A *Modify* Action is processed for a T3 port if the port exists in the DND database, i.e., the T3 module is set in the slot.

After *Modify* actions are accepted by the DND, appropriate commands are sent tot the AX (if the Reconcile Mode is "DND and AX"). No messages are sent to the Northbound Interface.

(Continued on next page)

DACS II AX Port Provisioning

When you select *PORT PROVISIONING* from the PROVISIONING TASK menu then enter the appropriate slot/port information for T3 ports, the DACS II AX PORT PROVISIONING form is displayed as shown in Figure 9-2.



Figure 9-2. DND GUI: DACS II AX Port Provisioning Form, *MODIFY T3* Action

DND GUI: DACS II AX Port Provisioning Form, T3 Ports (Continued)

Field Descriptions The field values for the DACS II AX Port Provisioning form are described in Table 9-2.

Table 9-2. DND GUI: Field Descriptions for the DACS II AX PORT PROVISIONING Form

Field	Description
Site Name	(Combo box) Mandatory. Select the name of the DACS II AX where the requested **Action** will take place. Clicking this field displays a list of DACS II AX names which by default are listed alphabetically. **NOTE:** The selected DACS II AX must reside in the DND database and must be In Service only if the reconcile mode is DND and AX.
Profile ID	(Combo box) Optional. Select an existing profile to be used for the action to be selected. (Applies to *MODIFY* actions only).
Far End Site	Displays the name of the network element at the Far End.
Action	(Combo box) Mandatory. Choose *MODIFY* to change allowed combinations of fields for the specified port.

(Continued on next page)

DND GUI: DACS II AX Port Provisioning Form, T3 Ports (Continued)

Field Descriptions, Continued

Table 9-2. DND GUI: Field Descriptions for the DACS II AX PORT PROVISIONING Form (Continued)

Field	Description
Port Specifier	(Check boxes) Mandatory. Choose a method to identify the port. Choices are *ID* and *SLOT/PORT.*
Port ID	(Text field). If you selected *ID* in the **Port Specifier** field, enter up to 41 characters to identify each port (DND name).
Type of Port	(Check boxes). For the entered **Port ID**, choose T3 to identify port type.
Slot	(Text field). If you selected *Slot/Port* in the **Port Specifier** field, enter the slot number (x) value for a T3 card. The **Slot** number value corresponds with the DACS II AX type and module being used. For example: ■ For DACS II AX4 type, the allowable values are x=01 through 04. ■ For DACS II AX11 type (without redundancy), the allowable values are x=01 through 11 ■ For DACS II AX11 type (with redundancy), the allowable values are x=01 through 11 **NOTE:** 11 is not selectable if it is configured as a protection slot.
Port Type	Displays *T3* as the Port Type value.

(Continued on next page)

DND GUI: DACS II AX Port Provisioning Form, T3 Ports (Continued)

Field Descriptions, Continued

Table 9-2. DND GUI: Field Descriptions for the DACS II AX PORT PROVISIONING Form (Continued)

Field	Description
Port Name	(Text field) Read-only field that displays the specified port as it will be shown in DND reports.
New ID	(Text field) For the Modify action only, select a new DND ID for the port.
New Site Port ID	(Text field) For the Modify action only, select a new AX Site Port ID for the port.
Device Protection State	Displays the device protection state. A value of "Online" indicates the device is unprotected. "STBy" indicates that the device is protected.
M13 Opcode	(Radio buttons) Choose one of the following values to define the framing selection for the DS1 to DS3 multiplexing. ■ C-bit parity ■ Bellcore M13
M13 RemLoop	(Combo box) Controls the line codes used to set and reset DS1 remote line loopback requests.
RcvLoopTiming	(Radio button) Choose one of the following to specify whether or not internal or loop timing is being used. ■ Enabled ■ Disabled
RcvAIS	(Combo box) The received bit pattern to use to determine when the remote line is in error.
Short Haul	(Radio button) Line build out of the DS3 port. ■ Yes (Connected to a cable less than 50 feet) ■ No (Not connected to a cable greater than 50 feet)

(Continued on next page)

DND GUI: DACS II AX Port Provisioning Form, T3 Ports (Continued)

Field Descriptions

Table 9-2. DND GUI: Field Descriptions for the DACS II AX PORT PROVISIONING Form(Continued)

Field	Description
XmitAIS	(Combo box) The transmitted bit pattern when a DS3 port is in error.
Reconcile Mode	(Radio buttons) Select the database where the current **Action** will take place. The choices are: ■ *DND and AX* - Perform the **Action** to both the DND and AX databases (default) ■ *DND only* - Perform the **Action** to the DND database only
Execution Mode	(Radio buttons) Select whether the **Action** will be executed immediately (**Immediate** Mode) or at a later date and/or time (**Schedule** Mode).

(Continued on next page)

DND GUI: DACS II AX Port Provisioning Form, T3 Ports (Continued)

Field Descriptions, Continued

Table 9-2. DND GUI: Field Descriptions for the DACS II AX PORT PROVISIONING Form, (Continued)

Field	Description
Scheduling Options Mode	Select when the current **Action** should take place. The choices are: ■ *Immediate* - Executes the **Action** as soon as Execute is clicked. ■ *Schedule* - Executes the **Action** at a time and frequency selected by the user. After selecting *Schedule*, click Continue... to display the following combo box fields: — **DATE** fields: **Day:** (01 thru 31) **Month:** (Jan thru Dec) **Year:** (1990 thru 2037) — **TIME** fields: **Hour:** (00 thru 23) **Minute:** (00 thru 59) — **REPEAT** fields: **Number of times** (enter any number) **Interval** (enter any number) **Scale:** (**None/Minutes/Hours/Days**)
Profile ID	(Text field) Specify a Profile ID to be saved or deleted. This ID can include 12 alphanumerics; spaces are not allowed.

DND GUI: AX Port Range

Description

The Port Range field allows you to specify a range of ports to provision at a time. Once the first **port** in the range and the **Port Range:** is specified, the DND computes the ports within the range based on the slot type. The number of ports available in the range is dependent on the slot type. Figure 9-3 displays the **Port Range:** field.

The **Port Range:** specifies a number *n* where the **Action:** is repeated on *n* consecutive ports. The DND will specify consecutive blocks of available ports, beginning with the port number entered.

NOTE:
This only applies to T1/E1 ports on an Octal E1T1 card or T1 ports on a T3 card. If the action is *Modify*, then the port parameters will be applied to every port in the range.



Figure 9-3. DND GUI: PORT PROVISIONING Form - *Port Range:* Field

DND GUI: PORT Range (Continued)

AX PORT RANGE SPECIFICATION Form

The AX PORT RANGE SPECIFICATION form is automatically displayed on the screen when the **Port Range:** is selected. This form, shown in Figure 9-4, displays the ports selected for the range and allows the user to modify the DND Port ID and the Site Port ID if the action is *MODIFY*.

Ranges are limited to a single slot.



Figure 9-4. DND GUI: AX PORT RANGE SPECIFICATION Form - *MODIFY* Action

Port Types Allowed

The Port Range feature applies to:

- DS1/E1 Port types within an Octal T1/E1 module
- DS1 Port types within a DS3 module

Port Provisioning ERP

Description

The Echoed Response Processing (ERP) feature supports port provisioning events that occur on a DACS II AX. These events are communicated via ERP messages sent from the AX to DND.

ERPs are processed by the DND when changes occur due to port provisioning actions that occur:

- at DACS II AX console
- through passthrough command
- through some other means not initiated by a DND form.

Since this level of provisioning could cause the DACS II AX and DND databases to differ, the DND is designed to process the echoed messages it receives from the AX. For example, if it receives a message that the DACS II AX has modified a port, DND modifies a Port in the local database.

Whenever an ERP is processed by the DND, a message is displayed on the network map status line and the event is logged into the ERP log.

Notification of ERP Messages

When the DND processes an echoed response message, event messages are posted on the Status Line of the DND Forms User Interface.

In addition, details about the echoed response message are logged in the DND database. To retrieve these details, from the DND Forms Main Menu, select REPORT OPERATIONS, then select ECHOED RESPONSE PROCESSING.

Port Provisioning ERP (Continued)

ERP Messages

With any other DND **Action**, an action generated in ERP can succeed or fail. The result of the attempt is reported in the Status Summary Window Line at the bottom top of the DND Main Window in the following format:

```
database/result:action explanation
```

where:

database	Is the **Site Name** field value for this frame.
result	Is one of these values:
	SUCCESS The action succeeded.
	ERROR The action failed.
action	Is a terse English description of the attempted action.
explanation	Is the **Port ID** field value or an error message.

Detailed information can be obtained through the *Echoed Response Processing Report* which can be run from the GUI and the DND Forms User Interface. (See Chapter 17, Report Operations).

Managing the AX Protection Switch

Description Port provisioning is disallowed by the DND on protected racks.

Circuit Provisioning

10

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Contents

Background

Overview

This chapter supports circuit provisioning and network circuit provisioning for DACS II and DACS II AX network elements.

DACS II Circuit Provisioning

DACS II Circuit Provisioning is the process of establishing cross-connections between External Facility Terminations (EFTs) for a variety of circuits, i.e., including half duplex or full duplex circuits. These cross-connections may be established as an elementary circuit (a single-channel cross-connection) or as multiple-channel cross-connection (combined cross-connections into complex, high-bandwidth circuits).

Before provisioning circuits on a DACS II, the NPC PROVISIONING form must be used to *CREATE* and *RESTORE* the NPCs which will be used to establish the circuit. The NPC **Type**, specified during *CREATE*, is an important element in determining the type of circuit it will be used in. Attempts to *ACTIVATE* circuits between NPCs that are inappropriate to the type of circuit are rejected.

DACS II AX Circuit Provisioning

DACS II AX circuit provisioning involves establishing cross connections for full-duplex circuits only. Before provisioning circuits on a DACS II AX, the T1/E1 or T3 PORT PROVISIONING form must be used to *RESTORE* the T1/E1 or T3 ports which will be used to establish the circuit. Attempts to *ACTIVATE* circuits between ports that are inappropriate to the type of circuit are rejected.

Beginning with DND Release 5.0.1, port and circuit provisioning became available for AX equipment. While the DND supports port provisioning for DACS II AX Release 9.03 equipment (and beyond), circuit provisioning is now supported on all types of AX ports.

When an AX is upgraded to Release 9.03 or greater, all termination name and termination cross connect data is automatically deleted from the DND. Therefore, termination name and mapping functions do not apply to the newer AX equipment.

Prior releases of AX equipment are still supported through Termination Naming and Termination Mapping. (See *Chapter 12, Termination Naming and Connections*).

(Continued on next page)

Background (Continued)

Network Circuit Provisioning

Network Circuit Provisioning is the process of the DND searching through managed nodes (DACS II, DACS II ISX, and DACS II AX) and locating the shortest network path (number of nodes) corresponding to A and Z circuit sites. It enables endpoint to endpoint (A-Z) network circuit provisioning by matching individual circuit segments on each node with the intertie table to determine network circuit connectivity.

For network circuit provisioning, the DND only supports Random Bandwidth Type, Full Duplex, two-point circuits. Clear circuits are not supported.

Circuit Provisioning Forms

The following forms support the circuit provisioning processes:

- DACS II CIRCUIT PROVISIONING form
- DACS II AX CIRCUIT PROVISIONING form
- NETWORK CIRCUIT PROVISIONING form

The DACS II CIRCUIT PROVISIONING form is used to setup a circuit in a network of DACS II. The DACS II AX CIRCUIT PROVISIONING form is used to set up a circuit in a network of DACS II AX equipment running AX Release 9.03, on ports that are managed and unmanaged by DND. The NETWORK CIRCUIT PROVISIONING form is used to set up circuits in a network where the end-points are either *managed* or *unmanaged* nodes.

The forms and their available actions are described later in this chapter.

(Continued on next page)

Background (Continued)

DACS II Objectives

This chapter provides background information to help you perform the following:

1. Activate New Full Duplex, Half Duplex, Digital Multipoint Bridge, and Virtual Circuits
2. Pend a New Circuit
3. Modify a Circuit
4. Combine Multiple Circuits
5. Create an Alternate Route for a Circuit (with or without circuit preemption)
6. Normalize a Circuit
7. Add a Leg to a BCON Circuit
8. Delete a Leg from a BCON Circuit
9. Change the Return Path for a BCON Circuit
10. Provision TS0 to Non-TS0 Circuits
11. Deactivate a Circuit
12. Delete a Circuit
13. Perform a Circuit Trace

DACS II AX Objectives

1. Activate New DACS II AX Full Duplex Circuits
2. Modify a DACS II AX Circuit
3. Change a DACS II AX active map
4. Delete a DACS II AX Circuit
5. Perform a Circuit Trace on DACS II AX

Network Provisioning Objectives

1. Activate Network Circuit Provisioning
2. Modify Network Circuit Provisioning
3. Delete Network Circuit Provisioning

Background (Continued)

Related tasks

For related tasks, see the following General Tasks in Volume II:

DND GUI:

- Activating or Pending a New Circuit, Full or Half Duplex GT 10.1G
- Activating or Pending a New Circuit, Digital Multipoint Bridge GT 10.2G
- Modifying a Circuit GT 10.3G
- Combining Multiple Circuits GT 10.4G
- Adding a Leg to a Broadcast Circuit (BCON) GT 10.5G
- Deleting a Leg from a Broadcast Circuit (BCON) GT 10.6G
- Changing the Return Path of a Broadcast Circuit (BCON) GT 10.7G
- Creating an Alternate Route Cross-connection GT 10.8G
- Normalizing a Circuit GT 10.9G
- Deactivating a Circuit GT 10.10G
- Deleting a Circuit GT 10.11G
- Performing a Circuit Trace GT 10.12G
- Activating a New or Existing DACS II AX Circuit GT 10.13G
- Modifying a DACS II AX Circuit GT 10.14G
- Changing a DACS II AX Active Map GT 10.15G
- Deleting a DACS II AX Circuit GT 10.16G
- Performing a Circuit Trace on a DACS II AX GT 10.17G
- Activating Network Circuit Provisioning GT 10.18G
- Modifying Network Circuit Provisioning GT 10.19G
- Deleting Network Circuit Provisioning GT 10.20G

DND Forms:

- Activating a New Circuit, Full Duplex or Full Duplex Loopback GT 10.1U
- Activating a New Circuit, Clear DS1 Full Duplex or Half Duplex GT 10.2U
- Activating a New Circuit, Half Duplex or Half Duplex Loopback GT 10.3U

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Background (Continued)

Related tasks (Continued)

DND Forms (Continued):

- Activating a New Circuit, Full-Duplex Random or Full-Duplex Random Loopback GT 10.4U
- Combining Multiple Circuits GT 10.5U
- Activating a Circuit, Virtual Multipoint Circuit GT 10.6U
- Activating a Circuit, DMB Multipoint Symmetrical Circuits GT 10.7U
- Activating a Circuit, DMB Multipoint Polling Data Circuit GT 10.8U
- Adding a BCON LEG to a Full-Duplex Contiguous Circuit GT 10.9U
- Adding a BCON LEG to a Full-Duplex Random Circuit GT 10.10U

Related information

For related information see:

- *DACS II and DACS II ISX Operation and Maintenance Manuals.*

General Information

Overview

The following section contains general circuit provisioning information. Since certain information only applies to DACS II, DACS II ISX, or DACS II AX network elements supported by DND, a distinction is made where appropriate. If no distinction is made, the information applies to all network elements.

Channels and Ports

The unit of cross-connection is typically the cross connection of the Digital Signal 0 or Digital Signal 1 (DS0 or DS1) channel used to transmit data and/or voice information. A channel has a bandwidth of 64 kilobits per second (Kbps) and can carry 56 Kbps or 64 Kbps of data. If a user is limited to the lower number of Kbps per channel, the DACS uses the remaining 8 Kbps in each DS0/DS1 to achieve 64 Kbps.

Channels are identified by channel numbers within a port. The values are -- 0 through 23 for North American Standard (NAS) and 0 through 31 for Conference European Postale et Telephonique (CEPT) standard. The 1.544 megabits per second (Mbps) of a DS0/DS1 signal becomes 24 channels of 64 kilobits per second (Kbps) under the NAS. Likewise, the 2.048 Mbps of an E1 signal becomes 32 channels of 64 Kbps under the CEPT Standard.

A NAS T1 port carries 24 DS0/DS1 channels for a total of 1.536 megabits per second (Mbps), (plus 8K overhead to achieve 1.544 Mbps). An E1 facility port (under the CEPT standard) carries 32 DS0/DS1 channels for a total of 1.984 Mbps (which includes an additional 64K overhead to achieve the 2.048 Mbps data rate). In this instance, only 31 DS0 channels are available; Timeslot 1 is used for framing.

Bandwidth

The circuit **Bandwidth** refers to the number of 64 Kbps channels constituting a high-rate circuit (any circuit larger than one channel). For example, a 256 Kbps data channel consists of four 64 Kbps channels.

For NAS NPCs, the available bandwidth is *1-24* channels; for CEPT NPCs, the available bandwidth is *1* through *31* channels.

General Information (Continued)

Bandwidth Type (DACS II and DACS II ISX)

The **Bandwidth Type** indicates how bandwidth is allocated on the two NPCs used on the circuit. The three bandwidth types for DACS II are:

- *C: Contiguous*
- *A: Alternating*
- *R: Random.*

Contiguous bandwidth is allocated on consecutive channels (i.e., 1, 2, 3, etc.). Alternating bandwidth is allocated on alternate channels (i.e., 2, 4, 6, etc.). In the **Channel:** field, enter the first channel number in the sequence for either Contiguous or Alternating bandwidth types, and the DND will compute the other channel numbers in the sequence. Random bandwidth permits allocation of channels in a random fashion. In the **Channel:** field, enter a list of channels separated by a comma (i.e., 2, 3, 5, 6, etc.).

TO and FROM Sides

A circuit is considered to go from one external facility termination (EFT) to another, or from one set of EFTs to another (high-rate). One side is, therefore, considered the FROM side, and the other is considered the TO side. The transmitting side of the circuit is typically denoted the FROM side. These conventions apply to all circuits established with one CIRCUIT PROVISIONING form.

DACS II AX FROM and TO Channel Requirements for supported and unsupported cards

The From and To Channel entries on the DACS II AX Circuit provisioning form are not always required entries. Therefore, channel fields are not displayed unless they are required.

(Continued on next page)

General Information (Continued)

DACS II AX FROM and TO Channel Requirements for supported and unsupported cards (Continued)

Use the following guidelines to determine when an entry is required.

- If you are using the Octal E1/T1 Card, the T3 Card, or the *Hybrid T3 Card* which are each supported by the DND for circuit provisioning, you are required to enter bandwidth and channel information (unless the ports are configured as "Clear").

  Note: The *Hybrid T3 card* is not supported for port provisioning from the DND GUI, however DND stores its port data through port provisioning Echoed Response Processing (ERP).

- If you are using one of several voice cards, a Quad OCU card, or a Quad or Octal High Speed card, you are not required to enter From and To Channel values; they are defaulted based on the bandwidth.
- If you are using other non-supported cards, bandwidth information, facility numbering, (e.g., channel numbers 1-32) and channel information is required, unless the bandwidth speed indicates Clear.

Locating Available Channels Using the Find Button

The Find button locates the first available channels on an NPC based on the selected **Bandwidth Type** and **Bandwidth**. For example, assume channels 3, 4, and 6 are the only channels used on an NPC. If the **Bandwidth** is 3 and the **Bandwidth Type** is *Contiguous*, clicking Find will return channels 7, 8, and 9. If the **Bandwidth Type** is *Alternating*, clicking Find will return channels 5, 7, and 9. If the **Bandwidth Type** is *Random*, clicking Find will return channels 1, 2, and 5.

If the FROM NPC and TO NPC are the same, the Find button will not consider channels on the other side of the circuit being created. So, in the above example, if only 3, 4, and 6 are being used and we are creating a *Random* circuit with a **Bandwidth** of 3, and FROM NPC and TO NPC are the same, clicking Find for the FROM NPC will return 1, 2, and 5. Clicking Find for the TO NPC will return 7, 8, and 9.

For the DACS II AX, the Find button treats all circuits as **Bandwidth Type** *Random*.

General Information (Continued)

Establishing Circuits

The most important characteristic of any circuit is its operating status. When you enter a **Ckt ID** for a circuit that is not on record in the DND database, the **Ckt Status** field on the screen is assigned a *NULL*. Any other **Ckt Status** means that a circuit of that ID is on record.

To successfully *ACTIVATE* a DACS II circuit means to establish it as a successful, traffic-bearing circuit. In that case, the **Ckt Status** is *ACTIVE*. However, you do not have to *ACTIVATE* a circuit to place it on record; a *PEND* **Action** places it on record in *PENDING* **Ckt Status**.

NOTE:
Traffic-bearing refers to the fact that the circuit is marked as cross-connected and, in theory, is capable of supporting customer traffic. However, the **Service State** of the NPC (In Service or Out of Service), as well as external parameters beyond control of the DND, will affect the ability of the cross-connect to actually carry customer traffic.

If an *ACTIVATE* **Action** fails, the DND will attempt to undo any connection it has already put up. In the case of a timeout, the DND sends a disconnect command.

Circuits for the DACS II AX do not have a status. All AX circuits are considered to be ACTIVE when they are established and remain traffic-bearing until they are deleted.

Disconnecting Circuits

When a DACS circuit is disconnected, it does not always disappear. It may remain in the database as *DEACTIVATED*, *ALTROUTED*, or *PREEMPTED*, depending on how it was disconnected. These **Ckt Status**es are covered in greater detail in this and the following chapters. To return a circuit to *NULL*; for example, to delete it, enter an **Action** of *DELETE*.

(Continued on next page)

General Information (Continued)

Disconnecting Circuits (Continued)

The *ACTIVATE* **Action** sends a command to connect EFTs that are *IS*. If the NPC of an EFT should go *OOS* after the circuit is in *ACTIVE* **Ckt Status**, the circuit remains *ACTIVE*. You can disconnect it immediately by selecting the *OOS* option from the *DELETE* **Action**. If you neglect to do that and attempt to *DEACTIVATE* or *DELETE* the circuit, the DND would need to send two commands before disconnection would be successful.

When a DACS II AX circuit is disconnected, it is deleted from the DND database. It may not be *DEACTIVATED*, *ALTROUTED*, or *PREEMPTED* since those actions do not apply to AX circuits.

Red-lining DACS II and DACS II ISX Circuits

You can red-line a DACS circuit as not to be disconnected without authorization, through the RDLD and INCL **Option**s.

High Rate Circuits

High rate circuits are FDX circuits, HDX circuits, or multipoint circuit legs which are established with a bandwidth of 2 or greater. High rate circuits are established to support the transmission capacity of larger traffic customers.

Using the Reconcile Mode

By specifying a **Reconcile Mode** in DACS II, you can have the circuit recorded in one of the following ways:

- Both the DND and DACS databases
- In the DND database only, where no DACS cross-connection is made
- In the DACS database only, in which case no data is changed in the DND database.

(Continued on next page)

General Information (Continued)

Using the Reconcile Mode (Continued)

By specifying a **Reconcile Mode** in DACS II AX, you can have the circuit recorded in one of the following ways:

- Both the DND and DACS databases
- In the DND database only, where no DACS cross-connection is made

WARNING:
Using Reconcile should be done with care. It can create discrepancies between the DND and DACS databases.

For more information, refer to *Chapter 3, DND Screens and Form Navigation*.

Combining Multiple Circuits (DACS II and DACS II ISX)

When using the *COMBINE* **Action** for DACS IIs, multiple circuits are combined to create high-rate, complex circuits. These circuits are useful for customers requiring larger bandwidths to transfer data. Depending on bandwidth size needed, the building of a multiple circuit may require a number of *COMBINE* **Actions**.

When combining multiple circuits to a create larger bandwidth, complex circuit, the following must hold:

- The multiple circuits must all be of the same Bandwidth Type
- No circuits can be of the Random bandwidth type

Testing Circuits (DACS II and DACS II ISX)

Once a circuit is *ACTIVATED* in a DACS II, you may want to test it. *Chapter 21, Test Ports and Test Access* describes test access capabilities and how to connect test circuits.

TS0 Circuit Feature (DACS II and DACS II ISX Only)

Description

The TS0 circuit feature (for DACS IIs only) is supported by DND NPC and CIRCUIT PROVISIONING, for CEPT circuits of **Type** *PA* NPCs and **Bandwidth** *1* only. In the CEPT standard, channel 0 (time slot 0) is used to transmit the framing pattern and other data channel information. For various reasons, you may want to utilize channel 0 for other purposes, such as transmitting alarm information, or for testing, and therefore you may want to connect it to some channel other than 0 in some other CEPT NPC. This is a special case, and requires a value in the **Framing** field.

Framing Example

Figure 10-1 shows two sequential time frames in one direction for two different NPCs. Channel 0 (time slot 0) is to be connected to channel 1 (time slot 1). The last 7 bits of the first time frame's channel 0 contain an arbitrary pattern, the framing word (FW), which is used to identify the beginning of a pair of time frames. Channel 0 of the alternate time frame contains the non-framing word (NFW), consisting of 8 bits used to transmit various signals.

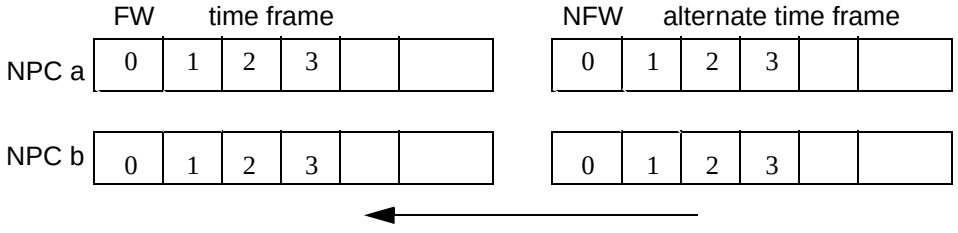


Figure 10-1. Circuit Provisioning Example—Two Sequential Time Frames

(Continued on next page)

TS0 Circuit Feature (DACS II and DACS II ISX Only) (Continued)

Framing Example, Continued

If you connected channel 0 unmodified to channel 1, the FW would appear twice within the pair of time frames on NPC b, and therefore would destroy the framing sequence. The **Framing** field allows you to insert another arbitrary pattern, the pseudo-FW, into the stream of frames on NPC b. Alternatively, you can communicate the NFW of NPC a to both frames of NPC b. In either case, the NFW is used to transmit the channel data you want to transmit.

Spare Bits

The FW and the NFW each consist of 8 bits. Bit 1 of the FW and bits 1 through 8 of the NFW are not used for framing purposes and therefore are called the spare bits. Spare bit manipulation also is supported. To access these bits, however, use the **NFS** field on the NPC PROVISIONING form.

Circuit Types (DACS II and DACS II ISX Only)

Overview

NOTE:
The majority of this section applies to DACS II circuit types only. For AX, the DND only supports Full Duplex, Clear, and Channelized circuits. For a general understanding of how these circuits are supported, review the Full Duplex and Clear DS1/E1 information within this section.

The type of circuit is determined mainly by **Ckt Class**, **Bandwidth**, **Options**, and the EFT identifiers.

- **Ckt Class** is the most significant. Through it you can specify two-way or, one-way, DMB multipoint, virtual multipoint, and BCON circuits.
- The EFT identifiers determine whether the connections are entirely NAS, entirely CEPT, or gateway.
- However, if you connect NAS with CEPT EFTs, you need to make sure the **NAM** keyword option is unselected; for example, that A-to-mu law conversion is in effect.

The DND supports a variety of circuit types, depending on what hardware is present on the DACS. Hardware and NPC types are described in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*. This section provides brief summaries of various circuit types. For more complete details on circuit types, refer to the *DACS II and DACS II ISX Operation and Maintenance Manuals*.

High-rate circuits in the DND are implemented in the DACS as a range command or individual one- or two-way circuits, depending on the **Bandwidth Type** chosen (*CONTIGUOUS*, *ALTERNATING* or *RANDOM*). To the DACS operator, the complex process of building circuits by individual MML commands and selection form a large variety of types with many possible parameters; becomes a much simpler process using DND by entering information into the forms.

Circuit Types (DACS II and DACS II ISX Only) (Continued)

Full Duplex

A full-duplex circuit provides a two-point, two-way transmission path. Data is sent from the FROM to the TO sides, as well as from the TO to the FROM sides. The **Ckt Class** is indicated by *FDX: FULL DUPLEX*.

One CIRCUIT PROVISIONING form is required to provision a full-duplex circuit. Figure 10-2 shows a sample of a full duplex circuit.

NOTE:
Selection of the NPC determines whether the DS0 channels are provided by NAS E/DDCs, CEPT E/DPCs, or DS3 Cards (channelized configuration). The procedure is the same in each case.

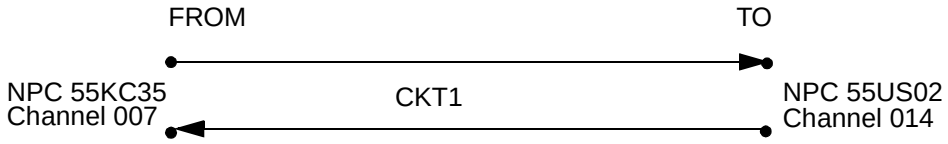


Figure 10-2. Sample Full-duplex Circuit

Circuit Types (DACS II and DACS II ISX Only) (Continued)

Half Duplex

A half-duplex circuit provides a two-point, one-way transmission path. For one-way circuits (half duplex), the transmitting side must be considered FROM. The **Ckt Class** is indicated by *HDX: HALF DUPLEX*.

One CIRCUIT PROVISIONING form is required to provision a half duplex circuit. Figure 10-3 shows an example of a half duplex circuit.

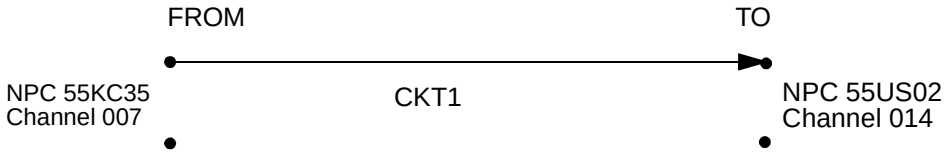


Figure 10-3. Sample Half-duplex Circuit

Circuit Types (DACS II and DACS II ISX Only) (Continued)

Clear DS1/E1

A clear DS1/E1 circuit provides a two-point, one- or two-way transmission path using all channels on the FROM and TO NPCs. The **Ckt Class** is indicated by *HDX: HALF DUPLEX* or *FDX: FULL DUPLEX.*

One CIRCUIT PROVISIONING form is required to provision a clear DS1/E1circuit. Figure 10-4 shows a sample of a clear, full-duplex DS1 circuit.

NOTE:
A clear DS1/E1 NPC can only connect to another clear DS1/E1 NPC. They are provisioned as such during NPC Provisioning.

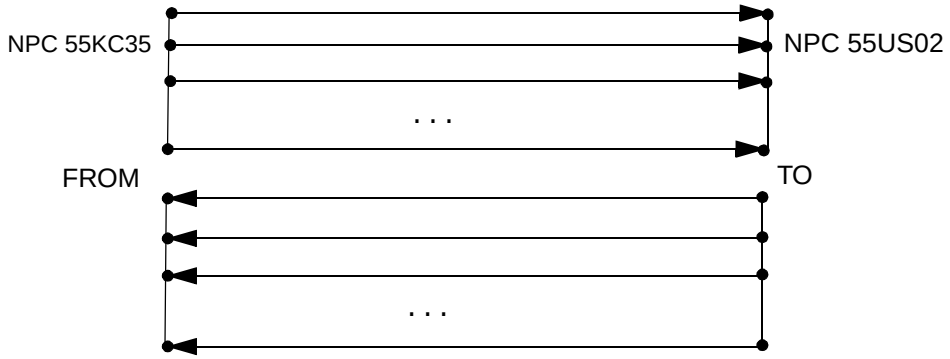


Figure 10-4. Sample Clear DS1 Full-duplex Circuit

Circuit Types (DACS II and DACS II ISX Only) (Continued)

BCON Circuits

BCON circuits provide the capability to provision multipoint circuits.There are two types of BCON circuit classes:

- *Backbone circuits* (*BKB*) - BKB circuits are used as the backbone circuit in BCON provisioning.
- T*ributary circuits* (*LEG*) - LEG circuits are used as the tributary circuit in BCON provisioning.

To create a BCON circuit through the DND user interface, create a Full Duplex circuit and add a LEG. The Full Duplex circuit will be converted into a BCON backbone with the new leg. Similarly, when the last LEG of a BCON circuit is deleted through the DND user interface, the remaining backbone will be converted back to a Full Duplex circuit automatically. The Circuit ID of a LEG circuit is automatically generated during execution of the *ADDLEG* action, and is displayed after the action completes. Figure 10-5 illustrates an example of a BCON circuit.

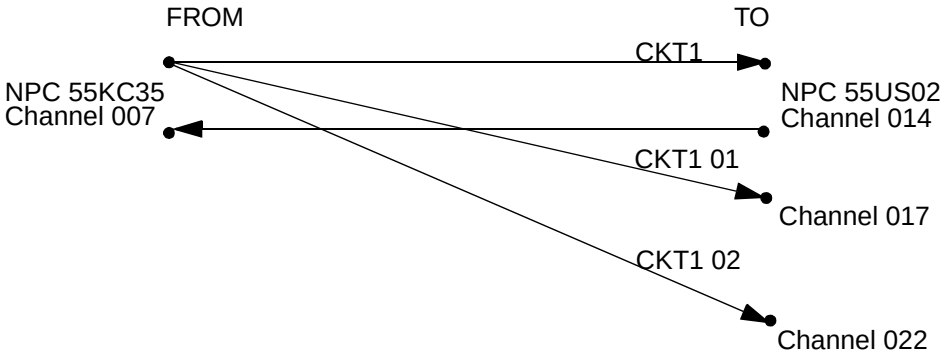


Figure 10-5. Sample BCON Circuit

You can modify a BCON circuit by adding a leg (*ADDLEG*), deleting an existing leg (*DELLEG*), or by changing the base name (*MODIFY* of BKB). BCON circuits cannot be *DEACTIVATED*, *ALTROUTED*, *PREEMPTED*, or *COMBINED*.

You can use the *CHGRPATH* **Action** to change the return path to another leg. The leg must already be connected in the BCON.

For additional information on BCON circuits, refer to the *DACS II and DACS II ISX Operation and Maintenance Manuals*.

Circuit Types (DACS II and DACS II ISX Only) (Continued)

Half-Duplex Loopback Circuits

One CIRCUIT PROVISIONING form is required to provision a half-duplex loopback circuit. The FROM and TO sides must be the same channel of the same NPC. The **Ckt Class** must be *HDX*. The Tx then loops around to the Rx of the same channel, as shown in Figure 10-6.

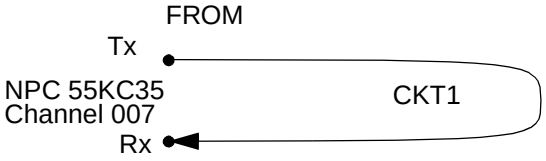


Figure 10-6. Sample Half-Duplex Loopback Circuit

Full-Duplex Loopback Circuits

One CIRCUIT PROVISIONING form is required to provision a full-duplex loopback circuit. The FROM and TO sides must be the same channel of the same NPC. The circuit class must be *FDX.* The Tx then loops around to the Rx of the same channel, as shown in Figure 10-7.

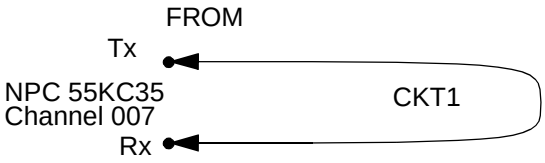


Figure 10-7. Sample Full-Duplex Loopback Circuit

NOTE:
The full-duplex loopback circuit is *only* available when the environment variable *FDX_LOOP_CKT* is set to 1. For more information on environment variables, refer to "Environment Variables" in *Chapter 2, Getting Started*.

Circuit Types (DACS II and DACS II ISX Only) (Continued)

Virtual Circuits

You can provision virtual multipoint, one-way, receive-only broadcast circuits of bandwidth 1 through 24 for NAS or 1 through 32 for CEPT. Gateway circuits are allowed, with a bandwidth up to 24.

To visualize the virtual multipoint, broadcast model, imagine a black box with one input and multiple outputs, as shown in Figure 10-8.

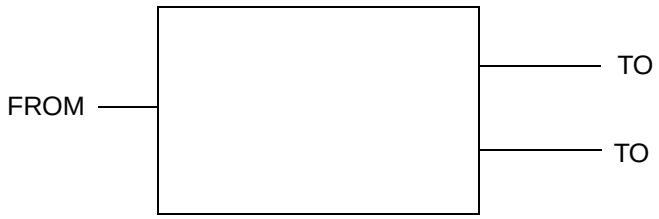


Figure 10-8. Ideal Broadcast Circuit

What happens inside the box is a matter of design. The DND design is shown in the exhibit for the *BBL* and *BRD* values of **Ckt Class** under the preceding table in "Field Descriptions."

In the single-channel bandwidth case, the initial FROM side and the final TO sides are single directions of one channel each on an NPC. In the high-rate case, the FROM and the TO points must be represented by multichannel circuits.

Internally, within the black box, branching is accomplished by means of a virtual node. This node is a logical channel that is both the TO side of the input FROM side and the FROM side of the output TO sides. In effect, DND sets up an input one-way, two-point circuit and one such output circuit for each broadcast point.

Ordinarily the channel for this virtual node is system-selected from the 1-500 range, but you can select one yourself, as is explained under **Ckt Class**. Such a procedure is unusual. The connection through the node is handled by the DND software once you enter a **Ckt Class** of *BBL* or *BRD*.

Circuit Types (DACS II and DACS II ISX Only) (Continued)

Provisioning Virtual Circuits

To provision a virtual circuit, a CIRCUIT PROVISIONING form is required for each leg.

Each form must have a different **Ckt ID**. High-rate circuits count as one leg and take one form to specify. In that case, channels are displayed on the real EFT line only.

There are a few conditions:

- All legs must have the same **Bandwidth**, and the **Bandwidth Type** must be *C* (contiguous).
- You must establish the backbone leg first. The broadcast legs cannot exist without it; if you try to create a BRD before a BBL, your attempt is denied.
- The NPCs must not be *UEQD*. If they are *OOS*, DND accepts the form, but the frame does not accept the command. A successful circuit must contain NPCs that are all *IS*.

NOTE:
The DND GUI does not support virtual circuits. All virtual circuits must be provisioned through the DND Forms interface.

Circuit Types (DACS II and DACS II ISX Only) (Continued)

DMB Circuits

The model for a DMB multipoint circuit is similar to that of the virtual multipoint circuit, except that a DMB multipoint circuit is two-way, and, therefore, the concept of FROM and TO sides becomes arbitrary. Either direction of a circuit can be the FROM or the TO. Also, DMB multipoint circuits require the selection of a DMB NPC and channel as a branch point.

The two specific types of DMB circuits are:

- Symmetric Voice Bridge - two or more symmetric legs
- Polling Data Bridge - one backbone leg and one or more branches

NOTE:
DMB multipoint is supported *only* for DACS II.

NOTE:
The DMB NPC number must be in the range supported by the DMB circuit pack. If it is not, the NPC is not a DMB NPC. If you do not know the ranges of each type of NPC, consult your system administrator.

Circuit Types (DACS II and DACS II ISX Only) (Continued)

Symmetrical Voice Circuits

Figure 10-9 shows an example of a symmetric voice circuit.

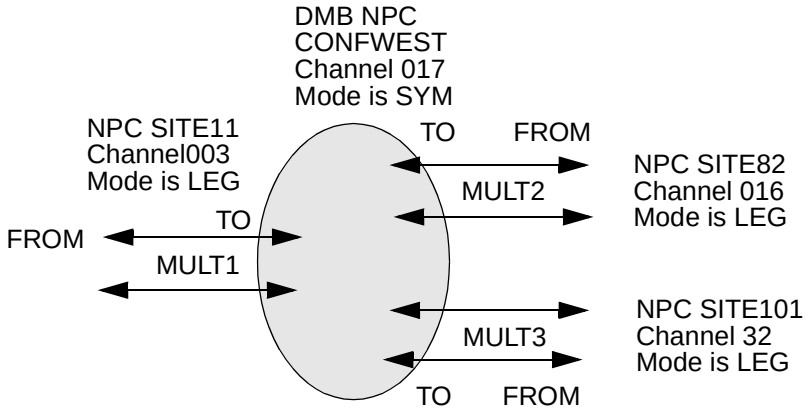


Figure 10-9. Sample Symmetric Voice Circuit

In this example, three CIRCUIT PROVISIONING **Actions** are required. Each form must have a different **Ckt ID**.

When implemented, the circuit resembles the illustration in Figure 10-10. Each leg can hear the traffic from all of the other legs.

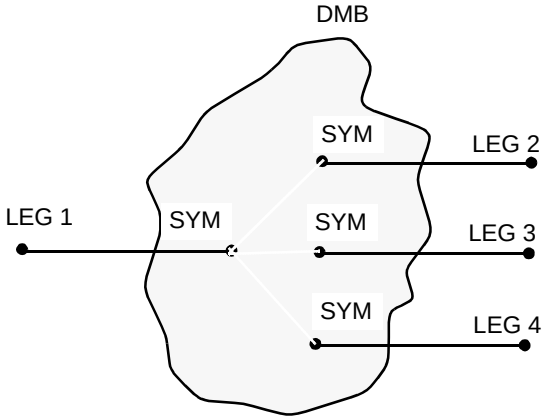


Figure 10-10. Implemented Symmetric Voice Circuit

Circuit Types (DACS II and DACS II ISX Only) (Continued)

Polling Data Circuits

Figure 10-11 shows an example of a polling data circuit. This figure is essentially the same as Figure 10-10; however, it is strictly conventional. The Tx direction of the backbone does not really go through the DMB NPC.

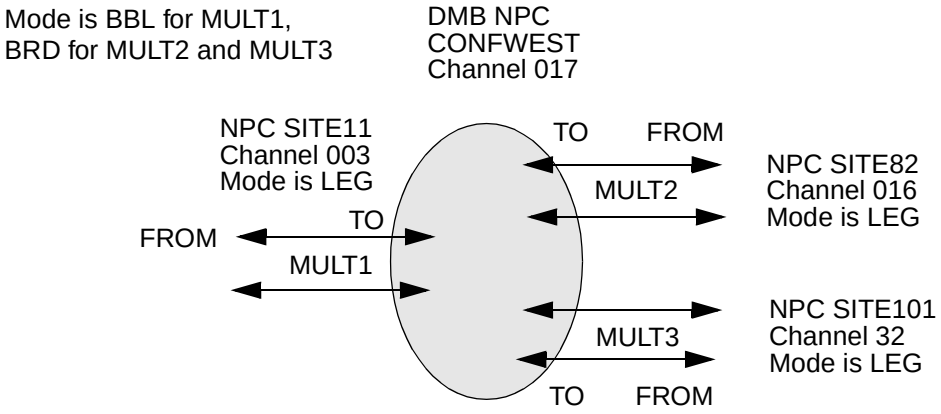


Figure 10-11. Sample Polling Data Circuit

In this example, three CIRCUIT PROVISIONING **Actions** are required. Each form must have a different **Ckt ID**.

When implemented, the circuit resembles the illustration in Figure 10-12. LEG 1 hears traffic for all LEGS, however, LEGS 2, 3, and 4 only hear traffic from LEG 1.

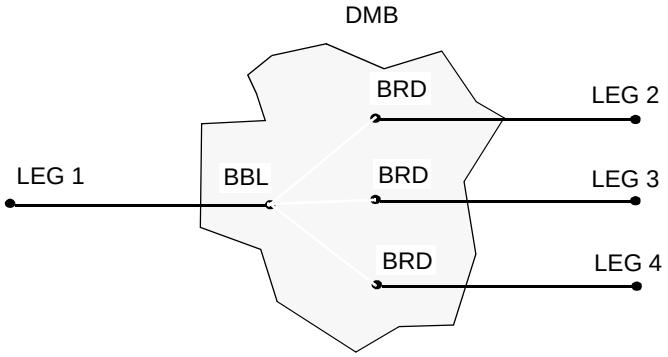


Figure 10-12. Implemented Polling Data Circuit

Circuit Types (DACS II and DACS II ISX Only) (Continued)

Cascaded DMB Circuits

The number of legs that can be hung from one branch point in a DMB multipoint circuit is limited by the number of time slots in a DMB circuit pack. Some limits are stated for the DACS II, as shown in Table 10-1.

Table 10-1. DMB Conference Information

Machine	DMB Conference Number Range	Maximum Number of DMB Conferences Per Frame	Maximum Number of DMB Conference Legs Per Pack
DACS II	1-85 (170 per pack)	2720	512
DACS II (CEF)	1-85 (170 per pack)	10880	512

NOTE:
If you assume eight DMB packs per DSPU per frame, and two DSPUs per frame, the maximum number of conferences is 170x8x2, or 2720.

The above limitations can be overcome for multipoint circuits by a configuration called cascading, in which two or more conferences are included in the same network of DMB multipoint circuits.

NOTE:
The representations shown in this section are not to be taken as circuit diagrams. They graphically represent the relations between the circuits to be entered on the various CIRCUIT PROVISIONING forms required by the cascade.

Circuit Types (DACS II and DACS II ISX Only) (Continued)

Cascaded Symmetric Voice Circuit

Figure 10-13 represents a cascaded symmetric voice circuit where each LEG can hear traffic from all of the other LEGS.

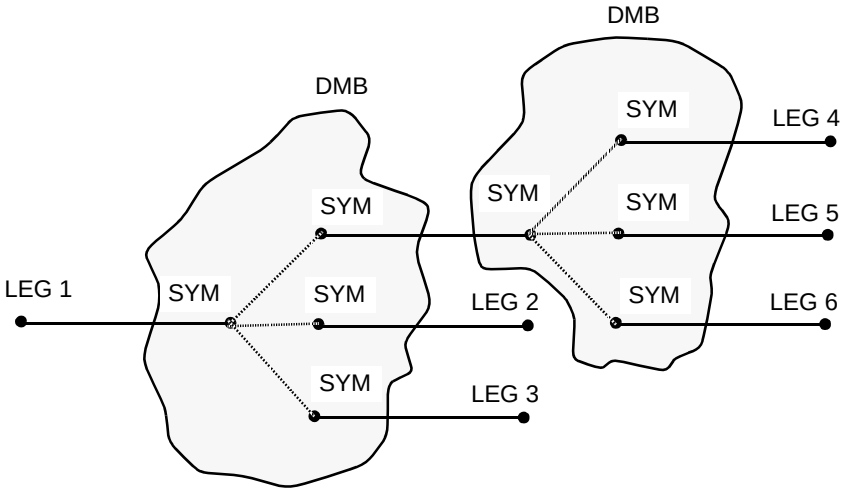


Figure 10-13. Cascaded Symmetric Voice Circuit

Using Figure 10-13 as an example, the following rules are evident:

- LEG always connects to SYM.
- Clusters of SYM must be the same NPC and channel, and it must be a DMB NPC.
- The number of SYM-to-SYM circuits is equal to one less than the number of DMB conferences in the circuit.

In the illustration, seven circuits are shown, requiring seven CIRCUIT PROVISIONING **Actions**. Whether a channel is TO or FROM has no bearing, except, of course, that a FROM and a TO have to appear in every cross-connect.

Circuit Types (DACS II and DACS II ISX Only) (Continued)

Cascaded BBL-to-BBL Polling Data Circuit

Notice that the same DMB NPC and channel are labeled BBL in one form and BRD in three forms.

Figure 10-14 shows two polling data circuits cascaded through the backbone LEGS. LEGS 1, 2, and 3 hear traffic from 4, 5, and 6, but they do not hear each other. Similarly, LEGS 4, 5, and 6 cannot hear each other, but they can hear the traffic from LEGS 1, 2 and 3.

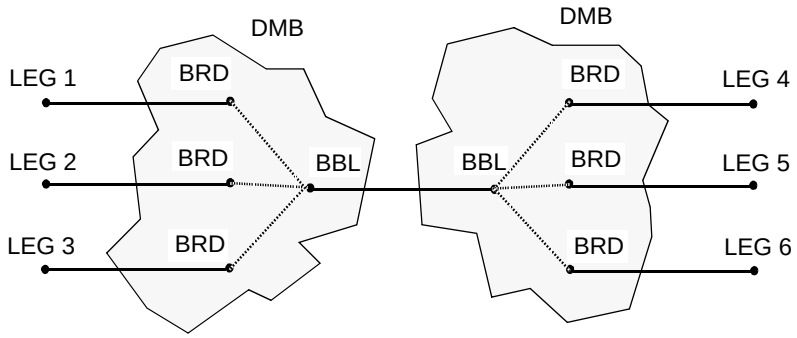


Figure 10-14. BBL-to-BBL Cascaded Polling Data Circuit

Notice that the LEG to BBL cross-connects of a single circuit have been replaced by a common BBL to BBL cross-connect. Seven CIRCUIT PROVISIONING **Actions** are required.

Circuit Types (DACS II and DACS II ISX Only) (Continued)

Cascaded BBL-to-BRD Polling Data Circuit

Figure 10-15 shows an example of a BBL to BRD cross-connect. LEG 1 can hear the traffic from everyone; all other legs only hear traffic from LEG 1.

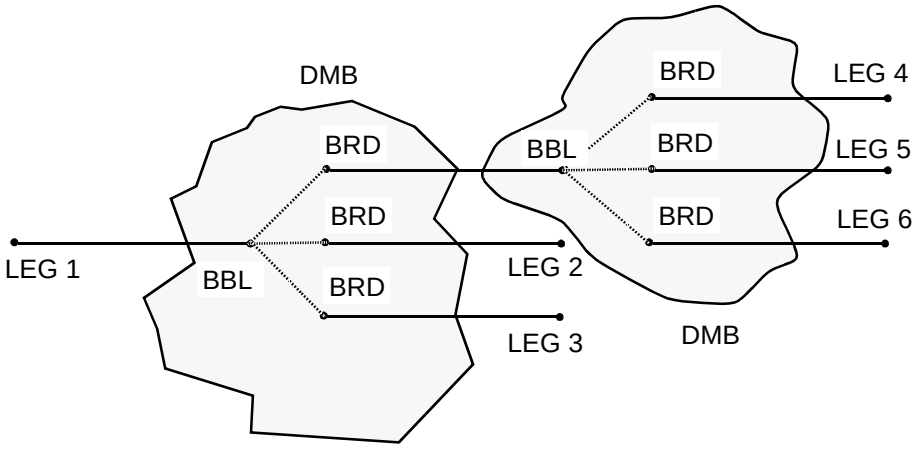


Figure 10-15. BBL-to-BRD Cascaded Polling Data Circuit

From this figure, the following rules are evident

- LEG always connects to BBL or BRD.
- A cluster of points representing one DMB and channel must include one BBL with the rest being BRD.
- As many BRD to BBL circuits are required as one less than the number of DMB conferences in the circuit.

Circuit Packs and Related Circuit Types (DACS II/DACS II ISX Only)

E/DDC and E/DPC Circuit Packs

Standard E/DDC and E/DPC circuit packs can support the following circuit types:

- Single-channel, two-point, one-way or two-way circuits.
- Single-channel, two-point, one-way or two-way circuits between NAS NPCs and CEPT NPCs (gateway circuits).
- High-rate, or high bandwidth (multichannel), NAS, CEPT, or gateway two-point, one-way or two-way circuits. The maximum bandwidth for NAS and gateway is 24 channels per circuit; for CEPT, 32.
- Virtual multipoint, one-way, receive-only broadcast circuits of bandwidth 1 through 24 for NAS or 1 through 32 for CEPT. Gateway circuits are allowed, with a bandwidth up to 24.
- BCON circuits of bandwidth 1 through 24 for NAS or 1 through 32 for CEPT. Gateway circuits are allowed, with a bandwidth up to 24.

DMB Circuit Packs

If DMB circuit packs are installed in the DACS, the following DMB multipoint two-way circuits are supported in single-channel bandwidth only:

- Symmetric voice circuits. Each station can communicate both ways at all times, but the DND allows disabling of transmission in one direction (**NTR** field).
- Polling data circuits. Equipment is polled one way and the replies are sent the other. Again, the DND allows disabling of transmission in one direction.

TG 80 Circuit Packs

If TG80/TG 80B circuit packs are installed in the DACS, the following circuits are supported, NAS only:

- 193-bit, clear DS1, half-duplex, full-duplex, or BCON.

TG 192 Circuit Packs

If TG192 circuit packs are installed in the DACS, the following circuit types are supported, CEPT only:

- 256-bit, clear E1, half-duplex, full-duplex, or BCON.

Circuit Packs and Related Circuit Types (DACS II/DACS II ISX Only) (Continued)

DS3 Circuit Packs

If a regular DS3 shelf containing DS3 circuit packs is installed in the DACS, the following circuit types are supported, NAS only:

- Channelized DS3; such as 28 channelized DS1 signals per DS3 circuit pack. Each DS1 signal becomes 24 NAS-only DS0 channels, which can be connected in bandwidths of up to 24. There are no CEPT DS3s; however, gateway circuits with other NPCs that are CEPT are supported.
- DS3 with 28 clear DS1s, full- or half-duplex only.

If a hybrid DS3 shelf is installed in the DACS, the following circuit types are supported:

- The EMXR/MXR cards support all types of NAS NPCs and circuits.
- The HMXR card supports all types of CEPT NPCs and circuits.

Alternate Routing (DACS II and DACS II ISX Only)

Introduction

When a transmission facility fails, it may be necessary for the DND operator to switch circuits connected to that facility to an alternate route. This section describes how to use the *ALTROUTE* **Action** to execute alternate routing, or altrouting, from the DND, and how the DND handles circuit preempting and normalizing of altrouted circuits.

Constraints

The following constraints apply to altrouting:

- A circuit in any **Circuit Status** can be altrouted (rerouted to an alternate route), except circuits that are already in the *ALTROUTED* or *DEROUTED* **Circuit Status**. You can even create a new circuit in the *ALTROUTED* **Circuit Status**.
- You can only *ALTROUTE* a circuit once. Before altrouting a second time, you must first *DEACTIVATE* or *NORMALIZE* (return it to its primary route).
- An *ALTROUTED* circuit is not available for being preempted (bumped from a channel assignment) until it has been deactivated or normalized.
- An *ALTROUTED* circuit can only be deactivated, normalized, or deleted. It can be activated in *local only* mode, but any circuit that it preempted will be deactivated.

High Rate Circuits

For high-rate circuits:

- When you *ALTROUTE* a multichannel circuit, all the channels on that side of the circuit get altrouted, possibly requiring the preempting of multiple circuits (see "Preempting Conditions" later on page 10-39).
- Random circuits cannot be altrouted.

Multipoint Circuits

For multipoint circuits, only the EFTs can be altrouted; the virtual node of a broadcast circuit or the DMB channel of a symmetric voice circuit or of a polling data circuit cannot be altrouted. Multipoint altrouting means that you change the EFTs of the legs, but not the branch point.

Alternate Routing (DACS II and DACS II ISX Only) (Continued)

BCON Circuits

BCON circuits cannot be altrouted.

Real vs. Psuedo Altrouting

Most altrouting occurs when you use the DND to route a circuit that is connected in the DACS (*ACTIVE* **Circuit Status**) through another DACS channel. This is a "real" *ALTROUTE* **Action**.

However, an *ALTROUTE* in which all channel ends are altrouted to themselves is called a "pseudo-"*ALTROUTE*. The pseudo-*ALTROUTE* allows you to put up a temporary circuit, in *ALTROUTE* **Ckt Status**, that becomes deactivated on normalization, without special action to deactivate it.

Alternate Routing Fields

The Altrouting fields appear on the CIRCUIT PROVISIONING form. When performing the *ALTROUTE* **Action** on an existinig circuit, the original circuit information will appear on the form in read-only mode. The **ALTROUTE CIRCUIT ENDPOINTS** box appears to allow you to enter NPC and channel information to the FROM
and TO sides of the new alternate route.

When the *ALTROUTE* is completed, the **New Circuit Status:** field will indicate the new circuit status as *ALTROUTED.*

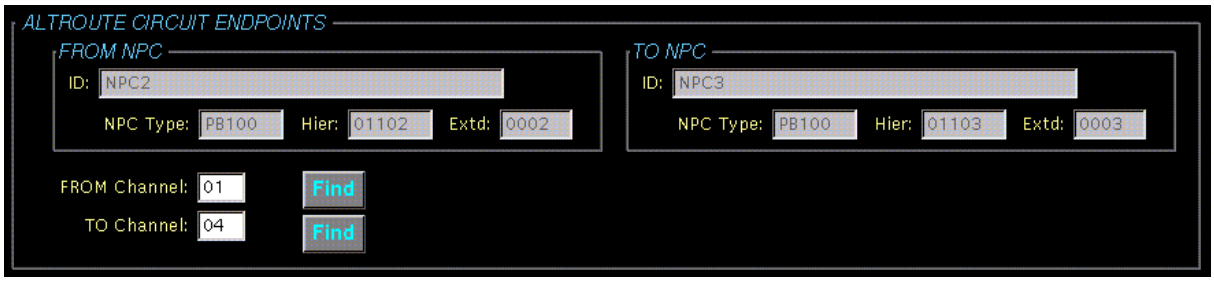


Figure 10-16. ALTROUTE CIRCUIT ENDPOINTS Box

Preempting Conditions (DACS II and DACS II ISX Only)

Description

A circuit can be altrouted to a spare, unused channel (which is preferable but may be unavailable), or to a channel already in use by other circuits. In this latter case, the other circuit is *PREEMPTED*; that is, they are temporarily bumped off their channel assignment.

All Circuits

The following conditions apply to preempting:

- Preempted circuits stay in the *PREEMPTED* **Ckt Status** until they are normalized or you manually change them to another **Ckt Status**.
- Once you manually change the **Ckt Status** of a *PREEMPTED* circuit, it can no longer be automatically normalized to its primary channel assignment; you would have to do this via a CIRCUIT PROVISIONING **Action**.
- An NPC and channel cannot be preempted twice. A second attempt is denied.
- Some channels on a *PREEMPTED* circuit may not required for the *ALTROUTED* circuit. They are still available for preemption by other circuits.
- Once any channels on a circuit are preempted, that circuit is in the *PREEMPTED* **Ckt Status** and cannot be activated to carry traffic until all preempted channels on the circuit are normalized.
- You can place a *PREEMPTED* circuit in service on other channels with an *ALTROUTE* **Action**. This **Action** will remove it from the preemption list of its original preempting circuit. You can return it to its original path with a *NORMALIZE* **Action** when the original channels are available. If they are not, the normalization will leave the circuit in the *DEACTIVATED* status.
- If more than one circuit preempts the channels on a *PREEMPTED* circuit, the *PREEMPTED* circuit cannot be reactivated until all the preemption has been removed from its channels. The normalizing of the last preempted channel reactivates the *PREEMPTED* circuit.

High Rate Circuits

For high-rate circuits, random circuits can be *PREEMPTED*, although they cannot be *ALTROUTED*.

Preempting Conditions (DACS II and DACS II ISX Only) (Continued)

Multipoint Circuits

For multipoint circuits, any or all of the EFTs can be preempted. For DMB, the EFT of a leg can be preempted. For both virtual and DMB, the corresponding legs are then placed in *PREEMPTED* **Ckt Status**. However, the virtual node or DMB channel remains *ACTIVE*, meaning that additional legs can be attached to it at any time.

BCON Circuits

BCON circuits cannot be preempted.

Preempting Table and Fields

When you specify an altrouting operation that preempts *ACTIVE* circuits using the DND GUI, the DND displays a separate Netscape window with a table of circuits that need to be preempted to perform the altrouting. The CIRCUIT PROVISIONING form displays a message field asking you to verify the preempting procedure. Select the **Verified:** check box to proceed. If you decide not to proceed with the procedure, click Back to enter different *ALTROUTE* endpoints.

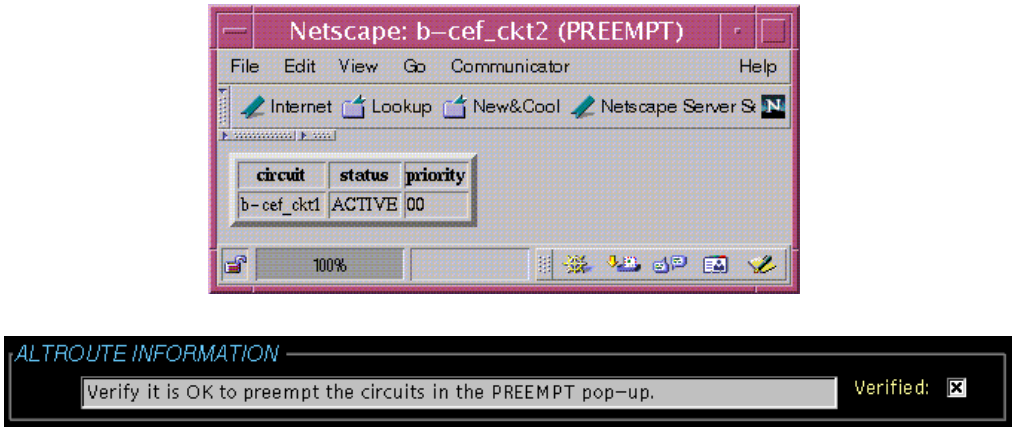


Figure 10-17. DND GUI: Preempting Table and Fields

If the DND Forms interface is used, it will prompt for manual verification to preempt each circuit.

Normalizing (DACS II and DACS II ISX Only)

Description

When you *NORMALIZE* an *ALTROUTED* circuit, the circuit is rerouted from its temporary channel to the original channel for which it was provisioned and is returned to its pre-*ALTROUTED* connection. Any *PREEMPTED* circuits are reactivated.

Conditions

Normalizing has the following conditions:

- When you *NORMALIZE* a real *ALTROUTED* circuit, the original circuit is restored to *ACTIVE* **Ckt Status**.
- When you *NORMALIZE* a pseudo-*ALTROUTED* circuit, the original circuit is restored to *DEACTIVATED* **Ckt Status**.
- *DEACTIVATE* also performs a *NORMALIZE* and leaves the original circuit in the *DEACTIVATED* **Ckt Status**, whether it was a real or a pseudo-*ALTROUTE*.
- If another circuit was preempted by the *ALTROUTED* circuit, the DND attempts to reactivate the *PREEMPTED* circuit, provided that the circuit just returned to *ACTIVE* was the only one preempting it.
- Circuits which cannot be reactivated for any reason (such as a conflict arises during a normalization) are put in *DEACTIVATED* **Ckt Status** so that the user can work on them when conditions permit.

Circuit Trace

Overview

The buttons and fields in the CIRCUIT NETWORK INFORMATION box allow you to use the "continue network circuit" feature to provision additional circuits connected to either the FROM or TO side of the current circuit (depending on which is available) and display a circuit trace of the connecting circuits throughout your DACS network. When a circuit trace is displayed, the whole circuit path is displayed. The circuit trace is not dependent upon a user's assigned partition. A single circuit can be traced through DACS II, DACS II AX, and other SNMP nodes.

The trace feature is used for DACS equipment and Release 9.03 and greater DACS II AX equipment. While trace works similarly for these equipment types, separate descriptions are provided below to highlight processing differences.

Circuit Trace Navigation Buttons

The FROM PORT, TO PORT, and TRACE MAP DISPLAY buttons appear in the CIRCUIT NETWORK INFORMATION box to help continue building a network circuit or to trace a network circuit. Click the FROM or TO button to trace the circuit through an intertie (on either the FROM to TO side) to the next site.

Matching Circuit

A matching circuit must adhere to the following conditions:

- The Far End NPC is created or the Far End Port exists, or the Far End termination has been created.
- There is an active circuit on DACS II (status of *ACTIVE*, *ALTROUTED*, or *P_ACTIVE*) on the Far End Port/NPC/Termination, or any circuit on DACS II AX or other SNMP node with a matching **Ckt Class**. If the Far End Port/NPC/Termination is a channelized Port/NPC/Termination, the channels must also match. If the Far End Port/NPC/Termination is a clear Port/NPC/Termination, the circuit can be traced throught the clear circuit to the next site in the network circuit.

If there is no matching circuit on the next site and the current **Action** is *ACTIVATE*, the form will transition to the next site and allow creation of the next circuit. The matching side of the circuit will automatically be filled in. If the Far End is a DACS II, the NPC must be In-Service (IS) to transition to the next site. The form transition will be denied for all other circuit **Actions**.

(Continued on next page)

Circuit Trace (Continued)

Matching Circuit (Continued)

For actions other than *ACTIVATE*, if there is a matching circuit on the next site, the form will transition to the next site and display the matching circuit.

For the DACS II AX, a circuit can only be traced through the active connection map.

Read-only Fields

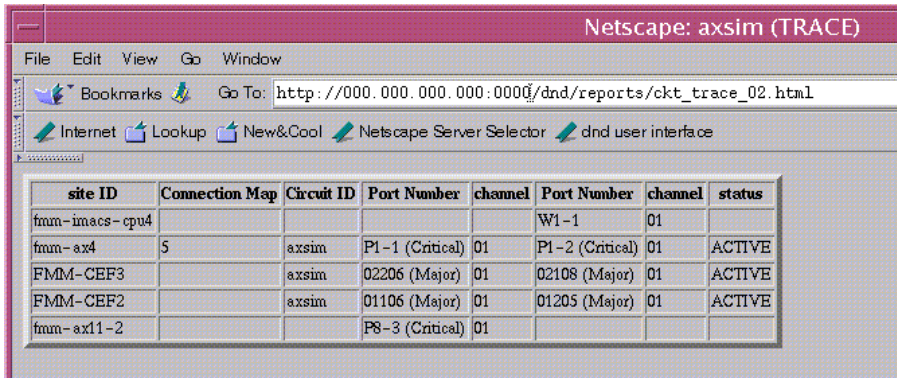
The read-only fields next to the buttons indicate the port (or hierarchical NPC number or Mux Port) of the FROM or TO side, the **Site Name** it is associated with, and (if applicable) the port it is connected to on the other side of the intertie.

Displaying a Circuit Trace

A circuit trace can be displayed from any **Action** of the DACS II CIRCUIT PROVISIONING form or the DACS II AX CIRCUIT PROVISIONING form before or after the current **Action** is executed.

These forms also offer the *TRACE* **Action** to quickly display a circuit trace map. Click TRACE MAP DISPLAY to display the following:

- A circuit trace table (See Figure 10-18), indicating the Site Names and circuits connected throughout the DACS network.
- A circuit trace map (See Figure 10-19) on a greyed out background, illustrating the circuit path throughout the DACS network. Only the network elements and interties and groups which are associated with the network circuit are displayed in the circuit trace diagram.



site ID	Connection Map	Circuit ID	Port Number	channel	Port Number	channel	status
fmm-imacs-cpu4					W1-1	01	
fmm-ax4	5	axsim	P1-1 (Critical)	01	P1-2 (Critical)	01	ACTIVE
FMM-CEF3		axsim	02206 (Major)	01	02108 (Major)	01	ACTIVE
FMM-CEF2		axsim	01106 (Major)	01	01205 (Major)	01	ACTIVE
fmm-ax11-2			P8-3 (Critical)	01			

Figure 10-18. A Sample Circuit Trace Table

Circuit Trace (Continued)

Displaying a Circuit Trace, Continued

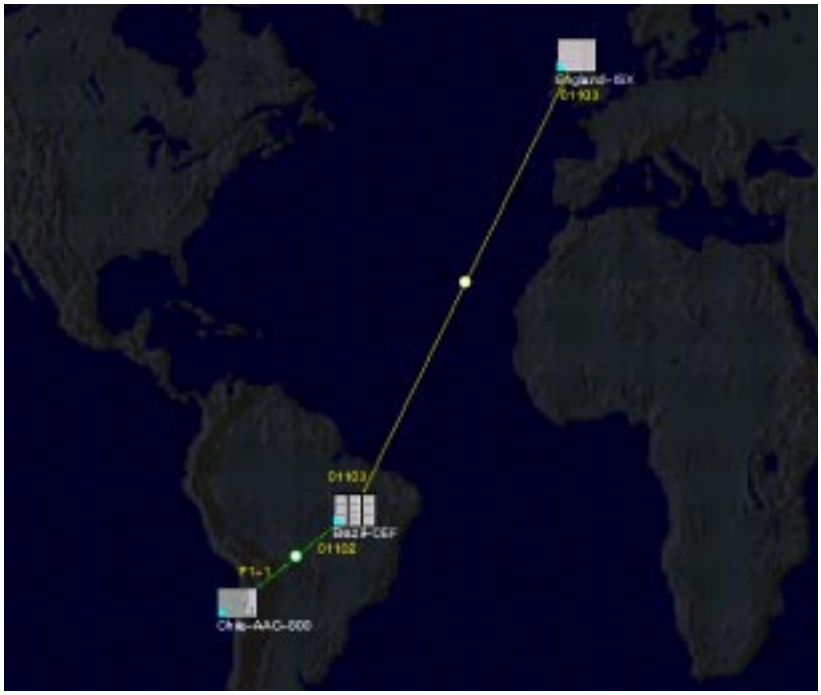


Figure 10-19. A Sample Circuit Trace Map

Circuit Trace (Continued)

Characteristics of a Circuit Trace Map

The characteristics of a circuit trace map are:

- The sites will always display in grey - there is no service state information provided for the sites on a circuit trace map.
- The interties cannot be clicked.
- The color of the interties on the circuit trace may not match that on the DND Workspace network map; it will ONLY indicate the highest alarm severity of the NPCs and ports that are part of the network circuit.
- The NPC and port numbers or channel and port numbers of the intertie that are part of the circuit are displayed at either end of the intertie. If the circuit loops back through the intertie, up to two sets of NPCs and ports can be displayed per intertie. If there are more than two passes through the intertie, the ports are replaced with "******".

Actions on a Circuit Trace Map

On a circuit trace map, you can: move network elements and groups, zoom in and unzoom an area, expand and condense groups. No other network map actions are available.

To expand, or condense an individual group, use the Group Icon Menu.

To zoom in on an area:

- **Workstation**: Hold down right mouse button and drag diagonally. Release when outline appears around desired area.
- **PC**: Double-click either mouse button and drag diagonally. Release when outline appears around desired area.

(Continued on next page)

Circuit Trace (Continued)

Actions on a Circuit Trace Map, Continued

To unzoom, condense or expand all groups on a circuit trace map, use the circuit trace map pull-down menu:

1. Right-click and release on an empty spot on the circuit trace map.

   A pop-up menu will appear on the circuit trace map.

2. Select the choice from the pop-up menu.



Figure 10-20. Circuit Trace Pop-Up Menu

Closing the Circuit Trace Table and Map

To close the circuit trace table, double-click on the window menu button. To close the circuit trace map, click Close.

Circuit Profiles

Description

Specify field values once in a profile and re-use the profile to create new circuits. The CIRCUIT PROVISIONING form allows you to define profiles based on the NPC types and use them to create new circuits using the same or similar NPC types.

Profiles and Circuit Types

A circuit profile is used to create circuits using the same or similar NPC types. This is true for both the FROM NPC and TO NPC. There are six categories of NPC types (port classes):

- DMB
- Clear DS1
- Clear E1
- Domestic
- CEPT CAS
- CEPT NSA.

When you use a profile as a basis for a new circuit, you can change all field entries, except **Circuit Class** and **Bandwidth Type**. **Control Options** are not saved as part of a profile. Each profile is marked as available for public use by all DND users, or for private use by your own login.

Profile ID Field

Use the **Profile ID** field located near the top of the screen to select an existing profile as a basis for a new circuit.

Circuit Profiles (Continued)

Profile Box

The **Profile Box** located at the bottom of the CIRCUIT PROVISIONING form is used to create and delete circuit profiles. You can save or delete a profile from any circuit **Action**.



Figure 10-21. DND GUI: Profile Box

Profiles and Network A-Z Circuit Creation

Using a circuit profile, you can easily create a network A-Z circuit with a minimum of new field entries and mouse clicks.

When the NPC is in an intertie to another DACS, the FROM NPC and TO NPC buttons appear in the CIRCUIT NETWORK INFORMATION box on the CIRCUIT PROVISIONING form. The FROM NPC and TO NPC buttons enable you to slide through the intertie to the next part of the circuit. This is very useful when creating or modifying a network A-Z circuit.



Figure 10-22. CIRCUIT NETWORK INFORMATION Box

Circuit Profiles (Continued)

Example: Network A-Z Circuit and Circuit Profile

This example shows how a profile can be used to create a network A-Z circuit.

Assume there are interties between DACS#1, DACS#2, and DACS#3.

1. Create a circuit on DACS#1 using a profile.
2. Click TO NPC. The form transitions to DACS#2 with the same profile and the FROM Side of the circuit filled in.
3. Specify the TO NPC information and execute the form.
4. Click TO NPC. The form transitions to DACS#3 with the same profile and the FROM Side of the circuit filled in.
5. Specify the TO NPC information and execute the form.

DND GUI: CIRCUIT PROVISIONING Form

Overview

The execution of a properly filled out CIRCUIT PROVISIONING form sends the appropriate MML commands (i.e., CONN, DISC, etc.) to the DACS to physically establish the cross-connection. The DND records the circuit information in the DND and DACS databases.

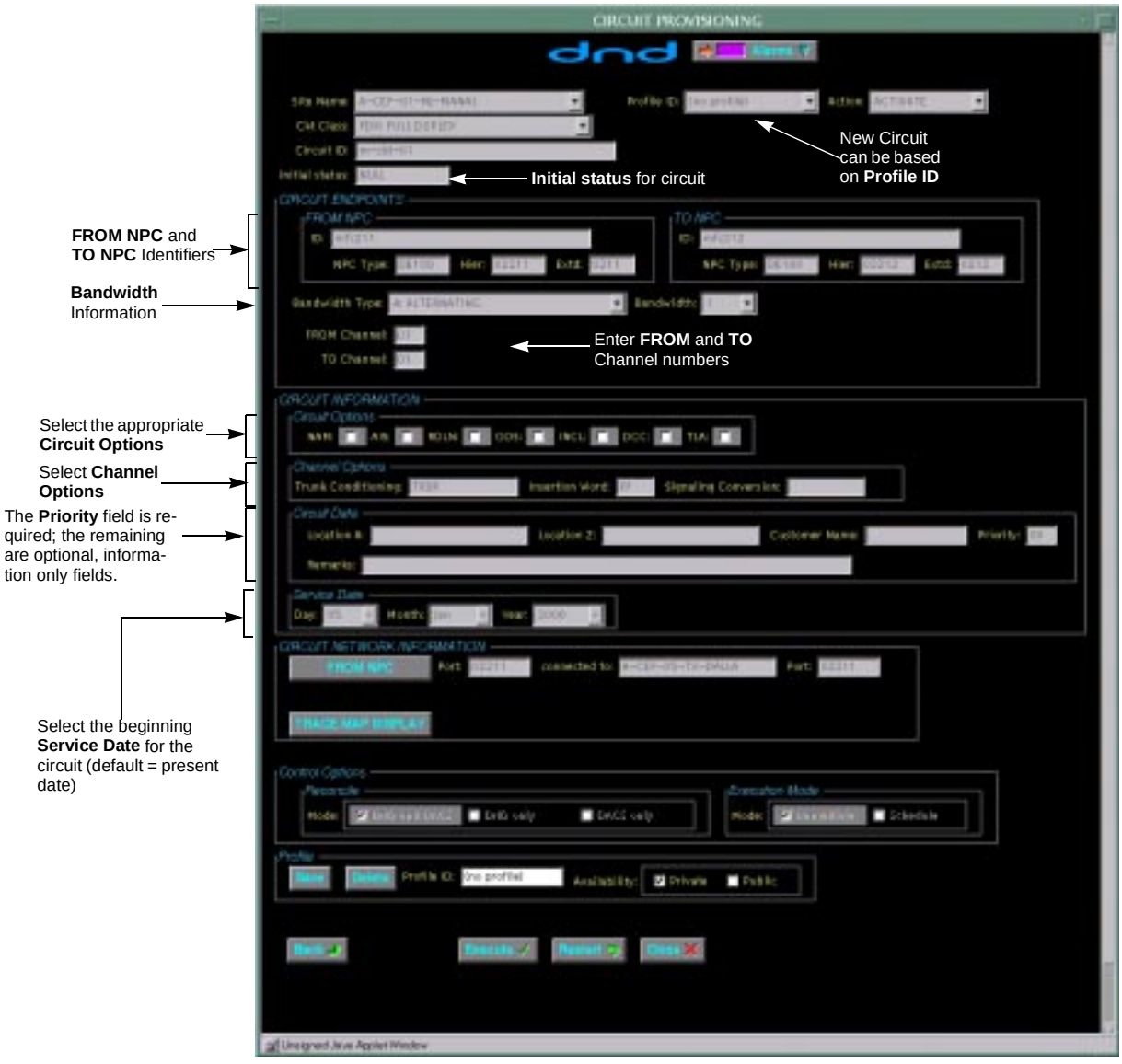


Figure 10-23. The CIRCUIT PROVISIONING Form, *ACTIVATE* Action

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions

The field values for the CIRCUIT PROVISIONING form are described in Table 10-2.

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form

Field	Description
Site Name	(Combo box) Mandatory. Select the name of the DACS where the requested **Action** will take place. Clicking this field will display a list of DACS names. By default, the list appears alphabetically. To change the sorting order, modify the setting for the SORT_NAME_BY variable.
Profile ID	(Combo box) Optional. For creating new circuits, select a circuit profile that will be used as a basis for a new circuit. The profile and the new circuit must have similar NPC types. Valid for *ACTIVATE*, *ALTROUTE*, *PEND*, and *COMBINE*.
Action	(Combo box) Specifies the CIRCUIT PROVISIONING operation. The valid actions are: ■ *ACTIVATE* - Enters the circuit specified by **Ckt ID** in the DND database and cross-connects it in the frame, making it an existing, traffic-carrying circuit. *ACTIVATE* also changes the **New Status** of already existing circuits from *PENDING*, *PREEMPTED*, or *DEACTIVATED* to *ACTIVE* and from *ALTROUTED* to *ACTIVE* in *DACS only* mode. *ACTIVATE* is the default **Action**. ■ *DELETE* - Removes the specified circuit from the DND and DACS databases, changing the **New Status** to *NULL*. **Note**: Deletion of an *ACTIVE* or *ALTROUTED* circuit results in disconnection of the circuit in the DACS before the record is deleted in the DND.

(Continued on next page)

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
Action, Continued	Deletion of a circuit that is listed in a Reconfiguration Plan is not allowed (except in *DACS only* mode). First, delete it from the plan. ■ *MODIFY* - Retrieves the specified circuit from the DND database for purposes of altering circuit attributes or **Ckt ID**. *MODIFY* does not change the **New Status**. You can *MODIFY* any user-accessible field for circuits in the *PENDING* or *DEACTIVATED* **Ckt Status**. You can *MODIFY* the following fields for circuits in the *ACTIVE* or, *PREEMPTED* or *ALTROUTED* **Initial Status**. Non-service affecting fields: **Circuit ID**, **Customer Name**, **Service Date**, **Priority**, **Location A**, **Location Z**, **Remarks**, **Circuit Options**: *OOS, INCL, DCC*. Service affecting fields: **Trunk Conditioning**, **Insertion Word**, **Signaling Conversion**, **Framing**, **No Transmit (NTR)**, **Circuit Options**: *NAM, AIS, RDLD*. **CAUTION:** *Changes to service affecting fields will interrupt traffic.*

(Continued on next page)

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
Action, Continued	■ *PEND* - Enters the specified circuit (including *DEACTIVATED* ones) in the DND database as *PENDING*, to indicate it may soon be made *ACTIVE*. Activation of *PENDING* circuits may be dependent on equipment installation or on other sections of the circuit being established. ■ *DEACTIVATE* - Enters the specified circuit in the DND database as *DEACTIVATED* and disconnects it in the frame. ■ *COMBINE* - Combines multiple circuits that exist over either an alternate or a contiguous range of channels into a single, new high-rate circuit in the DND database. The source circuits must be *ACTIVE* and the combined circuit is made *ACTIVE*. Remember, high-rate circuits are implemented in the frame as single-channel circuits; thus, they are already in the frame. After the source circuits have been deleted in the DND database, the combined circuit is created there. At no time during the process is a command sent to the frame. The **Ckt Class**es of the source circuits must be all *HDX* or all *FDX* only. Use of channel 0 and of test circuits is prohibited. ■ *ALTROUTE* - Enters the specified circuit in the DND database as *ALTROUTED*. The DND may reroute the specified circuit over a path involving the preemption of other circuits. The operator will be informed of each preemption and will be required to confirm it. A circuit can be altrouted only once, and an *ALTROUTED* circuit cannot be preempted.

(Continued on next page)

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
Action, Continued	■ *NORMALIZE* - Tries to place a real altrouted circuit in *ACTIVE* **New Status** or a pseudo-altrouted circuit in *DEACTIVATED* **New Status**. If the circuit returns to *ACTIVE*, it is cross-connected in the frame over its normal path. If the circuit returns to *DEACTIVATED*, it is not cross-connected in the frame. During the altrouting, one or more circuits may have been placed in the *PREEMPTED* **New Status**. If the circuit now being normalized is the only circuit preempting a *PREEMPTED* circuit, *NORMALIZE* attempts to return the *PREEMPTED* circuit to *ACTIVE*. Otherwise, *NORMALIZE* does not make the attempt. ■ *ADDLEG* - Adds a LEG to an existing *BKB* circuit. This action can also convert an existing *FDX* circuit to a *BKB* and add the first **LEG Circuit ID** (automatically populated and displayed) when this action is completed successfully. ■ *DELLEG* - Deletes a LEG from an existing *BKB* circuit. If it is the last LEG in the remaining backbone (*BKB*) circuit, it will be automatically converted to a *FDX* circuit. ■ *CHGRPATH* - Changes the return path for a BCON circuit to the specified LEG. It has the effect of swapping the *BKB* and LEG circuit. ■ *TRACE* - Allows you to trace a network circuit by displaying a circuit trace map and table.

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
Initial Status/New Status	(Read-only field) A display-only field indicating the initial or new operating status of the circuit, after the form has been executed. Values are: ■ *NULL* - The circuit has not been defined and, therefore, is not in the DND database. To define the circuit, use the *ACTIVATE* **Action** ■ *PENDING* - The circuit is in the DND database, but is not cross-connected in the frame. The circuit has been noted as *PENDING* with the *PEND* **Action**. It is ready to be made *ACTIVE* on user request. To cross-connect the circuit, use the *ACTIVATE* **Action** ■ *DEACTIVATED* - The circuit is in the DND database but is not cross-connected in the frame. The DND record is marked *DEACTIVATED*. To cross-connect the circuit, use the *ACTIVATE* **Action** ■ *ALTROUTED* - The circuit is present in the frame and DND databases and is cross-connected in the DACS. However, it was temporarily rerouted over an alternate path with an *ALTROUTE* **Action**. If any part of the alternate path was in use by another circuit, that circuit was placed in *PREEMPTED* **Ckt Status**. A *NORMALIZE* **Action** is required to return the *ALTROUTED* circuit to its original path ■ *PREEMPTED* - The circuit was *ACTIVE* in the frame but has been temporarily disconnected so that one or more of its channels can be used by one or more *ALTROUTED* circuits. The circuit is in the DND database only. The *NORMALIZE* commands that return the *ALTROUTED* circuits to normal also return the *PREEMPTED* circuits to normal.

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
Initial Status/New Status, Continued	■ *ACTIVE* - The circuit is present in the frame and DND databases and is cross-connected in the DACS. A circuit that exists in the frame is in both the frame and DND databases (unless there is a discrepancy) ■ *P_ACTIVE* - The *P_ACTIVE* status will be applied to partially connected n x 64 Kbps BCON circuits created through the echoed response process (ERP). *P_ACTIVE* status marks the n x 64 Kbps circuit when there is at least one disconnected cross-connect in the LEG circuit from ERP. The bandwidth in a *P_ACTIVE* LEG circuit is the number of 64 Kbps cross-connects in that circuit. ■ *DEROUTED* - The circuit was in *ALTROUTED* **New Status** but was placed in *DEROUTED* **New Status** at the beginning of an NPC ROLL (using the DND Forms Interface), and the system failed during the roll. You can *DELETE*, *DEACTIVATE*, or *NORMALIZE* a *DEROUTED* circuit. If the roll completes successfully, you will never observe the circuit in *DEROUTED* **New Status**. The **Initial Status** field reflects the last successful **Action**.

(Continued on next page)

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
Circuit ID	(Text field) Mandatory. must be unique. One through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, ", %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored. Associates the name entered in this field with the circuit described by this form.
Ckt Class	(Combo box) Specify the type of circuit. The choices are: ■ *FDX: FULL-DUPLEX* - Applies to single-channel or high-rate DS0 cross-connections between NAS or CEPT NPCs, and to gateway circuits. Specifies a two-way, two-point circuit. ■ *HDX: HALF-DUPLEX* - Applies to single-channel or high-rate DS0 cross-connections between NAS or CEPT NPCs, and to gateway circuits. Specifies a one-way, two-point circuit. ■ *DMB: DIGITAL MPT BRIDGE* - Applies to single-channel, two-way, multipoint circuits. These circuits are complex; for example, are composed of multiple cross-connections requiring multiple CIRCUIT PROVISIONING forms. A **Ckt Class** of *DMB* identifies this cross-connection as a unit in a DMB circuit. The two types of DMB multipoint circuits are the symmetric voice circuit and the polling data circuit.Provision the backbone first and the branches subsequently. Use a **Mode** of *LEG* to identify an EFT, but a **Mode** of *BBL* or *BRD* on the opposite side of each leg to identify its use as a backbone or branch.

(Continued on next page)

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
Ckt Class, Continued	Be sure to read the operating examples for DMB. The examples also cover cascading, the building of still more complex circuits using DMB circuits as units. ■ *BKB: BCON BACKBONE* - A circuit is classified as a BKB class if it is being used as the backbone circuit in BCON provisioning ■ *LEG: BCON TRIBUTARY* - A circuit is classified as a LEG class if it is being used as the tributary circuit in BCON provisioning. LEG circuits have the same parameters as the BKB circuit that it belongs to except for the following: Circuit ID Circuit status Circuit class Service date If a LEG circuit is classified as P_ACTIVE, its bandwidth will be smaller than the bandwidth of its BKB circuit.
(FROM or TO) NPC Type/Hier/Extd	(Read-only fields) These fields are displayed when the DND has recognized the **NPC Specifier** information previously entered. **NPC Type** indicates the circuit pack type. **Hier** indicates the FROM or TO NPC's hierarchical number. **Extd** indicates the FROM or TO NPC's extended number.

(Continued on next page)

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
Direction	(Radio buttons) Optional. This field appears only when the **Action** is *ADDLEG*. This field defines which side of the backbone is the source broadcast side, **FROM** or **TO**. Mandatory. This field is mandatory when the first leg is added to a *FDX* circuit which will become the BKB. After at least one leg has been added, the field is read-only.
New Circuit ID	(Text field) 1-41 characters. Appears only when the **Action** is *MODIFY*. One through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, ", %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored. New name for the circuit ID.
Bandwidth Type	(Radio buttons) Mandatory. Indicates how bandwidth is allocated in an NPC. The choices are: ■ *C: Contiguous* ■ *A: Alternating* ■ *R: Random* Alternating bandwidth is allocated on alternate channels. A maximum of 12 channels are available for NAS; 16 for CEPT. Contiguous bandwidth is allocated on consecutive channels. For example, starting with Channel 5, a **Bandwidth** of 3 allocates 5, 6, and 7 for contiguous; 5, 7, and 9 for alternating.

(Continued on next page)

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
Bandwidth Type, Continued	Random permits allocation of channels between two NPCs in a random fashion; for example, channel 1 to channel 10, 2 to 5, 3 to 7, etc.The value is set to *Contiguous* for a **Ckt Class** of *DMB*. If the **Bandwidth** of the circuit is greater than *1*, then the circuit is a high-rate circuit. This field does not appear for clear DS1/E1 connections.
NPC Specifier/NPC	(Radio buttons and Text field) Mandatory. Fields for specifying the **FROM** and **TO NPC**. The three choices for entering NPC data are: ■ *ID* - If selected, Enter the NPC name in the **NPC:** field. ■ *Hier* - If selected, enter the NPC's hierarchical number in the **NPC:** field ■ *Extd* - If selected, enter the NPC's extended number in the **NPC:** field.
FROM Channel/ TO Channel	(Text field) The **FROM** or **TO** channel number, *0-31* for CEPT or *1-24* for NAS. DMB channel numbers can range from 1 to 85. This field is displayed for *Contiguous* or *Alternating* circuits. Use Find on either the **FROM** or **TO** side to locate available channels for creating a new circuit. For the *ADDLEG* **Action** there is an identifier for the LEG channel.

(Continued on next page)

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
Mode	(Radio buttons) Appears only when the **Ckt Class** is *DMB*. Specifies the use of the preceding **FROM** and **TO Channel** in a DMB multipoint circuit. ■ *SYM* - The associated channel is to be used as the DMB side of a leg in a symmetric voice circuit. ■ *BRD* - The associated channel is to be used as the DMB side of a broadcast, or branch, leg of a polling data circuit. ■ *BBL* - The associated channel is to be used as the DMB side of the backbone leg of a polling data circuit. ■ *LEG* - The associated channel is to be used as an EFT in any leg of the circuit. A DMB channel must be in a DMB NPC.
Bandwidth	(Combo box) Mandatory. Two numeric characters. Indicates the number of 64 Kbps channels constituting a high-rate circuit. For example, a 128 Kbps data channel consists of two 64 Kbps channels. For NAS NPCs, the available bandwidth is *1-24* channels; for CEPT NSA NPCs, the available bandwidth is *1* through *31* channels; for CEPT CAS ports, the available bandwidth is 1 through 30 channels. **Bandwidth** defaults to *1* channel for a **Ckt Class** of *DMB*. The bandwidth of a random circuit must be greater than 1. This field disappears for clear DS1/E1 connections.

(Continued on next page)

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
(ALTROUTE INFORMATION) Verified	(Checkbox) For the *ALTROUTE* **Action** only. When selected, this option allows the DND to preempt a circuit. If unselected, the DND will deny the Action and display the following message in the **Command Response** field: *Verify it is OK to preempt the circuits in the preempt pop-up.*
Circuit Options	(Checkboxes) Names options for activating or deactivating the circuit. **NOTE:** Only *RDLD*, *OOS*, and *INCL* are available for clear DS1/E1 circuits. ■ *NAM* - No A-to-mu law conversion is to be applied to the circuit if it is CEPT only; for example, if it is not a gateway ■ *AIS* - Alarm Indication Signal (all 1s, including the framing bit) is to be asserted on the downstream NPC when it is detected on the upstream NPC or when the upstream NPC asserts a CGA. Applies to NAS, *FDX*, high-rate circuits of bandwidth 24 only ■ *RDLD* - Red-lined. The circuit is to require specific authorization to disconnect; the *INCL* keyword must be set For DMB circuits, if one leg of a conference is designated as *RDLD*, all legs must be. This condition applies only to DACS II.

(Continued on next page)

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
Circuit Options, Continued	■ *OOS* - Out of service. A disconnect is to be effected when the NPC at one or both ends of the circuit are *OOS* ■ *INCL* - Included. Authorizes disconnects of *RDLD* circuits. This *INCL* keyword applies to a DACS II disconnect only. The *INCL* keyword (like the *CUS* keyword) from a DACS II connect is not supported. ■ *DCC* - Disconnect channel code. Causes the frame to assert the user-defined disconnect code (specified in the **Insertion Word** field) on disconnected channels. ■ *TLA* - Terminate and Leave Activated. If it is unselected, TLR, Terminate and Leave Released is to be in effect for this circuit. **NOTE:** *TLR* is the normal state for traffic-carrying circuits. It means that the circuit is not terminated. (Terminate and Leave released. Refer to this chapter and *Chapter 21, Test Ports and Test Access*) *TLA* is a state generally used only for initial testing from end to end. If you make a circuit *ACTIVE* (or *ALTROUTED*) on the frame in the *TLA* state, the DND system automatically reverses this state to *TLR* in the DND database once the command has been sent. To change the termination state of the circuit on the frame back to *TLR*, send the command again. You would have to reset this field manually to *TLA* to override this automatic reversal.

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DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
Circuit Options, Continued	**NOTE:** The unassigned **Insertion Word**, specified under NPC PROVISIONING for the NPC, is transmitted in the terminated direction(s).
No Transmit (NTR)	(Radio buttons) Appears only when **Ckt Class** is *DMB*. Specifies whether the leg is one-way or two-way. The choices are: ■ *FROM* - Transmission is shut off toward the FROM direction. ■ *TO* - Transmission is shut off toward the TO direction. **NOTE:** The **NTR** capability applies only to DACS II.
FROM Channel/ TO Channel/ Leg Channel	(Text field) Appear for *RANDOM* **Bandwidths** only. ■ **FROM Channel** indicates the listing of channels on the **FROM** side (up to 32 channel entries) ■ **TO Channel** indicates the listing of channels on the **TO** side (up to 32 channel entries) Use Find on either the **FROM** or **TO** side to locate available channels for creating a new circuit. ■ **Leg Channel** indicates the listing of channels for the Leg (up to 32 channel entries). Appears for the *ADDLEG* **Action** only Enter a comma after each channel in the list.

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DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
Trunk Conditioning	(Text field) Trunk conditioning specifies whether A/B-robbed-bit signaling is to be used to signal failure on the specified circuit. This information will only be used during failure of either an incoming signal or an NPC. When the NPC can no longer frame on the signal, it initiates trunk conditioning on all DS0 channels of the NPC. The signaling bits sent during failure are intended to disconnect active calls and hold the circuits busy (if appropriate) for the duration of the failure. DDC circuits require a **Trunk Conditioning** of *TRSP* and an **Insertion Word** of *MUX*, which inserts MUX for the duration of the failure, and does not send the signaling bits. The value of **Trunk Conditioning** also is set at *TRSP* for a **Ckt Class** of *DMB*. The **TC** field disappears for clear DS1/E1 connections; trunk conditioning is not supported for them. The trunk-conditioning code is: *0011, 0011*. Indicates the circuit will use A/B signaling. The A/B bits sent upon detection of a failure condition are: **Duration of failure** / **FROM Facility** / **TO Facility** First 2.5 sec / *00* / *00* Remainder / *11* / *11*

(Continued on next page)

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
Trunk Conditioning, Continued	Logic 0 is an on-hook (idle). Logic 1 is an off-hook (busy). Circuits that use A/B signaling must always have an **Insertion Word** specified. **NOTE:** The **TC**-value format shown is for *FDX*, full duplex. For *HDX*, replace the FROM side's number with hyphens. For an *FDX* version of *X-05,X-63* the *HDX* result would be *X---,X-63.* **NOTE:** It is important to remember that with HDX, you must put hyphens on one side. Virtual multipoint circuits also are HDX. *0101,0101* *----,0011* The previous value is used in connection with four-state signaling only. *TRSP* Transparent. Indicates the circuit will not use A/B signaling. *X-FF,X-FF* *X-99,X-99* *X---,X-FF*

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DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
Trunk Conditioning, Continued	The previous two values are used in connection with 16-state signaling only. *11111111,11111111* *--------,11111111* See the DACS I/O manual for other valid TC codes and for more information about trunk conditioning.
Insertion Word	(Text field) Insertion Word. Specifies the 8-bit alternate code to be inserted into the DS0 outgoing time slots of mapped channels of an NPC during *OOS* conditions, including carrier failure and removal of an NPC. The DDC is still sent toward both DS1 lines on unmapped channels. A yellow alarm is sent toward the failed DS1. The selections are: ■ *TRB* - Insert the standard trouble code, Hex E4, or 11100100. You can also enter *X-E4*. ■ *MUX* - Insert the MUX out-of-sync code, Hex 1A, or 00011010. You can also enter *1A*. When DS0 channels of DDS lines are cross-connected in the CCN, *TRSP* is used for **Trunk Conditioning** and *MUX* for **Insertion Word**. The latter is inserted in the mapped DS0 channels of the outgoing DS1 line away from the failure. UMC is still inserted on unmapped channels. ■ *nn* - Insert an 8-bit pattern specified by Hex *nn*. Currently *7F*, *FF*, and *BF* are selections

(Continued on next page)

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
Signaling Conversion	(Text field) Optional. Signaling conversion is used in CEPT and GATEWAY cross-connections in conjunction with CAS signaling. If the **Signaling Conversion** field is not specified, all four signaling bits will be cross-connected unchanged. The **Signaling Conversion** field is defined as: *xxxx,yyyy* where the first four bits, *xxxx*, represent the FROM side and the last four bits, yyyy represent the TO side. The comma separator is mandatory. All eight bits can be controlled independently. The valid values for these bits are: ■ *P* - Pass unchanged ■ *V* - Pass inverted ■ *0* - Set output to 0 ■ *1* - Set output to 1 ■ - - o value, the circuit is one-way All 8 bits are used only for *FDX*, full duplex. For *HDX*, replace the FROM side's number with hyphens. For example: *0011,0011* in *FDX* would become *----,0011* in *HDX.* If - is used, all four characters in the group must be -. If they are not, the frame may deny the command. This field disappears for clear DS1/E1 connections.

(Continued on next page)

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
Framing	(Text field) The value of the framing bits in the FW in cases where a CEPT channel 0 (time slot 0) is being connected to some other CEPT channel (non-TS0). ■ *abcdefg, hijklmn* - An arbitrary bit pattern of *0s* and *1s*, where *abcdefg* is the pseudo-FW in the TO-FROM direction and *hijklmn* is the pseudo-FW in the FROM-TO direction. Make sure that the pseudo-FW can in no case be the same as the FW or the NFW. ■ *NFW* - Use the NFW in channel 0 of all time frames.
Location A	(Text field) Optional. Up to 24 characters. The Station ID of the FROM side of the circuit being provisioned. This field is informational only.
Location Z	(Text field) Optional. Up to 24 characters. The Station ID of the TO side of the circuit being provisioned. This field is informational only.
Customer Name	(Text field) Optional. Up to 12 characters. An informational field only. The name of the customer to be associated with the current circuit. An automatically supplied value of *ERP* identifies circuits created by the ERP feature.
Service Date	(Combo boxes) Optional. Select the date the circuit is first placed into service. The fields are: ■ **Day:** (*01* thru *31*) ■ **Month:** (*Jan* thru *Dec*) ■ **Year:** (*1990* thru *2037*)

(Continued on next page)

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
Priority	(Text field) Mandatory. Circuit Priority (CP). Informational only, one or two alphanumeric characters. Indicates to the user the relative importance of the circuit for restoral actions. Regardless of its use, a circuit cannot be assigned more than one circuit priority. The default is *00*.
Remarks	(Text field) Optional. 0-77 characters. A user-defined informational field. A DND operator can enter informational comments.
Port/Connected To	(Read-only fields) Appears only if at least ONE port in the circuit is connected to the network circuit. **Hier** indicates the hierarchical NPC number on either or both the TO or FROM side of the circuit. **Connected To** indicates the **Site Name** of the Far End (other side of the intertie).
Reconcile Mode	(Radio buttons) Select the database where the results from the current **Action** will be saved. The choices are: ■ *DND and DACS* - Save the results to both the DND and DACS databases (default) ■ *DND only* - Save the results to the DND database only ■ *DACS only* - Save the results to the DACS database only

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DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-2. DND GUI: Field Descriptions for the CIRCUIT PROVISIONING Form, Continued

Field	Description
Execution Mode	(Radio buttons/Combo boxes and Text fields also if *Schedule* is selected) Select when the current **Action** should take place. The choices are: ■ *Immediate* - Executes the **Action** as soon as Execute is clicked ■ *Schedule* - Executes the **Action** at a time and frequency selected by the user. After selecting *Schedule*, click Continue... to display the following combo box fields: — **DATE** fields: **Day:** (01 thru 31) **Month:** (Jan thru Dec) **Year:** (1990 thru 2037) — **TIME** fields: **Hour:** (00 thru 23) **Minute:** (00 thru 59) — **REPEAT** fields: **Number of times** (enter any number) If number of times is set to "00", then the task repeats an infinite number of times (forever). **Interval** (enter any number) **Scale:** (**None/Minutes/Hours/Days**)
Profile ID	(Text field) Specify a Profile ID to be saved or deleted. The Profile ID can include 11 alphanumerics. Spaces are not allowed
Availability	(Radio buttons) For a new profile, indicate if the profile should be available to: ■ *Public* - All DND users ■ *Private* - Only to your login.

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Value Summary

Table 10-3. DND GUI: Summary of CIRCUIT PROVISIONING Field Values

Field	Size	Values
Site Name*	24	Previously created under NE Provisioning.
Profile ID		Previously created in Profile Box.
Action*	10	*ACTIVATE, MODIFY, PEND, DELETE, DEACTIVATE, ALTROUTE,NORMALIZE, COMBINE, ADDLEG, DELLEG, CHGRPATH,* and *TRACE.*
Initial Status/ New Status	11	*NULL, PENDING, DEACTIVATED,ALTROUTED, PREEMPTED, ACTIVE, DEROUTED,* and *P_ACTIVE.*
Circuit ID*	41	All printable characters except *, ?, \, [,], ^, ", %, |.
New Circuit ID	41	All printable characters except *, ?, \, [,], ^, ", %, |.
Ckt Class †	3	*FDX, HDX, DMB, BKB, and LEG.*
Direction	1	*FROM, TO*
Hier	5	*xxyzz, xx* is *01-16, y* is *1-8, zz* is *01-40.*
Extd	4	*1-x*, depending on the frame type and hardware configuration.
NPC ID*	41	All printable characters except *, ?, \, [,], ^, ", %, |.
FROM Channel/ TO Channel†	2	*00-24* NAS, *00-31* CEPT, *1-85* DMB with DACS II.
Mode†	3	*SYM, BRD, BBL,* and *LEG*
Bandwidth†	2	*1-24* NAS, *1-31* CEPT.
Bandwidth Type†	1	*C: Contiguous, A: Alternating, or R: Random*

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Value Summary, Continued

Table 10-3. DND GUI: Summary of CIRCUIT PROVISIONING Field Values, Continued

Field	Size	Values
Circuit Options**	7 Options	*NAM, AIS, RDLD, OOS, INCL, DCC,* and *TLA.*
No Transmit (NTR)**	1	*FROM,TO*
FROM Channel	2 (up to 32 fields)	*00-31*
TO Channel	2 (up to 32 fields)	*00-31*
Leg Channel	2 (up to 32 fields)	*00-31*
Trunk Conditioning†	17	*0011,0011* *0101,0101* *----,0011* *TRSP* *X-FF,X-FF* *X-99,X-99* *X---,X-FF* *11111111,11111111* *--------,11111111*
Insertion Word**	3	*TRB, MUX, 7F, FF, BF.*
Signaling Conversion**	9	*xxxx,yyyy* where *x, y = [P,V, 0,1,-].*
Framing	15	*abcdefg,hijklmn* where a letter is *0* or *1.* Alternatively, *NFW*.

(Continued on next page)

DND GUI: CIRCUIT PROVISIONING Form (Continued)

Field Value Summary, Continued

Table 10-3. Summary of CIRCUIT PROVISIONING Field Values, Continued

Field	Size	Values
Location A	24	All printable characters except *, ?, \, [,], ^, “, %, |.
Location Z	24	All printable characters except *, ?, \, [,], ^, “, %, |.
Customer Name	12	All printable characters except *, ?, \, [,], ^, “, %,|.
Service Date	7	dd mmm yy
Priority*	2	*a-z, A-Z, 0-9*
Remarks	77	All printable characters except | (pipe).
Profile ID	12	All printable characters except *, ?, \, [,], ^, “, %,|.
Availability		Public or Private

* Mandatory field
** Traffic-affecting field
† Both Mandatory and Traffic-affecting field

DND Forms: CIRCUIT PROVISIONING Form

Sample Circuit Provisioning Form

Select CIRCUIT from the PROVISIONING menu. The CIRCUIT PROVISIONING form is displayed, as shown in Figure 10-24.

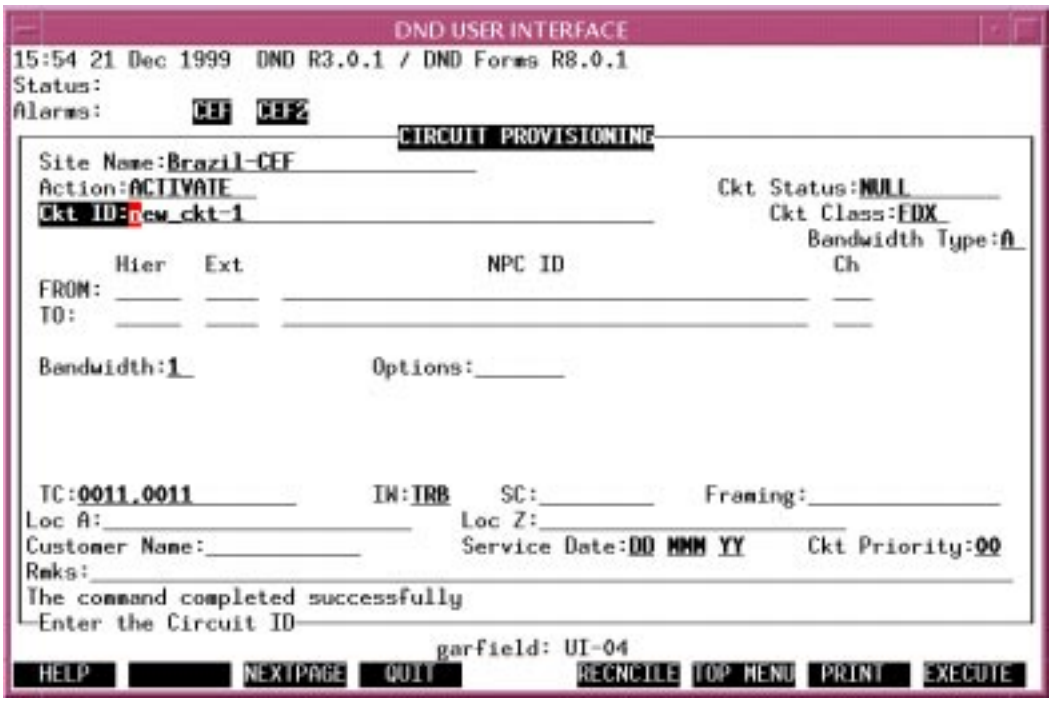


Figure 10-24. DND Forms: CIRCUIT PROVISIONING Form

DND Forms: CIRCUIT PROVISIONING Form (Continued)

Browse Circuit Data

You can browse through the circuits stored in the DND database. In that case, you will use the CIRCUIT PROVISIONING SEARCH CRITERIA form, which is displayed after you enter an **Action** of *BROWSE* and press EXECUTE. The CIRCUIT PROVISIONING SEARCH CRITERIA form is displayed, as shown in Figure 10-25.

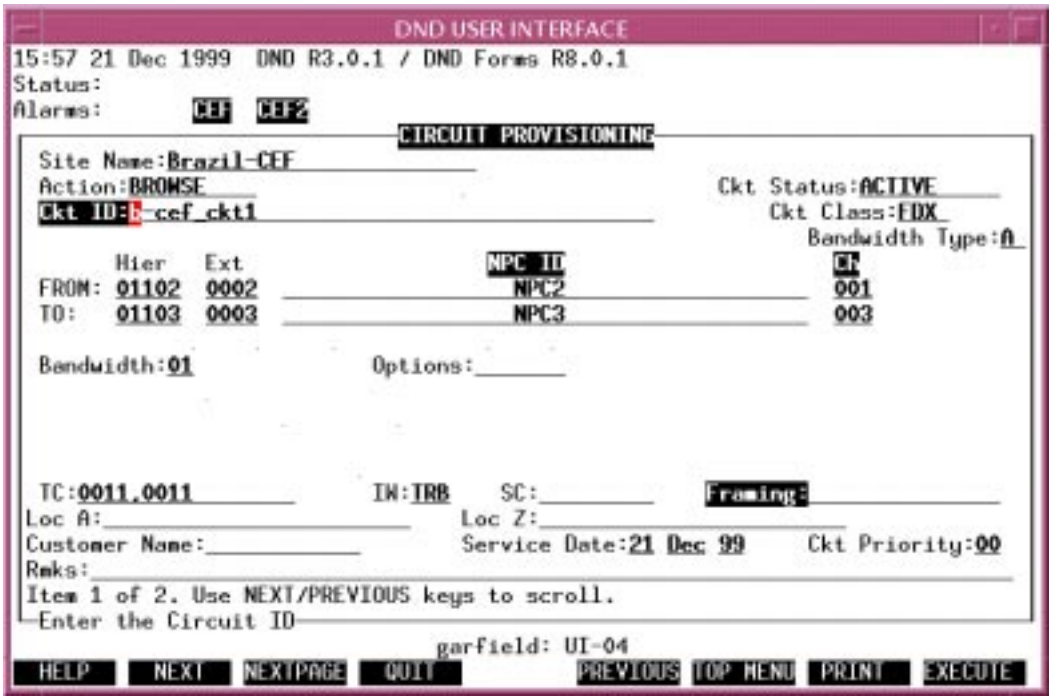


Figure 10-25. DND Forms: CIRCUIT PROVISIONING SEARCH CRITERIA Form

DND Forms: CIRCUIT PROVISIONING Form (Continued)

Field Descriptions

Field descriptions for the CIRCUIT PROVISIONING form are described in Table 10-4.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form

Field	Description
Site Name	Mandatory. The name of the DACS where the requested **Action** will take place. Enter or press CHOICES to select a Site Name. Site Names are created from the FRAME ADMINISTRATION form. See *Chapter 5, NE Provisioning* for more details.
Action	Mandatory. Enter the action to be performed with regard to the circuit. ■ *ACTIVATE* - Enters the circuit specified by **Ckt ID** in the DND database (if it does not yet exist) and cross-connects it in the frame, making it an existing, traffic-carrying circuit. *ACTIVATE* also changes the **Ckt Status** of already existing circuits from *PENDING*, *PREEMPTED*, or *DEACTIVATED* to *ACTIVE* and from *ALTROUTED* to *ACTIVE* in *local only* mode. *ACTIVATE* is the default **Action**. ■ *MODIFY* - Retrieves the specified circuit from the DND database for purposes of altering circuit attributes or **Ckt ID**. *MODIFY* does not change the **Ckt Status**. You can *MODIFY* any user-accessible field for circuits in the *PENDING* or *DEACTIVATED* **Ckt Status**. You can *MODIFY* the following fields for circuits in the *ACTIVE* or, *PREEMPTED* or *ALTROUTED* **Ckt Status**:

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
Action, Continued	Non-service affecting fields: **Ckt ID**, **Customer Name**, **Service Date**, **Ckt Priority**, **Loc A**, **Loc Z**, **Rmks**, **Options**: OOS, INC, DCC. Service affecting fields: **TC**, **IW**, **SC**, **Framing**, **NTR**, **Options**: NAM, AIS, RDLD. **CAUTION:** *Changes to service affecting fields will interrupt traffic.* ■ *DELETE* - Removes the specified circuit from the DND and DACS databases, returning the **Ckt Status** to *NULL*. **NOTE:** Deletion of an *ACTIVE* circuit results in deactivation of the circuit in the DACS before the record is deleted in the DND. Deletion of an *ALTROUTED* circuit results in normalization of the circuit in the DACS before the record is deleted in the DND. Deletion of a circuit that is listed in a Reconfiguration Plan is not allowed (except in *local only* mode). First delete it from the plan. ■ *PEND* - Enters the specified circuit (including *DEACTIVATED* ones) in the DND database as *PENDING*, to indicate it may soon be made *ACTIVE*. Activation of *PENDING* circuits may be dependent on equipment installation or on other sections of the circuit being established.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
Action, Continued	■ *DEACTIVATE* - Enters the specified circuit in the DND database as *DEACTIVATED* and disconnects it in the frame. ■ *ALTROUTE* - Enters the specified circuit in the DND database as *ALTROUTED*. The DND may reroute the specified circuit over a path involving the preemption of other circuits. The operator will be informed of each preemption and will be required to confirm it. A circuit can be altrouted only once, and an *ALTROUTED* circuit cannot be preempted. ■ *NORMALIZE* - Tries to place a real altrouted circuit in *ACTIVE* **Ckt Status** or a pseudo-altrouted circuit in *DEACTIVATED* **Ckt Status**. If the circuit returns to *ACTIVE*, it is cross-connected in the frame over its normal path. If the circuit returns to *DEACTIVATED*, it is not cross-connected in the frame. During the altrouting, one or more circuits may have been placed in the *PREEMPTED* **Ckt Status**. If the circuit now being normalized is the only circuit preempting a *PREEMPTED* circuit, *NORMALIZE* attempts to return the *PREEMPTED* circuit to *ACTIVE*. Otherwise, *NORMALIZE* does not make the attempt. ■ *BROWSE* - Gives you read-only access to the DND database for retrieving and scrolling circuit records. As soon as you press EXECUTE after entering an **Action** of *BROWSE*, the DND displays the CIRCUIT PROVISIONING SEARCH CRITERIA form. Its fields are taken from the CIRCUIT PROVISIONING form. Entering a value in any defined field restricts the search. To initiate the search, press EXECUTE. To return to CIRCUIT PROVISIONING without executing, press QUIT.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
Action, Continued	The following rules apply: — You can search on **Ckt ID**, **Ckt Status**, **Ckt Class**, **NPC ID**, **Mode**, **Bandwidth Type**, **Options**, **NTR**, **TC**, **IW**, **SC**, **Framing**, **Customer Name**, **Ckt Priority**, **Loc A**, **Loc Z**, **Rmks**. — The default for all fields is all values of the fields. — The wildcard character, *, replaces zero or more characters. The ? replaces any single character. Wildcards are allowed in all alphanumeric fields except **Options**. — The character, <, followed by a value, in numeric fields: **Hier**, **Ext**, **Ch**, **Bandwidth**, **Service Date**, obtains records for values less than the entered value; the character, >, greater. ■ *COMBINE* - Combines multiple circuits that exist over either an alternate or a contiguous range of channels into a single, new high-rate circuit in the DND database. The source circuits must be *ACTIVE* and the combined circuit is made *ACTIVE*. Remember, high-rate circuits are implemented in the frame as single-channel circuits; thus, they are already in the frame. After the source circuits have been deleted in the DND database, the combined circuit is created there. At no time during the process is a command sent to the frame. The **Circuit Class**es of the source circuits must be all *HDX* or all *FDX* only. Use of channel 0 and of test circuits is prohibited.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
Action, Continued	Specify the combined circuit characteristics on a single CIRCUIT PROVISIONING form. The channel numbers in the combined circuit are the same as the source circuits'; however, the **Bandwidth** of the combined circuit must be made equal to the sum of the **Bandwidth**s of the source circuits. Therefore, the source circuits' channels must run contiguously or alternately upward from the combined circuit's starting channel, and the combined **Bandwidth Type** must be correct for the channels The following fields of the source circuits must have the same values: **TC**, **IW**, **SC**, **Circuit Class**. **Options** settings of RDLD and no NAM must be the same throughout. The **Ckt ID** of the combined circuit can be unique, or it can be one of the source circuits' **Ckt ID**s. You can reuse the **Ckt ID** of a *DEACTIVATED* or *PENDING* circuit, provided all the channels of that circuit are also in use by the *ACTIVE* source circuits. No other cases are allowed. ■ *ADDLEG* - Adds a LEG to an existing BKB circuit. This action can also convert an existing FDX circuit to a BKB and add the first LEG Ckt ID (automatically populated and displayed) when this action is completed successfully. ■ *DELLEG* - Deletes a LEG from an existing BKB circuit. If it is the last LEG in the remaining backbone (BKB) circuit, it will be automatically converted to a FDX circuit. ■ *CHGRPATH* - Changes the return path for a BCON circuit to the specified LEG. It has the effect of swapping the BKB and LEG circuit.
Ckt Status	A display only mode indicating the status of the circuit. *NULL* The circuit has not been defined and, therefore, is not in the frame or DND databases. To define the circuit, use the *ACTIVATE* **Action**.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description	
Ckt Status, Continued	*PENDING*	The circuit is in the DND database, but is not cross-connected in the frame. The circuit has been noted as *PENDING* with the *PEND* **Action**. It is ready to be made *ACTIVE* on user request. To cross-connect the circuit, use the *ACTIVATE* **Action**.
	DEACTIVATED	The circuit is in the DND database but is not cross-connected in the frame. The DND record is marked *DEACTIVATED*. To cross-connect the circuit, use the *ACTIVATE* **Action**.
	ALTROUTED	The circuit is present in the frame and DND databases, is cross-connected in the frame, and is carrying transmission. However, it was temporarily rerouted over an alternate path with an *ALTROUTE* **Action**. If any part of the alternate path was in use by another circuit, that circuit was placed in *PREEMPTED* **Ckt Status**. A *NORMALIZE* **Action** is required to return the *ALTROUTED* circuit to its original path.
	PREEMPTED	The circuit was *ACTIVE* in the frame but has been temporarily disconnected so that one or more of its channels can be used by one or more *ALTROUTED* circuits. The circuit is in the DND database only and is not carrying transmission. The *NORMALIZE* commands that return the *ALTROUTED* circuits to normal also return the *PREEMPTED* circuits to normal.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
Ckt Status (Continued)	■ *ACTIVE* - The circuit is present in the frame and DND databases, is cross-connected in the frame, and is carrying transmission. A circuit can be defined in the DND database, but if it is not *ACTIVE*, it is not defined in the frame database. A circuit that exists in the frame is in both the frame and DND databases (unless there is a discrepancy). ■ *P_ACTIVE* - The P_ACTIVE status will be applied to partially connected n x 64 Kbps circuits through the echoed response process (ERP). P_ACTIVE status marks the n x 64 Kbps circuit when there is at least one disconnected cross-connect in the LEG circuit from ERP. The bandwidth in a P_ACTIVE LEG circuit is the number of ACTIVE (connected) cross-connects in that circuit. ■ *DEROUTED* - The circuit was in *ALTROUTED* **Ckt Status** but was placed in *DEROUTED* **Ckt Status** at the beginning of an NPC ROLL, and the system failed during the roll. You can *DELETE*, *DEACTIVATE*, or *NORMALIZE* a *DEROUTED* circuit. If the roll completes successfully, you will never observe the circuit in *DEROUTED* **Ckt Status**.
Ckt ID	Mandatory. must be unique. One through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, “, %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored. Associates the name entered in this field with the circuit described by this form.
BBL ID	Appears when the **Ckt Class** is BRD. Mandatory, when activating a new BRD circuit. One through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, “, %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
LEG Ckt ID	Appears when the action is *ADDLEG*, *DELLEG*, or *CHGRPATH*. When the Action is *ADDLEG*, this is a display-only field that is automatically filled in after the action is executed. One through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, ", %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored.
Ckt Class	■ *FDX* - Full-duplex. Applies to single-channel or high-rate DS0 cross-connections between NAS or CEPT NPCs, and to gateway circuits. Specifies a two-way, two-point circuit. *FDX* can be abbreviated to *F*. ■ *HDX* - Half-duplex. Applies to single-channel or high-rate DS0 cross-connections between NAS or CEPT NPCs, and to gateway circuits. Specifies a one-way, two-point circuit. *HDX* can be abbreviated to *H*. ■ *BBL* - Backbone leg. Applies to single-channel or high-rate, DS0, virtual multipoint circuits between NAS or CEPT NPCs, and to gateway circuits. These circuits are complex; which are composed of multiple cross-connections requiring multiple CIRCUIT PROVISIONING forms. A **Ckt Class** of *BBL* identifies this unit as a one-way backbone leg broadcast circuit. Abbreviation not allowed (not unique). ■ *BRD* - Broadcast, or branch, leg. Applies to single-channel or high-rate, DS0, virtual multipoint circuits between NAS or CEPT NPCs, and to Gateway circuits. Specifies a one-way branch leg broadcast circuit. Abbreviation not allowed (not unique). In virtual multipoint operations, enter the *BBL* first. With existing circuits, **Ckt Class** is known and protected, and the field cannot be changed. In *Site and local* mode, you cannot enter the FROM side NPC of any BRD, such as the virtual node. It is selected by the system. Up to 20 BRDs can be entered for one BBL.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
Ckt Class (Continued)	■ *DMB* - Digital multipoint bridge. Applies to single-channel, two-way, multipoint circuits. These circuits are complex; for example, are composed of multiple cross-connections requiring multiple CIRCUIT PROVISIONING forms. A **Ckt Class** of *DMB* identifies this cross-connection as a unit in a DMB circuit. The two types of DMB multipoint circuits are the symmetric voice circuit and the polling data circuit. Provision the backbone first and the branches subsequently. Use a **Mode** of *LEG* to identify an EFT, but a **Mode** of *BBL* or *BRD* on the opposite side of each leg to identify its use as a backbone or branch. Be sure to read the operating examples for DMB. The examples also cover cascading, the building of still more complex circuits using DMB circuits as units. ■ *BKB* - A circuit is classified as a BKB class if it is being used as the backbone circuit in BCON provisioning. ■ *LEG* - A circuit is classified as a LEG class if it is being used as the tributary circuit in BCON provisioning. LEG circuits have the same parameters as the BKB circuit that it belongs to except for the following: Circuit ID Circuit status Circuit class Service date If a LEG circuit is classified as P_ACTIVE, its bandwidth will be smaller than the bandwidth of its BKB circuit.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
Dir	This field appears only when the action is *ADDLEG* or when browsing a BCON BKB. This field defines which side of the backbone is the source broadcast side, **FROM** or **TO**. Mandatory. This field is mandatory when the first leg is added to a *FDX* circuit which will become the *BKB.*
NEW ID	New circuit ID. 1-41 characters. Appears only when the **Action** is *MODIFY.* One through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, ", %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored.
Bandwidth Type	Mandatory. Indicates how bandwidth is allocated in an NPC; valid entries are: ■ *C* Contiguous ■ *A* Alternating ■ *R* Random Alternating bandwidth is allocated on alternate channels. A maximum of 12 channels are available for NAS; 16 for CEPT. Contiguous bandwidth is allocated on consecutive channels. For example, starting with Channel 5, a **Bandwidth** of *3* allocates 5, 6, and 7 for contiguous; 5, 7, and 9 for alternating. Random permits allocation of channels between two NPCs in a random fashion; for example, channel 1 to channel 10, 2 to 5, 3 to 7, etc.The default is *A*. The value is set to the default for a **Ckt Class** of *DMB*. You can scroll through the **FROM** and **TO** fields for information on the channel series by pressing NEXT. If you do this and find the **Bandwidth** of the circuit is greater than *1*, then the circuit is a high-rate circuit. For example, if the **Bandwidth** is *5*, you can scroll from 1 through 5 and the channels for both the **FROM** and the **TO** fields scroll along in synchronization. This field disappears for clear DS1/E1 connections.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
Hier	An NPC number in hierarchical format. (See *Chapter 8, DACS II, DACS II ISX NPC Provisioning* for an explanation of hierarchical and extended formats.) As shown in the diagrams under **Ckt Class** above, an NPC identifier for the NPC of the FROM channel and another for the NPC of the TO channel are required for one-way and two-way, two-point circuits. For the *ADDLEG* action, there is an identifier for the NPC of the leg channel. The identifier can be a number in hierarchical format, a number in extended format, or the **NPC ID**. The NPC must have been provisioned.
Ext	The FROM or TO NPC number in extended format. For the *ADDLEG* action, there is an identifier for the NPC of the leg channel. Automatically provided if **Hier** or **NPC ID** was entered.
NPC ID	The FROM or TO **NPC ID**. With the entry of a value in **Hier**, **Ext**, or **NPC ID**, the DND automatically performs a database query and displays the corresponding FROM or TO information in each field. For the *ADDLEG* action, there is an identifier for the NPC of the leg channel.
Ch	The FROM or TO channel number, *0-31* for CEPT or *1-24* for NAS. This field is displayed for contiguous or alternating circuits. Virtual channel numbers can range from *1* to *500*; however, one is automatically selected by the system during provisioning of virtual multipoint circuits. For the *ADDLEG* action there is an identifier for the LEG channel.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
Ch, Continued	For DMB circuits, the DMB-side **Ch** contains the conference number. It can range from *1* through *85* for DACS II. If the NPC identifying information (**Hier**, **Ext**, **NPC ID**) indicates that this is a clear DS1/E1 or DS3 configured as clear DS1 **Type** of NPC (see *Chapter 8, DACS II, DACS II ISX NPC Provisioning*), then the value, *DS1/E1*, appears in the FROM **Ch** field. The **TC**, **IW**, **SC**, **Bandwidth**, and **Bandwidth Type** fields disappear. If you attempt to enter a DS0 **TO Ch**; for example, to cross-connect clear DS1 to DS0, the previously mentioned fields reappear and you get a warning message: `WARNING: Non-clear DS1 cannot connect to Clear DS1 NPC.`
Mode	Appears only when the **Ckt Class** is *DMB*. Specifies the use of the preceding **Ch** in a DMB multipoint circuit. ■ *SYM* - The associated channel is to be used as the DMB side of a leg in a symmetric voice circuit. ■ *BRD* - The associated channel is to be used as the DMB side of a broadcast, or branch, leg of a polling data circuit. ■ *BBL* - The associated channel is to be used as the DMB side of the backbone leg of a polling data circuit. ■ *LEG* - The associated channel is to be used as an EFT in any leg of the circuit. A DMB channel must be in a DMB NPC.
Bandwidth	Mandatory. Two numeric characters. Indicates the number of 64 Kbps channels constituting a high-rate circuit. For example, a 128 Kbps data channel consists of two 64 Kbps channels. For NAS NPCs, the available bandwidth is *1-24* channels; for CEPT NSA NPCs, the available bandwidth is *1* through *31* channels; for CEPT CAS ports, the available bandwidth is 1 through 30 channels.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
Bandwidth, Continued	If not specified, **Bandwidth** defaults to *1* channel. It is set to *1* for a **Ckt Class** of *DMB*. The bandwidth of a random circuit must be greater than 1. This field disappears for clear DS1/E1 connections.
Options	Optional. 0 through 7 characters. Names options for activating or deactivating the circuit. When you press CHOICES to see the menu of **Options**, SELECT and UNSELECT function keys appear. The CHOICES menu for this field is a multiselect menu and operates differently from any other DND menu. Pressing Enter does not select the item, as is the case with all other DND menus. Instead, pressing SELECT selects the item. Use SELECT to choose as many options as are appropriate. Press Enter to place them on the screen. **NOTE:** Only *RDLD*, *OOS*, and *INCL* are available for clear DS1/E1circuits. The choices are as follows. If you type into the field, use only the letter. ■ *A* - NAM. No A-to-mu law conversion is to be applied to the circuit if it is CEPT only; for example, if it is not a gateway. ■ *B* - AIS. Alarm indication signal (all 1s, including the framing bit) is to be asserted on the downstream NPC when it is detected on the upstream NPC or when the upstream NPC asserts a CGA. Applies to NAS, FDX, high-rate circuits of bandwidth 24 only.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
Options, Continued	■ *C* - RDLD. Red-lined. The circuit is to require specific authorization to disconnect; the INCL keyword must be set. For DMB circuits, if one leg of a conference is designated as *RDLD*, all legs must be. This condition applies only to DACS II. ■ *D* - OOS. Out of service. A disconnect is to be effected when the NPC at one or both ends of the circuit are *OOS*. ■ *E* - INCL. Included. Authorizes disconnects of *RDLD* circuits. **NOTE:** This INCL keyword applies to a DACS II disconnect only. The INCL keyword (like the CUS keyword) from a DACS II connect is not supported. ■ *F* - DCC. Disconnect channel code. Causes the frame to assert the user-defined disconnect code (specified in the **IW** field) on disconnected channels. ■ *G* - TLA. Terminate and Leave Activated. If it is unselected, TLR, Terminate and Leave Released is to be in effect for this circuit. **NOTE:** TLR is the normal state for traffic-carrying circuits. It means that the circuit is not terminated. TLA is a state generally used only for initial testing from end to end. If you make a circuit *ACTIVE* (or *ALTROUTED*) on the frame in the TLA state, the DND system automatically reverses this state to TLR in the DND database once the command has been sent. To change the termination state of the circuit on the frame back to TLR, send the command again. You would have to reset this field manually to TLA to override this automatic reversal.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
Options, Continued	**NOTE:** The unassigned **IW**, specified under NPC PROVISIONING for the NPC, is transmitted in the terminated direction(s).
NTR	No transmit. Appears only when **Ckt Class** is *DMB*. Specifies whether the leg is one-way or two-way. The **NTR** capability applies only to DACS II. *F* Transmission is shut off toward the FROM direction. *T* Transmission is shut off toward the TO direction. blanks Transmission is not shut off.
F_CH	Mandatory. These FROM channel fields appear when the bandwidth is Random (up to 32 fields each).
T_CH	Mandatory. These TO channel fields appear when the bandwidth is Random (up to 32 fields each).
L_CH	Mandatory. These LEG channel fields appear when a bandwidth is Random and the action is *ADDLEG*.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
TC	Trunk conditioning specifies whether A/B-robbed-bit signaling is to be used to signal failure on the specified circuit. This information will only be used during failure of either an incoming signal or an NPC. When the NPC can no longer frame on the signal, it initiates trunk conditioning on all DS0 channels of the NPC. The signaling bits sent during failure are intended to disconnect active calls and hold the circuits busy (if appropriate) for the duration of the failure. DDC circuits require a **TC** of *TRSP* and an **IW** of *MUX*, which inserts MUX for the duration of the failure, and does not send the signaling bits. The value of **TC** also is set at *TRSP* for a **Ckt Class** of *DMB*. The **TC** field disappears for clear DS1/E1 connections; trunk conditioning is not supported for them. The trunk-conditioning code is: *0011, 0011* Default. Indicates the circuit will use A/B signaling. The A/B bits sent upon detection of a failure condition are: **Duration of failure** / **FROM Facility** / **TO Facility** First 2.5 sec / *00* / *00* Remainder / *11* / *11* Logic 0 is an on-hook (idle). Logic 1 is an off-hook (busy). Circuits that use A/B signaling must always have an **IW** specified.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
TC, Continued	**NOTE:** The **TC**-value format shown is for FDX, full duplex. For HDX, replace the FROM side's number with hyphens. For an FDX version of *X-05,X-63* the HDX result would be *X---,X-63.* **NOTE:** It is important to remember that with HDX, you must put hyphens on one side. Virtual multipoint circuits also are HDX. *0101,0101* ----,0011 The previous value is used in connection with four-state signaling only. TRSP Transparent. Indicates the circuit will not use A/B signaling. X-FF,X-FF X-99,X-99 X---,X-FF The previous two values are used in connection with 16-state signaling only. 11111111,11111111 --------,11111111 If your preferred code is not in the list shown in the CHOICES menu, you can type it on the **TC** line. However, the syntax must be correct or the frame will not accept it. The DND does not correct or complete it for you. If you specify it incorrectly, the MML command line appears toward the screen bottom with = = (equation marks) surrounding the offending string. See the DACS I/O manual for other valid TC codes and for more information about trunk conditioning.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
IW	Insertion Word. Specifies the 8-bit alternate code to be inserted into the DS0 outgoing time slots of mapped channels of an NPC during *OOS* conditions, including carrier failure and removal of an NPC. The DDC is still sent toward both DS1 lines on unmapped channels. A yellow alarm is sent toward the failed DS1. The selections are: ■ *TRB* - Insert the standard trouble code, Hex E4, or 11100100. You can also enter *X-E4*. ■ *MUX* - Insert the MUX out-of-sync code, Hex 1A, or 00011010. You can also enter *1A*. When DS0 channels of DDS lines are cross-connected in the CCN, *TRSP* is used for **TC** and *MUX* for **IW**. The latter is inserted in the mapped DS0 channels of the outgoing DS1 line away from the failure. UMC is still inserted on unmapped channels. ■ nn - Insert an 8-bit pattern specified by Hex nn. Currently *7F*, *FF*, and *BF* are selections.
SC	Optional. Signaling conversion is used in CEPT and GATEWAY cross-connections in conjunction with CAS signaling. If the **SC** field is not specified, all four signaling bits will be cross-connected unchanged. The **SC** field is defined as: xxxx,yyyy where the first four bits, xxxx, represent the FROM side and the last four bits, yyyy represent the TO side. The comma separator is mandatory. All eight bits can be controlled independently. The valid values for these bits are: ■ *P* - Pass unchanged. ■ *V* - Pass inverted. ■ *0* - Set output to 0. ■ *1* - Set output to 1. -No value, the circuit is one-way.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
SC, Continued	All 8 bits are used only for FDX, full duplex. For HDX, replace the FROM side's number with hyphens. For example: *0011,0011* in FDX would become *----,0011* in HDX. If - is used, all four characters in the group must be -. If they are not, the frame may deny the command. This field disappears for clear DS1/E1 connections.
Framing	The value of the framing bits in the FW in cases where a CEPT channel 0 (time slot 0) is being connected to some other CEPT channel (non-TS0). abcdefg**,** hijklmn — An arbitrary bit pattern of *0*s and *1*s, where abcdefg is the pseudo-FW in the TO-FROM direction and hijklmn is the pseudo-FW in the FROM-TO direction. Make sure that the pseudo-FW can in no case be the same as the FW or the NFW. *NFW* — Use the NFW in channel 0 of all time frames.
Loc A	Optional. Up to 24 characters. The Station ID of the FROM side of the circuit being provisioned. This field is informational only.
Loc Z	Optional. Up to 24 characters. The Station ID of the TO side of the circuit being provisioned. This field is informational only.
Customer Name	Optional. Up to 12 characters. An informational field only. The name of the customer to be associated with the circuit of this screen. An automatically supplied value of *C2000* identifies circuits created by the DACScan-2000 Controller C-Module. An automatically supplied value of *ERP* identifies circuits created by the ERP feature.

Table 10-4. DND Forms: Field Descriptions for the CIRCUIT PROVISIONING Form (Continued)

Field	Description
Service Date	Three fields. Enter the date the circuit is first placed into service. The format is: dd mmm yy ■ dd - 1 or 2 digits that represent the day. Days 1 through 9 do not have to be entered as 01 through 09. ■ mmm - The first three letters of the month, as in *Jan*, *Feb*, *Mar,*.. . *Dec*. Upper- or lower-case or any combination is acceptable. ■ yy - The last two digits of the year. Valid entries are *90* through *99*. For example, `01 Dec 98` The default date is today's date.
Ckt Priority	Mandatory. Circuit Priority (CP). Informational only, one or two alphanumeric characters. Indicates to the user the relative importance of the circuit for restoral actions. Regardless of its use, a circuit cannot be assigned more than one Circuit Priority. The default is *00*.
Rmks	Optional. 0-77 characters. A user-defined informational field. A DND operator can enter informational comments.

DND Forms: CIRCUIT PROVISIONING Form (Continued)

Summary of Fields And Values Field values for CIRCUIT PROVISIONING are described in Table 10-5.

Table 10-5. DND Forms: Summary of CIRCUIT PROVISIONING Field Values

Name	Field Size	Values
Site Name*	24	Previously created under frame administration.
Action*	10	*ACTIVATE, MODIFY, PEND,DELETE, DEACTIVATE*, *ALTROUTE,NORMALIZE*, *BROWSE*, *COMBINE, ADDLEG, DELLEG,* and *CHGRPATH*.
Ckt Status	11	*NULL, PENDING, DEACTIVATED,ALTROUTED*, *PRE-EMPTED*, *ACTIVE*, *DEROUTED,* and *P_ACTIVE.*
Ckt ID*	41	All printable characters except *, ?, \, [,], ^, ", %, |.
BBL ID	41	Previously activated.
NEW ID	41	All printable characters except *, ?, \, [,], ^, ", %, |.
LEG Ckt ID	41	All printable characters except *, ?, \, [,], ^, ", %, |.
Ckt Class †	3	*FDX, HDX, BBL, BRD, DMB, BKB,* and *LEG*.
Dir	1	*F, T*
Hier	5	xxyzz, xx is *01-16*, y is *1-8*, zz is *01-40*.
Ext	4	1-x, depending on the frame type and hardware configuration.
NPC ID*	41	All printable characters except *, ?, \, [,], ^, ", %, |.
Ch†	3	*00-24* NAS, *00-31* CEPT, *1-500* virtual, *1-85* DMB with DACS II.
Mode†	3	*SYM, BRD, BBL*, and *LEG*
Bandwidth†	2	*1-24* NAS, *1-31* CEPT.
Bandwidth Type†	1	*A, C*, or *R*
Options**	7	*A-G.* (applies only to *A-C)*.
NTR**	1	*F,T*

Table 10-5. DND Forms: Summary of CIRCUIT PROVISIONING Field Values (Continued)

Name	Field Size	Values
F_CH	3 (up to 32 fields)	`000-031`
T_CH	3 (up to 32 fields)	`000-031`
L_CH	3 (up to 32 fields)	`000-031`

TC†	17	`0011,0011`
		`0101,0101`
		`----,0011`
		`TRSP`
		`X-FF,X-FF`
		`X-99,X-99`
		`X---,X-FF`
		`11111111,11111111`
		`--------,11111111`

IW**	3	`TRB, MUX, 7F, FF, BF.`
SC**	9	xxxx,yyyy where x, y = [*P,V, 0,1,*-].
Framing	15	abcdefg**,**hijklmn where a letter is *0* or *1*. Alternatively, *NFW*.
Loc A	24	All printable characters except *, ?, \, [,], ^, “, %, |.
Loc Z	24	All printable characters except *, ?, \, [,], ^, “, %, |.
Customer Name	12	All printable characters except *, ?, \, [,], ^, “, %,|.
Service Date	7	dd mmm yy
Ckt Priority	2	*a-z, A-Z, 0-9*
Rmks	77	All printable characters except | (pipe).

***** Mandatory field
****** Traffic-affecting field
† Both Mandatory and Traffic-affecting fields

DND GUI: DACS II AX CIRCUIT PROVISIONING Form

Overview

The execution of a properly filled out DACS II AX CIRCUIT PROVISIONING form sends the appropriate commands to the AX to physically establish the cross-connection. The DND records circuit information in the DND and AX databases.



Figure 10-26. DACS II AX CIRCUIT PROVISIONING Form, *MODIFY* Action

DND GUI: DACS II AX CIRCUIT PROVISIONING Form (Continued)

Field Descriptions

The field values for the DACS II AX CIRCUIT PROVISIONING form are described in Table 10-2.

Table 10-6. DND GUI: Field Descriptions for the DACS II AX CIRCUIT PROVISIONING Form

Field	Description
Site Name	(Combo box) Mandatory. Select the name of the DACS where the requested **Action** will take place. Clicking this field will display a list of DACS II AX names. By default, the list appears alphabetically. To change the sorting order, modify the setting for the SORT_NAME_BY variable.
Action	(Combo box) Mandatory. Specifies the DACS II AX CIRCUIT PROVISIONING operation. The valid actions are: ■ *ACTIVATE* - Enters the circuit specified by **Ckt ID** in the DND database and cross-connects it in the frame, making it an existing, traffic-carrying circuit. *ACTIVATE* is the default **Action**. ■ *DELETE* - Removes the specified circuit from the DND and DACS II AX databases. **NOTE:** Deletion of a circuit results in disconnection of the circuit in the DACS II AX before the record is deleted in the DND.

(Continued on next page)

DND GUI: DACS II AX CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-6. DND GUI: Field Descriptions for the DACS II AX CIRCUIT PROVISIONING Form (Continued)

Field	Description
Action, Continued	■ *MODIFY* - Retrieves the specified circuit from the DND database for purposes of altering circuit attributes or **Circuit ID**. You can *MODIFY* all attributes except the endpoints (i.e., ports). Non-service affecting fields: **Circuit ID**, **Customer Name**, **Service Date**, **Priority, Location A**, **Location Z**, and **Remarks**. ■ *TRACE* - Allows you to trace a network circuit by displaying a circuit trace map and table. ■ *CHANGE ACTIVE MAP* - Allows you to specify which connection map will be activated.
Connection Map	(Combo box) Enter a value between 1 and 5 which identifies the connection map where the circuit connection is activated.
Active Map	(Read-only field) This field displays a value between 1 and 5 to identify the active connection map at the DACS II AX. **NOTE:** May display 0 if the AX has not been restored.
Circuit ID	(Text field) Mandatory. Must be unique for a given DACS II AX and connection map. One through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, ", %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored. Associates the name entered in this field with the circuit described by this form.

(Continued on next page)

DND GUI: DACS II AX CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-6. DND GUI: Field Descriptions for the DACS II AX CIRCUIT PROVISIONING Form, Continued

Field	Description
Ckt Class	(Read-only field.) Displays the type of circuit. The only value is: ■ *FULL DUPLEX* - A two-way, two-point circuit that applies to high-rate DS0 cross-connections.
NEW Circuit ID	(Text field) 1-41 characters. Appears only when the **Action** is *MODIFY*. Enter a new name for the circuit ID containing one through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, “, %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored.
(FROM PORT/TO PORT) Port Specifier	(Radio buttons) Mandatory. Choose a method to identify the FROM and TO ports. Choices are **ID** or **Slot/Port**. Specify the port name if **ID** is selected or the port number if **Slot/Port** is selected.
(FROM PORT/TO PORT) Port ID	(Text field). If you selected **ID** in the FROM or TO **Port Specifier** field, enter up to 41 characters to identify each managed port (DND name), excluding *, \, ?, [,], ^, “, %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored.
(FROM PORT/TO PORT) Slot Number	(Combo Box). If you selected **Slot/Port** in the FROM or TO **Port Specifier** field, enter the slot number (x) value. **Slot** number values correspond with the DACS II AX type and module being used. For example: ■ For DACS II AX4 type, slot values are x=01 through 04. ■ For DACS II AX11 type, slot values are x=01 through 11. **Note:** Slots 01 and 11 are not shown if they are being used for redundancy.

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DND GUI: DACS II AX CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-6. DND GUI: Field Descriptions for the DACS II AX CIRCUIT PROVISIONING Form, Continued

Field	Description
(FROM PORT/TO PORT) Port Number	(Combo box). If you selected **Slot/Port** in the FROM or TO **Port Specifier** field, enter the port number (*y*) value. **Port Number** values (y) correspond with the module being used. For example: ■ For T1/E1 Ports used for the Octal T1 module, port values are y=01 through 08 ■ For T1/E1 Ports used for the T3 module, port values are y=01 through 28.
(FROM PORT/TO PORT) Port Name	Displays the port name. This is the format used to display port numbers on reports.
Bandwidth	(Combo box) Mandatory. Indicates the number of DS0 channels desired and if the user is limited to 56 Kbps per channel or has access to the full 64 Kbps. For example, a 128 Kbps data channel consists of two 64 Kbps channels. For NAS ports, the available bandwidth is *1-24* channels; for CEPT NSA ports, the available bandwidth is *1* through *31* channels; for CEPT CAS ports, the available bandwidth is 1 through 30 channels. **NOTE:** This field does not appears for clear E1/T1 connections.

(Continued on next page)

DND GUI: DACS II AX CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-6. DND GUI: Field Descriptions for the DACS II AX CIRCUIT PROVISIONING Form, Continued

Field	Description
Bandwidth Speed	(Radio buttons) Mandatory. Indicates the cross connect speed. The choices are: ■ *DS0 (48K b/s)* ■ *DS0 (56K b/s)* ■ *DS0 (64K b/s)* ■ *Clear E1* (displayed only for devices not supported by DND) ■ *Clear T1* (displayed only for devices not supported by DND) **NOTE:** If the cross-connect speed is 48K, then the **Bandwidth** of the circuit must be *1*.
FROM Channel/ TO Channel	(Text field). The **FROM** or **TO** listing of channels separated by commas. Values are *1-31* for CEPT; *1-24* for NAS; or 1-32 for unsupported ports. Use Find on either the **FROM** or **TO** side to locate available channels for creating a new circuit.
Location A	(Text field) Optional. Up to 24 characters. Informational only; the Station ID of the FROM side of the circuit being provisioned.
Location Z	(Text field) Optional. Up to 24 characters. Informational only; the Station ID of the TO side of the circuit being provisioned.

(Continued on next page)

DND GUI: DACS II AX CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-6. DND GUI: Field Descriptions for the DACS II AX CIRCUIT PROVISIONING Form, Continued

Field	Description
Customer Name	(Text field) Up to 12 characters. Informational only; the name of the customer to be associated with the current circuit.
Priority	(Text field) Mandatory. Informational only, one or two alphanumeric characters. Indicates to the user the relative importance of the circuit for restoral actions. Regardless of its use, a circuit cannot be assigned more than one circuit priority. Default value is *00*.
Site Circuit Name	(Text field) Mandatory. Identifies the AX circuit name connection. One through 19 characters from the printable ASCII character set.
Voice/Data	(Combo box) Mandatory. Indicates the type of communications being carried on the circuit. The choices are: ■ Data ■ Voice ■ Voice/AuToMu **NOTE:** DND does not validate the Voice/Data value against the type of port to be cross-connected. If the value is invalid, DND displays an error from the AX on the status line, indicating "invalid communications".
Remarks	(Text field) 0-77 characters. A user-defined informational field for comments.

(Continued on next page)

DND GUI: DACS II AX CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-6. DND GUI: Field Descriptions for the DACS II AX CIRCUIT PROVISIONING Form, Continued

Field	Description
Service Date	(Combo boxes) Select the date the circuit is first placed into service. The fields are: ■ **Day:** (*01* thru *31*) ■ **Month:** (*Jan* thru *Dec*) ■ **Year:** (*1990* thru *2037*)
Reconcile Mode	(Radio buttons) Select the database where the results from the current **Action** will be saved. The choices are: ■ *DND and DACS* - Save the results to both the DND and DACS databases (default) ■ *DND only* - Save the results to the DND database only

(Continued on next page)

DND GUI: DACS II AX CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-6. DND GUI: Field Descriptions for the DACS II AX CIRCUIT PROVISIONING Form, Continued

Field	Description
Execution Mode	(Radio buttons/Combo boxes and Text fields also if *Schedule* is selected) Select when the current **Action** should take place. The choices are: ■ *Immediate* - Executes the **Action** as soon as Execute is clicked ■ *Schedule* - Executes the **Action** at a time and frequency selected by the user. After selecting *Schedule*, click Continue... to display the following combo box fields: — **DATE** fields: **Day:** (01 thru 31) **Month:** (Jan thru Dec) **Year:** (1990 thru 2037) — **TIME** fields: **Hour:** (00 thru 23) **Minute:** (00 thru 59) — **REPEAT** fields: **Number of times** (enter any number) If number of times is set to "00", then the task repeats an infinite number of times (forever). **Interval** (enter any number) **Scale:** (**None/Minutes/Hours/Days**)

DND GUI: DACS II AX CIRCUIT PROVISIONING Form (Continued)

Field Value Summary

Table 10-7. DND GUI: Summary of DACS II AX CIRCUIT PROVISIONING Field Values

Field	Size	Values
Site Name*	24	Selectable from list format.
Action*	10	*ACTIVATE, DELETE, MODIFY, TRACE,* and *CHANGE ACTIVE MAP.*
Connection Map	1	*1-5*
Active Map	1	System-generated
Circuit ID*	41	All printable characters except *, ?, \, [,], ^, ", %, |.
Circuit Class	?	*FULL DUPLEX*
New Circuit ID	41	All printable characters except *, ?, \, [,], ^, ", %, |.
Port Specifier	1	*ID, PORT*
Port ID	41	All printable characters except *, ?, \, [,], ^, ", %, |.
Slot	2	01-04 (For DACS II AX 4) 01-11 (For DACS II AX 11)
Port	2	01-08 (T1/E1 Ports used for the Octal T1 Module) 01-28 (T1/E1 Ports used for the T3 Module)
Bandwidth†	2	*1-24* NAS, *1-32* CEPT.
Bandwidth Speed†	1	*48K, 56K, 64K*
FROM Channel/ TO Channel†	2	*01-24* NAS, *01-31* CEPT
Location A	24	All printable characters except *, ?, \, [,], ^, ", %, |.
Location Z	24	All printable characters except *, ?, \, [,], ^, ", %, |.
Customer Name	24	All printable characters except *, ?, \, [,], ^, ", %, |.

Field	Size	Values
Priority*	2	Default=00
Site Circuit Name	19	All printable characters except *, ?, \, [,], ^, ", %, |. **NOTE:** If the characters listed above are used in the Site Circuit Name, an error occurs in the ERP log and the circuit will not be added to the database.
Remarks	77	All printable characters except | (pipe).
Service Date	7	dd mmm yy

***** Mandatory field
† Both Mandatory and Traffic-affecting fields

DND GUI: NETWORK CIRCUIT PROVISIONING Form

Overview

On the NETWORK CIRCUIT PROVISIONING form, a user may specify two sites and request the DND to find a network path to be used for the network circuit. During an ACTIVATE action, the DND uses the entered information and searches for ports with available channels through managed nodes on DACS II, DACS II ISX, and DACS II AX equipment to determine a network path. The path is defined with the least number of nodes required to connect circuits from the A to Z endpoints. Once the user executes the form, the network circuit will be provisioned.

Rules

The following rules apply to network circuit provisioning:

- Only full-duplex channelized NxDS0 circuits are supported. There is no support for clear DS1/E1 circuits, or for path hunt through clear port types.
- The maximum number of elements in the network circuit is five, including the specified A and Z sites.
- The A and Z sites can be any element type, either managed or unmanaged. The managed elements are DACS II, DACS II ISX, and DACS II AX R9.03 and later.

  If an unmanaged node is specified as an A or Z site, then a Termination Circuit Mapping must be previously provisioned on that site with the same Circuit ID as the network circuit to be cross connected. In this case, since the terminations have been already provisioned, the bandwidth of the new network circuit will be forced to match the bandwidth of the Termination Circuit Mapping.
- The network path hunt will search for the shortest network circuit (least number of elements) path which uses ports of alarm severity less than or equal to the maximum alarm severity specified on the network circuit form. The ports on a given intertie will be searched in the order of the least alarm severity to highest alarm severity.

(Continued on next page)

DND GUI: NETWORK CIRCUIT PROVISIONING Form (Continued)

Rules (Continued)

- The network path hunt will only search for available channels on managed ports residing on managed elements. This includes:
  - DACS II channelized NPCs
  - DACS II ISX channelized NPCs
  - DACS II AX channelized ports on the Octal T1E1, T3, and Hybrid T3 cards.
- DACS NPCs must be inservice (and if the NPC is on a DS3 card, then its MMFG must also be inservice) in order to be considered an available port. DACS II AX ports must be inservice in order to be considered an available port.
- If there is a DACS II AX in the network circuit, the cross connect will be made on the active map.

Port Classes

- The DND divides ports into the following three distinct port classes for the purpose of network circuit provisioning:
  - Domestic
  - Cept CAS
  - Cept NSA

  If the specified endpoints of the network circuit are both in the same port class, then the network path hunt will only search for available ports in the same port class. If the specified endpoints are not in the same port class, then any available port will be chosen.

DND GUI: NETWORK CIRCUIT PROVISIONING Form (Continued)

Network Circuit Execution Results

The DND executes the individual circuit commands sequentially down the network path. The DND displays all results (per site) in a status box in the NETWORK PATH area of the NETWORK CIRCUIT PROVISIONING form. (See Figure 10-27)

The value 'Success' or 'Failure' displays for each site. If a failure occurs, the error displayed at the bottom of the form is related to the site for which 'Failure' is displayed in the status box. If an activate fails, 'Failure' displays in the status box and then the DND takes down (or rolls back) the circuit connection(s) that were successfully put up. For each site above the Failure where a rollback occurred, the status area will display either 'Rollback OK' or 'Rollback Fail' to specify whether or not the circuit could be disconnected from the site.

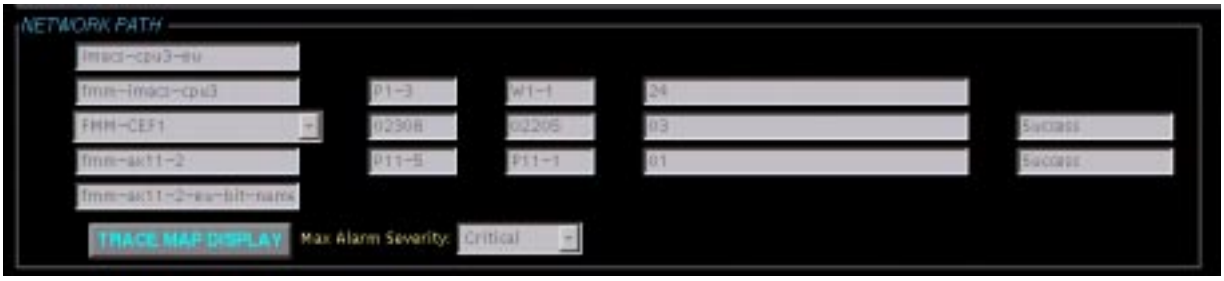


Figure 10-27. Network Circuit Execution Results

DND GUI: NETWORK CIRCUIT PROVISIONING Form (Continued)

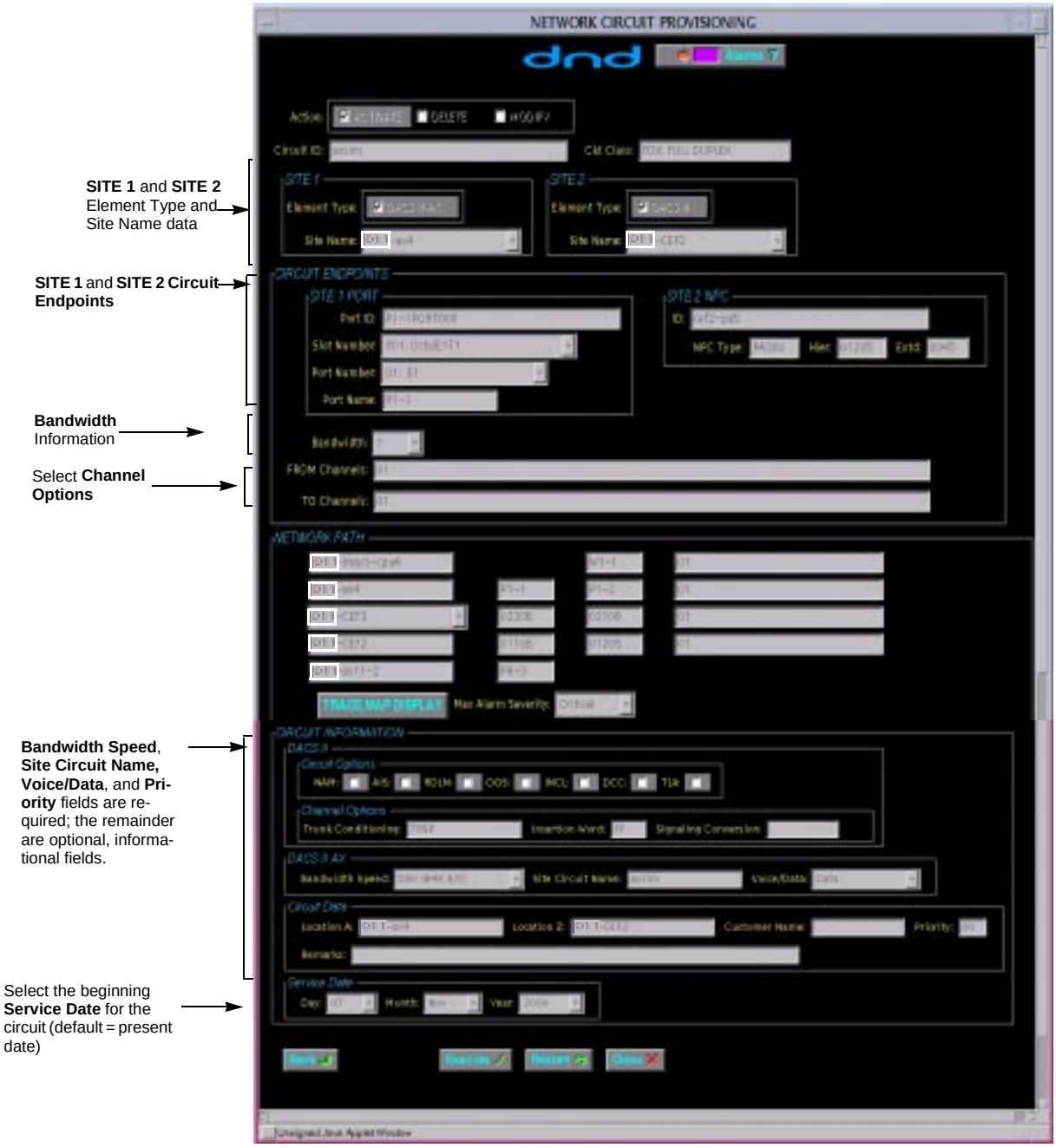


Figure 10-28. The NETWORK CIRCUIT PROVISIONING Form, *ACTIVATE* Action

DND GUI: NETWORK CIRCUIT PROVISIONING Form (Continued)

Field Descriptions

The field values for the NETWORK CIRCUIT PROVISIONING form are described in Table 10-2.

Table 10-8. DND GUI: Field Descriptions for the NETWORK CIRCUIT PROVISIONING Form

Field	Description
Action	(Combo box) Mandatory. Specifies the NETWORK CIRCUIT PROVISIONING operation. The valid actions are: ■ *ACTIVATE* - Enters the circuit specified by **Circuit ID** in the DND database and cross-connects it in the network, making it an existing, traffic-carrying circuit. *ACTIVATE* is the default **Action**. ■ *MODIFY* - Changes the specified circuit information only. ■ *DELETE* - Removes the specified circuit from the DND and element databases.
Circuit ID	(Text field) Mandatory. Must be unique for all elements in the circuit. One through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, “, %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored. Associates the name entered in this field with the circuit described by this form.
Circuit Class	(Combo box) Mandatory. Specify the type of circuit. The value is: ■ *FULL DUPLEX* - A two-way, two-point circuit that applies to high-rate DS0 cross-connections.

(Continued on next page)

DND GUI: NETWORK CIRCUIT PROVISIONING Form (Continued)

Field Descriptions

Table 10-8. DND GUI: Field Descriptions for the NETWORK CIRCUIT PROVISIONING Form, (Continued)

Field	Description
(Site 1/Site 2) Element Type	(Radio Button) Mandatory. Select the Element Type for Sites 1 and 2. ■ *DACS II* ■ *DACS II ISX* ■ *DACS II AX* ■ *AAC/IMACS* ■ *PSAX* ■ *Other*
(Site 1/Site 2) Site Name	(Combo box) Mandatory. Select the name of the DACS where the requested **Action** will take place. Clicking this field will display a list of DACS names. By default, the list appears alphabetically. To change the sorting order, modify the setting for the SORT_NAME_BY variable.
NPC Specifier/NPC	(Radio buttons and Text field) Mandatory. Fields for specifying Site 1's NPC. The three choices for entering NPC data are: ■ *ID* - If selected, Enter the NPC name in the **NPC:** field. ■ *Hier* - If selected, enter the NPC's hierarchical number in the **NPC:** field ■ *Extd* - If selected, enter the NPC's extended number in the **NPC:** field.
Port Specifier	(Radio buttons) Mandatory. Choose a method to identify the FROM and TO ports. Choices are **ID** or **Slot/Port**. Specify the port name if **ID** is selected or the port number if **Slot/Port** is selected.

(Continued on next page)

DND GUI: NETWORK CIRCUIT PROVISIONING Form (Continued)

Field Descriptions

Table 10-8. DND GUI: Field Descriptions for the NETWORK CIRCUIT PROVISIONING Form, (Continued)

Field	Description
Port ID	(Text field). If you selected **ID** in the **Port Specifier** field, enter up to 41 characters to identify each managed port (DND name).
Slot Number	(Combo Box). If you selected **Slot/Port** in the FROM or TO **Port Specifier** field, enter the slot number (x) value. **Slot** number values correspond with the DACS II AX type and module being used. For example: ■ For DACS II AX4 type, slot values are x=01 through 04. ■ For DACS II AX11 type, slot values are x=01 through 11. **Note:** Slots 01 and 11 are not shown if they are being used for redundancy.
Termination Name	(Text field) Mandatory. 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, ", %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored.
Port Number	(Combo box). If you selected **Slot/Port** in the FROM or TO **Port Specifier** field, enter the port number (*y*) value. **Port Number** values (y) correspond with the module being used. For example: ■ For T1/E1 Ports used for the Octal T1 module, port values are y=01 through 08 ■ For T1/E1 Ports used for the T3 module, port values are y=01 through 28

(Continued on next page)

DND GUI: NETWORK CIRCUIT PROVISIONING Form (Continued)

Field Descriptions

Table 10-8. DND GUI: Field Descriptions for the NETWORK CIRCUIT PROVISIONING Form, (Continued)

Field	Description
Bandwidth	(Combo box) Mandatory. Indicates the number of DS0 channels desired. For example, a 128 Kbps data channel consists of two 64 Kbps channels. For NAS ports, the available bandwidth is *1-24* channels; for CEPT NSA ports, the available bandwidth is *1* through *31* channels; for CEPT CAS, the bandwidth is 1 through 30 channels.
FROM Channel/ TO Channel	(Text field). The **FROM** or **TO** listing of channels separated by commas. Values are *1-31* for CEPT; *1-24* for NAS; or 1-32 for unsupported ports. Use Find on either the **FROM** or **TO** side to locate available channels for creating a new circuit.
Max Alarm Severity	(Combo Box) Choose the maximum alarm severity to be used for the network path hunt. DND will search for the shortest network circuit (least number of elements) path which uses ports of alarm severity less than or equal to the selected maximum alarm severity value. ■ Critical ■ Major ■ Minor ■ INFO ■ Clear

(Continued on next page)

DND GUI: NETWORK CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-8. DND GUI: Field Descriptions for the NETWORK CIRCUIT PROVISIONING Form, Continued

Field	Description
(DACS II) Circuit Options	(Checkboxes) Names options for activating or deactivating the circuit. **NOTE:** Only *RDLD*, *OOS*, and *INCL* are available for clear DS1/E1 circuits. ■ *NAM* - No A-to-mu law conversion is to be applied to the circuit if it is CEPT only; for example, if it is not a gateway ■ *AIS* - Alarm Indication Signal (all 1s, including the framing bit) is to be asserted on the downstream NPC when it is detected on the upstream NPC or when the upstream NPC asserts a CGA. Applies to NAS, *FDX*, high-rate circuits of bandwidth 24 only ■ *RDLN* - Red-lined. The circuit is to require specific authorization to disconnect; the *INCL* keyword must be set.

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DND GUI: NETWORK CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-8. DND GUI: Field Descriptions for the NETWORK CIRCUIT PROVISIONING Form, Continued

Field	Description
(DACS II) Circuit Options, Continued	■ *OOS* - Out of service. A disconnect is to be effected when the NPC at one or both ends of the circuit are *OOS* ■ *INCL* - Included. Authorizes disconnects of *RDLD* circuits. This *INCL* keyword applies to a DACS II disconnect only. The *INCL* keyword (like the *CUS* keyword) from a DACS II connect is not supported. ■ *DCC* - Disconnect channel code. Causes the frame to assert the user-defined disconnect code (specified in the **Insertion Word** field) on disconnected channels ■ *TLA* - Terminate and Leave Activated. If it is unselected, TLR, Terminate and Leave Released is to be in effect for this circuit. **NOTE:** The unassigned **Insertion Word**, specified under NPC PROVISIONING for the NPC, is transmitted in the terminated direction(s).

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DND GUI: NETWORK CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-8. DND GUI: Field Descriptions for the NETWORK CIRCUIT PROVISIONING Form, Continued

Field	Description
(Channel Options) Trunk Conditioning	(Text field) Trunk conditioning specifies whether A/B-robbed-bit signaling is to be used to signal failure on the specified circuit. This information will only be used during failure of either an incoming signal or an NPC. When the NPC can no longer frame on the signal, it initiates trunk conditioning on all DS0 channels of the NPC. The signaling bits sent during failure are intended to disconnect active calls and hold the circuits busy (if appropriate) for the duration of the failure. DDC circuits require a **Trunk Conditioning** of *TRSP* and an **Insertion Word** of *MUX*, which inserts MUX for the duration of the failure, and does not send the signaling bits. The value of **Trunk Conditioning** also is set at *TRSP* for a **Ckt Class** of *DMB*. The **TC** field disappears for clear DS1/E1 connections; trunk conditioning is not supported for them. The trunk-conditioning code is: *0011, 0011*. Indicates the circuit will use A/B signaling. The A/B bits sent upon detection of a failure condition are: **Duration of failure** / **FROM Facility** / **TO Facility** First 2.5 sec / *00* / *00* Remainder / *11* / *11*

(Continued on next page)

DND GUI: NETWORK CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-8. DND GUI: Field Descriptions for the NETWORK CIRCUIT PROVISIONING Form, Continued

Field	Description
(Channel Options) Trunk Conditioning, Continued	Logic 0 is an on-hook (idle). Logic 1 is an off-hook (busy). Circuits that use A/B signaling must always have an **Insertion Word** specified. **NOTE:** The **TC**-value format shown is for *FDX*, full duplex. For *HDX*, replace the FROM side's number with hyphens. For an *FDX* version of *X-05,X-63* the *HDX* result would be *X---,X-63.* **NOTE:** It is important to remember that with HDX, you must put hyphens on one side. Virtual multipoint circuits also are HDX. *0101,0101* *----,0011* The previous value is used in connection with four-state signaling only. *TRSP* Transparent. Indicates the circuit will not use A/B signaling. *X-FF,X-FF* *X-99,X-99* *X---,X-FF*

(Continued on next page)

DND GUI: NETWORK CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-8. DND GUI: Field Descriptions for the NETWORK CIRCUIT PROVISIONING Form, Continued

Field	Description
(Channel Options) Trunk Conditioning, Continued	The previous two values are used in connection with 16-state signaling only. *11111111,11111111* *--------,11111111* See the DACS I/O manual for other valid TC codes and for more information about trunk conditioning.
(Channel Options) Insertion Word	(Text field) Insertion Word. Specifies the 8-bit alternate code to be inserted into the DS0 outgoing time slots of mapped channels of an NPC during *OOS* conditions, including carrier failure and removal of an NPC. The DDC is still sent toward both DS1 lines on unmapped channels. A yellow alarm is sent toward the failed DS1. The selections are: ■ *TRB* - Insert the standard trouble code, Hex E4, or 11100100. You can also enter *X-E4*. ■ *MUX* - Insert the MUX out-of-sync code, Hex 1A, or 00011010. You can also enter *1A*. When DS0 channels of DDS lines are cross-connected in the CCN, *TRSP* is used for **Trunk Conditioning** and *MUX* for **Insertion Word**. The latter is inserted in the mapped DS0 channels of the outgoing DS1 line away from the failure. UMC is still inserted on unmapped channels. ■ *nn* - Insert an 8-bit pattern specified by Hex *nn*. Currently *7F*, *FF*, and *BF* are selections

(Continued on next page)

DND GUI: NETWORK CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-8. DND GUI: Field Descriptions for the NETWORK CIRCUIT PROVISIONING Form, Continued

Field	Description
(Channel Options) Signaling Conversion	(Text field) Optional. Signaling conversion is used in CEPT and GATEWAY cross-connections in conjunction with CAS signaling. If the **Signaling Conversion** field is not specified, all four signaling bits will be cross-connected unchanged. The **Signaling Conversion** field is defined as: *xxxx,yyyy* where the first four bits, *xxxx*, represent the FROM side and the last four bits, yyyy represent the TO side. The comma separator is mandatory. All eight bits can be controlled independently. The valid values for these bits are: ■ *P* - Pass unchanged ■ *V* - Pass inverted ■ *0* - Set output to 0 ■ *1* - Set output to 1 ■ - - o value, the circuit is one-way All 8 bits are used only for *FDX*, full duplex. For *HDX*, replace the FROM side's number with hyphens. For example: *0011,0011* in *FDX* would become *----,0011* in *HDX.* If - is used, all four characters in the group must be -. If they are not, the frame may deny the command. This field disappears for clear DS1/E1 connections.

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DND GUI: NETWORK CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-8. DND GUI: Field Descriptions for the NETWORK CIRCUIT PROVISIONING Form, Continued

Field	Description
(Channel Options) Framing	(Text field) The value of the framing bits in the FW in cases where a CEPT channel 0 (time slot 0) is being connected to some other CEPT channel (non-TS0). ■ *abcdefg, hijklmn* - An arbitrary bit pattern of *0s* and *1s*, where *abcdefg* is the pseudo-FW in the TO-FROM direction and *hijklmn* is the pseudo-FW in the FROM-TO direction. Make sure that the pseudo-FW can in no case be the same as the FW or the NFW. ■ *NFW* - Use the NFW in channel 0 of all time frames.
Bandwidth Speed	(Radio buttons) Mandatory. Indicates the cross connect speed. The choices are: ■ *DS0 (48K b/s)* ■ *DS0 (56K b/s)* ■ *DS0 (64K b/s)* If the cross-connect speed is 48K, then the **Bandwidth** of the circuit must be *1*.
(DACS II AX) Site Circuit Name	(Text field) Mandatory. Identifies the AX circuit name connection. One through 19 characters from the printable ASCII character set.

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DND GUI: NETWORK CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-8. DND GUI: Field Descriptions for the NETWORK CIRCUIT PROVISIONING Form, Continued

Field	Description
Voice/Data	(Combo Box) Mandatory. Indicates the type of communications being carried on the circuit. The choices are: ■ Data ■ Voice ■ Voice/AuToMu **NOTE:** DND does not validate the Voice/Data value against the type of port to be cross-connected. If the value is invalid, DND displays an error from the AX on the status line, indicating "invalid communications".
Location A	(Text field) Optional. Up to 24 characters. The Station ID of the FROM side of the circuit being provisioned. This field is informational only.
Location Z	(Text field) Optional. Up to 24 characters. The Station ID of the TO side of the circuit being provisioned. This field is informational only.
Customer Name	(Text field) Optional. Up to 12 characters. An informational field only. The name of the customer to be associated with the current circuit. An automatically supplied value of *ERP* identifies circuits created by the ERP feature.

(Continued on next page)

DND GUI: NETWORK CIRCUIT PROVISIONING Form (Continued)

Field Descriptions, Continued

Table 10-8. DND GUI: Field Descriptions for the NETWORK CIRCUIT PROVISIONING Form, Continued

Field	Description
Priority	(Text field) Mandatory. Informational only, one or two alphanumeric characters. Indicates to the user the relative importance of the circuit for restoral actions. Regardless of its use, a circuit cannot be assigned more than one circuit priority. Default value is *00*.
Remarks	(Text field) 0-77 characters. A user-defined informational field for comments.
Service Date	(Combo boxes) Select the date the circuit is first placed into service. The fields are: ■ **Day:** (*01* thru *31*) ■ **Month:** (*Jan* thru *Dec*) ■ **Year:** (*1990* thru *2037*)

Circuit Provisioning ERP

Overview

This section describes Echoed Response Processing (ERP), an autonomous (not menu-driven) feature that applies to DACS II, DACS II ISX, and DACS II AX equipment. While most of this section applies to DACS II and DACS II ISX, a separate subsection is provided to describe circuit provisioning ERPs for managed DACS II AX equipment (AX Release 9.03 and beyond only).

Description

An echoed response is a message that is sent from a frame to the DND when the DND does not expect a response. This would occur, for example, when a change in frame circuit provisioning has been entered through the frame console or by some other means not initiated on the DND forms. Such provisioning means that the DACS and DND databases no longer correspond.

All actions taken by ERP are logged and the log can be retrieved as a report. For more information, refer to *Chapter 17, Report Operations.*

DACS II and DACS II ISX Circuit Provisioning ERPs

DACS II Circuit Provisioning ERPs are logged when the DND automatically activates or deletes one-way, two-way, virtual multipoint, DMB multipoint, or BCON circuits. It searches for the NPCs and channels referenced in the message. If it does not find them in the DND database, it logs the message, but takes no action. If it finds the terminations, but no circuit is active, it activates a circuit.

Circuit Provisioning ERP (Continued)

Circuit Activation for DACS II and DACS II ISX Equipment

If the DND must activate a circuit that is not in the DND database at all, it automatically assigns a **Circuit ID** in one of the following formats:

```
ERP fromnpc-fromchan tonpc-tochan BW/bw
class
```

where:

fromnpc	is the FROM NPC number in hierarchical or extended format, depending on how the frame was provisioned.
fromchan	is the FROM channel number.
fromport	is the FROM port number.
tonpc	is the TO NPC number in hierarchical or extended format.
tochan	is the TO channel number.
toport	is the TO port number.
bw	is the bandwidth, which is either *1* or the number of contiguous channels of a high-rate circuit.
class	is the circuit class

Circuit Deletion (DACS II and DACS II ISX)

If an ERP message indicating a disconnect has occurred on a DACS II or DACS II ISX, DND will delete the circuit using the same FROM point and TO point. If an ERP circuit or a SYN circuit must be deactivated, it is deleted. Otherwise, a circuit taken out of service is placed in *DEACTIVATED* **Ckt Status**. This can be controlled by the SYNC_DEACTIVATE_CKTS environment variable.

BCON Activation (DACS II and DACS II ISX)

For BCON ERP messages which result in the addition or modification of LEGs to an existing BCON circuit on a DACS II or DACS II ISX, the standard LEG circuit naming is used. However, for new BCON circuits that have been created via ERP, the DND assigns a **Circuit ID** of the following format:

```
BRP fromnpc-fromchan tonpc-tochan BW
```

Circuit Provisioning ERP (Continued)

High Rate Circuits (DACS II and DACS II ISX)

The DACS II and DACS II ISX do not recognize high-rate circuits with an alternating or random type of bandwidth. If the DND receives a deactivation message for a circuit with such a bandwidth, it deletes all the circuits of the bandwidth and reactivates the ones not specified in the message.

ERP Messages (DACS II and DACS II ISX)

The DND is designed to respond to the following types of DACS output messages:

Table 10-9. ERP Messages

ERP Message Number	Message Description
0.11001	connection of two-way or a range of cross-connect circuits
0.11011	connection of two-way clear DS1/E1 circuits
0.11021	connection of two-way multipoint circuits
0.11101	connection of one-way or a range of cross-connect circuits
0.11121	connection of one-way multipoint or a range of cross-connect circuits
0.11131	connection of one-way clear DS1/E1 circuits
0.13001	addition of up to eight legs for BCON circuits
0.13002	addition of one leg for a BCON circuit
0.13011	addition of up to eight clear legs for BCON circuits
0.13021	addition of one clear leg for a BCON circuit
0.15001	disconnection of a two-way or a range of cross-connect circuits
0.15002	disconnection of two-way or a range of cross-connect circuits
0.15011	disconnection of two-way clear DS1/E1 circuits
0.15101	disconnection of one-way circuits
0.15111	disconnection of one-way clear DS1/E1 circuits
0.15102	disconnection of one-way multipoint or a range of cross-connect circuits
0.15201	disconnection of one leg for a BCON circuit

(Continued on next page)

Circuit Provisioning ERP (Continued)

ERP Messages, (DACS II and DACS II ISX) Continued

Table 10-9. ERP Messages, Continued

ERP Message Number	Message Description
0.15211	disconnection of up to eight legs for a BCON circuit
0.15221	disconnection of up to eight clear legs for a BCON circuit
0.15231	disconnection of one clear leg for a BCON circuit
0.18001	change the return path for up to eight BCON circuits
0.18011	change the return path for up to eight clear circuits

ERP Control (DACS II and DACS II ISX)

You can partially control the DND response to a message of this type. On the NETWORK ELEMENT PROVISIONING form, if the **ERP Control** option is selected, the DND processes echoed response messages only if all point terminations are already in the DND database. The database is updated and event messages are published. If any terminations are missing, the message is not processed and no action of any kind is taken.

If, on the other hand, **ERP Control** option is unselected, the DND responds fully to every message of this type.

Circuit Provisioning ERP (Continued)

DND ERP Response for DACS II, DACS II ISX and DACS II AX

As with any other DND **Action**, an action generated in ERP can succeed or fail. The result of the attempt is reported in the **Status Summary** field on the DND Workspace window, in the following format:

database/result:action explanation

where:

database	Is the **Site Name** field value for this frame.
result	Is one of these values: `SUCCESS` The action succeeded. `FAILURE` The action failed.
action	Is a terse English description of the attempted action.
explanation	Is the **Circuit ID** field value or an error message.

DACS II AX Circuit Provisioning ERPs

The DND automatically activates, modifies, and deletes two-way circuits. It logs ERP messages for circuits that are not full-duplex or that conflict with other circuits in the DND database.

Circuit Activation for DACS II AX Equipment

If the DND must activate a circuit that is not in the DND database at all, it automatically assigns a **Circuit ID** of the following format:

ERP`-0# axname`

where:

#	is 1 to 5.
axname	is the name of the circuit at the DACS II AX.

(Continued on next page)

Circuit Provisioning ERP (Continued)

Circuit Activation for DACS II AX Equipment (Continued)

DND may fail to activate the circuit if a circuit already exists in the DND database for the same site, map number, Circuit ID, Site Circuit ID, or connection number (an internal key used by AX, but not displayed by AX or DND).

Note that if illegal characters (i.e., *, ?, \, [,], ^, ", %, |) are used for the Site Circuit Name, an error will occur in the ERP log and the circuit will not be added to the database.

DND's Response to DACS II AX ERP Messages

The DND supports DACS II AX equipment ERP messages as follows.

- If an ERP message indicates that a circuit *modify* action has occurred on the AX, DND will modify the circuit, as long as it is valid in the DND.
- If an ERP message indicates that a circuit *deletion* action has occurred on the AX, DND will delete the circuit with the given connection ID. It will also delete circuits on ports that have been reconfigured as indicated by the AX.
- If an ERP message indicates that a *map activation* action has occurred on the AX, the active connection map on the DND GUI is updated.
- If an ERP message indicates that a *map deletion* action has occurred on the AX, all circuits on that connection map are deleted. The message fails and is logged if the message indicates the current active map.
- If an ERP message indicates that a *map copy* action has occurred on the AX, all circuits from the destination map are deleted, and replaced with copies of circuits on the source map.

MMFG Provisioning

11

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Background

Introduction

A Multiplexer-Multiplexer Interface Unit Functional Group (MMFG) in a DS3 can consist of one Multiplexer (MXR) and one Multiplexer interface Unit (MIU). The (H)DS3U is supported on DACS II network elements only.

NOTE:
The Hybrid DS3 Unit does not currently support an MIU.

The MXR can be created, restored, modified, removed or deleted with the MMFG Provisioning form. If an MIU is present on the MMFG, it can be created, restored, modified, removed or deleted with the MXR, or separately, using the **Modify** action.

NOTE:
MMFG Provisioning can be performed only from the DND GUI. The MMFG Provisioning Form can be retrieved from the Provisioning Menu or from an MMFG slot on an Equipment View.

Objectives

This chapter provides background information to help you perform the following:

1. Create MMFGs
2. Restore an MMFG
3. Modify an MMFG
4. Remove an MMFG
5. Delete an MMFG.

Background (Continued)

Related tasks

For related tasks, see the following General Tasks in Volume II:

DND GUI:

- Creating an MMFG GT 11.1G
- Modifying an MMFG GT 11.2G
- Restoring an MMFG on a DACS GT 11.3G
- Removing an MMFG from a DACS GT 11.4G
- Deleting an MMFG from a DACS GT 11.5G

Related information

For related information see:

- *DACS II and DACS II ISX Operation and Maintenance Manual*
- *DACS II Network Director Installation Manual.*

General Information

Major Actions

The major MMFG provisioning actions are *CREATE, RESTORE, REMOVE*, and *DELETE*. These actions are based on the DACS concepts of "create equipment," "place in service," "remove from service," and "disconnect equipment."

MXR Type

The MXR type is designated by **mnxyz**, where:

- **mn** refers to the MMFG Type
- **xyz** refers to the MMFG Parameters.

MXR Types

An MXR can be one of the following types:

- MX100 - KCR-1 circuit pack with M13 framing
- MX200 - C-bit parity framing
- EX100 - M13 framing
- EX200 - C-bit parity framing
- HX110 - KCR-8, Hybrid DS3, M13 Framing, ANSI X-bit (HDS3U card only)
- HX100 - KCR-8, Hybrid DS3, M13 framing, reverse X-bit (HDS3U card only).

MIUs

An EX type MXR on a DS3U card supports an MIU. An MIU can be created or deleted with the EXxyz MXR by specifying the MIU type on the MMFG Provisioning Form. Additionally, the MIU's equipage and service state can be managed separately with the MODIFY action on the MMFG Provisioning Form:

- If the MMFG is in service, the MIU can be created or restored by selecting MIU - IS.
- If the MMFG is out of service, the MIU can be created (added to the MMFG) by selecting MIU - OOS.

DND Supported MMFG Addressing

MMFG Specifiers

There are two ways to specify an MMFG. The choices are:

- **Number -** The MMFG number in the format uu-n, where:

  uu - the MMFG unit number (01-16)

  n - MMFG number within the unit (1-6)

- **ID** - The name used to identify the MMFG. This is defined when performing the *CREATE* **Action**.

Specifying New or Existing MMFGs

When specifying a new MMFG, you must:

- Know the number of the MMFG you are going to use
- Give the MMFG a name (**ID**).

When specifying a previously created MMFG, you must:

- Know either the MMFG name (**ID**) or number
- Or, specify the MMFG identifier in the **MMFG:** field.

Protection MMFG

Description

The DND automatically CREATES a protection MMFG to reflect the protection MMFG that is always provisioned at the DACS. You can modify this MMFG as follows:

- And MIU can be added with the **MODIFY** Action.

  No commands will be sent to the DACS when the protection MMFG is modified.

- The MMFG can be REMOVED or RESTORED.

MMFG ID

The protection MMFG is automatically assigned an **MMFG ID** in the following format:

nn**MMFG**mmm

where:

nn	The unit number (0-16).
mmm	Is a unique sequence number assigned to this MMFG record. The number is incremented with each new MMFG activated by this method.

The protection MMFG is also identified by the number:

uu-**p**

where:

uu	The unit number (0-16).

Performance Monitoring

Description

When an HXxyz type MXR is selected the MMFG Provisioning Form will reveal additional fields used to specify Performance Monitoring options.

Data Sets

Performance Monitoring thresholds for each parameter are defined in terms of data sets 0,1,2, and 3. Data set 0 is defined at the DACS by default. The other optional data sets must be provisioned directly at the DACS using the `ED-OPT-T3` command.

NOTE:
If a data set is *not* defined in the DACS, it will reject requests for a data set value.

Line Performance Monitoring

Table 10-1. Line Performance Monitoring Range and Default Values

Parameter	Threshold Value Range	Default Threshold Value
Near End 15 Minute Counts		
Code Violations	0 - 29490750	402867
Errored Seconds	0 - 900	300
Severely Errored Seconds	0 - 900	30
Near End 24 Hour Counts		
Code Violations	0 - 1073700000	3867523
Errored Seconds	0 - 86400	4320
Severely Errored Seconds	0 - 86400	90

Performance Monitoring (Continued)

Path Performance Monitoring

Table 10-2. Path Performance Monitoring Range and Default Values

Parameter	Threshold Value Range	Default Threshold Value
Near End 15 Minute Counts		
Code Violations	0 - 3686175	402867
F and M Bit Violations	0 - 230175	18432
Errored Seconds	0 - 900	30
Severely Errored Seconds	0 - 900	30
Unavailable Seconds	0 - 900	0
Near End 24 Hour Counts		
Code Violations	0 - 1073700000	3867523
F and M Bit Violations	0 - 22096800	176947
Errored Seconds	0 - 86400	4320
Severely Errored Seconds	0 - 86400	90
Unavailable Seconds	0 - 86400	0
Far 15 Minute Counts		
Severely Errored Seconds	0 - 900	30
Far End 24 Hour Counts		
Severely Errored Seconds	0 - 86400	90

MMFG Provisioning ERP

Description

An echoed response is a message that is sent from a DACS to the DND when the DND does not expect a response; for example, when a change in MMFG Provisioning is entered through the DACS console, through a passthrough command to the DACS, or by some other means not initiated by a DND form. Such provisioning would cause the DACS and DND databases to differ if the DND did not respond to the echoed response message.

The DND, therefore, is designed to process the echoed messages from the DACS. For example, if it receives a message that the DACS has created an MMFG, DND creates an MMFG in the local database. Likewise, the DND also executes a *RESTORE*, *REMOVE*, *MODIFY*, or *DELETE* when specified by the message.

Notification of ERP Messages

When the DND processes an echoed response message, event messages are posted on the Status Line of the DND Forms User Interface.

In addition, details about the echoed response message are logged in the DND database. To retrieve these details, from the DND Forms Main Menu, select REPORT OPERATIONS, then select ECHOED RESPONSE PROCESSING.

MMFG Provisioning ERP (Continued)

MMFG ID ERP Assignment

If the DND must create an MMFG that is not in the DND database at all, it automatically assigns an **MMFG ID** in the following format:

nn**MMFG**mmm

where:

nn	Is the MMFG number as represented at the DACS.
mmm	Is a unique sequence number assigned to this MMFG record. The number is incremented with each new MMFG activated by this method.

The default values used by the *CREATE* **Action** are the same as those specified under "Field Descriptions." They are displayed on the screens.

CAUTION:
You **SHOULD AVOID** *creating* **MMFG ID***s from the MMFG PROVISIONING form according to the ERP scheme.*

ERP Messages

With any other DND **Action**, an action generated in ERP can succeed or fail. The result of the attempt is reported in the Status Summary Window Line at the bottom top of the DND Main Window in the following format:

```
database/result:action explanation
```

where:

database	Is the **Site Name** field value for this frame.
result	Is one of these values: *SUCCESS* The action succeeded. *ERROR* The action failed.
action	Is a terse English description of the attempted action.
explanation	Is the **MMFG ID** field value or an error message.

More detailed information can be obtained with the Echoed Response Processing Report which can be run from the GUI and the DND Forms User Interface.

DND GUI: The MMFG Provisioning Form

MMFG Provisioning Form

This is an example of the MMFG PROVISIONING form. On this form, the MMFG to *CREATE* is identified as MMFG01 for MMFG 11-1.



Figure 11-1. DND GUI: MMFG Provisioning Form, Section 1: *CREATE* Action

DND GUI: The MMFG Provisioning Form (Continued)

Performance Monitoring Options for type HXxyz

The performance monitoring fields on Figure 11-2 are displayed only when an HX110 or HX100 type MXR is selected.

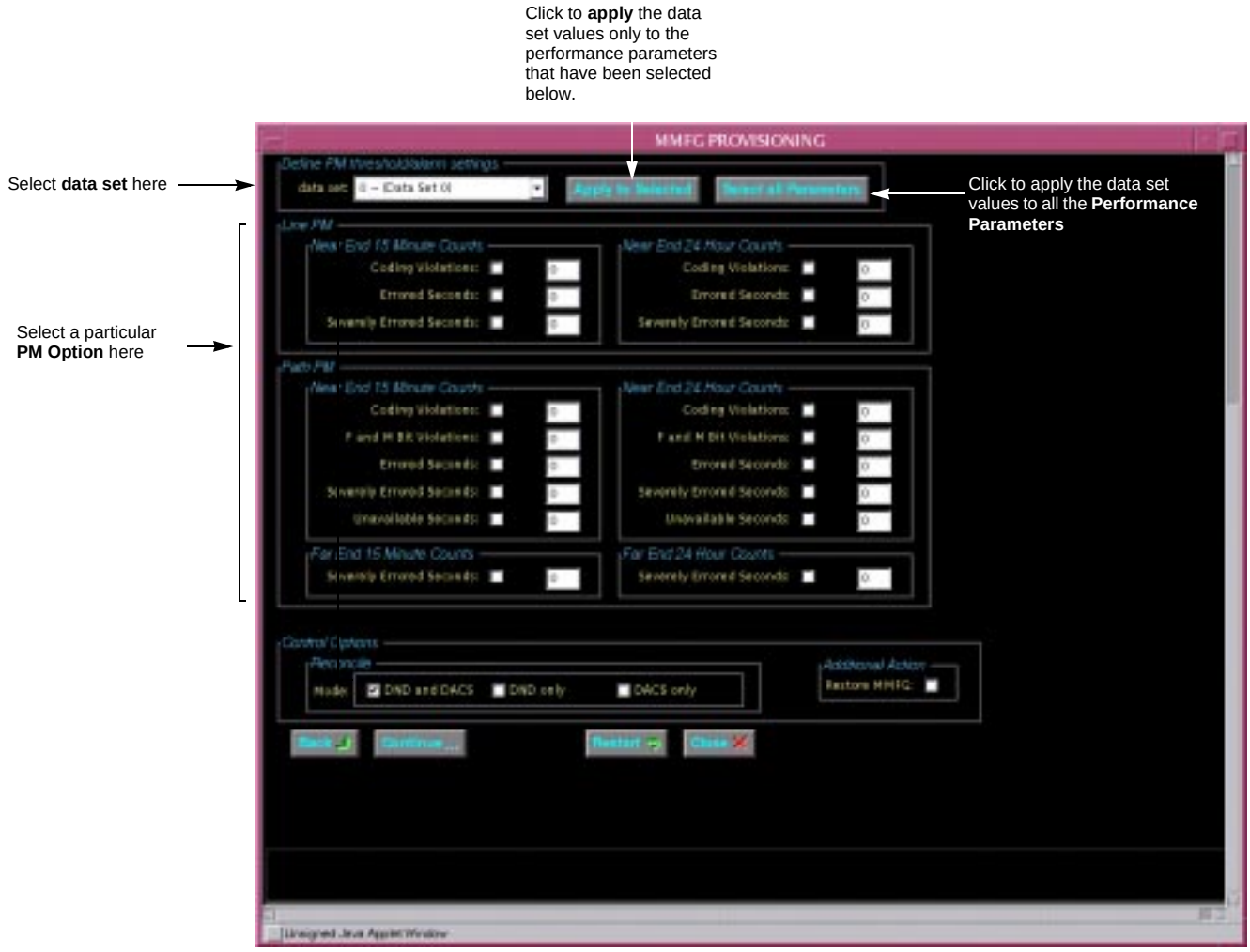


Figure 11-2. DND GUI: MMFG Provisioning Form, Section 2: *Performance Monitoring Options* (HX Type)

DND GUI: The MMFG Provisioning Form (Continued)

Field Descriptions

The field values for the MMFG PROVISIONING form are described in Table 11-3.

Table 11-3. DND GUI: Field Descriptions for the MMFG PROVISIONING Form

Field	Description
Site Name	(Combo box) Mandatory. Select the name of the DACS where the requested **Action** will take place. Clicking this field will display a list of DACS names. By default, the list appears alphabetically.
DACS CMM Number	(Read-only field) The DACS command number that corresponds to the actions on the MMFG Provisioning Form of the DND GUI. See the DACS II or DACS II ISX *Command and Message Manual*.
Far End Site	(Read-only field) Displays the name of the DACS/End User which is at the far end of the intertie, as entered by INTERTIE PROVISIONING. If this MMFG is not assigned to an intertie, then this field is blank.
Service State	(Read-only field) The status of the MMFG. This field cannot be changed by the user except as the result of an **Action**. Possible values: ■ *UEQD* - Unequipped. The MMFG referenced by the **MMFG ID** is not currently recorded in the DND and/or DACS databases (equipped). To place it there, use the *CREATE* **Action**. ■ *OOS* - Out of service. The MMFG is currently equipped, but is not operable. To place it in service, use the *RESTORE* **Action**. To unequip it, use the *DELETE* **Action**. ■ *IS* - In service. The MMFG is equipped and operable (ready for NPC PROVISIONING). To remove it from service, use the *REMOVE* **Action**.

(Continued on next page)

DND GUI: The MMFG Provisioning Form (Continued)

Field Descriptions, Continued

Table 10-3. DND GUI: Field Descriptions for the MMFG PROVISIONING Form (Continued)

Field	Description
Action	(Combo box) Mandatory. Valid choices are: ■ *CREATE* - Adds a new MMFG. ■ *RESTORE* - Places the specified MMFG in service. An MMFG must be in service before it can be used for NPC PROVISIONING. ■ *MODIFY* - Changes allowed combinations of fields for the specified MMFG. These combinations are stated under "Types of MMFGs" in this chapter. Constraints on possible new values of **MMFG Type** are also stated there. **NOTE:** Only those fields whose specification on the form differs from the DND database cause changes to be sent to the DACS. In particular, if the value is correct in the DND but is not correct in the DACS, a *MODIFY*, even in *DACS Only* mode, will not correct the value in the DACS. ■ *REMOVE* - Removes the specified MMFG from service. **CAUTION:** *Removing an MMFG with active circuits may result in transmission loss for those circuits.* ■ *DELETE* - Deletes the specified MMFG. An MMFG must be removed from service before it can be deleted.

(Continued on next page)

DND GUI: The MMFG Provisioning Form (Continued)

Field Descriptions, Continued

Table 3-3. DND GUI: Field Descriptions for the MMFG PROVISIONING Form (Continued)

Field	Description
MMFG Number	(Text field). The MMFG number in the format *uu-n*, where: ■ *uu* - the MMFG unit number (01-16) ■ *n* - MMFG number within the unit (1-6)
MMFG ID	(Text field). The name used to identify the MMFG. This is defined when performing the *CREATE* **Action**.
MXR Type	(Combo box) The MXR Type: ■ MX100 - KCR-1 circuit pack with M13 framing ■ MX200 - KCR-1 circuit pack with C-bit parity framing ■ EX100 - KCR-5 circuit pack with M13 framing ■ EX200 - KCR-5 circuit pack with C-bit parity framing ■ HX110 - KCR-8 Hybrid circuit pack with M13 framing and ANSI interpretation of X-bit values ■ HX100 - KCR-8 Hybrid circuit pack with M13 framing and reverse ANSI interpretation of X-bit values Type HX100 and HX 110 set the X-bits (carried by the DS3 signal) in the transmit direction and interpret the value of the X-bits in the receive direction for the purpose of obtaining a Remote Alarm Indication (RAI) for the DS3 signal. Type HX110 interprets X-bit values (there are two X-bits) or "1" as normal, while values of "0" indicate an RAI. Type XH100 interprets the X-bit values of "0" as normal and X-bit values of "1" as RAI.

(Continued on next page)

DND GUI: The MMFG Provisioning Form (Continued)

Field Descriptions, Continued

Table 3-3. DND GUI: Field Descriptions for the MMFG PROVISIONING Form (Continued)

Field	Description
MIU Type	(Radio Buttons) Select MIU type where: ■ *No MIU* ■ *MIU100* - Applies the current action to the MIU as well as the MXR. The MIU applies only to the EXxyz type of MXR. The DND will deny invalid combinations of MXR and MIU.
MIU State	(Radio Buttons) If the Action is **MODIFY**, select an MIU state where: ■ *No MIU* - if an MIU exists it will automatically be deleted. ■ *MIU IS* - Creates the MIU if it is not already created, and puts the MIU in service if it is not already in service. ■ *MIU OOS* - Creates the MIU if it is not already created, and puts the MIU out-of-service if it is not already out-of-service. If the Action is not **MODIFY**, this field displays the current MIU state.

(Continued on next page)

DND GUI: The MMFG Provisioning Form (Continued)

Field Descriptions, Continued

Table 3-3. DND GUI: Field Descriptions for the MMFG PROVISIONING Form (Continued)

Field	Description
DACS Provisioning Options	(Radio Buttons) Select values for the following options: ■ BERM - bit error rate calculation method: — Bipolar violations (the default) — DS3 Parity Errors ■ BERT - bit error rate threshold for declaring High BER Condition. — 10-3 (the default) — 10-6 ■ LBO - Line Buildout specification. Set as follows: — 734A Cabling Set LBO *off* for 225 to 450 feet and Set LBO *on* for 0 to 225 feet — KS-19224, L2 Cabling Set LBO *off* for 75 to 150 feet and Set LBO *on* for 0 to 75 feet **NOTE:** The LBO setting of an in-service, traffic carrying MMFG can be changed.

(Continued on next page)

DND GUI: The MMFG Provisioning Form (Continued)

Field Descriptions, Continued

Table 3-3. DND GUI: Field Descriptions for the MMFG PROVISIONING Form (Continued)

Field	Description
Data Set	(Combo Box) Data sets 0,1,2, and 3. Data set 0 is defined at the DACS by default. See *Data Sets* earlier in this chapter. ■ Click on Select all Parameters to apply the values in that data set to all of the performance parameters. ■ Check each performance parameter that you want to take its value from that data set and click on Apply to Selected.
Apply to Selected	(Button) Applies the settings from the selected dataset to the performance parameters that have been checked.
Select all Parameters	(Button) Selects all of the performance parameters, then press Apply to Selected to apply the selected data set.
Performance Parameters	(Checkboxes) The performance parameters that can be defined in terms of one of the data sets. Check the checkbox, then press Apply to Selected to apply the selected data set to that performance parameter. See *Performance Monitoring* earlier in this chapter.
Reconcile Mode	(Radio buttons) Select the database where the current **Action** will take place. The choices are: ■ *DND and DACS* - Perform the **Action** to both the DND and DACS databases (default) ■ *DND only* - Perform the **Action** to the DND database only ■ *DACS only* - Perform the **Action** to the DACS database only

(Continued on next page)

DND GUI: The MMFG Provisioning Form (Continued)

Field Descriptions, Continued

Table 3-3. DND GUI: Field Descriptions for the MMFG PROVISIONING Form (Continued)

Field	Description
INCL	(Checkbox) Restores or Removes all NPCs associated with the MMFG.
FRC	(Checkbox) Force the removal of an MMFG, the MMFG will not be protected.
Delete MMFG	(Checkbox) Appears for the *REMOVE* **Action** only. When selected, the DND will *REMOVE* and *DELETE* an MMFG using the same form.
Restore MMFG	(Checkbox) Appears for the *CREATE* **Action** only. When selected, the DND will *CREATE* and *RESTORE* an MMFG using the same form.

Termination Naming and Connections

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Background

Introduction

A termination is the name used to designate one end of an SNMP circuit connection, called Termination Circuit Mappings. These terminations and circuit maps are recognized by the DND database only. To physically provision an SNMP termination or circuit map, a user must telnet to the SNMP box and issue the appropriate provisioning commands.

Termination and termination circuit map provisioning is performed at the DND GUI.

Objectives

This chapter provides background information to help you perform the following:

1. Create a Termination
2. Modify a Termination
3. Delete a Termination
4. Create a Termination Circuit Map
5. Modify a Termination Circuit Map
6. Delete a Termination Circuit Map
7. Trace a Termination Circuit Map thru a Network Circuit.

Related tasks

For related tasks, see the following DND GUI General Tasks in Volume II:

- Creating a Termination GT 12.1G
- Modifying a Termination GT 12.2G
- Deleting a Termination GT 12.3G
- Creating a Termination Circuit Map GT 12.4G
- Modifying a Termination Circuit Map GT 12.5G
- Deleting a Termination Circuit Map GT 12.6G
- Performing a Trace on a Termination Circuit Map GT 12.7G

Background (Continued)

Related information

For related information see:

- *Chapter 8, DACS II, DACS II ISX NPC Provisioning*
- *Chapter 10, Circuit Provisioning*.

The Termination Name Form

Termination Name Form

Figure 12-1 shows an example of a TERMINATION NAME form.

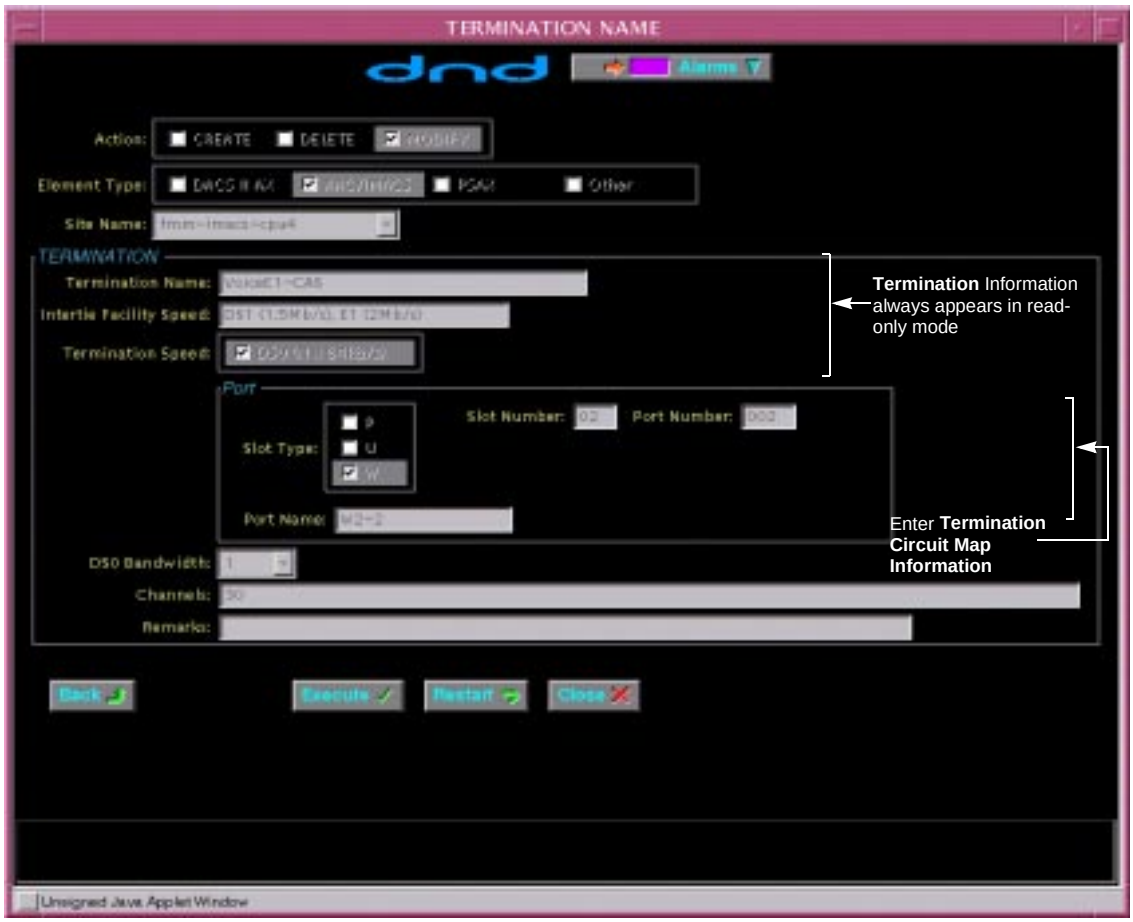


Figure 12-1. TERMINATION NAME Form, *CREATE* Action

The Termination Name Form (Continued)

Termination Information

A termination is an endpoint on an SNMP circuit mapping. The information necessary to define a termination is dependent on the Element Type, the physical card type, and the speed or type of the SNMP cross-connect mapping that will contain the termination. The SNMP element types managed by the DND can map at the DS0, DS1, E1, and ATM speeds. Therefore, the DND allows terminations to be created at the NxDS0, DS1, E1, and ATM speeds.

Termination Slot Types

The slot types for terminations are particular SNMP elements are identified in table.

Element Type	Slot Types
DACS II AX	P
AAC/IMACS	P, U, W
PSAX	P
Other	Any alphabetical capital letter

Termination Speeds

The termination speed represents the speed at which the termination circuit mapping will be connected. This can either be an NxDS0, DS1, E1, or ATM speed depending upon the Element Type and the type of physical card in the slot as specified when it is added to the intertie.

The Termination Name Form (Continued)

Creating Terminations

The following table specifies the termination information needed for the type of port card in use and the termination speed.

IF you have a...	Term Speed	Slot Type	Slot Number	Port Number	Bandwidth	Channels	VPI/VCI
DS0 card	DS0	X	X	X	X		
DS1 card, E1 card	DS0	X	X	X	X	X	
	DS1, E1	X	X	X			
DS3 card	DS0	X	X	X*	X	X	
	DS1, E1	X	X	X*			
ATM card	ATM	X	X				X

*DS1 number within the DS3.

A termination cannot be created until its port facility has been added to an intertie.

Modifying Terminations

The information fields listed below are the only fields which can be modified:

- **DS0 Bandwidth** (ONLY if not used in a termination circuit map)
- **Channels**
- **Remarks**.

To change the termination name or port designation, delete the existing termination, and re-create it with new termination name and port information.

Deleting Terminations

A termination cannot be deleted if it has been designated as an endpoint in a termination circuit map.

The Termination Name Form (Continued)

Field Descriptions

The field values for the TERMINATION NAME form are described in Table 12-1.

Table 12-1. Field Descriptions for the TERMINATION NAME Form

Field	Description
Action	(Combo box) Mandatory. Valid choices are: ■ *CREATE* - Adds a new termination ■ *DELETE* - Deletes the specified termination ■ *MODIFY* - Changes allowed combinations of fields for the specified termination.
Element Type	(Radio buttons) The type of SNMP site. The choices are: ■ DACS II AX (prior to AX Release 9.03) ■ AAC/IMACS ■ PSAX ■ Other.
Site Name	(Combo box) Mandatory. Select the name of the SNMP site where the requested **Action** will take place. Clicking this field will display a list of available SNMPs of the type specified in the **Element Type:** field. By default, the list appears alphabetically.
Termination Name	(Text field) Mandatory. 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, ", %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored. Specify a name for the termination.

Table 12-1. Field Descriptions for the TERMINATION NAME Form (Continued)

Field	Description
Slot Type	(Radio buttons) Mandatory. Select the type of port to add to/delete from/modify on the termination. Some typical choices are: ■ *P* - Server card (ISDN, ADPCM, IMUX, or FRS cards) used for providing internal services. ■ *U* - User card (voice, data, and alarm cards) ■ *W* - Wan card. For DACS II AX, field is read-only and can only be *P*. For a PSAX, field is read-only and can only be *P*. For the AAC/IMACS, the choices are *P, U,* or *W.* For "Other" type SNMP, the choices are any letter from *A* through *Z.*
Slot Number	(Text field) Mandatory. Enter the number of the slot for the **SLOT TYPE** previously selected. 1 or 2 digits. ■ DACS II AX slots: *01* through *11* ■ PSAX slots: *01* through *15* ■ AAC/IMACS slots: P and W: *01* through *04;* U: *01* through *08* ■ "Other" type slots: *01* through *99*.
Port Number	(Text field) Mandatory. Up to 3 digits. Enter the number of the port for the **SLOT NUMBER** previously selected. ■ DACS II AX ports: P, U, or W: *01* through *08* ■ PSAX ports: P: *01* through *28* ■ AAC/IMACS ports: P: *01* through *28* U: *01* through *08;* W: *01* through *08* ■ "Other" type ports: *001* through *999*.
VPI	(Text field - appears only for ATM speed) Virtual Port Interface. Range is from 0-4095

Table 12-1. Field Descriptions for the TERMINATION NAME Form (Continued)

Field	Description
VCI	(Text field - appears only for ATM speed) Virtual Channel Interface. Range is from 0-65535
Port Name	(Text field) Read-only field that displays the specified port as it will be shown in DND reports.
DS0 Bandwidth	(Combo box) Select the bandwidth of the termination. Range is from 1 to 31.
Channels	(Text field) Enter a comma-separated list of channel(s) for the termination.
Remarks	(Text field) Free-form field to enter information about the termination.

The Termination Circuit Mapping Form

Termination Circuit Mapping Form

Figure 12-2 shows an example of a TERMINATION CIRCUIT MAPPING form.



Figure 12-2. TERMINATION CIRCUIT MAPING Form, *CREATE* Action

The Termination Circuit Mapping Form (Continued)

Termination Circuit Map Information

Termination circuit maps are SNMP circuit connections, which are associated with a particular SNMP element in the DND network. These circuit maps define paths through SNMP elements for creating circuit traces on a DND network circuit.

Creating Termination Circuit Maps

Terminations must be created on the SNMP prior to creating a circuit map. The terminations on each side of the circuit map must have the same termination speed (unless one side is ATM). Any type of termination can be mapped to an ATM virtual path. In addition, if the termination speeds are NxDS0, then the bandwidth must also match.

Modifying Termination Circuit Maps

The **Remarks** field is the only field which can be modified on the TERMINATION CIRCUIT MAPPING form.

Tracing Termination Circuit Maps

Circuit map tracing to an SNMP element will fail if:

- There is no termination established at the far end
- The termination at the far end is not in a circuit map.

The Termination Circuit Mapping Form (Continued)

Field Description

The field values for the TERMINATION CIRCUIT MAPPING form are described in Table 12-2.

Table 12-2. Field Descriptions for the TERMINATION CIRCUIT MAPPING Form

Field	Description
Action	(Combo box) Mandatory. Valid choices are: ■ *CREATE* - Adds a new termination circuit map ■ *DELETE* - Deletes the specified termination circuit map ■ *MODIFY* - Changes allowed combinations of fields for the specified termination circuit map ■ *TRACE* - Allows you to trace a network circuit by displaying a circuit trace map and table.
Element Type	(Radio buttons) The type of SNMP site. The choices are: ■ *DACS II AX* (prior to AX Release 9.03) ■ *AAC/IMACS* ■ *PSAX* ■ *Other.*
Site Name	(Combo box) Mandatory. Select the name of the SNMP site where the requested **Action** will take place. Clicking this field will display a list of available SNMPs of the type specified in the **Element Type:** field. By default, the list appears alphabetically.
Circuit ID	(Text field) Mandatory. 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, ", %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored. Specify a name for the termination circuit map.

Table 12-2. Field Descriptions for the TERMINATION CIRCUIT MAPPING Form (Continued)

Field	Description
Termination Name (for TERMINATION 1 and TERMINATION 2)	(Text field) Mandatory. 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, ", %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored. The name of a termination specified using the TERMINATION NAME form. Two terminations must be identified to establish a termination circuit map.
Remarks	(Text field) Optional. 0-72 characters. Free-form field to enter any information about the termination circuit map.
Port/Connected To	(Read-only fields) Appears only if at least ONE port in the circuit has been added to an intertie. ■ For DACS far end sites - Contains the far end NPC number ■ For SNMP far end sites - Contains the far end port number (Slot Type/Slot Number/Port Number).

Subrate Provisioning

13

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Background

Introduction

DND supports Digital Data Networks (DDNs) at the 2.4, 4.8, 9.6, and 19.2 kbit/s rates. DND supports these digital data rates by being able to cross-connect individual DDN circuits and connect multiplexed DDN circuits and individual DDN circuits.

The subrate application requires the use of the Digital Signal Processing Platform (DSPP), which consists of:

- The Digital Signal Processing (DSP) TG193 circuit pack.
- The DSPP software. The software that runs on the DSPP is referred to as application software because DACS II ISX treats it as a separate application.

NOTE:
The subrate application described in this chapter applies *only* to DACS II ISX Release 2.0 and higher.

Subrate Provisioning is accessed through the DND Forms Interface only.

Objectives

This chapter provides background information to help you perform the following:

1. Create a subrate NPC
2. Activate, deactivate, delete, and modify a DS0 channel
3. Activate, deactivate, delete, and modify a subrate cross-connection.

Background (Continued)

Related tasks

For related tasks, see the following DND Forms General Tasks in Volume II:

■ Provisioning Subrate Circuits	GT 13.1U
Creating/Activating an NPC as a Subrate Type	SE 13.1.1U
Activating a DS0 Channel	SE 13.1.2U
Provisioning a Subrate Cross Connection	SE 13.1.3U
■ Browsing DS0 Channel Information	GT 13.2U
■ Browsing Subrate Cross Connects	GT 13.3U

Related information

For related information, see:

- *DACS II Network Director Software Release Description*
- *DACS II and DACS II ISX Operation and Maintenance Manuals.*

Supported Circuits

Subrate Circuits

The following subrate circuits are supported by DND:

- **X.50**—A 64 kbit/s circuit that carries a number of multiplexed circuits of lower data rates using the International Telecommunications Union (ITC) X.50 recommendation.
- **X.57**—DACS II ISX supports these data rates by cross-connecting individual DNN circuits and connecting individual or multiplexed (Digital Data Network) DNN circuits.

Cross-Connection Architecture

Cross-Connection to DSPP Circuit Pack

X.50 and X.57 circuits are cross-connected to a DSPP circuit pack (TG193). The DSPP circuit pack multiplexes and demultiplexes customer circuits that are being carried on the X.50 and X.57 circuits. Figure 13-1 illustrates this cross-connection architecture.

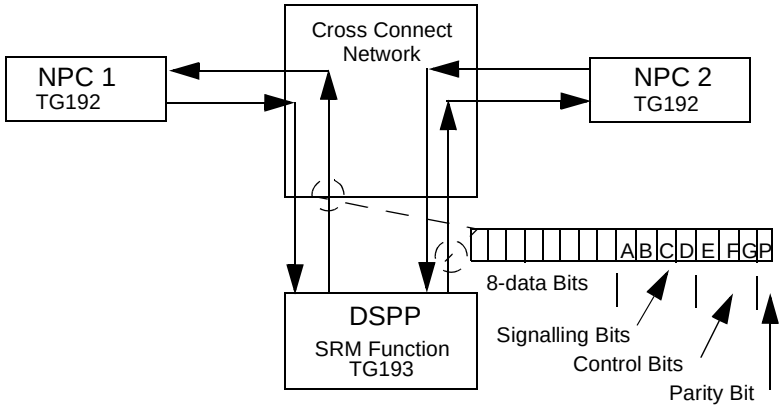


Figure 13-1. Cross Connection Architecture

How Information is Transferred

The information is cross-connected in its original form, at 16 bits at a time. A set of 16 bits is sent through the cross-connect network every 125 microseconds per each cross-connected channel. The lower eight bits of the 16 bit set consists of customer circuit data and overhead bits. These eight bits consists of four signalling bits, three control bits, and one parity bit.

NOTE:
For X.57 circuits, the 8-bit envelopes line up with the lower 8 bit bits, as shown in this figure. However, the data in the form of 8-bit envelopes may not line up with the lower 8 bits for other circuits.

Architectural Elements

DSPP Circuit Pack

The DSPP circuit pack (TG193) contains 64 channels (time slots), which can be cross-connected to another channel on another NPC in the system. This is illustrated by a dashed line in Figure 13-2. In addition, the DSPP circuit packs can have access to an Inter-NPC bus that connects the DSPP circuit packs among themselves.

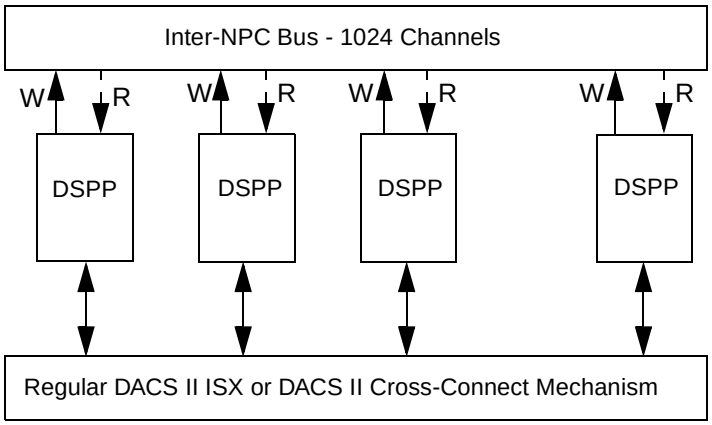
With the exception of growing and restoring the DSPP circuit pack, DND ignores all commands that pertain to the DSPP circuit pack.

Inter-NPC Bus

The Inter-NPC bus allows subrate cross-connections between more than 64 X.50 circuits. If the Inter-NPC bus is not used, the number of circuits that can exchange subrate circuits between themselves is 64.

When connected to the Inter-NPC bus, each DSPP circuit pack can:

- Write data for up to 64 channels. This can be modified or unmodified data.
- Read up to 1024 channels (16 DSPP circuit packs) from the Inter-NPC bus. Each DSPP circuit pack can read its own channels as well as all other channels from DSPP circuit packs connected to the Inter-NPC bus, if these channels are written to the Inter-NPC bus by the individual DSPP circuit pack.



W = write R = read -- = cross-connect to

Figure 13-2. Inter-NPC Bus Architecture for DSPP Circuit Pack

Architectural Elements (Continued)

Limits

The limit of 64 channels without the Inter-NPC bus and a limit of 1024 channels with the Inter-NPC bus are theoretical limits. The actual limits depend on the capacity of the DSP1611 chip on the DSPP circuit pack.

X.50 Customer Circuit Cross-Connections

Requirements

To connect X.50 customer circuits to each other, a total of three cross connects are required. Two of these cross-connects are illustrated in Figure 13-3, which illustrates how two X.50 circuits are connected from their NPCs to the DSPP circuit packs. These two cross-connects are established by the DACS II ISX cross-connect network.The cross-connection of customer circuits takes place in the DSPP circuit packs along with demultiplexing/multiplexing.

X.50 Schematic

Figure 13-3 shows a schematic view of how these customer circuit cross-connections are made. In Figure 13-3, the left side the column of 8-bit envelopes represents an incoming X.50 data stream in memory and on the right side of the column of 8-bit envelopes in memory go out to NPC 2.

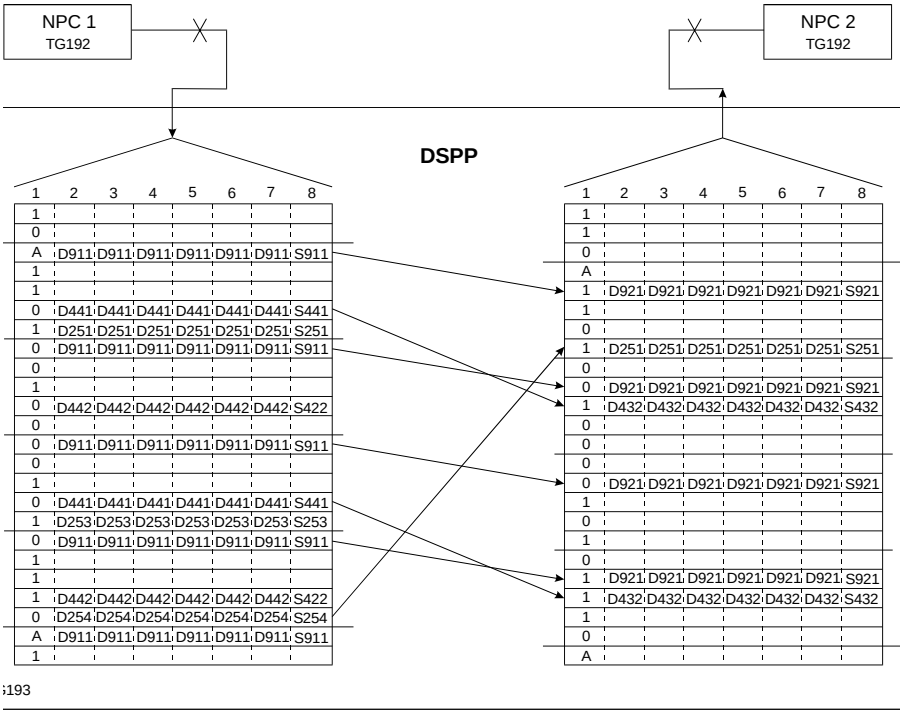


Figure 13-3. X.50 Customer Circuit Cross-Connection Diagram

X.50 Customer Circuit Cross-Connections (Continued)

X.50 Schematic Description

Only one direction of the cross-connection is shown for clarity. Both columns have the X.50 framing bit pattern in the first bit position, which is column one.

On the incoming side, this framing pattern needs to be checked to maintain subrate framing, on the outgoing side this framing pattern is set by the program. Figure 13-3 shows the "A" (alarm) bit in the beginning of each framing pattern. The long lines that form the column show a single frame, and the shorter lines divide the 20 envelope frame into four sets of five envelopes.

Individual 9.6 kbit/s circuits occupy one of the five envelope positions in a set of five. For example, if a circuit is designated as 911* in Figure 13-3 occupies the first envelope position of each set of five.

There are six data bits "D" and one status bit "S", which is the eighth bit position. In addition, the 9.6 kbit/s circuit envelopes occupy the data stream in every fifth envelope position.

The customer circuit 411 is a 4.8 kbit/s circuit that occupies the fourth envelope (phase) position and it is the first of a possible set of two 4.8 kbit/s circuits that can be in that envelope position. The envelopes from circuit 411 repeat every 10 envelopes because it is a 4.8 kbit/s circuit. Another 4.8 kbit/s circuit is called 442 and is located in the fourth envelope (phase) position, but it occupies the second position. Note that from Figure 13-3,circuit 442 occupies the second and fourth set of five envelopes in the frame, while circuit 411 occupies the first and third set of five envelopes in the frame.

Finally there are three 2.4 kbit/s circuits in the incoming frame, which are 251, 253, and 254. All three circuits occupy the fifth envelope (phase) position in the frame. Circuit 251 is the first set of five envelopes, circuit 253 is the third set of five envelopes, and circuit 254 is the fourth set of five envelopes. Note that 2.4 kbit/s circuits occupy every 20th envelope position, which is one envelope per frame.

X.50 Customer Circuit Cross-Connections (Continued)

X.50 Schematic Description (Continued)

Using Figure 13-3 as an example, three customer circuit cross-connects are established between the incoming and outgoing frame. Circuit 911 is cross-connected to circuit 921 in the outgoing frame. This means there are four envelopes per frame that are transferred from the incoming stream to the outgoing stream. In addition, there are only seven bits of the envelope that are transferred since the framing bit is not transferred. Circuit 441 is cross connected to circuit 432 in the outgoing frame, and circuit 254 (2.4 kbit/s) is cross connected to circuit 251 in the outgoing frame.

* The 9 in the 911 designation refers to a 9.6 kbit/s circuit. The first 1 in 911 refers to the first envelope position, which is also called phase 1. The second 1 is the position phase 1;since 9.6 kbit/s circuits occupy all positions in their phase, this number is always 1 for 9.6 kbit/s circuits.

X.50 to X.57 Customer Circuit Cross-Connection

X.50 to X.57 Schematic

Figure 13-4 shows the customer circuit cross-connections between an X.50 and X.57 circuit.

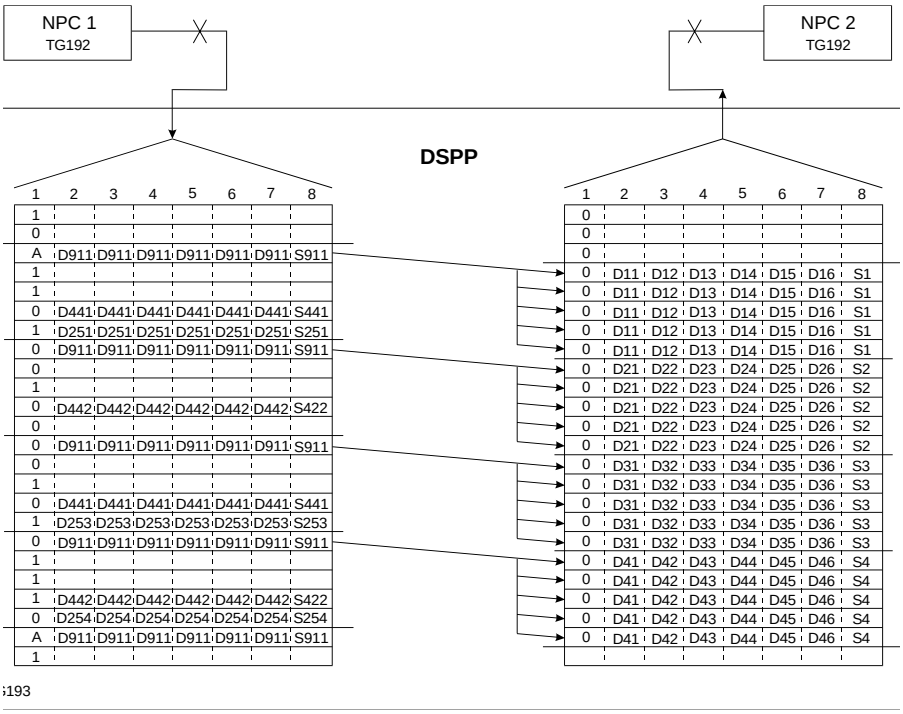


Figure 13-4. X.50 to X.57 Customer Circuit Cross-Connection Diagram

X.50 to X.57 Customer Circuit Cross-Connection (Continued)

X.50 to X.57 Schematic Description

The incoming frame is identical to the frame in Figure 13-3; however, the outgoing frame is a X.57 circuit. Note that all framing bits are "0" because there is no agreed upon framing patter for X.57 circuits. The cross-connection is between 9.6 kbit/s circuit 911 and the X.57 circuit. Each envelope that is obtained from the X.50 circuit is transferred, with the exception of the framing bit, to the X.57 circuit and repeated five times.

Figure 13-4 illustrates the direction from an X.50 circuit to a X.57 circuit and not in the other direction. The other direction the cross-connection is comparable to the one shown in this figure. Every fifth envelope in the X.57 circuit is used and multiplexed onto the X.50 circuit. If a 4.8 kbit/s circuit was cross-connected, every 10th envelope would have been transferred and for 2.4 kbit/s circuits every 20th envelope would have been transferred.

Using DND for Subrate Provisioning

Set Up

Before a subrate cross-connect can be performed, you must:

1. Create an NPC that is a subrate type (SD111).
2. Establish a DSO channel to carry subrate traffic.
3. Connect the DS0 channel to the DSPP platform, which is referred to as an *established channel.*

Reports

DND provides two reports that allow you to search subrate channels and cross connections:

- The *ESTABLISHED DS0 CHANNELS SEARCH CRITERIA* form allows you to search established channel information.
- The *SUBRATE CIRCUITS SEARCH CRITERIA* form allows you to search subrate cross connect information.

For more information on these reports, refer to *Chapter 17, Report Operations*.

Database Audit/ Synchronization

The Database Audit/Synchronization feature allows you to perform a *SUBRATE AUDIT* and *SUBRATE SYNC* to synchronize subrate circuits in the DND and/or DACS database. Fore more information on database synchronization, refer to *Chapter 17, Database Audit/Synchronization*.

NOTE:
DND will deny NPC Roll commands if a DS0 channel is connected to a DSPP platform.

DND Forms: Establish DS0 Channel Form

Sample Form

To provision a DS0 channel, from the DND Forms Main Menu, select PROVISIONING, then select ESTABLISH DS0 CHANNEL. The ESTABLISH DS0 CHANNEL form is displayed, as shown in Figure 13-5.

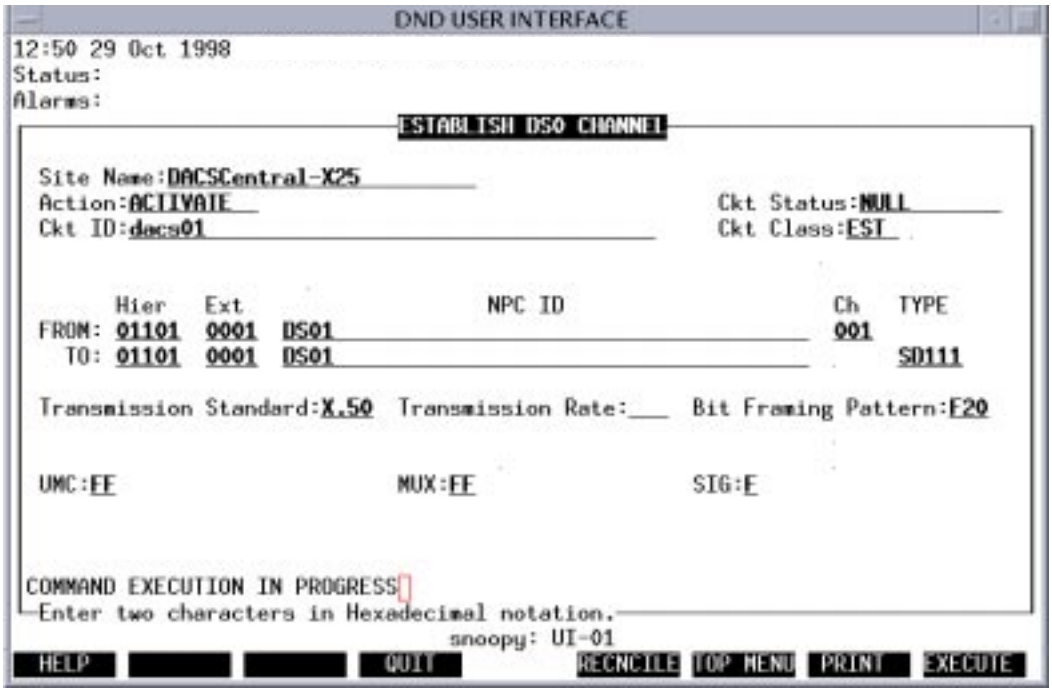


Figure 13-5. DND Forms: ESTABLISH DS0 CHANNEL Form

DND Forms: Establish DS0 Channel Form (Continued)

Field Descriptions

Field descriptions for the ESTABLISH DS0 CHANNEL form are described in Table 13-1.

Table 13-1. DND Forms: Field Descriptions for the ESTABLISH DS0 CHANNEL Form

Field	Description
Site Name	Enter the name of the DACS where the requested **Action** will take place. Pressing CHOICES displays WHICH DACS? with a list of the DACS names. These names were established during Frame Administration.
Action	Mandatory. Enter the action to be performed with regard to the circuit. ■ *ACTIVATE* - Enters the channel specified by **Ckt ID** in the DND database (if it does not yet exist) and connect the DS0 channel to a DSPP platform. When this action is completed successfully, the **Ckt Status** changes from *NULL* to *ACTIVE*. ■ *DELETE* - Removes the specified circuit from theDND and frame databases, returning the **Ckt Status** to *NULL*. Deletion of an *ACTIVE* circuit results in disconnection deactivation of the circuit in the frame before the record is deleted in the DND. ■ *MODIFY* - ows you to change the **Ckt ID** of the establishing DS0 channel. ■ *DEACTIVATE* - As a result of this action, enters the specified circuit in the DND database as *DEACTIVATED* and disconnects it in the frame. ■ *BROWSE* - Gives you read-only access to the DND database for retrieving and scrolling circuit records.

Table 13-1. DND Forms: Field Descriptions for the ESTABLISH DS0 CHANNEL Form (Continued)

Field	Description
Ckt ID	Mandatory. must be unique. One through 41 characters from the printable ASCII character set, excluding *, \, ?, ",], ^, “,%, |. Blanks are allowed in the name, but leading and trailing blanks are ignored. This field associates the name entered in this field to a connection between a DS0 channel and a DSPP platform.
Ckt Status	A display-only field indicating the operating status of the circuit. ■ *NULL* - The circuit has not been defined and, therefore, is not in the frame or DND databases. To define the circuit, use the *ACTIVATE* **Action**. ■ *ACTIVE* - The circuit is active in the DND database and/or the frame. ■ *DEACTIVATED* - The circuit is in the DND database but is not cross-connected in the frame. The DND record is marked *DEACTIVATED*. To cross-connect the circuit, use the *ACTIVATE* **Action**.
Ckt Class	Mandatory. Read only field that specifies the type of circuit for an established DS0 channel. The only class for this field is EST.
Hier	An NPC number in hierarchical format. (See *Chapter 8, DACS II, DACS II ISX NPC Provisioning* for an explanation of hierarchical and extended formats.) As shown in the diagrams under **Ckt Class** above, an NPC identifier for the NPC of the FROM channel and another for the NPC of the TO channel are required for one-way and two-way, two-point circuits. The identifier can be a number in hierarchical format, a number in extended format, or the **NPC ID**. The NPC must have been provisioned.
Ext	The FROM or TO NPC number in extended format. Automatically provided if **Hier** or **NPC ID** was entered.
NPC ID	The FROM or TO **NPC ID**. With the entry of a value in **Hier**, **Ext**, or **NPC ID**, the DND automatically performs a database query and displays the corresponding FROM or TO information in each field.

Table 13-1. DND Forms: Field Descriptions for the ESTABLISH DS0 CHANNEL Form (Continued)

Field	Description
Ch	The FROM channel number from *0-31* for CEPT or *1-24* for NAS. Virtual channel numbers can range from *1 to 500*; however, one is automatically selected by the system during provisioning of virtual multipoint circuits.
TYPE	Mandatory. This field is populates automatically if a DSPP slot address has been selected. **DANGER:** The **TO NPC TYPE** is read only.
Transmission Standard	Mandatory. This field accepts the following transmission standards: X.50, and X.57. ■ *X.50* - A 64 kbit/s circuit that carries a number of multiplexed circuits of lower data rates using the International Telecommunications Union (ITC) X.50 recommendation. ■ *X.57* - An individual lower rate circuit (lower than 64 kbit/s) that is transmitted on a 64 kbit/s facility using the ITC X.57 recommendation.
Transmission Rate	Entry for this field is required only is the Transmission Standard field is X.57. Valid entries are: 2.4, 4.8, and 9.6.
Bit Framing Pattern	The DND provides a blank default bit framing. Otherwise, the option F20 can be selected.
UMC	Optional. Unoccupied Multiplexer Channel. This field accepts two alphabetic characters.
MUX	Optional. If the multiplexer out of synchronization code is not specified. This field accepts two alphabetic characters.
SIG	Optional. If the signalling bits are not specified. This field accepts one alphabetic character.

DND Forms: Subrate Cross Connect Form

Sample Form

To provision a subrate cross-connection, from the DND Forms Main Menu, select PROVISIONING, then select SUBRATE CROSS CONNECT. The SUBRATE CROSS CONNECT form is displayed, as shown in Figure 13-6.

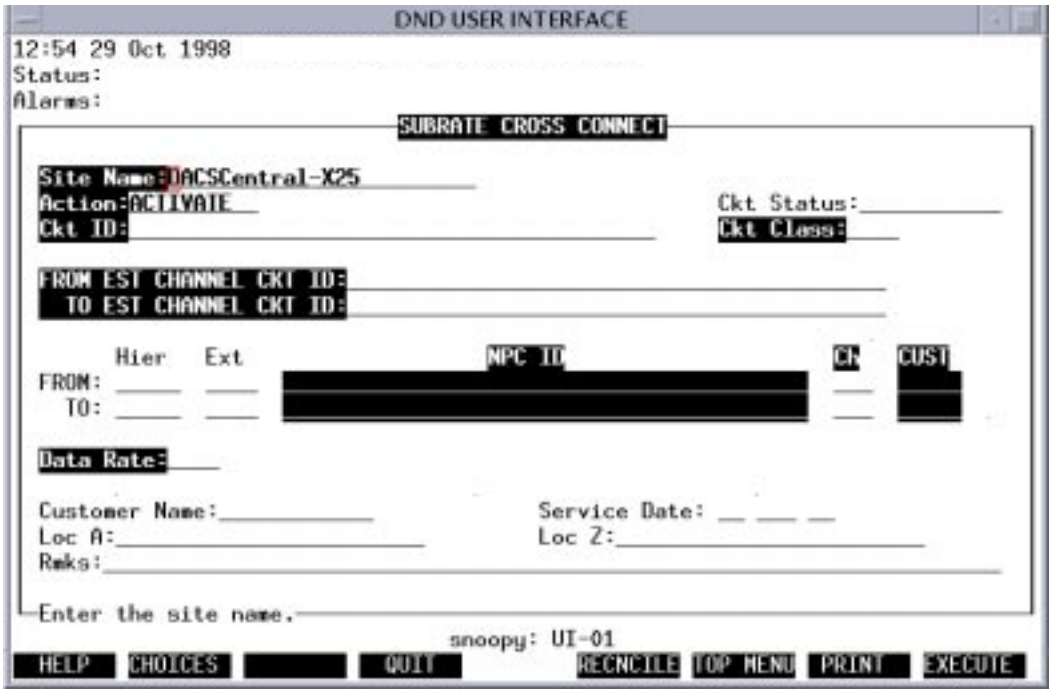


Figure 13-6. DND Forms: SUBRATE CROSS CONNECT Form

DND Forms: Subrate Cross Connect Form (Continued)

Field Descriptions

The field values for the SUBRATE CROSS CONNECT form are described in Table 13-2.

Table 13-2. DND Forms: Field Descriptions for the SUBRATE CROSS CONNECT Form

Field	Description
Site Name	Enter the name of the DACS where the requested **Action** will take place. Pressing CHOICES displays WHICH DACS? with a list of the DACS names. These names were established during Frame Administration.
Action	Mandatory. Enter the action to be performed with regard to the circuit. ■ *ACTIVATE* - Enters the channel specified by **Ckt ID** in the DND database (if it does not yet exist) and allows you to connect subrate customer circuits in the frame, making it an existing, traffic-carrying circuit. When this action is completed successfully, the **Ckt Status** changes from *NULL* to *ACTIVE*. ■ *MODIFY* - Retrieves the specified circuit from the DND database for purposes of altering circuit attributes or **Ckt ID**. *MODIFY* does not change the **Ckt Status**.: ■ *DELETE* - Removes the specified circuit from the DND and frame databases, returning the **Ckt Status** to *NULL*. **NOTE:** Deletion of an *ACTIVE* circuit results in deactivation of the circuit in the frame before the record is deleted in the DND. ■ *DEACTIVATE* - The specified circuit in the DND database as *DEACTIVATED* and disconnects it in the frame.

Table 13-2. DND Forms: Field Descriptions for the SUBRATE CROSS CONNECT Form (Continued)

Field	Description
Action, Continued	■ *BROWSE* - Gives you read-only access to the DND database for retrieving and scrolling circuit records. As soon as you press EXECUTE after entering an **Action** of *BROWSE*, the DND displays the CIRCUIT PROVISIONING SEARCH CRITERIA form. Its fields are taken from the CIRCUIT PROVISIONING form. Entering a value in any defined field restricts the search. To initiate the search, press EXECUTE. To return to CIRCUIT PROVISIONING without executing, press QUIT. ■ *MODIFY* - Allows you to change the **Ckt ID** of the establishing DS0 channel.
Ckt ID	Mandatory. must be unique. One through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, ", %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored.
Ckt Status	A display-only field indicating the operating status of the circuit. ■ *NULL* - The circuit has not been defined and, therefore, is not in the frame or DND databases. To define the circuit, use the *ACTIVATE* **Action**. ■ *ACTIVE* - The circuit is active. ■ *DEACTIVATED* - The circuit is in the DND database but is not cross-connected in the frame. The DND record is marked *DEACTIVATED*. To cross-connect the circuit, use the *ACTIVATE* **Action**.
Ckt Class	Mandatory. This is a read-only field that specifies the type of circuit. The only option displayed is SUB for subrate.

Table 13-2. DND Forms: Field Descriptions for the SUBRATE CROSS CONNECT Form (Continued)

Field	Description
Hier	An NPC number in hierarchical format. (See Chapter 8, DACS II, DACS II ISX NPC Provisioning for an explanation of hierarchical and extended formats.) As shown in the diagrams under **Ckt Class** above, an NPC identifier for the NPC of the FROM channel and another for the NPC of the TO channel are required for one-way and two-way, two-point circuits. The identifier can be a number in hierarchical format, a number in extended format, or the **NPC ID**. The NPC must have been provisioned.
Ext	The FROM or TO NPC number in extended format. Automatically provided if **Hier** or **NPC ID** was entered.
Ch	The FROM or TO channel number, `0-31` for CEPT or `1-24` for NAS.
FROM NPC	The FROM NPC of the cross connection.
FROM CH	The From channel of the cross connection.
FROM EST CHANNEL CKT ID	Optional. This field allows you to specify the FROM **Ckt ID** for an established DS0 channel. One through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, “, %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored.
TO EST CHANNEL CKT ID	Optional. This field allows you to specify the TO **Ckt ID** for an established DS0 channel. One through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, “, %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored.
TO NPC	The To NPC of the cross connection.
TO CH	The To channel of the cross connection.

Table 13-2. DND Forms: Field Descriptions for the SUBRATE CROSS CONNECT Form (Continued)

Field	Description
CUST	Mandatory. This field allows you to specify the customer number of a subrate circuit. This field accepts up to three characters. The formats for each of the following standards are: ***X.50 Standard:*** Allowed values are "a-b", where "a" and "b" are two digits, for example 1-1. The "a" can be within a range from 1 to 5 and the "b" can be in a range from 1-4. ***X.57 Standard:*** "1-1" is the *only* value for this standard.
Data Rate	Mandatory. This valid entries for this field are: 2.4, 4.8, and 19.2.
Customer Name	Optional. This field allows you to specify the customer name associated with a subrate circuit. This field accepts up to 12 characters.
Service Date	The DND provides a default date as "today's" date. There are three fields associated with this field in the format DD MMM YY, where DD is the day, MMM is the first three letters of the month, and YY is the year.
Loc A and Loc Z	Optional. Up to 24 alphanumeric characters. Loc A is the location identifier for the FROM end of the circuit being provisioned and Loc Z is the TO end of the circuit being provisioned.
Rmks	Optional. This field allows you to specify up to 77 characters for remarks.

Equipment Views

14

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Background

Purpose

The purpose of this chapter is to introduce users to the equipment view concept. Users will be able to visually monitor the alarm status and equipage of a Network Element. In addition, port provisioning forms (NPC PROVISIONING or MMFG PROVISIONING), the DATABASE AUDIT/SYNCHRONIZATION form, and (for equipped ports only) port alarm reports for NPCs, MMFGs, and SNMP ports are accessible from equipment views by clicking on either an equipped or an unequipped port.

Equipment views are displayed from the DND GUI.

Objectives

This chapter provides information to perform the following:

1. Display an equipment view of all Network Elements, except the "Other" type SNMP element.
2. Identify the equipage and alarm severity status of an SNMP, DACS frame, or any of the DACS II subassemblies.
3. Provision NPCs and MMFGs from an equipment view.
4. Retrieve alarm report information for NPCs, MMFGs, and SNMP ports.

Related information

For related information refer to the:

- *DACS II and DACS II ISX Operation and Maintenance Manuals.*

Using Equipment Views

Description

An equipment view displays the equipage and alarm status of a Network Element. High-level and individual unit views are provided for the CEF, Non-CEF, and E/SBF DACS II frames. The equipment views for the rest of the Network Elements display only a detailed view of its system components (ports, power units, timing references, etc.). The DND supports the following equipment views:

- High-level view of the DACS II (CEF, Non-CEF, and E/SBF) and its sub-assemblies/units
- Detailed view of the various DACS II sub-assemblies and units:
  - Facility Terminating Unit (FTU), Integrated Facility Terminating Unit (IFTU), and Integrated Facility Terminating Unit 2 (IFTU2)
  - FTU Common Equipment
  - Digital Signaling Processing Unit (DSPU)
  - Hybrid/Digital Signal 3 Unit (HDS3U/DS3U)
  - Cross-Connect Network and Enhanced Cross-Connect Network (CCN/ECCN) sides 0 and 1
  - Main Controller (MC)
- View of the DACS II ISX
- Views of the DACS II AX 4 and DACS II AX 11
- View of the AAC/IMACS elements: Model 600, 800, and 900 shelves.
- View of the PSAX

NOTE:
There are no equipment views for Network Elements provisioned as "Other."

Port Equipage

Each equipment view displays the port (NPC, MMFG, or SNMP port) and/or other circuit pack equipage on that Network Element. Ports are shown in an equipment view slot if either one or all ports in the slot are equipped. Dark grey spaces in either the high-level or detailed views indicate vacant slots (unequipped circuit packs or units).

Using Equipment Views (Continued)

Provisioning and Report Retrieval

In addition to viewing equipage and alarm status, the NPC and port (both considered ports) slots are now clickable to perform additional provisioning and/or report retrieval actions. When port slots are clicked, a pull-down menu is displayed. When an option is selected, one of the two choices will appear:

- A form with selected site/port information pre-populated (for the DACS II and DACS II ISX only)
- An automatically generated report using the information from the selected site and port.

Table 14-1 describes the selections available for equipped and unequipped port slots:

Table 14-1. Port Pull-Down Options Available in Equipment Views

IF you click on...	THEN the choices on the menu are...
An unequipped NPC slot	■ *NPC Provisioning* - The NPC PROVISIONING form appears with the **Site Name**, NPC information, and the *CREATE* **Action** fields pre-populated. ■ *Database Audit/Synchronization* - The DATABASE AUDIT/ SYNCHRONIZATION form appears with the **Site Name**, **Mode**, NPC information, and the *NPC Audit* **Action** fields pre-populated.
An equipped NPC slot	■ *NPC Provisioning* ■ *Database Audit/Synchronization* ■ *NPC Alarm Report* - An NPC ALARM Report is automatically generated. ■ *NPC Report* - The NPC Report is automatically generated.
An unequipped MMFG slot	■ *MMFG Provisioning* ■ *Database Audit/Synchronization*
An equipped MMFG slot	■ *MMFG Provisioning* - The MMFG PROVISIONING form appears with the **Site Name**, **Action,** and MMFG information fields pre-populated. ■ *Database Audit/Synchronization* - The DATABASE AUDIT/ SYNCHRONIZATION form appears with the **Site Name**, **Mode**, MMFG information, and the **Action** fields pre-populated. ■ *MMFG Provisioning Report* - The MMFG PROVISIONING Report is automatically generated.
An equipped SNMP port slot	■ *Port Alarm Report* - The PORT ALARM Report is automatically generated.

NOTE:
The empty SNMP port slots are not "clickable." To provision an SNMP port, you must use a telnet session to access the SNMP system.

Using Equipment Views (Continued)

Port Numbering

The port slots (NPC, MMFG, and SNMP) in all equipment views are numbered, whether they occupy the space on the Network Element or not. The NPC numbers are displayed in either hierarchical or extended, depending on how the DACS is provisioned.

The NPC slot numbers on the DACS II are typically displayed in the hierarchical numbering scheme, while the DACS II ISX is typically displayed in the extended numbering scheme. However, you can change the way the NPC numbers appear on the view by modifying a DACS to use the desired NPC Numbering scheme (refer to GT 5.6G).

MMFG slot numbers are of the format <DACS II Unit #> - <MMFG #>, for example, 11-3.

SNMP slot numbers are of the format <Card Type><Slot #> - <Port #>, for example, P1-2.

The Alarm Status Indicator

The Alarm Status Indicator (ASI) on the Alarms... button (the colored rectangle) indicates the highest alarm status of a Network Element in the entire network. On an equipment view, the ASI is either a colored rectangle on the sub-assemblies in the high-level DACS II view, or a colored "LED" circle on circuit packs in the other equipment views. The equipment view ASI indicates the alarm status of the unit or circuit pack. With the exception of the MC alarm indicators, the LEDs do not physically appear on the circuit packs. The alarm color scheme (see Table 14-2) is identical to that of the Network Elements and intertie alarm colors.

Table 14-2. Alarm Status Indicator Color Scheme

Color	Alarm Status
Blue "i" next to LED	Informational Alarm
Green	In-Service, No Alarms
Yellow	Minor
Red	Major
Magenta	Critical
Grey	Out-of-Service

Using Equipment Views (Continued)

Common Equipment Alarm Indication

Common Equipment provisioning is not processed by the DND. However, circuit packs for common equipment on the DACS will appear in the equipment view. The LED does not show the service state (i.e., will never appear grey), but the LED will show alarm status.

The Half LED Alarm Indicator



When a port circuit pack is pulled from the Network Element while the Network Element is In-Service, or if an NPC/port failed a diagnostics test and is autonomously removed, the alarm indicator color becomes what is referred to as a "Half LED." Half of the LED displays the alarm color, while the other half of the LED is grey (OOS).

Power Alarms

Power alarms are stored as a single alarm entity on a Network Element. For the DACS II CEF, the power alarm status is displayed on the MC equipment view.

DACS II AX Supported Circuit Pack Views

The DACS II AX equipment views allow users the ability to click on certain individual circuit packs to display enlarged and more detailed representations of the selected packs. The following packs are supported by this feature:

- Octal E1/T1
- Quad HS
- Quad T1
- Quad OCU
- Octal HS
- Voice Cards
- T3
- STS1
- Test Access
- System Manager Controller (SMC)
- Power Supply.

Using Equipment Views (Continued)

DACS II AX 1+N Protection Supported Circuit Pack Views

Additionally, the following packs are supported by the DACS II AX 1+N Protection:

- Protection Switch Controller
- Protection Switch Narrowband Primary
- Protection Switch Narrowband Spare
- Protection Switch Broadband Primary
- Protection Switch Broadband Spare
- Router Card
- SMC II

PSAX 2300 Supported Circuit Pack Views

The following packs are supported by the PSAX 2300:

- Channelized DS3
- E1 IMA
- OC-3c MMAQ
- OC-3c MMTS
- OC-3c SMAQ
- OC-3c SMTS
- CPU
- Power Supply.
- Stratum

Displaying Equipment Views

Overview

To display an equipment view:

1. Right-click and hold on a Network Element icon from the DND network map on the DND Workspace window. A pull-down menu appears next to the icon.
2. Select *Equipment View* from the menu. The EQUIPMENT VIEW window appears with a high-level view of the DACS II selected or the full-view of the other Network Elements. If displaying a DACS II, click on a sub-assembly to get a detailed view of the selected unit.

Using the Back Button

Back jumps from a sub-assembly view to the high-level DACS II view. If the equipment view is currently displaying the high-level DACS II view or any other Network Element, then Back is inoperable.

Using the Refresh Button

DND performs automatic equipment view updating in real-time for DACS sites. Automatic updating is not performed for SNMP sites. Any new changes which occur on an SNMP site since the view was initially opened will not be displayed.

To view changes which have occurred in the DND database (i.e., new provisioning information or alarm status changes, click Refresh to update the equipment view with any new alarm or equipage information which occurred since the view was displayed or the last Refresh operation was performed.

Using the Close Button

Close exits the Equipment View window.

DACS Equipment Views

DACS II CEF High Level View

Figure 14-1 and Figure 14-2 are high-level depictions of a DACS II CEF including the MC, CCN, and equipped units. The alarm state of each unit and the CEF alarm summary are displayed on this view. A detailed view of each unit is obtained by clicking directly on the unit.

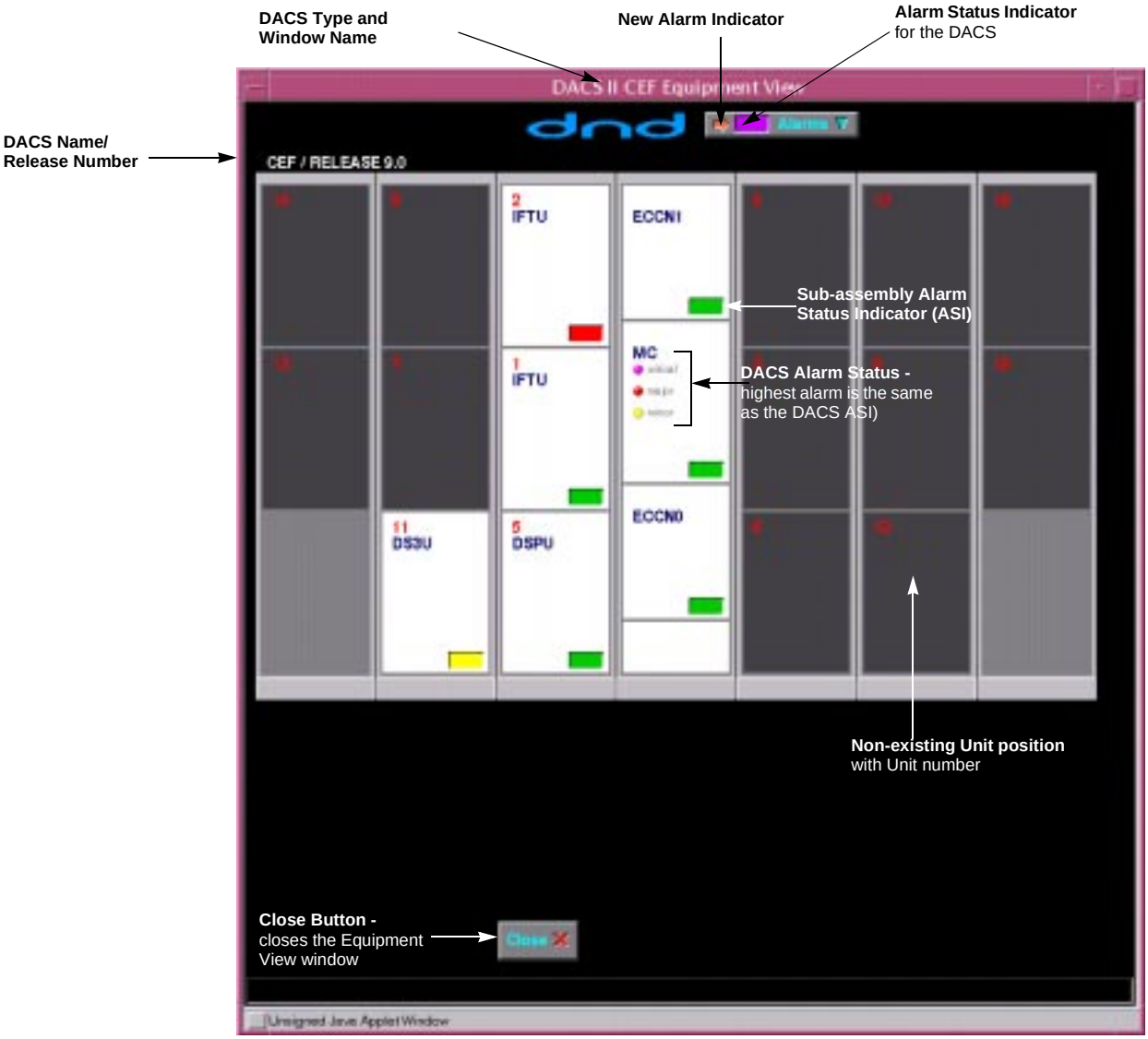


Figure 14-1. DACS II CEF Equipment View - High Level (Unequipped Units)

DACS Equipment Views (Continued)

DACS II CEF High Level View, Continued



Figure 14-2. DACS II CEF Equipment View - High Level (Fully Equipped)

DACS Equipment Views (Continued)

DACS II Non-CEF High Level View

Figure 14-3 is a high-level depiction of a DACS II Non-CEF. The DACS II Non-CEF can have up to 3 bays. A detailed view of each unit is obtained by clicking directly on the unit.

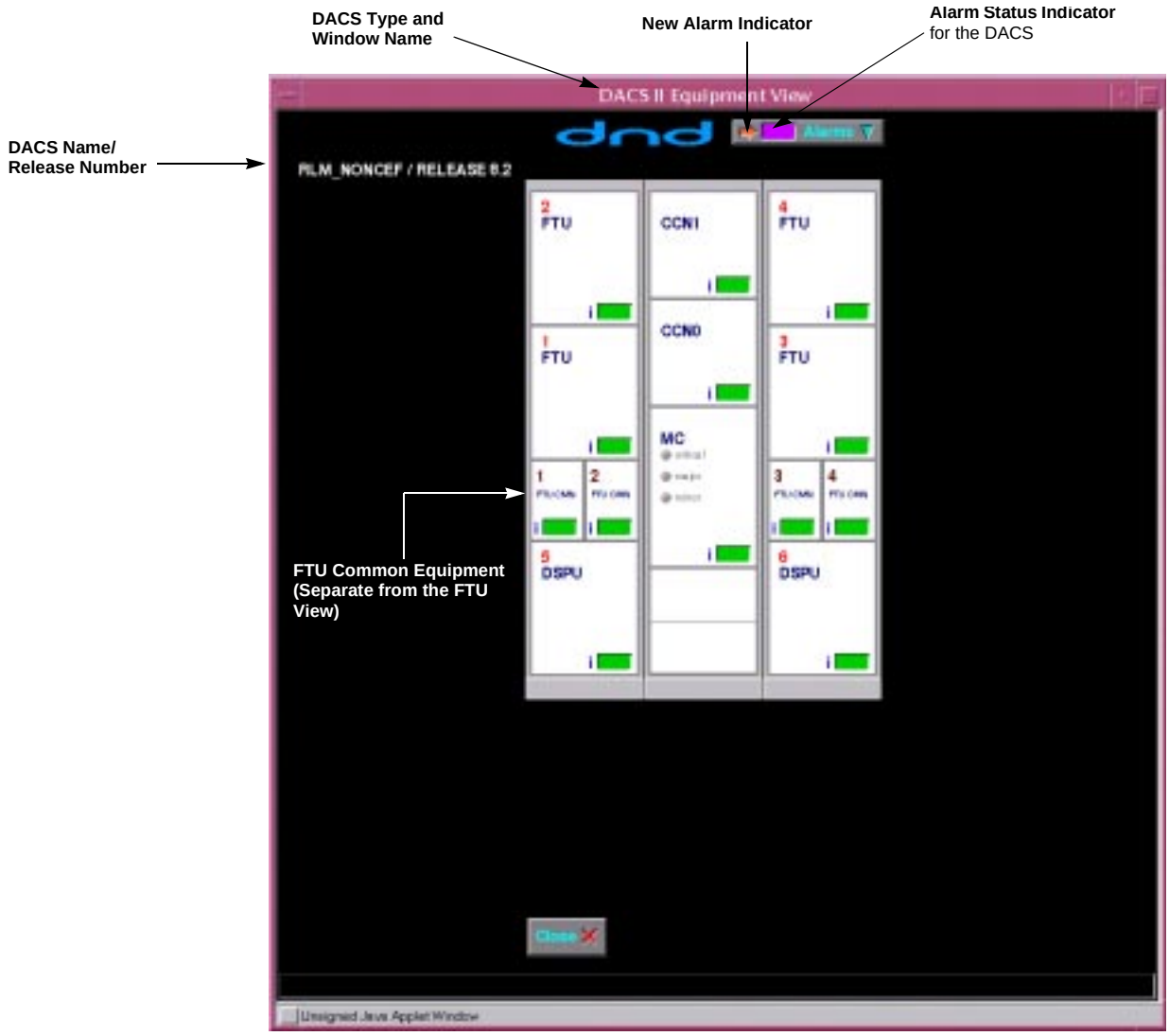


Figure 14-3. DACS II Non-CEF Equipment View - High Level

DACS Equipment Views (Continued)

DACS II SBF High Level View

Figure 14-4 is a high-level depiction of a DACS II SBF. The DACS II SBF has only one bay. A detailed view of each unit is obtained by clicking directly on the unit.

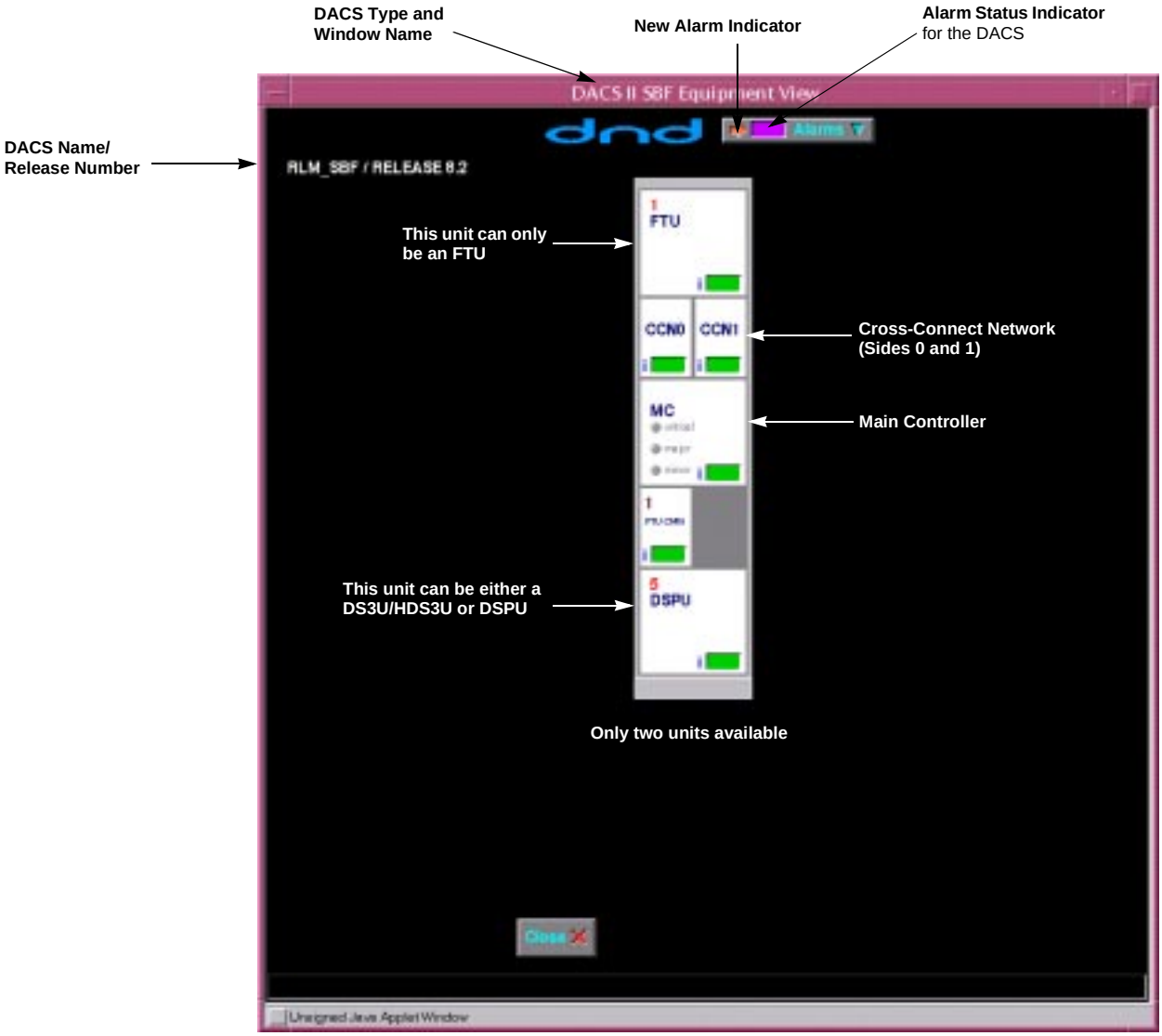


Figure 14-4. DACS II SBF Equipment View - High Level

DACS Equipment Views (Continued)

DACS II ESBF High Level View

Figure 14-5 is a high-level depiction of a DACS II ESBF. Like the DACS II SBF, the DACS II ESBF also has only one bay. A detailed view of each unit is obtained by clicking directly on the unit.

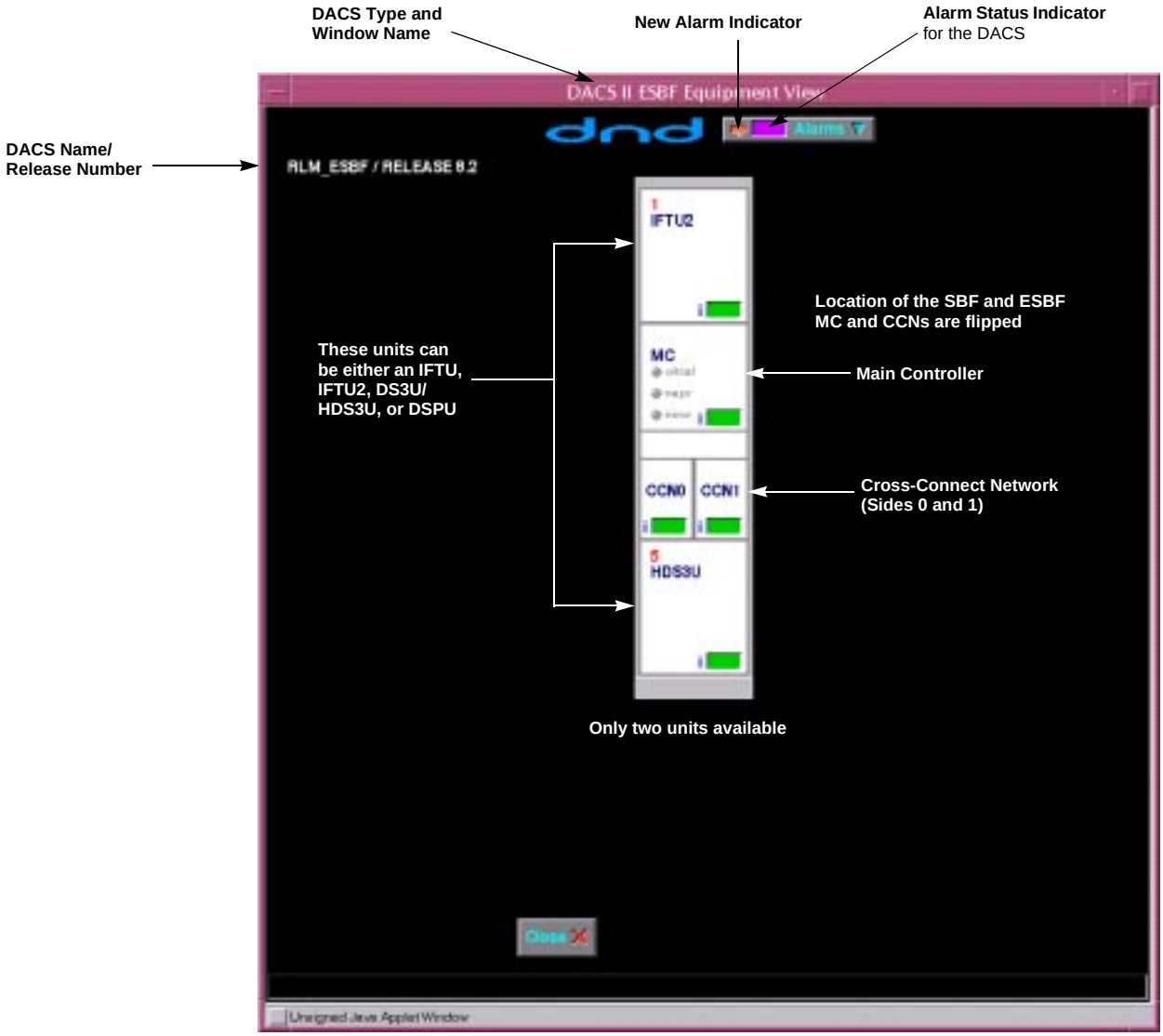


Figure 14-5. DACS II ESBF Equipment View - High Level

DACS Equipment Views (Continued)

DACS II FTU View

Figure 14-6 depicts the circuit pack positioning of a DACS II Facility Terminating Unit (FTU).

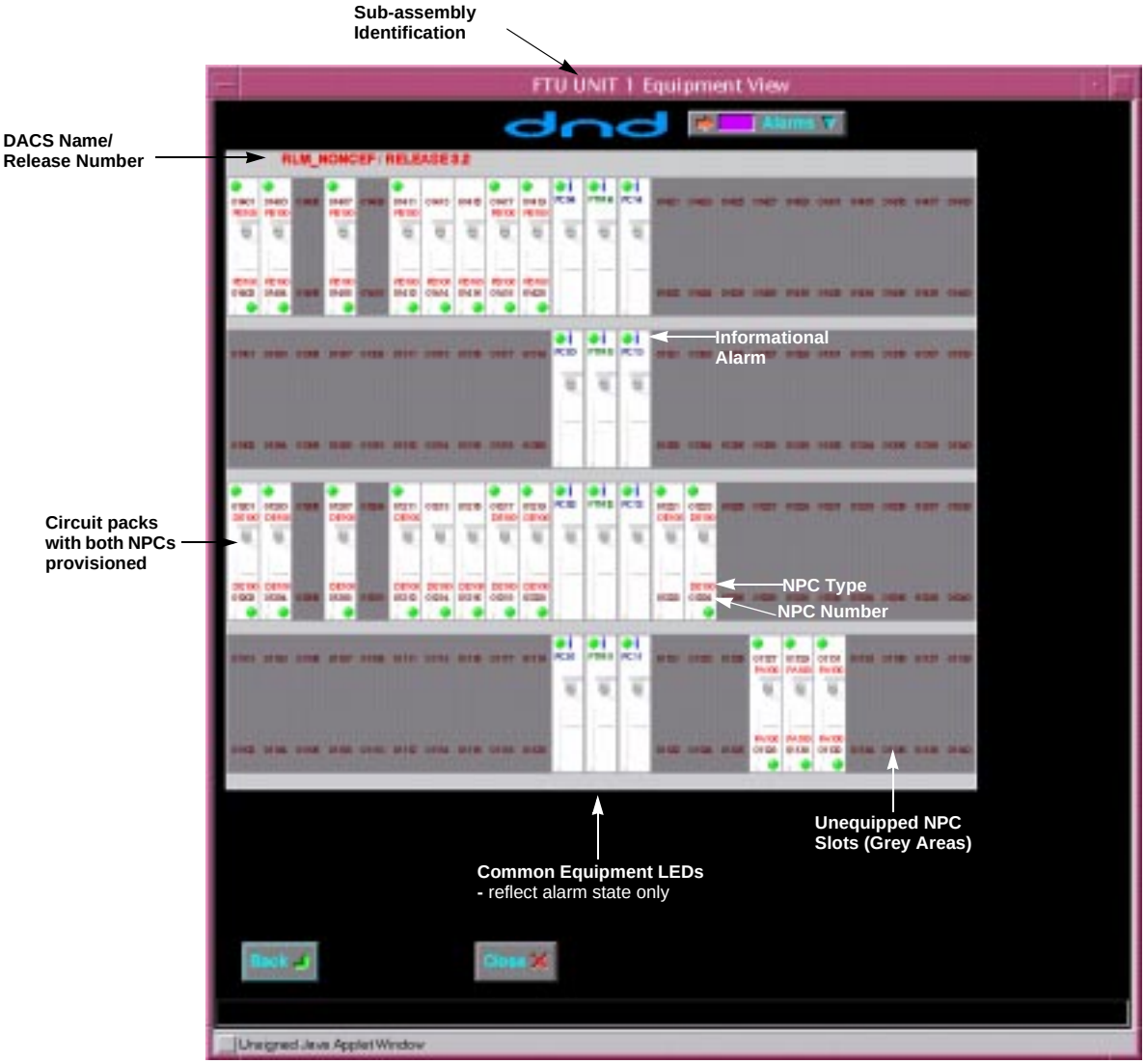


Figure 14-6. DACS II Equipment View - FTU

DACS Equipment Views (Continued)

DACS II FTU Common View

Figure 14-7 depicts the circuit pack positioning of a DACS II Facility Terminating Unit (FTU) common equipment.

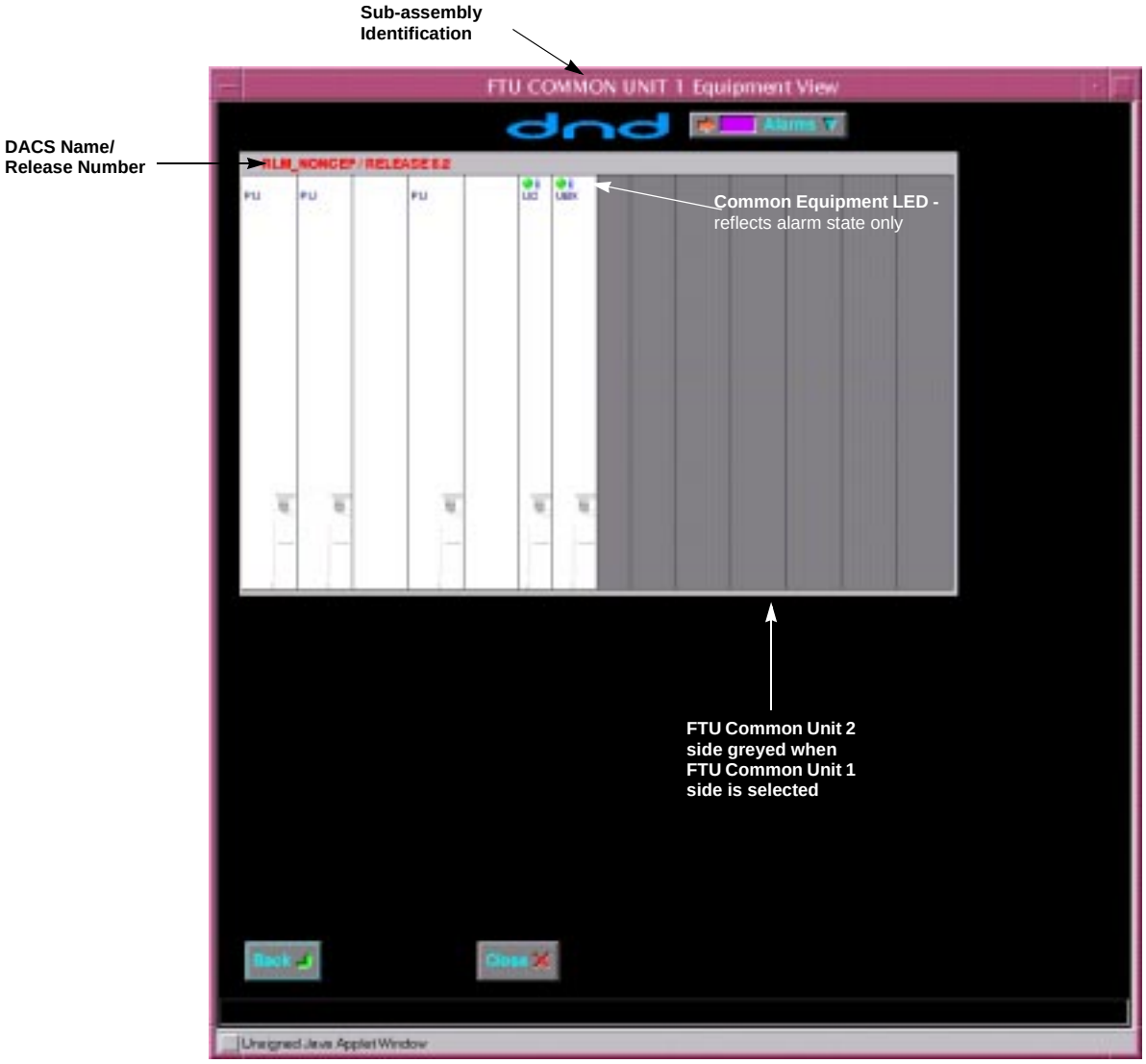


Figure 14-7. DACS II Equipment View - FTU Common

DACS Equipment Views (Continued)

DACS II IFTU View

Figure 14-8 depicts the circuit pack positioning of a DACS II Integrated Facility Terminating Unit (IFTU).



Figure 14-8. DACS II Equipment View - IFTU

NOTE:
DND does not monitor alarms for circuit packs that are displayed without an LED.

DACS Equipment Views (Continued)

DACS II IFTU2 View

Figure 14-9 depicts the circuit pack positioning of a DACS II Integrated Facility Terminating Unit 2 (IFTU2).



Figure 14-9. DACS II Equipment View - IFTU2

DACS Equipment Views (Continued)

DACS II DSPU View

Figure 14-10 is a depiction of a DACS II Digital Signal Processing Unit (DSPU).



Figure 14-10. DACS II Equipment View - DSPU

DACS Equipment Views (Continued)

DACS II HDS3U/DS3U View

Figure 14-11 is a depiction of a DACS II Hybrid/Digital Signal 3 Unit (HDS3U/DS3U).

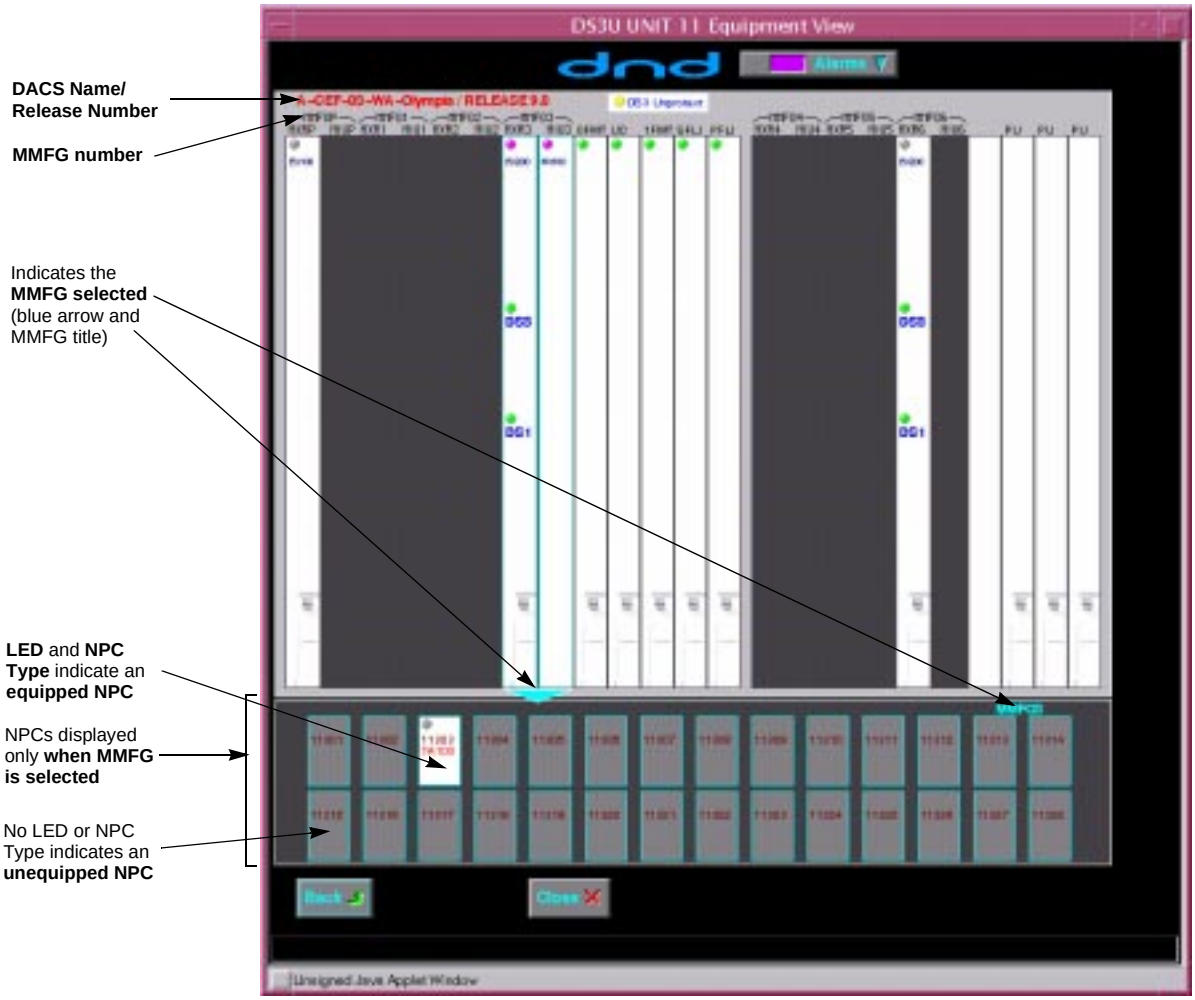


Figure 14-11. DACS II Equipment View - HDS3U/DS3U

NOTE:
Alarms occur on an MMFG unit. The equipment view does not indicate which pack (MIU or MXR) in the MMFG is in alarm.

DACS Equipment Views (Continued)

DACS II CCN View

Figure 14-12 is a depiction of a DACS II SBF or ESBF Cross-Connect Network (CCN).

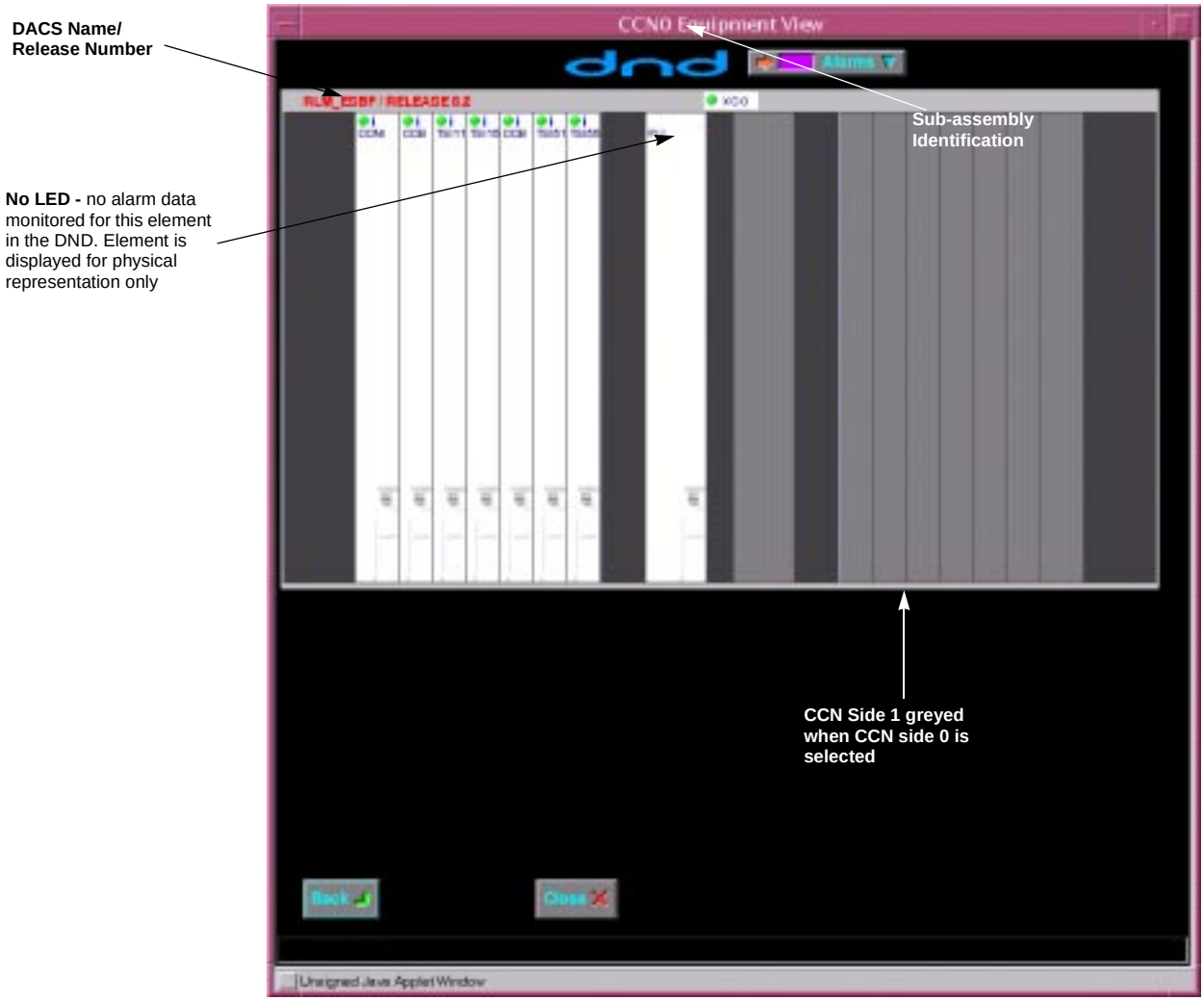


Figure 14-12. DACS II Equipment View - DACS II E/SBF CCN

DACS Equipment Views (Continued)

DACS II Non-CEF CCN View

Figure 14-13 is a depiction of a DACS II Non-CEF Cross-Connect Network (CCN).

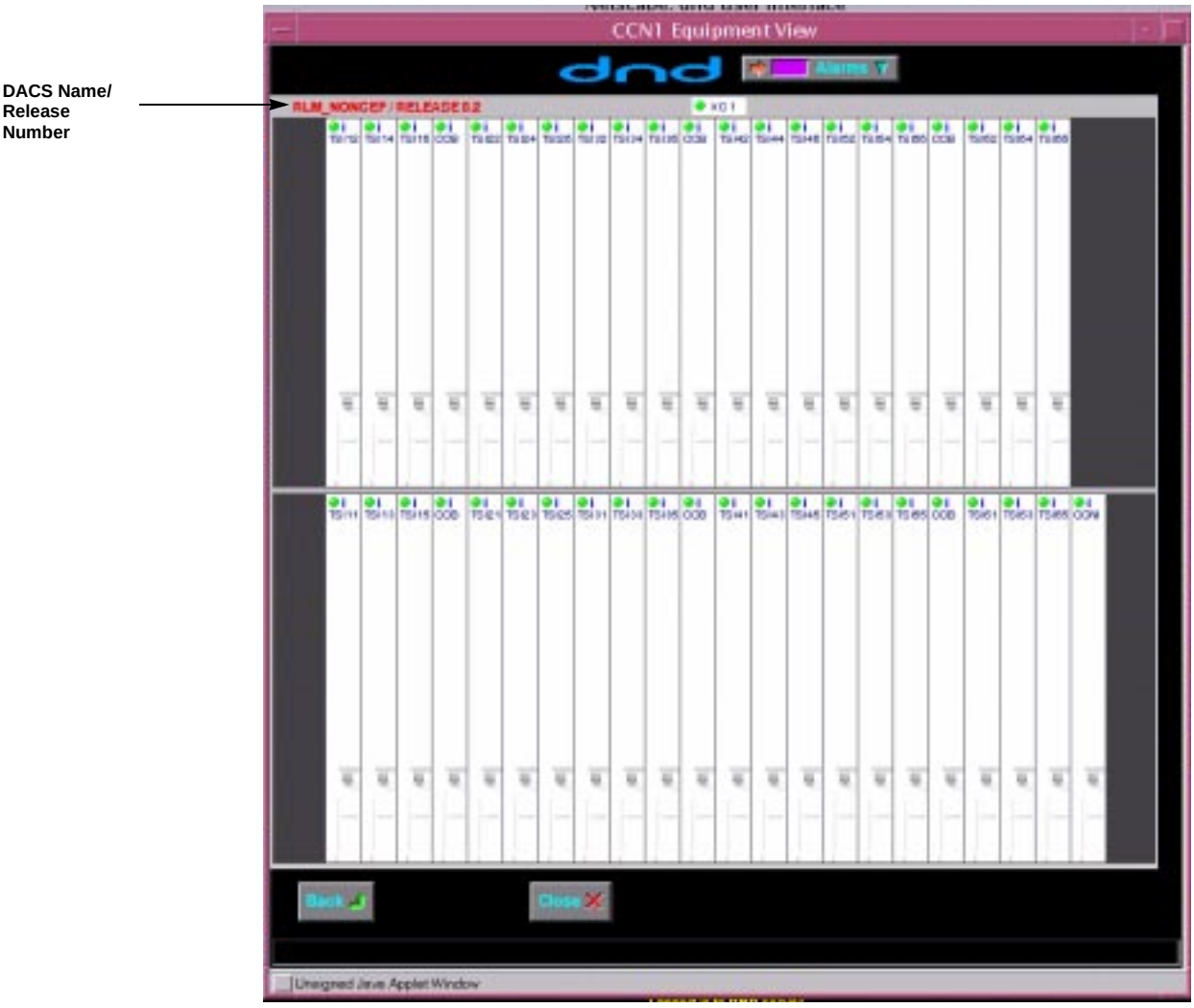


Figure 14-13. DACS II Equipment View - DACS II Non-CEF CCN

DACS Equipment Views (Continued)

DACS II ECCN View

Figure 14-14 is a depiction of a DACS II CEF Expanded Cross-Connect Network (ECCN).

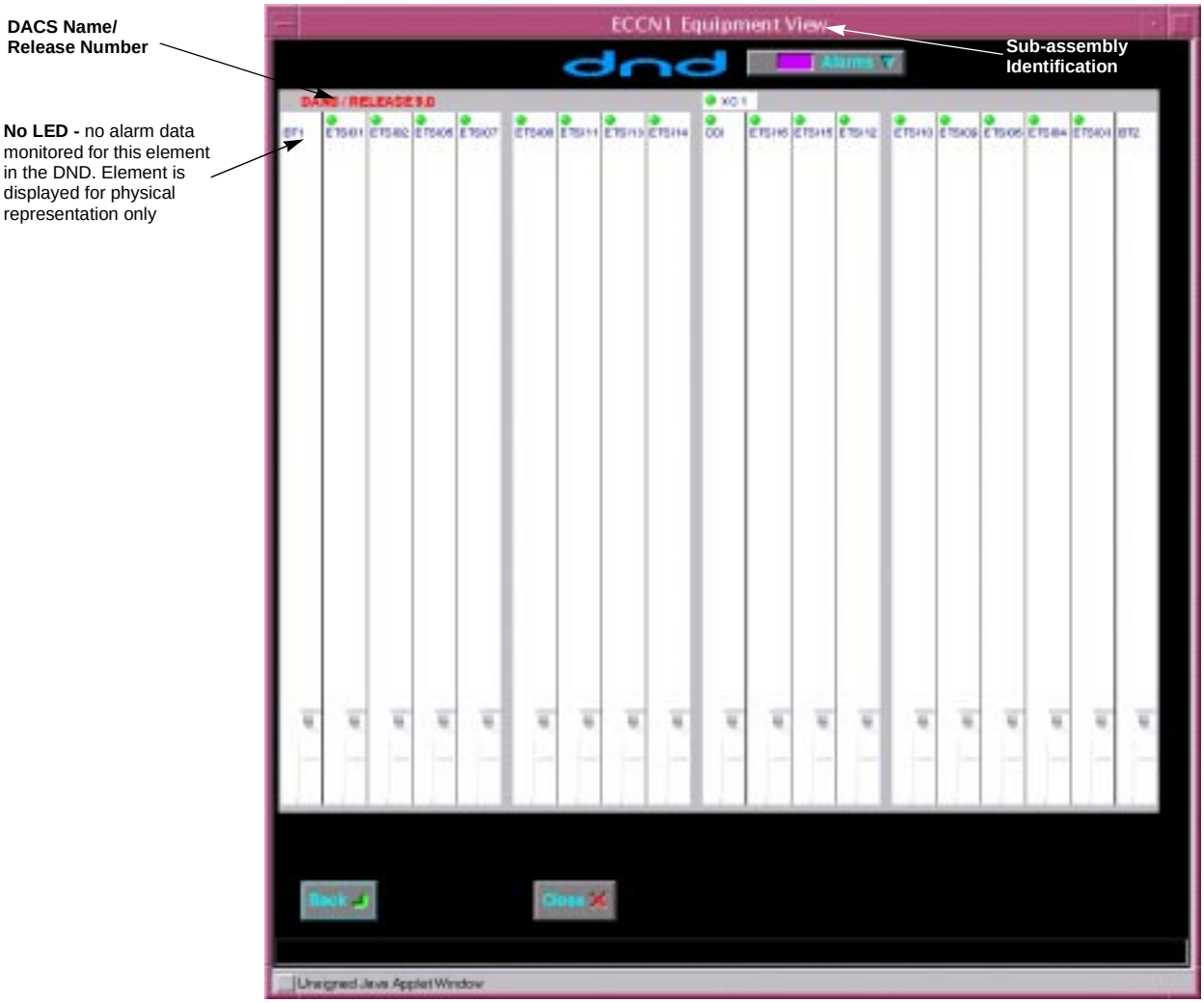


Figure 14-14. DACS II Equipment View - ECCN

NOTE:
DND does not monitor alarms for circuit packs that are displayed without an LED.

DACS Equipment Views (Continued)

DACS II MC View - R7.0 and higher

Figure 14-15 is a depiction of a DACS II Main Controller (MC) shelf with flash cards for DACS II frames Release 7.0 and higher.

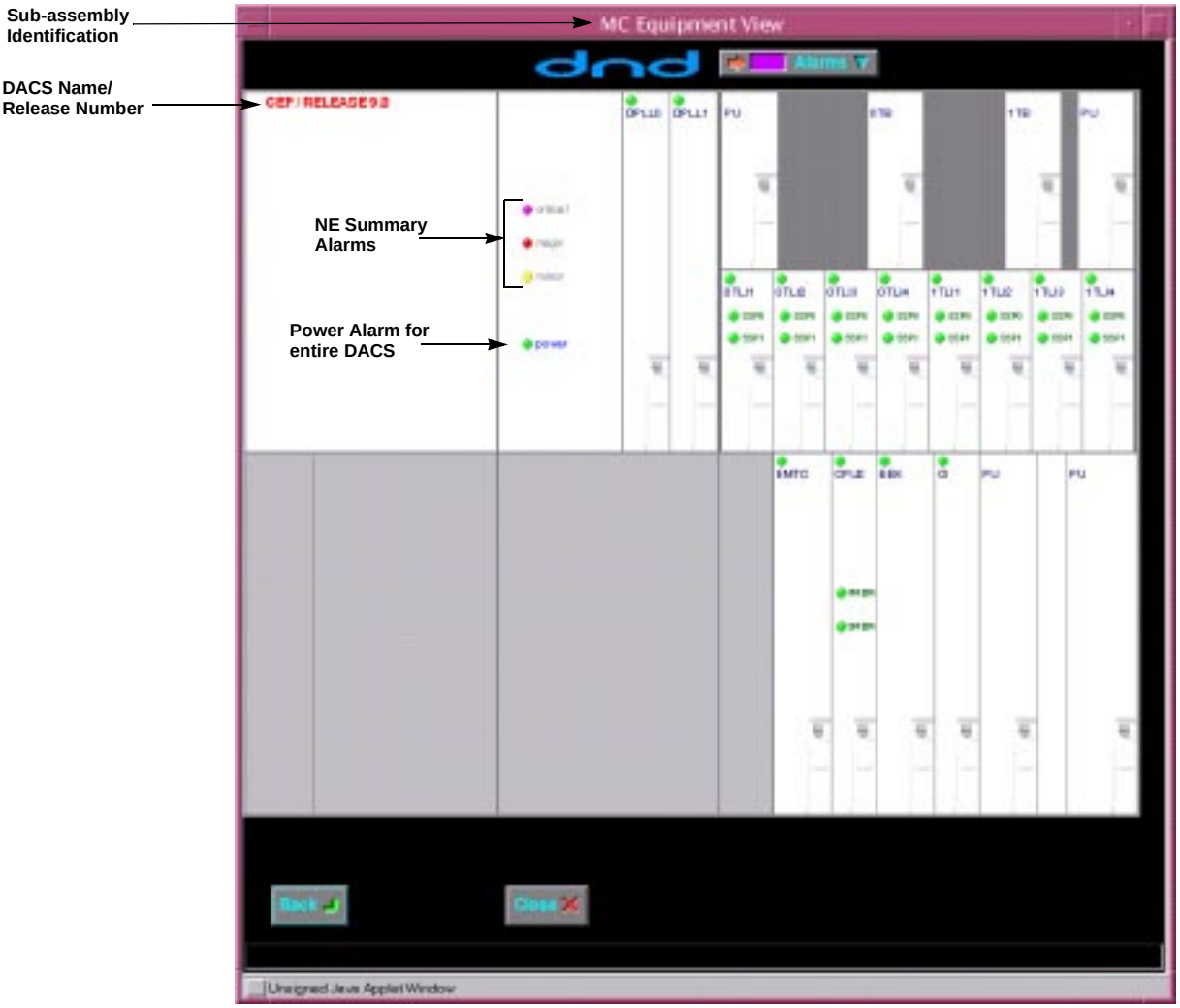


Figure 14-15. DACS II Equipment View - MC (Release 7.0 and higher)

DACS Equipment Views (Continued)

DACS II MC View - Before R7.0

Figure 14-16 is a depiction of a DACS II CEF Main Controller (MC) shelf with tape and disk drive for DACS II frames prior to Release 7.0.



Figure 14-16. DACS II Equipment View - CEF MC (prior to DACS II Release 7.0)

DACS Equipment Views (Continued)

DACS II Non-CEF MC View - Before R7.0

Figure 14-17 is a depiction of a DACS II Main Controller (MC) shelf with tape and disk drive for DACS II Non-CEF frames (which includes Non-CEF, SBF, and ESBF) prior to Release 7.0.



Figure 14-17. DACS II Equipment View - Non-CEF MC (prior to DACS II Release 7.0)

DACS Equipment Views (Continued)

DACS II ISX View

Figure 14-18 is a depiction of an extended DACS II ISX. If the DACS II ISX displayed does not have an expansion shelf, then NPCs 0065 - 0128 will appear as vacant (grey) slots.

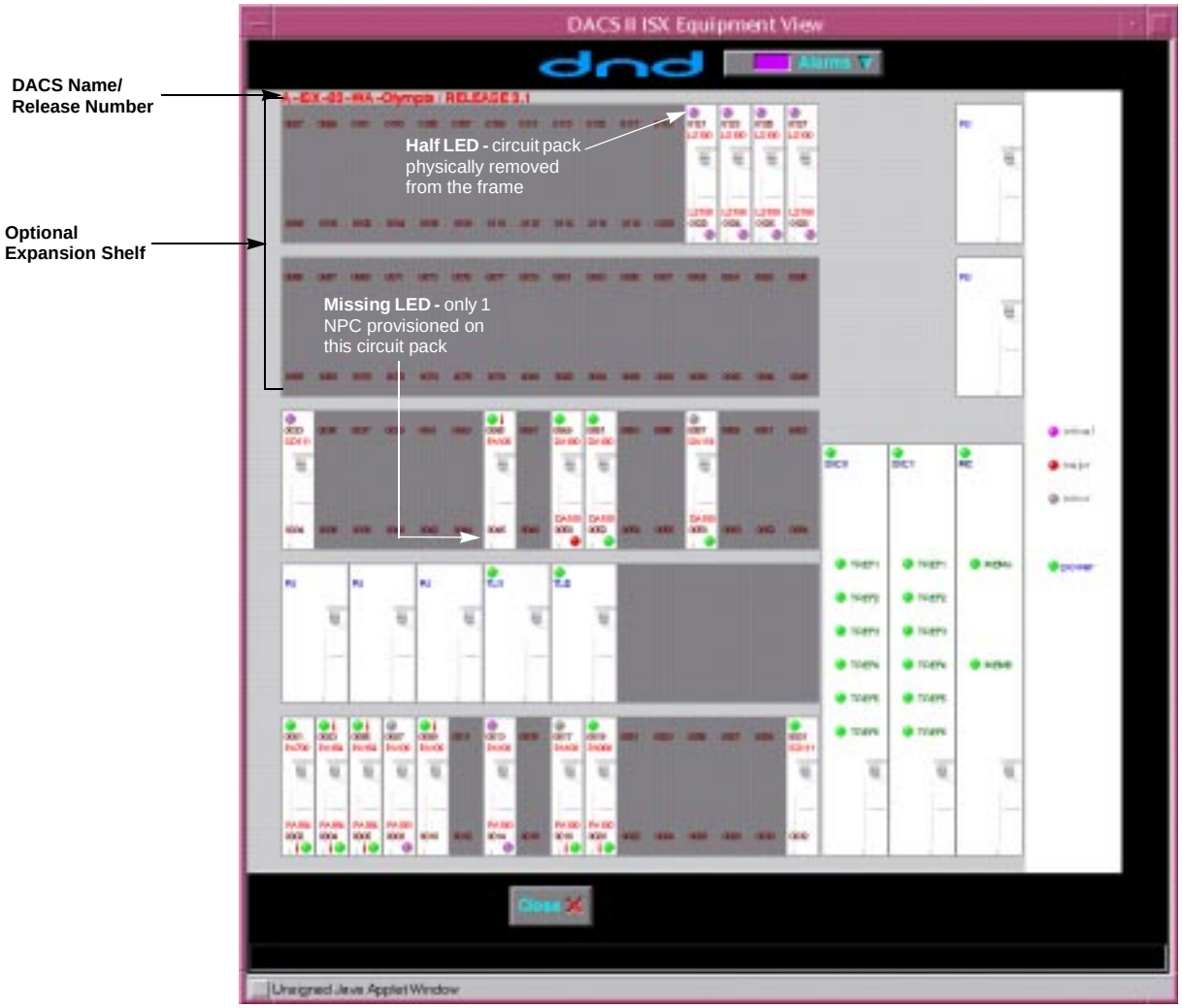


Figure 14-18. DACS II ISX Equipment View

SNMP Equipment Views

AX Equipment View Enhancement

Beginning with GUI Release 5.0.1/Forms Release 10.0.1, the DND now manages Octal E1T1 and T3 cards for newer AX equipment (AX Release 9.03 and greater). As a result, equipment views for the newer AX equipment now contain more information specific to its cards.

Port information displays for supported cards. The port display indicates the Port Status (via LED), Port Name, and Port Class (i.e., T1, T1C, E1-CAS, E1-NSA, E1C) for each individual port.

AX Out of Sync Conditions

For the newer AXs, DND displays "Out of Sync" labels for slots that mismatch between the DND database and the AX.

A "white" out of sync condition indicates that the pack type in the AX does not match the information stored in the DND's database. A "grey" out of sync condition indicates that the pack's information does not exist in the DND's database, however it does exist on the AX.

AX Slot Configuration Error Conditions

The DND will display "SLOT CONFIG ERR ON AX" if the DND database and the configured slot type on the AX match, but the configured and actual types do not match on the AX. This includes the case where the pack may not be physically present in the slot.

AX Protection Switch Scenario

For newer AX Equipment, the protection pack will have to be selected to get the detailed port view. If a protection pack is in StandBy mode, detailed port views are not displayed.

Equipment View Auto Refresh

Automatic refresh of the equipment view, when provisioning or when alarm information changes is not supported in DND Release 5.0. The Refresh button will have to be pressed to refresh the display.

AX Equipment View Menu Enhancement

For the newer AXs, if you right-click on a circuit pack port, a menu displays additional choices. As a result, you can now select port provisioning or audit/sync actions or produce a T1/E1 Port Report.

Note that the older equipment is still supported by DND and displays views as noted in Figure 14-22 through Figure 14-24.

SNMP Equipment Views (Continued)

DACS II AX 4 View (AX Release 9.03 or Greater)

Figure 14-19 reflects DACS II AX 4 equipment. Click on a circuit pack to display an enlarged and more detailed representation of the circuit pack to the right of the view. In addition, a detailed port view of T1/E1 ports on the selected pack is displayed for supported cards, i.e., OctalE1T1 and T3. Right click on a port to display a menu containing the *Port Provisioning, Database Audit/Synchronization*, *Port Alarm Report and T1E1 Port Report* selections. You may also right click on a pack to view the pack menu choices, i.e., *Database Audit/Synchronization* and *Port Alarm Report*.

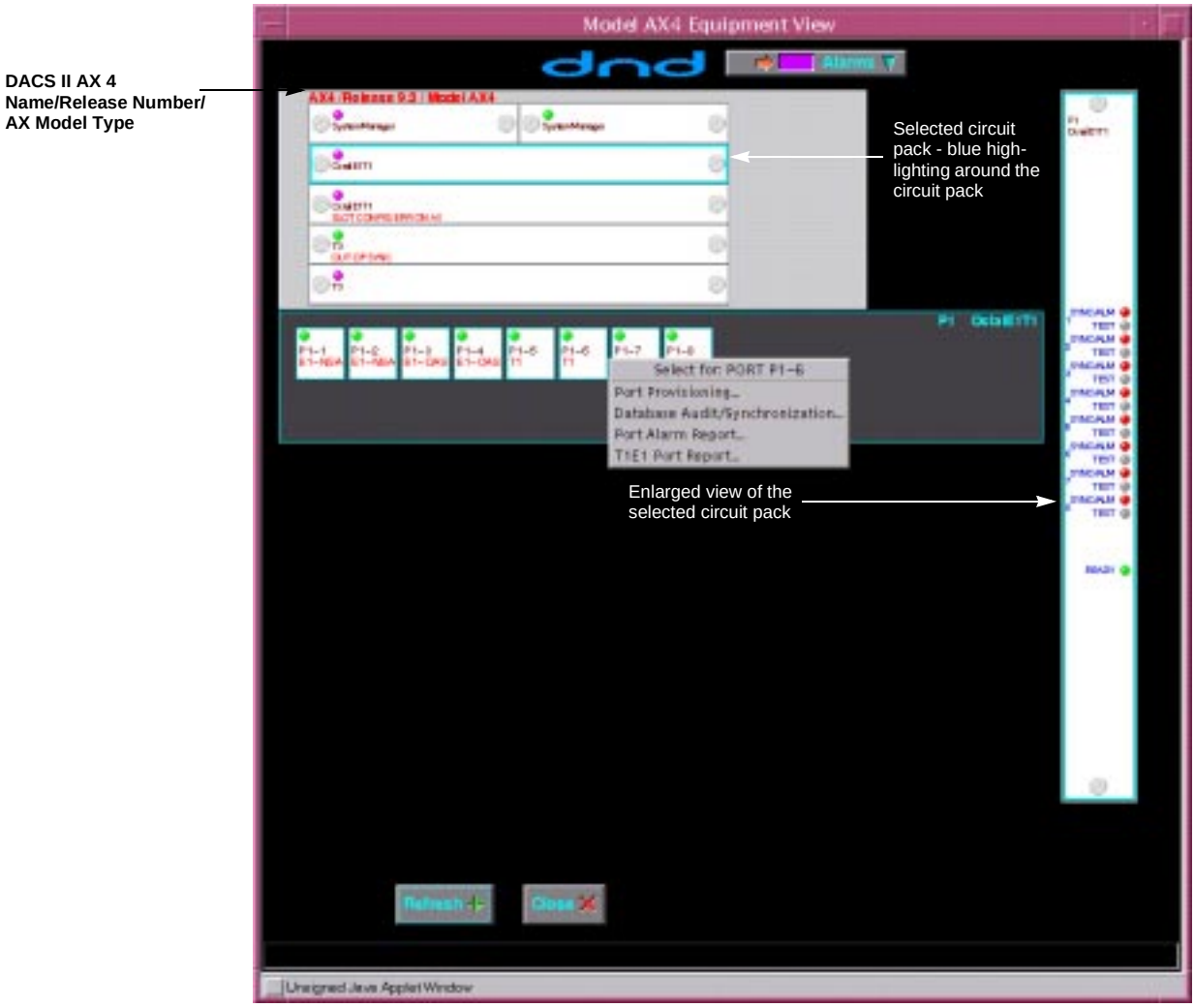


Figure 14-19. DACS II AX 4 Equipment View - AX Release 9.03 or Greater

SNMP Equipment Views (Continued)

DACS II AX 11 Standard Configuration View (AX Release 9.03 or Greater)

Figure 14-20 is a depiction of a newer DACS II AX 11 standard configuration. Click on a circuit pack to display an enlarged and more detailed representation of the circuit pack to the right of the view. In addition, a detailed port view of T1/E1 ports on the selected pack is displayed for supported cards, i.e., OctalE1T1 and T3. Right-click on a port to display a menu containing the *Port Provisioning, Database Audit/Synchronization*, *Port Alarm Report and T1E1 Port Report* selections. You may also right click on a pack to view the pack menu choices, i.e., *Database Audit/Synchronization* and *Port Alarm Report*

DACS II AX 11 Name/Release Number/AX Model Type →

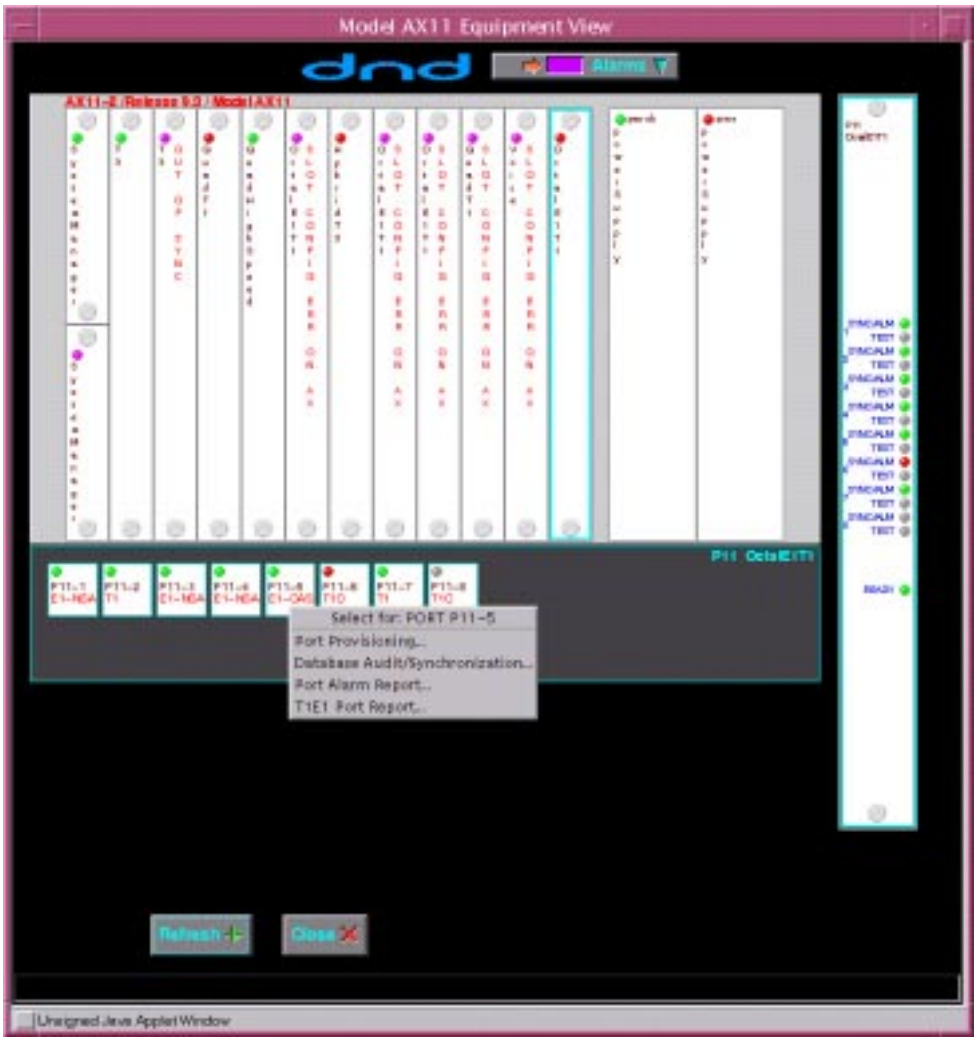


Figure 14-20. DACS II AX 11 Equipment View

SNMP Equipment Views (Continued)

DACS II AX 11 Protection Switch View (AX Release 9.03 or Greater)

Figure 14-21 is a depiction of a DACS II AX 11 with N+1 Protection Switch. Click on a circuit pack to reveal an enlarged and more detailed representation of the circuit pack to the right of the view. In addition, on supported cards, a detailed port view is displayed at the bottom. Right-click on a port to display a menu containing the *Port Provisioning, Database Audit/Synchronization*, *Port Alarm Report and T1E1 Port Report* selections. If a pack is protected, click on the protection pack to display the port view of the protected pack. You may also right click on a pack to view the pack menu choices, i.e., *Database Audit/Sync* and *Port Alarm Report*.

Note: In an actual rack, protection switch packs are installed with the front of the circuit packs facing the back of the rack. The equipment view displays the order of the protection switch packs as they would be viewed from the back of the rack.

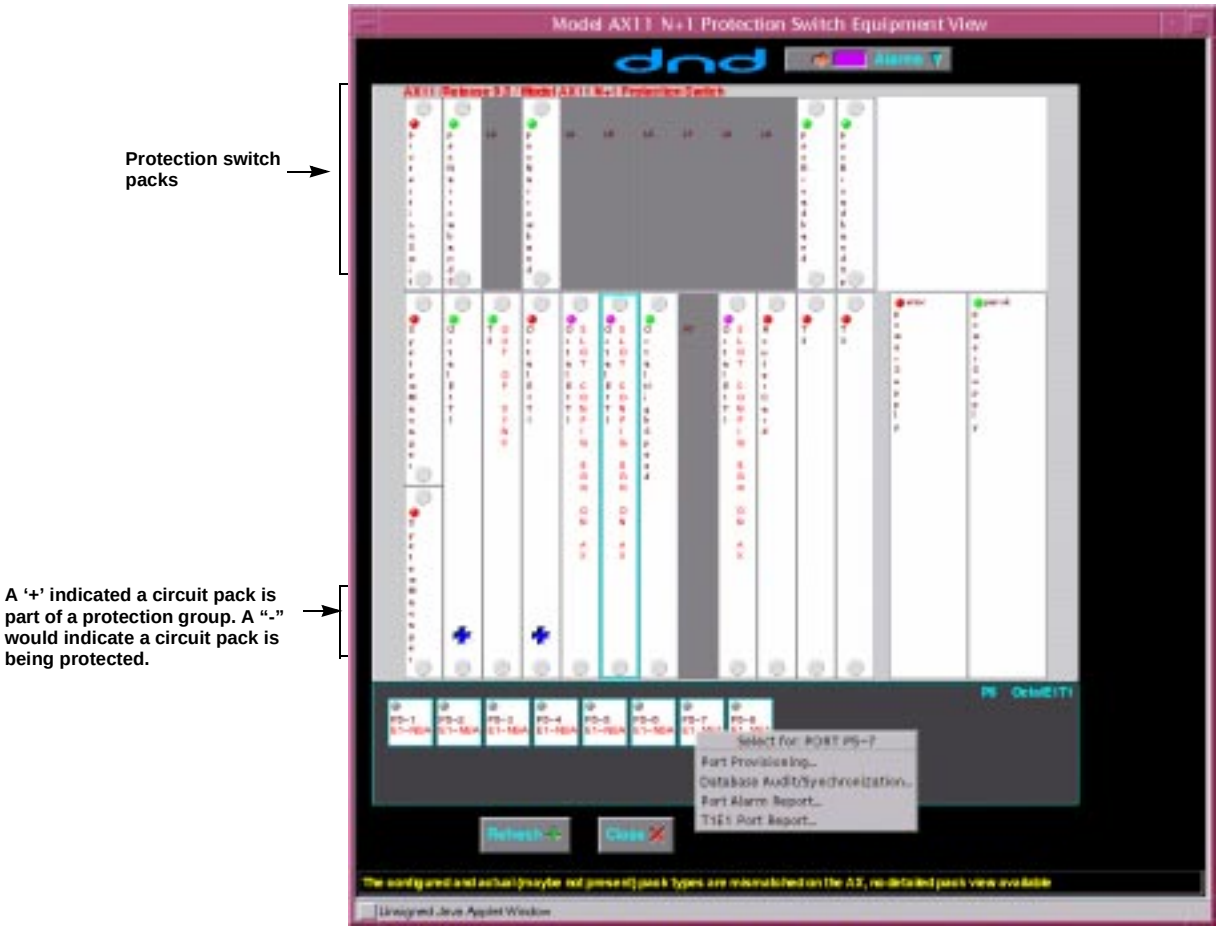


Figure 14-21. DACS II AX 11 with Protection Switch Equipment View

SNMP Equipment Views (Continued)

DACS II AX 4 View (AX Releases Prior to 9.03)

Figure 14-22 is a depiction of a DACS II AX 4. Click on a circuit pack to display an enlarged and more detailed representation of the circuit pack to the right of the view. Right-click on a pack to view the pack menu choices, i.e., PORT ALARM Report.



Figure 14-22. DACS II AX 4 Equipment View (Prior to AX Release 9.03)

SNMP Equipment Views (Continued)

DACS II AX 11 View - Standard Configuration (AX Releases Prior to 9.03)

Figure 14-23 is a depiction of a DACS II AX 11 standard configuration. Click on a circuit pack to reveal an enlarged and more detailed representation of the circuit pack to the right of the view. Right-click on a pack to view the pack menu choices, i.e., PORT ALARM Report.

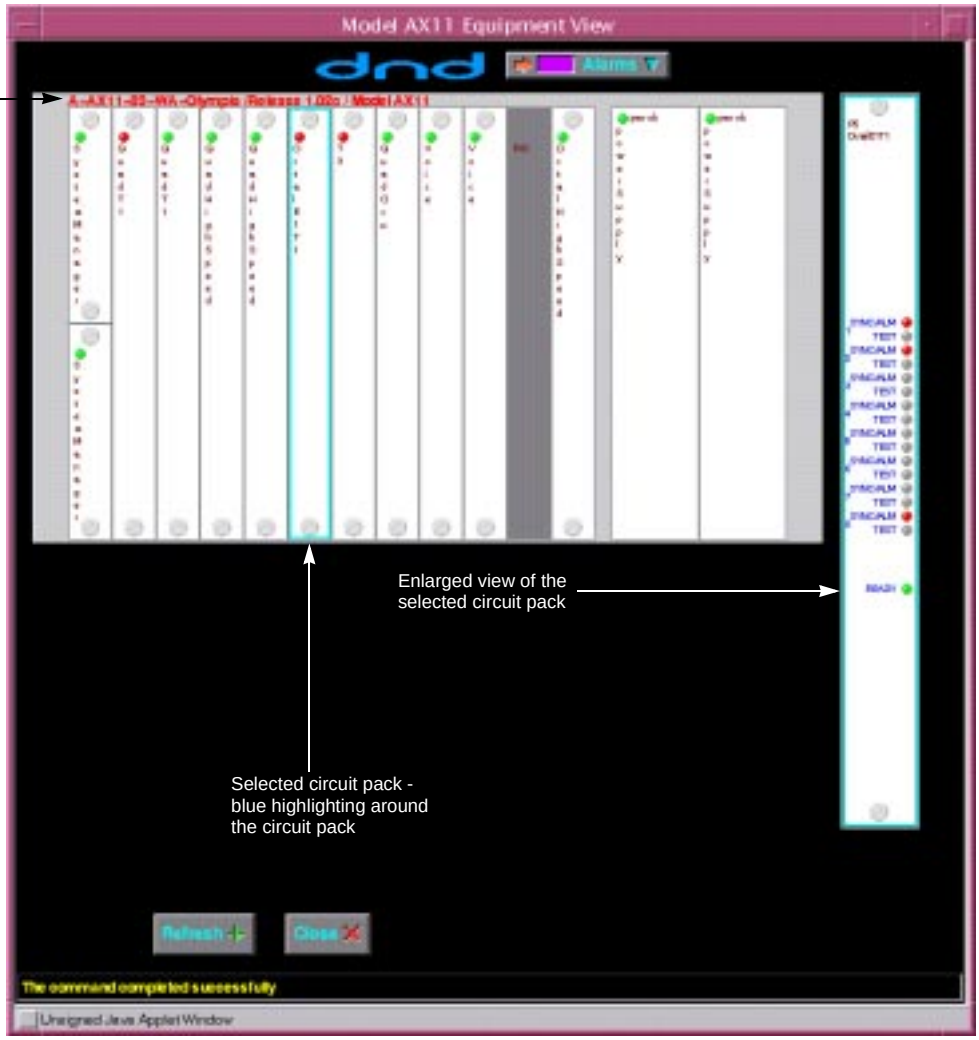


Figure 14-23. DACS II AX 11 Equipment View (Prior to AX Release 9.03)

SNMP Equipment Views (Continued)

DACS II AX 11 Protection Switch View (AX Releases Prior to 9.03)

Figure 14-24 is a depiction of a DACS II AX 11 with N+1 Protection Switch. Right click on a pack to view the pack menu choices, i.e., PORT ALARM Report.

NOTE:
In an actual rack, the protection switch packs are installed with the front of the circuit packs facing the back of the rack. The equipment view displays the order of the protection switch packs as they would be viewed from the back of the rack.

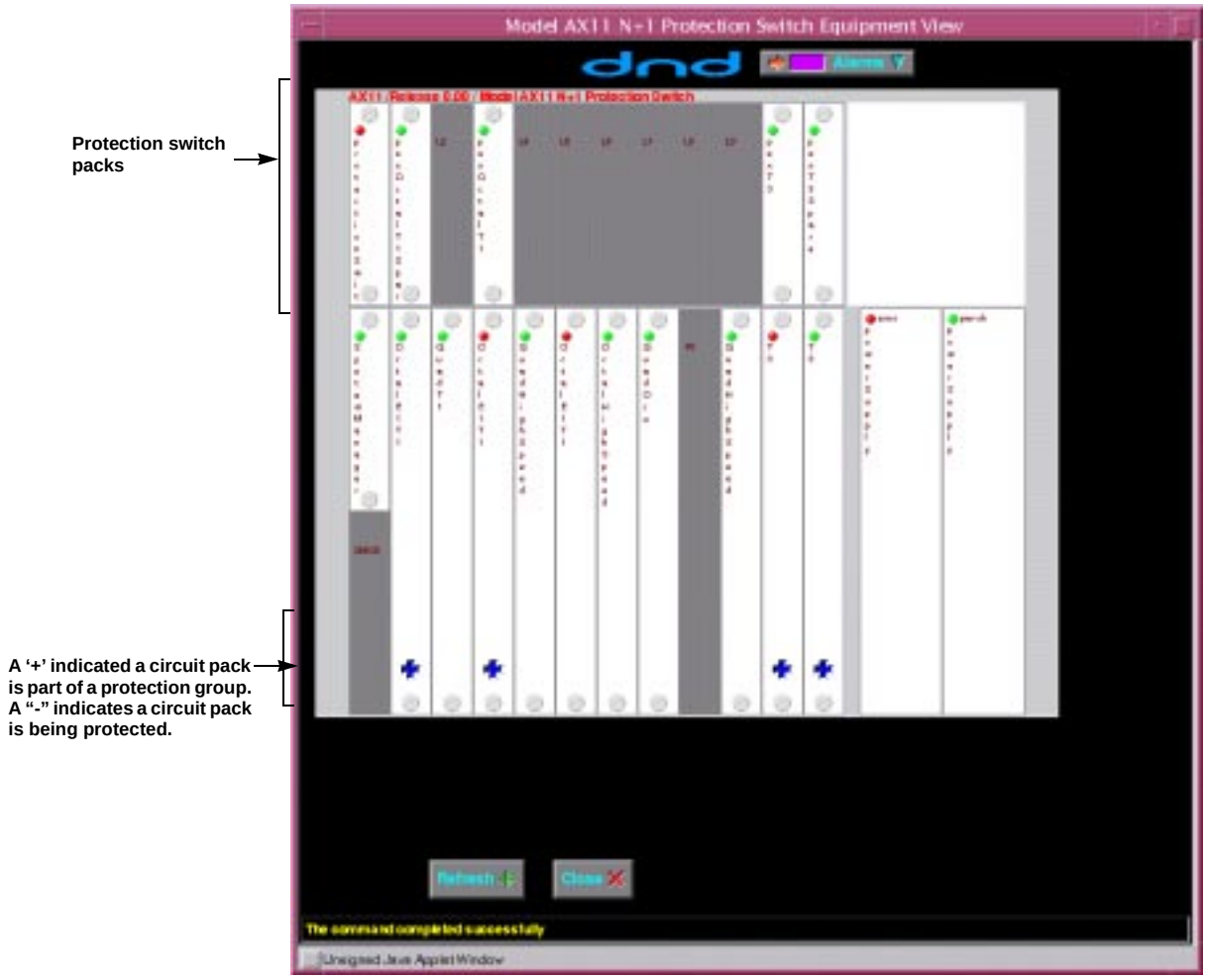


Figure 14-24. DACS II AX 11 with Protection Switch Equipment View (Prior to AX Release 9.03)

SNMP Equipment Views (Continued)

AAC/IMACS Model 600 Shelf View

Figure 14-25 is a depiction of an AAC or IMACS. The Model 600 Shelf allows circuit pack loading in the front of the shelf only. Right click on a pack to view the pack menu choices, i.e., PORT ALARM Report.

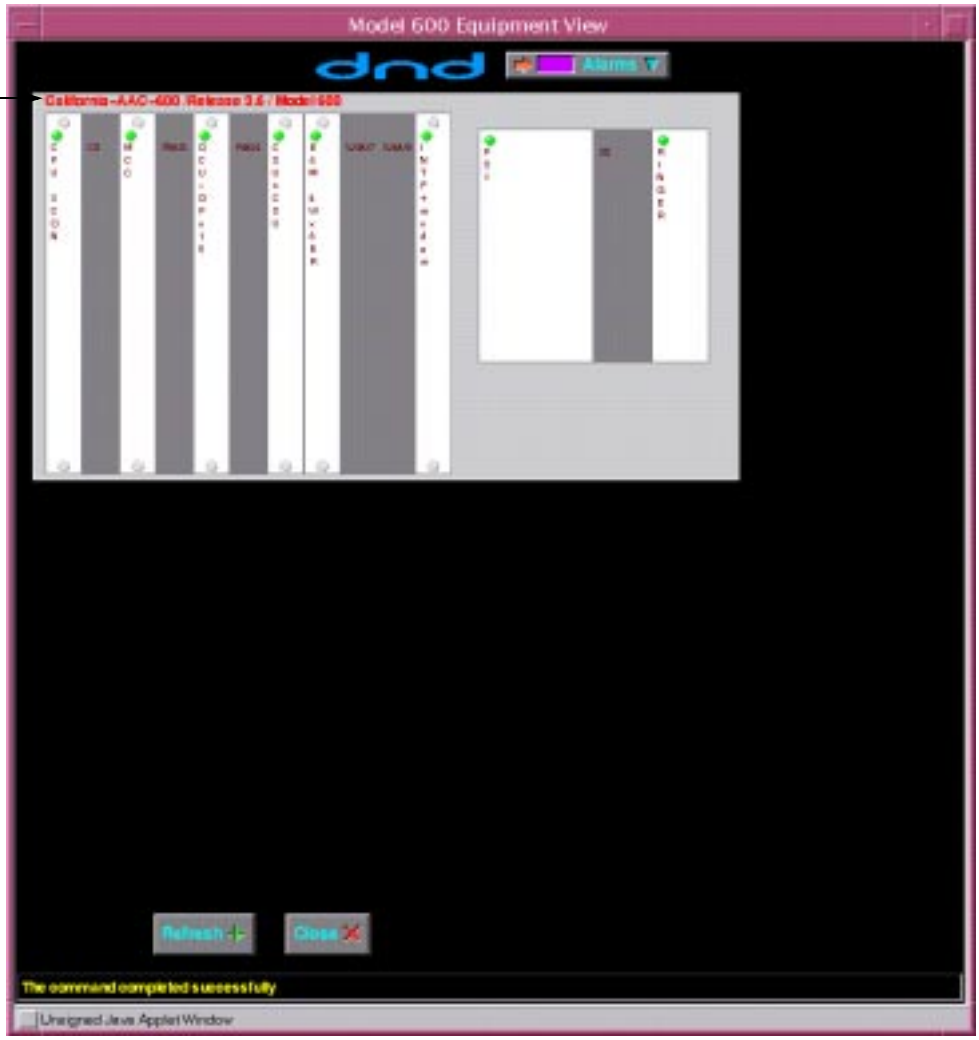


Figure 14-25. AAC/IMACS Model 600 Shelf Equipment View

SNMP Equipment Views (Continued)

AAC/IMACS Model 800 Shelf View

Figure 14-26 is a depiction of an AAC/IMACS Model 800 Shelf. The Model 800 Shelf allows circuit pack loading in the front and back of the shelf. Right click on a pack to view the pack menu choices, i.e., PORT ALARM Report.



Figure 14-26. AAC/IMACS Model 800 Shelf Equipment View

SNMP Equipment Views (Continued)

AAC/IMACS Model 900 Shelf View

Figure 14-27 is a depiction of an AAC/IMACS Model 900 Shelf. Right click on a pack to view the pack menu choices, i.e., PORT ALARM Report.



Figure 14-27. AAC/IMACS Model 900 Shelf Equipment View

SNMP Equipment Views (Continued)

PSAX 2300 Shelf View

Figure 14-28 is a depiction of a PSAX. Right click on a pack to view the pack menu choices, i.e., PORT ALARM Report.

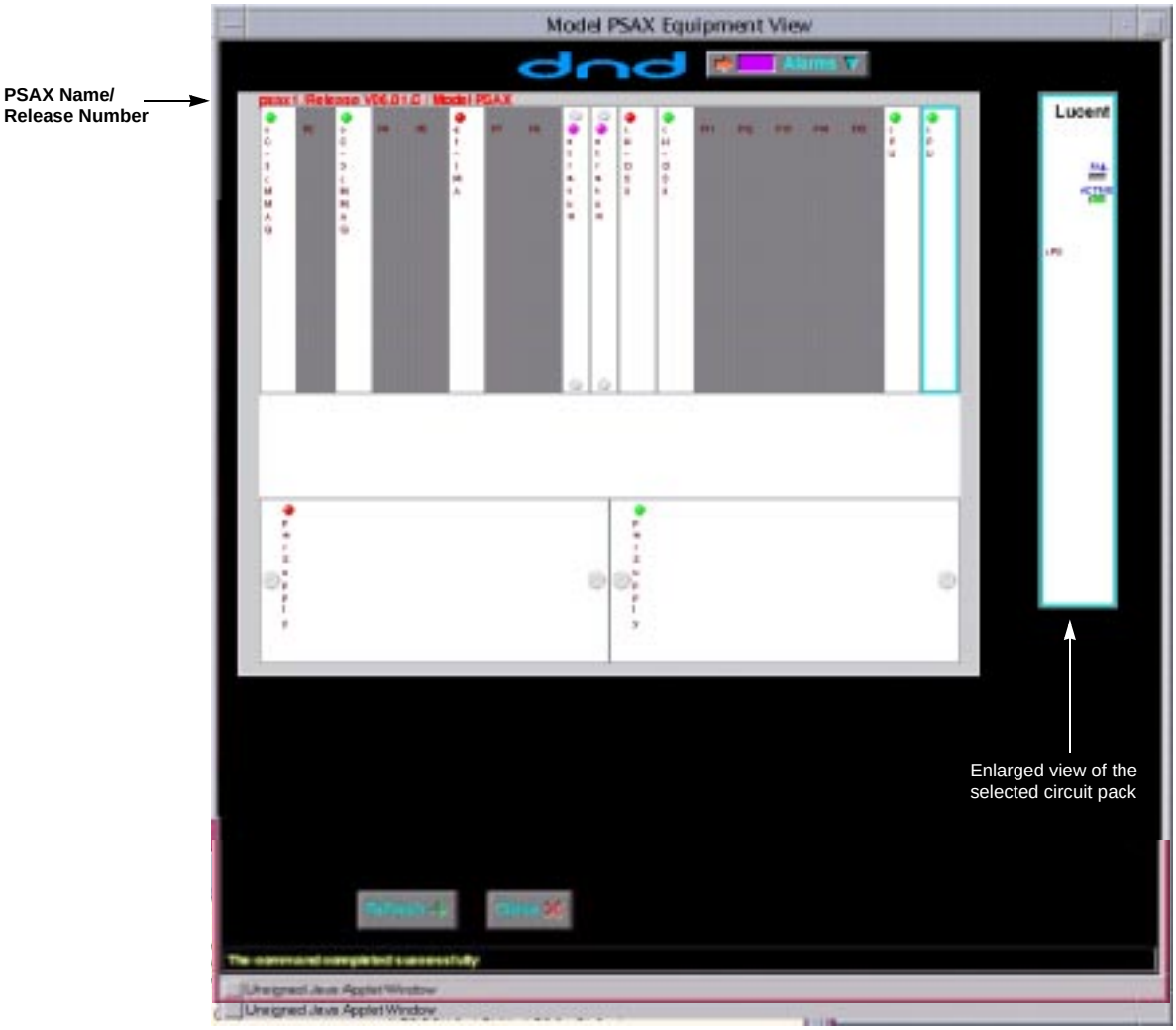


Figure 14-28. PSAX 2300 Equipment View

Intervention Level Equipment Views

Overview

Intervention levels for alarms can be set for all DACS frames. When intervention levels are applied to alarms, they can either escalate or de-escalate the severity of an alarm, depending on the how the intervention level feature is provisioned.

Setting Intervention Levels

In order for the intervention level to be seen in an equipment view, the DACS frame must be provisioned for alarm intervention. Once the DACS is provisioned for alarm intervention, the radio button field for switching between intervention level and alarm state will appear at the bottom of the equipment view.

When the equipment views are switched, a difference in alarm color will appear on circuit pack LEDs. The change in color will correspond to the intervention level settings.

For additional information on intervention levels, refer to *Chapter 5, NE Provisioning*.

The Intervention Level Views

The two equipment views associated with intervention levels are:

- **Alarm State View** - the regular equipment view without intervention levels applied
- **Intervention Level View** (when intervention is on) - the equipment view with intervention levels applied to existing alarms.

Change from one view to another by clicking the desired radio button choice in the field at the bottom of the equipment view. The intervention level settings can be seen in the high level and detailed views of the DACS frames.

Intervention Level Equipment Views (Continued)

Alarm State View

Figure 14-29 is a depiction of the Alarm State (regular alarm) view for a DACS II ISX.

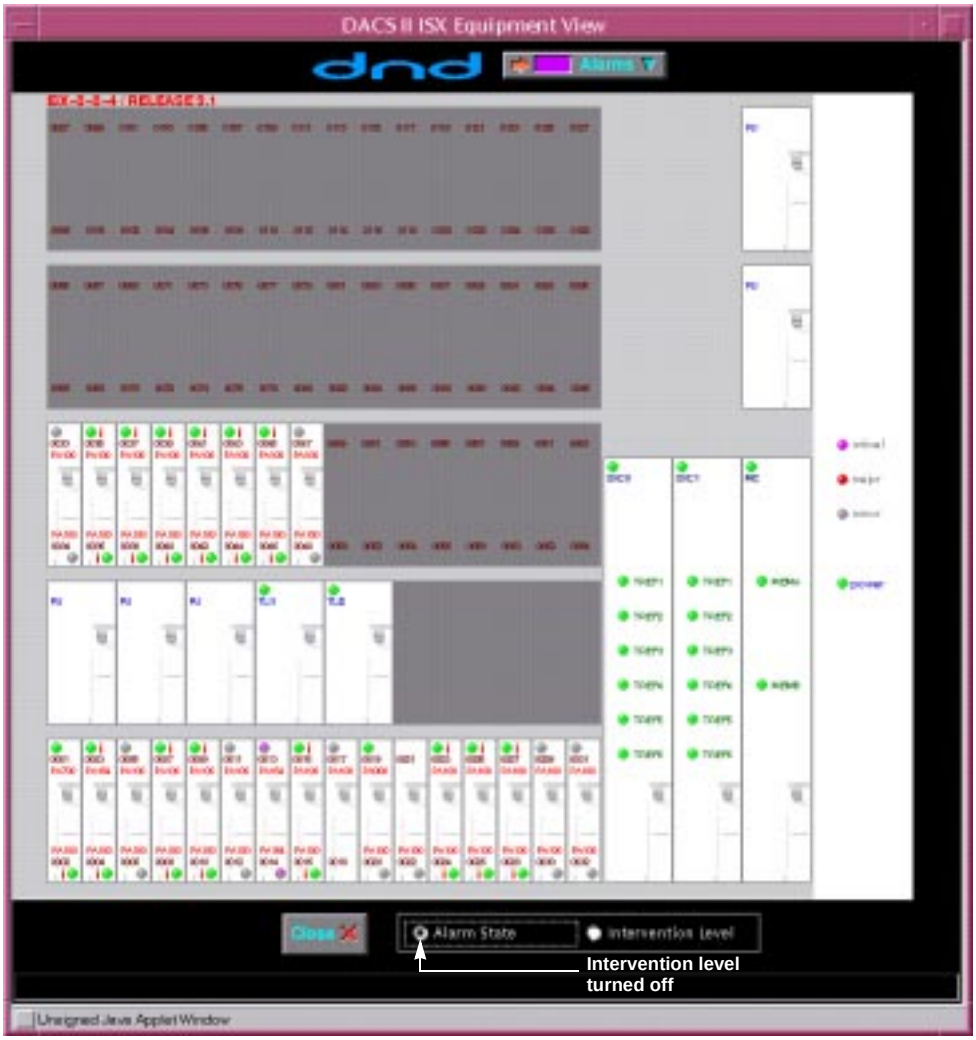


Figure 14-29. Sample Alarm State View

Intervention Level Equipment Views (Continued)

Intervention Level View

Figure 14-30 is a depiction of the Intervention Level view for a DACS II ISX. Notice that most circuit pack LEDs have either escalated in alarm severity.

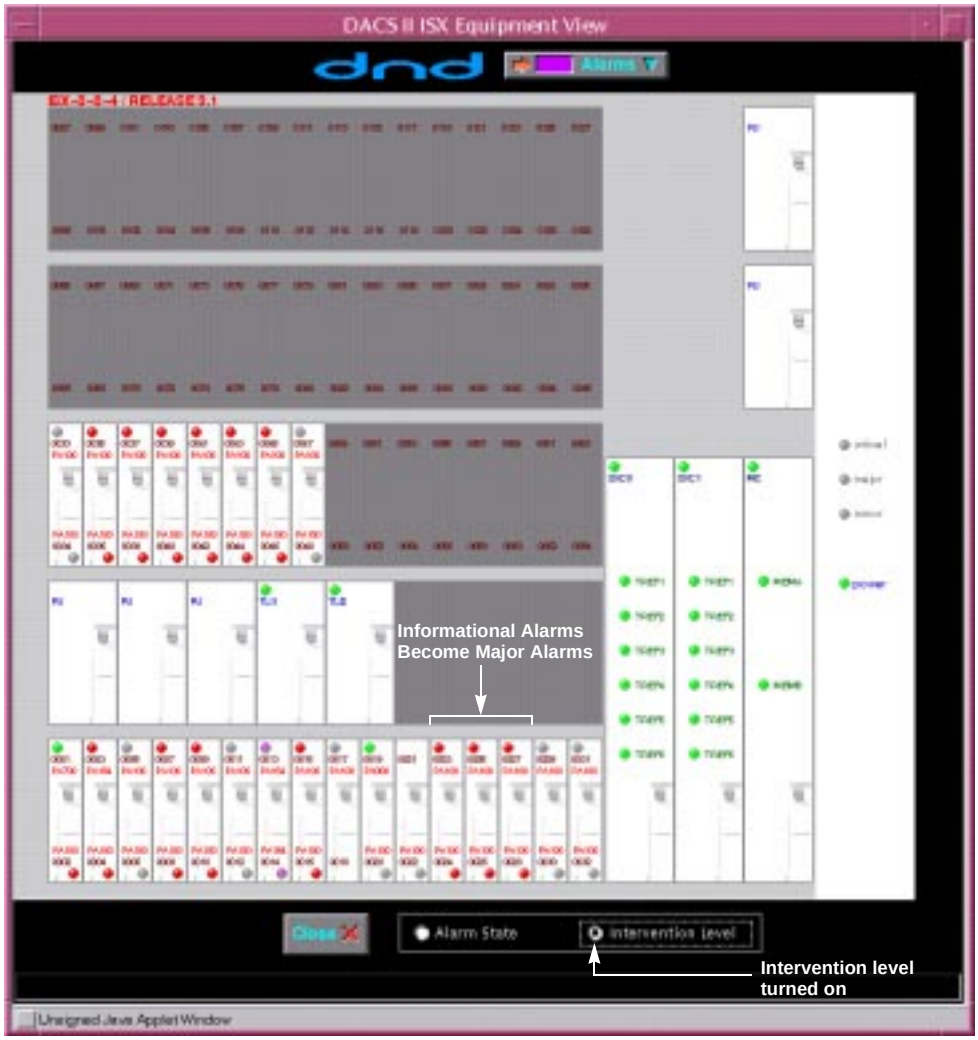


Figure 14-30. Sample Intervention Level View

Partitioning

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Background

Introduction

Partitioning functions are performed by system administrators using the DND GUI only. Partitioning allows the system administrator to:

- Limit the number of sites displayed on the network map for users (users can only view the sites assigned to their partition).
- Prohibit user access into sites which are not assigned to a user's partition.

Objectives

This chapter provides reference information to help you perform the following:

1. Modify partition names.
2. Assign Network Elements to partitions and unassign Network Elements from partitions.
3. Assign users to a partition and unassign users from a partition.

Related tasks

For related tasks, see the following DND GUI General Task in Volume II:

- Modifying a Partition GT 15.1G

Related information

For related information, refer to:

- *Chapter 5, NE Provisioning*
- *Chapter 16, User Administration*.

Partitioning Information

Partition Description

A partition is a collection of nodes (Network Elements). A partition is assigned a name and nodes, which can be any grouping of DACS, AAC/IMACS, DACS II AX, or "Other" nodes. The NE PARTITIONING form assigns names to partitions and nodes to a partition. The NE PARTITIONING form can assign nodes to one or more partitions. The USER ADMINISTRATION form assigns a partition to a user.

Partitioning Description

Partitioning allows the system administrator to define nodes to partitions and assign each DND user (including administrators) to a particular partition. Administrators can assign any node to any partition. A user is assigned to one partition for the following reasons:

- **Limit the sites displayed on the network map** - Users can only view the sites assigned to their partition on their network maps. This is very beneficial to users on large DND networks; making their network maps less congested.
- **Prohibit access into sites** - Users do not have access to sites which are not assigned to their partition.

The Effects of Partitioning

Partitioning affects the following:

- **DND Network Map** - Only those nodes which are assigned to that partition are displayed on the network
- **DND GUI** - The Site Name choices on each of the DND GUI forms correspond to the nodes in the partition
- **DND Forms** - The Site Name and WHICH DACS? choices also correspond to the nodes in the partition.

The DND Network Map is updated for all users who are affected by the change. The GUI and Forms Interface forms are updated when those fields are refreshed, by starting or restarting the form or using the Back and Continue... buttons to refresh that field.

Partitioning Information (Continued)

Provisioning Partitions

The DND GUI provides 10 partitions (default names: *PARTITION01* through *PARTITION10*). By default, all sites are assigned to all partitions, and all users are initially assigned to *PARTITION01*. Administrators are able to *MODIFY* the partition names and element members. These partitions cannot be added or deleted, whether all of the partitions provided are used or not.

Partitioning Rules

Partitioning adheres to the following rules:

1. Users view only the groups and sites assigned to their partitions. Administrators have privileges to MODIFY a node assignment from the NE PROVISIONING form, or MODIFY a partition from the NE PARTITIONING form, or MODIFY the user to be assigned to another partition.



NOTE:
It is recommended that at least one partition be designed with all nodes and that partition be available to at least one user.

2. Groups are independent of partitions. If a node is a member of that partition and that node is a member of a group or group hierarchy, the group (or group hierarchy) is given on the map.
3. Empty groups are not displayed, that is, if all nodes of a group are not part of that partition, the group (or group hierarchy) is not displayed on the network map.
4. If an administrator changes a partition while a user is logged in, the partition update will be visible immediately by the user on the network map.
5. If an administrator changes a partition while a user is on a form, then the partition update will be visible after the **Action** is executed.
6. Interties appear on the network map only if they are connected to visible sites (sites assigned to the user's partition).

(Continued on next page)

Partitioning Information (Continued)

Partitioning Rules (Continued)

7. Some form information overlaps, and if changes are executed in one form, this change may invalidate the data in another form.

   For example, if you have the NE PARTITIONING form open, it displays a set of nodes for a partition, and if you also have the NE PROVISIONING form open, it displays the partitions for a node as well. If you execute a change from the NE PARTITIONING form, the data in the NE PROVISIONING form is not automatically updated. When you attempt to execute the NE PROVISIONING form, you may receive an error that the data is out of date and you must click Restart to initialize the provisioning operation, or click Back and then Continue... to receive new form data.

8. The NE SUMMARY window is modified according to a user's partition - only sites assigned to a user's partition are displayed.

9. The following are not filtered according to a user's partition:

   - Messages that appear in the Status Summary field - status messages for Network Elements in all partitions are displayed.
   - The results of some reports that list DACS sites (for example, the DACS Frames/Links Report and the Task Schedule List Report).

Associated Partitioning Forms

There are three forms associated with partitioning functions:

- The NE PARTITIONING form
- The USER ADMINISTRATION form
- The NE PROVISIONING form.

The NE PARTITIONING Form

Sample Form

The NE PARTITIONING form is used to MODIFY the partition name and site members. Figure 15-1 shows an example of the NE PARTITIONING form.

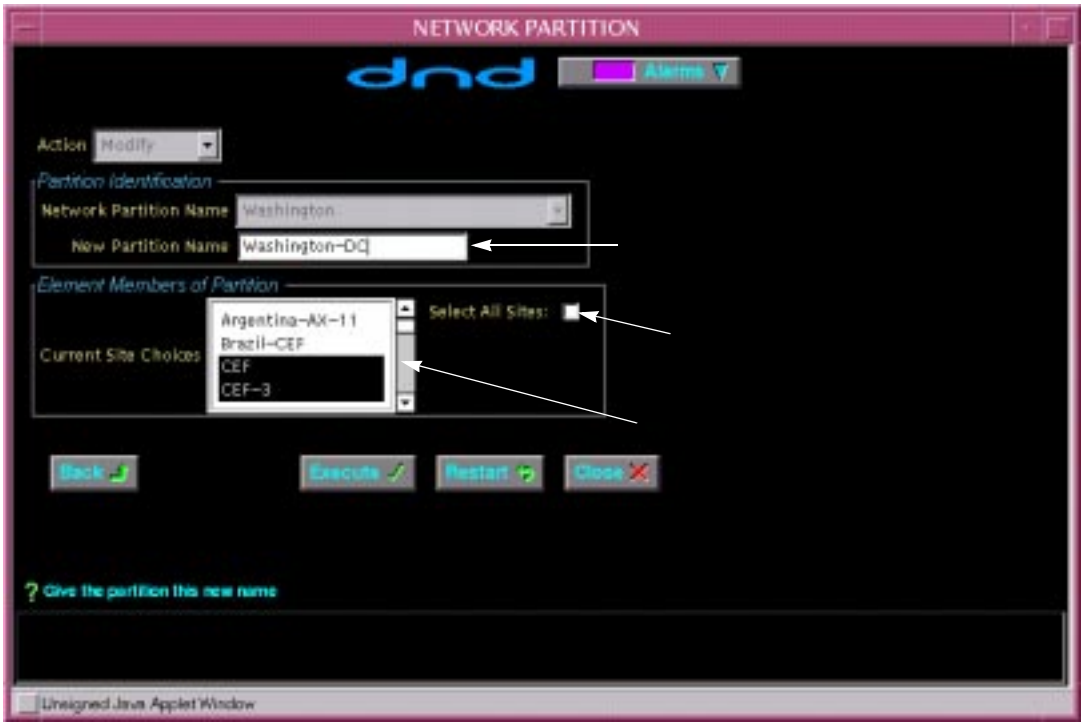


Figure 15-1. Sample NE PARTITIONING Form

All users created using the DND Forms Interface are defaulted to *PARTITION01*. If *PARTITION01* is renamed, all users in *PARTITION01* will be assigned to the partition's new name. The administrator is responsible for keeping track of partition name changes; the DND system does not keep track of previous and new partition names.

The NE PARTITIONING Form (Continued)

Field Descriptions

The field values for the NE PARTITIONING form are described in Table 15-1

Table 15-1. Field Descriptions for the NE PARTITIONING Form

Field	Description
Action	(Combo box - read only) The only available **Action** is *MODIFY*.
Network Partition Name	(Combo box) Select the name of the partition to *MODIFY*. The choices are all 10 partition names (default and/or modified names) in the network.
New Partition Name	(Text field) Enter a new name for the partition. Must be unique. 1 through 24 characters from the set 0-9, A-Z, a-z, /, _, and -. All other characters are illegal. Blanks are not allowed within a name.
Current Site Choices	(Multi-select Combo box) Select the Network Element(s) to assign to the selected partition.
Select All Sites	(Check box) Select this box to assign ALL sites to the selected partition. The list of sites is updated after the form is executed.

The USER ADMINISTRATION Form

Sample Form

One of the functions of the DND GUI's The USER ADMINISTRATION form is to assign a user to a particular partition. Figure 15-2 displays the area on the form to perform this action.

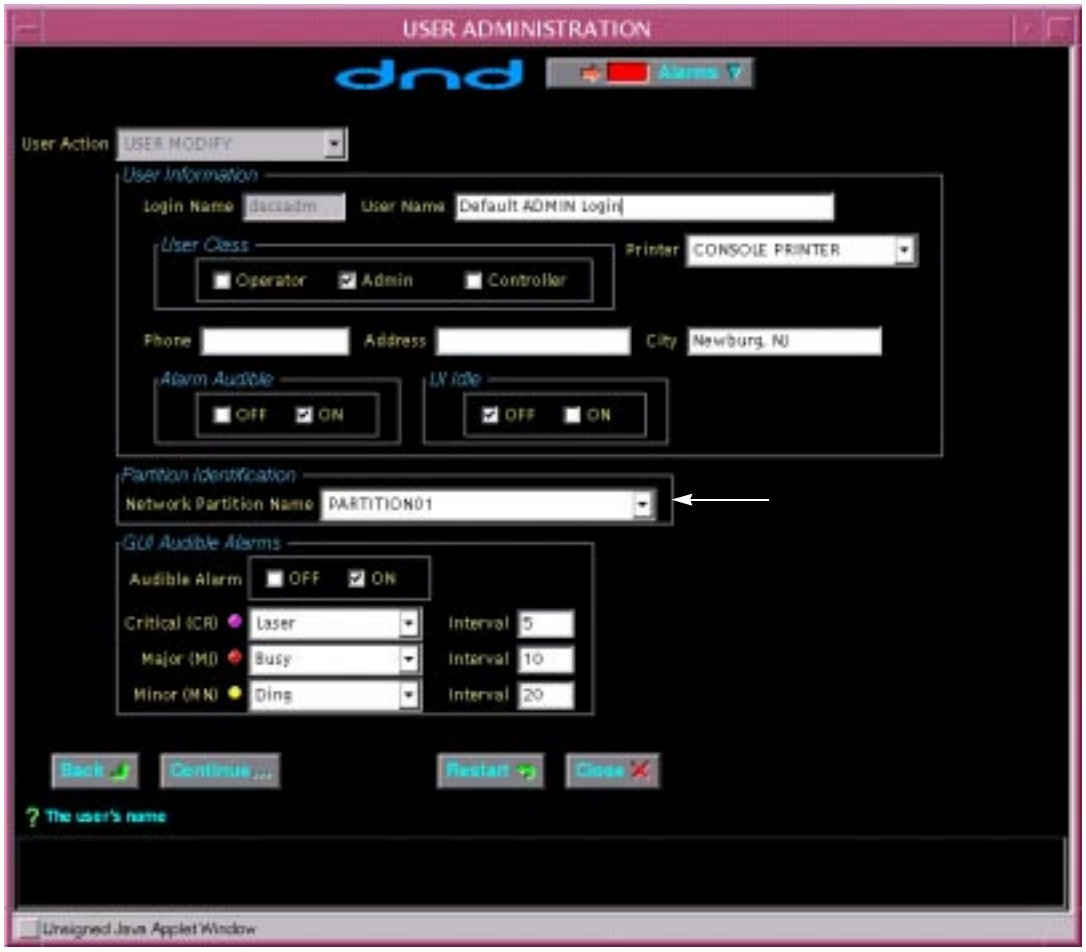


Figure 15-2. Sample USER ADMINISTRATION Form

Field descriptions for this form can be found in *Chapter 16, User Administration*.

The NE PROVISIONING Form

Sample Form

When using either the *CREATE* or *MODIFY* **Action** on the NE PROVISIONING form, the administrator can select or change the partition assignment for the Network Element. Figure 15-3 shows the area on the form to perform this function.

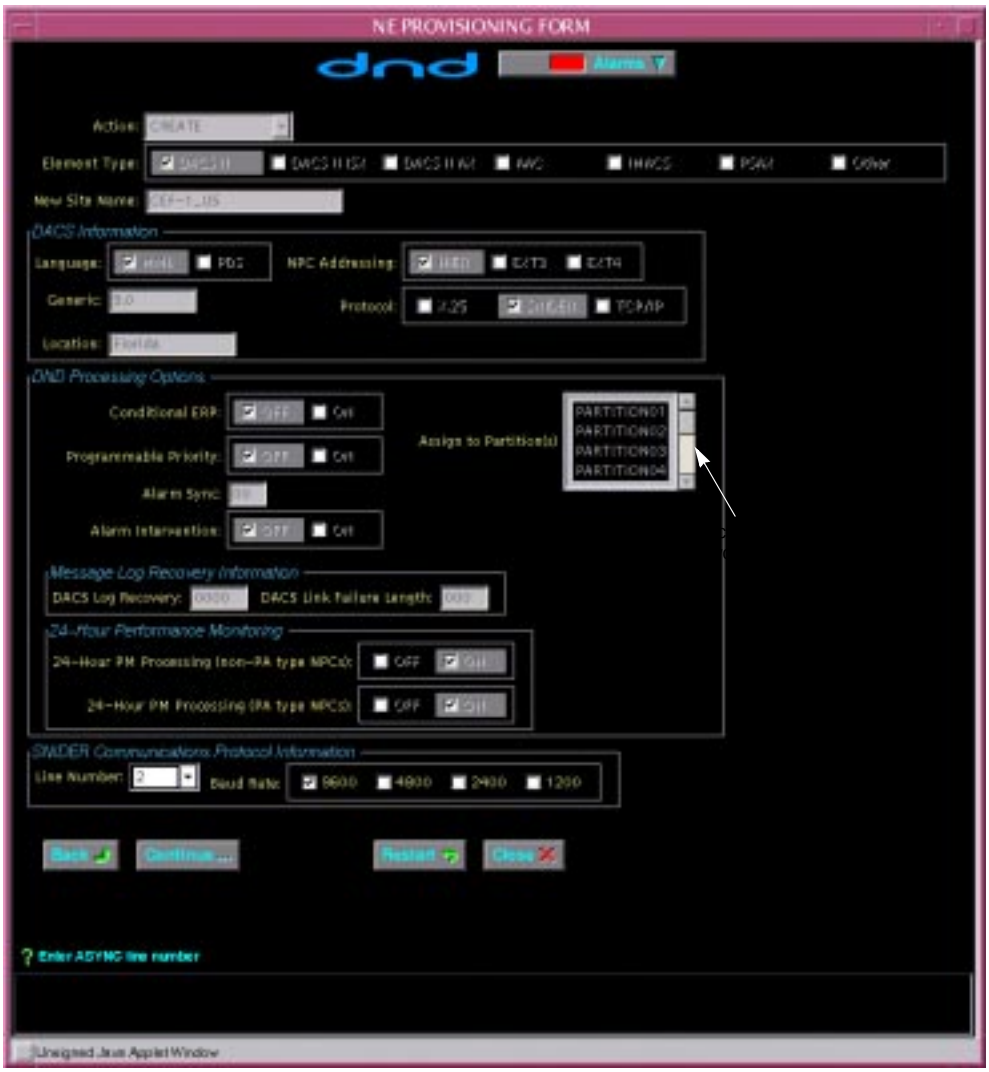


Figure 15-3. Sample NE PROVISIONING form

Field descriptions for this form can be found in *Chapter 5, NE Provisioning*.

User Administration

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Background

Introduction

A DND system administrator can have up to 125 user logins in the DND database. In addition, DND automatically supports these special logins:

- **dacsadm** - the default system administration login
- **ems -** the default DND operator login

DND can support up to 32 simultaneous login sessions, including the console login session.

Objectives

This chapter provides background information to help you perform the following:

1. Create, modify, and delete user logins
2. Change passwords
3. Reset passwords
4. Add or remove password aging values.
5. Restrict or change user access to DND GUI or DND Forms

Related tasks

For related tasks, see the following General Tasks in Volume II:

DND GUI:

■ Adding a User	GT 16.1G
■ Modifying User Information	GT 16.2G
■ Deleting a User	GT 16.3G
■ Changing a Password as an Operator	GT 16.4G
■ Changing a Password as an Administrator	GT 16.5G
■ Adding a User with Password Aging Enabled	GT 16.6G
■ Restricting or Changing User Access	GT 16.7G

(Continued on next page)

Background (Continued)

Related tasks (Continued)

DND Forms:

- Adding a User GT 16.1U
- Changing User Information GT 16.2U
- Deleting a User GT 16.3U
- Changing a Password as an Operator GT 16.4U
- Changing Password Information as an Administrator GT 16.5U
- Resetting a Forgotten Password GT 16.6U

Related information

For related information, see:

- *DACS II Network Director Software Release Description*
- *DACS II and DACS II ISX Operation and Maintenance Manuals*

User Logins

User Class

A login is assigned a **User Class** on the USER MANAGEMENT form. **User Class** defines which privileges are assigned to a login.

There are three user classes:

- System Administrator
- Operator
- Controller (only used by ITM-XMC when logging into the DND).

A login with system administration privileges has unrestricted access to all of the DND functions. A system administrator can add, change, or delete user information and passwords for any login.

An operator login is restricted from certain DND selections. For example, users with operator logins are restricted from the SYSTEM ADMINISTRATION and DATABASE SYNCHRONIZATION selections on the DND MAIN MENU (Forms) or from the DND Main window (GUI). In addition, operators can change their own user information (except for their **User Class** and **UI Idle** option) and passwords. They cannot change user information for any other login.

Password values are stored in both the DND and UNIX databases when the user class is "GUI and UI". When a change is detected in either database, an automatic synchronization occurs to ensure that the most current password value is stored in both databases. Password aging values are always synchronized so that the DND database is the master.

Login Ports

Before an operator can log in to DND, a system administrator must enable the asynchronous login port that the operator will be using to access DND. For information on login ports, refer to Chapter 4, System Adminstration.

Forgotten Passwords

If a password is forgotten, the system administrator can reset the password by performing ONE of the following:

- Following the procedures in GT 15.5G or GT 15.5U
- Logging on to the DND console as **root** and following the procedure described in GT 15.6U.

(Continued on next page)

User Logins (Continued)

Aging Passwords

The system administrator may assign minimum and maximum password aging values to a GUI or UI user login. When a minimum password aging value is set, a password cannot be changed unless the minimum number of days has passed. When a maximum password aging value is set, a user will be prompted to change a password if the maximum number of days has expired since the password was last changed.

Minimum and maximum password aging values may be set in the DND GUI only and only by the system administrator. To assign values to the Min Password Aging or Max Password Aging fields, refer to procedure GT 16.6G.

NOTE:
Minimum password aging is not enforced for the "Administrator/Controller" class. Maximum password aging does not apply to the Controller class.

Restricting or Changing User Access

There is a user administrator option available to define or restrict User Access to the DND. It is available through the User Access options on the USER ADMINISTRATION form. The options are:

- GUI and UI
- GUI Only
- UI Only

When "GUI and UI" is chosen, the user has access to the Graphical User Interface (GUI) and the DND Forms (UI) interface. The user has both a UNIX Password entry and a DND database user entry and can login to the DND workstation through UNIX to obtain a UI or through the Netscape browser to use the GUI.

When the "GUI Only" option is chosen, the user has access to the DND only through the GUI and can only log in to DND through the GUI. The user does not have a UNIX password file entry and will not be able to login to the DND through UNIX in order to start a User Interface.

When the "UI Only" option is chosen, the user has access to the DND only through a UNIX login and can start only a DND User Interface. Access to the DND through the Graphical User Interface will be denied.

User Logins (Continued)

Restricting or Changing User Access (Continued)

It is possible for an administrator to change the user access type using the MODIFY action on the USER ADMINISTRATION form. It is not possible, however for an operator to change their own access methods from the USER ADMINISTRATION form. It is also not possible for any administrator to change the access method for the "dacsadm" user since this special user must always be able to access the GUI and the UI. Any attempt to change the "dacsadm" user's access will be denied.

Audible Alarm Feature

Description

When the audible alarm feature is set, the DND will play a sound periodically if new alarm activity occurs on one or more network elements. The sound file and the interval at which it is repeated is provisionable on a per user basis.

Enable/Disable Audible Alarms

A new audible alarm is depicted by an audible alarm indicator, a bell-shaped figure beside the network element icon (under the red arrow) in the Network Map, in the NE Summary display, and on the Alarms... button in the DND Task Bar.

The audible alarm feature is provisionable on a per user basis. The **Audible Alarm** field in the DND GUI **Audible Alarms** box should have *ON* selected to enable the feature. By default, the audible alarm feature is disabled (*OFF)*.

The user has the ability to select each of the following for critical, major, and minor alarms:

- The alarm sound
- The alarm interval (in seconds)

In addition, the user can specify up to three user-defined sounds to use for the audible alarm feature. For additional information, refer to GT 27.5G.

DND GUI: The USER ADMINISTRATION Form

Sample Form

To access the USER ADMINISTRATION form, Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears. Select *User Administration...*. The USER ADMINISTRATION form appears. Figure 16-1 shows an example of a USER ADMINISTRATION form.



Figure 16-1. DND GUI: USER ADMINISTRATION Form, *USER MODIFY* Action

DND GUI: The USER ADMINISTRATION Form (Continued)

Field Descriptions

Table 16-1 describes the fields used in the USER ADMINISTRATION form.

Table 16-1. DND GUI: Field Descriptions for the USER ADMINISTRATION Form

Field	Description
User Action	(Combo box) Mandatory. ■ *CHANGE PASSWORD* - Change the password of a user. Administrators can change passwords for all users, but Operators can only change their own passwords. ■ *USER MODIFY* - Change fields other than the **Login Name** and **Password**. To change the **Login Name**, *DELETE* and *ADD* the login. To change the password, use the CHANGE *PASSWORD* selection. ■ *USER ADD* - Adds a user login. ■ *USER DELETE* - Deletes a user login.
Login Name	(Text field) Mandatory. The login name by which the user will be known to the DND, and which will be required on login. Login Name may contain only two through eight alphanumeric characters. One lower-case letter is required. It may not contain control characters, punctuation marks, or spaces.
User Name	(Text field) Up to 40 alphanumeric characters including A-Z, 0-9, -,(,), period, comma, and space. The name of the person owning the login specified in **Login Name**.
User Class	(Radio buttons) The type of login. The choices are: ■ *OPERATOR* - The user is an operator ■ *ADMIN* - The user is an administrator ■ *CONTROLLER* - (only used by ITM-XMC when logging into the DND)

Table 16-1. DND GUI: Field Descriptions for the USER ADMINISTRATION Form (Continued)

Field	Description
User Access	(Radio buttons) Select one of the following to define or restrict user access to the DND. The choices are: ■ *GUI and UI* - To permit GUI and UI access. ■ *GUI Only* - To permit GUI only access. ■ *UI Only* - To permit UI only access.
Printer	(Combo box) Mandatory. The name of the printer to assigned for this login. The choices are the *CONSOLE PRINTER* (default) and any other printer names connected to the DND server, including the names of remote printers installed in the **printcap** file of Sun systems. For details, refer to Chapter 2, Getting Started. To reset the **Printer Name**, use a *CHANGE* **Action**.
Phone	(Text field) Up to 13 numeric characters, including 0-9, - and space. No comma or letters allowed. The telephone number of the person cited in **User Name**.
Address	(Text field) Up to 20 alphanumeric characters. The address of the person cited in **User Name**.
City	(Text field) Up to 20 alphanumeric characters. The city of the person cited in **User Name**.
UI Audible Alarms	(Radio buttons) A switch for the DND Forms only: ■ *ON* - When an alarm occurs, an audible signal will sound at the terminal where the user is logged in. ■ *OFF* - An audible signal will not sound.
UI Idle	(Radio buttons - appears for administrators only) Set a threshold value for terminal idle time: ■ *ON* - Log off automatically after IDLE_ THRESHOLD minutes of idle time. For details, see "Environment Variables" in Chapter 2, Getting Started. ■ *OFF* - Remain logged on until the user logs off.

Table 16-1. DND GUI: Field Descriptions for the USER ADMINISTRATION Form (Continued)

Field	Description
Password	(Text field) Mandatory. Appears only for an **Action** of *USER ADD*. The password used to authenticate the user. A password must be at least six characters. It must contain at least two alphabetic and one numeric or special character. It may not contain Backspace or Delete.
New Password/Re-enter the password	(Text field) Mandatory. Appear only for an **Action** of *USER ADD* and *CHANGE PASSWORD*. The password is used to authenticate the user. A password must be at least six characters. It must contain at least two alphabetic and one numeric or special character. It may not contain Backspace or Delete.
Min Password Aging	(Text field) Optional. Appears for administrators only when the **Action** is *CHANGE PASSWORD*. Defines the minimum number of days a password must be active before a user is permitted to change it.
Max Password Aging	(Text field) Optional. Appears for administrators only when the **Action** is *CHANGE PASSWORD*. Defines the maximum number of days that a password may be used before the system prompts the user to change it.
No. Days Since Password Update	(Text field) Optional. Appears for administrators only when the **Action** is *CHANGE PASSWORD*. Indicates the number of days since the password was last modified.
Network Partition Name	(Multi-select Combo box) Select the partition(s) to assign to the user. The choices are *PARTITION01* through *PARTITION10*.

Table 16-1. DND GUI: Field Descriptions for the USER ADMINISTRATION Form (Continued)

Field	Description
Audible Alarm	(Radio buttons) Select the audible alarm feature option for the DND GUI only. The choices are: ■ *OFF* - Audible alarms are disabled (default) ■ *ON* - Audible alarms are enabled.
Critical (CR), **Major (MJ)**, and **Minor (MN)**	(Combo boxes) Select the desired sounds to use for the critical, major, and minor alarms. The choices are: ■ *Boat Horn* ■ *Horn* ■ *Ding* ■ *Loud Ding* ■ *Chord* ■ *Submarine* ■ *Doh* ■ *User Def 1* - Sound defined by the user ■ *User Def 2* - Sound defined by the user ■ *User Def 3* - Sound defined by the user.
Interval	(Text fields) Enter the audible alarm beeping interval for **Critical (CR)**, **Major (MJ)**, and **Minor (MN)** alarms. The values are from 5 to 300 seconds.

DND Forms: The USER ADMINISTRATION Menu

Sample Form

Choose the USER ADMINISTRATION option from the DND Forms MAIN MENU to manage user login information or reset an operator's password. The USER ADMINISTRATION menu is shown in Figure 16-2.

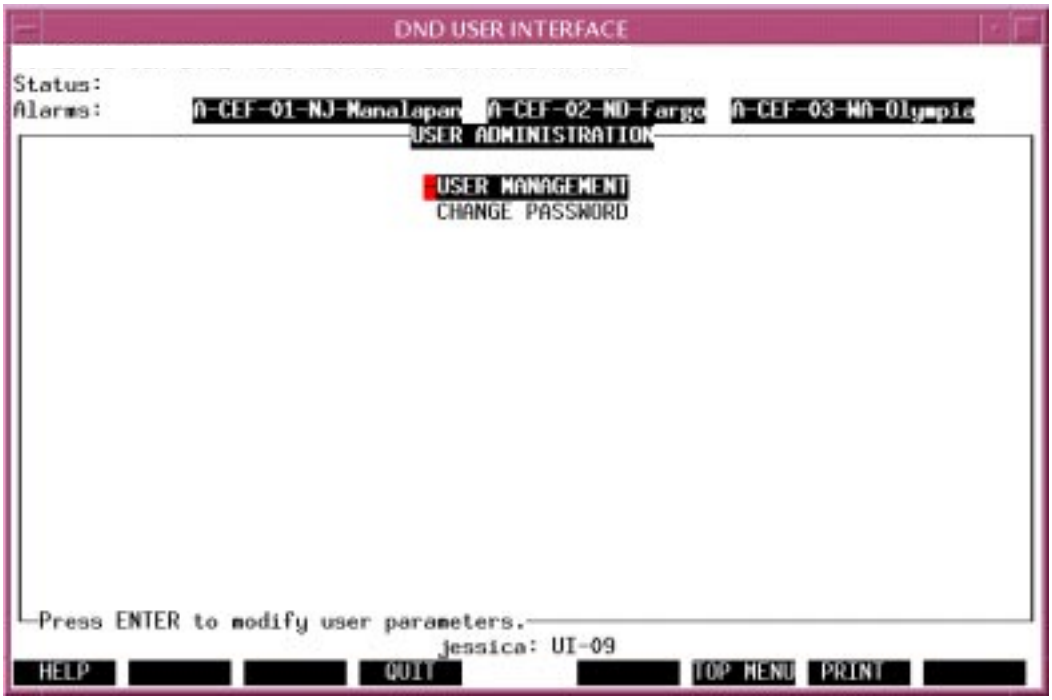


Figure 16-2. DND Forms: USER ADMINISTRATION Menu

DND Forms: The USER MANAGEMENT Form

Sample Form

To access the USER MANAGEMENT form, select USER ADMINISTRATION from the DND MAIN MENU, then select USER MANAGEMENT. Figure 16-3 shows an example of a USER MANAGEMENT form.

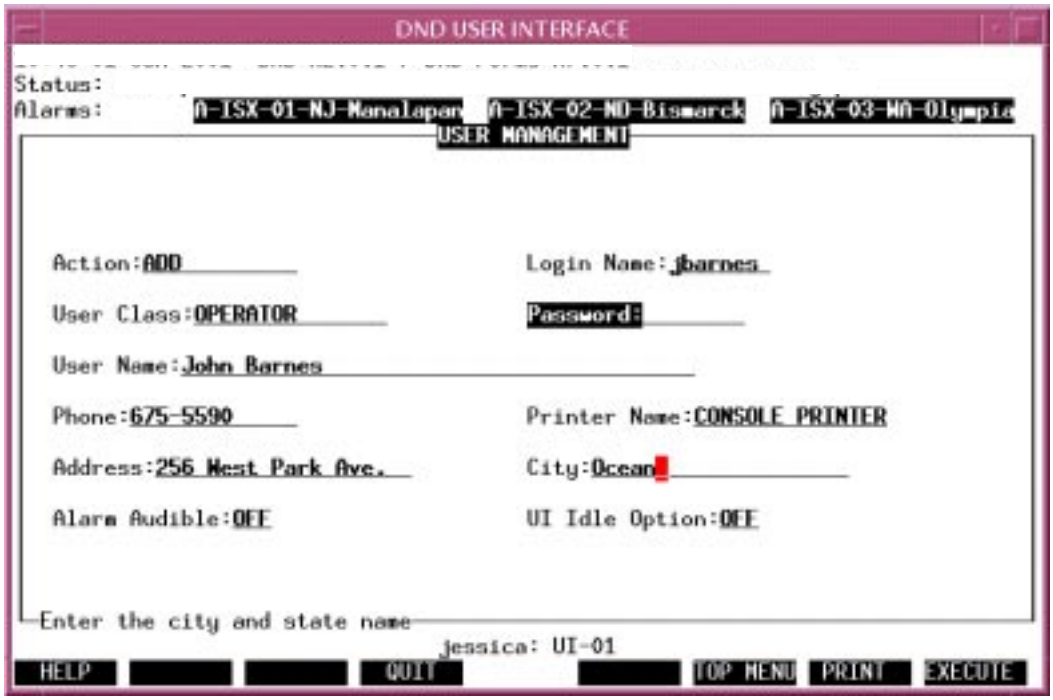


Figure 16-3. DND Forms: USER MANAGEMENT Form, *ADD* Action

DND Forms: The USER MANAGEMENT Form (Continued)

Field Descriptions

Table 16-2 describes the fields used in the USER MANAGEMENT form:

Table 16-2. DND Forms: Field Descriptions for the USER MANAGEMENT Form

Field	Description
Action	Mandatory. ■ *ADD* - Adds a user login. ■ *CHANGE* - Changes USER MANAGEMENT fields other than the **Login Name** and **Password**. To change the **Login Name**, *DELETE* and *ADD* the login. To change the password, use the CHANGE PASSWORD form. ■ *DELETE* - Deletes a user login.
Login Name	Mandatory. The login name by which the user will be known to the DND, and which will be required on login. Login Name may contain only two through eight alpha-numeric characters (0-9, A-Z, and a-z). One lower-case letter is required. It may not contain control characters, punctuation marks, or spaces.
User Class	The type of login. The choices are: ■ *OPERATOR* - The user is an operator ■ *ADMIN* - The user is an administrator ■ *CONTROLLER* - (only used by ITM-XMC when logging into the DND).
Password	Mandatory. Appears only for an **Action** of *ADD*. The password used to authenticate the user. A password must be at least six characters. It must contain at least two alphabetic and one numeric or special character. It may not contain #, @, -, Backspace, or Delete.
New Password	Mandatory. (Displayed for the CHANGE PASSWORD form.) The new password used to assign to the user. A password must be at least six characters. It must contain at least two alphabetic and one numeric or special character. It may not contain #, @, -, Backspace, or Delete.

Table 16-2. DND Forms: Field Descriptions for the USER MANAGEMENT Form (Continued)

Field	Description
User Name	Up to 40 alphanumeric characters including numbers, letters, dash, open parenthesis, closed parenthesis, period, comma, and space. The name of the person owning the login specified in **Login Name**.
Phone	(Text field) Up to 13 alphanumeric characters, including 0-9, -, and space. No comma or letters allowed. The telephone number of the person cited in **User Name**.
Printer Name	Mandatory. The name of the printer to be in effect for this login. Use the CHOICES menu to select the name. The default, *CONSOLE PRINTER,* appears in every CHOICES menu. Names of remote printers installed in the **printcap** file of Sun systems also will appear. For more information, refer to Chapter 2, Getting Started. To reset the **Printer Name**, use the *CHANGE* **Action**.
Address	Up to 20 alphanumeric characters. The address of the person cited in **User Name**.
City	Up to 20 alphanumeric characters. The city of the person cited in **User Name**.
Alarms Audible	A switch for the DND Forms only: ■ *ON* - When an alarm occurs, an audible signal will sound at the terminal where the user is logged in. ■ *OFF* - An audible signal will not sound.
UI Idle Option	Set a threshold value for terminal idle time: ■ *ON* - Log off automatically after IDLE_ THRESHOLD minutes of idle time. For details, see "Environment Variables" in Chapter 2, Getting Started. ■ *OFF* - Remain logged on until the user logs off. The **UI IDLE Option** exists for administrators only.

DND Forms: The CHANGE PASSWORD Form

Sample Form

To access the CHANGE PASSWORD form, select USER ADMINISTRATION from the DND MAIN MENU, then select CHANGE PASSWORD. Figure 16-4 shows an example of a USER MANAGEMENT form.

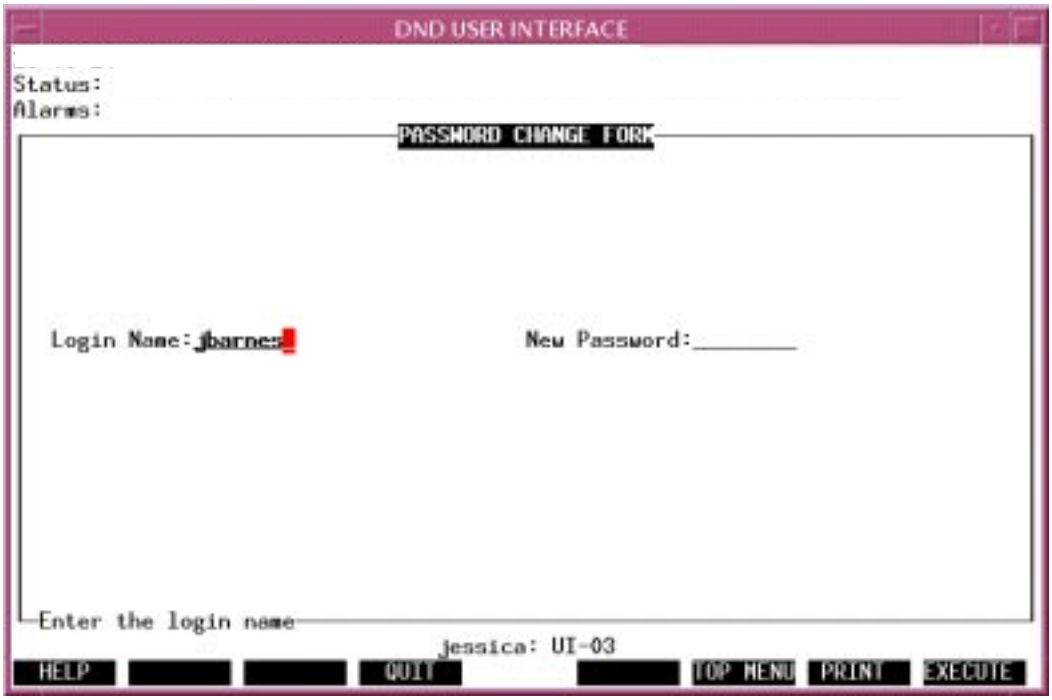


Figure 16-4. DND Forms: USER ADMINISTRATION, CHANGE PASSWORD Form

Report Operations

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Background

Introduction

When generating a report, you can specify search criteria for the records that are to be extracted from the DND database. The search criteria restrict the report to records that have certain values in certain fields.

DND GUI Information

With the exception of the intertie reports, the DND reports can be accessed using the Reports task button. DND allows you to generate reports containing data from the DND database. The reports are displayed in a separate Netscape window and can be printed with the ***PRINT*** option from Netscape's **FILE** pull-down menu list.

NOTE:
TIP: To increase or decrease the font size in the Netscape window, select the **Edit --> Preferences** options from the Netscape task bar to display the PREFERENCES window. Once in the window, select the **Fonts --> Fixed width font** folders and change the desired font options.

DND Forms Information

Use the REPORT OPERATIONS MENU to generate reports containing data from the DND database. The reports can be displayed on screen, printed or written to a DOS diskette. The DOS diskette option presumes you will access the diskette from a DOS system. No provision is made for recovering the report from the diskette in the DND.

Objectives

This chapter provides background information to help you generate various types of reports.

Background (Continued)

Related tasks

For related tasks, see the following General Tasks in Volume II:

DND GUI:

- Generating a Report GT 17.1G
- Printing a Report GT 17.2G
- Generating a Performance Monitoring Error Report GT 17.3G
- Creating/Modifying a 24-Hour Performance Monitoring Report Format GT 17.4G
- Deleting a 24-Hour Performance Monitoring Report Format GT 17.5G

DND Forms:

- Generating Reports GT 17.1U
- Displaying and Printing Reports GT 17.2U
- Transferring Reports To DOS Diskette GT 17.3U
- Creating a New Report Format GT 17.4U
- Modifying a Report Format GT 17.5G
- Renaming a Report Format GT 17.6U
- Deleting a Report Format GT 17.7U
- Generating an Alarm Query Report GT 17.8U

Using Report Forms

Report Navigation

DND GUI Navigation

Report forms do not have as many different stages as the Provisioning forms. When the form is accessed, all of the fields needed to generate the report will appear, except for the Alarm Log and NPC Report. When the form appears, select the field values you wish to include in the report.

To navigate through a report, use any of the following:

- The up and down arrows on the bottom of the window to move up or down the screen
- The left and right scroll arrows on the right of the window to move across the window
- The Pg Up or Pg Dn buttons on your keyboard.

When finished entering field values, clicking Continue... will display the fields in read-only mode for a final verification. Click Execute to generate the report. The report will appear in a separate Netscape window. If desired, you can open another report form and fill it out while the previous report is generating.

DND Forms Navigation

In DND Forms, you can move through the report using TOPPAGE, LASTPAGE, NEXTPAGE, and PREVPAGE, or by entering the page number in the **Display Page** field. Reports sent to the printer are also paged, but with a different page size than is used on the screen.

Metacharacters

In text fields, you can use wild-card abbreviations (metacharacters) as follows:

***** stands for any number of any alphanumeric characters (including none) at that position in the string.

? stands for a single occurrence of any single character at that position in the string.

For example, *AB5** finds AB544, AB54, AB5, AB55D, etc. *ABC?5* finds ABC45, ABCD5, etc., but not ABC or ABC5.

Using Report Forms (Continued)

Creating and Customizing Report Formats

Pre-defined formats are supplied for DND GUI and DND Forms reports. You may also create and edit specialized formats which appear as **Available Formats** choices. This is performed using the DND Forms Interface. When you create a specialized format, you specify which data items will be shown in the report and how they are arranged. For more information, see Appendix A, Summary of Fields for Customized Reports.

Several fixed formats are also supplied that cannot be customized. For instance, it is not possible to modify or customize the DND Forms AUDIT/ SYNCHRONIZATION RESULTS report.

DND Forms: Report Operations Menu

Sample Menu

Select REPORT OPERATIONS from the DND Forms MAIN MENU. The REPORT OPERATIONS MENU is displayed, as shown in Figure 17-1.

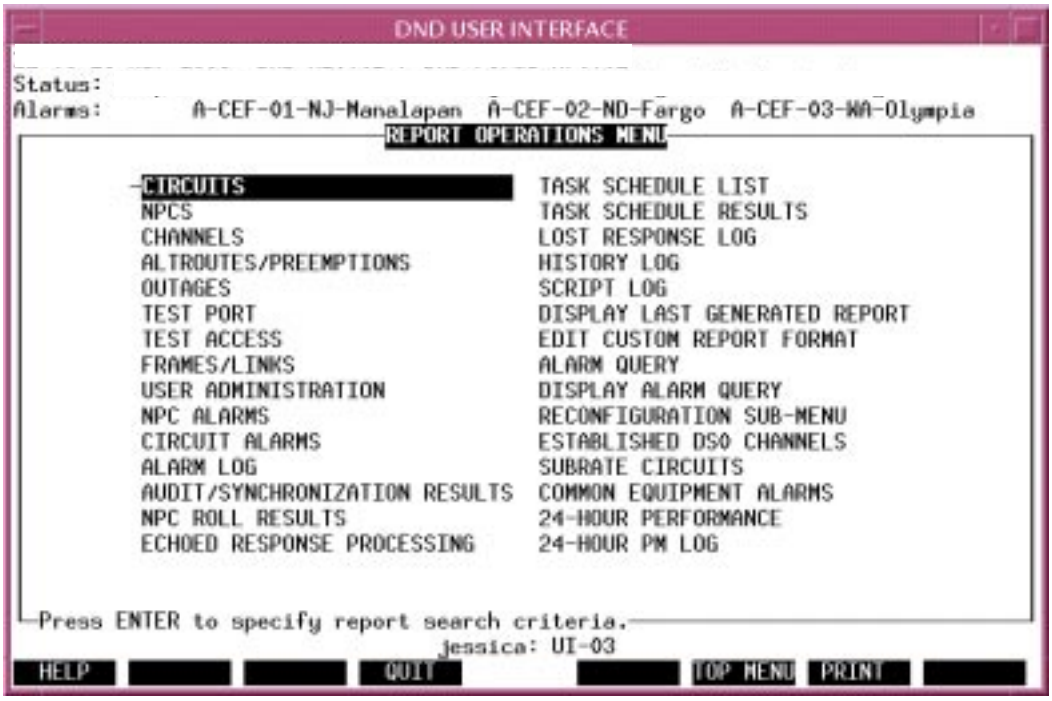


Figure 17-1. REPORT OPERATIONS MENU

NOTE:
Some report options only appear on the REPORT OPERATIONS MENU if the related DND feature is activated, as shown in Table 17-1.

Table 17-1. DND Special Report Options

Report Option	DND Feature
ESTABLISHED DS0 CHANNELS	X.50 Subrate
SUBRATE CIRCUITS	X.50 Subrate
24-HOUR PERFORMANCE	24-Hour Performance Monitoring
24-HOUR PM LOG	24-Hour Performance Monitoring

DACS Alarm Log Report

Description

The ALARM LOG reports all DACS alarms received by the DND. The selection criterion is by **Site Name**. The three types of ALARM LOG reports are:

- **Facility** - Displays the alarms which relate to the facility terminating units (NPCs)
- **Equipment** - Displays the alarms which relate to the common equipment
- **All** - Displays both facility and Equipment related alarms

DACS Alarm Log Report (Continued)

DND GUI: Sample Report Form

Figure 17-2 displays a sample DACS ALARM LOG Report form.

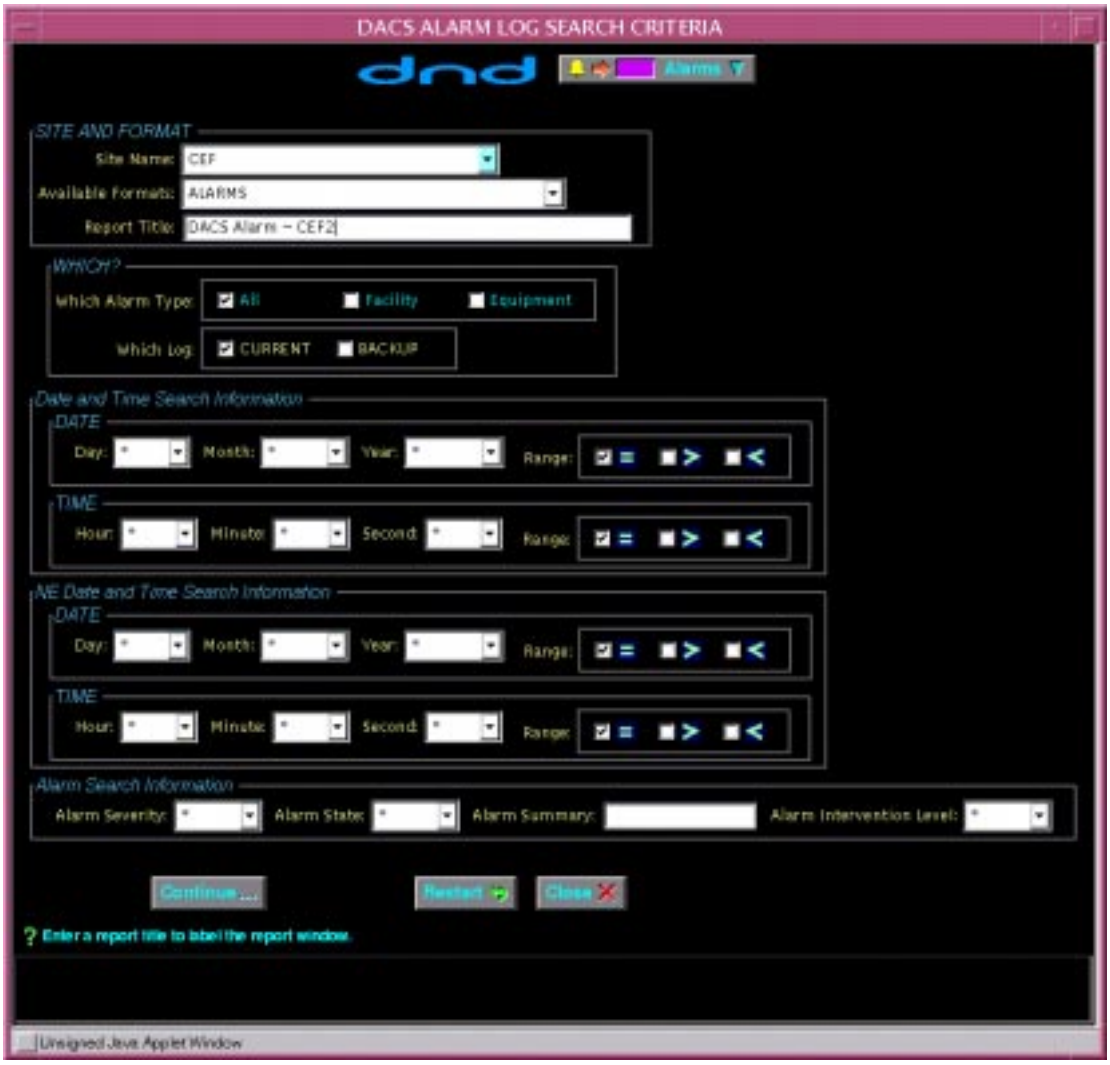


Figure 17-2. DND GUI: Sample DACS ALARM LOG Report Form - *ALL* Alarm Types

Different fields will appear on the form depending on the selection in the **Which Alarm Type:** field.

DACS Alarm Log Report (Continued)

DND Forms: Sample Report Form

Figure 17-3 displays a sample ALARM LOG Report form.

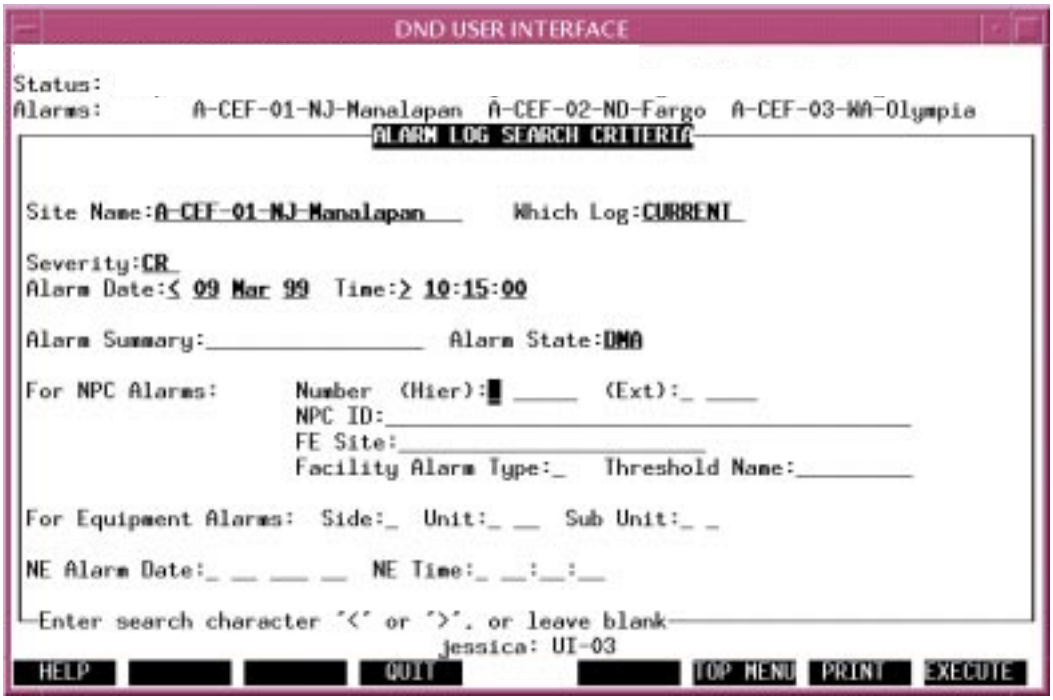


Figure 17-3. DND Forms: Sample ALARM LOG Report Form

DACS Alarm Log Report (Continued)

Field Descriptions

The DACS/ALARM LOG Report form fields are described in Table 17-2.

Table 17-2. Field Descriptions for the DACS/ALARM LOG Report Form

Field	Description
GUI and Forms: **Site Name**	(Combo box) Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
GUI only: **Available Formats**	(Combo box) Select an ALARM LOG Report format. If no customized formats were created using the DND Forms Interface, the only format available will be *ALARMS*.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
GUI only: **Which Alarm Type**	(Radio buttons) Select the type of alarm to display in the report. The choices are: ■ **All** - Displays all DACS alarms ■ **Facility** - Displays NPC related alarms ■ **Equipment** - Displays common equipment related alarms
GUI and Forms: **Which Log**	(Radio buttons) Select the log you want to retrieve alarm data from. The choices are: ■ **CURRENT** - The current database ■ **BACKUP** - The history database
*GUI:***Date/NE Date** *Forms:* **Alarm Date/ NE Alarm Date**	(Combo boxes) Select the date criteria for the report. The **Date** fields are: ■ **Day** - Select the day (*01* through *31*) ■ **Month** - Select the month (*Jan* through *Dec*) ■ **Year** - Select the year (*1990* through *2037*)

Table 17-2. Field Descriptions for the DACS/ALARM LOG Report Form (Continued)

Field	Description
GUI and Forms: **(Date/NE Date) Range**	(Radio buttons) Select the **Date** range for the report. The choices are: ■ **=** - (*GUI only*) Displays alarms which occurred ON the **Date** ■ **>** - Displays alarms which occurred AFTER the **Date** ■ **<** - Displays alarms which occurred BEFORE the **Date**
GUI and Forms: **Time/NE Time**	(Combo boxes) Select the time criteria for the report. The **Time** fields are: ■ **Hour** - Select the hour (00 through 23) ■ **Minute** - Select the minute (00 through 59) ■ **Second** - Select the second (00 through 59)
GUI and Forms: **(Time/NE Time) Range**	(Radio buttons) Select the time range. The choices are: ■ **=** - (*GUI only*) Displays alarms which occurred ON the **Time** ■ **>** - Displays alarms which occurred AFTER the **Time** ■ **<** - Displays alarms which occurred BEFORE the **Time**
GUI: **Alarm Severity** *Forms:* **Severity**	(Combo box) Select the alarm severity to display in the report. The choices are: ■ * - Displays all alarm severities ■ *CR* - Displays critical alarms ■ *MAJ* - Displays major alarms ■ *MIN* - Displays minor alarms ■ *INF* - Displays informational alarms ■ *CLR* - Displays idled alarms
GUI and Forms: **Alarm Summary**	(Text field) Enter the alarm summary matching information. Unless the exact Summary string is known, it is best to use wild card searches for this field (i.e. *CCN*).

Table 17-2. Field Descriptions for the DACS/ALARM LOG Report Form (Continued)

Field	Description
GUI: **NPC Specifier/NPC** *Forms:* **Number**	(Radio buttons/Text field) Select the NPC in which to display alarms. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI and Forms: **(NPC) Range**	(Radio buttons) Select the range criteria of NPCs in which display alarm report information. The choices are: ■ **=** - (*GUI only*) Displays NPC alarms for NPC numbers EQUAL to the NPC specified ■ **>** - Displays NPC alarms for NPC numbers GREATER than the NPC specified ■ **<** - Displays NPC alarms for NPCs numbers LESS than the NPC specified
GUI and Forms: **Facility Alarm Type**	(Combo box - displayed only if **Facility** is selected in the **Alarm Type** field.) Select the facility alarm type to display in the report. The choices are: ■ * - All facility alarm types ■ *A* - Primary AIS; i.e., Alarm Indication Signal received in all 32 time slots ■ *B* - BER: Bit Error Rate detected in received signal ■ *C* - LCMA: Loss of CRC4 Multiframe Alignment in TS0 ■ *E* - RBER: Remote Bit Error Rate detected in Bit 4 of TS0 ■ *F* - LOF PBF: Loss Of Frame Primary Block Failure

Table 17-2. Field Descriptions for the DACS/ALARM LOG Report Form (Continued)

Field	Description
GUI and Forms: **Facility Alarm Type, Continued**	■ *I* - RAIS: Remote AIS detected in Bit 4 of TS0 ■ *L* - LMA: Loss of Multiframe Alignment in CAS TS16 ■ *M* - R16: RAI received in Bit 6 of Frame 0 of TS16 ■ *R* - LOS PBF: Loss Of Signal type Primary Block Failure, or Primary Block Alarm (PBA) ■ *S* - SFI: Synchronization Failure Indication in Bit 5 of TS0 ■ *V* - A16: AIS received in CAS TS16 ■ *X* - EER: Excessive Error Rate ■ *Y* - RAI: Remote Alarm Indication received in Bit 3 of NFW of TS0
GUI and Forms: **Alarm State**	(Combo box field) Select the alarm state to display in the report. The choices are: ■ * - All alarm states ■ *DMA* - Deferred Maintenance Alarm Minor ■ *MI* - Maintenance Information Alarm ■ *PMA* - Prompt Maintenance Alarm Minor ■ *PMC* - Prompt Maintenance Alarm Critical
GUI: **Far End Site** *Forms:* **FE Site**	(Combo box - displayed only if **Facility** is selected in the **Alarm Type** field.) Select the name of the DACS at the Far End.
GUI and Forms: **Side**	(Combo box field - displayed only if **Equipment** is selected in the **Alarm Type** field.) Select the unit side (*0* or *1*) to display alarms for. * indicates both sides.
GUI and Forms: **Unit**	(Combo box - displayed only if **Equipment** is selected in the **Alarm Type** field.) Select the DACS II unit (*01* through *16*, *A*, and *B*) to display alarms for.

Table 17-2. Field Descriptions for the DACS/ALARM LOG Report Form (Continued)

Field	Description
GUI and Forms: **(Unit) Range**	(Radio buttons - displayed only if **Equipment** is selected in the **Alarm Type** field.) Select the unit range criteria in which to display alarms for. The choices are: ■ **=** - (*GUI only*) Displays alarms for units EQUAL to the number of the **Unit** selected ■ **>** - Displays alarms for units GREATER than the number of the **Unit** selected ■ **<** - Displays alarms for units LESS than the number of the **Unit** selected
GUI and Forms: **Sub Unit**	(Combo box - displayed only if **Equipment** is selected in the **Alarm Type** field.) Select the sub unit number (if available) for the **Unit** selected.
GUI and Forms: **(Sub Unit) Range**	(Radio buttons - displayed only if **Equipment** is selected in the **Alarm Type** field.) Select the sub unit range criteria in which to display alarms for. The choices are: ■ **=** - (*GUI only*) Displays alarms for units EQUAL to the number of the **Sub Unit** selected ■ **>** - Displays alarms for units GREATER than the number of the **Sub Unit** selected ■ **<** - Displays alarms for units LESS than the number of the **Sub Unit** selected

DACS Alarm Log Report (Continued)

Sample ALARM LOG Report

Figure 17-4 displays a sample ALARM LOG Report.

```
09 Mar 1999  11:18:39

----------A-CEF-01-NJ-Manalapan----------ALARM LOG----------ALARMS------------

Date  Time     Sev Summary           NPC   Type  Threshold Un  S Sub Fld1 Fld2

09Mar 11:18:13 CLR THRES IDLE        02201       15MIN

09Mar 11:03:49 INF THRES ALARM       02201       UAS_15mn

09Mar 11:03:13 CLR THRES IDLE        02201       15MIN

09Mar 10:48:47 INF THRES ALARM       02201       UAS_15mn

09Mar 10:48:13 CLR THRES IDLE        02201       15MIN

09Mar 10:33:46 INF THRES ALARM       02201       UAS_15mn
```

Figure 17-4. Sample DACS/ALARM LOG Report

Circuit Alarm Report

Description

The CIRCUIT ALARM Report form states the values of various fields for circuits that have as an end point an NPC in alarm. The fields map mainly to the CIRCUIT PROVISIONING form. One format is provided for alarms that identify the NPC and channel information of the circuit in alarm.

Circuit Alarm Report (Continued)

DND GUI: Sample Report Form

Figure 17-5 displays a sample CIRCUIT ALARM Report form.

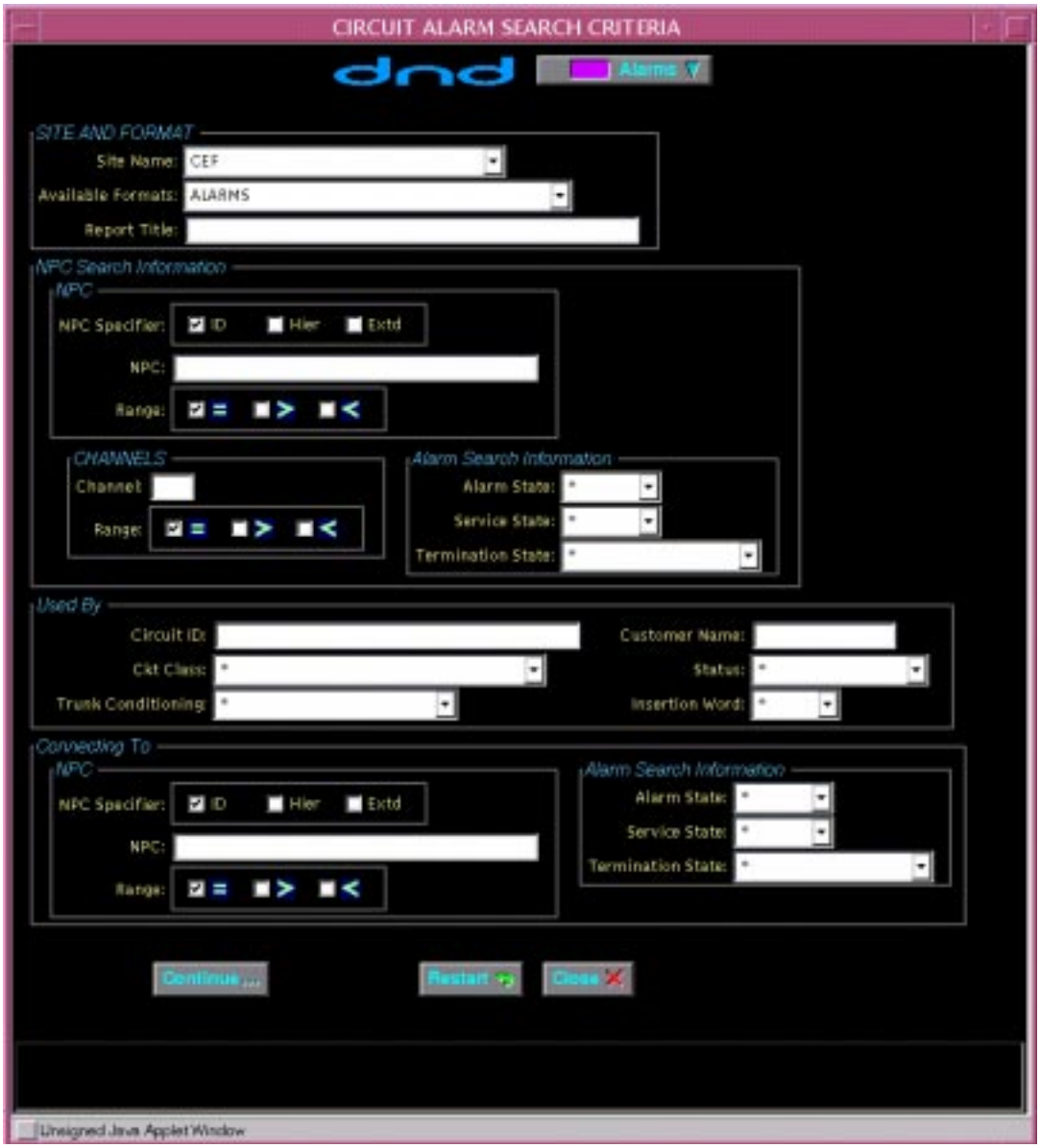


Figure 17-5. DND GUI: Sample CIRCUIT ALARM Report Form

Circuit Alarm Report (Continued)

DND Forms: Sample Report Form

Figure 17-6 displays a sample CIRCUIT ALARM Report form.

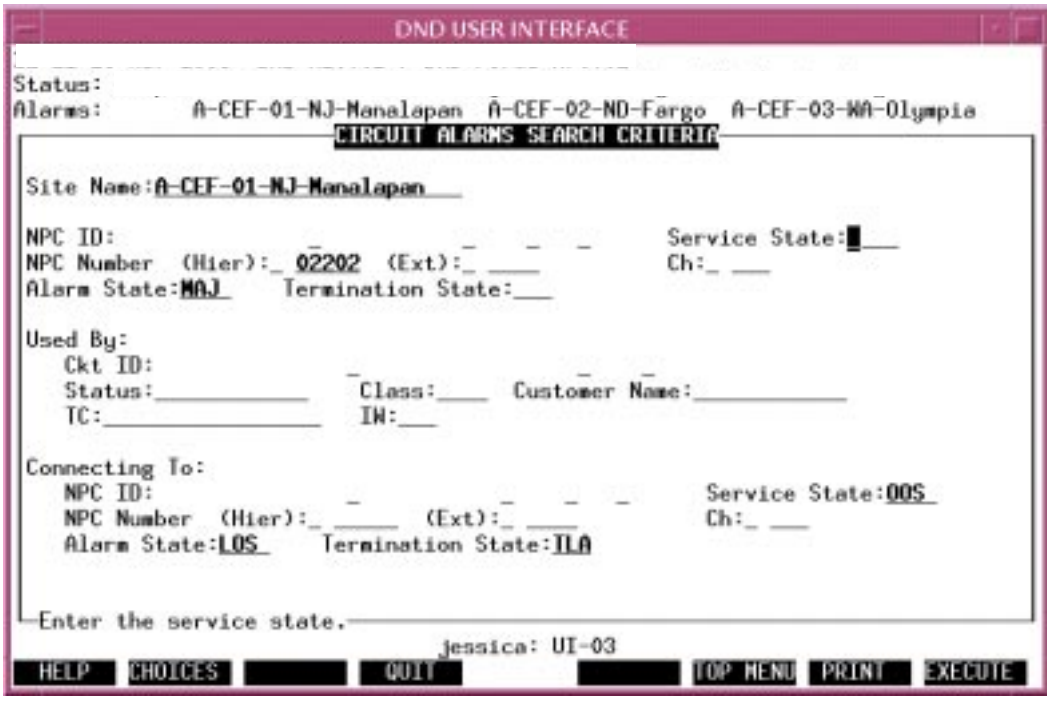


Figure 17-6. DND Forms: Sample CIRCUIT ALARM Report Form

Circuit Alarm Report (Continued)

Field Descriptions

The field values for the CIRCUIT ALARM Report form are described in Table 17-3.

Table 17-3. Field Descriptions for the CIRCUIT ALARM Report Form

Field	Description
GUI and Forms: **Site Name**	(Combo box) Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
GUI only: **Available Formats**	(Combo box) Select a Circuit Alarm Report format. If no customized formats were created using the DND Forms Interface, the only format available will be *ALARMS*.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
GUI: **NPC Specifier/ NPC** *Forms:* **NPC Number/ NPC ID**	(Radio buttons) Select the NPC of one side of the circuit in which to display alarms for. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **(NPC) Range**	(Radio buttons) Select the range criteria of NPCs of the circuit in which display alarm report information for. The choices are: ■ **=** - (*GUI only*) Displays circuit alarms where one side of the circuit has an NPC number EQUAL to the NPC specified ■ **>** - Displays circuit alarms where one side of the circuit has an NPC number GREATER than the NPC specified ■ **<** - Displays circuit alarms where one side of the circuit has an NPC number LESS than the NPC specified
GUI: **Channel** *Forms:* **Ch**	(Text field) Enter the NPC channel number, 0-31 for CEPT or 1-24 for NAS. This field is displayed for contiguous or alternating circuits. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.

Table 17-3. Field Descriptions for the CIRCUIT ALARM Report Form (Continued)

Field	Description
GUI and Forms: **(Channel) Range**	(Radio buttons) Select the range criteria of channels in which display report information. The choices are: ■ **=** - Displays alarms for circuits with the channel number EQUAL to the **Channel** specified ■ **>** - Displays alarms for circuits with channel numbers GREATER than the **Channel** specified ■ **<** - Displays alarms for circuits with channel numbers LESS than the **Channel** specified
GUI and Forms: **Alarm State**	(Combo box) Select the circuit alarm state to display. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI and Forms: **Service State**	(Combo box) Select the service state to display. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI and Forms: **Termination State**	(Combo box) Select to display circuits with ONE of the following termination states: ■ * - All termination states ■ *TLR* - Terminate and leave released ■ *TLA* - Terminate and leave active
GUI: **Circuit ID** *Forms:* **(Used By) Ckt ID**	(Text field) Enter the circuit name to receive a report for a particular circuit. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **Customer Name**	(Text field) Enter the customer name; for specifying a particular customer.
GUI and Forms: **Status**	(Combo box) Select the circuit status to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.

Table 17-3. Field Descriptions for the CIRCUIT ALARM Report Form (Continued)

Field	Description
GUI: **Ckt Class** *Forms:* **Class**	(Combo box) Select to display circuits with a circuit class of ONE of the following: ■ *FDX: FULL DUPLEX* ■ *HDX: HALF DUPLEX* ■ *BBL: BACKBONE LEG* ■ *BRD: BROADCAST LEG* ■ *DMB: DIGITAL MPT BRIDGE* ■ *BKB: BCON BACKBONE* ■ *LEG: BCON TRIBUTARY*
GUI: **Trunk Conditioning** *Forms:* **TC**	(Combo box) Select the **Trunk Conditioning** to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI: **Insertion Word** *Forms:* **IW**	(Combo box) Select the **Insertion Word** to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
(Connecting To) *GUI:* **NPC Specifier/ NPC** *Forms:* **NPC Number/ NPC ID**	(Radio buttons/Text field) Select the NPC of the other side of the circuit in which to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **(Connecting To - NPC) Range**	(Radio buttons) Select the range criteria of NPCs of the circuit in which to display alarm report information. The choices are: ■ **=** - Displays circuit alarms where one side of the circuit has an NPC number EQUAL to the NPC specified ■ **>** - Displays circuit alarms where one side of the circuit has an NPC number GREATER than the NPC specified ■ **<** - Displays circuit alarms where one side of the circuit has an NPC number LESS than the NPC specified

Table 17-3. Field Descriptions for the CIRCUIT ALARM Report Form (Continued)

Field	Description
Forms: **(Connecting To) Ch**	Enter the NPC channel number, 0-31 for CEPT or 1-24 for NAS. This field is displayed for contiguous or alternating circuits. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **(Connecting To) Alarm State**	(Combo box) Select the circuit **Alarm State** to display in the report. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI and Forms: **(Connecting To) Service State**	(Combo box) Select the **Service State** to display in the report. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI and Forms: **(Connecting To) Termination State**	(Combo box) Select to display circuits with ONE of the following termination states: ■ * - All termination states ■ *TLR* - Terminate and leave released ■ *TLA* - Terminate and leave active

Sample CIRCUIT ALARM Report

Figure 17-7 displays a sample CIRCUIT ALARM Report.

```
09 Mar 1999  11:56:38
----------A-CEF-05-TX-Dallas----------CIRCUIT ALARMS----------ALARMS----------
Customer     Circuit_ID                                NPC   Alm  T_NPC Alm  BW
             215-213                                   02215 INFO 02213 NONE 01
             ckt2                                      02215 INFO 02218 NONE 01
```

Figure 17-7. Sample CIRCUIT ALARM Report

NPC Alarm Report

Description

The NPC ALARM Report form states the values of various fields for NPC alarms. The fields map mainly to the NPC PROVISIONING form. One format is provided for ALARMS that identify the NPC and lists **Service State**, **Alarm State** and **Alarm Aging** information.

DND GUI: Sample Report Form

Figure 17-8 displays a sample NPC ALARM Report form.

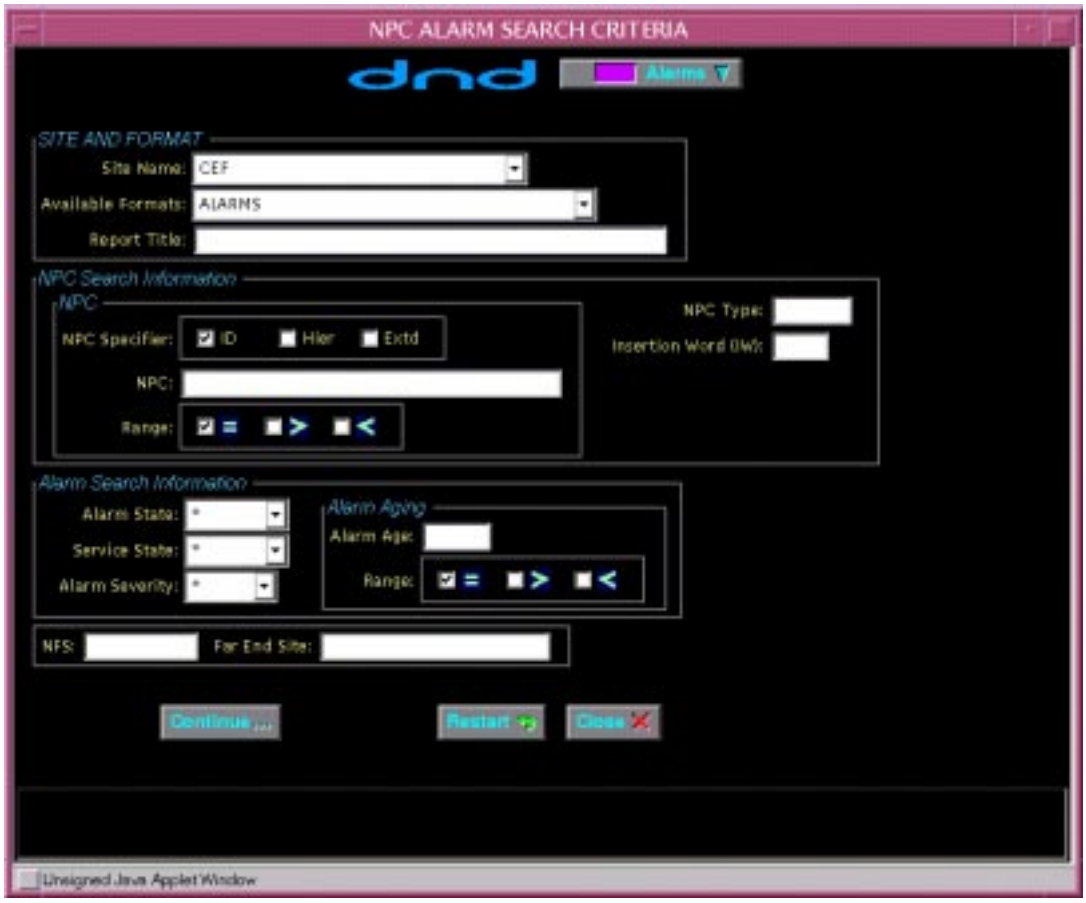


Figure 17-8. DND GUI: Sample NPC ALARM Report Form

NPC Alarm Report Form (Continued)

DND Forms: Sample Report

Figure 17-9 displays a sample NPC ALARM Report form.

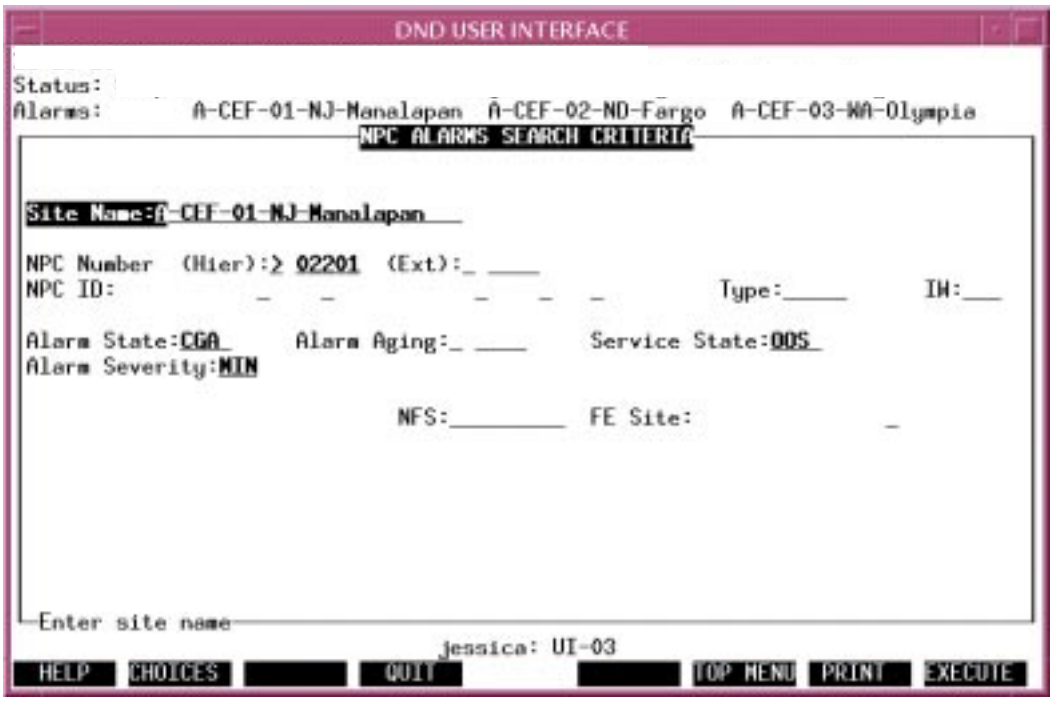


Figure 17-9. DND Forms: Sample NPC ALARM Report Form

NPC Alarm Report Form (Continued)

Field Descriptions

The field values for the NPC ALARM Report form are described in Table 17-4.

Table 17-4. Field Descriptions for the NPC ALARM Report Form

Field	Description
GUI and Forms: **Site Name**	(Combo box) Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
GUI only: **Available Formats**	(Combo box) Select an NPC Alarm Report format. If no customized formats were created using the DND Forms Interface, the only format available will be *ALARMS*.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
GUI: **NPC Specifier/ NPC** *Forms:* **NPC Number/ NPC ID**	(Radio buttons/Text field) Select the NPC to display in the report. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI and Forms: **(NPC) Range**	(Radio buttons) Select the range criteria of NPCs in which display in the report. The choices are: ■ **=** - Displays alarms for an NPC with a number EQUAL to the NPC specified ■ **>** - Displays alarms for NPCs with numbers GREATER than the NPC specified ■ **<** - Displays alarms for NPCs with numbers LESS than the NPC specified
GUI: **NPC Type** *Forms:* **Type**	(Text field) Enter the **NPC Type** (of the form *ABxyz*) to display this particular type of NPC in the report. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI: **Insertion Word** *Forms:* **IW**	(Text field) Enter the **Insertion Word** to display this particular type of NPC in the report. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI and Forms: **Alarm State**	(Combo box) Select the NPC Alarm State to display in the report. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.

Table 17-4. Field Descriptions for the NPC ALARM Report Form (Continued)

Field	Description
GUI and Forms: **Service State**	(Combo box) Select the **Service State** to display in the report. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI and Forms: **Alarm Severity**	(Combo box) Select the alarm severity to display in the report. The choices are: ■ * - Displays all alarm severities ■ *CR* - Displays critical alarms ■ *MAJ* - Displays major alarms ■ *MIN* - Displays minor alarms ■ *INF* - Displays informational alarms ■ *CLR* - Displays idled alarms
GUI: **Alarm Age** *Forms:* **Alarm Aging**	(Text field) Select the Alarm Age to display in the report. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI and Forms: **(Alarm Age) Range**	(Radio buttons) Select the alarm age criteria to display on the report. The choices are: ■ **=** - Display NPCs with an alarm age EQUAL to the **Alarm Age** specified ■ **>** - Display NPCs with alarm ages GREATER than the **Alarm Age** specified ■ **<** - Display NPCs with alarm ages LESS than the **Alarm Age** specified
GUI: **NFW** *Forms:* **NFS**	(Text field) Select the NFW value to display in the report. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI: **Far End Site** *Forms:* **FE Site**	(Text field) Enter the name of the DACS at the Far End.

NPC Alarm Report Form (Continued)

Sample NPC ALARM Report

Figure 17-10 displays a sample NPC ALARM Report.

```
09 Mar 1999  12:24:49
----------A-CEF-01-NJ-Manalapan----------NPC ALARMS----------ALARMS-----------
NPC_ID                                    NPC   Svc_St Type  Sev Alm_St Aging
02201NPC001                               02201 IS     PA164 MAJ PBA    0000
02205NPC001                               02205 OOS    PA164 MAJ OOS    0000
NPC02215                                  02215 IS     PA100 INF INFO   0000
```

Figure 17-10. Sample NPC ALARM Report

Common Equipment Alarm Report

Description

The COMMON EQUIPMENT ALARM Report form logs all of the equipment alarms received at the DND from the DACS.

DND GUI: Sample Report Form

Figure 17-11 displays a sample COMMON EQUIPMENT ALARM Report form.



Figure 17-11. DND GUI: COMMON EQUIPMENT ALARM Report Form

Common Equipment Alarm Report (Continued)

DND Forms: Sample Report Form

Figure 17-12 displays a sample COMMON EQUIPMENT ALARM Report form.

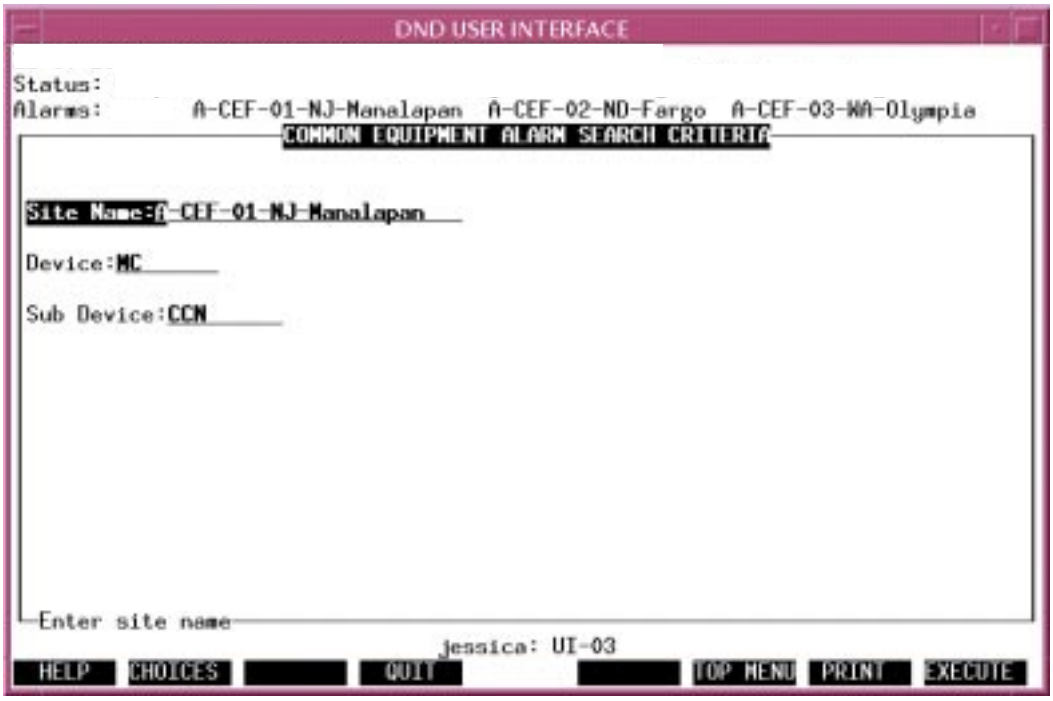


Figure 17-12. DND Forms: Sample COMMON EQUIPMENT ALARM Report Form

Common Equipment Alarm Report (Continued)

Field Descriptions

The field values for the COMMON EQUIPMENT ALARM Report form are described in Table 17-5.

Table 17-5. Field Descriptions for the COMMON EQUIPMENT ALARM Report Form

Field	Description
GUI and Forms: **Site Name**	(Combo box) Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
GUI only: **Available Formats**	(Combo box) Select a COMMON EQUIPMENT ALARM Report format. If no customized formats were created using the DND Forms Interface, the only format available will be *COMMON EQUIPMENT ALARMS*.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
GUI and Forms: **Device**	(Combo box) Select the device on the DACS to display in the report. The choices are: ■ * - All device alarms ■ *CCN* - Cross-connect Network alarms ■ *MC* - Main Controller alarms ■ *POWER* - Power unit alarms ■ *SYNC* - Synchronizer alarms ■ *UNIT* - Unit alarms ■ *NE* (GUI only) - Network Element
GUI and Forms: **Sub Device**	(Combo box) Select the sub device (if applicable) on the **Device** previously selected.

Common Equipment Alarm Report (Continued)

Sample COMMON EQUIPMENT ALARM Report

Figure 17-13 displays a sample COMMON EQUIPMENT ALARM Report.

```
09 Mar 1999  12:44:53
---A-CEF-01-NJ-Manalapan---COMMON EQUIPMENT ALARM---COMMON EQUIPMENT ALARM----
Date     Time     Device    Sub_Device Side Unit Sub_Unit Status
09Mar99  12:33:47 NE        NE         0    0    0        Critical
05Mar99  10:09:11 UNIT      DS3        0    11   1        Critical
26Feb99  11:41:32 CCN       ECCN       1    0    0        Major
26Feb99  11:39:33 UNIT      FC         1    2    2        Major
10Feb99  16:45:00 UNIT      FC         0    2    4        Major
```

Figure 17-13. Sample COMMON EQUIPMENT ALARM Report

Alarm Query Report

Description

The ALARM QUERY Report sends a command to the DACS to query alarm information. In order to perform this operation, the selected DACS must be In-service.

The only field on the report is **Site Name**: Select the name of the DACS where the report will be processed.

DND GUI: Sample Report Form

Figure 17-14 displays a sample ALARM QUERY Report form.



Figure 17-14. DND GUI: Sample ALARM QUERY Report Form

Alarm Query Report (Continued)

DND Forms: Sample Report Form

Figure 17-15 displays a sample ALARM QUERY Report form.

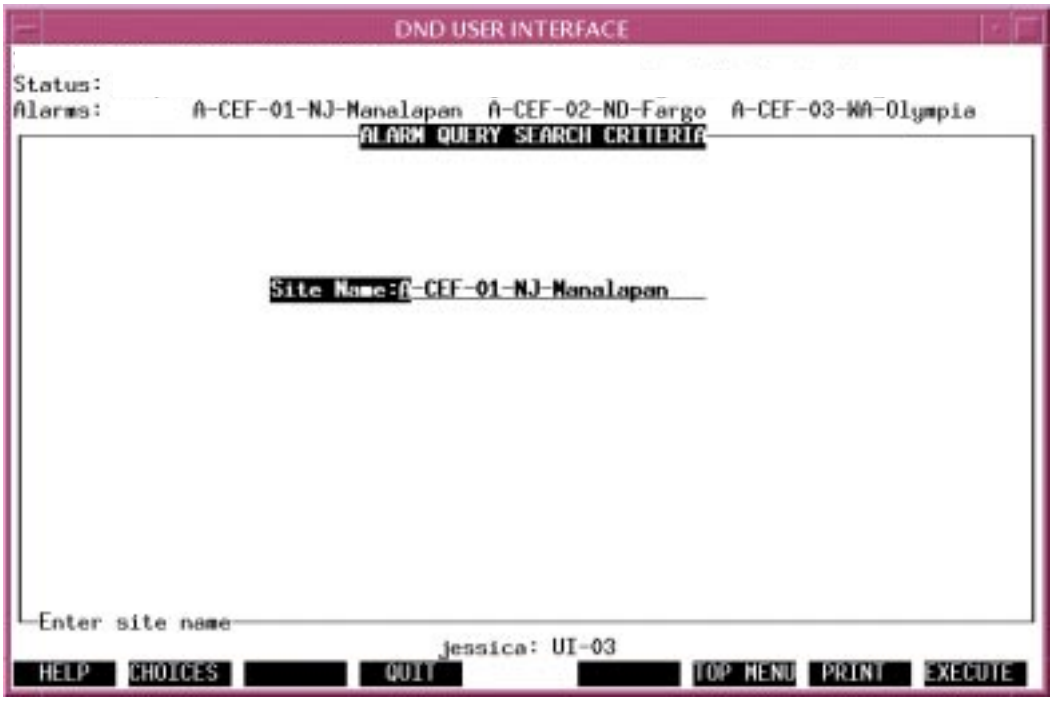


Figure 17-15. DND Forms: Sample ALARM QUERY Report Form

Alarm Query Report (Continued)

Sample ALARM QUERY Report

Figure 17-16 displays a sample ALARM QUERY Report.

```
09 Mar 99  13:02:28
A-CEF-01-NJ-Manalapan--------ALARM QUERY REPORT------------------------------

Alarm Conditions Outstanding
  A-CEF-01-NJ-Manalapan is alarming
    Critical, Major, Minor.

Summary totals for A-CEF-01-NJ-Manalapan:
  A-CEF-01-NJ-Manalapan has 1 Critical alarm(s).
  A-CEF-01-NJ-Manalapan has 2 Major alarm(s).
  A-CEF-01-NJ-Manalapan has 1 information indication(s).

Subtotals of frame summary alarms:
  1 Major alarm(s).

  DACS II Entities:
    Cross Connect Network (XC) 1 is in major alarm.

Subtotals for DS3 facility Alarm(s):
  1 Critical alarm(s).

DS3 Facility Alarm Information:
  Unit 11 facility 1 is in critical alarm.

Subtotals for FTU Network Processing Circuit (NPC) Alarm(s):
  1 Major alarm(s).
  1 Information indication(s).

Facility Terminating Unit (FTU) NPC Alarm(s):
  Unit 02 module 2 npc 01 (0201) is in major alarm.
  Unit 02 module 2 npc 15 (0215) has information.
```

Figure 17-16. Sample ALARM QUERY Report

History Log Report

Description

The HISTORY LOG Report lists the output messages from the selected DACS site. Each entry appears in chronological order.

The only field on the DND GUI HISTORY LOG Report form is the **Site Name**. A HISTORY LOG Report can be generated in DND Forms, but there is no DND Forms HISTORY LOG Report form.

Most command responses that are sent to the HISTORY LOG are generated from commands executed in multiplex passthrough, full passthrough, or SNIDER link commands (issued at the DACS). RTRV type messages that are generated in response to an audit/sync operation are not logged in the HISTORY LOG. Table 17-6 shows the commands whose responses are not logged into the HISTORY LOG.

Table 17-6. Messages Not Logged In History Log

Category	Command Code	Number	Use
NPC Provisioning	RTRV-STATE-EQPT::NPC	O.56311, O.56312	Utility query NPC state
NxDS0 Test Access	RTRV-TACC-T0::TG RTRV-TACC-T0::NPCTG	O.53081 O.53091, O.53092	Utility query test groups Utility query test group NPC
Audit/Sync	RTRV-CRS-T1 RTRV-PRMTR-T0 RTRV-PRMTR-T1 RTRV-STATE-EQPT::NPC::EQPD RTRV-ALM-EQPT RTRV-ALM-EQPT::NPC RTRV-PRMTR-EQPT::NPC:ALMOPT:AIS	O.52011 O.52041, O.52042 O.52051, O.52052 O.52053 O.52061, O.52071 O.53041 O.53111 O.81001 O.56021	Cross-connect map Utility query TO/FROM Utility query TO/FROM Utility query NPCs equipped Utility query alarms Utility query facility alarms Utility query AIS alarm option

History Log Report (Continued)

DND GUI: Sample Report Form

Figure 17-17 displays a sample HISTORY LOG Report form.



Figure 17-17. DND GUI: Sample HISTORY LOG Report Form

History Log Report (Continued)

Sample HISTORY LOG Report

Figure 17-18 displays a sample HISTORY LOG Report.

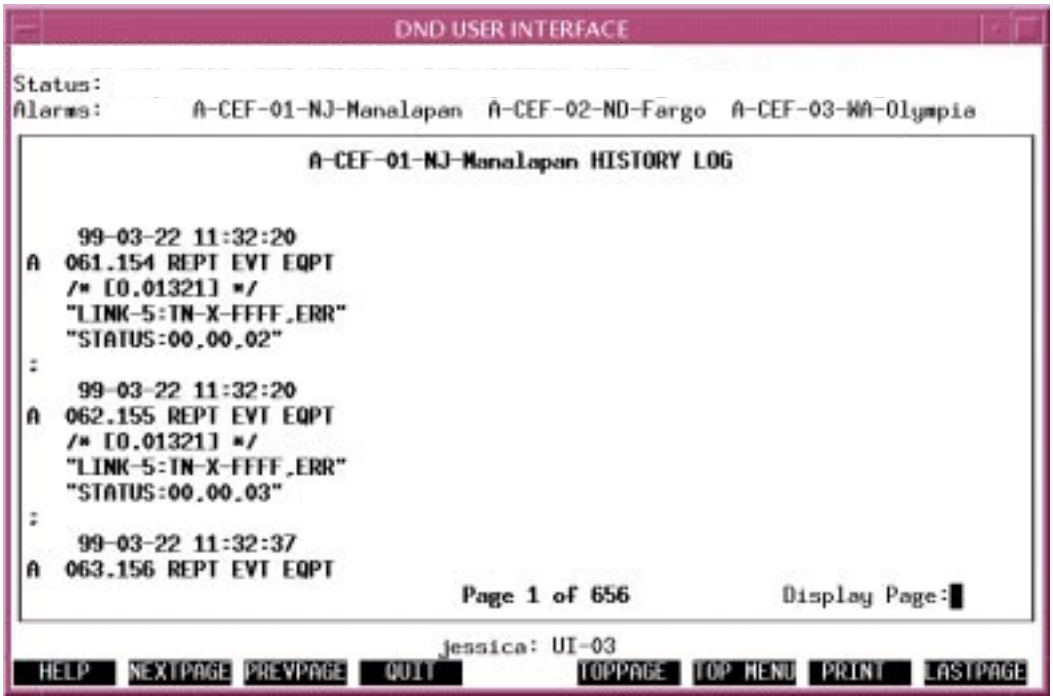


Figure 17-18. Sample HISTORY LOG Report

Message Log Report

Description

The MESSAGE LOG Report lists the messages that have been retrieved from the selected DACS site. Each entry appears in chronological order.

The message log supports the recovery of DACS events when restoring a DACS link when the **DACS Message Log** feature is enabled. If the time the link was down is greater than the specified **DACS Link Failure Length** time, a DACS log recovery is performed.The DND makes a request to the DACS to send all DACS messages that were output during the link outage. If the number of messages in the DACS message log is greater than what is provisioned by the **DACS Recovery Log**, the log recovery will not be performed.

For information on turning on the message log feature, see Chapter 2, *Getting Started*. For information on provisioning the **DACS Recovery Log** and **DACS Link Failure Length** time, see Chapter 5, *NE Provisioning*.

The only fields on the DND GUI MESSAGE LOG Report form are the **Site Name** and **Report Title**.

Message Log Report (Continued)

DND GUI: Sample Report Form

Figure 17-19 displays a sample MESSAGE LOG Report form.



Figure 17-19. DND GUI: Sample MESSAGE LOG Report Form

Message Log Report (Continued)

DND GUI: Sample Report

Figure 17-20 displays a sample MESSAGE LOG Report.

```
REPORT TITLE: A sample message log report

   111

    99-12-17 09:53:21 LINK-701

M  LGT USER::::DACSADM COMPLD

;

   112

    99-12-17 09:53:21

A  093.101 REPT EVT EQPT

   /* [O.01321] */

   "LINK-701:TN-X-FFFF,ERR"

   "STATUS:01,00,01"

;

   113

    99-12-17 09:53:37

A  094.102 REPT EVT EQPT

   /* [O.01321] */

   "LINK-701:TN-X-FFFF,ERR"

   "STATUS:00,00,01"

;
```

Figure 17-20. DND GUI: Sample Message LOG Report

Integrated Test Set Log Report

Description

The INTEGRATED TEST SET LOG Report lists any messages that have been retrieved from the selected DACS site that apply to the Integrated Test Set. Each entry appears in chronological order.

The Integrated Test Set messages that are logged are:

- A response to
  `CHG-TACC-TO::::TSM-ON:<EAST,WEST>`
- Autonomous Message:
  `RTRV-TACC-TO::TG-<tg-num>::TSM`

The only fields on the DND GUI INTEGRATED TEST SET LOG Report form are the **Site Name** and **Report Title**.

Message Log Report (Continued)

DND GUI: Sample Report Form

Figure 17-21 displays a sample INTEGRATED TEST SET LOG Report form.

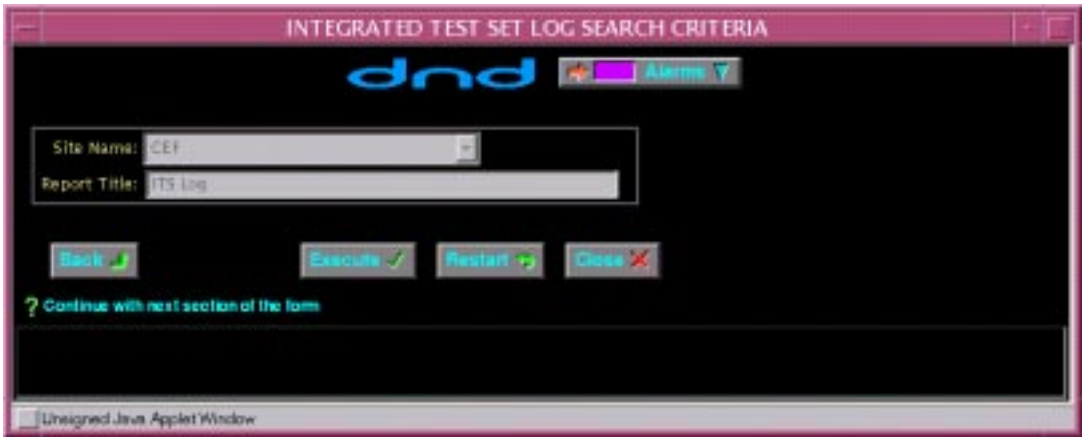


Figure 17-21. DND GUI: Sample INTEGRATED TEST SET LOG Report Form

Message Log Report (Continued)

DND GUI: Sample Report

Figure 17-22 displays a sample INTEGRATED TEST SET LOG Report.

```
REPORT TITLE: CEF INTEGRATED TEST SET LOG

Wed Mar 29 12:37:40 2000

========================

   161

    00-03-25 01:25:41 LINK-511

M  CHG TACC T0:::0024628636:TG-001:TSM-ON:EAST COMPLD

;

Wed Mar 29 12:46:40 2000

========================

   0

    00-03-25 01:34:39

A  065.000 RTRV TACC T0::TG-001::TSM COMPLD

   /* [O.53401] */

   /* generator status:pattern:bundle:signaling */

   "TSG-ON:511PRBS:EAST:SIG-0101"

   /* monitor status */

   "TSM-OFF"

   /* parameter:count or ratio */

   "STOTAL  :000531"
   "SOOS    :000000"
   "SAVAIL  :000531"
   "SUNAVAIL:000000"
   "BE      :1"
   "BER     :2.943E-08"
   "ES      :000001"
   "ESR     :1.883E-03"
   "SES     :000000"
   "SESR    :0.000E+00"
;

Wed Mar 29 12:51:12 2000

========================

   189

    00-03-25 01:39:13 LINK-511

M  CHG TACC T0:::0024625595:TG-001:TSM-ON:EAST COMPLD

;
```

Figure 17-22. DND GUI: Sample INTEGRATED TEST SET LOG Report

Script Log Report

Description

The SCRIPT LOG Report lists the contents of a user's script file. Script files can be edited, deleted, etc. using the FRAME COMMAND SCRIPT form obtained from the PASSTHROUGH MENU.

Sample SCRIPT LOG Report

Figure 17-23 displays a sample SCRIPT LOG Report.



Figure 17-23. Sample SCRIPT LOG Report

Circuit Report

Description

The CIRCUIT Report form provides reports on circuit records. Four default formats are provided. Each concentrates on a different aspect of the information that has been created about the circuit. The data is from information that was entered in the CIRCUIT PROVISIONING form, or placed in the database through ERP or by audit/synchronization.

The SEARCH CRITERIA form is similar to the CIRCUIT PROVISIONING form. You can search for circuits of a given **Status** and other fields given on the form in addition to the ones that will appear in the report.

Circuit Report (Continued)

DND GUI: Sample Report Form

Figure 17-24 displays a sample CIRCUIT Report form.

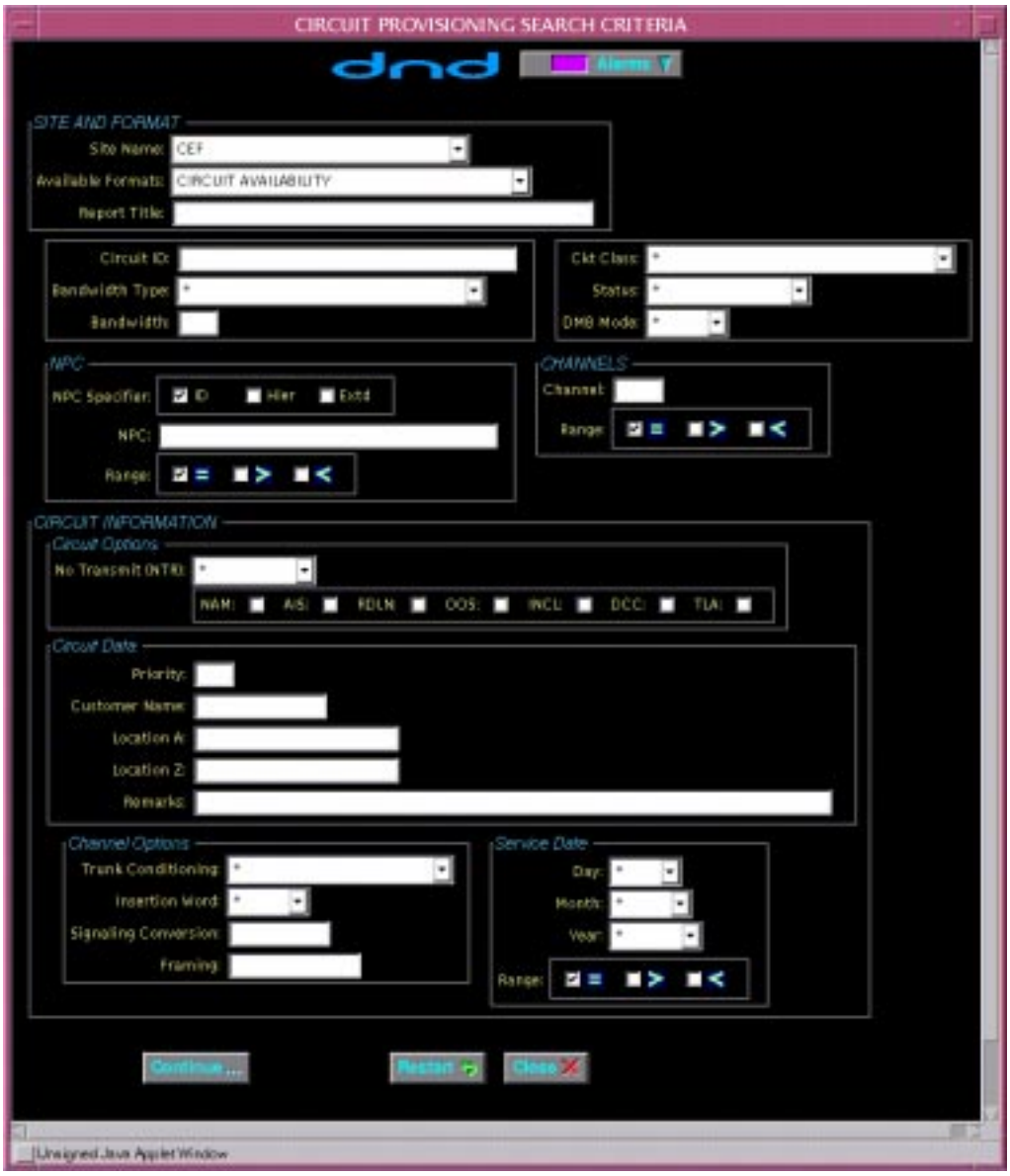


Figure 17-24. DND GUI: Sample CIRCUIT Report Form

Circuit Report (Continued)

DND Forms: Sample Report Form

Figure 17-25 displays a sample CIRCUIT Report form.

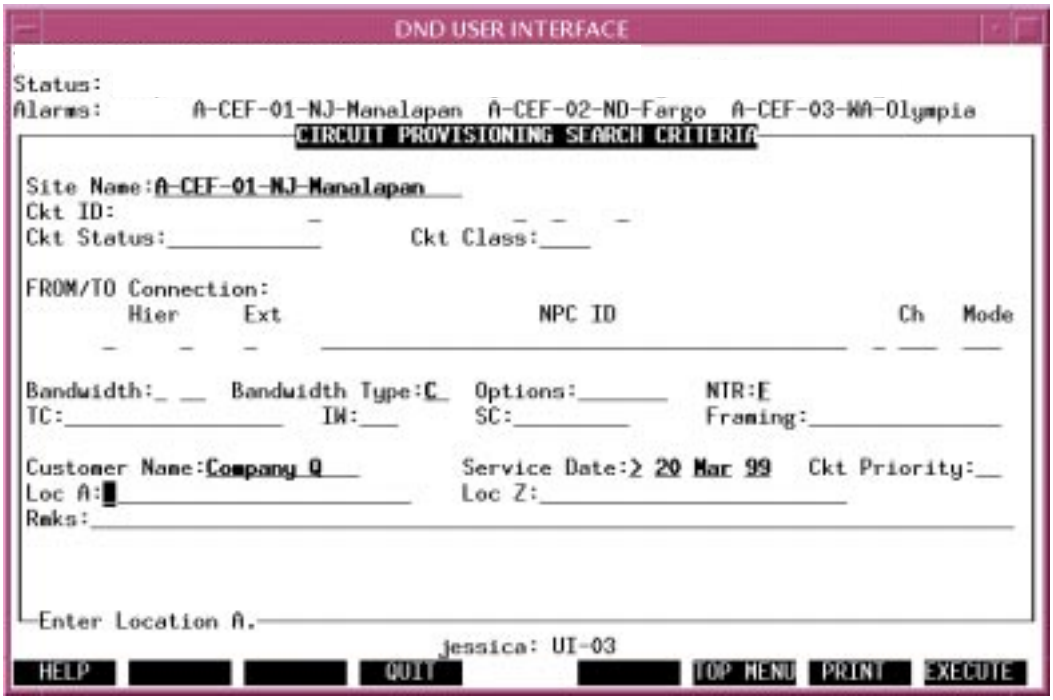


Figure 17-25. DND Forms: Sample CIRCUIT Report Form

Circuit Report (Continued)

Field Descriptions

The field values for the CIRCUIT Report form are described in Table 17-7.

Table 17-7. Field Descriptions for the CIRCUIT Report Form

Field	Description
GUI and Forms: **Site Name**	(Combo box) Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
GUI and Forms: **Available Formats** (For *Forms*, it is a separate pop-up window)	(Combo box) Select a CIRCUIT Report format. The default choices are: ■ *CIRCUIT CONNECTIONS* - Identifies circuit and endpoints by **Circuit ID**; **NPC** and **Channel** number is displayed for FROM and TO sides in addition to **Priority**, **Ckt Status**, **Ckt Class**, **Bandwidth**, and **Bandwidth Type** ■ *CIRCUIT OPTIONS* - Concentrates on circuit characteristics as specified by the **Circuit Options** ■ *CIRCUIT INFORMATION* - Concentrates on circuit characteristics for each **Circuit ID**; includes **Trunk conditioning** and **Insertion Word** ■ *CIRCUIT AVAILABILITY* - Concentrates on the availability of the circuits; includes **Service Date**, **Priority**, and **Ckt Status** Additional customized formats can be created using the DND Forms Interface.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
GUI: **Circuit ID** *Forms:* **Ckt ID**	(Text field) Enter the circuit name to receive a report for a particular circuit. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **Bandwidth**	(Text field) Enter the **Bandwidth** to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.

Table 17-7. Field Descriptions for the CIRCUIT Report Form (Continued)

Field	Description
GUI and Forms: **Bandwidth Type**	(Combo box) Select the **Bandwidth Type** to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI: **Status** *Forms:* **Ckt Status**	(Combo box) Select the status of the circuit to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **Ckt Class**	(Combo box) Select the class of the circuit to display in the report. The choices are: ■ *FDX: FULL-DUPLEX* ■ *HDX: HALF-DUPLEX* ■ *BBL: BACKBONE LEG* ■ *BRD: BROADCAST LEG* ■ *DMB: DIGITAL MPT BRIDGE* ■ *BKB: BCON BACKBONE* ■ *LEG: BCON TRIBUTARY*
GUI: **DMB Mode** *Forms:* **Mode**	(Combo box) Select the usage of **Channel** in a DMB circuit to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI: **NPC Specifier/ NPC** *Forms:* **Hier/Ext/ NPC ID**	(Radio buttons) Select the NPC in which to display a report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **(NPC) Range**	(Radio buttons) Select the range criteria of NPCs in which to display alarm report information. The choices are: ■ **=** - (*GUI only*) Displays NPC alarms for NPC numbers EQUAL to the NPC specified ■ **>** - Displays NPC alarms for NPC numbers GREATER than the NPC specified ■ **<** - Displays NPC alarms for NPCs numbers LESS than the NPC specified
GUI: **Channel** *Forms:* **Ch**	(Text field) Select the **Channel** to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.

Table 17-7. Field Descriptions for the CIRCUIT Report Form (Continued)

Field	Description
GUI and Forms: **(Channel) Range**	(Radio buttons) Select the range criteria of channels in which to display report information. The choices are: ■ **=** - (*GUI only*) Displays the channel number EQUAL to the **Channel** specified ■ **>** - Displays the channel number GREATER than the **Channel** specified ■ **<** - Displays the channel number LESS than the **Channel** specified
GUI: **No Transmit (NTR)** *Forms:* **NTR**	(Combo box) Select the No transmit direction to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI: **Circuit Options** *Forms:* **Options**	(Checkboxes) Select the **Circuit Options** to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI: **Trunk Conditioning** *Forms:* **TC**	(Combo box) Select the **Trunk Conditioning** to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI: **Insertion Word** *Forms:* **IW**	(Combo box) Select the **Insertion Word** to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI: **Signaling Conversion** *Forms:* **SC**	(Text field) Enter the **Signaling Conversion** value to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **Framing**	(Text field) Enter the **Framing** value to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI: **Location A** *Forms:* **Loc A**	(Text field) Enter the near-end location. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI: **Location Z** *Forms:* **Loc Z**	(Text field) Enter the far-end location. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **Customer Name**	(Text field) Enter the name of the customer. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.

Table 17-7. Field Descriptions for the CIRCUIT Report Form (Continued)

Field	Description
GUI: **Priority** *Forms:* **Ckt Priority**	(Text field) Enter the **Priority** value to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI: **Remarks** *Forms:* **Rmks**	(Text field) Enter comments about the circuit. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **Service Date**	(Combo boxes) Select the date the circuit was placed in service. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **(Service Date) Range**	(Radio buttons) Select the service date criteria for the circuit. The choices are: ■ **=** - (*GUI only*) Displays a report for circuits placed In-Service on the **Service Date** specified ■ **>** - Displays a report for circuits placed In-Service AFTER the **Service Date** specified ■ **<** - Displays a report for circuits placed In-Service BEFORE the **Service Date** specified

Circuit Report (Continued)

Sample CIRCUIT Reports

The four default CIRCUIT Report formats are:

- *CIRCUIT AVAILABILITY*
- *CIRCUIT INFORMATION*
- *CIRCUIT OPTIONS*
- *CIRCUIT CONNECTIONS*

CIRCUIT AVAILABILITY

CIRCUIT AVAILABILITY concentrates on the availability of the circuits. The service date, circuit priority and status are listed for each Circuit ID, as well as the user informational location A and location Z. Figure 17-26 displays an example of this format.

```
09 Mar 1999  15:52:22
-------A-CEF-01-NJ-Manalapan-------CIRCUITS-------CIRCUIT AVAILABILITY--------
Circuit_ID                   Status      CP Svc_Date Loc_A        Loc_Z
ERP 02213-001 02214-002 BW/0 ACTIVE      00 03Mar99
ERP 02213-005 02214-006 BW/0 ACTIVE      00 03Mar99
SYN 02425-001 99101-002 BW/0 DEACTIVATED 00 17Jan99
```

Figure 17-26. Sample CIRCUIT Report - *CIRCUIT AVAILABILITY* Format

(Continued on next page)

Circuit Report (Continued)

Sample CIRCUIT Reports, Continued

CIRCUIT INFORMATION

CIRCUIT INFORMATION concentrates on the circuit characteristics for each Circuit ID. The report includes trunk conditioning and insertion word. Figure 17-27 displays an example of this format.

```
09 Mar 1999  15:52:22
-------A-CEF-01-NJ-Manalapan-------CIRCUITS-------CIRCUIT INFORMATION---------
Circuit_ID           TC                IW  SC        NAM AIS RDLD OOS INCL DCC
Chicago-CKT2         0011,0011         TRB
ERP 02201-012 02205-
ckt1                 X-FF,X-FF         FF
ckt1                 X-FF,X-FF         FF
ckt1                 X-FF,X-FF         FF
```

Figure 17-27. Sample CIRCUIT Report - *CIRCUIT INFORMATION* Format

CIRCUIT OPTIONS

CIRCUIT OPTIONS concentrates on the circuit characteristics specified in options. Figure 17-28 displays an example of this format.

```
09 Mar 1999  15:52:22
-------A-CEF-01-NJ-Manalapan-------CIRCUITS-------CIRCUIT OPTIONS--------------
Circuit_ID             TC                IW  SC        NAM AIS RDLD OOS INCL DCC
Chicago-CKT2           0011,0011         TRB
ERP 02201-012 02205-001
ckt1                   X-FF,X-FF         FF
ckt1                   X-FF,X-FF         FF
ckt1                   X-FF,X-FF         FF
```

Figure 17-28. Sample CIRCUIT Report - *CIRCUIT OPTIONS* Format

(Continued on next page)

Circuit Report (Continued)

Sample CIRCUIT Reports, Continued

CIRCUIT CONNECTIONS

CIRCUIT CONNECTIONS identifies circuit and end points by Circuit ID. For each cross-connection, the NPC and channel number of the NPC in which it occurs is stated for both the FROM and the TO sides. High-rate and multipoint circuits are presented as multiple cross-connections. The report includes circuit priority, status, class, bandwidth and bandwidth type. Figure 17-29 displays an example of this format.

```
09 Mar 1999  15:52:22
-------A-CEF-01-NJ-Manalapan-------CIRCUITS-------CIRCUIT CONNECTIONS---------
Circuit_ID                         CP Status      Cls BW BT F_NPC Ch  T_NPC Ch
Chicago-CKT2                       00 ACTIVE      FDX 01 C  02201 001 02221 007
ERP 02201-012 02205-012 BW/01 FDX  00 ACTIVE      FDX 01 C  02201 012 02205 012
ckt1                               00 ACTIVE      FDX 03 C  02213 001 02215 004
ckt1                               00 ACTIVE      FDX 03 C  02213 002 02215 005
ckt1                               00 ACTIVE      FDX 03 C  02213 003 02215 006
```

Figure 17-29. Sample CIRCUIT Report - *CIRCUIT CONNECTIONS* Format

Channel Report

Description

The CHANNEL Report form provides one default format of *CHANNEL USAGE*. This format lists the use of each channel within each facility NPC that has been equipped. The information in this report is taken from both NPC and circuit data. On the report form, you can select by NPC, circuit, or connecting NPC.

NOTE:
Selecting *NULL* in the **Status** field of the form selects channels which are not in use.

Channel Report (Continued)

DND GUI: Sample Report Form

Figure 17-30 displays a sample CHANNEL Report form.



Figure 17-30. DND GUI: Sample CHANNEL Report Form

Channel Report (Continued)

DND Forms: Sample Report Form

Figure 17-31 displays a sample CHANNEL Report form.

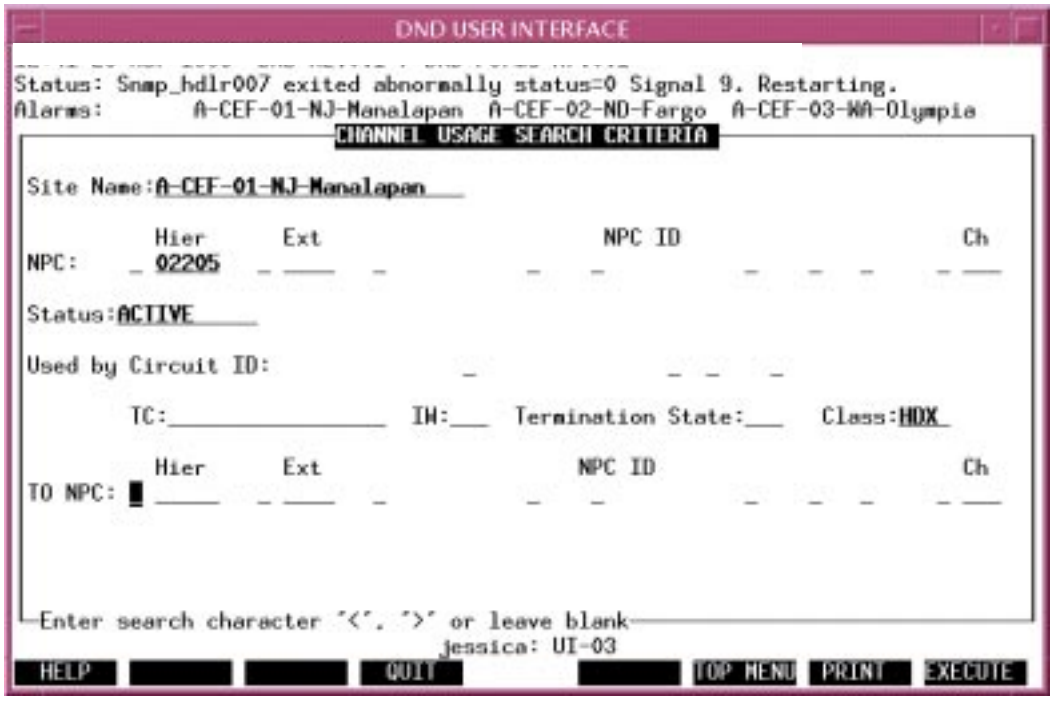


Figure 17-31. DND Forms: Sample CHANNEL Report Form

Channel Report (Continued)

Field Descriptions

The field values for the CHANNEL Report form are described in Table 17-8.

Table 17-8. Field Descriptions for the CHANNEL Report Form

Field	Description
GUI and Forms: **Site Name**	(Combo box) Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
GUI only: **Available Formats**	(Combo box) Select a CHANNEL Report format. If no customized formats were created using the DND Forms Interface, the only format available will be *CHANNEL USAGE*
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
GUI: **NPC Specifier/NPC** *Forms:* **NPC/NPC ID**	(Radio buttons/Text field) Select the NPC of one side of a circuit to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **(NPC) Range**	(Radio buttons) Select the **Range** criteria of NPCs in which display alarm report information. The choices are: ■ **=** - (*GUI only*) Displays NPC alarms for NPC numbers EQUAL to the NPC specified ■ **>** - Displays NPC alarms for NPC numbers GREATER than the NPC specified ■ **<** - Displays NPC alarms for NPCs numbers LESS than the NPC specified
GUI: **(NPC) Channel** *Forms:* **Ch**	(Text field) Select the Channel number of the NPC to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.

Table 17-8. Field Descriptions for the CHANNEL Report Form (Continued)

Field	Description
DND and Forms: **(NPC - Channel) Range**	(Radio buttons) Select the range criteria of channels to display in the report. The choices are: ■ **=** - (*GUI only*) Displays a report for the channel number EQUAL to the **Channel** specified ■ **>** - Displays a report for channel numbers GREATER than the **Channel** specified ■ **<** - Displays a report for channel numbers LESS than the **Channel** specified
GUI: **Circuit ID** *Forms:* **Used by Circuit ID**	(Text field) Enter the circuit name to receive a report for a particular circuit. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **Status**	(Combo box field) Select the status of the circuit to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI: **Ckt Class** *Forms:* **Class**	(Combo box field) Select the class of the circuit to display in the report. The choices are: ■ *FDX: FULL-DUPLEX* ■ *HDX: HALF-DUPLEX* ■ *BBL: BACKBONE LEG* ■ *BRD: BROADCAST LEG* ■ *DMB: DIGITAL MPT BRIDGE* ■ *BKB: BCON BACKBONE* ■ *LEG: BCON TRIBUTARY*
GUI: **Trunk Conditioning** *Forms:* **TC**	(Combo box) Select the **Trunk Conditioning** to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI: **Insertion Word** *Forms:* **IW**	(Combo box) Select the **Insertion Word** to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.

Table 17-8. Field Descriptions for the CHANNEL Report Form (Continued)

Field	Description
GUI and Forms: **Termination State**	(Combo box) Select to display circuits with ONE of the following termination states: ■ * - All termination states ■ *TLR* - Terminate and leave released ■ *TLA* - Terminate and leave active
GUI: **(Connecting To) NPC Specifier/NPC** *Forms:* **TO NPC**	(Radio buttons/Text field) Select the NPC of the other side of the circuit in which to display alarms. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **(Connecting To NPC) Range**	(Radio buttons) Select the range criteria of NPCs in which display alarm report information. The choices are: ■ **=** - Displays NPC alarms for NPC numbers EQUAL to the NPC specified ■ **>** - Displays NPC alarms for NPC numbers GREATER than the NPC specified ■ **<** - Displays NPC alarms for NPCs numbers LESS than the NPC specified
GUI: **(Connecting To) Channel** *Forms:* **Ch**	(Text field) Enter the **Channel** to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **(Connecting To - Channel) Range**	(Radio buttons) Select the range criteria of channels in which display report information. The choices are: ■ **=** - Displays the channel number EQUAL to the **Channel** specified ■ **>** - Displays the channel number GREATER than the **Channel** specified ■ **<** - Displays the channel number LESS than the **Channel** specified

Channel Report (Continued)

Sample CHANNEL Report

Figure 17-32 displays a sample CHANNEL Report.

```
09 Mar 1999  16:10:33
---------A-ISX-05-TX-Dallas---------CHANNELS---------CHANNEL USAGE------------
NPC   Ch  Status      Circuit_ID                                Cls To_NPC Ch
01107 000 NULL
01107 001 ACTIVE
01107 002 ACTIVE
01107 003 ACTIVE      SYN 0007-003 0007-004 BW/01 FDX           FDX 01107  004
01107 004 ACTIVE      SYN 0007-003 0007-004 BW/01 FDX           FDX 01107  003
01107 005 ACTIVE      SYN 0007-003 0007-004 BW/01 FDX           FDX 01107  003
01107 006 NULL
01107 007 NULL
01107 008 NULL
01107 009 NULL
01107 010 NULL
```

Figure 17-32. Sample CHANNEL Report

NOTE:
A full CHANNEL report takes some time to generate, since the DND must check every channel of every NPC. It is suggested you limit the search to one or a few NPCs.

Test Access Report

Description

The TEST ACCESS Report displays the test access status of circuits. One default format is provided which lists information for OBJECT UNDER TEST circuits through either test ports or test groups. The fields that appear on the form contain information that was entered using the TEST ACCESS form.

DND GUI: Sample Report Form

Figure 17-33 and Figure 17-34 display a sample TEST ACCESS Report form.

Top of Form:



Figure 17-33. DND GUI: Sample TEST ACCESS Report Form - Top half

(Continued on next page)

Test Access Report (Continued)

DND GUI: Sample Report Form, Continued

Bottom of Form:.



Figure 17-34. DND GUI: Sample TEST ACCESS Report Form - Bottom half

Test Access Report (Continued)

DND Forms: Sample Report Form

Figure 17-35 displays a sample TEST ACCESS Report form.

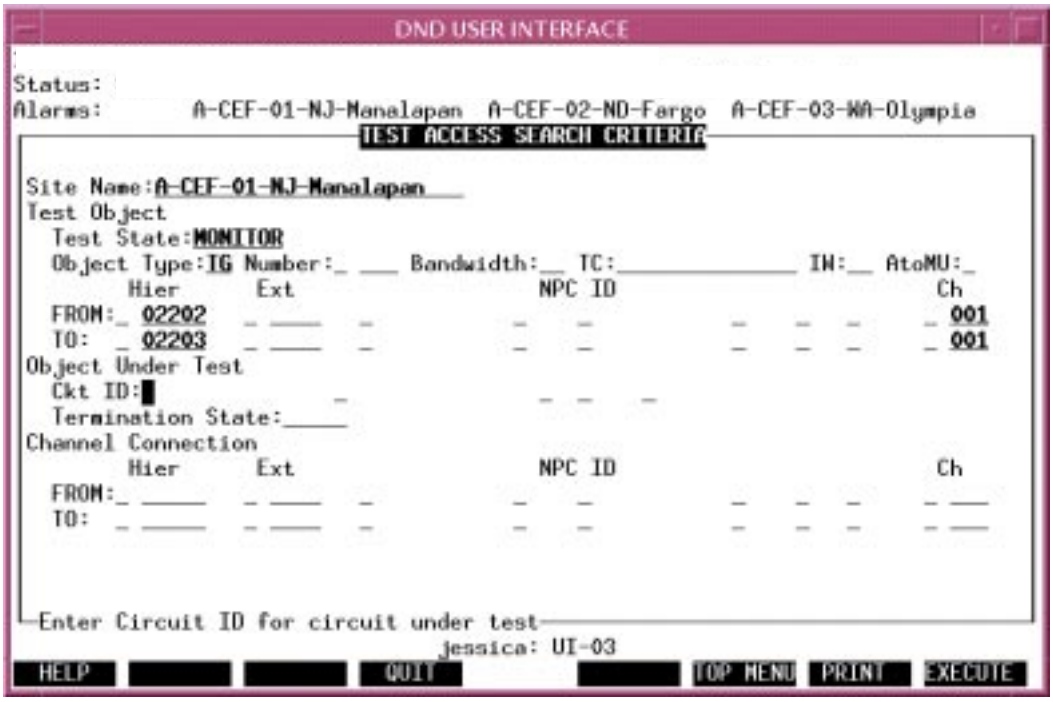


Figure 17-35. DND Forms: Sample TEST ACCESS Report Form

Test Access Report (Continued)

Field Descriptions

The field values for the TEST ACCESS Report form are described in Table 17-9.

Table 17-9. Field Descriptions for the TEST ACCESS Report Form

Field	Description
GUI and Forms: **Site Name**	(Combo box) Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
GUI only: **Available Formats**	(Combo box) Select a CHANNEL Report format. If no customized formats were created using the DND Forms Interface, the only format available will be *UNDER TEST*.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
GUI and Forms: **Test State**	(Combo box) Select the state of the test access connection. For additional information, refer to the Field Description tables in *Chapter 21, Test Ports and Test Access*.
GUI and Forms: **Object Type**	(Combo box) Select the TEST OBJECT type. For additional information, refer to the Field Description tables in *Chapter 21, Test Ports and Test Access*.
GUI and Forms: **(TG) Number**	(Text field) Enter the number of the TEST OBJECT used for the test access. For additional information, refer to the Field Description tables in *Chapter 21, Test Ports and Test Access*.
GUI and Forms: **(TG) Range**	(Radio buttons) Select the TEST OBJECT **Number** range. The choices are: ■ **=** - (*GUI only*) Displays test access information for the test group with a number EQUAL to the **Number** specified ■ **>** - Displays test access information for test groups with numbers GREATER than the **Number** specified ■ **<** - Displays test access information for test groups with numbers LESS than the **Number** specified.

Table 17-9. Field Descriptions for the TEST ACCESS Report Form (Continued)

Field	Description
GUI: **Insertion Word** *Forms:* **IW**	(Combo box) Select the Insertion Word for the TEST OBJECT. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*g.
GUI and Forms: **Bandwidth**	(Text field) Enter the bandwidth of the TEST OBJECT. For additional information, refer to the Field Description tables in *Chapter 21, Test Ports and Test Access*.
GUI: **Trunk Conditioning** *Forms:* **TC**	(Combo box) Select the Trunk Conditioning for the TEST OBJECT. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI: **(TEST OBJECT: FROM NPC/TO NPC) NPC Specifier/NPC** *Forms:* **FROM/TO/ NPC ID**	(Radio buttons and Text fields) Select the TEST OBJECT's FROM and TO NPCs. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI: **Channel** *Forms:* **Ch**	(Text field) Enter the channel number for the TEST OBJECT's FROM and TO NPCs. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **(Channel/Ch) Range**	(Radio buttons) Select the TEST OBJECT's **Channel** range. The choices are: ■ **=** - (*GUI only*) Displays test access information for the TEST OBJECT with a number EQUAL to the **Channel** specified ■ **>** - Displays test access information for the TEST OBJECT groups with numbers GREATER than the **Channel** specified ■ **<** - Displays test access information for the TEST OBJECT with numbers LESS than the **Channel** specified.
GUI: **(OBJECT UNDER TEST: FROM NPC/TO NPC) NPC Specifier/NPC** *Forms:* **FROM/TO/ NPC ID**	(Radio buttons and Text fields) Select the OBJECT UNDER TEST's FROM and TO NPCs. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.

Table 17-9. Field Descriptions for the TEST ACCESS Report Form (Continued)

Field	Description
GUI: **Channel** *Forms:* **Ch**	(Text field) Enter the channel number for the OBJECT UNDER TEST's FROM and TO NPCs. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.
GUI and Forms: **(Channel/Ch) Range**	(Radio buttons) Select the OBJECT UNDER TEST **Channel** range. The choices are: ■ **=** - (*GUI only*) Displays test access information for the OBJECT UNDER TEST with a number EQUAL to the **Channel** specified ■ **>** - Displays test access information for the OBJECT UNDER TEST groups with numbers GREATER than the **Channel** specified ■ **<** - Displays test access information for the OBJECT UNDER TEST with numbers LESS than the **Channel** specified.
GUI: **Circuit ID** *Forms:* **Ckt ID**	(Text field) Enter the circuit name of the OBJECT UNDER TEST. For additional information, refer to the Field Description tables in *Chapter 21, Test Ports and Test Access*.
GUI and Forms: **Termination State**	(Combo box) Enter the termination state of the OBJECT UNDER TEST. For additional information, refer to the Field Description tables in *Chapter 10, Circuit Provisioning*.

Test Access Report (Continued)

Sample TEST ACCESS Report

Figure 17-36 displays a sample TEST ACCESS Report.

```
09 Mar 1999  18:15:57

---------A-CEF-01-NJ-Manalapan---------TEST ACCESS---------UNDER TEST---------

Obj Num F_NPC  Ch TOBJF  Ch TOBJT  Ch T_NPC  Ch BW STATE TERM

TG  -01 02206 002 02206 017 02214 017 02214 001 01 MONIT TLR

TG  001 02201 001 02201 020 02205 020 02205 004 03 MONIT TLR

TG  002 02319 001 02319 013 02320 013 02320 003 02 MONIT TLA-F
```

Figure 17-36. Sample TEST ACCESS Report

NPC Report

Description

The NPC Report provides a report on NPC records. The data was entered in the NPC PROVISIONING form, or placed in the database through ERP or audit/ synchronization.

This form has four different variations - the generic NPC Report form, which displays if no PM option is specified, and the specific NPC Report forms with special fields for the NAS, CEPT, or CEPT PA PM options.

The SEARCH CRITERIA form is similar to the NPC PROVISIONING forms. You can specify search criteria for fields that do not appear on the report. Moreover, you can use search criteria in the status fields, which are not accessible on the NPC PROVISIONING form.

NPC Report (Continued)

DND GUI: Sample Report Form

Figure 17-37 displays a sample NPC Report form.

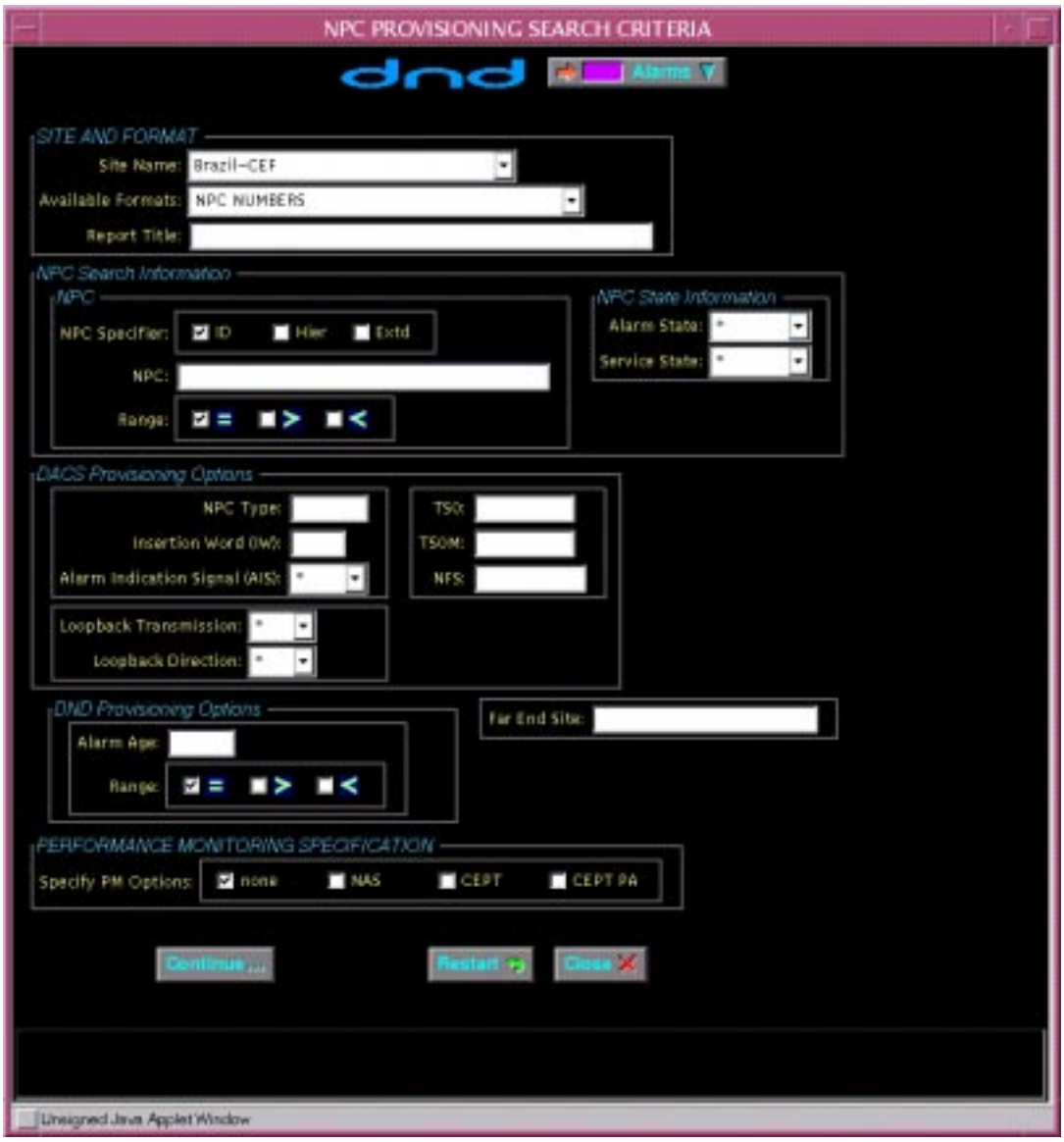


Figure 17-37. DND GUI: Sample NPC Report Form - No PM Options

NPC Report (Continued)

DND Forms: Sample Report Form

Figure 17-38 displays a sample NPC Report form.

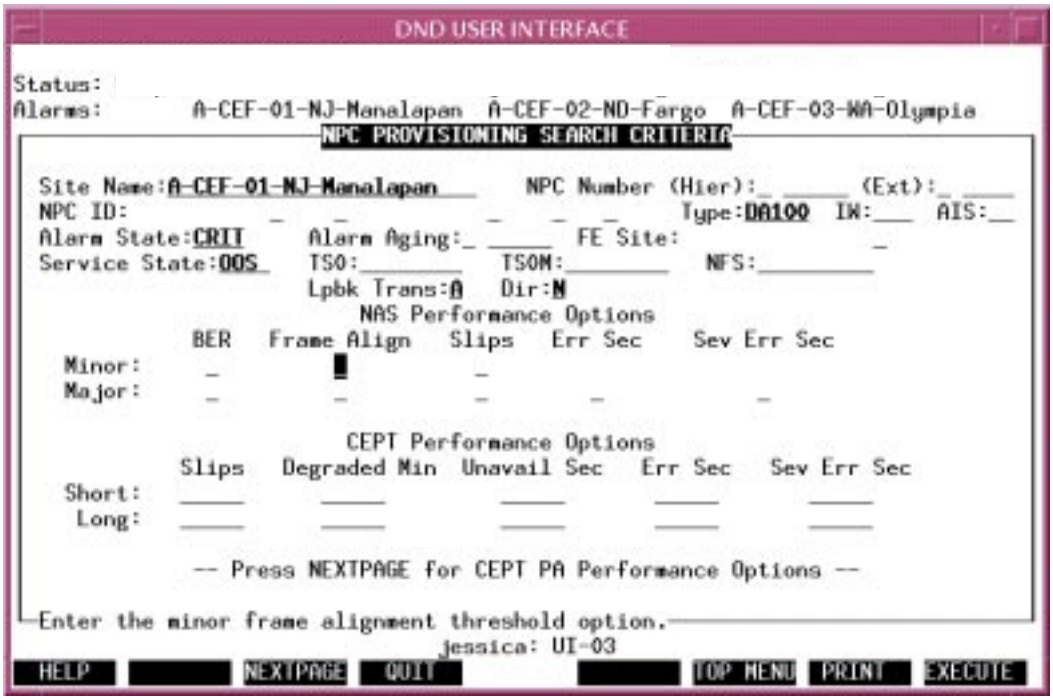


Figure 17-38. DND Forms: Sample NPC Report Form

NPC Report Form (Continued)

Field Descriptions

The field values for the NPC Report form are described in Table 17-10.

Table 17-10. Field Descriptions for the NPC Report Form

Field	Description
GUI and Forms: **Site Name**	(Combo box) Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
GUI and Forms: **Available Formats** (For *Forms*, it is a separate pop-up window)	(Combo box) Select an NPC Report format. The default choices are: ■ *NPC NUMBERS* -displays a report that is sorted by hierarchical NPC number with alarm and service state information included. ■ *NPC IDS* - displays a report of the NPCs in the database sorted by NPC ID. Additional customized formats can be created using the DND Forms Interface.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
GUI: **NPC Specifier/NPC** *Forms:* **NPC ID**	(Radio buttons/Text field) Select the NPC in which to display alarms. For additional information, refer to the Field Descriptions tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI and Forms: **(NPC) Range**	(Radio buttons) Select the range criteria of NPCs in which display alarm report information. The choices are: ■ **=** - Displays NPC alarms for NPC numbers EQUAL to the NPC specified ■ **>** - Displays NPC alarms for NPC numbers GREATER than the NPC specified ■ **<** - Displays NPC alarms for NPCs numbers LESS than the NPC specified
GUI: **NPC Type** *Forms:* **Type**	(Text field) Enter the NPC Type to display in the report. For additional information, refer to the Field Descriptions tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.

Table 17-10. Field Descriptions for the NPC Report Form (Continued)

Field	Description
GUI: **Insertion Word** *Forms:* **IW**	(Text field) Enter the **Insertion Word** to display in the report. For additional information, refer to the Field Descriptions tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI: **Alarm Indication Signal (AIS)** *Forms:* **AIS**	(Combo box) Select the user-defined severity of an NPC AIS alarm to display in the report. For additional information, refer to the Field Descriptions tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI and Forms: **TS0**	(Text field) Enter the Time slot 0 transmit value. For additional information, refer to the Field Descriptions tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI and Forms: **TS0M**	(Text field) Enter the Time slot 0 monitor. For additional information, refer to the Field Descriptions tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI: **Alarm Age** *Forms:* **Alarm Aging**	(Text field) Enter the alarm age of the NPCs to display the report. For additional information, refer to the Field Descriptions tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI and Forms: **Range**	(Radio buttons) Select the range criteria of the Alarm Age in which display report information. The choices are: ■ **=** - Displays NPCs with an alarm age EQUAL to the **Alarm Age** specified ■ **>** - Displays NPCs with an alarm age GREATER than the **Alarm Age** specified ■ **<** - Displays NPCs with an alarm age LESS than the **Alarm Age** specified
GUI and Forms: **Alarm State**	(Combo box) Select the alarm status of the NPC(s). For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI and Forms: **Service State**	(Combo box) Select the service state of the NPC(s). For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.

Table 17-10. Field Descriptions for the NPC Report Form (Continued)

Field	Description
GUI: **Loopback Transmission** *Forms:* **Loopback Trans**	(Combo box) Select the loopback transmission option for the NPC(s). For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI: **Loopback Direction** *Forms:* **Dir**	(Combo box) Select the loopback direction option for the NPC(s). For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI: **NFW** *Forms:* **NFS**	(Text field) For PA type NPCs only. Enter the Non-frame word setting value to display in the report. For additional information, refer to the Field Descriptions tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI: **Far End Site** *Forms:* **FE Site**	(Combo box - displayed only if **Facility** is selected in the **Alarm Type** field.) Select the name of the DACS at the Far End.
GUI: **Specify PM Options** *Forms:* **(All PM Options appear on the form.)**	(Radio buttons) Select the PM options to display in the report. The choices are: ■ **NONE** - For a report on all NPCs ■ **NAS** - For a report on NAS NPCs ■ **CEPT** - For a report on CEPT NPC ■ **CEPT PA** - For a report on PA type CEPT NPCs In DND *GUI*, click Continue... to display the PM options. In the *Forms* Interface, press NEXTPAGE to display the CEPT PA PM options. For additional information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.

NPC Report (Continued)

Sample Reports

Two default formats are provided. Each contains similar information, but the records are sorted on different fields. The two default NPC Report formats are:

- NPC NUMBERS
- NPC IDS

NPC NUMBERS

NPC NUMBERS contains records that are sorted by hierarchical NPC number. Alarm and service state information is included. The entries are sorted by NPC number. Figure 17-39 displays an example of this format.

```
09 Mar 1999  10:37:14
----------A-CEF-01-NJ-Manalapan----------NPCS----------NPC NUMBERS------------
NPC   NPC_ID                                  Svc  Type  FE_Site      Alm
02201 02201NPC001                             IS   PA164               PBA
02202 02202NPC001                             OOS  PA164               NONE
02205 02205NPC001                             IS   PA164               INFO
02206 02206NPC001                             IS   PA164               INFO
02213 02213NPC001                             IS   PB100               NONE
02214 02214NPC001                             IS   PB100               NONE
02215 NPC02215                                IS   PA100               INFO
02219 02219NPC001                             OOS  PA100               NONE
02319 02319NPC001                             IS   DE100               NONE
02320 02320NPC001                             IS   DE100               NONE
02425 NPC02425                                OOS  PC100               NONE
99101 VIRTUAL1                                IS
99102 VIRTUAL2                                IS
99103 VIRTUAL3                                IS
99104 VIRTUAL4                                IS
99105 VIRTUAL5                                IS
99106 VIRTUAL6                                IS
```

Figure 17-39. Sample NPC Report - *NPC NUMBERS* Format

(Continued on next page)

NPC Report (Continued)

Sample Reports, Continued

NPC IDS

NPC IDS contains a record of NPCs that are in the database. The NPC ID and various information, such as the type and status are included. The report lines are sorted by NPC ID. Figure 17-40 displays an example of this format.

```
09 Mar 1999  10:41:23
-----------A-CEF-01-NJ-Manalapan-----------NPCS-----------NPC IDS-------------
NPC_ID                                     NPC   Svc  Type  FE_Site      Alm
02201NPC001                                02201 IS   PA164               PBA
02202NPC001                                02202 OOS  PA164               NONE
02205NPC001                                02205 IS   PA164               INFO
02206NPC001                                02206 IS   PA164               INFO
02213NPC001                                02213 IS   PB100               NONE
02214NPC001                                02214 IS   PB100               NONE
02219NPC001                                02219 OOS  PA100               NONE
02319NPC001                                02319 IS   DE100               NONE
02320NPC001                                02320 IS   DE100               NONE
NPC02215                                   02215 IS   PA100               INFO
NPC02425                                   02425 OOS  PC100               NONE
VIRTUAL1                                   99101 IS
VIRTUAL2                                   99102 IS
VIRTUAL3                                   99103 IS
VIRTUAL4                                   99104 IS
VIRTUAL5                                   99105 IS
VIRTUAL6                                   99106 IS
```

Figure 17-40. Sample NPC Report - *NPC IDS* Format

Database Audit/Synchronization Report

Description

The DATABASE AUDIT/SYNCHRONIZATION Report lists discrepancies found between the DND and DACS databases during the most recent database audit/ synchronization operation. The selection criteria comprise **Site Name**, **Action**, **NPC Hier**, **Ext**, **ID**, **Date**, and **Time**. The form parallels the DATABASE AUDIT/ SYNCHRONIZATION form. You need to enter the same **Action** and range on the report form as you did on the DATABASE AUDIT/SYNCHRONIZATION form in order to obtain the desired report.

Database Audit/Synchronization Report (Continued)

DND GUI: Sample Report Form

Figure 17-41 displays a sample AUDIT/SYNCHRONIZATION Report form.



Figure 17-41. DND GUI: Sample AUDIT/SYNCHRONIZATION Report Form

Database Audit/Synchronization Report (Continued)

DND Forms: Sample Report Form

Figure 17-42 displays a sample DATABASE AUDIT/SYNCHRONIZATION Report form.

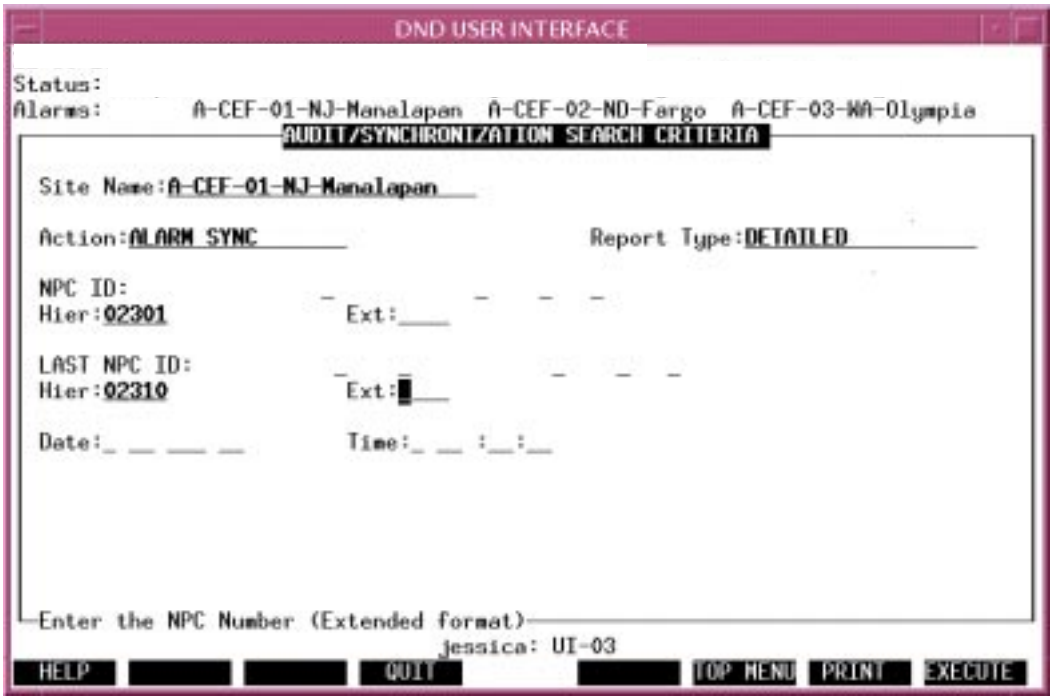


Figure 17-42. DND Forms: Sample DATABASE AUDIT/SYNCHRONIZATION Report Form

Database Audit/Synchronization Report (Continued)

Field Descriptions

The field values for the AUDIT/SYNCHRONIZATION Report form are described in Table 17-11.

Table 17-11. Field Descriptions for the AUDIT/SYNCHRONIZATION Report Form

Field	Description
GUI and Forms: **Site Name**	(Combo box) Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
GUI and Forms: **Action**	(Radio buttons) Select the type of Audit/Sync report to generate. For additional information, refer to the Field Descriptions tables in *Chapter 18, Chapter 17, Database Audit/Synchronization*.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
GUI and Forms: **Report Type**	(Radio buttons) Select the kind of information to display in the report.The choices are: ■ **Detailed** - Display a detailed report ■ **Exceptions Only** - Display a report only showing the differences between the databases.
GUI: **NPC Specifier/ NPC/Last NPC** *Forms:* **NPC ID/Hier/ Ext/Last NPC ID**	(Radio buttons/Text field) Select the NPC(s) to display in the report. For additional information, refer to the Field Descriptions tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI: **MMFG Specifier/ MMFG/Last MMFG**	(Radio buttons/Text field) Select the MMFG(s) to display in the report. For additional information, refer to the Field Descriptions tables in Chapter 11, MMFG Provisioning.
GUI and Forms: **Date**	(Combo boxes) Select the date criteria for the report. The **Date** fields are: ■ **Day** - Select the day (*01* through *31*) ■ **Month** - Select the month (*Jan* through *Dec*) ■ **Year** - Select the year (*1990* through *2037*)

Table 17-11. Field Descriptions for the AUDIT/SYNCHRONIZATION Report Form (Continued)

Field	Description
GUI and Forms: **(Date) Range**	(Radio buttons) Select the **Date** range for the report. The choices are: ■ **=** - Displays alarms which occurred ON the **Date** ■ **>** - Displays alarms which occurred AFTER the **Date** ■ **<** - Displays alarms which occurred BEFORE the **Date**
GUI and Forms: **Time**	(Combo boxes) Select the time criteria for the report. The **Time** fields are: ■ **Hour** - Select the hour (00 through 23) ■ **Minute** - Select the minute (00 through 59) ■ **Second** - Select the second (00 through 59)
GUI and Forms: **(Time) Range**	(Radio buttons) Select the **Time** range to display in the report. The choices are: ■ **=** - Displays alarms which occurred ON the **Time** ■ **>** - Displays alarms which occurred AFTER the **Time** ■ **<** - Displays alarms which occurred BEFORE the **Time**

Database Audit/Synchronization Report (Continued)

Sample AUDIT/ SYNC Report

Figure 17-43 displays a sample DATABASE AUDIT/SYNCHRONIZATION Report.

```
10 Mar 1999  11:21:05
-------A-CEF-03-WA-Olympia-------AUDIT/SYNCHRONIZATION-------RESULTS----------
Action: NPC SYNC       Date: 10Mar99  Time: 11:14:49  Master_DB: Frame

NPC: 02303  ID: 02303NPC001

          -Local-                              -Frame-

Mismatch: IS/DE100/7F                          NPC not equipped

Remove      02303NPC001
  The Local Remove command completed successfully
Delete      02303NPC001
  The Local Delete command completed successfully
```

Figure 17-43. Sample DATABASE AUDIT/SYNCHRONIZATION Report

Echoed Response Processing Report

Description

The ECHOED RESPONSE PROCESSING (ERP) Report lists messages that are received by the DND, and were initiated by a DACS independently; for example, they report changes in provisioning that were not in response to user requests through the DND.

The form allows you to search by type of message, date and time. On this form, the **Site Name** is a mandatory entry.

DND GUI: Sample Report Form

Figure 17-44 displays a sample ECHOED RESPONSE PROCESSING Report form.



Figure 17-44. DND GUI: Sample ECHOED RESPONSE PROCESSING Report Form

Echoed Response Processing Report (Continued)

DND Forms: Sample Report Form

Figure 17-45 displays a sample ECHOED RESPONSE PROCESSING Report form.

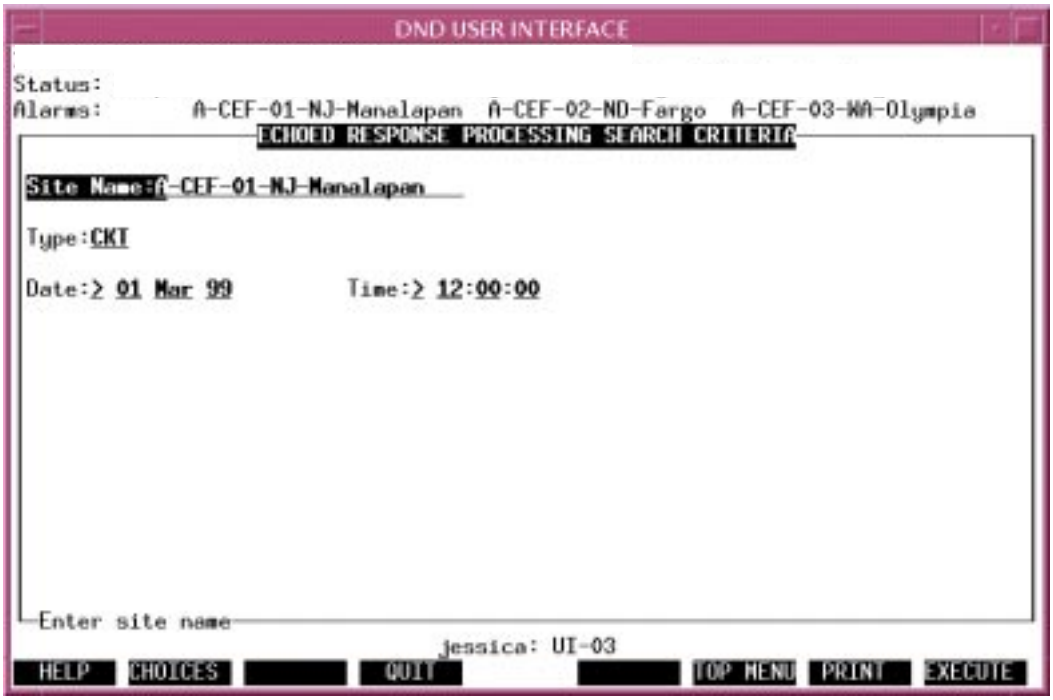


Figure 17-45. DND Forms: Sample ECHOED RESPONSE PROCESSING Report Form

Echoed Response Processing Report (Continued)

Field Descriptions

The field values for the ECHOED RESPONSE PROCESSING Report form are described in Table 17-12.

Table 17-12. Field Descriptions for the ECHOED RESPONSE PROCESSING Report Form

Field	Description
GUI and Forms: **Site Name**	(Combo box) Mandatory. Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
GUI: **ERP Type** *Forms:* **Type**	(Radio buttons) Select the ERP messages to display in the report. The choices are: ■ **All** - Display all ERP messages ■ **Circuit** - Display all Circuit ERP messages ■ **NPC** - Display all NPC ERP messages ■ **Test Access** - Display all test access ERP messages
GUI and Forms: **Date**	(Combo boxes) Select the date criteria for the report. The **Date** fields are: ■ **Day** - Select the day (*01* through *31*) ■ **Month** - Select the month (*Jan* through *Dec*) ■ **Year** - Select the year (*1990* through *2037*)

Table 17-12. Field Descriptions for the ECHOED RESPONSE PROCESSING Report Form (Continued)

Field	Description
GUI and Forms: **(Date) Range**	(Radio buttons) Select the date **Range** for the report. The choices are: ■ **=** - Displays alarms which occurred ON the **Date** ■ **>** - Displays alarms which occurred AFTER the **Date** ■ **<** - Displays alarms which occurred BEFORE the **Date**
GUI and Forms: **Time**	(Combo boxes) Select the time criteria for the report. The **Time** fields are: ■ **Hour** - Select the hour (00 through 23) ■ **Minute** - Select the minute (00 through 59) ■ **Second** - Select the second (00 through 59)
GUI and Forms: **(Time) Range**	(Radio buttons) Select the time **Range** to display in the report. The choices are: ■ **=** - Displays alarms which occurred ON the **Time** ■ **>** - Displays alarms which occurred AFTER the **Time** ■ **<** - Displays alarms which occurred BEFORE the **Time**

Echoed Response Processing Report (Continued)

Sample ERP Report

Figure 17-46 displays a sample ECHOED RESPONSE PROCESSING report.

```
10 Mar 1999  11:35:20
------A-CEF-03-WA-Olympia------ECHOED RESPONSE PROCESSING------RESULTS--------
Date     Time     Type Action     Identifier                                  E
08Mar99  13:14:19 CKT  ACTIVATE   ERP 02319-001 02319-002 BW/01 FDX:0
The command completed successfully

08Mar99  13:22:22 CKT  DELETE     ERP 02319-001 02319-002 BW/01 FDX:0
The command completed successfully

09Mar99  16:15:17 NPC  RESTORE    No.: 02205  ID: UNEQUIPPED
The NPC does not exist in the DND database

09Mar99  16:16:03 NPC  GROWTH     No.: 02206  ID: 02206NPC001
The command completed successfully

09Mar99  16:16:08 NPC  RESTORE    No.: 02206  ID: 02206NPC001
The command completed successfully

09Mar99  16:21:31 CKT  ACTIVATE   NPC 02205 not in DB for ERP circuit
NPC "02205" does not exist in A-CEF-03-WA-Olympia

10Mar99  11:15:52 NPC  REMOVE     No.: 02201  ID: UNEQUIPPED
The NPC does not exist in the DND database

10Mar99  11:17:20 NPC  RESTORE    No.: 02201  ID: UNEQUIPPED
The NPC does not exist in the DND database
```

Figure 17-46. Sample ECHOED RESPONSE PROCESSING Report

MMFG Provisioning Report

Description

The MMFG PROVISIONING Report provides a report on MMFG records. The data was entered in the MMFG PROVISIONING form, or placed in the database through ERP or audit/synchronization.

This report has three different formats:

- *MMFG PM Options 15MN*
- *MMFG Provisioning*
- *MMFG PM Options 24HR*.

The SEARCH CRITERIA form is similar to the MMFG PROVISIONING form. You can specify search criteria for fields that do not appear on the report. Moreover, you can use search criteria in the status fields, which are not accessible on the MMFG PROVISIONING form.

MMFG Provisioning Report (Continued)

DND GUI: Sample Report Form

Figure 17-47 and Figure 17-48 display a sample MMFG PROVISIONING Report form.

Top Part.

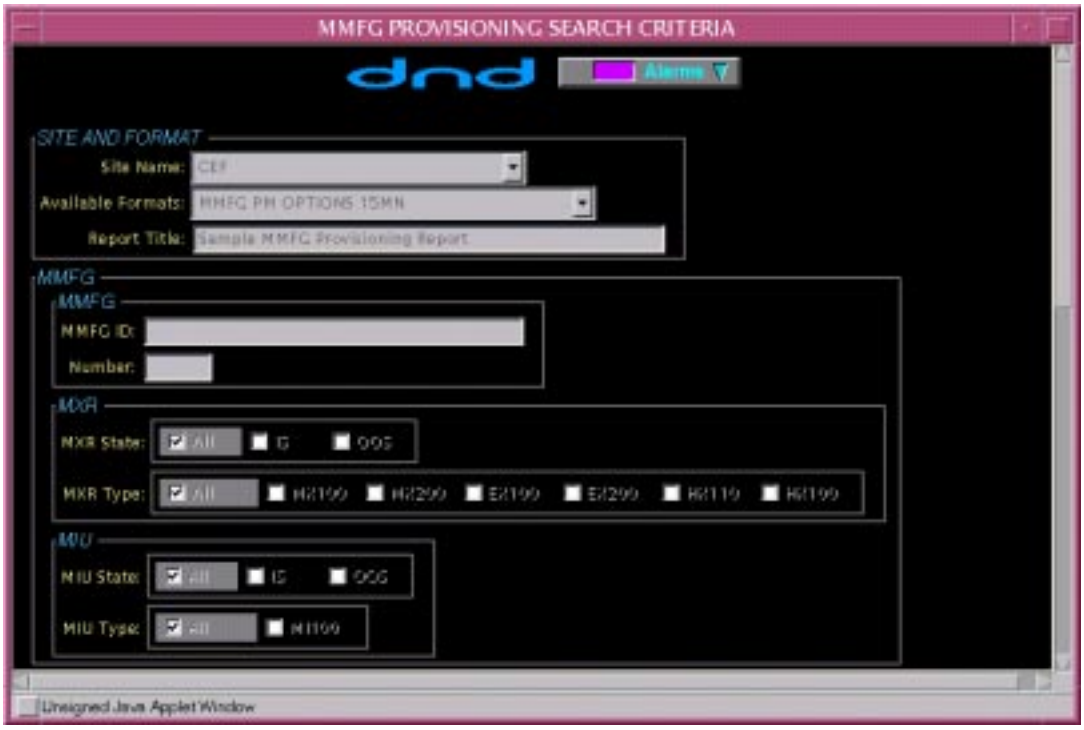


Figure 17-47. DND GUI: Sample MMFG Provisioning Report Form - Top Part

(Continued on next page)

MMFG Provisioning Report (Continued)

DND GUI: Sample Report Form, Continued

Figure 17-48 displays the bottom part of a sample MMFG PROVISIONING Report form.

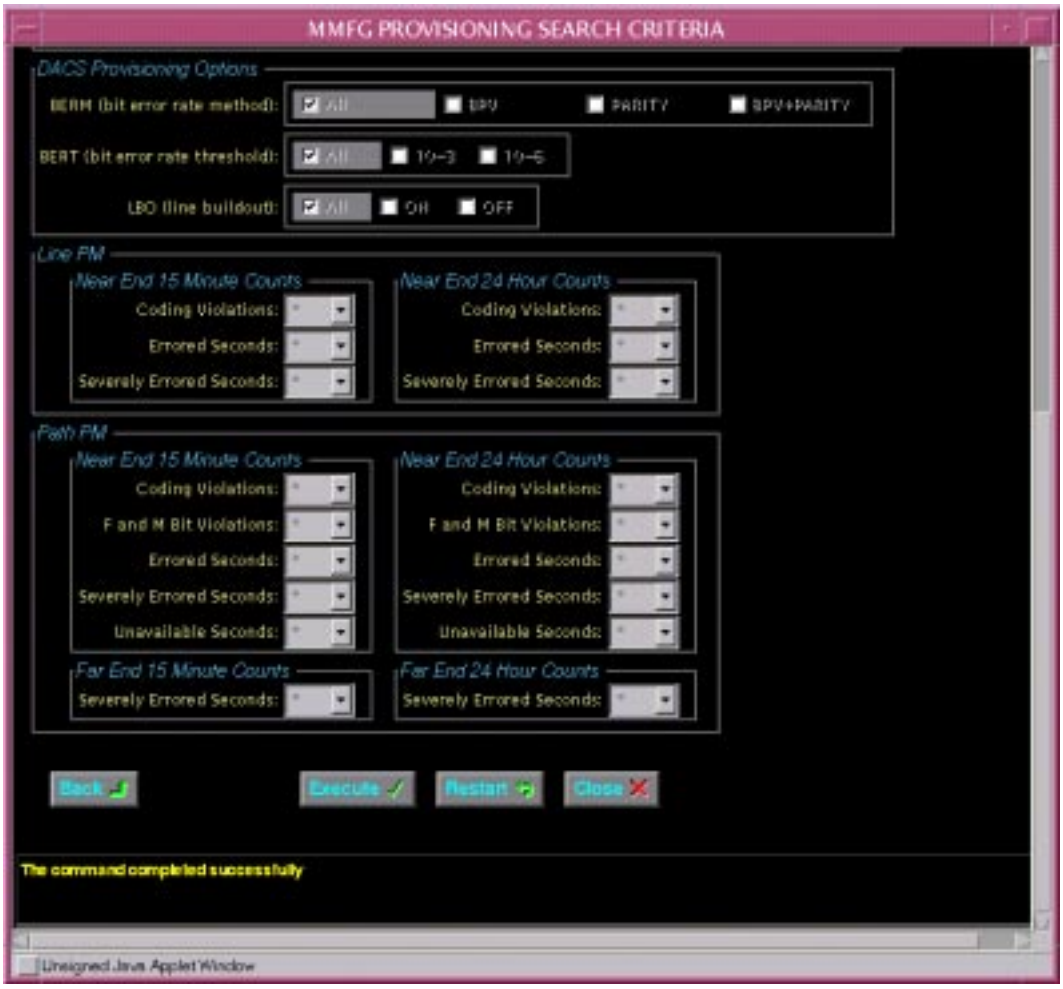


Figure 17-48. DND GUI: Sample MMFG Provisioning Report Form - Bottom Part

MMFG Provisioning Report (Continued)

Field Descriptions

The field values for the MMFG PROVISIONING Report form are described in Table 17-13.

Table 17-13. Field Descriptions for the MMFG Provisioning Report Form

Field	Description
Site Name	(Combo box) Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
Available Formats	(Combo box) Select an MMFG Provisioning Report format. The following formats are available: ■ *MMFG PM Options 15MN* ■ *MMFG Provisioning* ■ *MMFG PM Options 24HR*
Report Title	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
MMFG ID	(Text Field) Enter the **Circuit ID**. For additional information, refer to the Field Description tables in Chapter 10Z, MMFG Provisioning.
Number	(Text Field) Enter the number of the MMFG. For additional information, refer to the Field Description tables in Chapter 10, MMFG Provisioning.
MXR State	(Combo box) Select an **MXR State**. ■ *All* ■ *IS* - in service ■ *OOS* - out of service

Table 17-13. Field Descriptions for the MMFG Provisioning Report Form

Field	Description
MXR Type	(Combo box) Select an **MXR Type**. ■ MX100 - KCR-1 circuit pack with M13 framing ■ MX200 - KCR-1 circuit pack with C-bit parity framing ■ EX100 - KCR-5 circuit pack with M13 framing ■ EX200 - KCR-5 circuit pack with C-bit parity framing ■ HX110 - KCR-8 Hybrid circuit pack with M13 framing and ANSI interpretation of X-bit values ■ HX100 - KCR-8 Hybrid circuit pack with M13 framing and reverse ANSI interpretation of X-bit values
MIU State	(Combo box) Select an **MIU State**. ■ *All* ■ *IS* - in service ■ *OOS* - out of service
MIU Type	(Combo box) Select an **MIU Type**. ■ *All* ■ *MI100*
BERM	(Radio Buttion) Select a **BERM (**bit error rate calculation method**)**. For additional information, refer to the Field Description tables in Chapter 10, MMFG Provisioning. ■ *All* ■ *BPV* - Bipolar violations ■ *PARITY* - DS3 Parity Errors ■ *BPV+PARITY*
BERT	(Radio Buttion) Select a **BERT (**bit error rate threshold**)**. For additional information, refer to the Field Description tables in Chapter 10, MMFG Provisioning. ■ *All* ■ *10-3* ■ *10-6*

Table 17-13. Field Descriptions for the MMFG Provisioning Report Form

Field	Description
LBO	(Radio Buttion) Select an **LBO (**line buildout**)**. For additional information, refer to the Field Description tables in Chapter 11, MMFG Provisioning. ■ *All* ■ *ON* ■ *OFF*
Line PM	(Combo boxes) Select values for the follwing Line Performance Monitoring options: ■ Near End 15 Minute Counts — Coding Violations — Errored Seconds — Severely Errored Seconds ■ Near End 24 Hour Counts — Coding Violations — Errored Seconds — Severely Errored Seconds **NOTE:** For additional information, refer to the Field Description tables in Chapter 11, MMFG Provisioning.

Table 17-13. Field Descriptions for the MMFG Provisioning Report Form

Field	Description
Path PM	(Combo boxes) Select values for the follwing Path Performance Monitoring options: ■ Near End 15 Minute Counts — Coding Violations — F adn M Bit Violations — Errored Seconds — Severely Errored Seconds — Unavailable Seconds ■ Near End 24 Hour Counts — Coding Violations — F adn M Bit Violations — Errored Seconds — Severely Errored Seconds — Unavailable Seconds ■ Far End 15 Minute Counts — Severely Errored Seconds ■ Far End 24 Hour Counts — Severely Errored Seconds

MMFG Provisioning Report (Continued)

Sample Reports

Figure 17-49 to Figure 17-51 display sample MMFG PROVISIONING Reports. Not all Provisioning Options are show in these samples.

```
REPORT TITLE: Sample MMFG PM Options 15 MN Report


17 Dec 1999  15:47:09
-----------------CEF---------------MMFG PROVISIONING---------------MMFG PM OPTIONS 15MN----
MMFG_Num MXR_Type MIU_Type CV15mNEline ERS15mNEline SERS15mNEline CV15mNEpath FM15mNEpath ERS
11-P     EX100             0           0            0             0           0           0
11-1     HX100             0           0            0             0           0           0
11-3     EX200    MI100
11-4     MX100
11-6     EX200             2           3            3             3           3           3
```

Figure 17-49. DND GUI: Sample MMFG PROVISIONING Report Form - MMFG PM Options 15MM Format

```
REPORT TITLE: Sample MMFG Provisioning Report

17 Dec 1999  15:54:47
---------------CEF---------------MMFG PROVISIONING---------------MMFG PROVISIONING-------
MMFG_ID          MMFG_Num MXR_ServState MXR_Type MIU_ServState MIU_Type BERM       BERT L
PMMFG000         11-P     OOS           EX100
111MMFG000       11-1     OOS           HX100                             BPV        10-3 O
113MMFG000       11-3     IS            EX200    IS           MI100      BPV        10-3 O
114MMFG000       11-4     IS            MX100                             BPV        10-3 O
116MMFG000       11-6     IS            EX200                             BPV        10-3 O
```

Figure 17-50. DND GUI: Sample MMFG PROVISIONING Report Form - MMFG PROVISIONING Format

(Continued on next page)

MMFG Provisioning Report (Continued)

Sample Reports, Continued

REPORT TITLE: MMFG PM OPTIONS 24 HR

17 Dec 1999 15:59:20

-------------CEF---------------			MMFG PROVISIONING		-------------MMFG PM OPTIONS 24HR--------			
MMFG_Num	MXR_Type	MIU_Type	CV24hNEline	ERS24hNEline	SERS24hNEline	CV24hNEpath	FM24hNEpath	ER
11-P	EX100		0	0	0	0	0	0
11-1	HX100		0	0	0	0	0	0
11-3	EX200	MI100						
11-4	MX100							
11-6	EX200		3	3	3	3	3	3

Figure 17-51. DND GUI: Sample MMFG PROVISIONING Report Form - MMFG PM Options 24H Format

User Administration Report

Description

The USER ADMINISTRATION Report displays user login information. The fields that appear in the report contain information that was entered in the USER ADMINISTRATION form.

DND GUI: Sample Report Form

Figure 17-52 displays a sample USER ADMINISTRATION Report form.



Figure 17-52. DND GUI: Sample USER ADMINISTRATION Report Form - *USER LOGIN* Format

User Administration Report (Continued)

DND Forms: Sample Report Form

Figure 17-53 displays a sample USER ADMINISTRATION Report form.

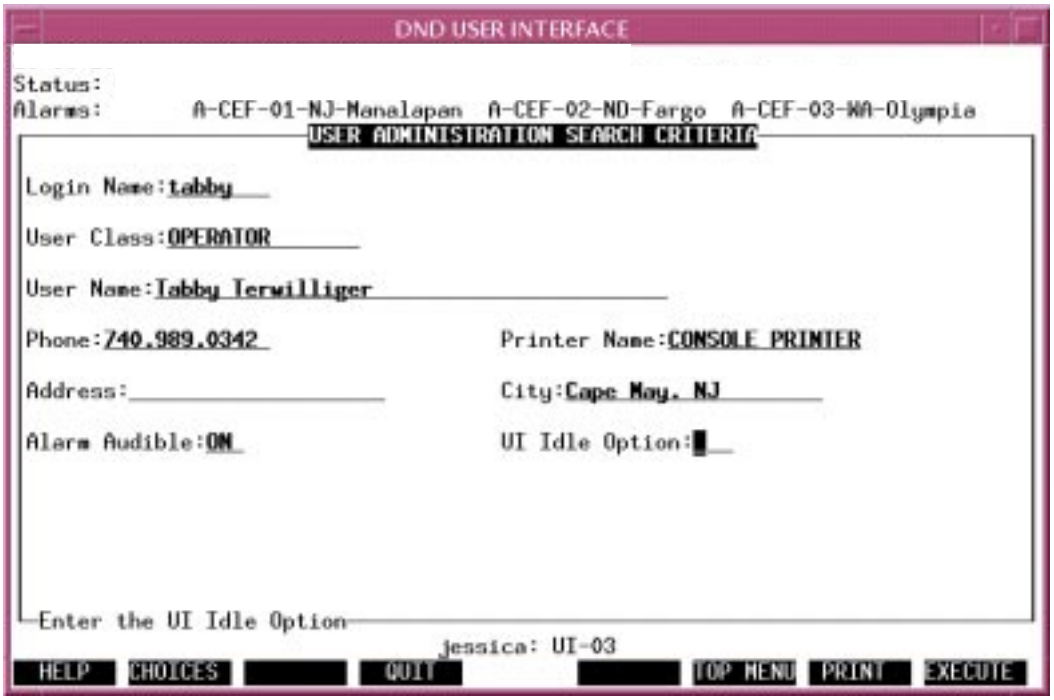


Figure 17-53. DND Forms: Sample USER ADMINISTRATION Report Form - *USER LOGINS* Available Format

User Administration Report (Continued)

Field Descriptions

The field values for the USER ADMINISTRATION Report form are described in Table 17-14.

Table 17-14. Field Descriptions for the USER ADMINISTRATION Report

Field	Description
GUI and Forms: **Available Formats**	(Combo box) Select a USER ADMINISTRATION Report format. The default choices are: ■ *USER PARTITION* - Displays the partitions associated with a user login. ■ *USER CONNECTIIVITY* - Displays the connection status of each user login. ■ *USER LOGINS* - Displays the login characteristics of each user login.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
GUI and Forms: **Network Partition Name**	(Combo box -displayed only if the *USER PARTITION* format is selected) Select the name of the partition. For additional information, refer to Chapter 16, User Administration.
GUI and Forms: **Login Name**	(Text field, 8 characters) Enter the name used for a user's login. For additional information, refer to Chapter 13, User Administration.
GUI and Forms: **User Name**	(Text field, 40 characters) Enter the name of the user. For additional information, refer to Chapter 13, User Administration.
GUI: **Printer** *Forms*: **Printer Name**	(Combo box - displayed only if the *USER LOGINS* format is selected) Select the printer used by particular users. For additional information, refer to Chapter 13, User Administration.
GUI and Forms: **Phone**	(Text field) Enter the phone number of a user. For additional information, refer to Chapter 13, User Administration.
GUI and Forms: **Address**	(Text field) Enter the address of a user. For additional information, refer to Chapter 13, User Administration.

Table 17-14. Field Descriptions for the USER ADMINISTRATION Report (Continued)

Field	Description
GUI and Forms: **City**	(Text field) Enter the city of a user. For additional information, refer to Chapter 16, User Administration.
GUI and Forms: **User Class**	(Radio buttons) The choices are: ■ *All* - Display report entries for all DND users ■ *OPERATOR* - Display report entries for all operators ■ *ADMIN* - Display report entries for all administrators ■ *CONTROLLER* - Display report entries for all controllers.
GUI: **User Type** *Forms*: **Type**	(Radio buttons - displayed only if the *USER CONNECTIVITY* format is selected) The choices are: ■ *All* - Display report entries for users connected via any connection ■ *ASYNC* - Display report entries for users connected via an asynchronous link ■ *X25* - Display report entries for users connected via an X.25 link ■ *LOCAL* - Display report entries for users connected directly to the DND ■ *BROWSR* - Display report entries for users connected via a browser.
GUI: **UI Audible Alarms** *Forms:* **Alarm Audible**	(Radio buttons - displayed only if the *USER LOGINS* format is selected) Select the **Alarm Audible** option. The choices are: ■ *All* - Display report entries for users set with either **Alarm Audible** option. ■ *ON* - Display report entries for users with the **Alarm Audible** option *ON*. ■ *OFF* - Display report entries for users with the **Alarm Audible** option *OFF*.

Table 17-14. Field Descriptions for the USER ADMINISTRATION Report (Continued)

Field	Description
GUI: **UI Idle** *Forms*: **UI Idle Option**	(Radio buttons - displayed only if the *USER LOGINS* format is selected) Select the UI Idle option. The choices are: ■ *All* - Display report entries for users set with either **UI Idle** option. ■ *ON* - Display report entries for users with the **UI Idle** option *ON*. ■ *OFF* - Display report entries for users with the **UI Idle** option *OFF*.
GUI: **GUI Audible Alarms**	(Radio buttons - displayed only if the *USER LOGINS* format is selected) Select the GUI Audible Alarm option. The choices are: ■ *All* - Display report entries for users set with either **GUI Alarm Audible** option. ■ *ON* - Display report entries for users with the **GUI Alarm Audible** option *ON*. ■ *OFF* - Display report entries for users with the **GUI Alarm Audible** option *OFF*.

User Administration Report (Continued)

Sample USER ADMIN Reports

The three default USER ADMINISTRATION Report formats are:

- USER PARTITION
- USER CONNECTIVITY
- USER LOGINS

USER PARTITION

USER PARTITION concentrates on the partitions associated with each user logged into the system. The user's login, partition, and class are listed. Figure 17-54 displays an example of this format.

```
10 Mar 1999  16:53:07

---------COMMON---------USER ADMINISTRATION---------USER PARTITION------------

Login    Partition                Class

adm-East East-Coast-Region        ADMIN

bobm     East-Coast-Region        CONTROLLER

cscan    East-Coast-Region        CONTROLLER

ems      East-Coast-Region        OPERATOR
```

Figure 17-54. Sample USER ADMINISTRATION Report - *USER PARTITION* Format

(Continued on next page)

User Administration Report (Continued)

Sample USER ADMIN Reports, Continued

USER CONNECTIVITY

USER CONNECTITIVITY concentrates on the connection status of each user logged into the system. The user's login, name, connectivity type and class are listed. Figure 17-55 displays an example of this format.

```
10 Mar 1999  16:57:16

---------COMMON---------USER ADMINISTRATION---------USER CONNECTIVITY---------

Login    Name                                    Type    Class

dacsadm  Default ADMIN Login                     BROWSR  ADMIN

dacsadm  Default ADMIN Login                     BROWSR  ADMIN
```

Figure 17-55. Sample USER ADMINISTRATION Report - *USER CONNECTIVITY* Format

USER LOGINS

USER LOGINS concentrates on the login characteristics of each user logged into the system. The user's login, name, phone, and login class are listed. Figure 17-56 displays an example of this format.

```
10 Mar 1999  17:05:07

----------COMMON----------USER ADMINISTRATION----------USER LOGINS------------

Login    Name                                    Phone         Class

cain     Cain Abelson                                          OPERATOR

cindy    Cindy Evans                                           OPERATOR

cscan    CSCAN                                   654-2222      CONTROLLER
```

Figure 17-56. Sample USER ADMINISTRATION Report - *USER LOGINS* Format

DACS Frames/Links Report

Description

The DACS FRAMES/LINKS Report provides information entered into the DND during the provisioning of DACS frames and the links through which communication to the DACS is effected. Three default formats are provided. The fields that appear on the form contain information that was entered on the FRAME ADMINISTRATION (DND Forms)/NE PROVISIONING (DND GUI) and X.25 LINK ADMINISTRATION (DND Forms) forms. The report form allows users to search by both frame and link data.

DACS Frames/Links Report (Continued)

DND GUI: Sample Report Form

Figure 17-57 and Figure 17-58 display a sample DACS FRAMES/LINKS Report form.

Top of Form:

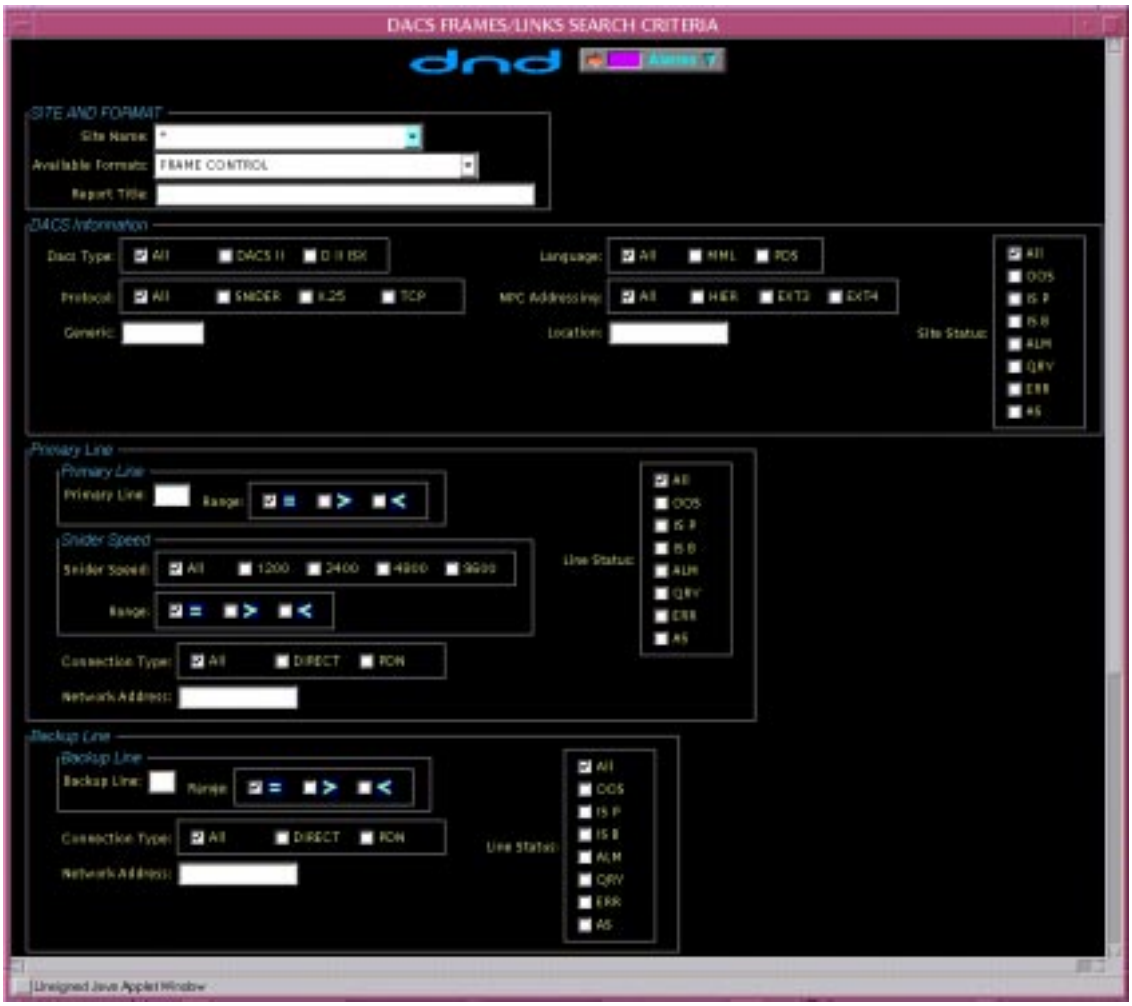


Figure 17-57. DND GUI: Sample DACS FRAMES/LINKS Report Form - Top half

(Continued on next page)

DACS Frames/Links Report (Continued)

DND GUI: Sample Report Form, Continued

Bottom of Form:

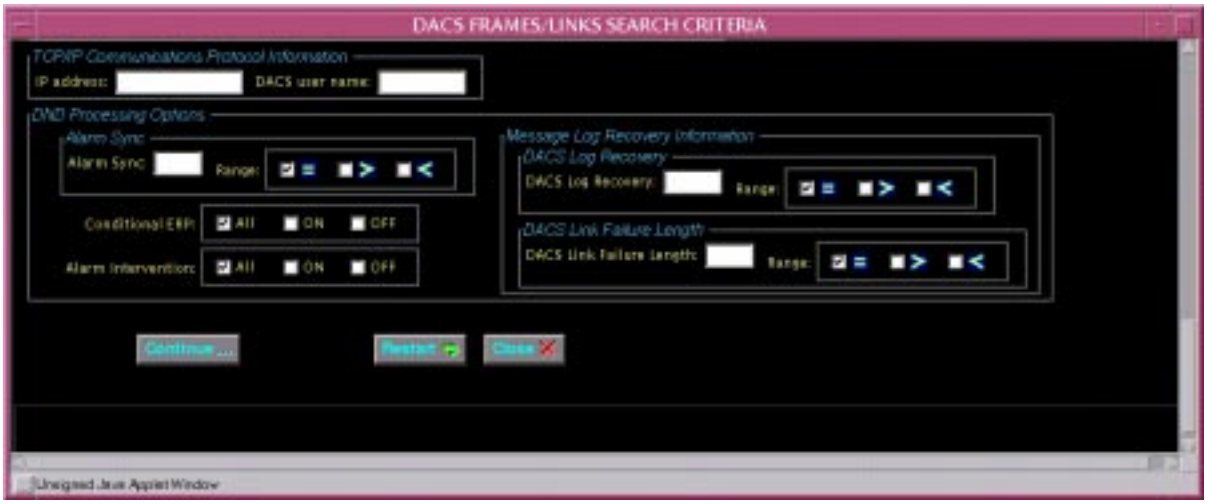


Figure 17-58. DND GUI: DACS FRAMES/LINKS Report Form - Bottom half

DACS Frames/Links Report (Continued)

DND Forms: Sample Report Form

Figure 17-59 displays a sample FRAMES/LINKS Report form.

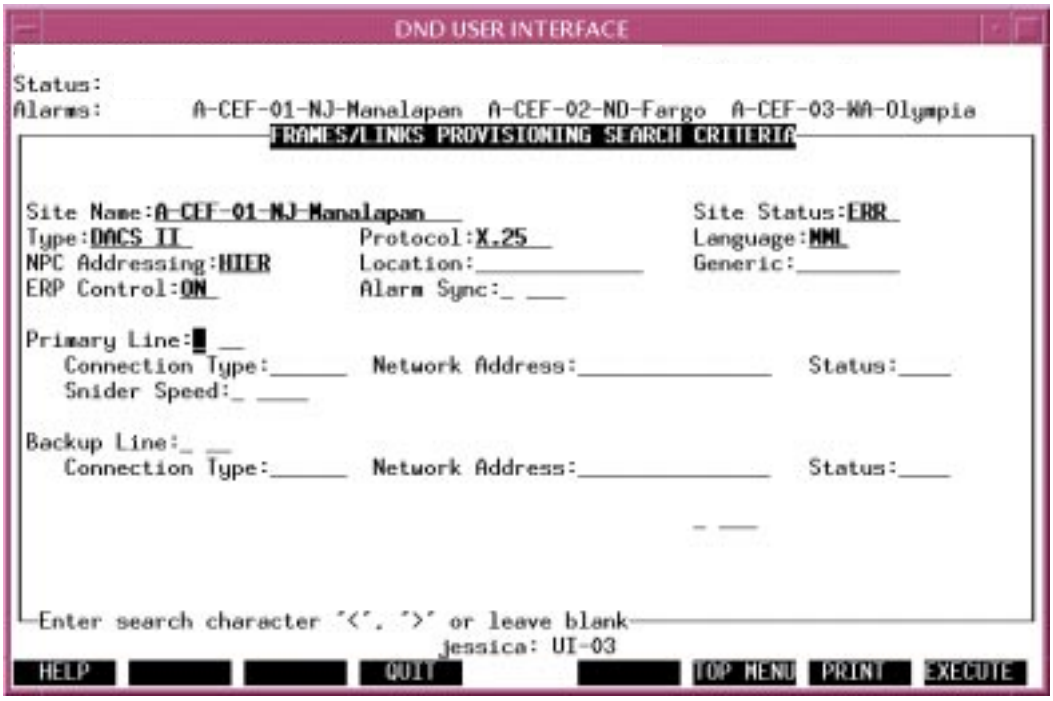


Figure 17-59. DND Forms: Sample FRAMES/LINKS Report Form

DACS Frames/Links Report (Continued)

Field Descriptions

The field values for the DACS FRAMES/LINKS Report form are described in Table 17-15.

Table 17-15. Field Descriptions for the DACS FRAMES/LINKS Report Form

Field	Description
GUI and Forms: **Site Name**	(Combo box) Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
GUI and Forms: **Available Formats** (In *Forms*, this is a pop-up window)	(Combo box) Select a DACS FRAMES/LINKS Report format.The choices are: ■ *FRAME CONTROL* - Lists the values of various control fields from the FRAME PROVISIONING/ NE PROVISIONING forms ■ *LINK CONNECTIVITY* - Lists information for the primary and backup links that have been connected to a given DACS. If the backup line data is not present, then the backup line have not been provisioned. ■ *PROVISIONING* - Lists identifying information for the frames that have been provisioned.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
GUI: **DACS Type** *Forms*: **Type**	(Radio buttons) Select the type of DACS frame. The choices are: ■ *All* - Display DACS II and DACS II ISX frames ■ *DACS II* - Display DACS II frames ■ *D II ISX* - Display DACS II ISX frames.

Table 17-15. Field Descriptions for the DACS FRAMES/LINKS Report Form (Continued)

Field	Description
GUI and Forms: **Protocol**	(Radio buttons) The choices are: ■ *All* - Display DACS frames with SNIDER and X.25 protocol ■ *SNIDER* - Display DACS frames with SNIDER protocol ■ *X.25* - Display DACS frames with X.25 protocol ■ *TCP/IP* - Display DACS frames with TCP/IP protocol.
GUI and Forms: **Generic**	(Text field) Enter the software generic number running on the DACS in the format *x.y*.
GUI and Forms: **Language**	(Radio buttons) Select the language used to communicate with the DACS. The choices are: ■ *All* - Display DACS frames using MML and PDS languages (currently, this will default to MML) ■ *MML* - Display DACS frames using the MML language ■ *PDS* - Display DACS frames using the PDS language (currently inoperable).
GUI and Forms: **NPC Addressing**	(Radio buttons) Select the NPC Addressing scheme assigned to the DACS. The choices are: ■ *All* - Display DACS frames using hierarchical, 3-digit extended, and 4-digit extended numbering ■ *HIER* - Display DACS frames using hierarchical numbering ■ *EXT3* - Display DACS frames using 3-digit extended numbering ■ *EXT4* - Display DACS frames using 4-digit extended numbering
GUI and Forms: **Location**	(Text field) Enter the location of the DACS.

Table 17-15. Field Descriptions for the DACS FRAMES/LINKS Report Form (Continued)

Field	Description
GUI and Forms: **Site Status**	(Radio buttons) Select the service status of the DACS. The choices are: ■ *All* - Display DACS frames of every status ■ *OOS* - Display DACS frames which are Out-of Service ■ *IS P* - Display DACS frames which are In-Service via the primary line ■ *IS B* - Display DACS frames which are In-Service via the backup line ■ *ALM* - Display DACS frames which are in alarm ■ *QRY* - Display DACS frames which are in query ■ *ERR* - Display DACS frames which are in error (i.e. the IP address of the database and the actual line do not match) ■ *AS* - Display DACS frames in audit/sync.
GUI and Forms: **Primary Line**	(Text field) Enter the number of the primary line. For additional information, refer to the Field Description tables in Chapter 5, NE Provisioning.
GUI and Forms: **(Primary Line) Range**	(Radio buttons) Select the **Primary Line** range. The choices are: ■ **=** - (*GUI only*) Display information for the line with the number EQUAL to **Primary Line** ■ **>** - Display information for the lines with numbers GREATER than **Primary Line** ■ **<** - Display information for the lines with numbers GREATER than **Primary Line**
GUI and Forms: **Snider Speed**	(Radio buttons) Select the speed of the SNIDER connection. The choices are: ■ *All* - Display DACS frames running on all speeds ■ *1200* - Display DACS frames running on 1.2 kbps ■ *2400* - Display DACS frames running on 2.4 kbps ■ *4800* - Display DACS frames running on 4.8 kbps ■ *9600* - Display DACS frames running on 9.6 kbps

Table 17-15. Field Descriptions for the DACS FRAMES/LINKS Report Form (Continued)

Field	Description
GUI and Forms: **(Snider Speed) Range**	(Radio buttons) Select the **Snider Speed** range. The choices are: ■ **=** - (*GUI only*) Display DACS frames with the speed EQUAL to **Snider Speed** ■ **>** - Display DACS frames with speeds GREATER than **Snider Speed** ■ **<** - Display DACS frames with speeds GREATER than **Snider Speed**
GUI: **(Primary and Backup Line) Line Status** *Forms*: **Status**	(Radio buttons) Select the primary/backup line status. The choices are identical to the **Site Status** choices previously described in this table.
GUI and Forms: **(Primary and Backup Line) Connection Type**	(Radio buttons) Select the primary/backup connection type. The choices are: ■ *All* - Display DACS frames with direct and packet-data network connections ■ *DIRECT* - Display DACS frames with direct connections ■ *PDN* - Display DACS frames with packet-data network (indirect) connections
GUI and Forms: **(Primary and Backup Line) Network Address**	(Text field) Enter the IP address of the primary/backup line.
GUI and Forms: **Backup Line**	(Text field) Enter the number of the backup line. For additional information, refer to the Field Description tables in Chapter 5, NE Provisioning.
GUI and Forms:**IP Address**	(Text field) Enter the IP address at the DACS. For additional information, refer to the Field Description tables in Chapter 5, NE Provisioning.
GUI and Forms:**DACS User Name**	(Text field) Enter the DACS User Name at the DACS. For additional information, refer to the Field Description tables in Chapter 5, NE Provisioning.

Table 17-15. Field Descriptions for the DACS FRAMES/LINKS Report Form (Continued)

Field	Description
GUI and Forms: **(Backup Line) Range**	(Radio buttons) Select the **Backup Line** range. The choices are: ■ **=** - (*GUI only*) Display information for the line with the number EQUAL to **Backup Line** ■ **>** - Display information for the lines with numbers GREATER than **Backup Line** ■ **<** - Display information for the lines with numbers GREATER than **Backup Line**
GUI and Forms: **Alarm Sync**	(Text field) Enter the Alarm Sync value for the DACS. For additional information, refer to the Field Description tables in Chapter 5, NE Provisioning.
GUI and Forms: **(Alarm Sync) Range**	(Radio buttons) Select the **Alarm Sync** range. The choices are: ■ **=** - Display DACS frames with an Alarm Sync value EQUAL to **Alarm Sync** ■ **>** - Display DACS frames with an Alarm Sync value GREATER than **Alarm Sync** ■ **<** - Display DACS frames with an Alarm Sync value LESS than **Alarm Sync**.
GUI and Forms: **DACS Log Recovery**	(Text field) Enter the Log Recovery value for the DACS. For additional information, refer to the Field Description tables in Chapter 5, NE Provisioning.
GUI and Forms: **(DACS Log Recovery) Range**	(Radio buttons) Select the **Log Recovery** range. The choices are: ■ **=** - Display DACS frames with an Log Recovery value EQUAL to **Log Recovery** ■ **>** - Display DACS frames with an Log Recovery value GREATER than **Log Recovery** ■ **<** - Display DACS frames with an Log Recovery value LESS than **Log Recovery**.
GUI and Forms: **DACS Link Failure Length**	(Text field) Enter the Link Failure Length value for the DACS. For additional information, refer to the Field Description tables in Chapter 5, NE Provisioning.

Table 17-15. Field Descriptions for the DACS FRAMES/LINKS Report Form (Continued)

Field	Description
GUI and Forms: *(***DACS Link Failure Length) Range**	(Radio buttons) Select the **Link Failure Length** range. The choices are: ■ **=** - Display DACS frames with an Link Failure Length value EQUAL to **Link Failure Length** ■ **>** - Display DACS frames with an Link Failure Length value GREATER than **Link Failure Length** ■ **<** - Display DACS frames with an Link Failure Length value LESS than **Link Failure Length**.
GUI and Forms: **Alarm Intervention**	(Radio buttons) Select the Alarm Intervention control. The choices are: ■ **All** - Display DACS frames with Alarm Intervention on and off ■ **ON** - Display DACS frames with Alarm Intervention turned on ■ **OFF** - Display DACS frames with Alarm Intervention turned off.
GUI: **Conditional ERP** *Forms*: **ERP Control**	(Radio buttons) Select the ERP control. The choices are: ■ **All** - Display DACS frames with conditional ERP on and off ■ **ON** - Display DACS frames with conditional ERP turned on ■ **OFF** - Display DACS frames with conditional ERP turned off.

DACS Frames/Links Report (Continued)

Sample DACS FRAMES/LINKS Reports

The three default DACS FRAMES/LINKS Report formats are:

- FRAME CONTROL
- LINK CONNECTIVITY
- PROVISIONING

FRAME CONTROL

FRAME CONTROL concentrates on the frame characteristics of the DACS. The DACS' site name, location, generic, ERP control, and alarm sync codes are listed. Figure 17-60 displays an example of this format.

```
10 Mar 1999  17:45:59

----------COMMON----------FRAMES/LINKS----------FRAME CONTROL-------------

Sitename                  Location      Generic  ERP Alm_Sync

A-ISX-01-NJ-Manalapan     Manalapan     3.1      OFF 00

A-ISX-02-ND-Bismarck      lab           3.1      OFF 00

A-ISX-03-WA-Olympia       lab           3.1      OFF 00

A-ISX-04-AZ-Phoenix       Phoenix       3.1      OFF 00

A-ISX-05-TX-Dallas        JR & Bobby    3.1      OFF 01
```

Figure 17-60. Sample DACS FRAMES/LINKS Report - *FRAME CONTROL* Format

(Continued on next page)

DACS Frames/Links Report (Continued)

Sample DACS FRAMES/LINKS Reports, Continued

LINK CONNECTIVITY

LINK CONNECTIVITY concentrates on the link connection information of the DACS. The DACS' site name, protocol, network address, and speed are listed. Figure 17-61 displays an example of this format.

```
10 Mar 1999  17:27:34

----------COMMON----------FRAMES/LINKS----------LINK CONNECTIVITY-------------

Sitename                  Protcl Network_Addr    Speed Network_Addr

A-CEF-01-NJ-Manalapan     X.25   7327853406

A-CEF-02-ND-Fargo         X.25   3166171134            3166171134

A-CEF-03-WA-Olympia       X.25   8089980434            8089980434

A-CEF-04-AZ-Phoenix       X.25   7304345512            7304345512

A-CEF-05-TX-Dallas        X.25   9076740456            9076740456
```

Figure 17-61. Sample DACS FRAMES/LINKS Report - *LINK CONNECTIVITY* Format

(Continued on next page)

DACS Frames/Links Report (Continued)

Sample DACS FRAMES/LINKS Reports, Continued

PROVISIONING

PROVISIONING concentrates on the provisioning characteristics of the DACS. The DACS' site name, service status, DACS type, protocol, language, and NPC addressing are listed. Figure 17-62 displays an example of this format.

```
10 Mar 1999  17:49:55

-----------COMMON-----------FRAMES/LINKS-----------PROVISIONING-----------

Sitename                  Status C Type     Protocol Lang NPC_Addr

A-CEF-01-NJ-Manalapan     IS P   * DACS II  X.25     MML  HIER

A-CEF-02-ND-Fargo         IS P   * DACS II  X.25     MML  HIER

A-CEF-03-WA-Olympia       IS P   * DACS II  X.25     MML  HIER

A-CEF-04-AZ-Phoenix       IS P   * DACS II  X.25     MML  HIER

A-CEF-05-TX-Dallas        IS P   * DACS II  X.25     MML  HIER
```

Figure 17-62. Sample DACS FRAMES/LINKS Report - *PROVISIONING* Format

DACS Frames/Links Report (Continued)

Sample DACS FRAMES/LINKS Reports, Continued

TCP/IP CONNECTIVITY

TCP/IP CONNECTIVITY concentrates on the provisioning characteristics of the DACS. The DACS' site name, service status, DACS type, protocol, language, and NPC addressing are listed. Figure 17-63 displays an example of this format.

```
REPORT TITLE: TCP CONNECTIVITY

30 Dec 1999  11:01:44

----------COMMON----------FRAMES/LINKS----------TCP CONNECTIVITY----------

Sitename                  Protocol IP_Address      DACS_UserName

Brazil-CEF                X.25

CEF                       TCP      205.229.223.173 DACSADM

CEF-3                     TCP      205.229.223.173 DACSADM

CEF2                      TCP      205.229.223.173 DACSADM

England-ISX               SNIDER

Japan-CEF                 X.25

WashingtonDC-CEF          X.25

x                         TCP      205.229.223.173 DACSADM
```

Figure 17-63. Sample DACS FRAMES/LINKS Report - *TCP/IP CONNECTIVITY* Format

Task Schedule Reports

Description

There are two types of Task Schedule reports:

- TASK SCHEDULE LIST Report
- TASK SCHEDULE RESULTS Report.

TASK SCHEDULE LIST Report

The TASK SCHEDULE LIST Report lists all DND tasks scheduled to be executed. The report form uses the site name and user ID as selection criteria.

TASK SCHEDULE RESULTS Report

The TASK SCHEDULE RESULTS Report lists all scheduled tasks that were executed, along with the results of the execution. This report form also uses the site name and user ID as selection criteria.

DND GUI: Sample Report Form

Figure 17-64 displays a sample TASK SCHEDULE LIST Report form. The TASK SCHEDULE RESULTS Report form is similar to this form.



Figure 17-64. DND GUI: Sample TASK SCHEDULE LIST Report Form

Task Schedule Reports (Continued)

DND Forms: Sample Report Form

Figure 17-65 displays a sample TASK SCHEDULE LIST Report form. The TASK SCHEDULE RESULTS Report Form is similar to this form.

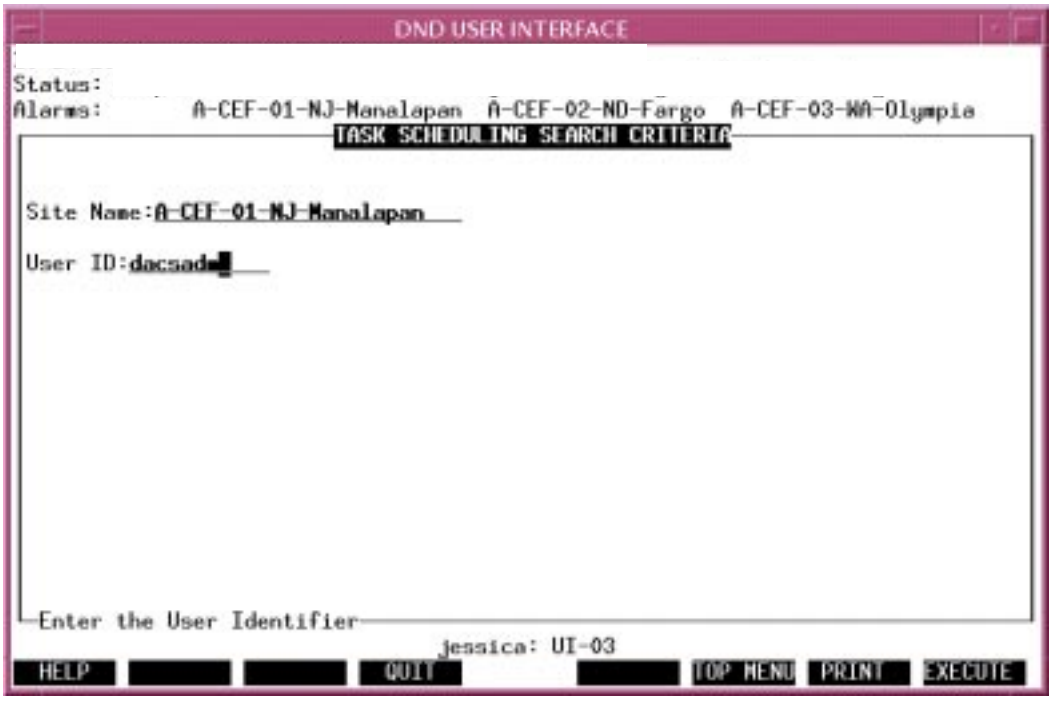


Figure 17-65. DND Forms: TASK SCHEDULE LIST/RESULTS Report Form

Task Schedule Reports (Continued)

Field Descriptions

The field values for the TASK SCHEDULE LIST and TASK SCHEDULE RESULTS Report forms are described in Table 17-16.

Table 17-16. Field Descriptions for the TASK SCHEDULE LIST/RESULTS Report Form

Field	Description
GUI and Forms: **Site Name**	(Combo box) Select the name of the DACS where the report will be processed. Clicking this field will display a list of Network Element names.
GUI only: **Available Formats**	(Combo box) Select a TASK SCHEDULE Report format. If no customized formats were created using the DND Forms Interface, the only formats available will be: ■ TASK SCHEDULE LIST Report Form: *LIST* ■ TASK SCHEDULE RESULTS Report Form: *RESULTS*.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
GUI and Forms: **User ID**	(Text field) Enter the user's login name. For additional information, refer to the Field Description tables in Chapter 16, User Administration.

Sample TASK SCHEDULE LIST Report

Figure 17-66 displays a sample TASK SCHEDULE LIST Report.

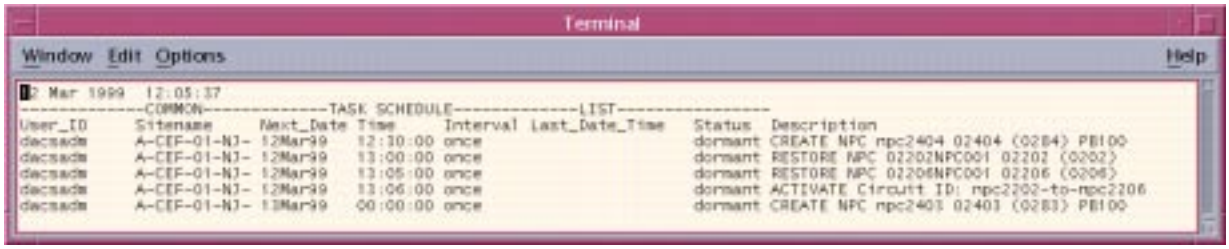


Figure 17-66. Sample TASK SCHEDULE LIST Report

Task Schedule Reports (Continued)

Sample TASK SCHEDULE RESULTS Report

Figure 17-67 displays a sample TASK SCHEDULE RESULTS Report.

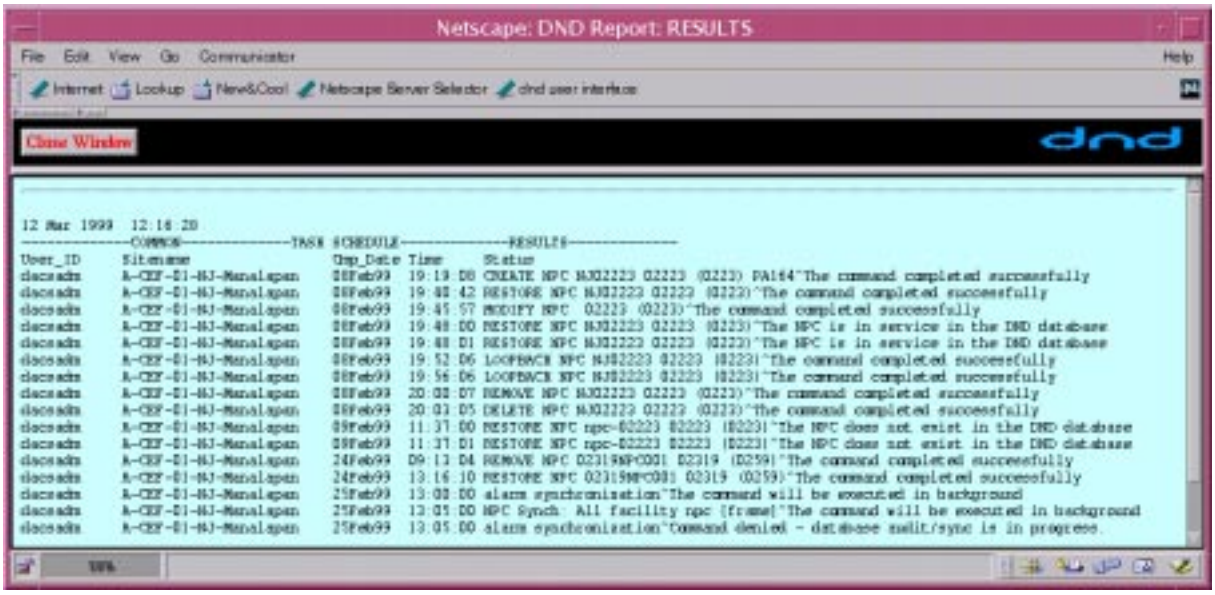


Figure 17-67. Sample TASK SCHEDULE RESULTS Report

Termination Name Reports

Description

The TERMINATION NAME Report displays a list of all termination names that have been provisioned, the alarms associated with each termination name, any remarks associated with each termination name, and the intertie information relating to that termination name.

Sample Report Form

Figure 17-68 displays a sample TERMINATION NAME Report form



Figure 17-68. DND GUI: Sample TERMINATION NAME Report Form

Termination Name Report (Continued)

Field Descriptions

The field values for the TERMINATION NAME Report form are described in Table 17-17.

Table 17-17. Field Descriptions for the TERMINATION NAME Report Form

Field	Description
Site Name	(Combo box) Select the name of the SNMP where the report will be processed. Clicking this field will display a list of SNMP names.
Available Formats	(Combo box) Select an TERMINATION NAME Report format. The following formats are available: ■ *Alarms* ■ *Remarks* ■ *Intertie Information* ■ *Channels*
Report Title	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
Termination Name	Enter the **Termination Name**. For additional information, refer to the Field Description tables in Chapter 12, Termination Naming and Connections.
Port Name	Enter the **Port Name**. For additional information, refer to the Field Description tables in Chapter 12, Termination Naming and Connections.
Channels	Enter the **Channel**. For additional information, refer to the Field Description tables in Chapter 12, Termination Naming and Connections.
DS0 Bandwidth	Enter the **DS0 Bandwidth**. For additional information, refer to the Field Description tables in Chapter 12, Termination Naming and Connections.
Alarm Severity	(Combo box) Select an **Alarm Severity**.

Table 17-17. Field Descriptions for the TERMINATION NAME Report Form

Field	Description
Intertie ID	(Text field) Enter the Name of the Intertie ID.
Far End Site	(Text field) Enter the name of the Network Element at the far end.
Element Type	(Radio buttons) Select the site type. The choices are: ■ **All** - all site types ■ **DACS II** ■ **DACS II ISX** ■ **DACS II AX** ■ **AAC** ■ **IMACS** ■ **PSAX** ■ **Other** - The SNMP type created as "Other."

Termination Name Report (Continued)

Sample Reports

Figure 17-69 to Figure 17-72 display sample TERMINATION NAME Reports.

```
REPORT TITLE: ALARMS


17 Dec 1999  17:46:25
---------------Argentina-AX-11---------TERMINATION NAME----------------ALARMS---------
Term_Name                                 Port     Alarm_Type              Severity
term_1                                    P1-1     T1NearEndLOF            Major
term_2                                    P1-2     T1NearEndLossOfSignal   Critical
```

Figure 17-69. DND GUI: Sample TERMINATION NAME Report Form - Alarms Format

```
REPORT TITLE: REMARKS


17 Dec 1999  17:47:38
--------Argentina-AX-11------------TERMINATION NAME-----------REMARKS-------------
Term_Name                                  Port     Remark
term_1                                     P1-1     Termination #1
term_2                                     P1-2     Termination #2
arg_term1                                  P1-3
arg_term2                                  P1-4
```

Figure 17-70. DND GUI: Sample TERMINATION NAME Report Form - Remarks Format

(Continued on next page)

Termination Name Report (Continued)

Sample Reports, Continued

REPORT TITLE: Intertie Information

17 Apr 2000 17:49:24

----------PSAX1----------		TERMINATION NAME	-------INTERTIE INFO-------		
Term_Name	Port	Intertie_Name	Itie_Speed	Far_End_Name	Far_End_Type
atm1	P2-21-1400	psax1-psax2-itie	ATM	psax2	PSAX
atm2	P2-4095-65535	psax1-psax2-itie	ATM	psax2	PSAX
p3-21	P3-21	psax1-ax-itie	DS3	ax	DACS II AX
p4-1	P4-1	CEF-psax1-itie	DS3	CEF	DACS II
p4-2	P4-2	CEF-psax1-itie	DS3	CEF	DACS II
p4-3	P4-3	CEF-psax1-itie	DS3	CEF	DACS II
p5-1	P5-1	psax1-eu-itie	DS1	psax1-eu	End User
p5-2	P5-2	psax1-ax-itie	DS1	ax	DACS II AX
p5-3	P5-3	CEF-psax1-itie	DS1	CEF	DACS II
p6-1	P6-1	psax1-eu-itie	DS3	psax1-eu	End User

Figure 17-71. DND GUI: Sample TERMINATION NAME Report Form - Intertie Information Format

REPORT TITLE: CHANNELS

14 Apr 2000 16:2

----------PSAX1-------	TERMINATION NAME	----------	CHANNELS------
Term_Name	Term_Speed	Port	BW Channels
atm1	ATM	P2-21-1400	01
atm2	ATM	P2-4095-65535	01
p3-21	DS1	P3-21	01
p4-1	DS1	P4-1	01
p4-2	DS1	P4-2	01
p4-3	DS1	P4-3	01
p5-1	E1	P5-1	01
p5-2	E1	P5-2	01
p5-3	E1	P5-3	01
p6-1	DS1	P6-1	01

Figure 17-72. DND GUI: Sample TERMINATION NAME Report Form - Channels Format

Termination Mapping Report

Description

The TERMINATION MAPPING Report displays a list of all termination connections that have been provisioned, the alarms associated with each termination mapping, any remarks associated with each termination mapping, and the channels relating to that termination mapping.

DND GUI: Sample Report Form

Figure 17-73 displays a sample TERMINATION MAPPING Report form



Figure 17-73. DND GUI: Sample TERMINATION MAPPING Report Form

Termination Mapping Report (Continued)

Field Descriptions

The field values for the TERMINATION MAPPING Report form are described in Table 17-18.

Table 17-18. Field Descriptions for the TERMINATION MAPPING Report Form

Field	Description
Site Name	(Combo box) Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
Available Formats	(Combo box) Select an TERMINATION MAPPING Report format. If no customized formats were created using the DND Forms Interface, the following formats will be available: ■ *Alarms* ■ *Remarks* ■ *Mappings*
Report Title	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
Circuit ID	(Text Field) Enter the **Circuit ID**. For additional information, refer to the Field Description tables in Chapter 11, Termination Naming and Connections.
DS0 Bandwidth	(Text Field) Enter the **DS0 Bandwidth**. For additional information, refer to the Field Description tables in Chapter 11, Termination Naming and Connections.
From Termination	(Text Fields) Enter the **Termination Name** or the **Port Name** and **Channel**. For additional information, refer to the Field Description tables in Chapter 11, Termination Naming and Connections.
To Termination	(Text Fields) Enter the **Termination Name** or the **Port Name** and **Channel**. For additional information, refer to the Field Description tables in Chapter 11, Termination Naming and Connections.
Alarm Severity	(Combo box) Select an **Alarm Severity**.

Termination Mapping Report (Continued)

Sample Reports

Figure 17-74 to Figure 17-76 display sample TERMINATION MAPPING Reports.

```
REPORT TITLE: ALARMS


17 Dec 1999  17:52:18
------------Argentina-AX-11-------TERMINATION MAPPING----------ALARMS-----------
CktID                              Alarm_Type                          Severity
term_map_1                         T1NearEndLossOfSignal               Critical
```

Figure 17-74. DND GUI: Sample TERMINATION MAPPING Report Form - Alarms Format

```
REPORT TITLE: REMARKS


17 Dec 1999  17:53:36
---------Argentina-AX-11-----------TERMINATION MAPPING------REMARKS--------------
CktID                        Remark
arg_term1_to_arg_term2       map the terminations
term_map_1                   termination circuit map for Argentina Customer A
```

Figure 17-75. DND GUI: Sample TERMINATION MAPPING Report Form - Remarks Format

```
REPORT TITLE:


17 Dec 1999  17:55:28
-----------Argentina-AX-11---------TERMINATION MAPPING---------MAPPINGS--------------
CktID                   Term1_Name  Term1_Port Term1_Ch Term2_Name   Term2_Port Term2_(
arg_term1_to_arg_term2  arg_term1   P1-3       01       arg_term2    P1-4       05
arg_term1_to_arg_term2  arg_term1   P1-3       02       arg_term2    P1-4       06
arg_term1_to_arg_term2  arg_term1   P1-3       03       arg_term2    P1-4       07
arg_term1_to_arg_term2  arg_term1   P1-3       04       arg_term2    P1-4       08
term_map_1              term_1      P1-1       01       term_2       P1-2       01
term_map_1              term_1      P1-1       02       term_2       P1-2       02
term_map_1              term_1      P1-1       03       term_2       P1-2       03
```

Figure 17-76. DND GUI: Sample TERMINATION MAPPING Report Form - Mappings Format

Outage Report

Description

The OUTAGE Report provides a report for NPC or circuit outage information. The information generated in this report is not automatically generated by the DND - it was previously entered into the database by the user via the OUTAGE LOG form.

DND GUI: Sample Report Form

Figure 17-77 displays a sample OUTAGE Report form.

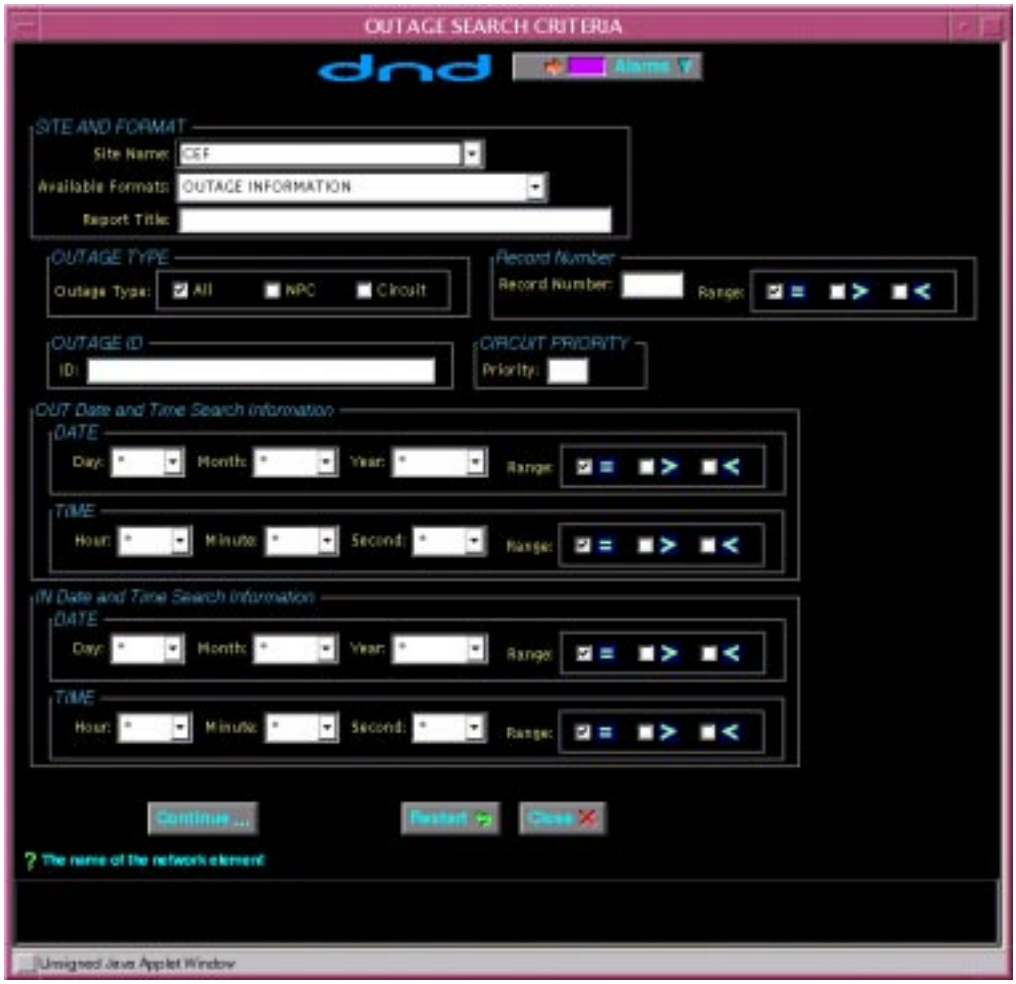


Figure 17-77. DND GUI: Sample OUTAGE Report Form

Outage Report (Continued)

DND Forms: Sample Report Form

Figure 17-78 displays a sample OUTAGE Report form.

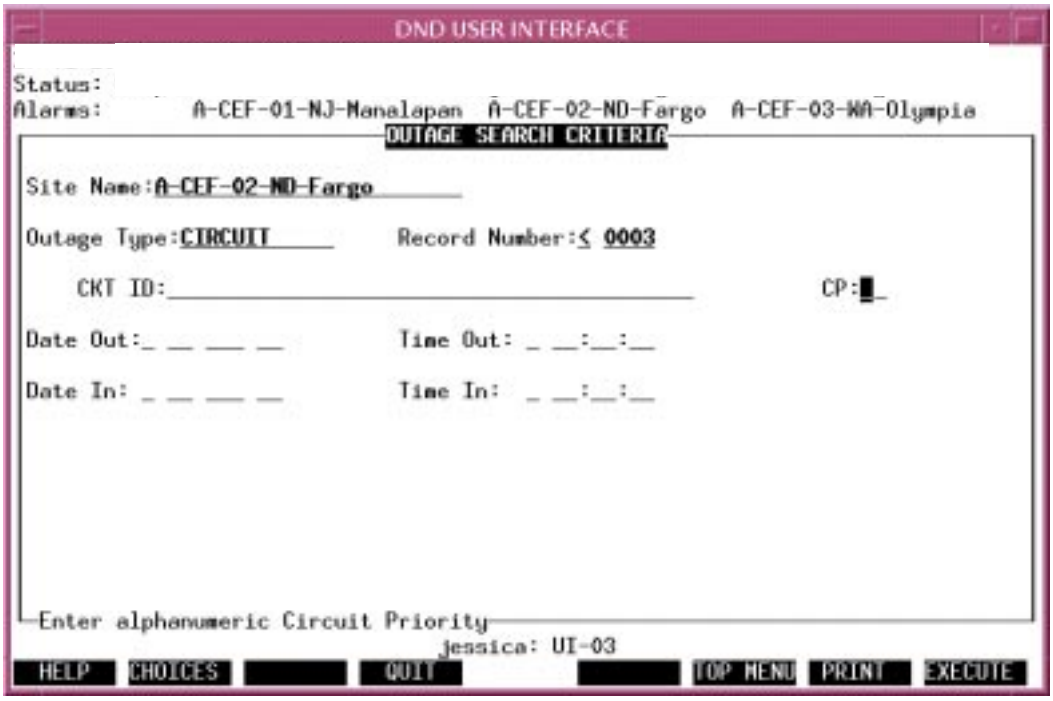


Figure 17-78. DND Forms: Sample OUTAGE Report Form

Outage Report (Continued)

Field Descriptions

The field values for the OUTAGE Report form are described in Table 17-19.

Table 17-19. Field Descriptions for the OUTAGE Report Form

Field	Description
GUI and Forms: **Site Name**	(Combo box) Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
GUI only: Available Formats	(Combo box) Select an OUTAGE Report format. If no customized formats were created using the DND Forms Interface, the only format available will be *OUTAGE INFORMATION*.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
GUI and Forms: **Outage Type**	(Radio buttons) The choices are: ■ *All* - Display NPC and circuit outages ■ *NPC* - Display NPC outages ■ *Circuit* - Display circuit outages
GUI and Forms: **Record Number**	(Text field) Enter the outage entry number assigned to a particular outage via the OUTAGE LOG form.
GUI and Forms: **(Record Number) Range**	(Radio buttons) The choices are: ■ **=** - (*GUI only*) Displays the outage for the record EQUAL to the Record Number ■ **>** - Displays the outages for the records GREATER than the Record Number ■ **<** - Displays the outages for the records LESS than the Record Number.
GUI: **(Outage) ID** *Forms*: **CKT ID**	(Text field) Enter a circuit name related to an outage. For additional information, refer to the Field Description tables in Chapter 9, Circuit Provisioning.
GUI: **(Circuit) Priority** *Forms*: **CP**	(Text field) Enter the priority code for the circuit. For additional information, refer to the Field Description tables in Chapter 9, Circuit Provisioning.

Table 17-19. Field Descriptions for the OUTAGE Report Form (Continued)

Field	Description
GUI and Forms: **(OUT and IN Information) DATE**	(Combo boxes) Select the **Date** range for the report. The fields are: ■ **Day** - Select the day (*01* through *31*) ■ **Month** - Select the month (*Jan* through *Dec*) ■ **Year** - Select the year (*1990* through *2037*)
GUI and Forms: **(OUT and IN Information: DATE) Range**	(Radio buttons) Select the **Date** range for the report. The choices are: ■ **=** - (*GUI only*) Displays outages which occurred ON the **Date** ■ **>** - Displays outages which occurred AFTER the **Date** ■ **<** - Displays outages which occurred BEFORE the **Date**
GUI and Forms: **(OUT and IN Information) TIME**	(Combo boxes) Select the time criteria for the report. The **Time** fields are: ■ **Hour** - Select the hour (00 through 23) ■ **Minute** - Select the minute (00 through 59) ■ **Second** - Select the second (00 through 59)
GUI and Forms: **(OUT and IN Information: DATE) Range**	(Radio buttons) Select the time range. The choices are: ■ **=** - (*GUI only*) Displays outages which occurred ON the **Time** ■ **>** - Displays outages which occurred AFTER the **Time** ■ **<** - Displays outages which occurred BEFORE the **Time**

Outage Report (Continued)

Sample OUTAGE Report

Figure 17-79 displays a sample OUTAGE Report.

```
12 Mar 1999  12:22:36

--------A-CEF-01-NJ-Manalapan--------OUTAGES--------OUTAGE INFORMATION--------

Type    Num   Outage_ID                                    Date_Str Date_End

CIRCUIT 1     ckt3                                         01Mar99  02Mar99

CIRCUIT 1     ckt2                                         11Mar99  12Mar99

CIRCUIT 1     ckt1                                         12Mar99  12Mar99
```

Figure 17-79. Sample OUTAGE Report

SNMP Alarm Log Report

Description

The SNMP ALARM LOG Report lists the history of alarm messages for an SNMP unit. If an SNMP unit icon is in the alarm state (ALM) or error state (ERR), then, an SNMP ALARM LOG Report should be run to find the cause of the alarm, The three types of alarm messages for an SNMP unit are:

- **State changes** - The state changes you will see most often are:
  - — Query (QRY)
  - — In-service (IS)
  - — Out-of-service (OOS)
  - — Alarm (ALM)
  - — Error (ERR).

  If DND detects a state change, the user is notified in the SNMP Alarm Log by this message: `NE STCHG: <new_change>`
- **Standard trap messages** - DND can receive SNMP traps from an SNMP network element, as long as DND and the network element are configured to communicate with each other. For details, see Chapter 5.
- **Gap alarm messages** - Each SNMP trap is assigned a sequence number. If DND detects a skip in sequence numbers, the user is notified in the SNMP Alarm Log by this message: `<Seqno> NE SEQNO GAP`

  A skip indicates that the SNMP device sent out traps that were not received by DND. Missed traps indicate that an error occurred at the SNMP device and may require further investigation. Missed traps may occur if the TCP/IP connection is down or the SNMP network element is not responding.

SNMP Alarm Log Report (Continued)

Sample Report Form

Figure 17-80 displays a sample SNMP ALARM LOG Report form.



Figure 17-80. Sample SNMP ALARM LOG Report Form

SNMP Alarm Log Report (Continued)

Field Descriptions

The field values for the SNMP ALARM LOG Report form are described in Table 17-20.

Table 17-20. Field Descriptions for the SNMP ALARM LOG Report Form

Field	Description
Site Name	(Combo box) Select the name of the SNMP site where the report will be processed. Clicking this field will display a list of SNMP names.
Available Formats	(Combo box) The only format available is *SNMP ALARM LOG*. This report cannot be customized.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
Seqno	(Text field) Enter the sequence number of the trap.
(Seqno) Range	(Radio buttons) The choices are: ■ **=** - Display the report entry for the sequence number EQUAL to **Seqno** ■ **>** - Display the report entries for sequence numbers GREATER than **Seqno** ■ **<** - Display the report entries for sequence numbers LESS than **Seqno**
Port Name	(Text field) Enter the name of the port whose alarms will be displayed in the report.
Port Type	(Text field) Enter the type of port whose alarms will be displayed in the report.
Alarm Severity	(Combo box) Select the severity of port alarms to display in the report.
Alarm Type	(Text field) Enter the type of port alarms to display in the report.
DATE	(Combo boxes) Select the date criteria for the report. The **Date** fields are: ■ **Day** - Select the day (*01* through *31*) ■ **Month** - Select the month (*Jan* through *Dec*) ■ **Year** - Select the year (*1990* through *2037*)

Table 17-20. Field Descriptions for the SNMP ALARM LOG Report Form (Continued)

Field	Description
(DATE) Range	(Radio buttons) Select the **Date** range for the report. The choices are: ■ **=** - Displays alarms which occurred ON the **Date** ■ **>** - Displays alarms which occurred AFTER the **Date** ■ **<** - Displays alarms which occurred BEFORE the **Date**
TIME	(Combo boxes) Select the time criteria for the report. The **Time** fields are: ■ **Hour** - Select the hour (00 through 23) ■ **Minute** - Select the minute (00 through 59) ■ **Second** - Select the second (00 through 59)
(TIME) Range	(Radio buttons) Select the **Time** range to display in the report. The choices are: ■ **=** - Displays alarms which occurred ON the **Time** ■ **>** - Displays alarms which occurred AFTER the **Time** ■ **<** - Displays alarms which occurred BEFORE the **Time**

SNMP Alarm Log Report (Continued)

Sample SNMP ALARM LOG Report

Figure 17-81 displays a sample SNMP ALARM LOG Report.

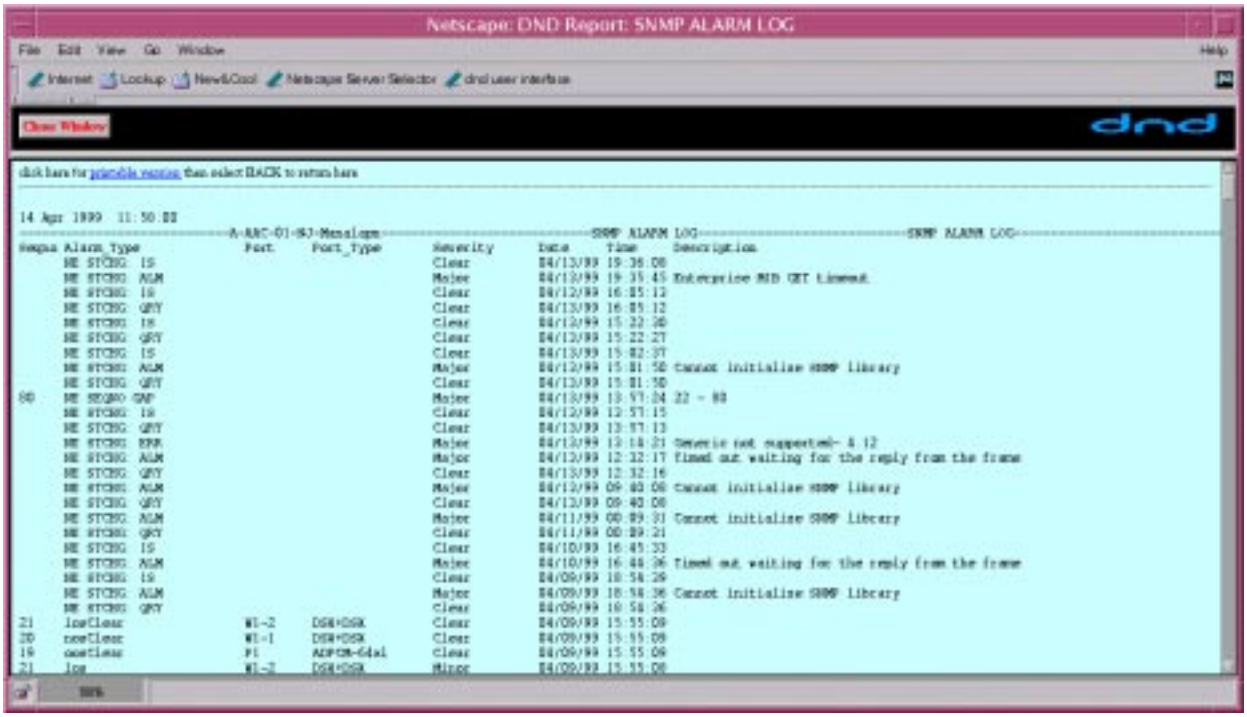


Figure 17-81. Sample SNMP ALARM LOG Report

SNMP Port Alarm Report

Description

The SNMP PORT ALARM Report displays all active port alarms on certain network elements it manages, including:

- DACS II AX
- ACCULINK Access Controller (AAC)
- Integrated Access Communications Server (IMACS)
- Packet Star PSAX2300 Access Concentrator (PSAX)

Through this report, alarms may be selected by port name, port type, alarm severity, or alarm type. By default, all active alarms on the NE are shown.

NOTE:
The Port Alarm Report will only display facility (port) alarms on the narrowband or broadband protection packs when they are providing protection to a service card. Therefore, when alarms display on either of these packs, it applies to a service pack's traffic that has been switched over to the protection pack.

Sample Report Form

Figure 17-82 displays a sample SNMP PORT ALARM Report form.

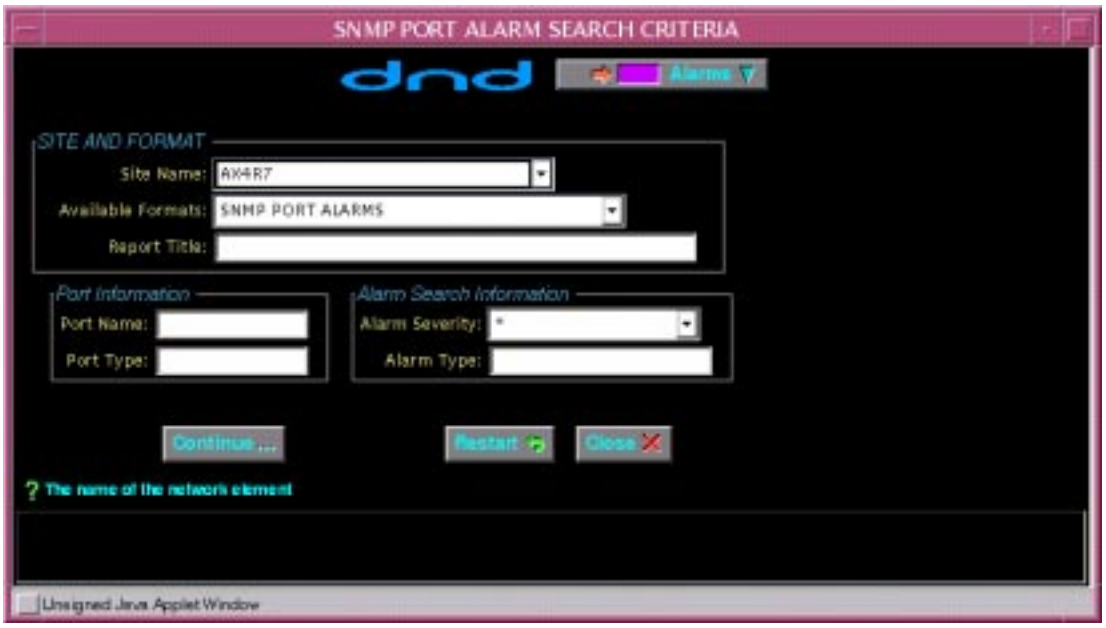


Figure 17-82. Sample SNMP PORT ALARM Report Form

SNMP Port Alarm Report (Continued)

Field Descriptions

The field values for the SNMP PORT ALARM Report form are described in Table 17-21.

Table 17-21. Field Descriptions for the SNMP PORT ALARM Report Form

Field	Description
Site Name	(Combo box) Select the name of the SNMP site where the report will be processed. Clicking this field will display a list of SNMP names.
Available Formats	(Combo box) The only format available is *SNMP PORT ALARMS*. This report cannot be customized.
Port Name	(Text field) Enter the name of the port whose alarms will be displayed in the report.
Port Type	(Text field) Enter the type of port whose alarms will be displayed in the report.
Alarm Severity	(Combo box) Select the severity of port alarms to display in the report.
Alarm State	(Text field) Enter the type of port alarms to display in the report.
Alarm Type	(Text field) Enter the type of port alarms to display in the report.

SNMP Port Alarm Report (Continued)

Sample SNMP PORT ALARM Report

Figure 17-83 displays a sample SNMP PORT ALARM Report.

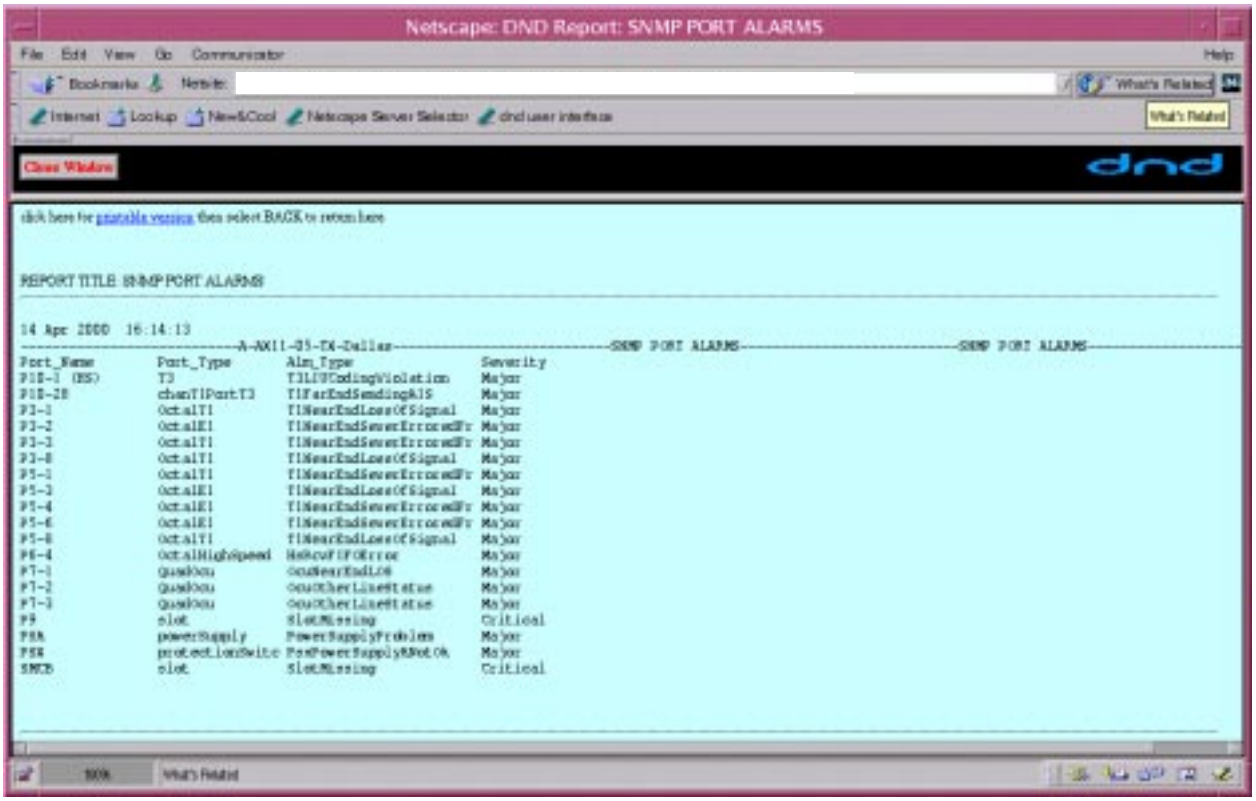


Figure 17-83. Sample SNMP PORT ALARM Report

SNMP Communications Report

Description

The SNMP COMMUNICATIONS Report displays SNMP and communications information for an SNMP unit.

Sample Report Form

Figure 17-84 displays a sample SNMP COMMUNICATIONS Report form.



Figure 17-84. Sample SNMP COMMUNICATIONS Report Form

SNMP Communications Report (Continued)

Field Descriptions

The field values for the SNMP COMMUNICATIONS Report form are described in Table 17-22.

Table 17-22. Field Descriptions for the SNMP COMMUNICATIONS Report Form

Field	Description
Site Name	(Combo box) Select the name of the SNMP site where the report will be processed. Clicking this field will display a list of SNMP names.
Available Formats	(Combo box) The only format available is *SNMP COMMUNICATIONS*. This report cannot be customized.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
Element Type	(Radio buttons) Select the SNMP site type. The choices are: ■ **All** - All types of SNMPs ■ **DACS II AX** ■ **AAC** ■ **IMACS** ■ **PSAX** ■ **Other** - The SNMP type created as "Other."

Table 17-22. Field Descriptions for the SNMP COMMUNICATIONS Report Form (Continued)

Field	Description
Site Status	(Radio buttons) Select the status of the site to display in the report. The choices are: ■ **All** - Display report entries for every site status ■ **OOS** - Display report entries for Out-of-Service sites. ■ **IS** - Display report entries for In-Service sites ■ **ALM** - Display report entries for sites in alarm ■ **QRY** - Display report entries for sites in query ■ **ERR** - Display report entries for sites in error.
IP address	(Text field) Enter the IP address of an SNMP site.
Community	(Text field) Enter the Community code for an SNMP site.

SNMP Communications Report (Continued)

Sample SNMP COMM. Report

Figure 17-85 displays a sample SNMP COMMUNICATIONS Report.

```
10 Mar 1999  19:44:42

--------COMMON--------SNMP COMMUNICATIONS--------SNMP COMMUNICATIONS----------

Site_Name               Site_Type  Comm_Status IP_Address     Community Location

A-AAC-01-NJ-Manalapn    AAC        IS          291.186.1.1    Manager   lab

A-AAC-02-ND-Rugby       AAC        IS          102.178.10.21  Manager   lab

A-AAC-04-AZ-Phoenix     AAC        IS          192.118.11.4   Manager   lab

A-AAC-05-TX-Dallas      AAC        IS          292.108.12.2   Manager   Texas

HOBBES-AAC-131-NM       AAC        IS          111.18.10.13   Manager   lab

HOBBES-AAC-132-NM       AAC        IS          296.18.78.130  Manager   lab

HOBBES-AAC-133-NV-Vegas AAC        IS          152.68.65.138  Manager   casino

HOBBES-AAC-134-NV-Vegas AAC        IS          152.198.10.14  Manager   casino

HOBBES-AAC-135-NV-Reno  AAC        IS          182.138.10.55  Manager   farm

HOBBES-AAC-136-NV-Reno  AAC         IS           199.198.10.0  Manager   farm
```

Figure 17-85. Sample SNMP COMMUNICATIONS Report

Altroutes/Preemptions Report

Description

The ALTROUTES/PREEMPTIONS Report provides information on altrouted and/or preempted circuits. Two default formats are provided. The fields that appear on the report contain information that was entered in the CIRCUIT PROVISIONING form, and its associated ALTROUTE form. The report form allows you to select by the altrouted circuit ID names, circuit characteristics, endpoint NPC and channel number, and by the preempted circuit identifiers.

Sample Report Form

Figure 17-86 displays a sample ALTROUTES/PREEMPTIONS Report form.

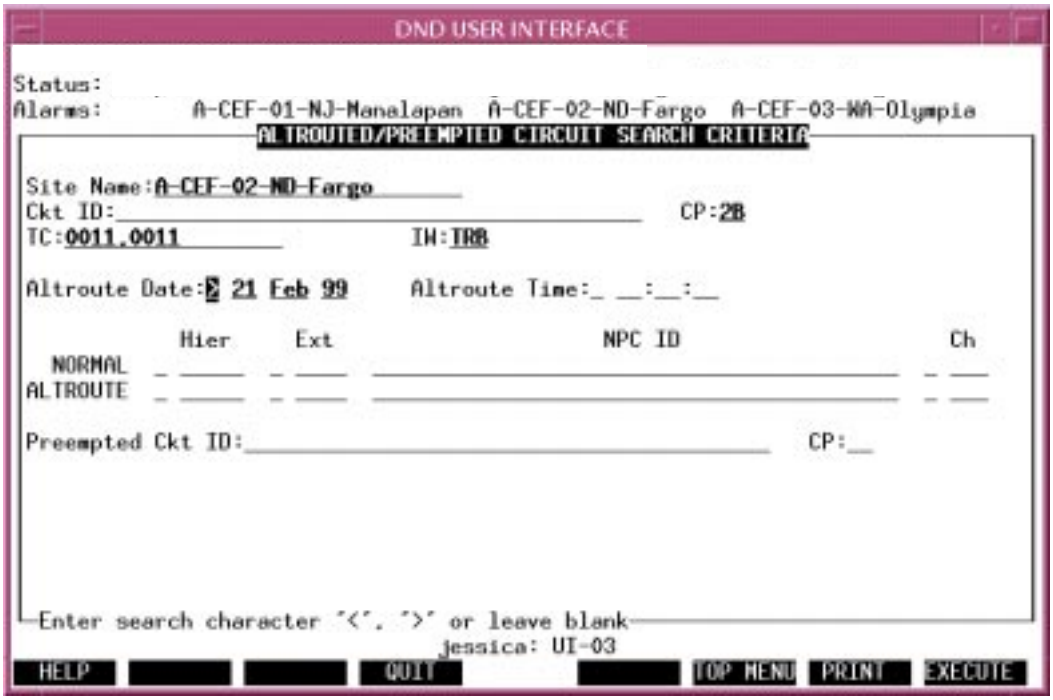


Figure 17-86. Sample ALTROUTES/PREEMPTIONS Report Form

Altroutes/Preemptions Report (Continued)

Field Descriptions

The field values for the ALTROUTES/PREEMPTIONS Report form are described in Table 17-23.

Table 17-23. Field Descriptions for the ALTROUTES/PREEMPTIONS Report Form

Field	Description
Site Name	Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
Available Formats	Select an ALTROUTES/PREEMPTIONS Report format. The default choices are: ■ *PREEMPTED CIRCUITS* - Identifies the preempted circuits and the altrouted endpoints that caused their preemption ■ *ALTROUTED CIRCUITS* - Identifies circuits in the ALTROUTED status. One line lists the altrouted circuit ID and identifies one endpoint of the altrouted circuit. The normal hierarchical number and channel is listed along with the altrouted hierarchical number and channel. One two-point circuit is thus identified by two report lines, one of each point. A multipoint circuit results in more than two report lines. Note that NPC and its channel will not be different from the altrouted NPC and its channel if that point was not changed.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
Ckt ID	Enter the circuit name of the altrouted or preempted circuit.
(Altrouted Ckt ID) CP	Enter the priority code of the circuit. For additional information, refer to the Field Description tables in Chapter 9, Circuit Provisioning.
TC	Select the Trunk Conditioning to display in the report. For additional information, refer to the Field Description tables in Chapter 9, Circuit Provisioning.

Table 17-23. Field Descriptions for the ALTROUTES/PREEMPTIONS Report Form (Continued)

Field	Description
IW	Select the Insertion Word to display in the report. For additional information, refer to the Field Description tables in Chapter 9, Circuit Provisioning.
(Altroute Date) Range	Select the **Date** range for the report. The choices are: ■ **>** - Displays information for circuits which were altrouted/preempted AFTER the **Altroute Date** ■ **<** - Displays information for circuits which were altrouted/preempted BEFORE the **Altroute Date**
Altroute Date	Enter the date criteria for the report. The **Date** fields are: ■ **Day** - Enter the day (*01* through *31*) ■ **Month** - Enter the month (*Jan* through *Dec*) ■ **Year** - Enter the year (*1990* through *2037*)
(Altroute Time) Range	Enter the time range. The choices are: ■ **>** - Displays information for circuits which were altrouted/preempted AFTER the **Altroute Time** ■ **<** - Displays information for circuits which were altrouted/preempted BEFORE the **Altroute Time**
Altroute Time	Enter the time criteria for the report. The **Time** fields are: ■ **Hour** - Enter the hour (00 through 23) ■ **Minute** - Enter the minute (00 through 59) ■ **Second** - Enter the second (00 through 59)
(FROM/TO Hier/Ext) Range	Enter the range criteria of NPCs in which display report information. The choices are: ■ **>** - Displays NPC altroute/preemption information for NPC numbers GREATER than the **Hier/Ext** specified ■ **<** - Displays NPC altroute/preemption information for NPC numbers LESS than the **Hier/Ext** specified.
(NORMAL/ ALTROUTE) Hier/Ext	Enter the normal/altrouted NPC number in which to display in the report. For additional information, refer to the Field Description tables in Chapter 8, NPC Provisioning.

Table 17-23. Field Descriptions for the ALTROUTES/PREEMPTIONS Report Form (Continued)

Field	Description
NPC ID	Enter the name of the normal/altrouted NPC.
Ch	Enter the channel number of the normal/altrouted NPC.
Preempted Ckt ID	Enter the circuit name of the preempted circuit.
(Preempted Ckt) CP	Enter the priority code of the preempted circuit. For additional information, refer to the Field Description tables in Chapter 9, Circuit Provisioning

Altroutes/Preemptions Report (Continued)

Sample ALTROUTES/ PREEMPTIONS Reports

The two default ALTROUTES/PREEMPTIONS Report formats are:

- *ALTROUTED CIRCUITS*
- *PREEMPTED CIRCUITS*

ALTROUTED CIRCUITS

Figure 17-87 displays a sample ALTROUTED CIRCUITS Report, showing two altrouted circuits.

```
--------stest1--------ALTROUTES/PREEMPTIONS--------ALTROUTED CIRCUITS-----------

Circuit_ID           CP  NPC      Ch     A_NPC    Ch   Date     Time    Pr_Ckt_ID

Circuit1             00  01103    005    01103    004  3/23/99  08:01

Circuit1             00  01104    011    01104    012  3/23/99  08:01

Circuit2             00  01104    004    01104    004  3/23/99  08:02

Circuit2             00  01104    005    01104    006  3/23/99  08:02
```

Figure 17-87. Sample ALTROUTED CIRCUITS Report

PREEMPTED CIRCUITS

Figure 17-88 displays a sample PREEMPTIONS Report, showing one circuit preemption, **Circuit7**. The TO channel of **Circuit8** was altrouted from NPC 01102, Channel 010, to NPC 01102, Channel 005, which was already in use.

```
10 Mar 1999  19:44:42

--------stest1--------ALTROUTES/PREEMPTIONS--------PREEMPTED CIRCUITS-----------

Circuit_ID             CP  NPC      Ch     Alt_Ckt_ID   CP   Date     Time

                           01101    010    Circuit8     00   22May99  09:26:22

Circuit7               00  01102    005    Circuit8     00   22May99  09:26:28
```

Figure 17-88. Sample PREEMPTED CIRCUITS Report

Test Port Report

Description

The TEST PORT Report displays test port and test port group status. Two default formats are provided. The fields that appear in the report contain information that was entered in the TEST PORT PROVISIONING form and the TEST ACCESS form. The report form permits search by test port or test circuit connection data and characteristics.

Sample Report Form

Figure 17-89 displays a sample TEST PORT Report form.

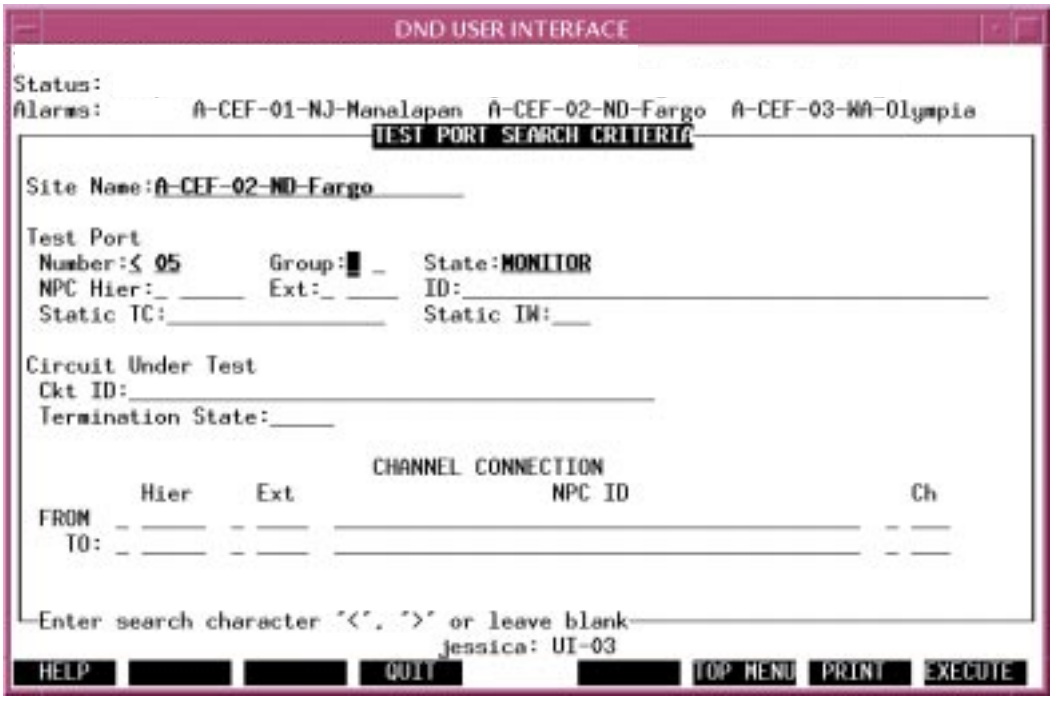


Figure 17-89. Sample TEST PORT Report Form

Test Port Report (Continued)

Field Descriptions

The field values for the TEST PORT Report form are described in Table 17-24.

Table 17-24. Field Descriptions for the TEST PORT Report Form

Field	Description
Site Name	Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names
Available Formats	Select a TEST PORT Report format. The choices are: ■ *TEST PORT PROVISIONING* - Identifies information on the test ports and lists conditioning information to be applied to the circuits under test. ■ *TEST PORT STATUS* - Identifies information on test port and test circuit status information. The test port number, hierarchical number of its NPC, ID of the circuit under test, and type of test connection are listed.
GUI only: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
(Test Port: Number) Range	Select the test port **Number** range. The choices are: ■ **>** - Displays test port entries for numbers GREATER than the **Number** entered ■ **<** - Displays test port entries for numbers LESS than the **Number** entered
(Test Port) Number	Enter the test port number (*1* through *96*).
(Test Port: Group) Range	Select the test port **Number** range. The choices are: ■ **>** - Displays test port group entries for numbers GREATER than the **Number** entered ■ **<** - Displays test port group entries for numbers LESS than the **Number** entered
(Test Port) Group	Enter the test port group (*1* through *8*).
State	Enter the state of the test port. For additional information, refer to the Field Description tables in Chapter 17, Test Ports and Test Access.

Table 17-24. Field Descriptions for the TEST PORT Report Form (Continued)

Field	Description
Static TC	Select the Trunk Conditioning of the Test Port. For additional information, refer to the Field Description tables in Chapter 10, Circuit Provisioning.
Static IW	Select the Insertion Word of the Test Port. For additional information, refer to the Field Description tables in Chapter 10, Circuit Provisioning
(Circuit Under Test) Ckt ID	Enter the circuit name of the **CIRCUIT UNDER TEST**.
(Circuit Under Test) Termination State	Select the termination state of the **CIRCUIT UNDER TEST**. For additional information, refer to the Field Description tables in Chapter 21, Test Ports and Test Access.
(FROM/TO Hier/Ext) Range	Select the range criteria of CIRCUIT UNDER TEST NPCs. The choices are: ■ **>** - Displays NPCs with numbers GREATER than the **Hier/Ext** specified ■ **<** - Displays NPCs with numbers LESS than the **Hier/Ext** specified.
(FROM/TO) Hier/Ext	Enter the FROM/TO NPC number of the **CIRCUIT UNDER TEST**. For additional information, refer to the Field Description tables in Chapter 10, Circuit Provisioning.
(FROM/TO) NPC ID	Enter the FROM/TO NPC name of the **CIRCUIT UNDER TEST**.
(FROM/TO) Ch	Enter the FROM/TO channel number of the **CIRCUIT UNDER TEST**.

Test Port Report (Continued)

Sample TEST PORT Reports

The two default TEST PORT Report formats are:

- *TEST PORT STATUS*
- *TEST PORT PROVISIONING*

TEST PORT STATUS

Figure 17-90 displays a sample TEST PORT STATUS Report.

```
10 Mar 1999  19:44:42

---------stest1---------TEST PORT----------TEST PORT STATUS--------------------

TP          TP_State    Ckt_ID_Under_Test           F_NPC    F_Ch   T_NPC   T_Ch

1           RELEASE

2           MONITOR     Circuit2                    01110    004    01112    005
```

Figure 17-90. Sample TEST PORT STATUS Report

TEST PORT PROVISIONING

Figure 17-91 displays a sample TEST PORT PROVISIONING Report.

```
10 Mar 1999  19:44:42

---------stest1---------TEST PORT----------TEST PORT PROVISIONING--------------

TP_Grp          TP_NPC        TP          Static_TC      Static_IW    TP_State

1               01103         1           0011,0011      7F           TLR
```

Figure 17-91. Sample TEST PORT PROVISIONING Report

NPC Roll Results Report

Description

The NPC ROLL RESULTS Report lists the results of NPC rolls. The circuit IDs of rolled circuits, as well as the status of the circuits are included. The report form uses the NPC identifiers as search criteria.

Sample Report Form

Figure 17-92 displays a sample NPC ROLL RESULTS form.

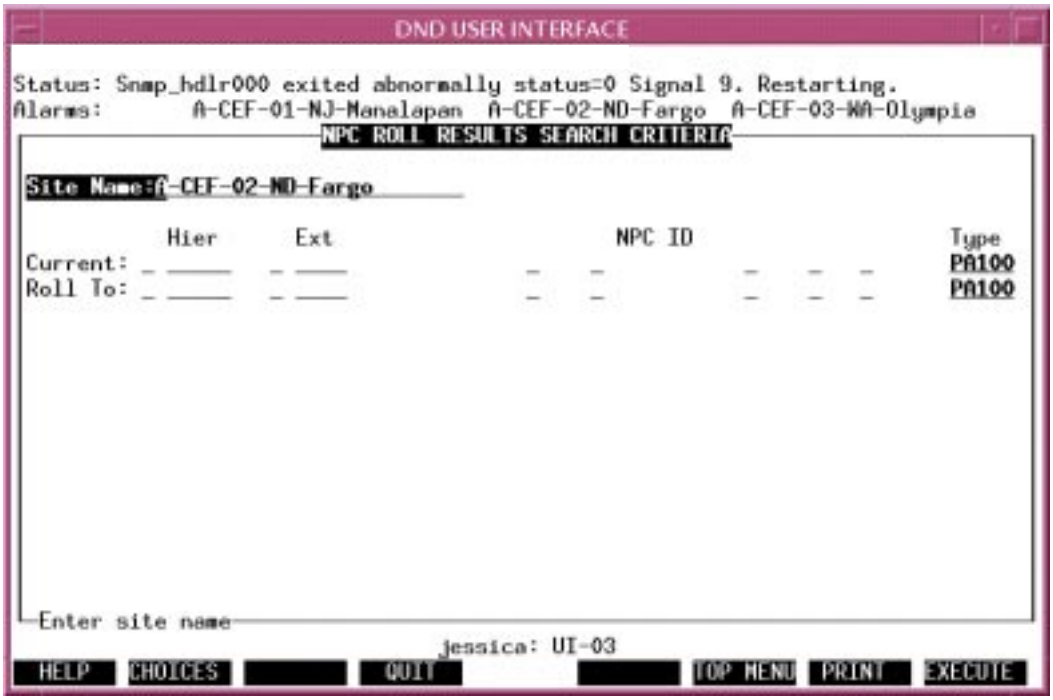


Figure 17-92. Sample NPC ROLL RESULTS Report Form

NPC Roll Results Report (Continued)

Field Descriptions

The field values for the NPC ROLL RESULTS Report form are described in Table 17-25.

Table 17-25. Field Descriptions for the NPC ROLL RESULTS Report Form

Field	Description
Site Name	Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
(Current/Roll To) Hier/Ext	Enter the number of the current/rolled NPC. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
(Current/Roll To) NPC ID	Enter the name of the current/rolled NPC. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
(Current/Roll To) Type	Enter the NPC type. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.

Sample NPC ROLL RESULTS Report

Figure 17-93 displays a sample NPC ROLL RESULTS Report.

```
10 Mar 1999  19:44:42

----------pnfsts----------NPC ROLL--------------RESULTS--------------------

Cur_NPC         Roll_NPC    Circuit_ID            Ckt_Status

npc105          npc100      Ckt1                  ACTIVE

The Command Completed Successfully
```

Figure 17-93. Sample NPC ROLL RESULTS Report

Lost Response Log

Description

Although listed as a REPORT OPERATIONS MENU option, the LOST RESPONSE LOG only contains data if the DND system interfaces to the Event Management System. The lost responses that get logged originate with the DND in reply to network traffic. However, for some reason, they cannot now be returned to the upstream network controller.

The **Request** field on the report represents the originator of the request, and can be frame, NPC, or circuit. The **Reason** field on the report is truncated to 31 characters to conserve space.

Sample Report Form

Figure 17-94 displays a sample LOST RESPONSE LOG form.

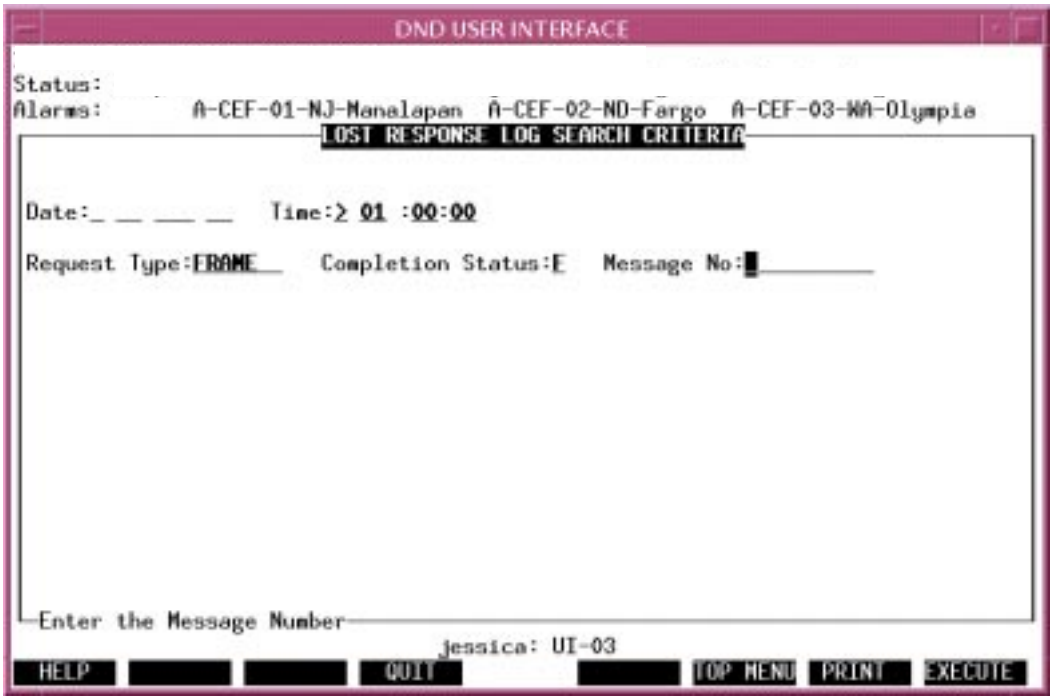


Figure 17-94. Sample LOST RESPONSE LOG Report Form

Lost Response Log Report (Continued)

Field Descriptions

The field values for the LOST REPSONSE LOG Report form are described in Table 17-26.

Table 17-26. LOST RESPONSE LOG Report Form Field Descriptions

Field	Description
(Date) Range	Select the **Date** range for the report. The choices are: ■ **>** - Displays lost responses which occurred AFTER the **Date** ■ **<** - Displays lost responses which occurred BEFORE the **Date.**
Date	Enter the date of the lost response. The **Date** fields are: ■ **Day** - Enter the day (*01* through *31*) ■ **Month** - Enter the month (*Jan* through *Dec*) ■ **Year** - Enter the year (*1990* through *2037*).
(Time) Range	Select the **Time** range for the report. The choices are: ■ **>** - Displays lost responses which occurred AFTER the **Time** ■ **<** - Displays lost responses which occurred BEFORE the **Time.**
Time	Enter the time criteria for the report. The **Time** fields are: ■ **Hour** - Enter the hour (00 through 23) ■ **Minute** - Enter the minute (00 through 59) ■ **Second** - Enter the second (00 through 59).

Table 17-26. LOST RESPONSE LOG Report Form Field Descriptions (Continued)

Field	Description
Request Type	Select the type of LOST RESPONSE LOG Report to generate. The choices are: ■ *CIRCUIT* - Display lost responses for circuits ■ *NPC* - Display lost responses for NPCs ■ *FRAME* - Display lost responses for DACS frames
Completion Status	Select the Completion Status of a provisioning request. The choices are: ■ *FAILURE* (F) - Display the entries with failed executions. ■ *SUCCESS (S)* - Display the entries with successful executions.
Message No	Enter the Message Number of the lost response.

Sample LOST RESPONSE LOG Report

Figure 17-95 displays a sample LOST RESPONSE LOG Report.

```
10 Mar 1999  19:44:42

----------COMMON----------LOST RESPONSE LOG-----------MESSAGES----------------

Date    Time     Request  S/F Message_No   Reason

01Dec99 15:49:18 FRAME    F   1            The input field primary line is inval
```

Figure 17-95. Sample LOST RESPONSE LOG Report

Reconfiguration Plan Reports

Description

A reconfiguration plan specifies a sequence of circuit-provisioning operations to be executed automatically when the plan is executed. There are five reconfiguration plan report types listed in the RECONFIGURATION SUB-MENU:

- *RECONFIGURATION PLANS*
- *RECONFIGURATION PLANS ALTROUTE*
- *AUTO RECONFIGURATION PLAN*
- *RECONFIGURATION PLAN RESULTS*
- *AUTO RECONFIGURATION PLAN RESULTS*

The fields that appear on these reports contain information that was entered in the RECONFIGURATION PLAN PROVISIONING form.

Reconfiguration Plans Report

The RECONFIGURATION PLANS (RP) Report lists the contents of reconfiguration plans. One default format (*PLAN CONTENTS*) is provided. The circuits and actions for the items of a a reconfiguration plan are listed.

The report can be sorted by RP identifying data and circuit state.

Reconfiguration Plan Altroute Report

The RECONFIGURATION PLANS ALTROUTE Report lists the altroutes and preemptions contained in a reconfiguration plan. Two default formats are provided:

- *PLAN ALTROUTED CIRCUITS* - Lists the altrouted circuit ID for the ALTROUTE Action in a reconfiguration plan. One line is reported for each circuit endpoint.
- *PLAN PREEMPTED CIRCUITS* - Lists the preempted circuit ID for circuits preempted by the ALTROUTE Action in a reconfiguration plan. One line is reported for each circuit endpoint.

The report can be sorted by RP identifying data and altrouted/preempted circuit identifiers.

Reconfiguration Plan Reports (Continued)

Automatic Reconfiguration Plan Report

The AUTO RECONFIGURATION PLAN (ARP) Report lists the contents of the two default list types:

- *RP LISTS* - Lists RPs in the ARP. The execution status of the ARP and the location at which the RP will execute are listed.
- *NPC LISTS* - Lists the NPCs whose alarm will trigger the ARP. The same information as in RP LISTS is reported, except the site identification and hierarchical number of the NPC is substituted for the RP site and identifier.

The report can be sorted by **Site Name**, **Plan**, **ARP Status**, **Date**, and **Time**.

Reconfiguration Plan Results Report

The RECONFIGURATION PLAN RESULTS Report lists the results of the latest execution of an RP (RP Action of ACTIVATE, CHECK, or IDLE). It includes one entry for each step in the plan showing either a successful completion or what type of conflict occurred, and an indication of what the last plan action was.

The report can be sorted by sequence number (**Seq**) or by circuit priority (**CP**).

Automatic Reconfiguration Plan Results Report

The AUTO RECONFIGURATION PLAN RESULTS Report lists the results of the latest execution of an ARP. It includes on entry for each RP in the plan. The RP status indicates whether an RP was executed.

The report can be sorted by sequence number (**Seq**) or by reconfiguration plan ID (**RP_ID**).

Reconfiguration Plan Reports (Continued)

Reconfiguration Sub-Menu

The RECONFIGURATION SUB-MENU provides access to the reconfiguration and altroute plans. Figure 17-96 displays the RECONFIGURATION SUB-MENU.

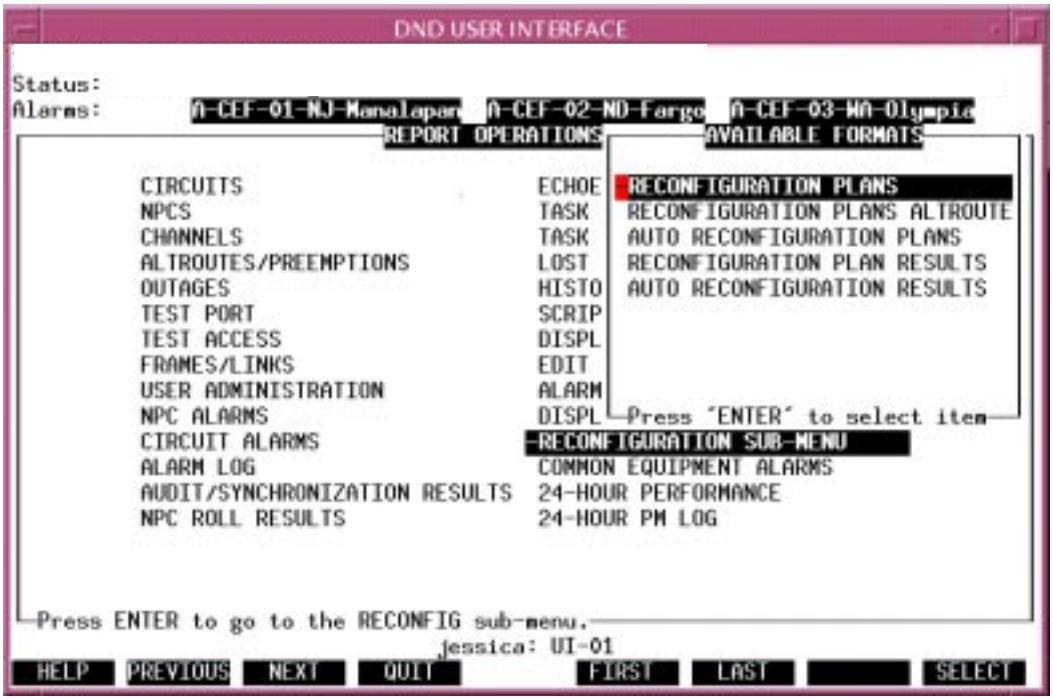


Figure 17-96. RECONFIGURATION SUB-MENU

Reconfiguration Plan Reports (Continued)

Sample Report Form

Figure 17-97 displays a sample RECONFIGURATION PLAN Report form.

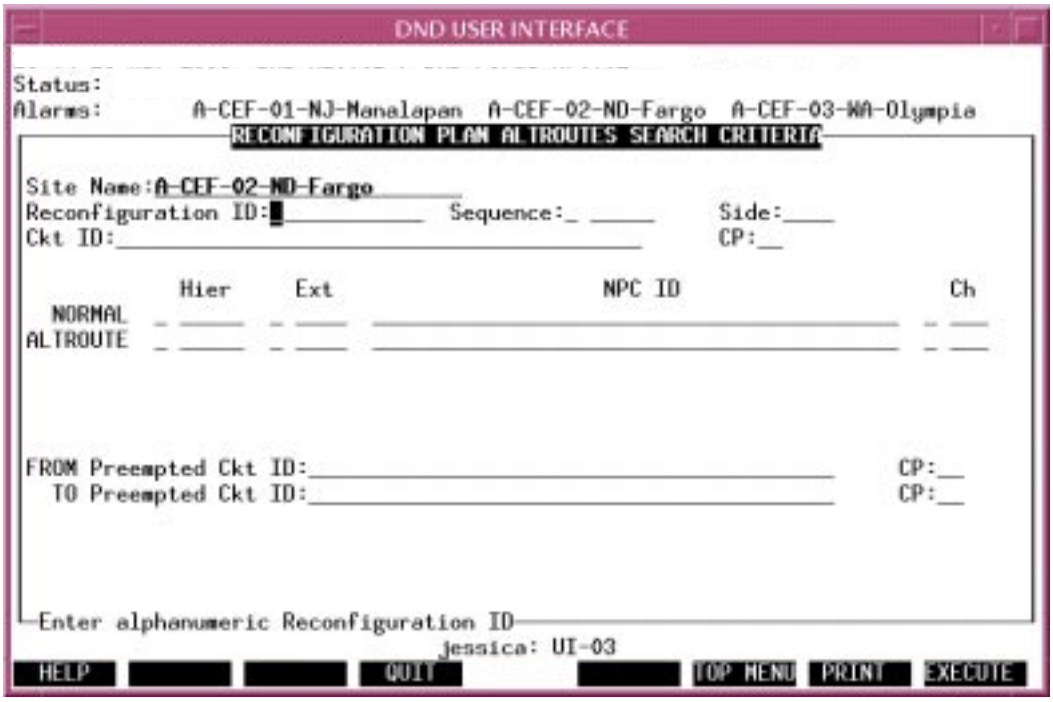


Figure 17-97. Sample RECONFIGURATION Plan Report - *RECONFIGURATION PLANS ALTROUTE* Format

Reconfiguration Plan Reports (Continued)

Field Descriptions

The field values for the various RECONFIGURATION PLAN Reports form are described in Table 17-27.

Table 17-27. Field Descriptions for the RECONFIGURATION PLAN Reports

Field	Description
Site Name	Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
Reconfiguration ID	Enter the RP ID name. For additional information, refer to the Field Description tables in Chapter 10, Circuit Provisioning.
RP Status	Select the status of the reconfiguration plan. For additional information, refer to the Field Description tables in Chapter 10, Circuit Provisioning.
Ckt ID	Enter the name of the circuit. For additional information, refer to the Field Description tables in Chapter 10, Circuit Provisioning.
Ckt Action	Select the operation performed when the RP was executed. For additional information, refer to the Field Description tables in Chapter 10, Circuit Provisioning.
(Sequence) Range	Select the **Sequence** range. The choices are: ■ **<** - Display information for all entries LESS than **Sequence**. ■ **>** - Display information for all entries GREATER than **Sequence**.
Sequence	Enter the reconfiguration plan sequence number (*1* through *32768*).
Side	Enter the side of the circuit. The choices are: ■ *TO* - TO side ■ *FROM* - FROM side
CP	Enter the circuit priority value for the normal/altrouted circuit. For additional information, refer to the Field Description tables in Chapter 9, Circuit Provisioning.

Table 17-27. Field Descriptions for the RECONFIGURATION PLAN Reports (Continued)

Field	Description
(NORMAL/ ALTROUTE) Hier/Ext	Enter the normal/altrouted NPC number in either Hierarchical (Hier) or Extended (Ext). For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
NPC ID	Enter the NPC ID name.For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
Ch	Enter the channel number of the normal/altrouted NPC.
(FROM/TO) Preempted Ckt ID	Enter the FROM/TO preempted circuit names. For additional information, refer to the Field Description tables in Chapter 10, Circuit Provisioning.
(FROM/TO) CP	Enter the circuit priority value for the FROM/TO preempted circuit. For additional information, refer to the Field Description tables in Chapter 10, Circuit Provisioning.
ARP ID	Enter the automatic reconfiguration plan ID name. For additional information, refer to the Field Description tables in Chapter 10, Circuit Provisioning.
ARP Status	Select the status of the automatic reconfiguration plan. For additional information, refer to the Field Description tables in Chapter 10, Circuit Provisioning.
List Type	Select the type of item. For additional information, refer to the Field Description tables in Chapter 10, Circuit Provisioning.
RP ID	Enter the reconfiguration plan ID name. For additional information, refer to the Field Description tables in Chapter 10, Circuit Provisioning.
(RP Date) Range	Select the **RP Date** range for the report. The choices are: ■ **>** - Displays RP items which were executed AFTER the **RP Date** ■ **<** - Displays RP items which were executed BEFORE the **RP Date**

Table 17-27. Field Descriptions for the RECONFIGURATION PLAN Reports (Continued)

Field	Description
RP Date	Select the **RP Date** range for the report. The fields are: ■ **Day** - Select the day (*01* through *31*) ■ **Month** - Select the month (*Jan* through *Dec*) ■ **Year** - Select the year (*1990* through *2037*)
(RP Time) Range	Select the **RP Time** range. The choices are: ■ **>** - Displays RP items which were executed AFTER the **RP Time** ■ **<** - Displays RP items which were executed BEFORE the **RP Time**
RP Time	Select the **RP Time** criteria for the report. The **Time** fields are: ■ **Hour** - Select the hour (00 through 23) ■ **Minute** - Select the minute (00 through 59) ■ **Second** - Select the second (00 through 59)

Sample RP Report

Figure 17-98 displays a sample RECONFIGURATION PLANS Report.

```
10 Mar 1999  19:44:42

---------stest1---------RECONFIGURATION PLANS--------PLAN CONTENTS--------------

Plan_ID               Status       Seq     Circuit_ID            Ckt_Action

RPlan001              IDLE         1       Circuit1              DEACTIVATE

RPlan001              IDLE         2       Circuit2              DEACTIVATE

RPlan001              IDLE         3       Circuit3              ACTIVATE
```

Figure 17-98. Sample RECONFIGURATION PLANS Report

Reconfiguration Plan Reports (Continued)

Sample RP ALTROUTE Reports

The two default RECONFIGURATION PLANS ALTROUTE Report formats are:

- *PLAN ALTROUTED CIRCUITS*
- *PLAN PREEMPTED CIRCUITS*

PLAN ALTROUTED CIRCUITS

Figure 17-99 displays a sample RECONFIGURATION PLANS ALTROUTED CIRCUITS Report.

```
10 Mar 1999  19:44:42

----stest1----RECONFIGURATION PLAN ALTROUTES------PLAN ALTROUTES CIRCUITS-------

Plan_ID      Seq      Alt_Ckt_ID       CP   NPC   Ch   A_NPC   Ch   Pr_Ckt_ID

RPlan001     5        Circuit1         00   0001  001  0003    003  Circuit3

RPlan001     5        Circuit2         00   0002  003  0004    004  Circuit4
```

Figure 17-99. Sample RECONFIGURATION PLANS ALTROUTE Report - *PLAN ALTROUTED CIRCUITS* Format

PLAN PREEMPTED CIRCUITS

Figure 17-100 displays a sample RECONFIGURATION PLANS PREEMPTED CIRCUITS Report.

```
10 Mar 1999  19:44:42
----stest1----RECONFIGURATION PLAN ALTROUTES------PLAN PREEMPTED CIRCUITS-------
Plan_ID      Seq      Pr_Ckt_ID     CP     NPC     Ch   Alt_Ckt_ID   CP
RPlan001     5
RPlan001     5        Circuit1      00
```

Figure 17-100. Sample RECONFIGURATION PLANS ALTROUTE Report - *PLAN PREEMPTED CIRCUITS* Format

(Continued on next page)

Reconfiguration Plan Reports (Continued)

Sample AUTO RP Reports

The two default AUTO RECONFIGURATION PLANS Report formats are:

- *RP LISTS*
- *NPC LISTS*

RP LISTS

Figure 17-101 displays a sample AUTO RECONFIGURATION PLAN RP LISTS Report.

```
10 Mar 1999  19:44:42

------stest1------AUTO RECONFIGURATION PLANS-----------RP LISTS--------------

ARP_ID         Seq      ARP_Stat    RP_Site       RP_ID     Date     Time

ARP001         1        IDLE        stest1        RP001     01Dec99  11:16:58

ARP001         2        IDLE        stest1        RP002     01Dec99  11:18:32
```

Figure 17-101. Sample AUTO RECONFIGURATION PLAN Report - *RP LISTS* Format

NPC LISTS

Figure 17-102 displays a sample AUTO RECONFIGURATION PLAN NPC LISTS Report.

```
10 Mar 1999  19:44:42

------stest1------AUTO RECONFIGURATION PLANS-----------NPC LISTS--------------

ARP_ID         Seq      ARP_Stat    NPC_Site      NPC       Date     Time

ARP001         1        IDLE        stest1        01105     01Dec99  11:16:58
```

Figure 17-102. Sample AUTO RECONFIGURATION PLAN Report - *NPC LISTS* Format

Reconfiguration Plan Reports (Continued)

Sample RP Results Reports

The two default RECONFIGURATION PLAN RESULTS Report formats are:

- *SEQUENCE SORTED*
- *CP SORTED*

SEQUENCE SORTED

Figure 17-103 displays a sample RECONFIGURATION PLAN RESULTS - SEQUENCE SORTED Report.

```
10 Mar 1999  19:44:42

---A-CEF-01-NJ-Manalapan---RECONFIGURATION PLAN RESULTS---SEQUENCE SORTED-----

Plan_ID      Action  Circuit_ID                                  CP Seq

rp1          EXECUTE rp-ckt                                      00 1

  The command completed successfully
```

Figure 17-103. Sample RECONFIGURATION PLANS RESULTS Report - *SEQUENCE SORTED* Format

CP SORTED

Figure 17-104 displays a sample RECONFIGURATION PLAN RESULTS - CP SORTED Report.

```
10 Mar 1999  19:44:42

---A-CEF-01-NJ-Manalapan---RECONFIGURATION PLAN RESULTS---SEQUENCE SORTED-----
Plan_ID      Action  Circuit_ID                                  CP Seq

rp1          EXECUTE rp-ckt                                      00 1

  The command completed successfully
```

Figure 17-104. Sample RECONFIGURATION PLANS RESULTS Report - *CP SORTED* Format

Reconfiguration Plan Reports (Continued)

Sample Auto RP Results Reports

The two default AUTO RECONFIGURATION PLAN RESULTS Report formats are:

- *SEQUENCE SORTED*
- *RP ID SORTED*

SEQUENCE SORTED

Figure 17-105 displays a sample AUTO RECONFIGURATION PLAN RESULTS - SEQUENCE SORTED Report.

```
10 Mar 1999  19:44:42

-------COMMON-------AUTO RECONFIGURATION RESULTS-------SEQUENCE SORTED--------

ARP_ID       Seq RP_Site                RP_ID        RP_St  Date     Time

arp1         1   A-CEF-01-NJ-Manalapan  rp1          EXECUT 12/30/00 18:21:31

  A-CEF-01-NJ-Manalapan RP ID "rp1": 1 attempted, 0 successful
```

Figure 17-105. Sample AUTO RECONFIGURATION PLAN RESULTS Report - *SEQUENCE SORTED* Format

RP ID SORTED

Figure 17-106 displays a sample AUTO RECONFIGURATION PLAN RESULTS - RP ID SORTED Report.

```
10 Mar 1999  19:44:42

--------COMMON--------AUTO RECONFIGURATION RESULTS--------RP ID SORTED--------

ARP_ID       Seq RP_Site                RP_ID        RP_St  Date     Time

arp1         1   A-CEF-01-NJ-Manalapan  rp1          EXECUT 12/30/00 18:21:31

  A-CEF-01-NJ-Manalapan RP ID "rp1": 1 attempted, 0 successful
```

Figure 17-106. Sample AUTO RECONFIGURATION PLAN RESULTS Report - *RP ID SORTED* Format

Established DS0 Channels Report

Description

The ESTABLISHED DS0 CHANNELS Report displays established DS0 circuit records. This feature is available only if the X.50/X.57 Subrate application is installed on the selected DACS site.

The report can be sorted by Circuit ID, Status, FROM/TO NPC, Channel, Type, Transmission Standard, Transmission Rate, and circuit options.

Sample Report Form

Figure 17-107 displays a sample ESTABLISHED DS0 CHANNELS Report form.

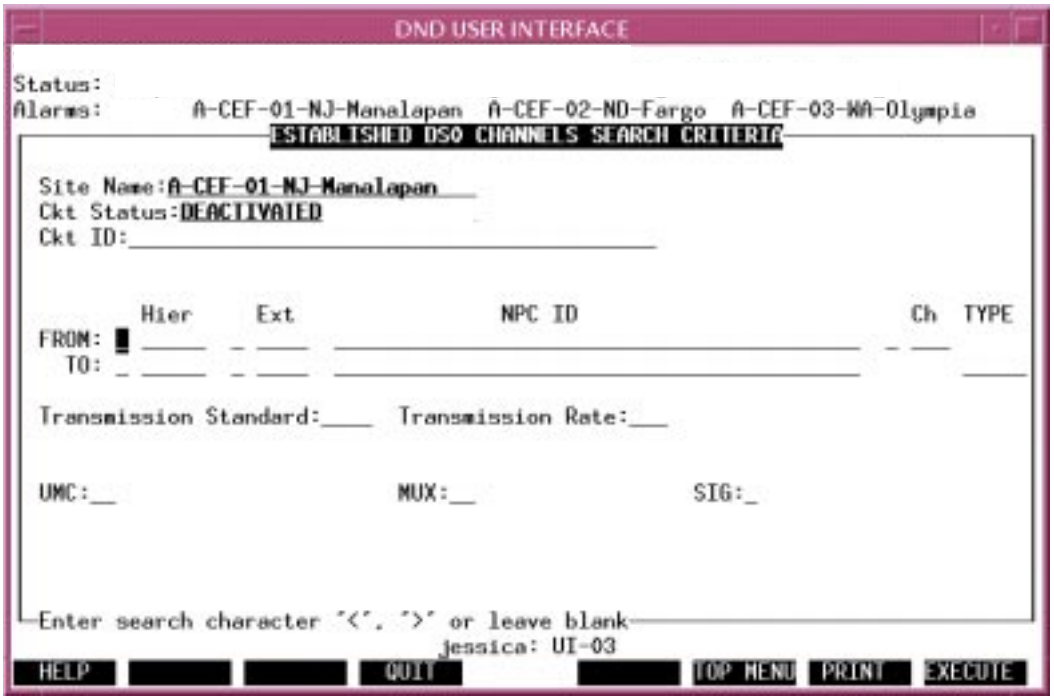


Figure 17-107. Sample ESTABLISHED DS0 CHANNELS Report Form

Established DS0 Channels Report (Continued)

Field Descriptions

The field values for the ESTABLISHED DS0 CHANNELS Report form are described in Table 17-28.

Table 17-28. Field Descriptions for the ESTABLISHED DS0 CHANNELS Report Form

Field	Description
Site Name	Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
Ckt Status	Select the status of the circuit. The choices are: ■ *ACTIVE* - The circuit is transmitting traffic ■ *DEACTIVATED* - The circuit is not transmitting traffic.
Ckt ID	Enter the name of the DS0 circuit. For additional information, refer to the Field Description tables in Chapter 9, Circuit Provisioning.
(FROM/TO Hier/Ext) Range	Select the **Hier/Ext** range. The choices are: ■ **>** - Displays NPCs which have numbers GREATER than **Hier/Ext**. ■ **<** - Displays NPCs which have numbers LESS than **Hier/Ext**.
(FROM/TO) Hier/Ext	Enter the FROM/TO NPC number(s) in hierarchical (**Hier**) or Extended (**Ext**) format. For additional information, refer to the Field Description tables in Chapter 8, NPC Provisioning.
(FROM/TO) NPC ID	Enter the name of the NPC. For additional information, refer to the Field Description tables in Chapter 8, NPC Provisioning.
(FROM Ch) Range	Select the **Ch** range. The choices are: ■ **>** - Displays channels which have numbers GREATER than **Ch**. ■ **<** - Displays channels which have numbers LESS than **Ch**.

Table 17-28. Field Descriptions for the ESTABLISHED DS0 CHANNELS Report Form (Continued)

Field	Description
(FROM) Ch	Enter the FROM channel number. For additional information, refer to the Field Description tables in Chapter 9, Circuit Provisioning.
(TO) TYPE	Select the TO Side NPC type. The only choice is *SD111*.
Transmission Standard	Select the subrate standard. The choices are: ■ *X.50* - The X.50 subrate standard ■ *X.57* - The X.57 subrate standard.
Transmission Rate	Select the transmission rate. The choices are: ■ *2.4* - 2.4 kbps ■ *4.8* - 4.8 kbps ■ *9.6* - 9.6 kbps
UMC	Enter the Unassigned Multiplexer Code.
MUX	Enter the Multiplexer out of Synchronization code.
SIG	Enter the Signaling Conversion code.

Sample ESTABLISHED DS0 CHANNELS Report

Figure 17-108 displays a sample ESTABLISHED DS0 CHANNELS Report.

```
10 Mar 1999  19:44:42

------dacs2------ESTABLISHED DS0 CHAN-----------ESTABLISHED DS0 CHAN------------

Circuit ID       Status    F_NPC   T_NPC   Ch   Type    Std    Rate   Framg


ckt1             4         0046    0035    001  SD111   X50

ckt1             4         0046    0035    002  SD111   X50

ckt1             4         0046    0035    003  SD111   X57    4.8
```

Figure 17-108. Sample ESTABLISHED DS0 CHANNELS Report

Subrate Circuits Report

Description

The SUBRATE CIRCUITS Report allows users to search for subrate circuit records. This feature is available only if the X.50/X.57 Subrate application is installed on the selected DACS site.

The report can be sorted by Circuit ID, FROM/TO NPC, FROM/TO Channel, FROM/TO Customer, rate, and status.

Sample Report Form

Figure 17-109 displays a sample SUBRATE CIRCUITS Report form.

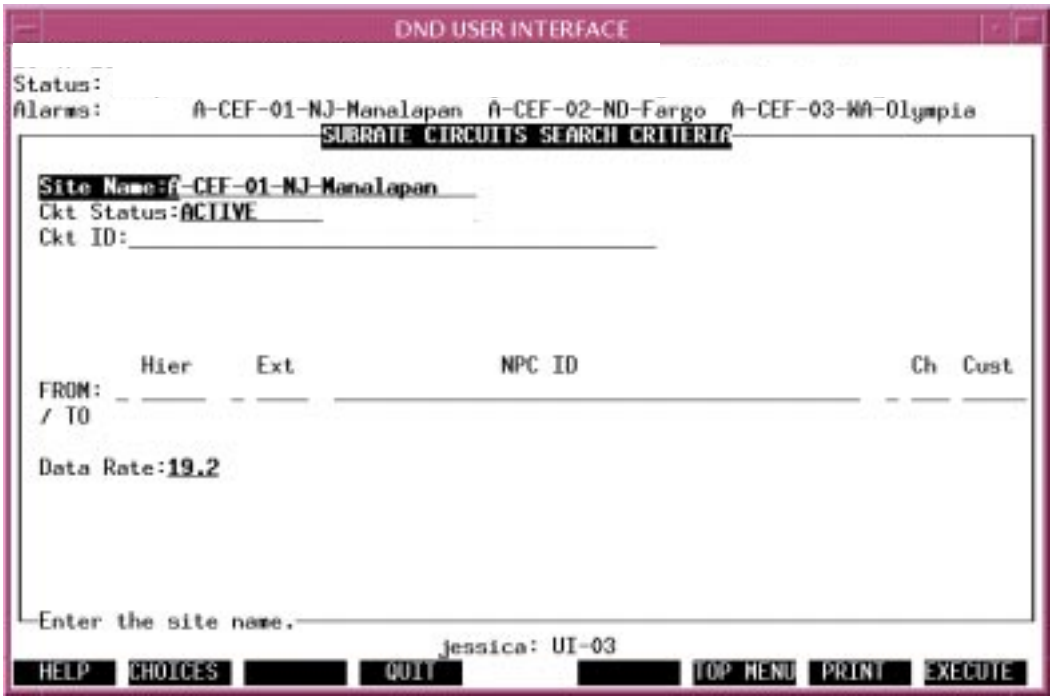


Figure 17-109. Sample SUBRATE CIRCUITS Report Form

Subrate Circuits Report (Continued)

Field Descriptions

The field values for the SUBRATE CIRCUITS Report form are described in Table 17-29.

Table 17-29. Field Descriptions for the SUBRATE CIRCUITS Report Form

Field	Description
Site Name	Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
Ckt Status	Select the status of the circuit. The choices are: ■ *ACTIVE* - The circuit is transmitting traffic ■ *DEACTIVATED* - The circuit is not transmitting traffic.
Ckt ID	Enter the name of the subrate circuit. For additional information, refer to the Field Description tables in Chapter 9, Circuit Provisioning.
(FROM/TO Hier/Ext) Range	Select the **Hier/Ext** range. The choices are: ■ **>** - Displays NPCs which have numbers GREATER than **Hier/Ext**. ■ **<** - Displays NPCs which have numbers LESS than **Hier/Ext**.
(FROM/TO) Hier/Ext	Enter the FROM/TO NPC number(s) in hierarchical (**Hier**) or Extended (**Ext**) format. For additional information, refer to the Field Description tables in Chapter 8, NPC Provisioning.
(FROM/TO) NPC ID	Enter the name of the NPC. For additional information, refer to the Field Description tables in Chapter 8, NPC Provisioning.
(FROM Ch) Range	Select the **Ch** range. The choices are: ■ **>** - Displays channels which have numbers GREATER than **Ch**. ■ **<** - Displays channels which have numbers LESS than **Ch**.

Table 17-29. Field Descriptions for the SUBRATE CIRCUITS Report Form (Continued)

Field	Description
(FROM) Ch	Enter the FROM channel number. For additional information, refer to the Field Description tables in Chapter 9, Circuit Provisioning.
(FROM/TO) Cust	Enter the customer for the subrate circuit. For additional information, refer to the Field Description tables in Chapter 10, Subrate Provisioning.
Data Rate	Select the transmission rate. For additional information, refer to the Field Description tables in Chapter 10, Subrate Provisioning.

Sample SUBRATE CIRCUITS Report

Figure 17-110 displays a sample SUBRATE CIRCUITS Report.

```
10 Mar 1999  19:44:42

------dacs2------SUBRATE CIRCUITS-----------SUBRATE CIRCUITS--------------------

CKT ID         F_NPC   F_ch   F_cust    T_NPC   T_Ch   T_cust    Rate    Status


sub1           0046    001    1-1       0046    002    1-1       2.4     4

sub2           0046    001    1-2       0046    002    1-2       4.8     4

sub3           0046    001    2-1       0046    002    2-1       9.6     4

sub4           0046    001    3-1       0046    002    1         4.8     4
```

Figure 17-110. Sample SUBRATE CIRCUITS Report

24-Hour Performance Monitoring Report

Description

The 24-HOUR PERFORMANCE MONITORING Report displays the 24-Hour performance statistics for all NPCs or a set of NPCs on a DACS.

DND GUI: Sample Report Form

Figure 17-111 displays a sample DND GUI 24-HOUR PERFORMANCE MONITORING REPORT form.



Figure 17-111. DND GUI: Sample 24-HOUR PERFORMANCE MONITORING REPORT Form

24-Hour Performance Monitoring Report (Continued)

DND Forms: Sample Report Form

Figure 17-112 displays a sample 24-HOUR PERFORMANCE Report form.

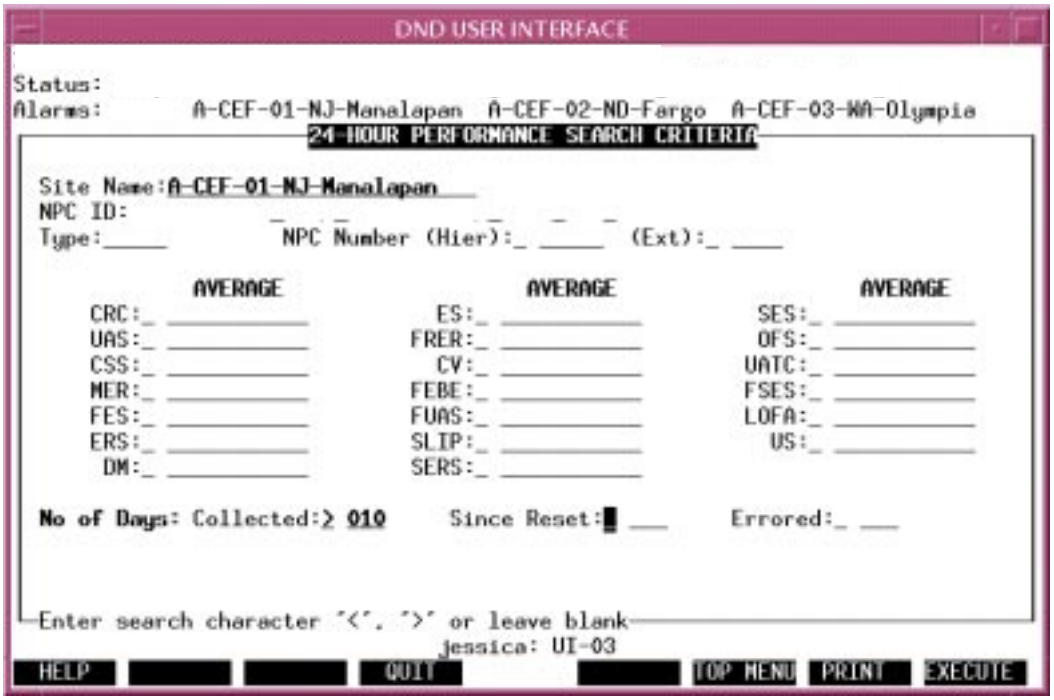


Figure 17-112. DND Forms: Sample 24-HOUR PERFORMANCE Report Form

24-Hour Performance Report (Continued)

Field Descriptions

The field values for the 24-HOUR PERFORMANCE Report form are described in Table 17-30.

Table 17-30. Field Descriptions for the 24-HOUR PERFORMANCE Report Form

Field	Description
GUI and Forms: **Site Name**	(Combo box) Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
GUI: **Report Type**	(Combo box) Select the format in which information will be organized in the report. The choices are: ■ PM Counts by NPC and Date ■ PM Counts by NPC and Parameter ■ Average PM Counts by Date ■ Average PM Counts by NPC ■ PM Error Report.
GUI: **Available Formats**	Select a 24-Hour Performance Report format. The default choice is 24-HOUR PERFORMANCE. Up to eight additional formats can be created using the CUSTOMIZE 24-HOUR PERFORMANCE MONITORING REPORT FORMATS form.

Table 17-30. Field Descriptions for the 24-HOUR PERFORMANCE Report Form (Continued)

Field	Description
GUI: **Chart title**	(Combo box - For the **Average PM Counts...** Report Types) Select the type of Average PM Counts report to generate. The DND can generate a standard report or display a graphical representation of the report data. The choices are: ■ Non-Graphical report (standard report) ■ Line Chart ■ Area Chart ■ Bar Chart ■ 3D Line Chart ■ 3D Area Chart ■ 3D Bar Chart ■ 3D Side-by-Side Bar Chart ■ 3D Layered Bar Chart
GUI: **Report Title**	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
GUI: **NPC Specifier/NPC**	(Radio buttons/Text field) Select the NPC in which to display PM data or select the first NPC in a range of NPCs in which to display PM data. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI: **Last NPC:**	(Text field) Select the last NPC in a range of NPCs in which to display PM data. For additional information, refer to the Field Description tables in Chapter 8, NPC Provisioning.
Forms: **NPC ID**	Enter the name of the NPC. For additional information, refer to the Field Description tables in Chapter 8, NPC Provisioning.
GUI: **NPC Type** *Forms:* **Type**	(Text field) Enter the NPC Type (in the form *ABxyz*). The wildcard character (*) may be used, for example, PA*. For additional information, refer to the Field Description tables in Chapter 8, NPC Provisioning.
Forms: **NPC Number**	Enter the hierarchical (Hier) or Extended (Ext) NPC number. For additional information, refer to the Field Description tables in Chapter 8, NPC Provisioning.

Table 17-30. Field Descriptions for the 24-HOUR PERFORMANCE Report Form (Continued)

Field	Description
GUI: **Parameter Search Information** *Forms:* **Performance Options**	(Field box of Text fields, up to 9 numerical digits) Select the desired parameters to display in the report and enter the count limit. If the entire field box is left blank, a report will be generated for all available PM counts. For additional information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning*. In the DND GUI, this field box is available only for the *PM Counts by NPC and Date* **Report Type:**.
GUI: **Parameter**	(Combo box) Select the desired performance monitoring count type to display in the report. This field appears only for the *PM Counts by NPC and Parameter* **Report Type:**.
GUI: **Range**	(Radio Buttons) Select the **Range** delimiter for the entered count limit. The choices are: ■ **=** - Displays PM data for NPCs with count values equal to the entered count limit ■ **>** - Displays PM data for NPCs with count values greater than to the entered count limit ■ **<** - Displays PM data for NPCs with count values less than to the entered count limit.
GUI: **Start Date**	(Combo box) Select the desired collection start date for the PM data report. Dates will only appear if performance monitoring data collection was completed on that day. If no dates appear, then there is no performance monitoring data in the database to report on.
GUI: **End Date**	(Combo box) Select the desired collection end date for the PM data report. To create a report with only one day's worth of PM data, make sure the **Start Date** and **End Date** fields have the same dates. Dates will only appear if performance monitoring data collection was completed on that day. If no dates appear, then there is no performance monitoring data in the database to report on.

Table 17-30. Field Descriptions for the 24-HOUR PERFORMANCE Report Form (Continued)

Field	Description
Forms: **(No of Days: Collected) Range**	Select the **Collected** range. The choices are: ■ **>** - Displays NPC entries for which performance parameters were collected for a number of days GREATER than the **Collected** value. ■ **<** - Displays NPC entries for which performance parameters were collected for a number of days LESS than the **Collected** value.
Forms: **(No of Days) Collected**	Enter the number of days (in the form *NNN*) the performance parameters were collected.
Forms: **(No of Days: Since Reset) Range**	Select the **Since Reset** range. The choices are: ■ **>** - Displays NPC entries for which performance parameters were reset for a number of days GREATER than **Since Reset**. ■ **<** - Displays NPC entries for which performance parameters were reset for a number of days LESS than **Since Reset**.
Forms: **(No of Days) Since Reset**	Enter the number of days (in the form *NNN*) since the performance parameters were reset.
Forms: **No of Days: Errored) Range**	Select the **Errored** range. The choices are: ■ **>** - Displays NPC entries which have been in error for a number of days GREATER than **Errored**. ■ **<** - Displays NPC entries which have been in error for a number of days LESS than **Errored**.
Forms: **(No of Days) Errored**	Enter the number of days (in the form *NNN*) that the NPC was errored.

24-Hour Performance Report (Continued)

DND GUI: Sample 24-HOUR PERFORMANCE MONITORING Reports

The four default 24-HOUR PERFORMANCE MONITORING report types are:

- *PM COUNTS BY NPC AND DATE*
- *PM COUNTS BY NPC AND PARAMETER*
- *AVERAGE PM COUNTS BY DATE*
- *AVERAGE PM COUNTS BY NPC.*

PM Counts by NPC and Date

Figure 17-113 displays a sample 24-HOUR PERFORMANCE MONITORING - PM COUNTS BY NPC AND DATE report .

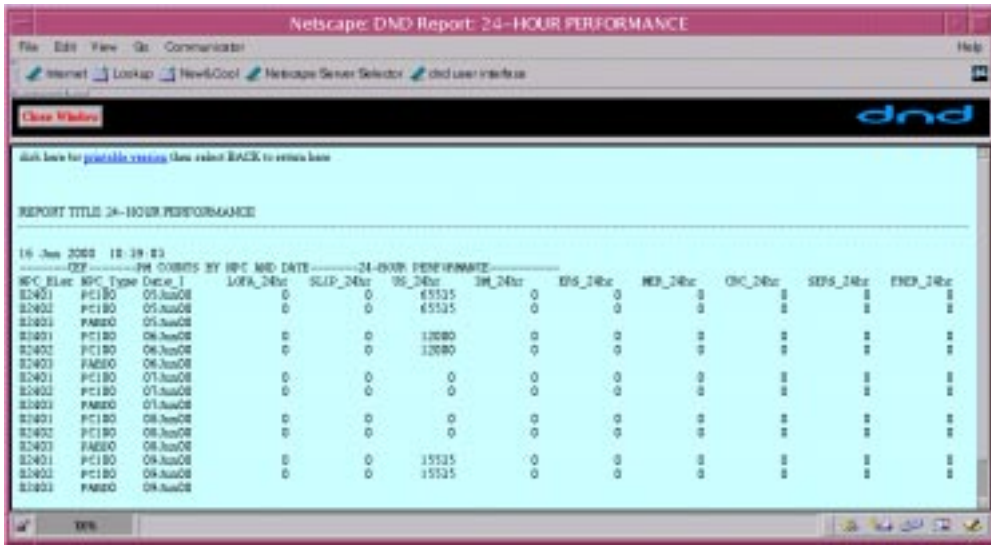


Figure 17-113. DND GUI: Sample 24-HOUR PERFORMANCE MONITORING Report - *PM COUNTS BY NPC AND DATE* Format

(Continued on next page)

24-Hour Performance Report (Continued)

DND GUI: Sample 24-HOUR PERFORMANCE MONITORING Reports, Continued

PM Counts by NPC and Parameter

Figure 17-114 displays a sample 24-HOUR PERFORMANCE MONITORING - PM COUNTS BY NPC AND PARAMETER report .

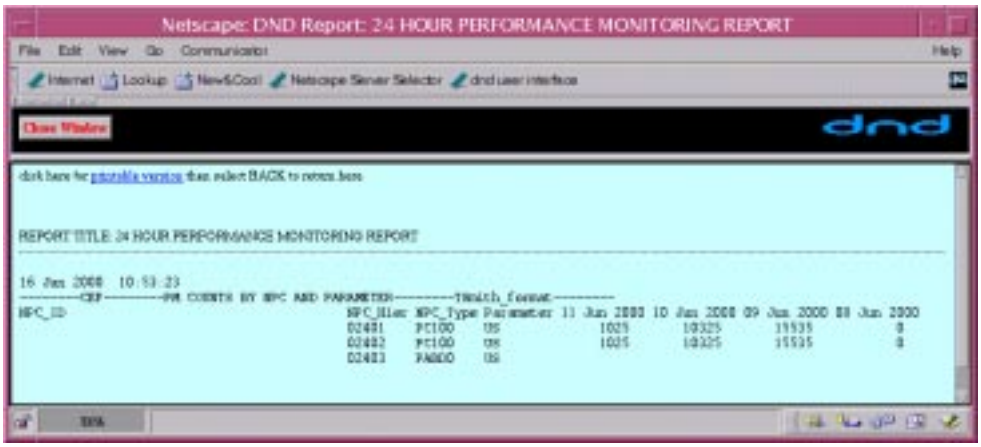


Figure 17-114. DND GUI: Sample 24-HOUR PERFORMANCE MONITORING Report - *PM COUNTS BY NPC AND PARAMETER* Format

(Continued on next page)

24-Hour Performance Report (Continued)

DND GUI: Sample 24-HOUR PERFORMANCE MONITORING Reports, Continued

Average PM Counts by Date

Figure 17-115 displays a graphical sample 24-HOUR PERFORMANCE MONITORING - AVERAGE PM COUNTS BY DATE report. This format allows the processing of text reports and graphical reports

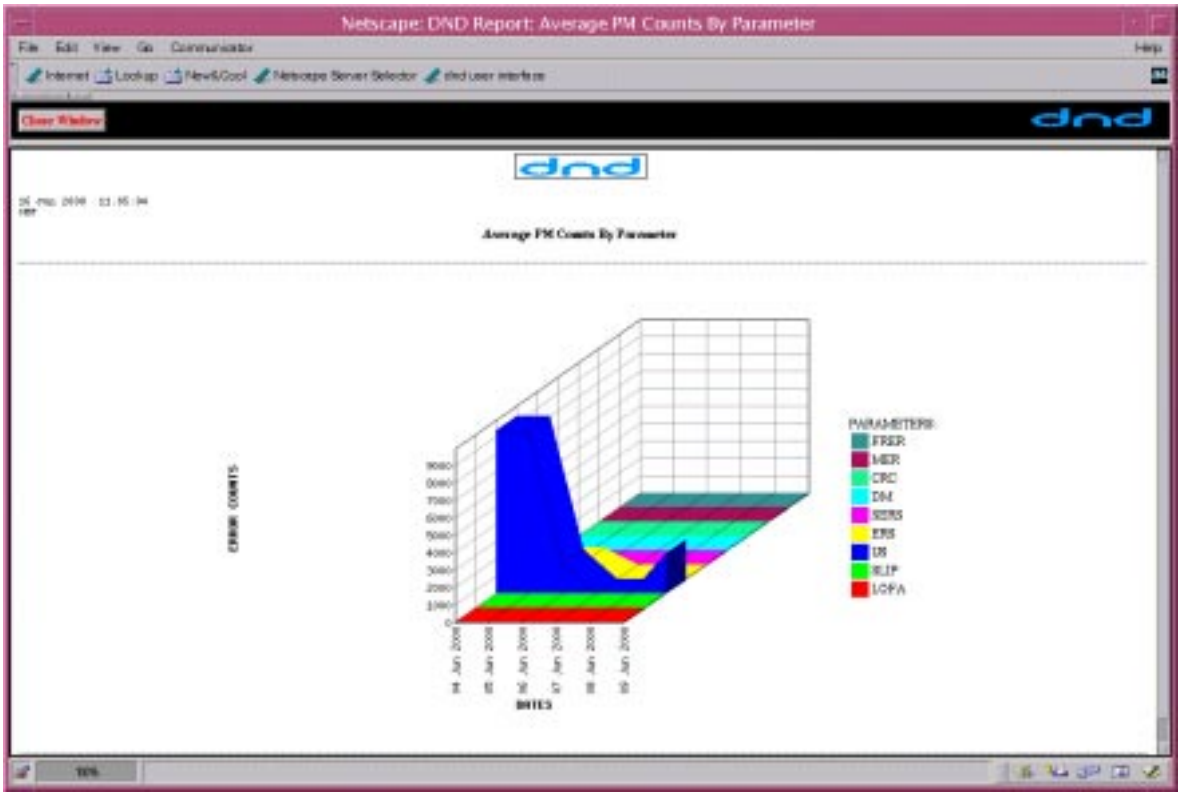


Figure 17-115. DND GUI: Sample 24-HOUR PERFORMANCE MONITORING Report - *AVERAGE PM COUNTS BY DATE* Format (3D Area Chart)

(Continued on next page)

24-Hour Performance Report (Continued)

DND GUI: Sample 24-HOUR PERFORMANCE MONITORING Reports, Continued

Average PM Counts by NPC

Figure 17-116 displays a graphical sample 24-HOUR PERFORMANCE MONITORING - AVERAGE PM COUNTS BY NPC report. This format allows the processing of text reports and graphical reports.

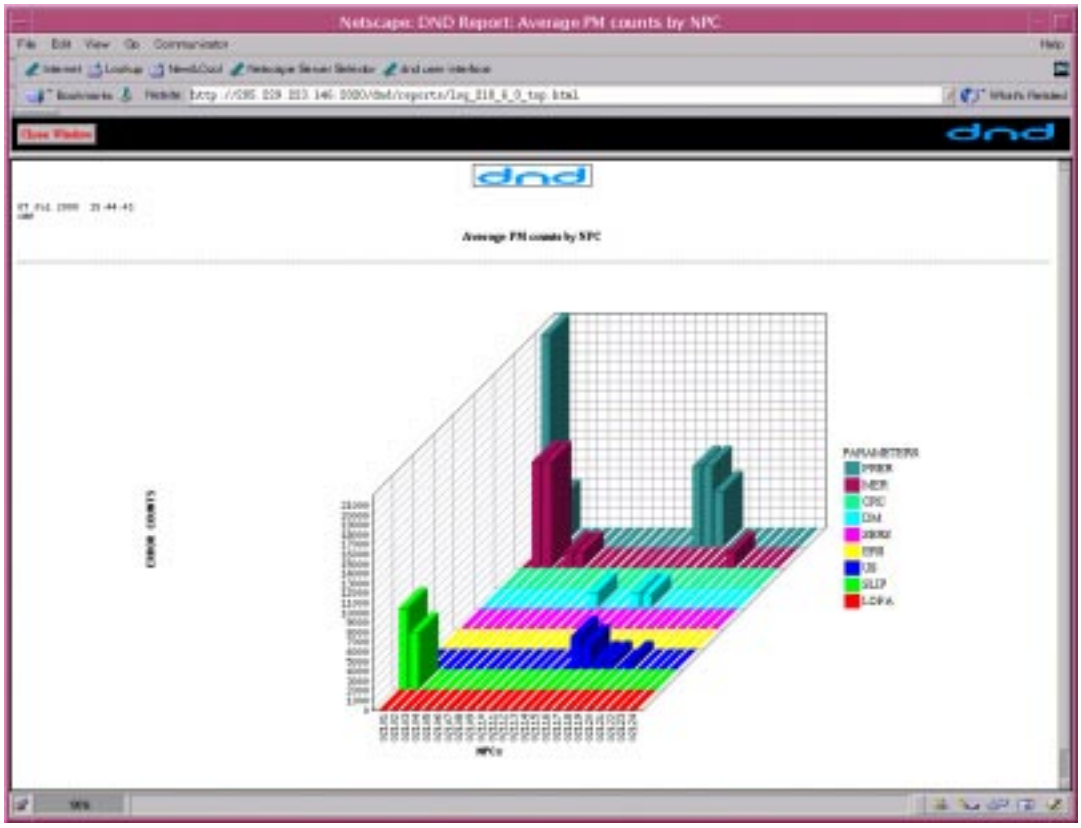


Figure 17-116. DND GUI: Sample 24-HOUR PERFORMANCE MONITORING Report - *AVERAGE PM COUNTS BY NPC* Format (3D Bar Chart)

(Continued on next page)

24-Hour Performance Report (Continued)

DND Forms: Sample 24-HOUR PERFORMANCE Report

Figure 17-117 displays a sample 24-HOUR PERFORMANCE Report.

```
10 Mar 1999  19:44:42

------CEF------24-HOUR PERFORMANCE-----------24-HOUR PERFORMANCE------------

NPC_Hier       Collected   Reset  Error  ESW_Avg      SES_Avg      UAS_Avg

01105          000         000    000    000000000.0  000000000.0  000000000.0

01114          000         001    000    000000000.0  000000000.0  000002101.0

01114          001         001    000    000000000.0  000000000.0  000002100.0

01116          001         001    000    000000000.0  000000000.0  000001999.0

01119          001         001    000    000000000.0  000000000.0  000023288.0
```

Figure 17-117. DND Forms: Sample 24-HOUR PERFORMANCE Report

24-Hour PM Log Report

Description

The PM ERROR Report (DND GUI)/24-HOUR PM LOG (DND Forms) Report displays information on discrepancies encountered during the processing of the daily 24-Hour PM reports from the DACS II or DACS II ISX.

DND GUI: Sample Report Form

Figure 17-118 displays a sample PM Error Report form.



Figure 17-118. DND GUI: 24-HOUR PERFORMANCE MONITORING Report - *PM ERROR REPORT* Type

24-Hour PM Log Report (Continued)

DND Forms: Sample Report Form

Figure 17-119 displays a sample 24-HOUR PM LOG Report form.

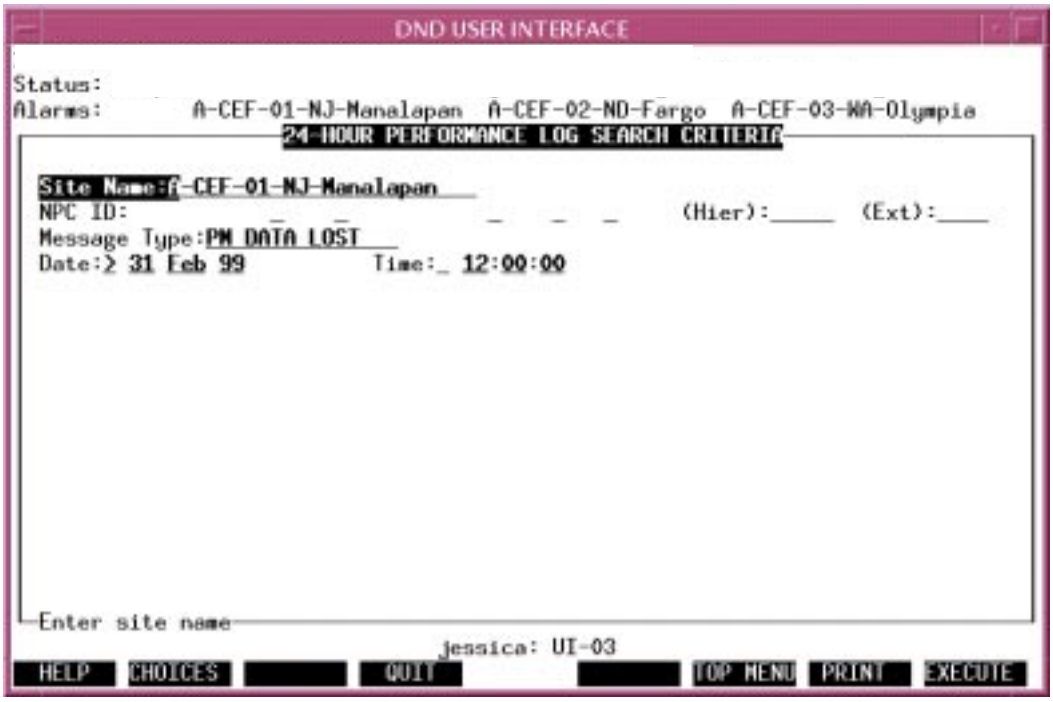


Figure 17-119. DND Forms: Sample 24-HOUR PM LOG Report Form

24-Hour PM Log Report (Continued)

Field Descriptions

The field values for the 24-HOUR PM LOG Report form are described in Table 17-31.

Table 17-31. Field Descriptions for the 24-HOUR PM LOG Report Form

Field	Description
GUI and Forms: **Site Name**	(Combo box) Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
GUI: **NPC Specifier/NPC**	(Radio buttons/Text field) Select the NPC in which to display PM data or select the first NPC in a range of NPCs in which to display PM data. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI: **Last NPC:**	(Text field) Select the last NPC in a range of NPCs in which to display PM data. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI: **NPC Type**	(Text field) Enter the NPC Type (in the form *ABxyz*). For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
Forms: **NPC ID**	Enter the name of the NPC. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
Forms: **Hier/Ext**	Enter the hierarchical (Hier) or Extended (Ext) NPC number. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
GUI: **Start Date**	(Combo box) Select the desired collection start date for the PM data report.
GUI: **End Date**	(Combo box) Select the desired collection end date for the PM data report. To create a report with only one day's worth of PM data, make sure the **Start Date** and **End Date** fields have the same dates.
GUI: **Parameter**	(Combo box) Select the desired PM parameter to include in the report.

Table 17-31. Field Descriptions for the 24-HOUR PM LOG Report Form (Continued)

Field	Description
Forms: **Message Type**	Enter the type of message. For additional information, refer to the Field Description tables in *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.
Forms: **(Date) Range**	Select the **Date** range for the report. The choices are: ■ **>** - Displays report items which were logged AFTER the **Date** ■ **<** - Displays report items which were logged BEFORE the **Date**
Forms: **Date**	Select the **Date** range for the report. The fields are: ■ **Day** - Select the day (*01* through *31*) ■ **Month** - Select the month (*Jan* through *Dec*) ■ **Year** - Select the year (*1990* through *2037*)
Forms: **(Time) Range**	Select the **Time** range. The choices are: ■ **>** - Displays report items which were logged AFTER the **Time** ■ **<** - Displays report items which were executed BEFORE the **Time**
Forms: **Time**	Select the **Time** criteria for the report. The **Time** fields are: ■ **Hour** - Select the hour (00 through 23) ■ **Minute** - Select the minute (00 through 59) ■ **Second** - Select the second (00 through 59)

24-Hour PM Log Report (Continued)

DND GUI: Sample PM ERROR Report

Figure 17-120 displays a sample DND GUI PM ERROR Report.

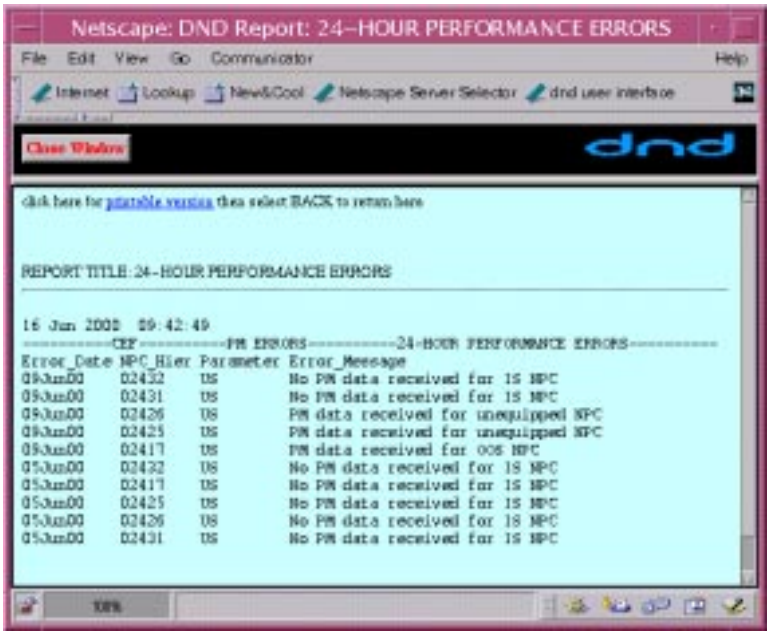


Figure 17-120. DND GUI: Sample PM ERROR Report

DND Forms: Sample 24-HOUR PM LOG Report

Figure 17-121 displays a sample 24-HOUR PM LOG Report.

```
10 Mar 1999  19:44:42

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

Date      Time      Error_Msg


29JAN99   00:00:37  01102 - PM data received for unequipped NPC

29JAN99   00:00:37  01103 - PM data received for unequipped NPC

29JAN99   00:00:37  01208 - PM data received for unequipped NPC
```

Figure 17-121. DND Forms: Sample 24-HOUR PM LOG Report

Customize Performance Monitoring Report Formats

Description

The CUSTOMIZE PERFORMANCE MONITORING REPORT FORMATS form allows you to customize report formats for the 24-HOUR PERFORMANCE MONITORING Report using the DND GUI. Users can either create new formats or modify the default formats to suit their needs.

The customizable report formats are:

- *PM COUNTS BY NPC AND DATE*
- *PM COUNTS BY NPC AND PARAMETER*
- *AVERAGE PM COUNTS BY DATE*
- *AVERAGE PM COUNTS BY NPC.*

Customize Performance Monitoring Report Formats (Continued)

Sample Report Form - Stage One

Figure 17-122 displays a sample CUSTOMIZE PERFORMANCE MONITORING REPORT FORMATS form in Stage One. In this Stage, the desired report field headings are selected and ranked according to appearance in the report.



Figure 17-122. Sample CUSTOMIZE PERFORMANCE MONITORING REPORT FORMATS Form - Stage One

Customize Performance Monitoring Report Formats (Continued)

Sample Report Form - Stage Two

Figure 17-123 displays a sample CUSTOMIZE PERFORMANCE MONITORING REPORT FORMATS form in Stage Two. In this Stage, the desired report field headings that were previously selected are the only fields that appear on the form. The user is able to customize each field heading as desired. However, field widths (**New Size**) cannot be increased, they can only be decreased.

NOTE:
When formatting graphical report formats, the only fields of interest are the **Column Name** and **Column Order** fields.



Figure 17-123. Sample CUSTOMIZE PERFORMANCE MONITORING REPORT FORMATS Form - Stage Two

Customize Performance Monitoring Report Formats (Continued)

Field Descriptions

The field values for the CUSTOMIZE PM REPORT FORMATS form are described in Table 17-32.

Table 17-32. Field Descriptions for the Customize PM Report Formats Form

Field	Description
Report Type	(Combo box) Select the type of 24-Hour Performance Monitoring report which will receive format changes. Clicking this field will display a list of report types.
Action	(Combo box) Select the type of activity being performed on the report format. The options are: ■ *CREATE* - creates a new format ■ *DELETE* - deletes an existing format ■ *MODIFY* - modifies an exisitng format
Available Formats	(Combo box) Select the format to *MODIFY* or *DELETE*. If no formats have been created, the default format, *24 HOUR PERFORMANCE*, will be the only format available.
Report Width	(Read-only) Displays the total width of the report.
New Format Name	(Text field; 30 alphanumeric characters) Appears for the *CREATE* **Action:** only. Enter the desired name of the new format.
Column Name	(Read-only) Displays the name of the various fields in the report. The fields included in this column depend on the **Report Type:** selected. This text will be used as the column heading on the report unless a new value is entered in the **Column Heading** field.
Size	(Read-only) Displays the default width (in characters) of the report field.
Column Order	(Text fields; up to 2 numerical digits) Enter the order of the report headings for the report format. If the same rank number is used for several fields, the DND will determine the logical order of appearance.

Table 17-32. Field Descriptions for the Customize PM Report Formats Form (Continued)

Field	Description
Column Heading	■ If the field is a not a date field: (Text field; up to 18 alphanumerical characters) Enter the new name for the **Column Name** heading. ■ If the field is a date field: (Combo box) Select the desired date format. The choices are: ■ DD MMM YYYY ■ DD MMM YY ■ DDMMMYYYY ■ DDMMMYY ■ DD/MM/YYYY ■ DD/MM/YY ■ MM/DD/YYYY ■ MM/DD/YY
New Size	(Text field; up to 2 numerical digits) Enter the new width of the report column. **NOTE:** The size entered cannot be greater than the default width.
Sort Order	(Text field; up to 2 numerical digits) Enter the order of the fields in the report format.
Sort Direction	(Combo box) Select the direction in which the DND will sort the PM information. The choices are: ■ *Ascending* - Sort information from lowest to highest value. ■ *Descending* - Sort information from highest to lowest value.

Intertie Reports

Description

Intertie reports do not use a report form. They are retrieved from selecting the choice in the Intertie pull-down menu. Click the intertie bubble and select the desired choice. The report is automatically generated in a separate Netscape window.

Types

The two types of Intertie reports are:

- Intertie Port Report
- Intertie Alarm Report

Intertie Port Report

The Intertie Port Report displays a listing of NPCs and/or SNMP ports assigned to the intertie. Figure 17-124 displays a sample INTERTIE NPC report

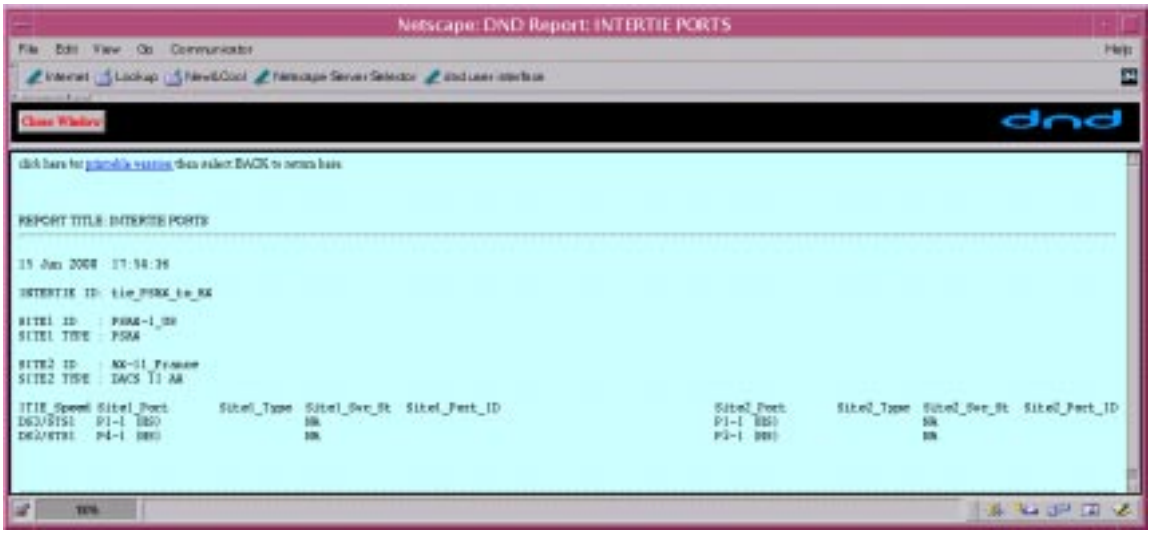


Figure 17-124. Sample INTERTIE PORT Report

(Continued on next page)

Intertie Reports (Continued)

Types, Continued

Intertie Alarm Report

The Intertie Alarm Report displays a listing of NPCs and/or SNMP ports assigned to that intertie which are in alarm. Figure 17-125 displays a sample INTERTIE ALARM report

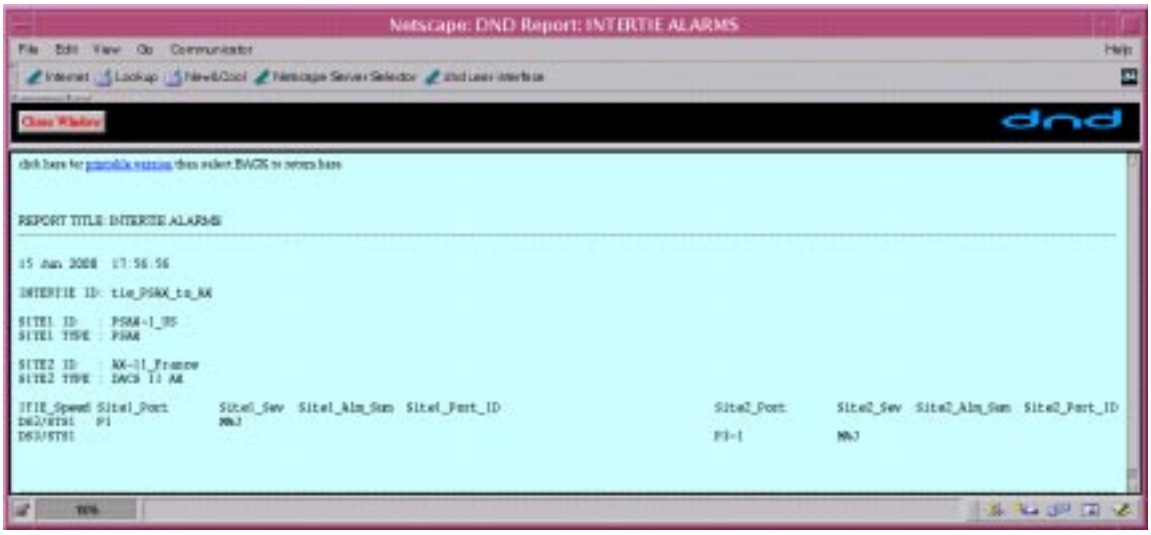


Figure 17-125. Sample INTERTIE ALARM Report

Custom Report Formats

Edit Screen and Fields

Once you have selected the report form category, the EDIT CUSTOM REPORT FORMAT form, as shown in Figure 17-126, is displayed. This form allows you to customize the report selected.

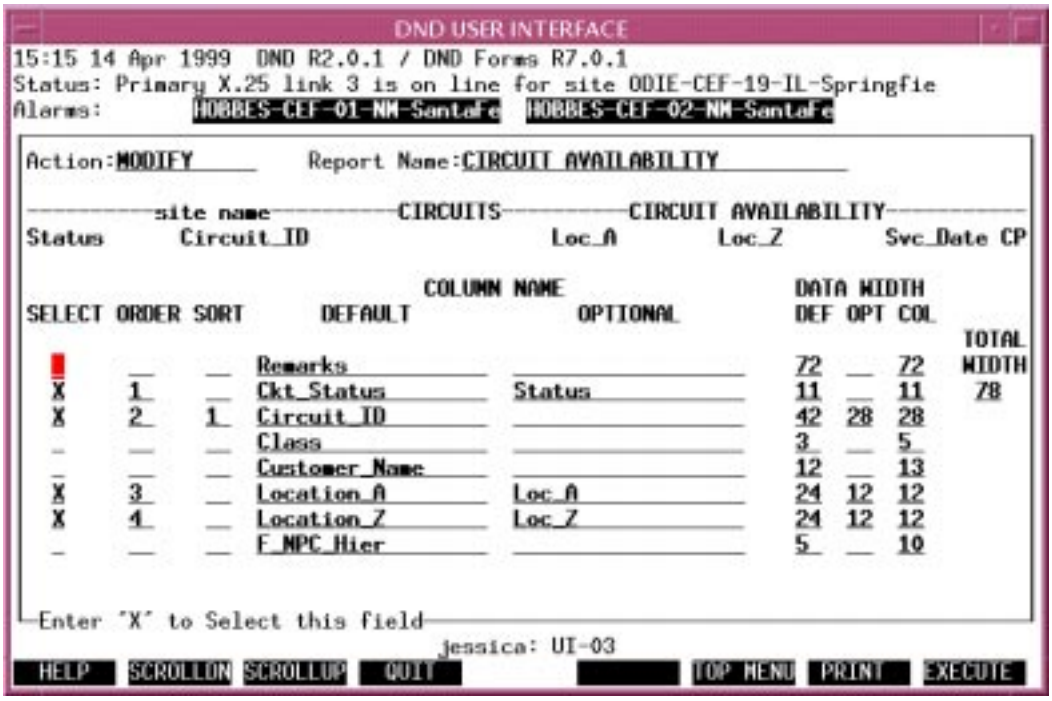


Figure 17-126. Sample EDIT CUSTOM REPORT FORMAT Form

To customize a new report, first CREATE it with a **Report Name**, then MODIFY the report of that name. You will be adding or removing fields from the report. The range of possible fields will be listed under COLUMN NAME. You have simply to select the desired field with an X.

Custom Report Formats (Continued)

Field Descriptions

The field values for the EDIT CUSTOM REPORT FORMAT form are described in Table 17-33.

Table 17-33. Field Descriptions for the EDIT CUSTOM REPORT FORMAT Form

Field	Description
Action	Mandatory. The valid actions are: ■ *CREATE* - Creates an initial report format. ■ *DELETE* - Deletes an existing format by name. ■ *MODIFY* - Displays an existing format for editing. ■ *RENAME* - Renames an existing format.
Report Name	Mandatory. 1 through 30 alphanumeric characters. Enter the name of the report you wish to create or otherwise access with the **Action**.
SELECT	Accessible in *MODIFY* only, as are the remaining fields of this screen. You can select or deselect display items by inserting or deleting an X in this field.
ORDER	Numeric, 1 through the number of Xs marked in the **SELECT** column. The order in which the item is to appear across the report, from left to right. As you edit this format, a line is displayed across the upper portion of the screen with each column name given in the specified order.
SORT	Numeric. The sort order priority of the item. For example, to sort report records first by **Circuit ID**, and then by **Circuit Type**, enter a 1 on the line at which **Circuit ID** is named and a 2 on the line at which **Circuit Type** is named. You can specify sorting priority down to the eighth level. You must enter Priority 1 first, Priority 2 second, etc.
DEFAULT COLUMN NAME	1 through 18 alphanumeric characters. The item names appear as the column names unless you enter an alternative name as the OPTIONAL COLUMN NAME. Use PREVIOUS and NEXT to scroll through the whole listing.
OPTIONAL COLUMN NAME	1 through 18 alphanumeric characters. Column names of your own choosing. They replace the default names.

Table 17-33. Field Descriptions for the EDIT CUSTOM REPORT FORMAT Form (Continued)

Field	Description
DEF DATA WIDTH	Numeric. The widths of the database items selected. The default is used unless you enter an alternative value under **OPTIONAL DATA WIDTH**.
OPT DATA WIDTH	Numeric. Column widths of your own choosing. The data is truncated to these widths, if necessary.
COL DATA WIDTH	Numeric. The width of the column to be displayed as defined by the user actions. If the data exceeds the width of a column, it will appear truncated on the report. The entire entry appears in the database.
TOTAL WIDTH	Numeric. The sum of the column widths with single spacing between columns. This sum automatically changes as you select or deselect data items, or modify the **OPTIONAL COLUMN NAME** or **OPTIONAL DATA WIDTH** fields. The maximum width of the report display is 78 characters. If the data exceeds the total width, it will appear truncated on the report. The entire entry appears in the database.

T1/E1 Port **Report**

Description

The T1/E1 Port Report allows users to produce a report containing DAX II AX-related T1/E1 port information from the DND database according to selected search criteria.

DND GUI: Sample T1/E1 Report Form

Figure 17-109 displays a sample T1/E1 PORT REPORT form.

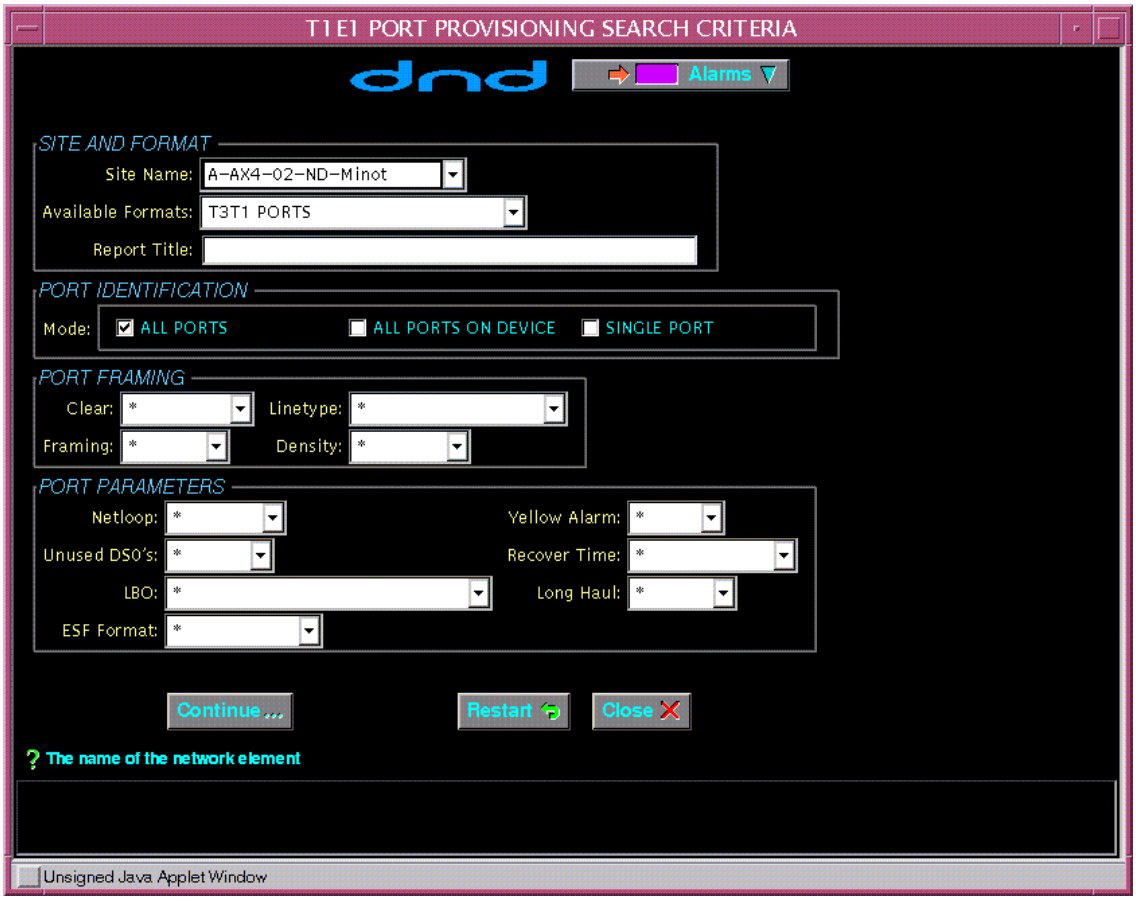


Figure 17-127. Sample T1/E1 PORT Report Form

T1/E1 Port Report (Continued)

Field Descriptions

The field values for the T1/E1 PORT Report form are described in Table 17-34.

Table 17-34. Field Descriptions for the T1/E1 PORT Report Form

Field	Description
Site Name	(Combo box). Mandatory. Select the name of the DACS II AX where the report will be processed. Clicking this field will display a list of DACS II AX names. The DACS must reside in the DND database and must be In Service.
Report Format	(Combo box) Select one of the following predefined report formats. ■ *OCTAL T1E1* - Displays ports on Octal cards. ■ *T3T1* - Displays T1 ports on a T3 card.
Report Title	(Text Field; 1 through 30 alphanumeric characters). Mandatory. Enter the name of the report you wish to create.

Table 17-34. Field Descriptions for the T1/E1 PORT Report Form (Continued)

Field	Description
Mode	(Radio Buttons) Mandatory. Select a specific item or a range of Ports to which the report should apply. The choices are: ■ *ALL PORTS* - Selects all ports T1E1 ports equipped on a specific DACS II AX database. ■ *ALL PORTS ON DEVICE* - Selects all T1E1 on a specific device. ■ *SINGLE PORT* - Selects a specific T1E1 port. When *ALL PORTS ON DEVICE* is selected, complete the following fields: — **Port ID** (Text field). Enter up to 41 characters to identify each port (DND name). — **Site Port ID** (Text field). Select a new AX Site Port ID for the port. — **Port Name** (Text field). Enter the DND Port Name according to `Pnn-p (HS)` convention used by DND (and used for reports output to identify a particular port). — **Slot** (Combo Box) Choose the **Slot** number value that corresponds with the DACS II AX type and module being used. For example: ■ For DACS II AX4 type, the allowable values are x=01 through 04. ■ For DACS II AX11 type (without redundancy), the allowable values are x=01 through 11 ■ For DACS II AX11 type (with redundancy), the allowable values are x=01 through 11 — **Port Number** (Combo Box) Choose a port number on the device identified by the slot number. This may be 1 to 8 for Octal T1E1 cards or 1 to 28 for T3 cards.
Clear	(Combo Box) Choose "Disabled" if a channelized port is desired. Choose "Unframed" or "Framed" if a clear channel or port is desired. Only applies to OctalE1T1 cards.

Table 17-34. Field Descriptions for the T1/E1 PORT Report Form (Continued)

Field	Description
Line Type	(Combo Box) Choose the line type to use for ports on an OctalE1T1 card only. The values are: ■ E1 ■ E1-CRC ■ E1-CAS ■ E1-CAS-CRC ■ T1 ESF B8ZS ■ T1 ESF AMI 62411 ■ T1 D4 B8ZS ■ T1 D4 AMI 62411 ■ T1 B8ZS ■ T1 AMI
Framing	(Combo Box) Only applies to T1s embedded in a T3. Choose "ESF" or "D4".
Density	(Combo Box) Determines the line coding for T1s embedded in a T3 only. Choose "Clear" for B8ZS, "62411" for AMI.
NetLoop	(Combo Box) Choose "Enable" to specify that the port should respond to a loop diagnostic received from the network supplier, otherwise choose "Disable".
Yellow Alarm	(Combo Box) Choose "Yes" to cause the module to discard data and send a yellow alarm if it is a red alarm condition after a 3-second period, otherwise choose "No".
Unused DS0's	(Combo Box) Choose a value to specify whether data transmitted over unused DS0s is *Idle* or *Busy*. Applies to channelized ports only.
Recover Time	(Combo Box) Choose the number of seconds the port will wait to stop sending the yellow alarm when coming out of a red alarm condition.

Table 17-34. Field Descriptions for the T1/E1 PORT Report Form (Continued)

Field	Description
LBO	(Combo Box) Choose a value to specify the line build out. Only applies to T1s on and OctalE1T1 card.
Long Haul	(Combo Box) Choose a value to specify the line build out. Only applies to E1s on and OctalE1T1 card.
ESF Format	(Combo Box) Choose a value to specify the type of ESF network commands to which the port should respond.

T1/E1 Port Report (Continued)

Sample T1/E1 PORT Report

Figure 17-128 displays a sample T1/E1 PORT Report.

```
REPORT TITLE: T3T1 PORTS

03 Nov 2000  16:03:38

------A-AX4-02-ND-Minot---------AX PROVISIONING----------T3T1 PORTS-------------

Port          PortID               SitePortID           SS   Framing Density
NetLoop YelAlrm EsfFormat  IdleCode RecoverTime

P4-1          P4-1PORT000          Link 01              IS   D4      Clear
Disable No      54016      Busy     3 seconds

P4-2          P4-2PORT000          Link 02              IS   D4      Clear
Disable No      54016      Busy     3 seconds

P4-3          P4-3PORT000          Link 03              IS   D4      Clear
Disable No      54016      Busy     3 seconds

P4-4          P4-4PORT000          Link 04              IS   D4      Clear
Disable No      54016      Busy     3 seconds

 .
 .
 .

P4-27         P4-27PORT000         Link 27              IS   D4      Clear
Disable No      54016      Busy     3 seconds

P4-28         P4-28PORT000         Link 28              IS   D4      Clear
Disable No      54016      Busy     3 seconds
```

Figure 17-128. Sample T1/E1 PORT Report

T3 Port **Report**

Description

The T3 Port Report allows users to produce a report containing DAX II AX-related T3 port information from the DND database according to selected search criteria.

DND GUI: Sample T3 Port Report Form

Figure 17-129 displays a sample T3 PORT REPORT form.

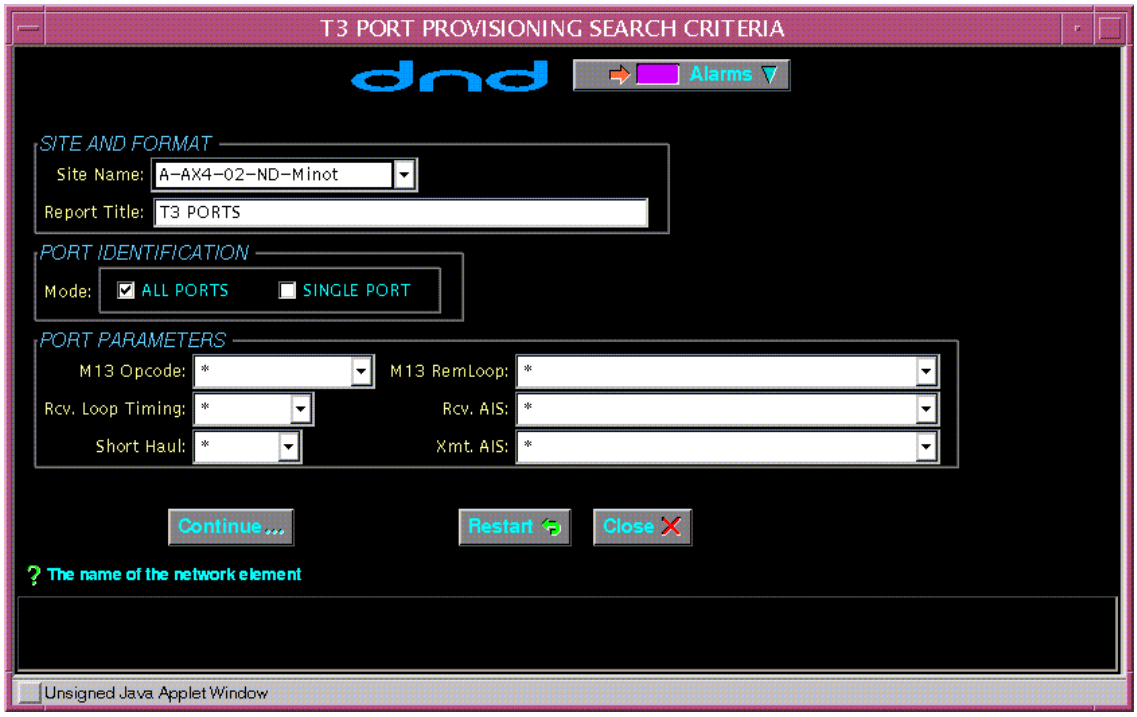


Figure 17-129. Sample T3 PORT Report Form

T3 Port Report (Continued)

Field Descriptions

The field values for the T3 PORT Report form are described in Table 17-35.

Table 17-35. Field Descriptions for the T3 PORT Report Form

Field	Description
Site Name	(Combo box). Mandatory. Select the name of the DACS II AX where the report will be processed. Clicking this field will display a list of DACS II AX names. The DACS must reside in the DND database and must be In Service.
Report Name	(Text Field; 1 through 30 alphanumeric characters). Mandatory. Enter the name of the report you wish to create.

Table 17-35. Field Descriptions for the T3 PORT Report Form

Field	Description
Mode	(Radio Buttons) Mandatory. Select a specific item or a range of Ports to which the report should apply. The choices are: ■ *ALL PORTS* - Selects all ports T3 ports equipped on a specific DACS II AX database. ■ *SINGLE PORT* - Selects a specific T3 port. When *SINGLE PORT* is selected, complete the following fields: — **Port ID** (Text field). Enter up to 41 characters to identify each port (DND name). — **Site Port ID** (Text field). Select a new AX Site Port ID for the port. — **Port Name** (Text Field). Enter the DND Port Name according to `Pnn-p (HS)` convention used by DND (and used for reports output to identify a particular port). — **Slot** (Combo Box) Choose the **Slot** number value that corresponds with the DACS II AX type and module being used. For example: ■ For DACS II AX4 type, the allowable values are x=01 through 04. ■ For DACS II AX11 type (without redundancy), the allowable values are x=01 through 11 ■ For DACS II AX11 type (with redundancy), the allowable values are x=01 through 11
M13 Opcode	(Radio buttons) Choose one of the following values to define the framing selection for the DS1 to DS3 multi-plexing. ■ C-bit parity ■ Bellcore M13
M13 RemLoop	Controls the line codes used to set and reset DS1 remote line loopback requests.

Table 17-35. Field Descriptions for the T3 PORT Report Form (Continued)

Field	Description
RcvLoopTiming	Choose one of the following to specify whether or not internal or loop timing is being used. ■ Enabled ■ Disabled
RcvAIS	The received bit pattern to use to determine when the remote line is in error.
Short Haul	Line build out of the DS3 port. ■ Yes (Connected to a cable less than 50 feet) ■ No (Not connected to a cable less than 50 feet)
XmitAIS	The transmitted bit pattern when a DS3 port is in error.

Sample T3 PORT Report

Figure 17-130 displays a sample T3 PORT Report.

```
REPORT TITLE: T3 PORTS

03 Nov 2000  16:25:30

----A-AX4-02-ND-Minot--------AX PROVISIONING-----------T3 PORTS----------------

Port         PortID       SitePortID          M13OpMode M13RemLoop
RCVLoopTiming ShortCable RcvAIS                          XmtAIS

P4-1 (HS)    P4-1PORT000   Circuit Number      C-Bit Pa  3rd C-Bit Inverted
Disable       Yes        Framed 1010, C-Bit=0, X-Bit disr
```

Figure 17-130. Sample T3 Port Report

DACS II AX Audit/Synchronization Port Report

Description

The DACS II AX AUDIT/SYNCHRONIZATION PORT Report lists discrepancies found between the DND and DACS II AX databases during the most recent database audit operation. When a mismatch of circuit, device, T1/E1 or T3 port data is detected, the parameters with mismatched values display in the report. An administrator may perform a database synchronization using either database as the master.

The form parallels the DACS II AX AUDIT/SYNCHRONIZATION PORT form.The selection criteria is **Site Name**, **Action**, **Report Type**, **Port ID, Date**, and **Time**.

DACS II AX Audit/Synchronization Port Report (Continued)

DND GUI: Sample Report Form

Figure 17-131 displays a sample AUDIT/SYNCHRONIZATION SEARCH CRITERIA Report form.



Figure 17-131. DND GUI: Sample AUDIT/SYNCHRONIZATION SEARCH CRITERIA Report Form

DACS II AX Audit/Synchronization Search Criteria Report (Continued)

Field Descriptions

The field values for the AUDIT/SYNCHRONIZATION SEARCH CRITERIA Report form are described in Table 17-36.

Table 17-36. Field Descriptions for the AUDIT/SYNCHRONIZATION SEARCH CRITERIA Report Form

Field	Description
Site Name	(Combo box) Select the name of the DACS II AX where the report will be processed. Clicking this field will display a list of DACS II AX names.
Report Title	(Text Field; 1 through 30 alphanumeric characters). Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.

Table 17-36. Field Descriptions for the AUDIT/SYNCHRONIZATION SEARCH CRITERIA Report Form

Field	Description
Action	(Radio buttons) Select the type of Audit/Sync report to generate. If CIRCUIT AUDIT or CIRCUIT SYNC is selected, the choices are: — ALL CIRCUITS — ALL CIRCUITS ON MAP — SINGLE CIRCUITS Based on your choice, the following fields may be selected: ■ ACTIVE MAP ■ CONNECTION MAP ■ CIRCUIT NAME SPECIFIER ■ SITE CIRCUIT NAME ■ CIRCUIT ID If DEVICE AUDIT or DEVICE SYNC is selected, you may select ALL DEVICES or SINGLE DEVICE for the MODE value. If SINGLE DEVICE is selected, the slot number is shown. For T1/E1 and T3 PORT AUDIT/SYNC actions, you may select ALL, ALL ON DEVICE or SINGLE for the MODE value. You may also complete the Port Specifier, Port ID, Slot Number, Port Number, and Port Name fields. For additional information, refer to the Field Descriptions tables in *Chapter 19, Chapter 20, DACS II AX Audit/Synchronization*.
Report Type	(Radio buttons) Select the kind of information to display in the report.The choices are: ■ **Detailed** - Display a detailed report ■ **Exceptions Only** - Display a report only showing the differences between the databases.

Table 17-36. Field Descriptions for the AUDIT/SYNCHRONIZATION SEARCH CRITERIA Report Form (Continued)

Field	Description
Date	(Combo boxes) Select the date criteria for the report. The **Date** fields are: ■ **Day** - Select the day (*01* through *31*) ■ **Month** - Select the month (*Jan* through *Dec*) ■ **Year** - Select the year (*1990* through *2037*)
(Date) Range	(Radio buttons) Select the **Date** range for the report. The choices are: ■ **=** - Displays alarms which occurred ON the **Date** ■ **>** - Displays alarms which occurred AFTER the **Date** ■ **<** - Displays alarms which occurred BEFORE the **Date**
Time	(Combo boxes) Select the time criteria for the report. The **Time** fields are: ■ **Hour** - Select the hour (00 through 23) ■ **Minute** - Select the minute (00 through 59) ■ **Second** - Select the second (00 through 59)
(Time) Range	(Radio buttons) Select the **Time** range to display in the report. The choices are: ■ **=** - Displays alarms which occurred ON the **Time** ■ **>** - Displays alarms which occurred AFTER the **Time** ■ **<** - Displays alarms which occurred BEFORE the **Time**

DACS II AX Audit/Synchronization Port Report (Continued)

Sample DACS II AX AUDIT/SYNC Report

Figure 17-132 displays a sample AX AUDIT/SYNCHRONIZATION PORT Report.

```
02 Nov 2000  11:21:05
-------A-AX4-03-WA-Olympia-------AX AUDIT/SYNCHRONIZATION-------RESULTS---------
Action: T1E1 PORT AUDIT       Date: 02Nov00  Time: 11:21:05

PORT: P1-1

          -Local-                              -Frame-

Mismatch: None                                  None

*****************************************************************************

Action: T1E1 PORT AUDIT       Date: 02Nov00  Time: 11:21:05

PORT:   P1-3

          -Local-                            -Frame-

Mismatch: None                                 None

*****************************************************************************
```

Figure 17-132. Sample DACS II AX AUDIT/SYNCHRONIZATION PORT Report

DACS II AX Echoed Response Processing Report

Description

The DACS II AX ECHOED RESPONSE PROCESSING (ERP) Report lists messages received by the DND which was initiated by a DACS II AX independently; for example, it reports events from the DACS II AX, such as device updates or removals from the DND database.

The form allows you to search by type of message, date and time. On this form, the **Site Name** is a mandatory entry.

DND GUI: Sample Report Form

Figure 17-133 displays a sample DACS II AX ECHOED RESPONSE PROCESSING Report form.

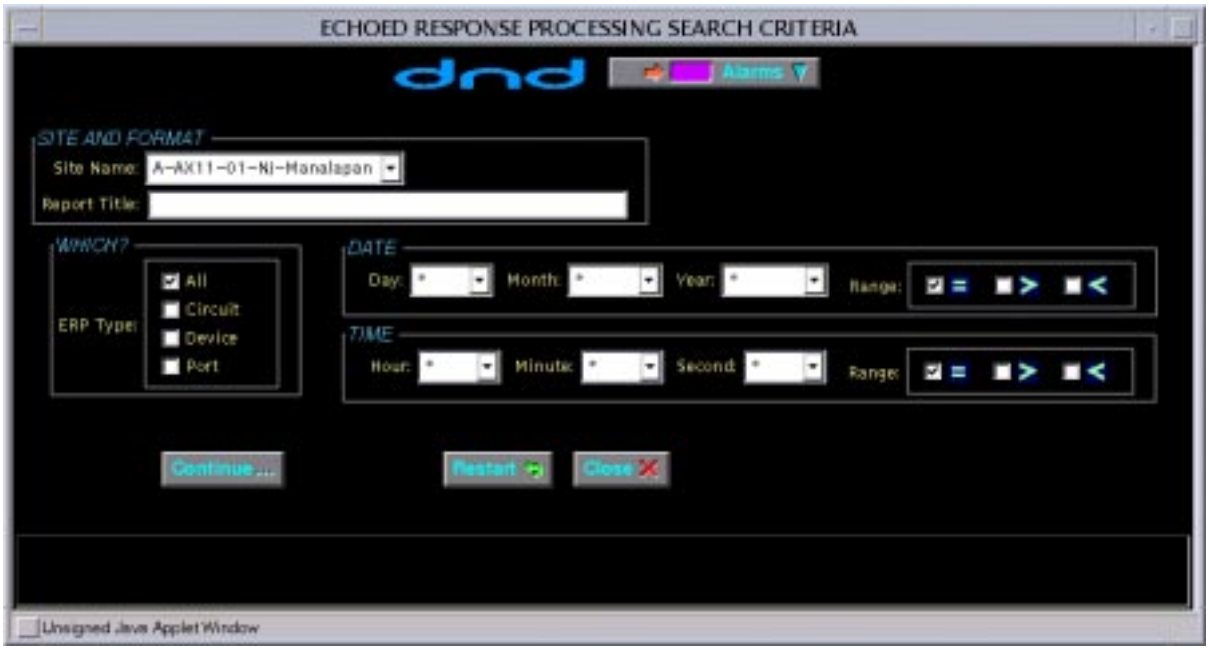


Figure 17-133. DND GUI: Sample DACS II AX ECHOED RESPONSE PROCESSING Report Form

DACS II AX Echoed Response Processing Report (Continued)

Field Descriptions

The field values for the ECHOED RESPONSE PROCESSING Report form are described in Table 17-37.

Table 17-37. Field Descriptions for the ECHOED RESPONSE PROCESSING Report Form

Field	Description
Site Name	(Combo box) Mandatory. Select the name of the DACS where the report will be processed. Clicking this field will display a list of DACS names.
Report Title	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
ERP Type	(Radio buttons) Select the ERP messages to display in the report. The choices are: ■ **Circuit** - Display all DACS II AX Circuit ERP messages ■ **Port** - Display all DACS II AX T1/E1 Port messages and T3 Port messages ■ **Device** - Display all device messages
Date	(Combo boxes) Select the date criteria for the report. The **Date** fields are: ■ **Day** - Select the day (*01* through *31*) ■ **Month** - Select the month (*Jan* through *Dec*) ■ **Year** - Select the year (*1990* through *2037*)

Table 17-37. Field Descriptions for the ECHOED RESPONSE PROCESSING Report Form (Continued)

Field	Description
(Date) Range	(Radio buttons) Select the date **Range** for the report. The choices are: ■ **=** - Displays alarms which occurred ON the **Date** ■ **>** - Displays alarms which occurred AFTER the **Date** ■ **<** - Displays alarms which occurred BEFORE the **Date**
Time	(Combo boxes) Select the time criteria for the report. The **Time** fields are: ■ **Hour** - Select the hour (00 through 23) ■ **Minute** - Select the minute (00 through 59) ■ **Second** - Select the second (00 through 59)
(Time) Range	(Radio buttons) Select the time **Range** to display in the report. The choices are: ■ **=** - Displays alarms which occurred ON the **Time** ■ **>** - Displays alarms which occurred AFTER the **Time** ■ **<** - Displays alarms which occurred BEFORE the **Time**

DACS II AX Echoed Response Processing Report (Continued)

Sample ERP Report

Figure 17-46 displays a sample DACS II AX ECHOED RESPONSE PROCESSING report.

```
REPORT TITLE: RESULTS

03 Nov 2000  16:46:20

----A-AX11-01-NJ-Manalapan--------AX ECHOED RESPONSE PROCESSING---RESULTS-----

Date     Time     Type     Action     Identifier

10/26/00 14:53:30 PORT     Modify     No.: P3-1  ID: P3-1PORT000
The esfformat value is not valid

10/26/00 14:54:47 PORT     Modify     No.: P3-1  ID: P3-1PORT000
The esfformat value is not valid

10/26/00 14:56:40 PORT     Modify     No.: P3-1  ID: P3-1PORT000
The command completed successfully

10/26/00 14:56:58 PORT     Modify     No.: P3-1  ID: P3-1PORT000
The esfformat value is not valid

10/26/00 14:57:48 PORT     Remove     No.: P3-1  ID: UNKNOWN
The command completed successfully (T1E1OutOfService)

10/26/00 15:43:49 CKT      Modify     AX ID: circuit01  Map: 3
The requested circuit does not exist on the DND

10/26/00 15:45:21 CKT      Activate   ID: ERP-01 circuit02  Map: 3
The command completed successfully

10/26/00 16:44:47 DEVICE   Modify     No.: P10  ID: T3
The command completed successfully (DevOnline)

10/26/00 16:44:47 DEVICE   Modify     No.: P10  ID: T3
The command completed successfully (DevNotStandby)

10/26/00 16:44:47 DEVICE   Modify     No.: P11  ID: T3
The command completed successfully (DevNotOnline)

10/26/00 16:44:48 DEVICE   Modify     No.: P11  ID: T3
The command completed successfully (DevStandby)

10/26/00 16:45:08 DEVICE   Unprotect  No.: P10  ID: T3
ERP timed out waiting for a response from the NE
```

Figure 17-134. Sample ECHOED RESPONSE PROCESSING Report

DACS II AX Circuit Alarm Report

Description

The DACS II AX CIRCUIT ALARM Report form states the values of various fields for circuits that have as an end point a port in alarm. The fields map mainly to the DACS II AX CIRCUIT PROVISIONING form. One format is provided for alarms that identify the port and channel information of the circuit in alarm.

DACS II AX Circuit Alarm Report (Continued)

DND GUI: Sample Report Form

Figure 17-135 displays a sample DACS II AX CIRCUIT ALARM Report form.

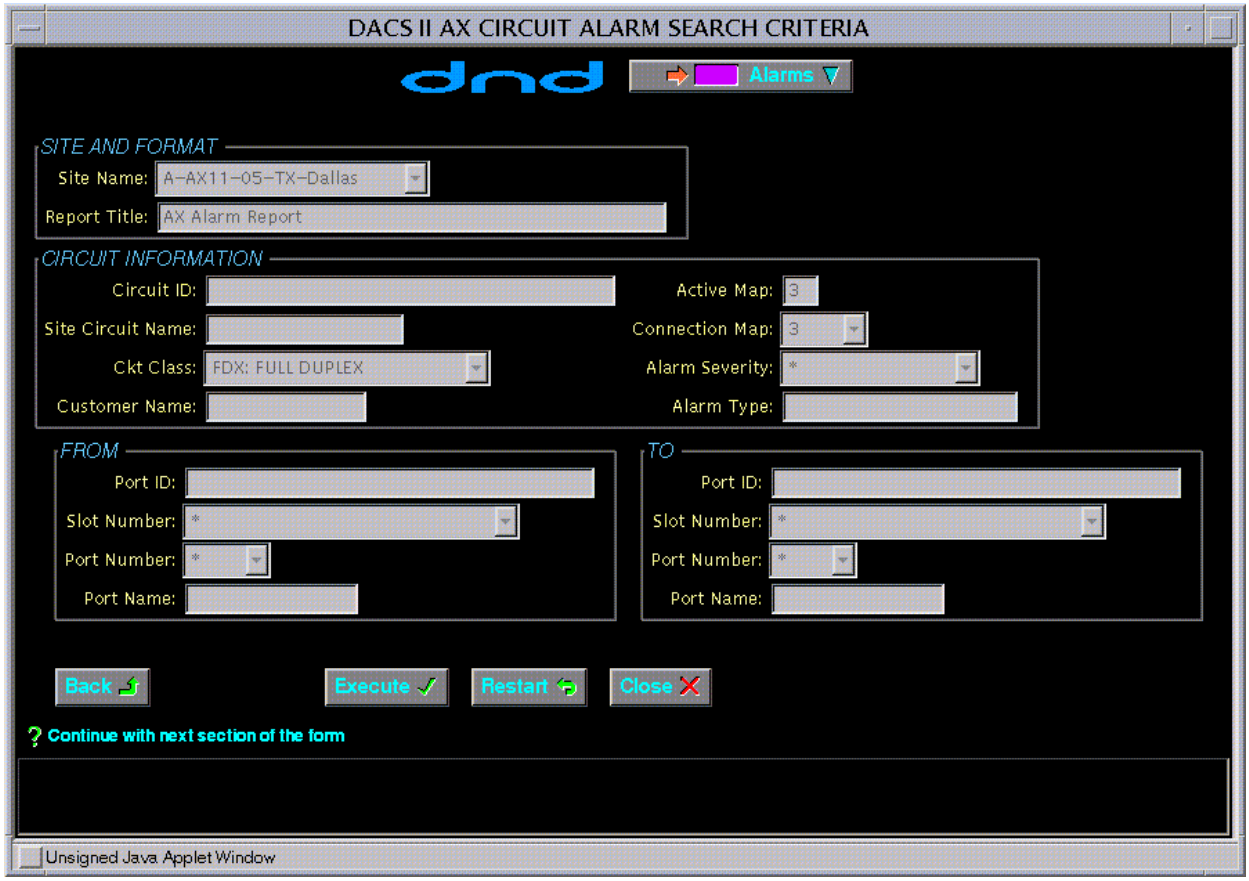


Figure 17-135. DND GUI: Sample DACS II AX CIRCUIT ALARM Report Form

DACS II AX Circuit Alarm Report (Continued)

Field Descriptions

The field values for the DACS II AX CIRCUIT ALARM Report form are described in Table 17-38.

Table 17-38. Field Descriptions for the DACS II AX CIRCUIT ALARM Report Form

Field	Description
Site Name	(Combo box) Select the name of the DACS II AX where the report will be processed. Clicking this field will display a list of DACS II AX names.
Report Title	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
Circuit ID	(Text field) Enter the circuit name to receive a report for a particular circuit. For additional information, refer to the Field Description tables in *Chapter 10, Chapter 10, Circuit Provisioning*.
Active Map	(Read-only field) This field displays a value between 1 and 5 to identify the active connection map at the DACS II AX. **NOTE:** May display 0 if the AX has not been restored.
Site Circuit Name	(Text field) Mandatory. Identifies the AX circuit name connection. One through 19 characters from the printable ASCII character set.
Connection Map	Enter a value between 1 and 5 which identifies the connection map where the circuit connection is activated.
Ckt Class	(Read-only field.) Displays the type of circuit. The only value is: ■ *FULL DUPLEX* - A two-way, two-point circuit that applies to high-rate DS0 cross-connections.

Table 17-38. Field Descriptions for the DACS II AX CIRCUIT ALARM Report Form (Continued)

Field	Description
Alarm Severity	(Combo Box) Choose a alarm severity to be used for the report. If no selection is made, all severities will display. ■ Critical ■ Major ■ Minor ■ Informational
Customer Name	(Text field) Up to 12 characters. Informational only; the name of the customer to be associated with the current circuit.
Alarm Type	(Text field) The type of alarms and events sent by the DACS II AX.
(FROM PORT/TO PORT) Port ID	(Text field). Enter up to 41 characters to identify each managed port (DND name), excluding *, \, ?, [,], ^, ", %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored.

Table 17-38. Field Descriptions for the DACS II AX CIRCUIT ALARM Report Form (Continued)

Field	Description
(FROM PORT/TO PORT) Slot Number	(Combo Box). Enter the slot number (x) value. **Slot** number values correspond with the DACS II AX type and module being used. For example: ■ For DACS II AX4 type, slot values are x=01 through 04. ■ For DACS II AX11 type, slot values are x=01 through 11. **Note:** Slots 01 and 11 are not shown if they are being used for redundancy.
(FROM PORT/TO PORT) Port Number	(Text field). Enter the port number (*y*) value. **Port Number** values (y) correspond with the module being used. For example: ■ For T1/E1 Ports used for the Octal T1 module, port values are y=01 through 08 ■ For T1/E1 Ports used for the T3 module, port values are y=01 through 28.
(FROM PORT/TO PORT) Port Name	Displays the port name. This is the format used to display port numbers on reports.

DACS II AX Circuit Alarm Report (Continued)

Sample DACS II AX CIRCUIT ALARM Report

Figure 17-136 displays a sample DACS II AX CIRCUIT ALARM Report

```
07 Nov 2000  16:03:04

----A-AX11-05-TX-Dallas---------AX CIRCUIT ALARMS---CIRCUIT ALARMS------------

Circuit_ID  Site_Circuit_ID  Map Customer   CktClass Alarm_Port From_Port To_Port Port_Type   Protection Protection_Pack Severity    Alarm_Type
ERP-01      circuit02        3             FDX      P3-1      P3-1      P3-1    OctalT1     NO                        Major       T1E1NearEndLossOfSignal
ERP-01      circuit02        3               FDX      P3-1      P3-1      P3-1    OctalT1     NO                        Major       T1E1NearEndLOF
ERP-01      circuit03        3             FDX      P3-7      P3-6      P3-7    OctalT1     NO                        Major       T1E1NearEndSeverErrored
ERP-01      circuit03        3               FDX      P3-7      P3-6      P3-7    OctalT1     NO                        Major       T1E1NearEndLOF
ERP-01      circuit03        3             FDX      P3-7      P3-6      P3-7    OctalT1     NO                        Major       T1E1NearEndSeverErrored
```

Figure 17-136. Sample DACS II AX CIRCUIT ALARM Report

DACS II AX Channel Report

Description

The DACS II AX CHANNEL Report form produces output on all channels in the DND database. It displays channel usage and non-usage information, and the service residing on the channel, e.g., the circuit name. Note however, that if this report is produced on channels residing on *unmanaged ports*, i.e., non-T1/E1 ports, then the unused channels will not display on the report.

The DACS II AX Channel report provides two default formats: *CHANNEL USAGE* and *CHANNEL AVAILABLE.*

CHANNEL USAGE displays the channels in use, including channels on unsupported devices. This includes the use of each channel within each facility circuit that has been equipped. *CHANNEL AVAILABLE* displays channels not in use on supported devices.

DACS II AX Channel Report (Continued)

DND GUI: Sample Report Form

Figure 17-137 displays a sample DACS II AX CHANNEL Report form.

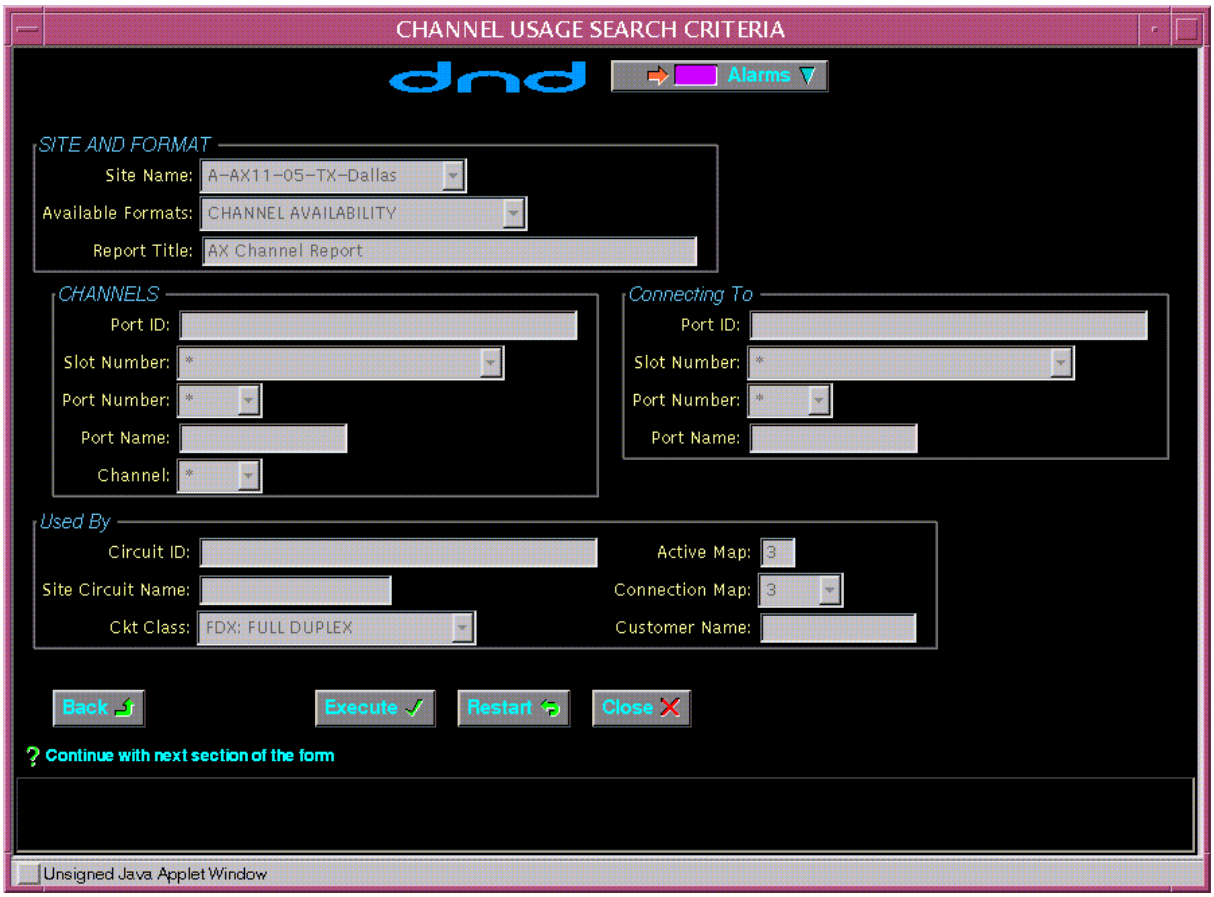


Figure 17-137. DND GUI: Sample DACS II AX CHANNEL Report Form

DACS II AX Channel Report (Continued)

Field Descriptions

The field values for the DACS II AX CHANNEL Report form are described in Table 17-39.

Table 17-39. Field Descriptions for the DACS II AX CHANNEL Report Form

Field	Description
Site Name	(Combo box) Select the name of the DACS II AX where the report will be processed. Clicking this field will display a list of DACS II AX names.
Available Formats	(Combo box) Select a DACS II AX CHANNEL Report format. If no customized formats were created using the DND Forms Interface, the only format available will be *CHANNEL USAGE*
Report Title	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
(CHANNELS/Connecting To) Port ID	(Text field). Enter up to 41 characters to identify each managed port (DND name), excluding *, \, ?, [,], ^, ", %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored.
(CHANNELS/Connecting To) Slot Number	(Combo Box). Enter the slot number (x) value. **Slot** number values correspond with the DACS II AX type and module being used. For example: ■ For DACS II AX4 type, slot values are x=01 through 04. ■ For DACS II AX11 type, slot values are x=01 through 11.
(CHANNELS/Connecting To) Port Number	(Text field). Enter the port number (*y*) value. **Port Number** values (y) correspond with the module being used. For example: ■ For T1/E1 Ports used for the Octal T1 module, port values are y=01 through 08 ■ For T1/E1 Ports used for the T3 module, port values are y=01 through 28.

Table 17-39. Field Descriptions for the DACS II AX CHANNEL Report Form

Field	Description
(CHANNELS/Connecting To) Port Name	Displays the port name. This is the format used to display port numbers on reports.
Channel	(Text field) Select the Channel number to display in the report. For additional information, refer to the Field Description tables in *Chapter 10, Chapter 10, Circuit Provisioning*.
Circuit ID	(Text field) Enter the circuit name to receive a report for a particular circuit. For additional information, refer to the Field Description tables in *Chapter 10, Chapter 10, Circuit Provisioning*.
Active Map	(Read-only field) This field displays a value between 1 and 5 to identify the active connection map at the DACS II AX. **NOTE:** May display 0 if the AX has not been restored.
Site Circuit Name	(Text field) Mandatory. Identifies the AX circuit name connection. One through 19 characters from the printable ASCII character set.
Connection Map	Enter a value between 0 and 5 which identifies the connection map where the circuit connection is activated. When 0 is seleced, it displays the map created by an audit/sync LOAD CIRCUIT INFO action.
Ckt Class	(Read-only field.) Displays the type of circuit. The only value is: ■ *FULL DUPLEX* - A two-way, two-point circuit that applies to high-rate DS0 cross-connections.
Customer Name	(Text field) Enter the customer name to specify a particular customer.

DACS II AX Channel Report (Continued)

Sample DACS II AX CHANNEL Report

Figure 17-138 displays a sample DACS II AX CHANNEL Report.

```
07 Nov 2000  16:10:50
-------A-AX11-05-TX-Dallas-----------AX CHANNELS------CHANNEL USAGE-----------

Port  Map Channel Circuit_ID Site_Circuit_ID To_Port  Customer  Class Voice_Data  BW Speed

P3-1  3   1         ERP-01     circuit02         P3-1              FDX   Data        01 DS0(56K b/s)
P3-6  3   1         ERP-01     circuit02         P3-6              FDX   Data        01 DS0(56K b/s)
P3-7  3   1         ERP-01     circuit02         P3-7              FDX   Data        01 DS0(56K b/s)
```

Figure 17-138. Sample DACS II AX CHANNEL Report

NOTE:
A full CHANNEL report takes some time to generate, since the DND must check every channel of every port. It is suggested you limit the search to one or a few ports.

DACS II AX Circuit Reports

Description

The DACS II AX CIRCUIT Report form provides the following report formats:

- Circuit Connections
- Circuit Information

The data is from information entered in the DACS II AX CIRCUIT PROVISIONING form, or placed in the database through ERP or by audit/synchronization.

The SEARCH CRITERIA form is similar to the the DACS II AX CIRCUIT PROVISIONING form. You can search for circuits of a given **Status** and other fields given on the form in addition to the ones that will appear in the report.

DACS II AX Circuit Report (Continued)

DND GUI: Sample Report Form

Figure 17-139 displays a sample DACS II AX CIRCUIT Report form.

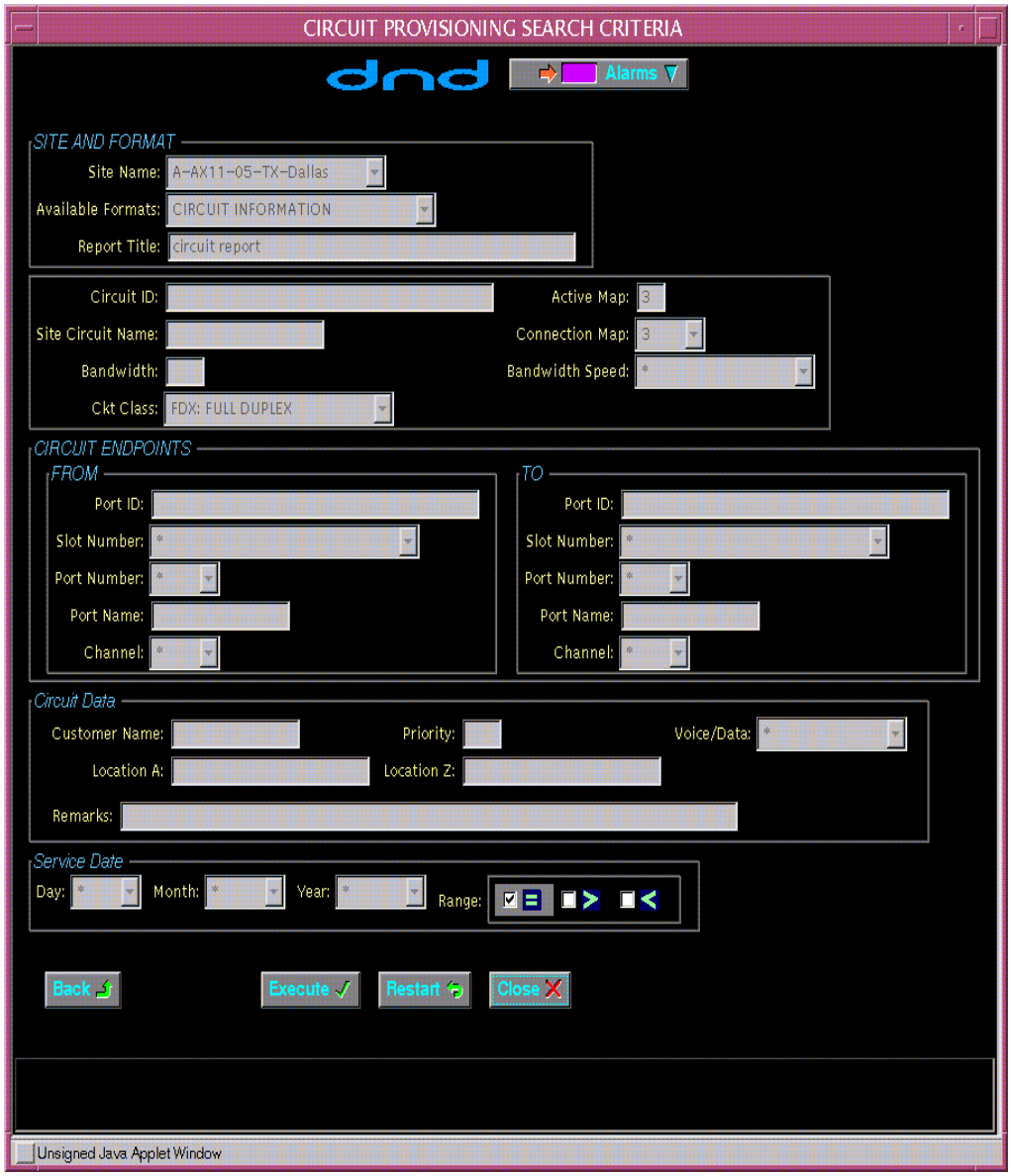


Figure 17-139. DND GUI: Sample DACS II AX CIRCUIT Report Form

DACS II AX Circuit Report (Continued)

Field Descriptions

The field values for the DACS II AX CIRCUIT Report form are described in Table 17-40

Table 17-40. Field Descriptions for the DACS II AX CIRCUIT Report Form

Field	Description
Site Name	(Combo box) Select the name of the DACS II AX where the report will be processed. Clicking this field displays a list of DACS II AX names.
Available Formats	(Combo box) Select the DACS II AX CIRCUIT Report output format. This report cannot be customized.
Report Title	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
Circuit ID	(Text field) Enter the circuit name to receive a report for a particular circuit. For additional information, refer to the Field Description tables in *Chapter 10, Chapter 10, Circuit Provisioning*.
Active Map	(Read-only field) This field displays a value between 0 and 5 to identify the active connection map at the DACS II AX. **NOTE:** May display 0 if the AX has not been restored.
Site Circuit Name	(Text field) Mandatory. Identifies the AX circuit name connection. One through 19 characters from the printable ASCII character set.
Connection Map	Enter a value between 0 and 5 which identifies the connection map where the circuit connection is activated. When 0 is seleced, it displays the map created by an audit/sync LOAD CIRCUIT INFO action.

Table 17-40. Field Descriptions for the DACS II AX CIRCUIT Report Form

Field	Description
Bandwidth	(Combo box) Mandatory. Indicates the number of DS0 channels desired and if the user is limited to 56 Kbps per channel or has access to the full 64 Kbps. For example, a 128 Kbps data channel consists of two 64 Kbps channels. For NAS ports, the available bandwidth is *1-24* channels; for CEPT ports, the available bandwidth is *1* through *32* channels. The bandwidth of a random circuit must be greater than 1.
Bandwidth Speed	(Radio buttons) Mandatory. Indicates the cross connect speed. The choices are: ■ *DS0 (48K b/s)* ■ *DS0 (56K b/s)* ■ *DS0 (64K b/s)* ■ *Clear E1* ■ *Clear T1* **NOTE:** If the cross-connect speed is 48K, then the **Bandwidth** of the circuit must be *1*.
Ckt Class	(Read-only field.) Displays the type of circuit. The only value is: ■ *FULL DUPLEX* - A two-way, two-point circuit that applies to high-rate DS0 cross-connections.
Priority	Enter the circuit priority value for the normal/altrouted circuit. For additional information, refer to the Field Description tables in Chapter 9, Circuit Provisioning.
Voice/Data	(Combo Box) Choose whether or not the circuit is a symmetric voice circuit or of a polling data circuit.
Location A	(Text field) Enter the near-end location. For additional information, refer to the Field Description tables in Chapter 9, Circuit Provisioning.
Location Z	(Text field) Enter the far-end location. For additional information, refer to the Field Description tables in Chapter 9, Circuit Provisioning.

Table 17-40. Field Descriptions for the DACS II AX CIRCUIT Report Form

Field	Description
Remarks	(Text field) Enter comments about the circuit. For additional information, refer to the Field Description tables in Chapter 10, Circuit Provisioning.
Service Date	(Combo boxes) Select the date the circuit was placed in service. For additional information, refer to the Field Description tables in Chapter 10, Circuit Provisioning.
(Service Date) Range	(Radio buttons) Select the service date criteria for the circuit. The choices are: ■ **=** - Displays a report for circuits placed In-Service on the **Service Date** specified ■ **>** - Displays a report for circuits placed In-Service AFTER the **Service Date** specified ■ **<** - Displays a report for circuits placed In-Service BEFORE the **Service Date** specified

DACS II AX Circuit Report (Continued)

Sample DACS II AX CIRCUIT Report

The DACS II AX CIRCUIT Report contains two output formats. Figure 17-140 displays the Circuit Information example; there is also a Circuit Connections format available which is similar to Figure 17-29.

```
07 Nov 2000  16:17:34

--A-AX11-05-TX-Dallas-------AX CIRCUITS-------CIRCUIT INFORMATION--------------

Circuit_ID Site_Circuit_ID Ckt_No Map Date     Loc_A  Loc_Z Customer Speed Class Voice_Data   Remarks

ERP-01        Circuit01      1      3   11/01/00             DS0     (56K b/s)FDX Data
ERP-01        Circuit02      1      3   11/01/00             DS0     (56K b/s)FDX Data
ERP-01        Circuit03      1      3   11/01/00             DS0     (56K b/s)FDX Data
```

Figure 17-140. Sample DACS II AX CIRCUIT Report

DACS II AX Port Alarm Report

Description

The DACS II AX PORT ALARM Report displays all active port alarms on a DACS II AX unit.

Sample Report Form

Figure 17-141 displays a sample DACS II AX PORT ALARM Report form.

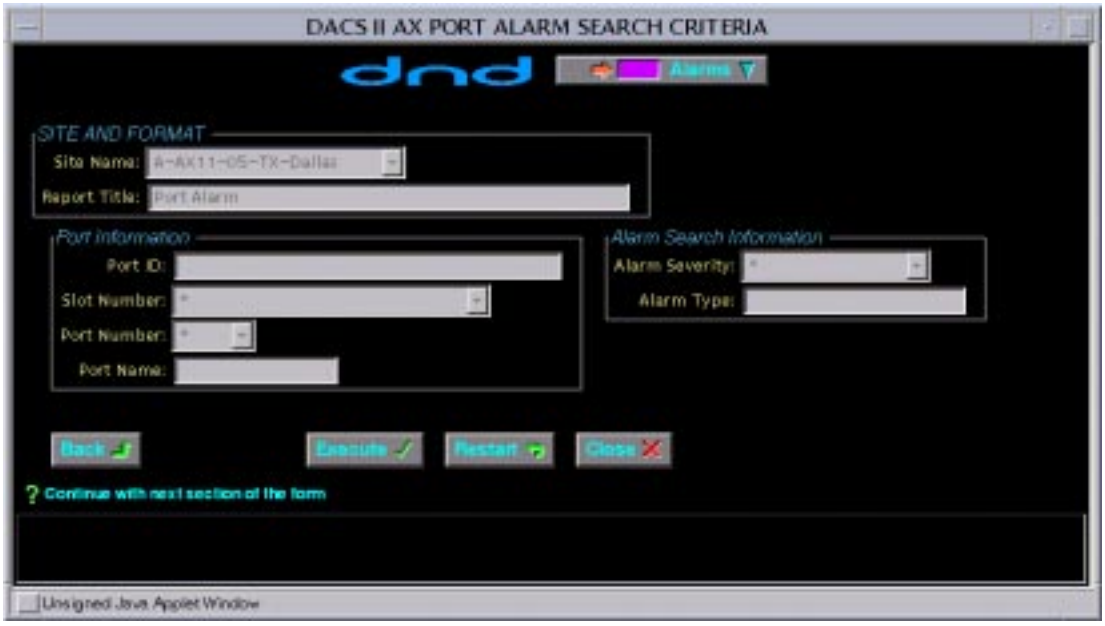


Figure 17-141. Sample PORT ALARMS Report Form

Port Alarms Report (Continued)

Field Descriptions

The field values for the PORT ALARMS Report form are described in Table 17-41.

Table 17-41. Field Descriptions for the PORT ALARMS Report Form

Field	Description
Site Name	(Combo box) Select the name of the site where the report will be processed. Clicking this field will display a list of DACS II AX names.
Report Title	(Text Field) Enter a title for the report. This title will be displayed in the report and will also appear on the title bar of the report window.
Port ID	(Text field). Enter up to 41 characters to identify each port (DND name).
Slot Number	(Text field). Enter the slot number (x) value. The **Slot** number value corresponds with the DACS II AX type and module being used. For example: ■ For DACS II AX4 type, the allowable values are x=01 through 04. ■ For DACS II AX11 type (without redundancy), the allowable values are x=01 through 11 ■ For DACS II AX11 type (with redundancy), the allowable values are x=01 through 11 **NOTE:** 11 is not selectable if it is configured as a protection slot.
Port Number	(Combo box) Identifies a port number on the device identified by the slot number. This may be 1 to 8 for Octal T1E1 cards or 1 to 28 for T3 cards.
Port Name	(Text field) Enter the name of the port whose alarms will be displayed in the report.
Alarm Severity	(Combo box) Select the severity of port alarms to display in the report.
Alarm Type	(Text field) The type of alarms and events sent by the DACS II AX.

Port Alarms Report (Continued)

Sample PORT ALARMS Report

Figure 17-142 displays a sample PORT ALARMS Report.

```
07 Nov 2000  16:22:39

---A-AX11-05-TX-Dallas--------AX PORT ALARMS--------PORT ALARMS-------

Port_Name Port_Type    Protection Protection_Pack Severity    Alarm_Type

SMCA      SystemManager NO                        Major        DevDataBaseNotInsync
SMCB      SystemManager NO                        Major        DevDataBaseNotInsync
PSA       powerSupply   NO                        Major        PowerSupplyProblem
P3-1      OctalT1       NO                        Major        T1E1NearLOF
P3-2      OctalT1       NO                        Major        T1E1NearLOF
P3-3      OctalT1       NO                        Major        T1E1NearLOF
```

Figure 17-142. Sample PORT ALARMS Report

Database Audit/Synchronization

18

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Background

Introduction

Database Audit/Synchronization consists of queries and provisioning commands. This feature allows you to perform the following:

- Compare (audit) the DND and DACS (facility) databases to note the differences
- Compare and adjust (synchronize) the DND and DACS databases to eliminate those differences
- Upload all MMFG, NPC, and provisioning data from the DACS and store it in the DND database

All audit/sync **Actions** (except for *SINGLE CHANNEL* Audit/Sync) run in the background. The message "*This command will be executed in the background*" indicates that the **Action** has been received by the DND.

Only one audit or sync **Action** per DACS can be done at a time. With very large databases, an audit/sync **Action** can take some time.

NOTE:
Database Audit/Synchronization is available only to the system administrator.

Objectives

This chapter provides background information to help you perform the following:

1. Channel, NPC, and MMFG Audits
2. Alarm, Channel, NPC, and MMFG Synchronization
3. Upload of the MMFG, NPC and circuit provisioning data into the DND database
4. Abort a scheduled or in-progress audit/synchronization action

Background (Continued)

Related tasks

For related tasks, see the following General Tasks in Volume II:

DND GUI:

- Performing an Alarm Synchronization GT 18.1G
- Performing a Database Audit GT 18.2G
- Performing a Database Synchronization GT 18.3G
- Performing an Upload GT 18.4G
- Performing an Abort GT 18.5G

DND Forms:

- Performing an Alarm Synchronization GT 18.1U
- Performing a Database Audit GT 18.2U
- Performing a Database Synchronization GT 18.3U
- Performing an Upload GT 18.4U
- Performing an Abort GT 18.5U
- Viewing the Results of an Audit or Synchronization GT 18.6U

Related information

For related information see:

- *DACS II Network Director Installation Manual*

Database Audit

Description

An audit will compare the MMFG, NPC, or channel information in a facility database with the same information in its corresponding local database. This is used to display the discrepancies for troubleshooting MMFG, NPC, or channel irregularities or problems. The discrepancies are stored in the audit/ synchronization log, and can be accessed through the AUDIT/ SYNCHRONIZATION report.

An MMFG audit compares MMFG provisioning information; an NPC audit compares NPC provisioning information; and a Channel audit compares circuit provisioning information. The specific parameters that are audited are listed in Table 17-1, Table 17-2, and Table 17-3.

Scheduling

The scheduling of a database audit insures that changes between the DACS and DND databases are logged. An audit action may take some time, so the ability to schedule it for a later time may prove helpful. This can be used as a daily or weekly maintenance routine, or anytime needed.

MMFG Audit

Description

The MMFG Audit allows you to compare MMFG Provisioning information in the DACS and DND databases. Discrepancies between the databases are logged and can be accessed through the AUDIT/SYNCHRONIZATION report.

Qualifying the MMFG Audit

To qualify the audit, you can choose to audit:

- A single MMFG
- All facility MMFGs (all MMFGs in the DACS database will be compared)
- All local MMFGs (all MMFGs in the DND database will be compared)
- A range of facility MMFGs
- A range of local MMFGs

MMFG Audit (Continued)

MMFG Audit Parameters

Table 17-1 illustrates the MMFG parameters that are audited.

Table 17-1. MMFG Parameters Audited

Type of MMFG	MXxyz	EXxyz	HXxyz
Service State	X	X	X
Type	X	X	X
MMFG number	X	X	X
Alarm State*	X	X	X
BERM	X	X	X
BERT	X	X	X
LBO	X	X	X
Performance thresholds			X
MIU**		X	

*Only synchronized when the DACS is the master.
** The MIU is supported only for DS3U (not for HDS3U).

The allowed values of each field can be found in Chapter 10, MMFG Provisioning. If no difference in value between the same field in the same MMFG record of each database is found, then no further action is taken.

NPC Audit

Description

The NPC Audit allows you to compare NPC Provisioning information in the DACS and DND databases. Discrepancies between the databases are logged and can be accessed through the AUDIT/SYNCHRONIZATION report.

Qualifying the NPC Audit

To qualify the audit, you can choose to audit:

- A single NPC
- All facility NPCs (all NPCs in the DACS database will be compared)
- All local NPCs (all NPCs in the DND database will be compared)
- A range of facility NPCs
- A range of local NPCs

NPC Audit (Continued)

NPC Audit Parameters

Table 17-2 illustrates the NPC parameters that are audited.

Table 17-2. NPC Parameters Audited

Type of NPC	DE/TE	PB/PC	DA/TA	PA/ TH	DC	Clear DE/TE	Clear DA/TA	Clear PA	SD
Service State	X	X	X	X	X	X	X	X	X
Type	X	X	X	X	X	X	X	X	X
NPC number	X	X	X	X	X	X	X	X	X
Alarm State*	X	X	X	X	X	X	X	X	X
IW	X	X	X	X	X				
TS0		X**		X					
TS0M		X**		X					
AIS Alarm Level	X	X	X	X		X	X	X	
NFS†				X					
Performance thresholds	X**	X**		X		X		X	

*Only synchronized when the DACS is the master.
**Applies only to DACS II.
† NFS (non-framing setting) is the NFW value of Framing on CIRCUIT PROVISIONING.

The allowed values of each field can be found in Chapter 8, NPC Provisioning. If no difference in value between the same field in the same NPC record of each database is found, then no further action is taken.

NPC Audit (Continued)

NPC Audit Parameters (Continued)

If a difference is found, it is recorded in one of six possible records in the audit/synchronization log. The following six field discrepancy records are possible:

- **Service State**, **Type**, or **IW**
- **TS0** or **TS0M**
- Performance monitoring threshold values
- **Alarm State**
- **NFS**
- **AIS Alarm Level**

Each of the above fields in every NPC record of the range is checked and all discrepancies are logged.

If there is a Performance Thresholds discrepancy, the DACS value "10" will be represented by a "G" in the log.

Channel Audit

Description

Channel audit allows you to compare the circuit provisioning information between the DACS and DND databases. Discrepancies are logged and can be accessed through a AUDIT/SYNCHRONIZATION report.

Qualifying the Channel Audit

To qualify the audit, you can choose to audit:

- A single channel on a single NPC
- All channels on a single NPC
- All channels on all facility NPCs (channels of all NPCs in the DACS database will be compared)
- All channels on all local NPCs (channels of all NPCs in the DND database will be compared)
- All channels on a range of facility NPCs
- All channels on a range of local NPCs

Channel Audit (Continued)

Channel Audit Parameters

Table 17-3 lists the circuit parameters audited.

Table 17-3. Circuit Parameters Audited

Type of circuit	CEPT nxDS0	NAS nxDS0	Gateway nxDS0	DMB*	Clear DS1*	Clear E1*	Virtual multipoint*	Subrate	Estab. DS0
Ckt Status	X	X	X	X	X	X	X	X	X
Ckt Class	X	X	X	X	X	X	X	X	X
FROM NPC	X	X	X	X	X	X	X	X	X
(Forms) **FROM Ch** (GUI) **FROM Channel**	X	X	X	X			X	X	X
FROM CUST								X	
TO NPC	X	X	X	X	X	X	X	X	X
(Forms) **TO Ch** (GUI) **TO Channel**	X	X	X	X			X	X	
TO CUST								X	
DMB Mode				X					
NTR				X					
Bandwidth	X	X	X	X			X		
Bandwidth Type	X	X	X	X			X		
(Forms) **IW** (GUI) **Insertion Word**	X	X	X	X			X		
TLA**	X	X	X	X	X	X	X		
NAM	X	X	X	X			X		
AIS	X	X	X	X					
RDLD	X	X	X	X	X	X	X		
(Forms) **TC** (GUI) **Trunk Conditioning**	X	X	X	X			X		
(Forms) **SC** (GUI) **Signaling Conversion**			X						

Table 17-3. Circuit Parameters Audited (Continued)

Type of circuit	CEPT nxDS0	NAS nxDS0	Gateway nxDS0	DMB*	Clear DS1*	Clear E1*	Virtual multipoint*	Subrate	Estab. DS0
Framing	X		X						
Transmission Rate								X	X†
UMC, MUX, SIG, Framing								X	
Transmission Standard									X

***** DACS II ISX Release 1.0 does not support these circuit types.
****** Only synchronized when the DACS is the master and one end for one-way or two ends for two-way are terminated or unterminated.
† For Transmission Standard X.50 only.

The allowed values for each field can be found in chapter 9, Circuit Provisioning. If no difference in the value of a field between databases is found, no further action is taken. If a difference is found in one field, it is recorded in the audit/ synchronization log. The remaining fields of the record are checked and remaining discrepancies are noted internally, but are not logged.

Single Channel Audit

Use

To display all differences, utilize the *CHANNEL AUDIT* **Action** in *SINGLE CHANNEL* (DND GUI)/*SINGLE CHAN* (DND Forms) **Mode**. All of the differences are shown on the CIRCUIT PROVISIONING form(s) except for **Mode**, **NTR**, and **Framing**.

One-Way and Two-Way Circuits

One channel has two directions. Figure 17-1 depicts two one-way, two-point circuits (**Class** of *HDX*) utilizing the same channel, Ch x, at the FROM side.

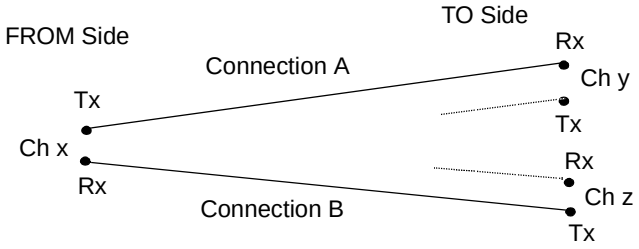


Figure 17-1. Two One-way, Two-point Circuits

Figure 17-2 depicts a two-way, two-point circuit (**Class** of *FDX*) Ch y and Ch z are the same channel, and both directions are used for channel operation.

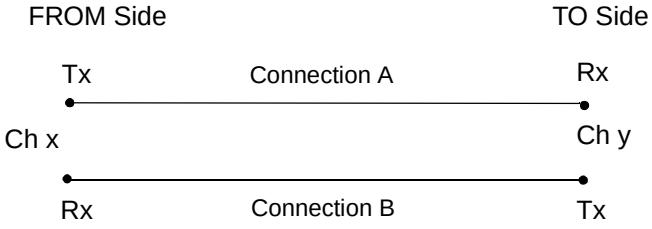


Figure 17-2. A Two-point, Two-way Circuit

DND Forms: Single Channel Audit, Continued

Single Channel Audit Fields

The FROM side **NPC ID** and **Channel** are stated in the upper portion of the form. The fields in the bottom half of the form, if they appear, state the TO side information. The **Fr NPC** states the hierarchical or extended number of the Tx side of Connection B; for example, at the TO side. In the *FDX* case, it is the same as the Rx side of Connection A. Figure 17-3 displays an example of the DATABASE AUDIT/SYNCHRONIZATION form.

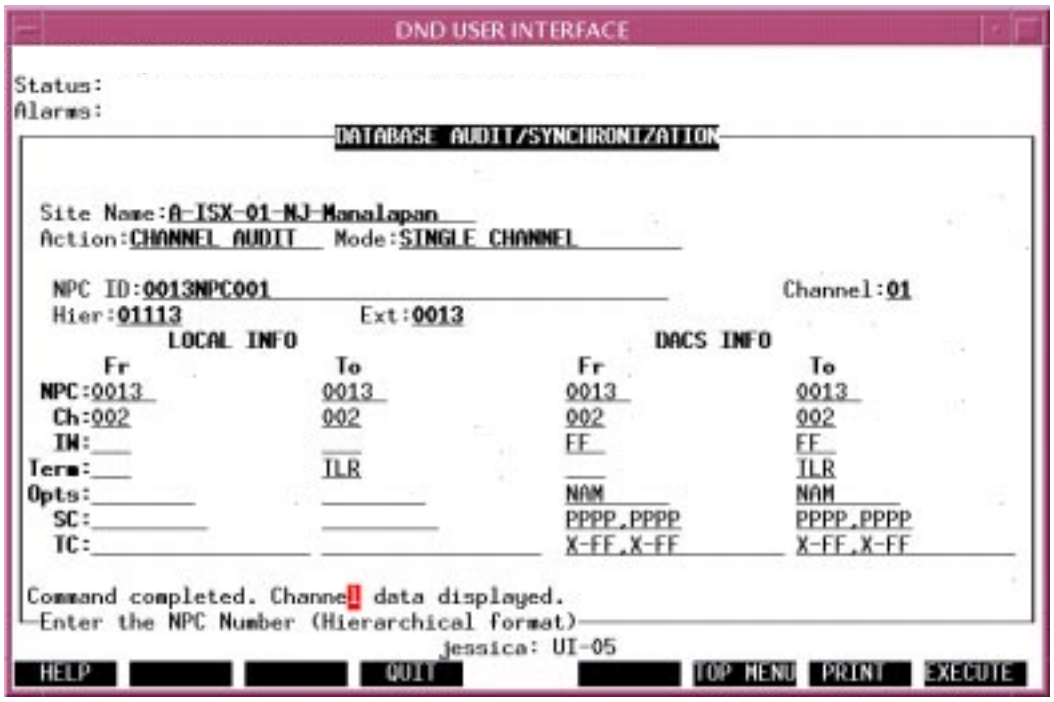


Figure 17-3. DND Forms: Sample DATABASE AUDIT/SYNCHRONIZATION form - *CHANNEL AUDIT* Action

DND Forms: Single Channel Audit, Continued

Field Descriptions

The field descriptions that appear at the bottom of the form are described in Table 17-4.

Table 17-4. DND Forms: Single Channel Audit Field Descriptions

LOCAL INFO Fr	Display-only. The identifying information of the TO side Tx channel as that information appears in the local database. **NPC** is the hierarchical or extended number**.**
LOCAL INFO To	Display-only. The identifying information of the TO side Rx channel as that information appears in the local database.
DACS INFO Fr	Display-only. The identifying information of the TO side Tx channel as it appears in the DACS database.
DACS INFO To	Display-only. The identifying information of the TO side Rx channel as it appears in the DACS database.

Database Synchronization

Description

A synchronization will audit and when possible, adjusts the data compared in the DND and DACS databases, so that they are identical. This is subject to certain constraints, which are detailed later in this section. One database is selected as the master database (**Master DB**), while the other database is changed to match it.

NOTE:
Echoed Response Processing (ERP) helps to keep the DND and DACS databases in sync, but Database Synchronization allows you to manually sync the databases.

Scheduling

The scheduling of a database synchronization insures that the DACS and DND databases are kept up to date. This can be used as a daily or weekly maintenance routine, or anytime needed in troubleshooting NPC, MMFG, channel, or alarm irregularities or problems.

MMFG Synchronization

Description

An MMFG synchronization first performs an MMFG audit. Then it attempts to insure that the discrepancies noted in the audit/synchronization log as a result of that audit are removed.The results of each command are then noted in additional records in the audit/synchronization log as success or failure, with the reason for the failure. If no corresponding MMFG provisioning record exists, one is created.

- If the DND is the master, *MMFG SYNC* sends commands to the DACS to provision it in such a way as to change the values of the fields noted as inconsistent.
- If the DACS is the master, *MMFG SYNC* changes the existing field in the DND database.

New MMFG IDs

New MMFG IDs created by MMFG synchronization have the following format:

MMFGxx-y

where:

xx	The unit number.
y	The MMFG number (P, 1-6).

If the identifier is already in use, a **.z** suffix is added to create a unique identifier, where **z** is an integer from 0 to 9.

MMFG Synchronization (Continued)

Limitations

The limitations on the use of MMFG synchronization are as follows:

- When the DND is the master:
  - — If there are discrepancies that would require removing an MMFG at the DACS, and there are NPCs in service on that MMFGs, the MMFG sync will fail for that particular MMFG and will continue with the next MMFG.
  - — If there are discrepancies that would require removing the MMFG at the DACS, and there is no protection for the MMFG, the sync will fail.
  - — If there are discrepancies that would require deleting an MMFG at the DACS, and the MMFG is under protection, the sync will fail.
  - — The DACS does not allow some MXR type changes; for example, it does not allow a type change from HX100 to MX100.

NPC Synchronization

Description

An NPC synchronization first performs an NPC audit. Then it attempts to insure that the discrepancies noted in the audit/synchronization log as a result of that audit are removed.The results of each command are then noted in additional records in the audit/synchronization log as success or failure, with the reason for the failure. If no corresponding NPC provisioning record exists, one is created.

- If the DND is the master, *NPC SYNC* sends commands to the DACS to provision it in such a way as to change the values of the fields noted as inconsistent.
- If the DACS is the master, *NPC SYNC* changes the existing field in the DND database.

New NPC IDs

New NPC IDs created by NPC synchronization have the following format:

- For DACS systems provisioned with hierarchical numbering links are in the format: **NPCxxxxx**
- For DACS systems provisioned with extended numbering links are in the format: **NPCyyyy**

where:

xxxxx is the hierarchical number for the NPC

yyyy is the extended number for the NPC

If the identifier is already in use, a .z is suffixed to create a unique identifier, where z is an integer from 0 to 9.

NPC Synchronization (Continued)

Limitations

The limitations on the use of NPC synchronization are as follows:

- When the DND is the master:
  - If there are discrepancies of **NPC Type** that would require unequipping the NPC at the DACS, and there are circuits on these NPCs, the NPC sync will fail for that particular NPC and will continue with the next NPC.
  - When auditing NPCs (*ALL LOCAL NPCS* or *RANGE OF LOCAL NPCS*), unequipped NPCs at the DND are not processed. If the NPC is equipped at the DACS, the NPC will not be degrown (unequipped) at the DACS.
- When the DACS is the master:
  - If there are discrepancies of equipage state that would require unequipping the NPCs at the DND, and there are circuits on these NPCs at the DND, then the NPC sync will fail for that particular NPC and move on to the next NPC.

Channel Synchronization

Description

A channel synchronization insures that the end-points and circuit characteristics noted as different in a channel audit are reconciled, subject to limitations.

- If the DACS is the master, then the circuit provisioning records of the local database are either updated, or are deleted and new records are created.
- If the DND is the master, then circuit provisioning commands are sent to the DACS.

NOTE:
During Channel Synchronization if DACS is the master, there is an environment variable that controls which channels are to be deleted or deactivated, (SYNC_DEACTIVATE_CKTS). For additional information, refer to the "Setting Environment Variables" section in *Chapter 2, Getting Started*.

New Circuit IDs

New circuit IDs have the following format:

- For circuit classes *FDX, HDX, BBL, BRD,* and *DMB*:

  SYN fromnpc-fromchan tonpc-tochan BW/bw class

- For subrate circuits:

  SYN fromnpc-fromchan-fromcust tonpc-tochan-tocust rate
  SUB BW/bw class

- For established DS0 circuits:

  SYN fromnpc-fromchan tonpc sectype **EST**

- For new BCON BKB circuits:

  BYN fromnpc-fromchan tonpc-tochan BW/bw class

(Continued on next page)

Channel Synchronization (Continued)

New Circuit IDs, Continued

Where:

`fromnpc`	is the FROM NPC number in hierarchical or extended format, depending on how the DACS was provisioned.
`fromchan`	is the FROM channel number, or *DS1* or *E1*.
`from-cust`	is the FROM customer number.
`tonpc`	is the TO NPC number in hierarchical or extended format.
`tochan`	is the TO channel number, or *DS1* or *E1*.
`tocust`	is the To customer number.
`bw`	is the bandwidth, which is either `1` or the number of contiguous channels of a high-rate circuit.
`rate`	is the subrate transmission rate.
`class`	is the **Ckt Class**: *FDX, HDX, BBL, BRD* or *DMB*.
`sech-type`	is the type of SRM NPC.

If the identifier is already in use, a `.z` is suffixed to create a unique identifier, where `z` is an integer from *0* to *9*.

Channel Synchronization (Continued)

Limitations

The limitations on the use of channel synchronization are as follows:

- Channel synchronization does not automatically equip NPCs. If an NPC is missing from one database, the synchronization of channels within it is not performed. It is suggested, therefore, that you precede a channel synchronization with an NPC synchronization.
- Channels that are connected to a test port in either the DND or the DACS are not audited or synchronized.
- DMB cascades are not audited or synchronized.
- Channels that are established for subrate cross-connection are not audited or synchronized. Their existence is logged.
- The BKB of a BCON circuit must be in the range of the NPC synchronization request for that BKB to be synchronized. This means that if a leg is encountered in the range of the request, and the BKB is not in the range of the request, the LEG will not be individually synchronized. The report for the audit/synchronization results will, however, identify this and will identify the BKB. Note, however, that if the BKB is in the range of the sync request then ALL LEGS associated with the BKB will be synchronized.

Channel Synchronization (Continued)

DND as Master

When the DND is the master:

- There is no command to modify provisioning in the DACS. The DND always disconnects and connects when it changes frame provisioning.
- If NPCs are equipped in the DND, but their channels are not cross-connected, the channel synchronization disconnects all circuits in the same NPCs of the DACS.
- Discrepancies of **Ckt Class**, **Ckt Status**, end points, **Trunk Conditioning / TC**, **Signaling Conversion/SC**, **Insertion Word/IW**, and **Options** result in disconnection in the DACS and connection of new circuits with the matching attributes.
- The Termination State (*TLA* or *TLR* (DND GUI)/**Option** *G* (DND Forms) of a circuit is not changed in the DACS during synchronization, unless the circuit is being disconnected and reconnected because of another discrepancy.
- A number of limitations apply to virtual conference circuits when the DND is the master, as shown in Figure 17-4.
  - — If a BBL required by the synchronization of the circuit is already in use in the DACS, the synchronization does not change it in any way.
  - — If the BBL is already in use in the DACS, the synchronization does not connect its BRDs unless the facility BBL is the same as the local BBL in every field of interest.
  - — The synchronization does not connect a BRD unless its bandwidth is the same as that of the BBL.
  - — The synchronization does not disconnect a virtual conference type if the bandwidth does not match.

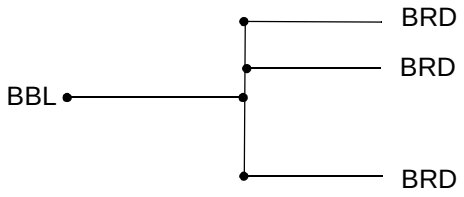


Figure 17-4. Virtual Multipoint Circuit

(Continued on next page)

Channel Synchronization (Continued)

DND as Master, (Continued)

NOTE:
The limitations on virtuals are designed to protect the DACS user who is not utilizing DND. The DND is not allowed to automatically interfere in existing DACS circuits by preempting control of a virtual node or of virtual conference circuits already in use by others.

DACS as Master

When the DACS is the master:

- Channel synchronization and circuit echoed response processing delete records that cannot be corrected.
- Differences of end points, **Circuit Class**, **Circuit Status**, **DMB Mode**, or **Bandwidth** result in deletion of the circuit record containing them and activation of a new circuit record with matching attributes.
- Differences of **Trunk Conditioning**, **Insertion Word**, **Signaling Conversion**, **No Transmit** (**NTR)** (DMB only), Termination State, or **Options** result in modification of the existing circuit record.
- The termination state can only be fully synchronized if both ends of the connection in the DACS are the same, either *TLA* or *TLR*. If they are not the same you can use the *TERMINATE* **Action** with the **Direction** field in Test Access to reset the termination state of one side.
- If the bandwidths do not match in corresponding virtual conference circuits, the entire circuit in the DND is deleted.

(Continued on next page)

Channel Synchronization (Continued)

DACS as Master, (Continued)

- The DACS provisions DND high-rate circuits as individual channels. As a result:
  - — If the DND record no longer exists, a separate DND record is created for each channel of a circuit that was originally high-rate in the DND.
  - — If the DND record is still present and the circuit corresponds in every way to the DACS circuit, no changes are made.
  - — If the DND record is still present, but some of the circuit characteristics have changed, they can be made to correspond to the DACS.
  - — If there is a discrepancy that cannot be corrected globally, over the entire circuit; for example, the **Trunk Conditioning** (DND GUI)**/TC** (DND Forms) in the DACS is not the same as for all the DND circuit's channels, then the DND record is deleted and new records are written.
- If a channel was originally in the high-rate circuit but for some reason is not now the same as in the DACS, synchronization will delete the DND high-rate record and will create individual records of single-channel **Bandwidth** (DND GUI)/**BW** (DND Forms) for all remaining connections in the high-rate that still match.

Upload

Description

MMFG, NPC, channel, and alarm synchronizations are combined in the *UPLOAD* **Action**. An *UPLOAD* loads the information located in the remote DACS database into the local, or DND, database for the DACS. It does so in five stages, as shown in Figure 17-5 through Figure 17-8.

UPLOAD does not first delete the existing information in the local database. The information is checked as in an audit. If matches are found in the values of the fields of interest, no action is taken, and the information remains. Otherwise, records are deleted, revised or created according to the rules for *MMFG SYNC*, *NPC SYNC, CHANNEL SYNC* and *ALARM SYNC.*

You can execute an *UPLOAD* repeatedly to bring about a successively closer correspondence of the databases, without loss of data you may want to keep, such as the previous circuit attributes.

Upload Stage 1

Figure 17-5 illustrates the first stage of the upload process.

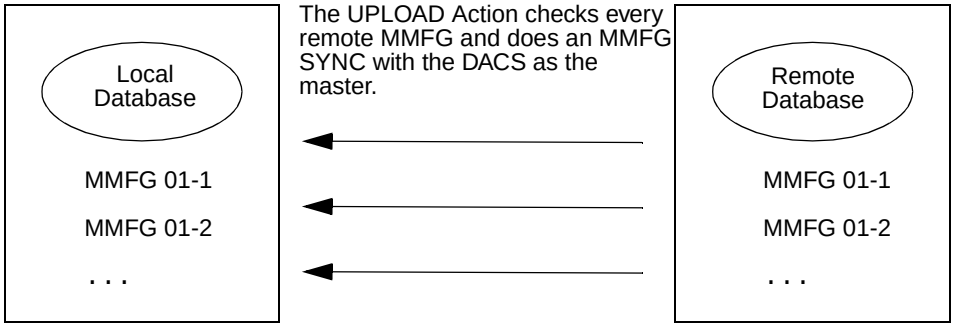


Figure 17-5. Stage 1 of the UPLOAD Action: *MMFG SYNC*

Upload (Continued)

Upload Stage 2

Figure 17-6 illustrates the second stage of the upload process.

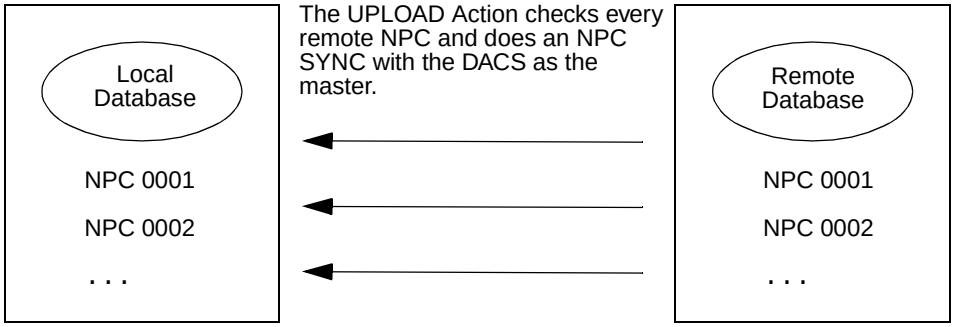


Figure 17-6. Stage 2 of the UPLOAD Action: *NPC SYNC*

Upload Stages 3 and 4

The result of the second stage, shown in Figure 17-7, is that the NPC provisioning in the local database conforms to the NPC provisioning in the remote database, subject to the limitations of an *NPC SYNC*.

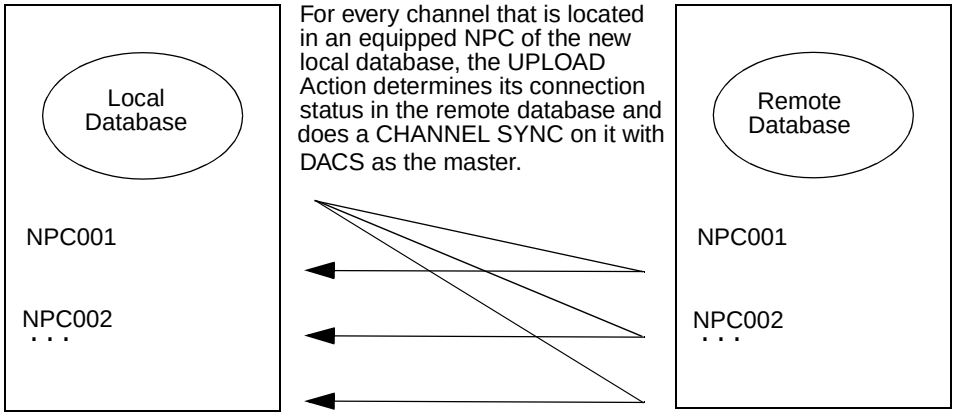


Figure 17-7. Stage 3 & 4 of the UPLOAD Action: *CHANNEL SYNC/SUBRATE SYNC*

Upload (Continued)

Exceptions to Stages 3 and 4

There may be some exceptions in the third and fourth stages according to the limitations on the use of *NPC SYNC*, *CHANNEL SYNC*, and *UPLOAD*.

For example, circuits for remote channels under test or used as test ports, or circuits that are not supported by the DND, are not recorded in the local database. Instead, an exception report is placed in the log.

Upload Stage 5

Figure 17-8 illustrates the fifth stage of the upload process, the Alarm Sync.

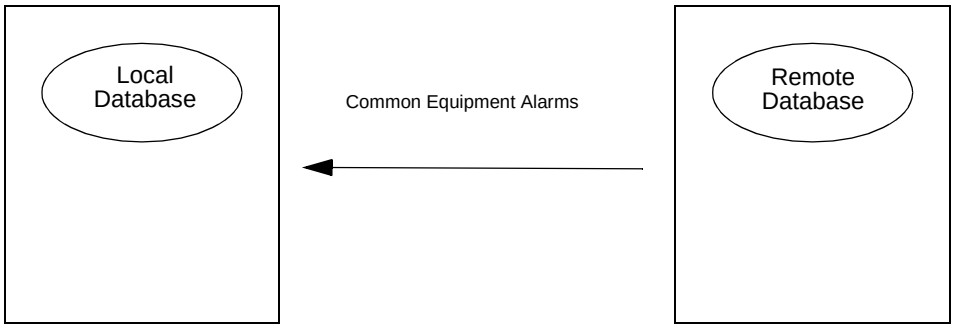


Figure 17-8. Stage 5 of the UPLOAD Action: *ALARM SYNC*

Other Features and Constraints

Recommendations

Database audit/synchronization may take a long time. Therefore, scheduling these activities for off-peak times is suggested. However, there are some constraints. A channel audit for a single channel runs in the foreground. Everything else, whether scheduled or not, runs in the background.

Additional Restrictions

Some additional features of audit/synchronization are:

- Certain functions are denied when others are in progress (such as executing the ALARM QUERY REPORT form), is not allowed during an audit/synchronization.
- Audit/synchronization cannot be performed when any user is in SNIDER passthrough mode, or doing a database restoral.
- Any user with the ADMIN user class can terminate an audit/synchronization from any terminal with the *ABORT* **Action.**
- Audit synchronization applies to these DACS types only: DACS II Releases 4 and higher; and DACS II ISX Releases 1.0 and higher. A table of NPC types supported for each frame is shown in Table 17-5. This table also lists DSP types supported for the X.50 and X.57 subrate provisioning.

Table 17-5. NPC Types Supported in Audit/Synchronization

	PB	PC	PA	DC	DE	TE	TH	DA	TA	MB	SR	MJ	Virtual	SD	ST
DACS II before Release 6.0	X	X			X	X									
DACS II Release 6.0 and after	X	X	X		X	X	X***	X	X						X****
DACS II ISX Releases 1.0 and higher			X*					X						X**	

***** DACS II ISX Releases 1, 1.1 do not support the clear DS1/E1 versions of Types PA and DA.
** DACS II ISX Release 2.0 and higher.
*** DACS II Release 8.0 and higher.
**** DACS II Release 9.0 and higher.

Other Features and Constraints (Continued)

Scheduling

Scheduling relieves the administrator of some repetitive work; however, the administrator should be aware that some circumstances can inadvertently change scheduled operations. Unintended change of a scheduled audit or synchronization will occur if the time schedule for the audit/synchronization is added, changed, or deleted.

When the database is restored, the schedule that existed before backup also is restored, and the new schedule that was entered after backup is lost. Therefore, it is recommended that whenever you restore the DND database from floppy disk, you reenter any scheduled operations.

Audit/Sync Log

A log is kept during auditing of all mismatches and during synchronization of all connects and disconnects in a frame, or of all deactivations, deletions and activations in the DND. The log also records successes and failures of synchronization. The log is available through the AUDIT/SYNCHRONIZATION report.

The log contains records of activity related to NPCs. Data from each successive audit/synchronization overwrites the previous records. Data not overwritten remains. Thus, an *ALL FACILITY NPCS* **Mode** NPC Sync would create records for every NPC, but a succeeding *SINGLE NPC* **Mode** NPC Sync would overwrite the records for one NPC only.

The log may be large if this is the first audit or synchronization and the differences are great. A report of the audit/sync results which does not qualify the range of NPCs in the report may be quite large. Qualify the report by limiting the range of NPCs in the report.

DND GUI: Audit/Synchronization Form

Sample Audit/ Sync Form

Figure 17-9 shows a sample DATABASE AUDIT/SYNCHRONIZATION form for an *NPC SYNC*. The fields displayed on the form are dependent on the **Action** and **Mode** selected.

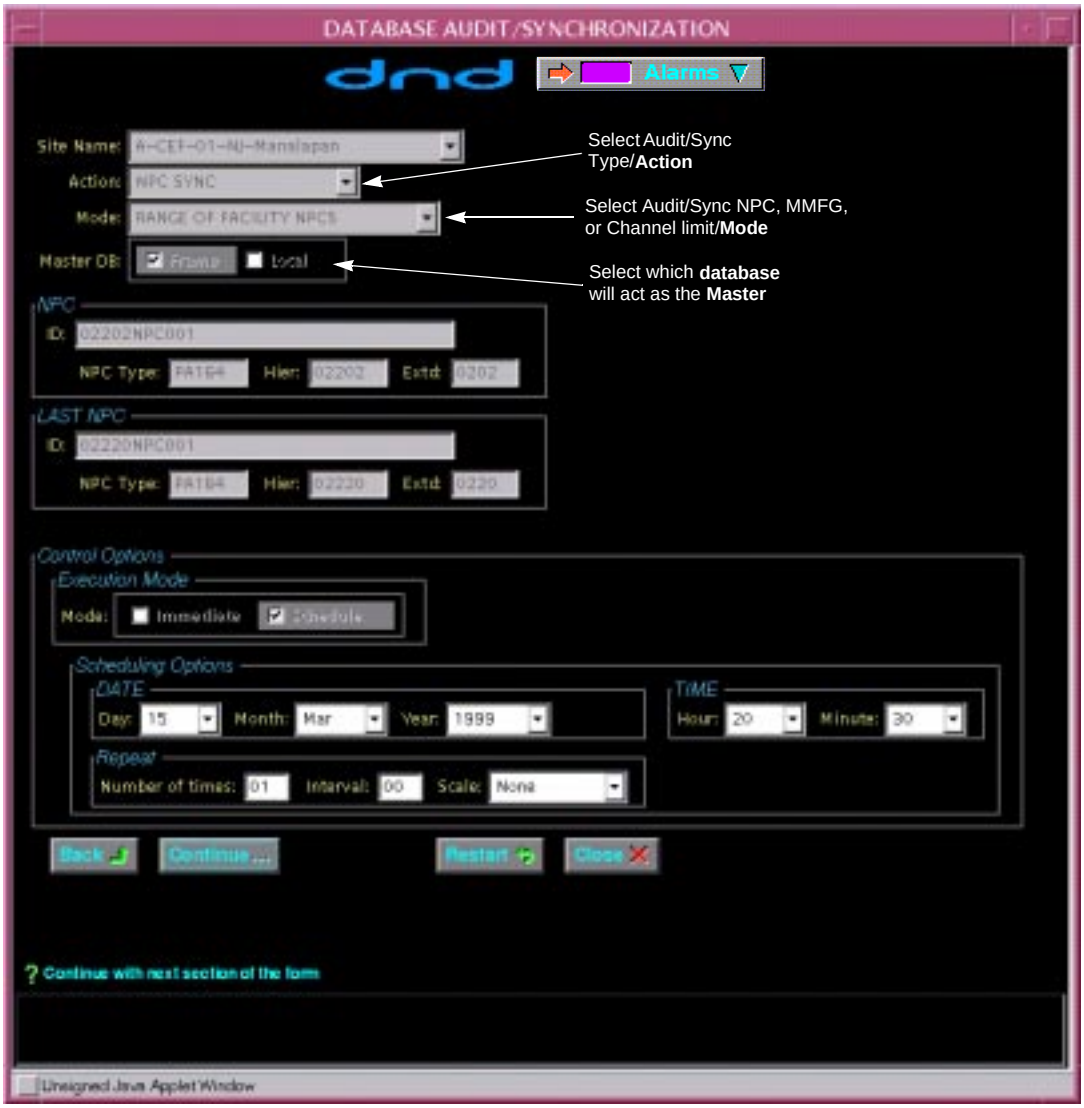


Figure 17-9. DND GUI: Audit/Synchronization Form, *NPC SYNC* Action

DND GUI: Audit/Synchronization Form (Continued)

Field Descriptions

The field descriptions for the DATABASE AUDIT/SYNCHRONIZATION form are described in Table 17-6.

Table 17-6. DND GUI: Field Descriptions for the AUDIT/ SYNCHRONIZATION Form

Field	Description
Site Name	(Combo box) Mandatory. Select the name of the DACS where the requested **Action** will take place. Clicking this field will display a list of DACS names. By default, the list appears alphabetically. To change the sorting order, modify the setting for the SORT_NAME_BY variable using the DND Forms Interface.
Action	(Combo box) Mandatory. Select the type of audit/synchronization to be executed. For full details, be sure to refer to the introduction to each **Action**, given previously in this chapter. The choices are: ■ *ALARM SYNC* - Performs a synchronization of **Alarm State** only, on the same NPCs as would be specified by *ALL LOCAL NPCS* **Mode**. This **Action** is a manual version of automatic alarm synchronization described in the **NPC Alarm Sync** field under DACS administration in the SYSTEM ADMINISTRATION chapter. ■ *CHANNEL AUDIT/SYNC* - Compares local and facility cross-connection databases, logs differences in parameters that are common to the two, and synchronized by eliminating those differences according to restrictions. The range of channels to be synchronized is specified by **Mode** and channel selection fields. ■ *NPC AUDIT/SYNC* - Compares local and facility NPC provisioning databases, logs differences in parameters that are common to the two, and synchronizes by eliminating those differences according to restrictions. The range of NPCs to be compared is specified by **Mode** or by **Mode** and NPC selection fields.

Table 17-6. DND GUI: Field Descriptions for the AUDIT/ SYNCHRONIZATION Form (Continued)

Field	Description
Action, *Continued*	■ *MMFG AUDIT/SYNC* - Compares local and facility MMFG provisioning databases, logs differences in parameters that are common to the two, and synchronizes by eliminating those differences according to restrictions. The range of MMFGzs to be compared is specified by **Mode** or by **Mode** and MMFG selection fields. ■ *SUBRATE AUDIT/SYNC* - (Available only if you have the X.50/X.57 Subrate Application running on a DACS.) Compares local and facility cross-connection databases, logs differences in parameters that are common to the two, and synchronized by eliminating those differences according to restrictions. The range of channels to be synchronized is specified by **Mode** and channel selection fields. ■ *UPLOAD* - Initiates an *NPC SYNC* in *ALL FACILITY NPCS* **Mode** with DACS as **Master DB**, followed by a *CHANNEL SYNC* **Action** in *ALL LOCAL NPCS* **Mode**, again with **Master DB**. You can use *UPLOAD* to load the DND database initially with data taken from the DACS database. The *UPLOAD* Action only logs failures. ■ *ABORT* - Cancels the audit/synchronization currently executing in the background or on queue.

Table 17-6. DND GUI: Field Descriptions for the AUDIT/ SYNCHRONIZATION Form (Continued)

Field	Description
Mode	(Combo box) Mandatory. Select the range of NPCs, MMFGs, or channels to which the **Action** is to apply. A selection referring to NPCs, such as *ALL FACILITY NPCS*, also implies all the associated channels. The available modes will change depending on what ACTION was selected. The choices are: ■ *ALL FACILITY NPCS* - Selects all NPCs that can be equipped in the DACS. ■ *RANGE OF LOCAL NPCS* - Indicates that the range of local NPCs to be considered is bounded by the **NPC ID** field or its corresponding **Hier** or **Ext** fields and the **Last NPC ID** field. ■ *ALL LOCAL NPCS* - Selects all NPCs that are currently equipped in the local database. ■ *RANGE OF FACILITY NPCS* - Indicates that the range of facility NPCs to be considered is bounded by the **NPC ID** field or its corresponding **Hier** or **Ext** fields and the **Last NPC ID** fields ■ *SINGLE NPC* - Selects the channels of the NPC specified by **NPC ID** or the associated hierarchical or extended number ■ *ALL FACILITY MMFGS* - Selects all MMFGs that can be equipped in the DACS. ■ *RANGE OF LOCAL MMFGS* - Indicates that the range of local MMFGs to be considered is bounded by the **MMFG ID** field or the associated number and the **Last MMFG ID** field. ■ *ALL LOCAL MMFGS* - Selects all MMFGs that are currently equipped in the local database. ■ *RANGE OF FACILITY MMFGS* - Indicates that the range of facility MMFGs to be considered is bounded by the **MMFG ID** field or the associated number and the **Last MMFG ID** fields ■ *SINGLE MMFG* - Selects the channels of the MMFG specified by **MMFG ID** or the associated number ■ *SINGLE CHANNEL* - Selects the channel specified by the **NPC ID** or its **Hier** or **Ext** equivalents and the **Channel**

Table 17-6. DND GUI: Field Descriptions for the AUDIT/ SYNCHRONIZATION Form (Continued)

Field	Description
Master DB	(Radio buttons) Appears for *SYNC* **Actions** only. Select the master database for a sync. The choices are: ■ **Facility** - Use the facility database as the master. ■ **Local** - Use the local database as the master.
NPC ID/ LAST NPC ID	Mandatory. 1 through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, ", %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored. An identifier, or name, associated with the specified **Number**. The *CREATE* **Action** associates the name and number. Only one **NPC ID** can be associated with a **Number** within a DACS, and also, an **NPC ID** can be associated with only one NPC. An **NPC ID** uniquely identifies an NPC. Once the **NPC ID** is entered, the **NPC Type, Hier,** and **Ext** fields appear as read-only and pre-populated.
MMFG ID/ LAST MMFG ID	Mandatory. 1 through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, ", %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored. An identifier, or name, associated with the specified **Number**. The *CREATE* **Action** associates the name and number. Only one **MMFG ID** can be associated with a **Number** within a DACS, and also, an **MMFG ID** can be associated with only one MMFG. An **MMFG ID** uniquely identifies an MMFG. Once the **MMFG ID** is entered, the **MMFG Number** field appears as read-only and pre-populated.
Channel	Appears for *AUDIT* and *SYNC* **Action**s when the **Mode** is *SINGLE CHANNEL*.The channel number of the single channel to be audited or synchronized.

Table 17-6. DND GUI: Field Descriptions for the AUDIT/ SYNCHRONIZATION Form (Continued)

Field	Description
Execution Mode	(Radio buttons) Select whether the **Action** will be executed immediately (**Immediate** Mode) or at a later date and/or time (**Schedule** Mode).
Scheduling Options Mode	(Radio buttons/Combo boxes and Text fields also if *Schedule* is selected) Select when the current **Action** should take place. The choices are: ■ *Immediate* - Executes the **Action** as soon as Execute is clicked ■ *Schedule* - Executes the **Action** at a time and frequency selected by the user. After selecting *Schedule*, click Continue... to display the following combo box fields: — **DATE** fields: **Day:** (01 thru 31) **Month:** (Jan thru Dec) **Year:** (1990 thru 2037) — **TIME** fields: **Hour:** (00 thru 23) **Minute:** (00 thru 59) — **REPEAT** fields: **Number of times** (enter any number) **Interval** (enter any number) **Scale:** (**None/Minutes/Hours/Days**)

DND Forms: DATABASE AUDIT/ SYNCHRONIZATION Form

Sample Audit/ Synchronization Form

Select DATABASE AUDIT/SYNCHRONIZATION from the DATABASE ADMINISTRATION menu. The DATABASE AUDIT/SYNCHRONIZATION form appears. Figure 17-10 shows a sample DATABASE AUDIT/SYNCHRONIZATION form for an NPC AUDIT. The fields displayed on the form are dependent on the **Action** selected.

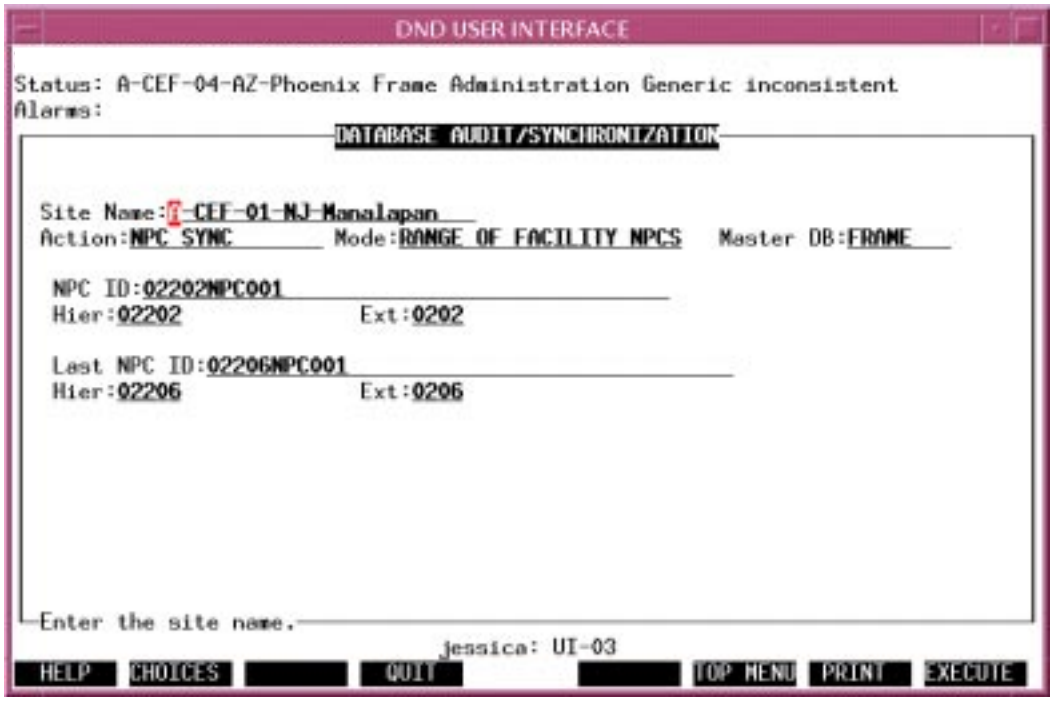


Figure 17-10. DND Forms: Sample DATABASE AUDIT/SYNCHRONIZATION Form

DND Forms: DATABASE AUDIT/ SYNCHRONIZATION Form (Continued)

Field Descriptions

The field descriptions for the DATABASE AUDIT/SYNCHRONIZATION form are described in Table 17-7:

Table 17-7. DND Forms: Field Descriptions for the DATABASE AUDIT/ SYNCHRONIZATION Form

Field	Description
Site Name	Mandatory. The name of the DACS where the requested **Action** will take place. Enter or press CHOICES to select a **Site Name**. **Site Names** are created from the FRAME ADMINISTRATION form. See Chapter 5, NE Provisioningfor more details.
Action	Mandatory. Specifies the type of audit/synchronization to be executed. For full details, be sure to refer to the introduction to each **Action**, given previously in this chapter. The choices are: ■ *ALARM SYNC* - Performs a synchronization of **Alarm State** only, on the same NPCs as would be specified by *ALL LOCAL NPCS* **Mode**. This **Action** is a manual version of automatic alarm synchronization described in the **Alarm Sync** field under frame administration in Chapter 5, NE Provisioning. ■ *CHANNEL AUDIT/SYNC* - Compares local and facility cross-connection databases, logs differences in parameters that are common to the two, and synchronized by eliminating those differences according to restrictions. The range of channels to be synchronized is specified by **Mode** and channel selection fields. ■ *NPC AUDIT/SYNC* - Compares local and facility NPC provisioning databases, logs differences in parameters that are common to the two, and synchronizes by eliminating those differences according to restrictions. The range of NPCs to be compared is specified by **Mode** or by **Mode** and NPC selection fields.

Table 17-7. DND Forms: Field Descriptions for the DATABASE AUDIT/ SYNCHRONIZATION Form (Continued)

Field	Description
Action, *Continued*	■ *SUBRATE AUDIT/SYNC* - (Available only if you have the X.50/X.57 Subrate Application running on a DACS.) Compares local and facility cross-connection databases, logs differences in parameters that are common to the two, and synchronized by eliminating those differences according to restrictions. The range of channels to be synchronized is specified by **Mode** and channel selection fields. ■ *UPLOAD* - Initiates an *NPC SYNC* in *ALL FACILITY NPCS* **Mode** with DACS as **Master DB**, followed by a *CHANNEL SYNC* **Action** in *ALL LOCAL NPCS* **Mode**, again with **Master DB**. You can use *UPLOAD* to load the DND database initially with data taken from the DACS database. The *UPLOAD* Action only logs failures. ■ *ABORT* - Cancels the audit/synchronization currently executing in the background or on queue.
Mode	Mandatory. Specifies the range of NPCs or channels to which the **Action** is to apply. A selection that is explicit about the NPCs, such as *ALL FACILITY NPCS,* also implies all the associated channels. The choices are: ■ *ALL FACILITY NPCS* - Selects all NPCs that can be equipped in the DACS. ■ *ALL LOCAL NPCS* - Selects all NPCs that are currently equipped in the local database. ■ *RANGE OF LOCAL NPCS* - Indicates that the range of local NPCs to be considered is bounded by the **NPC ID** field or its corresponding **Hier** or **Ext** fields and the **Last NPC ID** field.

Table 17-7. DND Forms: Field Descriptions for the DATABASE AUDIT/ SYNCHRONIZATION Form (Continued)

Field	Description
Mode, *Continued*	■ *RANGE OF FACILITY NPCS* - Indicates that the range of facility NPCs to be considered is bounded by the **NPC ID** field or its corresponding **Hier** or **Ext** fields and the **Last NPC ID** fields. ■ *SINGLE NPC* - Selects the channels of the NPC specified by **NPC ID** or the associated hierarchical or extended number. ■ *SINGLE CHANNEL* - Selects the channel specified by the **NPC ID** or its **Hier** or **Ext** equivalents and the **Channel**.
Master DB	Appears for *SYNC* **Action** values only. Selects the master database for a synchronization. The values are: ■ *DACS* - Use the facility database as the master. ■ *LOCAL* - Use the local database as the master.
NPC ID/ LAST NPC ID	Mandatory. 1 through 41 characters from the printable ASCII character set, excluding *, \, ?, [,], ^, ", %, |. Blanks are allowed in the name, but leading and trailing blanks are ignored. An identifier, or name, associated with the specified **Number**. The *CREATE* **Action** associates the name and number. Only one **NPC ID** can be associated with a **Number** within a DACS, and also, an **NPC ID** can be associated with only one NPC. An **NPC ID** uniquely identifies an NPC.
Channel	Appears for *AUDIT* and *SYNC* **Action**s when the **Mode** is *SINGLE CHANNEL*.The channel number of the single channel to be audited or synchronized.
Hier	Appears with **NPC ID**. The NPC number in hierarchical format. Enter either this field or **NPC ID/LAST NPC ID** or **Ext**.
Ext	Appears with **NPC ID/LAST NPC ID**. The NPC number in extended format.

DACS II AX Audit/Synchronization

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Background

Introduction

DACS II AX Audit/Synchronization consists of query and provisioning commands. This feature allows system administrators only to:

- Compare (audit) the DND and DACS II AX (facility) databases to note the differences
- Compare and adjust (synchronize) the DND and DACS II AX databases to eliminate those differences
- Upload all Circuit, Device, and Port data from the DACS II AX and store it in the DND database.

All audit/sync **Actions** run in the background. The message, "*This command will be executed in the background*" indicates that the **Action** has been received by the DND.

Only one audit or sync **Action** per DACS II AX can be done at a time. With very large databases, an audit/sync **Action** can take some time.

Purpose

The DND provisions port parameters and circuits at the DACS II AX and responds to actions taken directly at the DACS II AX in order to keep information between the DND and the DACS II AX the same. The information between the DND and the DACS II AX, however may become different (i.e., go out of sync) for a number of reasons, such as:

- Communications between the DACS II AX and the DND may have been disrupted, and the DND was not made aware of changes made at the DACS II AX
- You are connecting to an already provisioned DACS II AX and wish to capture information from the DACS II AX into the DND in order to provision the DACS II AX from the DND.
- You are upgrading from an older release of DND and/or DACS II AX and wish to use the DND provisioning features.
- An error occurred (e.g., missed messages, workstation outage, overload conditions, etc.) such that the databases are out of sync.

The database audit/synchronization feature is provided to detect differences between the DND management system and the network element and to reconcile them. Audits and/or synchronizations may be requested manually, or may be scheduled to occur periodically. Either the DND or the DACS II AX may be designated the "master" for reconciliation.

Background (Continued)

Objectives

This chapter provides background information to help you perform:

1. Circuit, Device, and Port Audit Actions
2. Circuit, Device, and Port Synchronization Actions
3. An upload of the circuit, device, and port provisioning data into the DND database
4. An upload of circuit data into a temporary local database
5. An abort on an in-progress audit/synchronization.

In addition to information to support the above actions, this chapter also includes Retrofit Information which explains how the DND supports old and new (Release 9.0.3 and above) DACS II AX equipment. There is also an Audit/Sync-Related Information section that describes:

- Audit/Sync Process Termination
- Autonomous Message Processing
- Audit/Sync Scheduling
- Audit/Sync Log
- Denied Audit/Sync Requests

This chapter also describes how devices are managed on the DACS II AX versus how they are managed through Echoed Response Processing (ERP) on the DND. Automatic alarm synchronization is also covered.

Background (Continued)

Related tasks

For related tasks, see the following General Tasks in Volume II:

DND GUI:

- **Performing a DACS II AX Circuit Audit GT 19.1G**
- **Performing a DACS II AX Circuit Synchronization GT 19.2G**
- **Performing a DACS II AX Device Audit GT 19.3G**
- **Performing a DACS II AX Device Synchronization GT 19.4G**
- **Performing a T1E1 Port Audit GT 19.5G**
- **Performing a T1E1 Port Synchronization GT 19.6G**
- **Performing a T3 Port Audit GT 19.7G**
- **Performing a T3 Port Synchronization GT 19.8G**
- **Performing a DACS II AX Upload GT 19.9G**
- **Performing a DACS II AX Abort GT 19.10G**
- **Uploading DACS II AX Circuit Data GT 19.11G**

Related information

For related information, see:

- *DACS II Network Director Installation Manual*

DACS II AX Retrofit Information

Description

The DND now supports both *unmanaged* and *managed* AX equipment, the latter of which is supported by DACS II AX software Release 9.0.3 and above. As a result, the DND's link restoral process determines whether or not an AX's generic value has changed, indicating that its status has changed from 'unmanaged' to 'managed'.

WARNING:

If the status has changed, that is, the DND detects a software release upgrade to DACS II AX Release 9.03 or greater, the DND deletes termination names and termination maps from its database. The DND Administrator may then use the UPLOAD command to retrieve the device, port, and circuit information from the AX.

The intertie information contained in the DND network map is not affected by the change.

DACS II AX Circuit Audit

Description

A DACS II AX Circuit Audit allows DND administrators the ability to compare circuit values between the DND circuits database and the DACS II AX cross-connections database of all maps, or of a selected map. This only applies to circuits defined on T1/E1 ports of modules managed by the DND. Discrepancies are logged and can be accessed through the DACS II AX AUDIT/ SYNCHRONIZATION report.

Qualifying the Circuit Audit

To qualify the audit, you can choose to audit:

- All circuits
- All circuits on a map
- A single circuit.

NOTE:
The DND only supports DACS II AX full duplex circuits. Other circuit classes are not supported.

The allowed values for each field can be found in *Chapter 10, Chapter 10, Circuit Provisioning*. If no difference in the value of a field between databases is found, no further action is taken. If a difference is found in one field, it is recorded in the audit/synchronization log. This log can be viewed using the DACS II AX Audit Synchronization Results Report (see Figure 19-1).

DACS II AX Circuit Audit, (Continued)

Circuit Audit Report Sample

In this example, the circuit exists in the DND and at the DACS II AX, however, the channels which are actually connected are different.

```
03 Nov 2000  17:28:27
-----A-AX11-02-NY-Buffalo----AX AUDIT/SYNCHRONIZATION-------RESULTS---------

Action: CIRCUIT AUDIT  Date: 11/03/00  Time: 17:28:04

Site Circuit Name : domestic-hds3
DND Circuit ID: ERP-01 domestic-hds3
Connection Map: 2

          -Local-                              -Frame-

Mismatch: From Channels :                      From Channels :

Mismatch: 01234567890123456789012345678901    01234567890123456789012345678901

Mismatch: -XX-----------------------------    ---XX--------------------------

Mismatch: To Channels :                        To Channels :

Mismatch: 01234567890123456789012345678901    01234567890123456789012345678901

Mismatch: -XX-----------------------------    -----XX------------------------
```

Figure 19-1. Circuit Audit Report Sample

DACS II AX Port Audit

Description

A DACS II AX Port Audit allows administrators the ability to compare T1/E1 or T3 port values between the DACS II AX and DND databases. A port audit is only run on devices/ports which are supported by the DND, i.e., Octal E1T1 Cards and T3 Cards. HDS3 ports are also audited, however, the DND does not fully support the HDS3 card.

Discrepancies are logged and can be accessed through the AUDIT/ SYNCHRONIZATION PORT report.

Qualifying the Port Audit

To qualify the audit, you can choose to audit:

- All ports
- All ports on a device
- A single port.

NOTE:
Facility ports reside in the DACS II AX database while *local* ports reside in the DND database.

T1/E1 Port Audit Parameters

The following lists the T1/E1 Port parameters which are audited. Each is described in *Chapter 9, Chapter 8, DACS II AX Port Provisioning*.

- **AX Port ID**
- **Service State**
- **Port Type**
- **E1/T1 Provisioning Info**
- **Framed/Unframed Clear**
- **Network Loop**
- **Yellow Alarm**
- **Unused DS0**
- **Recover Time**

DACS II AX Port Audit

T3 Port Audit Parameters

The following lists the T3 Port parameters which are audited. Each is described in *Chapter 9, Chapter 8, DACS II AX Port Provisioning*.

- **AX Port ID**
- **M13 opcode**
- **RcvLoopTiming**
- **Short_Cable**
- **M13 RemLoop**
- **RcvAIS**
- **XmitAIS**

If a difference is found between the same field in the same port record of each database, it is recorded in the audit/synchronization log. This log can be viewed using the DACS II AX Audit Synchronization Results Report.

DACS II AX Device Audit

Description

A DACS II AX Device Audit allows administrators the ability to compare device values between the DACS II AX and DND databases. Audit discrepancies are logged and can be accessed through the AUDIT/SYNCHRONIZATION PORT report.

Qualifying the Device Audit

To qualify the audit, you can choose to audit:

- All devices on a specific DACS II AX
- A specific device.

Device Audit Parameters

The following lists the Device parameters which are audited.

- **Configured Type**
- **Redundancy and Protection Switch Information**
- **State**

If a difference is found between the same field in the same device record of each database, it is recorded in the audit/synchronization log. The device audit will also perform a port audit on the corresponding ports on the device.

Circuit Synchronization

Description

The circuit synchronization action can be used by DND administrators to reconcile circuit provisioning differences between the DND and the AX. The Circuit Provisioning action performs an audit of the DACS II AX and the DND database and corrects differences found by that audit. Either the DACS II AX or the DND can be identified as the 'master' database, and actions are taken on the 'slave' database to correct any audit discrepancies.

Circuit IDs

When the DACS II AX is designated the 'master' database (Frame Master), then it is possible that circuits exist in the DACS II AX that do not exist in the DND, A Frame Master Circuit Sync will create those circuits in the DND database, When a new circuit is created in the DND database by a Circuit Synchronization, the Circuit ID name is derived from the DACS II AX circuit name, e.g.:

```
SYN-nn <circuit_name>
```

where nn is a number used to identify the circuit. For example, if a DACS II AX circuit is named "`circuit1` ", then the DND circuit name will be "`SYN-01 circuit1` ".

DACS II AX as Master

The DND will query the circuit(s) on the DACS II AX and compare those with information in the DND circuit database (i.e., perform a Circuit Audit). If a mismatch is detected, then the mismatch is recorded in the DACS II AX Audit/ Synchronization log, and the DND will perform "local only" circuit provisioning actions to correct the circuit.

The DACS II AX circuit name is used as the identifier for a circuit. The corresponding circuit with the "Site Circuit Name" as described by the DACS II AX CIRCUIT PROVISIONING form is matched by the DND. If that circuit does not exist in the DND, then it is created, If that circuit name does exist in the DND, then it is compared.

(Continued on next page)

Circuit Synchronization (Continued)

DACS II AX as Master (Continued)

The DND will correct:

- mismatches in from/to ports
- mismatches in from/to channels (bandwidth)
- mismatches in any other provisioning attribute as described by the DACS II AX CIRCUIT PROVISIONING form.

If the DND attempts to create or change a circuit and another DND circuit conflicts with this correction, then the conflicting circuit may or may not be deleted, the "Delete Slave D/B Conflicts?" option determines whether or not the action will remove conflicting circuits.

If this attribute is set to Yes, then conflicting circuits will be deleted. If this attribute is set to No, then the synchronization will fail and the reason will be noted in the synchronization log.

Note that DACS II AX Circuit Synchronization will also delete extraneous circuits which exist on the slave, but do not exist on the master database, if the Delete Slave D/B Conflicts? option is set to Yes. For example, if a circuit exists on the DND, but does not exist on the DACS II AX and a Frame Master Synchronization with the Delete Slave D/B Conflicts? option is enabled, then that circuit will be deleted on the DND.

DND as Master

In a manner similar to the DACS II AX as master, the circuit or circuits in the DND are searched, and the identifying "Site Circuit Name" is queried from the DACS II AX and compared (i.e., an audit is performed). If a difference is detected, then provisioning actions are taken at the DACS II AX to create or change that circuit to match what is in the DND database. The DND will correct:

- mismatches in from/to ports
- mismatches in from/to channels (bandwidth)
- mismatches in any other provisioning attribute as described by the DACS II AX CIRCUIT PROVISIONING form.

As with the DACS II AX master, there may be circuits which already exist on the DACS II AX which conflict with the DND database and must be deleted before a correction can take place. The "Delete Slave D/B Conflicts?" option is used in the same way.

Circuit Synchronization (Continued)

Circuit Sync Report Sample

```
03 Nov 2000  16:41:02

-----nwk-ax11-----------AX AUDIT/SYNCHRONIZATION----------RESULTS---------------
Action: CIRCUIT SYNC   Date: 31Oct00  Time: 14:02:33  Master_DB: Frame

Site Circuit Name : Denver
DND Circuit ID: Unequipped
Connection Map: 2

          -Local-                              -Frame-

Mismatch: Unconnected                          P3-1/001 to P3-1/002 BW=1

Activate    SYN-01 abc
  The Local Activate command completed successfully

********************************************************************************
```

Figure 19-2. Circuit Sync Report Sample

Port Synchronization

Description

The Port Synchronization action can be used by DND administrators to reconcile port provisioning differences between the DND and the AX. The DND maintains a database for the T1/E1 ports on the Octal E1T1 card, the T3 card, and the HDS3U card. The DND also provides management of the T3 port itself on the T3 card.

The Port Synchronization action performs an audit of the DACS II AX and DND database and corrects differences found by that audit. Either the DACS II AX or the DND may be identified as the 'master' database. Actions are taken on the 'slave database to correct any audit discrepancies.

DACS II AX as Master

The DND will query the port(s) on the DACS II AX and compare those with information in the DND database (i.e., perform a Port Audit). If a mismatch is detected, then the mismatch is recorded in the DACS II AX Audit/Synchronization log, and the DND will perform "local only" port provisioning actions to correct the port.

If the DND attempts to change a port and the port type conflicts, (e.g., the DACS II AX contains a T1 D4 port, but the DND contains a T1 ESF port) the DND may or may not override the port information. The "Delete Slave D/B Conflicts?" option determines whether or not this type of information should be corrected. If this attribute is set to Yes, then the conflicting ports will be changed, otherwise the failure will be noted in the Audit/Synchronization log.

Port IDs

When the DACS II AX is designated the Master database, (Frame Master), then it is possible that ports exist in the DACS II AX and do not exist in the DND. A Device Sync or Frame Master Port Sync will create those ports in the DND Database. When a new port is created in the DND Database, Port ID name is derived from the slot identifier and the port number.

Port Synchronization (Continued)

DND as Master

In a manner similar to the DACS II AX as master, the database in the DND is searched, and for each port in the DND database, the DND will query the provisioning information on the DACS II AX and compare the information (i.e., an audit is performed). If a difference is detected, then provisioning actions are taken at the DACS II AX to create or change that port to match what is in the DND database. The DND will correct:

- line type information
- all provisioning information that is described by DACS II AX Port Provisioning

As with the DACS II AX master, there may be line type information conflicts. This information will only be corrected if the "Delete Slave D/B Conflicts?" option is set to Yes.

Port Sync Log

Each action performed as a result of the synchronization is logged (including synchronization success, discrepancies, and failure levels). Logged information can be accessed through the AUDIT/SYNCHRONIZATION PORT report.

Sync Port Naming Scheme

Synchronized T1/E1 or T3 ports have a combined port name/port number identifier in the format:

`<port_name>Portnnn` (e.g., `P1-1PORT000`).

where:

`nnn` is a unique identifier, e.g., 001, 002. This scheme produces a port containing a unique name, e.g., `P1-1PORT000`.

`<port_name>` is formatted as `Ps-p` where:

```
s=slot number
p=port number
```

Device Synchronization

Description

The device synchronization process allows DND administrators only the ability to synchronize device information between the DACS II AX and DND databases. When a sync is requested, the DACS II AX database is always designated as the master. Upon completion, the DACS II AX information is loaded into the DND database.

The DND will audit/sync all of the associated ports for:

- Octal E1T1
- T3 card
- HDS3U card (partial support for Frame Master only)

This process causes a synchronization of:

- device equippage and type information
- protection switch information, including protection state and redundancy group data
- status information (for equipment display requests)
- information on all ports belonging to managed devices, if the information is available on the AX.

The DND will manage devices through:

- Echoed Response Processing
- Synchronization (manual and automatic)
- Local database via equipment view, provisioning (In this case, all DND provisioning is based on provisioning information at the DND).

The DND stores information on managed devices with or without ports, including devices provisioned but not plugged into the AX. If a sync is performed on a device for which DND has no prior information, the sync causes device and ports to be equipped in the DND.

Device synchronizations may be requested either manually, through the DACS II AX Database Audit/Synchronization form or automatically on link restoration as provisioned from NE Provisioning. The Automatic Device Sync is performed with 'Delete Slave D/B Conflicts?' set to No.

(Continued on next page)

Device Synchronization (Continued)

Description (Continued)

If the 'Delete Slave D/B Conflicts?' option is set to No, then the DND will not overwrite the device/port information in the DND database if there is a mismatch. The differences will be logged to the Audit/Sync log but no corrective action will be taken. If this option is set to Yes, then the information will be corrected, the ports will be deleted, and the new device and port information will be inserted.

Device synchronization is also performed automatically on a DACS II AX by DND when link communications are re-restored to a DACS II AX, if that option was enabled from the NE Provisioning form. The automatic device synchronization runs with the 'Delete Slave D/B Conflicts?' option set to No.

A device synchronization will also attempt to synchronize the associated ports, if that card is managed by the DND (e.g., Octal E1T1). In some cases, however, a device sync will fail to capture the port information if the card is not plugged into the DACS II AX. The port information will be obtained later, when the card is plugged in. The DND will automatically detect the card insertion and equip the ports.

WARNING:
Insure that the correct card is plugged into the DACS II AX prior to performing a device sync.

Once the ports are created by the device synchronization, the ports will exist in the DND database until the device is deleted at the AX, or the device type is re-provisioned at the AX. This will happen either autonomously as the result of an ERP, if detected by the DND, or another device synchronization with the 'Device Slave DB Conflicts' set to Yes.

A device audit/synchronization will also perform an audit/synchronization of the associated ports, if the DND manages those card types (e.g., Octal E1T1). See the *Port Synchronization* section of this chapter for details.

Discrepancies and actions (i.e., grow, update, or delete) performed on the devices to synchronize the databases are logged (including synchronization success and failures). This log can be viewed using the DACS II AX Audit Synchronization Results Report (see Figure 19-3).

Device Synchronization (Continued)

Device Sync Report Sample

The following is an example of a device sync, where the DND detects the device at the DACS II AX and identifies the device type and all of the associated ports on that device.

```
03 Nov 2000  16:41:02

-----nwk-ax11-----------AX AUDIT/SYNCHRONIZATION----------RESULTS---------------
Action: DEVICE SYNC   Date: 31Oct00  Time: 14:02:33  Master_DB: Frame

DEVICE : P3
          -Local-                              -Frame-

Mismatch: Unequipped                          OctalE1T1

Create    P3-1PORT000
  The Local Create command completed successfully
Create    P3-2PORT000
  The Local Create command completed successfully
Create    P3-3PORT000
  The Local Create command completed successfully
Create    P3-4PORT000
  The Local Create command completed successfully
Create    P3-5PORT000
  The Local Create command completed successfully
Create    P3-6PORT000
  The Local Create command completed successfully
Create    P3-7PORT000
  The Local Create command completed successfully
Create    P3-8PORT000
  The Local Create command completed successfully

*******************************************************************************
```

Figure 19-3. Device Sync Report Sample

Device Synchronization (Continued)

Sync Device Naming Scheme

The DND identifies slots via the 'Slot Number' field on a number of DND forms. The 'Slot Number' naming convention is `NSS: <card_name>`

where `N` is:

- `C` slots for SMC slots
- `P` slots for interface cards (high speed and low speed)
- `F` slots for power supplies
- `X` slot for protection switch
- `L` slots for line cards (protected lines)

SS is the slot number for that slot type. The interface cards are plugged in to `P01` to `Pxx` where `Pxx` may be 4 or 11 depending on the type of DACS II AX (4 slot or 11 slot).

`<card_name>` is the name of the card provisioned in the AX, e.g., `OctalE1T1`.

Automatic Alarm Synchronization

Description

A manual alarm synchronization selection is not provided for the DACS II AX as it is for the DACS II and the DACS II ISX. The DND is designed to maintain alarm synchronization with all SNMP based network elements. This alarm information is re-synchronized automatically by various events, including:

- Any restoration of the communications link between the DND and the managed node.
- Detection of a sequence 'gap' in the traps that are being sent by the node (i.e., missing traps).
- Periodically by Alarm Surveillance which is automatically auditing its alarm data. (The period for this audit can be adjusted by the SNMP_ACT_ALM_POLL_INTERVAL, and is defaulted to 15 minutes.

  For additional information, refer to the "Setting Environment Variables" section in *Chapter 2, Chapter 2, Getting Started*.

Upload DACS II AX to DND

Description

Circuit, Device, and port synchronizations are combined in the *UPLOAD* **Action** by a DND Administrator only. An *UPLOAD* loads the information located in the remote DACS II AX database into the local, or DND database for the DACS II AX. It does so in four stages, as shown in Figure 19-4 through Figure 19-7.

UPLOAD does not first delete the existing information in the local database. The information is checked as in an audit. If value matches are found, no action is taken, and the information remains. Otherwise, records are deleted, revised or created according to the rules for *CIRCUIT SYNC*, *DEVICE SYNC, T3 PORT SYNC* and *T1E1 PORT SYNC.*

You can execute an *UPLOAD* repeatedly to bring about a successively closer correspondence of the databases, without loss of data you may want to keep.

Upload Stage 1

Figure 19-4 illustrates the first stage of the upload process.

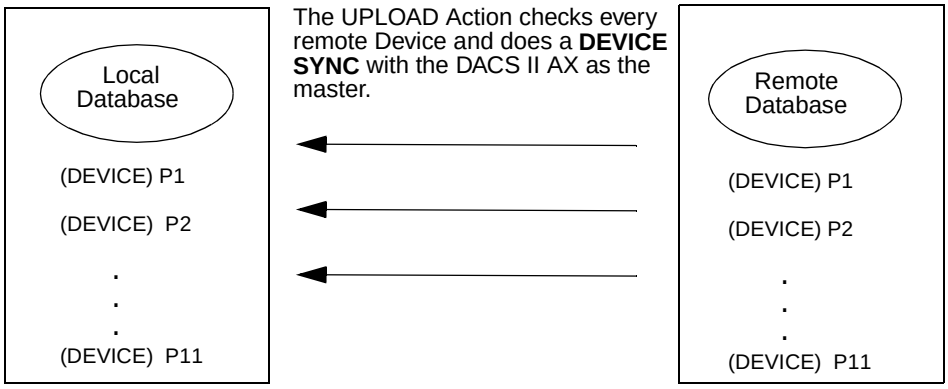


Figure 19-4. Stage 1 of the UPLOAD Action: *DEVICE SYNC*

Upload (Continued)

Upload Stage 2 Figure 19-5 illustrates the second stage of the upload process.

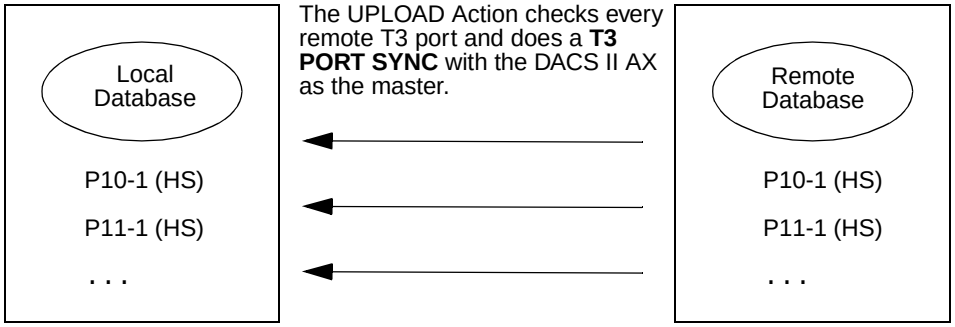


Figure 19-5. Stage 2 of the UPLOAD Action: *T3 PORT SYNC*

Upload Stage 3 Figure 19-6 illustrates the third stage of the upload process.

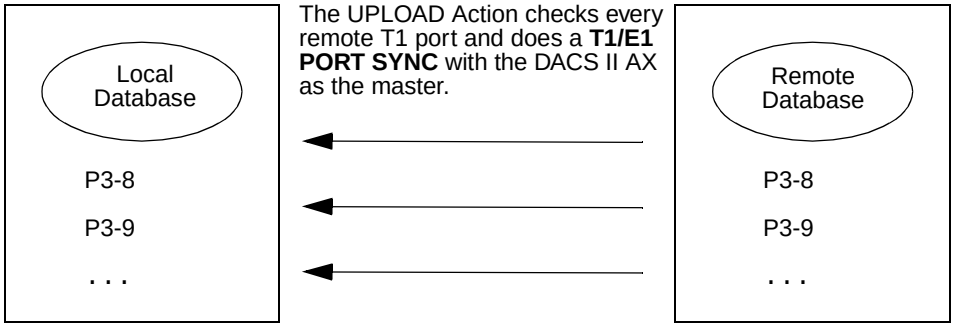


Figure 19-6. Stage 3 of the UPLOAD Action: *T1E1 PORT SYNC*

Upload (Continued)

Upload Stage 4

Figure 19-7 shows how Circuit provisioning in the local database conforms to the Circuit provisioning in the remote database, subject to the limitations of a *CIRCUIT SYNC*.

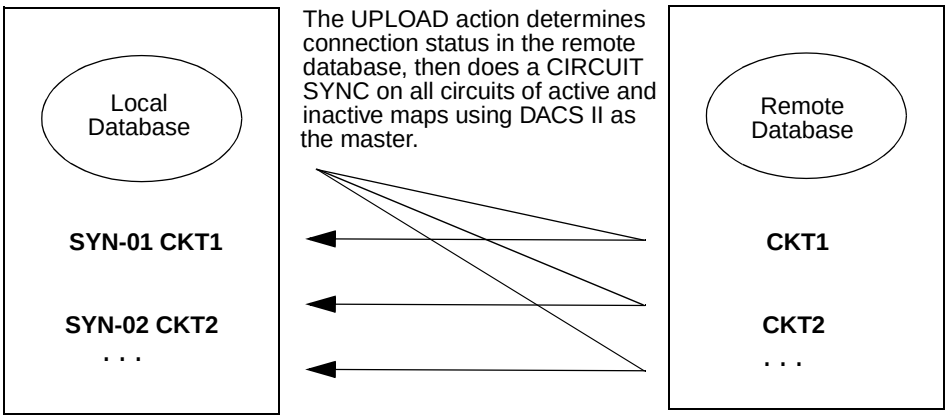


Figure 19-7. Stage 4 of the UPLOAD Action: *CIRCUIT SYNC*

Load Circuit Information

Description

A special action is provided by DACS II Audit/Synchronization called Load Circuit Info. This action uploads all of the circuit information from a DACS II AX circuit map (1 to 5) into a temporary DND database separate from the circuit maps maintained by the DND.

The circuit reports (Circuit and Channel reports) can then be run on this information. This map is designated as 'map 0' by the Circuit and Channel reports. Any of the DACS II AX circuit maps can be loaded into 'map 0' for viewing.

DND GUI: DACS II AX Database Audit/Synchronization Form

Sample DACS II AX Database Audit/ Synchronization Form

Figure 19-8 shows a sample DACS II AX DATABASE AUDIT/ SYNCHRONIZATION form for the DACS II AX Audit/Sync.

The fields displayed on the form are dependent on the **Action** and **Mode** selected.

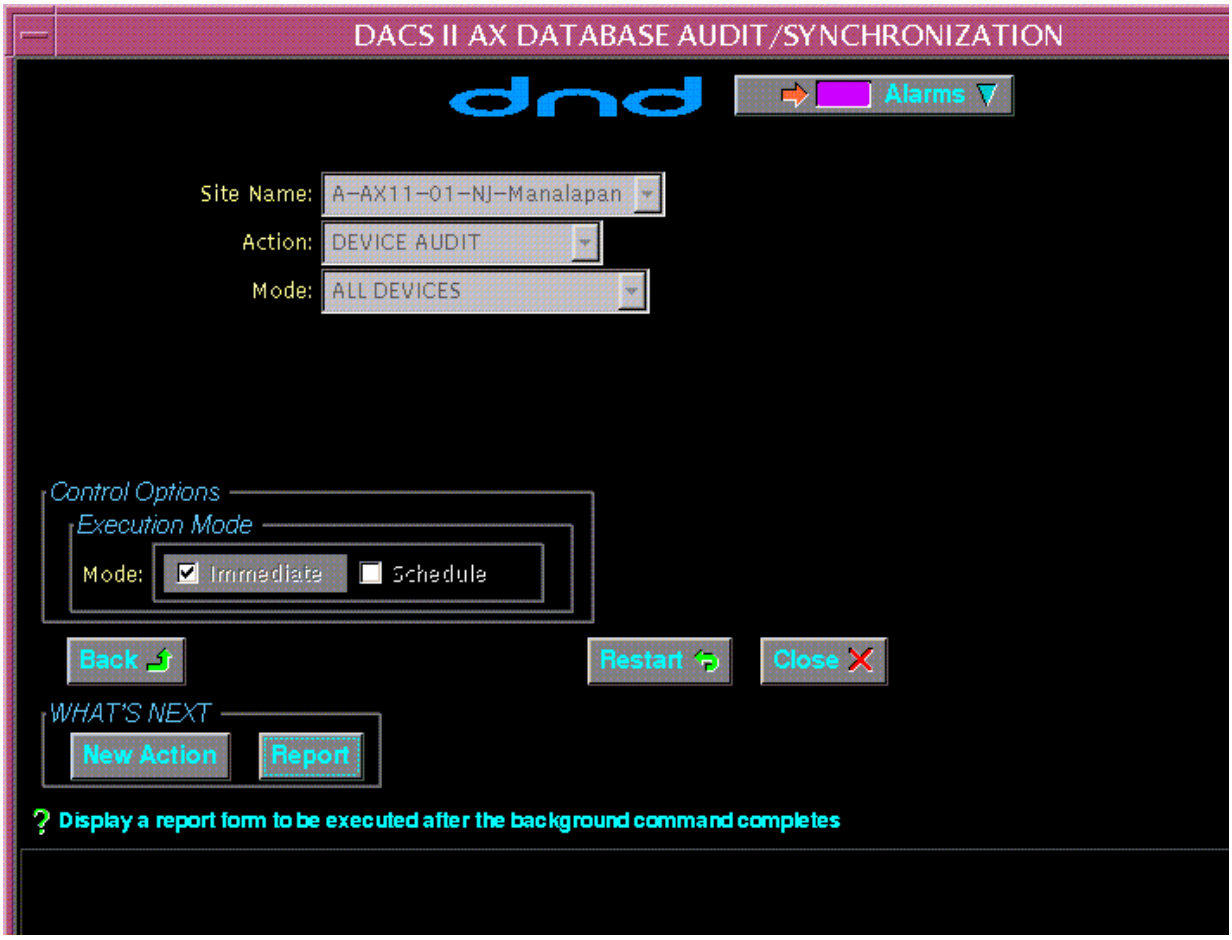


Figure 19-8. DND GUI: DACS II AX Database Audit/Synchronization Form, *DEVICE AUDIT* Action

DND GUI: DACS II AX DATABASE AUDIT/SYNCHRONIZATION Form (Continued)

Field Descriptions

The field descriptions for the DACS II AX DATABASE AUDIT/ SYNCHRONIZATION form are described in Table 19-1.

Table 19-1. DND GUI: Field Descriptions for the DACS II AX DATABASE AUDIT/SYNCHRONIZATION Form

Field	Description
Site Name	(Combo box) Mandatory. Select the name of the DACS II AX where the requested **Action** will take place. Clicking this field will display a list of DACS II AX names. By default, the list appears alphabetically.
Action	(Combo box) Mandatory. Select the type of audit/synchronization to be executed. For full details, refer to the introduction to each **Action** described earlier in this chapter. The choices are: ■ *CIRCUIT AUDIT/CIRCUIT SYNC* - Compares local and facility cross-connection databases, logs differences in parameters that are common to the two, and performs synchronization by eliminating differences. The range of circuits to be synchronized is specified by the **Mode** and **CIRCUIT** selection fields. ■ *T1E1 PORT AUDIT/T1E1 PORT SYNC* - Compares T1/E1 ports in the DACS II AX and DND databases, logs parameter value differences, and performs synchronization by eliminating those differences according to restrictions. The range of ports to be compared is specified by the **Mode** field. ■ *T3 PORT AUDIT/T3 PORT SYNC* - Compares T3 ports in the DACS II AX and DND databases, logs parameter value differences, and performs synchronization by eliminating those differences according to restrictions. The range of ports to be compared is specified by the **Mode** field.

Table 19-1. DND GUI: Field Descriptions for the DACS II AX DATABASE AUDIT/SYNCHRONIZATION Form (Continued)

Field	Description
Action, *Continued*	■ *DEVICE AUDIT/DEVICE SYNC* - Compares devices on local and facility databases, logs parameter differences common to the two, and performs synchronization by eliminating those differences according to restrictions. The range of devices to be compared is specified by the **Mode** field or by the **Mode** and **DEVICE** selection fields. ■ *LOAD CIRCUIT INFORMATION* - Uploads all of the circuit information from a DACS II AX circuit map (1 to 5) into a temporary DND database (map 0) separate from the circuit maps maintained by the DND. Circuit and Channel reports can then be run on this information. ■ *UPLOAD* - Initiates a *SYNC of devices, T3 ports, T1/E1 ports* and *circuits* using DACS II AX as the **Master DB**. You may use *UPLOAD* to load the DND database initially with data taken from the DACS II AX database. ■ *ABORT* - Cancels the audit/synchronization process executing in the background.

Table 19-1. DND GUI: Field Descriptions for the DACS II AX DATABASE AUDIT/SYNCHRONIZATION Form (Continued)

Field	Description
Mode	(Combo box) Mandatory. Select a specific item or a range of Circuits, Ports, or Devices to which the **Action** should apply. The available modes will change depending on the selected ACTION. The choices are: ■ For *CIRCUIT AUDIT* or *CIRCUIT SYNC* actions, choose one of the following: — *ALL* CIRCUITS - Selects all facility circuits equipped on a specific DACS II AX. — *ALL* CIRCUITS ON MAP - Selects all circuits equipped on a specific map. — *SINGLE CIRCUIT* - Selects a specific circuit. ■ For the *T1E1 PORT AUDIT*, *T1E1 PORT SYNC*, *T3 PORT AUDIT* or *T3 PORT SYNC* actions, choose one of the following: — *ALL PORTS* - Selects all ports T1E1 or T3 ports equipped on a specific DACS II AX database. — *ALL PORTS ON DEVICE* - Selects all T1E1 or T3 ports on a specific device. — *SINGLE PORT* - Selects a specific T1E1 or T3 port. ■ For the DEVICE AUDIT or DEVICE SYNC actions, choose one of the following: — *ALL DEVICES* - Selects all devices currently equipped on a specific DACS II AX. — *SINGLE DEVICE* - Selects a specific device. You are not required to select a mode for the *LOAD CIRCUIT INFO*, *UPLOAD, or ABORT* actions.
Port Specifier	(Check boxes) For device or port-related audit/synchronizations, choose a method to identify the port. Choices are *ID* (to specify a port by Port ID) and *SLOT/PORT* to specify a port by Slot and Port Number.

Table 19-1. DND GUI: Field Descriptions for the DACS II AX DATABASE AUDIT/SYNCHRONIZATION Form (Continued)

Field	Description
Port ID	(Text field). For device or port-related audit/synchronizations, if you selected **ID** in the **Port Specifier** field, enter up to 41 characters to identify each port (DND name).
Slot Number	(Text field). For device or port-related audit/synchronizations, if you selected **Slot/Port** in the **Port Specifier** field, choose the slot number for the slot at the DACS II AX. This value displays in CSS: <name> format. If the slot is not known in the DND database, then the value for <name> is UNEQUIPPED.
Port Number	(Combo box) For device or port-related audit/synchronizations, identifies a port number on the device identified by the slot number. This may be 1 to 8 for Octal T1E1 cards or 1 to 28 for T3 cards.

Port Name	For device or port-related audit/synchronizations, this is a display-only field which is shown just prior to execution. This will display the DND Port Name according to `Pnn-p (HS)` convention used by DND (and used for reports output to identify a particular port).
	
	where:
	`nn=slot number`
	`p=port number`
	`(HS)= High Speed (only for T3, HDS3, etc., ports)`

Circuit Name Specifier	For circuit-related audit/synchronizations, choose one of the following methods of identifying a single circuit. ■ **Site Circuit Name** ■ **Circuit ID**
Active Map	(Text field) For circuit-related audit/synchronizations, this display only field shows a value between 1 and 5 to identify the active connection map at the DACS II AX. ■ May display 0 if the AX has not been restored.
Connection Map	(Combo box) For circuit-related audit/synchronizations, this field displays a choice of possible maps (1-5) on which the action is to take place.

Table 19-1. DND GUI: Field Descriptions for the DACS II AX DATABASE AUDIT/SYNCHRONIZATION Form (Continued)

Field	Description
Site Circuit Name	For circuit-related audit/synchronizations, this field contains the name of the circuit as it is entered on the DACS II AX. This field is also called Site Circuit Name on the DND and is described in the DACS II AX Circuit Provisioning form.
Master DB	(Radio buttons) Appears for *SYNC* **Actions** only. Select the master database to use for the sync. Choices are: ■ **Frame** - Use the DACS II AX database as the master. ■ **Local** - Use the local (DND) database as the master.
Delete Slave D/B Conflicts?	(Radio buttons) Choose whether or not discrepancies found on the slave database should be deleted. Choices are: ■ **Yes** ■ **No**
Circuit ID	The name of the circuit as entered on the DND. Also the circuit ID field as described in the DACS II AX Provisioning form. The circuit must exist in the DND database in order for this option to be used.

Table 19-1. DND GUI: Field Descriptions for the DACS II AX DATABASE AUDIT/SYNCHRONIZATION Form (Continued)

Field	Description
Execution Mode	(Radio buttons) Select whether the **Action** will be executed immediately (**Immediate** Mode) or at a later date and/or time (**Schedule** Mode).
Scheduling Options	(Radio buttons/Combo boxes and Text fields also if *Schedule* is selected) Select when the current **Action** should take place. The choices are: ■ *Schedule* - Executes the **Action** at a time and frequency selected by the user. After selecting *Schedule*, click Continue... to display the following combo box fields: — **DATE** fields: **Day:** (01 thru 31) **Month:** (Jan thru Dec) **Year:** (2000 thru 2037) — **TIME** fields: **Hour:** (00 thru 23) **Minute:** (00 thru 59) — **REPEAT** fields: **Number of times** (enter any number; enter 0 to repeat indefinitely) **Interval** (enter any number) **Scale:** (**None/Minutes/Hours/Days**)

Audit/Synch-Related Information

Terminating Audit/ Synchronization

Any user with the ADMIN user class can terminate an audit/synchronization from the DACS II AX Audit/Synchronization form with the *ABORT* **Action.**

Autonomous Message Processing

The SNMP Northbound interface receives messages if an action occurs on a circuit or port that leads to DND database modification during the synchronization process. For more information, see *Chapter 28, DND Interfaces*.

Audit/Sync Scheduling

Scheduling relieves the administrator of some repetitive work, however, the administrator should be aware that some circumstances can inadvertently change scheduled operations.

When the database is restored, the schedule that existed before backup also is restored, and the new schedule that was entered after backup is lost. Therefore, it is recommended that whenever you restore the DND database, you reenter any scheduled operations.

Note that database audit/synchronization may take a long time therefore, scheduling these activities for off-peak times is suggested.

Audit/Sync Log

A log is kept during auditing of all mismatches and during synchronization of all connects and disconnects in a frame, or of all deactivations, deletions and activations in the DND. The log also records successes and failures of synchronization. The log is available through the AUDIT/SYNCHRONIZATION PORT report.

The log may be large if this is the first audit or synchronization and the differences are great. A report of the audit/sync results which does not qualify the range in the report may be quite large. Qualify the report by limiting the range to decrease log size.

(Continued on next page)

Audit/Synch-Related Information (Continued)

Denied Audit/ Sync Requests

Audit/synchronization requests may be denied by the DND if a conflicting condition exists on the AX, such as:

- Communications are down
- DB restore or a NE Provisioning Request is in progress on the node

If an audit/synchronization request is denied, it may be re-attempted after the conflicting condition is corrected, i.e., after the link is restored (if communications were down) or after the DB restore or NE provisioning request has completed on the effected node.

DACS II AX Device Management

Description

DACS II AX devices (i.e., cards in slots) are physically managed through card insertions or through provisioning commands entered at the AX. The DND does not directly manage DACS II AX devices through its forms interface, however, it manages them through:

- its local database (via DND Provisioning and Equipment View)
- ERP
- Device synchronization (manual and automatic)

Reconfiguration Plans

20

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Background

Introduction

DND provides three tools that enable you to execute a group of circuit provisioning actions. They are:

- **Reconfiguration Plan**—contains a sequence of circuit provisioning actions. A reconfiguration plan is executed manually.
- **Automatic Reconfiguration Plan**—is a set of reconfiguration plans. It can be executed manually or automatically when specified NPCs have a major or critical alarm.
- **NPC Roll**— allows you to transfer circuit connections from one facility NPC to another.

Objectives

This chapter provides background information to help you perform the following:

1. Create a reconfiguration plan
2. Create an automatic reconfiguration plan
3. Perform an NPC roll.

Related tasks

For related tasks, see the following General Tasks in Volume II:

- Using Reconfiguration Plans GT 20.1U
- Using Automatic Reconfiguration Plans GT 20.2U
- Using NPC Roll GT 20.3U

Reconfiguration Plans

Purpose

A reconfiguration plan contains a sequence of circuit-provisioning **Action**s. A reconfiguration plan enables you to:

- change the **Ckt Status** of multiple circuits already in the DND database. You can *ACTIVATE*, *DEACTIVATE*, or *ALTROUTE* existing circuits.
- provision new circuits
- store a list of circuit-provisioning **Action**s to be executed at a later time.

How to Create and Execute a Reconfiguration Plan

To create and execute a reconfiguration plan:

1. *CREATE* the plan
2. *INSERT* items into the plan one at a time. Each item is a circuit-provisioning action and is assigned a sequence number.
3. (Optional)
   a. *CHECK* the plan to ensure that circuits currently exist and review the results of the check in the RECONFIGURATION PLAN RESULTS report.
   b. Fix errors found by *CHECK* and repeat step 3a.
4. *EXECUTE* the plan. The items in the plan are executed in order of sequence number.
5. Review the execution results in the RECONFIGURATION PLAN RESULTS report.

Timeout Error Message

Ordinarily the DND User Interface waits three minutes for a reply from the DACS before reporting a *timeout error* message in the COMMAND RESPONSE box. For a circuit reconfiguration **Action**, the DND waits a default time of 30 minutes. Since the RP is being executed in the background, the DND does not report a timeout on the screen. Instead, it places the *timeout error* message in the database, to be retrieved with an RP report.

DND Forms: RECONFIGURATION PLAN PROVISIONING Form

Example - Creating a Reconfiguration Plan

From the DND Forms MAIN MENU, select PROVISIONING, then select RECONFIGURATION PLAN. A sample RECONFIGURATION PLAN PROVISIONING form is shown in Figure 20-1.

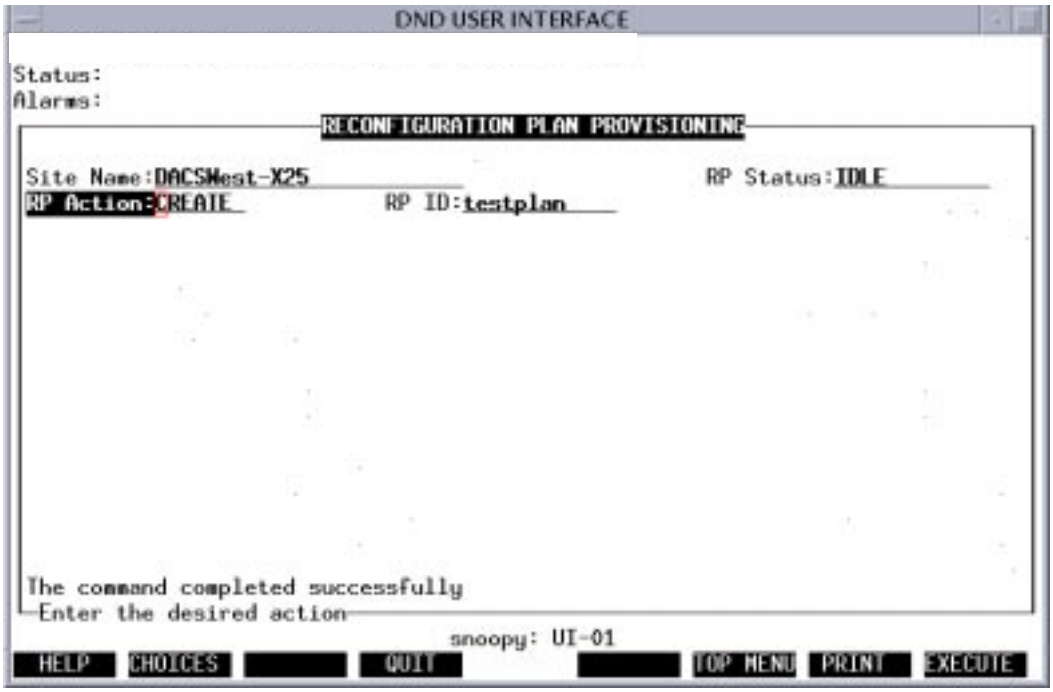


Figure 20-1. DND Forms: RECONFIGURATION PLAN PROVISIONING Form

RECONFIGURATION PLAN PROVISIONING Form (Continued)

Example - Inserting an Item into a Reconfiguration Plan

In a reconfiguration plan, you insert items to be executed. You can *ACTIVATE*, *DEACTIVATE*, or *ALTROUTE* existing circuits. Figure 20-2 shows an example of the *INSERT* **RP Action**.

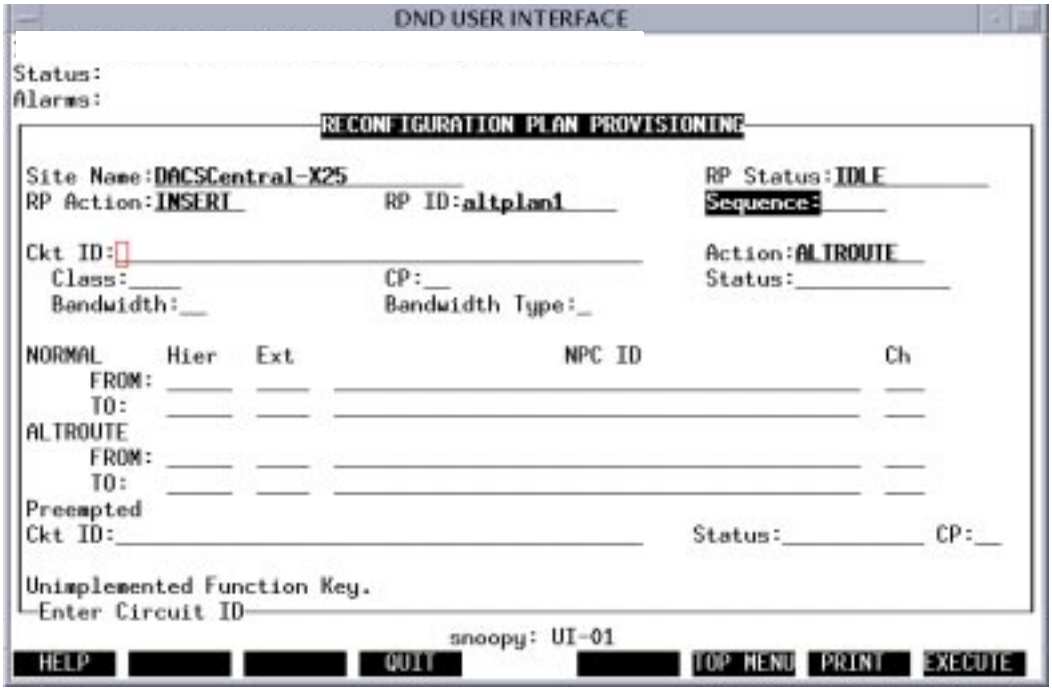


Figure 20-2. RECONFIGURATION PLAN PROVISIONING Form - *Insert* **Action**

RECONFIGURATION PLAN PROVISIONING Form (Continued)

Field Descriptions

The field values for theRECONFIGURATION PLAN PROVISIONING form are described in Table 20-1.

Table 20-1. Field Descriptions for the RECONFIGURATION PLAN PROVISIONING Form

Field	Description
Site Name	Mandatory. The name of the DACS where the requested **Action** will take place. Enter or press CHOICES to select a Site Name. Site Names are created from the FRAME ADMINISTRATION form. See Chapter 5 for more details.
RP Status	Inaccessible through form. Indicates whether the plan has been *EXECUTE*d or is *IDLE*: either never executed or executed and subsequently made *IDLE* by an **RP Action** of *IDLE*. Note that reconfiguration plans are executed in the background. The status displayed on the screen is the status retrieved from the database. Therefore, if you execute the plan, the **RP Status** may still indicate *IDLE*. You can update the screen at any time by entering the **RP ID**. The DND retrieves the current **RP Status**.
RP Action	Mandatory. Reconfiguration plan action. ■ *CREATE* - Applies to plans only. Creates a reconfiguration plan, uniquely identified by an **RP ID**. ■ *DESTROY* - Applies to plans only. Deletes the RP. Once the *DESTROY* form has been filled in and executed, the RP is no longer in the DND. If the RP is listed in an ARP, the *DESTROY* is rejected.

Table 20-1. Field Descriptions for the RECONFIGURATION PLAN PROVISIONING Form (Continued)

Field	Description
RP Action, Continued	■ *BOOT* - Applies to plans only. Locates all *ACTIVE* and *ALTROUTED* circuits in the DND database, and places an item for each one of them in a special RP having the **RP ID** of *BootDacs*. Each item will bring about the same circuit status in the DACS as exists in the DND. *BOOT* then performs an *EXECUTE* on this plan in the Site-only mode, thereby booting the DACS database. If every item completes successfully, the DACS database will record the same in-service circuits as does the DND database. Unlike other **RP Action**s, which log both successes and failures, *BOOT* only logs the failures. ■ *INSERT* - Applies to items only. Inserts an item into the plan in the position indicated by the **Sequence**. If the position is already occupied, the DND places your item in front of the existing entry and adjusts the rest of the sequence numbers. If you specify a sequence number that is higher than any existing entries, the DND inserts the item at the end of the plan and assigns it the last number in the sequence. If the **Ckt ID** indicates the circuit does not exist, a pop-up window appears, allowing you to enter CIRCUIT PROVISIONING. When you have provisioned the circuit, you are returned to this form. A circuit can only be inserted in a plan once. However, the same circuit can be used in different plans. ■ *REMOVE* - Applies to items only. Removes an item from the plan. The DND automatically renumbers all subsequent entries in that plan.

Table 20-1. Field Descriptions for the RECONFIGURATION PLAN PROVISIONING Form (Continued)

Field	Description
RP Action, Continued	■ *CHANGE* - Applies to items only. Changes the information in an item. An exception is the **Sequence**. It identifies the items in the plan and, therefore, cannot be changed directly. To change the position (**Sequence**) of an item in the plan, you must *REMOVE* the item and *INSERT* it where you want it to be. ■ *IDLE* - Applies to plans only. Reverses the provisioning accomplished by a previous execution of the plan specified in **RP ID**; i.e., changes each circuit status back to what it is presumed to have been before. We presume you will be starting from *ACTIVE*, *DEACTIVATED*, or *PENDING*. Exception: a circuit that had been in the *PENDING* status before the plan was executed is placed into the *DEACTIVATED* status by *IDLE*. *IDLE* undoes the provisioning in the reverse order of the plan, starting with the last item and finishing with the first, regardless of the order in which the circuits actually were provisioned. If *IDLE* discovers an action that cannot be reversed, because the circuit does not exist, it internally marks the **Status** null.

Table 20-1. Field Descriptions for the RECONFIGURATION PLAN PROVISIONING Form (Continued)

Field	Description
RP Action, Continued	■ *EXECUTE* - Applies to plans only. Executes the plan specified by **RP ID**. Execution consists of first performing a *CHECK*, then executing the **Action**s of all items not internally marked null, in order of **Sequence**. Nullified items are logged anyway. *EXECUTE* does not affect circuits already in the desired circuit status. Upon completion, *EXECUTE* reports the number of circuit provisioning actions that were attempted and the number that were successfully completed. You can inspect these results by running the reconfiguration plan results report. The results of only the most recent *CHECK*, *EXECUTE*, or *IDLE* are saved in the results log for an RP. If a circuit provisioning action was unsuccessful, you can modify the plan or correct the condition that prevented execution and then execute the plan an many times as it takes to bring about all the desired circuit statuses. ■ *CHECK* - Applies to plans only. Checks the circuits in the plan specified by **RP ID** against the circuits in the current DND database, to determine which circuits have been deleted from the database. If an item specifies a circuit that does not now exist, the item is internally marked null. When *CHECK* completes, it displays the DND status message listing how many items can be successfully completed. To find out which items cannot complete and why, run the reconfiguration plan results report (see Chapter 14). Then correct the problems and perform *CHECK* again. *EXECUTE*, *IDLE*, and *CHECK* keep a results log for each RP. The reconfiguration plan results report is taken from the log. One use of one of these commands overwrites the data in the log from the previous use.

Table 20-1. Field Descriptions for the RECONFIGURATION PLAN PROVISIONING Form (Continued)

Field	Description
RP Action, Continued	■ *CLEAN* - Applies to plans only. Looks for every circuit referenced in the plan. If it does not find the circuit in the appropriate DND frame database, *CLEAN* removes its reference from the plan. ■ *ABORT* - Applies to plans only. Aborts the plan currently running as a background process. Background plans are started by *BOOT*, *IDLE*, *EXECUTE*, or *CHECK*. Once an *ABORT* is entered, the DND finishes the current circuit and stops. Circuits already reconfigured remain reconfigured.
RP ID	Mandatory, up to 12 characters. Identifies the reconfiguration plan that is to be affected by the **RP Action**.
Sequence	Up to 5 characters. Mandatory for **RP Action**s of *INSERT*, *REMOVE*, *CHANGE*; not accessible in other cases. Specifies the sequence number identifying the item in the plan.
Ckt ID	For items only. 1 through 41 characters. Identifies the circuit to which the **Action** of this item pertains. The circuit must already be in the database, but it can have any status there.

Table 20-1. Field Descriptions for the RECONFIGURATION PLAN PROVISIONING Form (Continued)

Field	Description
Action	For items only. Specifies the operation to be performed when the plan is executed. The possible **Action**s are: ■ *ACTIVATE* - Changes the **Status** of an already existing DND circuit from *PENDING* or *DEACTIVATED* to *ACTIVE*, and cross-connects it in the DACS, making it a traffic-carrying circuit. The DND validates all fields before activating a circuit. If the circuit **Status** is *ACTIVE*, *ALTROUTED*, or *PREEMPTED*, this RP *ACTIVATE* will fail. ■ *DEACTIVATE* - Changes the specified circuit in the DND database to *DEACTIVATED* and disconnects it in the DACS. ■ *ALTROUTE* - Changes the specified circuit to *ALTROUTED*. Altrouting may involve the preemption of other circuits. The operator will be informed of each preemption and will be required to confirm before this item can be successfully placed in the plan. A circuit can be altrouted only once, and an *ALTROUTED* circuit cannot be preempted. *ALTROUTE* is the default **Action**. Between the time when the *ALTROUTE* item is entered and the time when the RP is executed, the EFTs to which the circuit is to be altrouted may have changed status. The user will be notified in the preemption confirmation pop-up inserts of their new status, and may then alter the *ALTROUTE*.

Table 20-1. Field Descriptions for the RECONFIGURATION PLAN PROVISIONING Form (Continued)

Field	Description
Class	A display-only field indicating the **Ckt Class** (see Chapter 10: 'Circuit Provisioning) of the circuit identified by **Ckt ID**. ■ *FDX* - Full-duplex, a two-way, two-point circuit. ■ *HDX* - Half-duplex, a one-way, two-point circuit. ■ *BBL* - Backbone leg, a one-way, backbone leg broadcastcircuit. ■ *BRD* - Branch leg, a one-way, branch leg broadcast circuit. ■ *DMB* - Digital multipoint bridge, a two-way, multipoint circuit leg.
CP	A display-only field indicating the **CP** (circuit priority).
Status	A display-only field indicating the current operating status of the circuit, as follows: ■ *NULL* - The **Ckt ID** does not identify a circuit currently in the DND or DACS databases. The **RP Action** will not be accepted, and, therefore, the circuit cannot be used in the plan. ■ *PENDING* - The circuit is in the DND database, but is not cross-connected in the DACS. It is ready to be made *ACTIVE* on user request. To cross-connect the circuit, use the *ACTIVATE* **Action**, in the plan. ■ *DEACTIVATED* - The circuit is in the DND database but is not cross-connected in the DACS. It was *ACTIVE*, but was disconnected with a *DEACTIVATE* **Action**. To cross-connect the circuit, use the *ACTIVATE* **Action**. ■ *ALTROUTED* - The circuit is present in the DACS and DND databases, is cross-connected in the DACS, and is carrying transmission. However, it was temporarily rerouted over an alternate path with an *ALTROUTE* **Action**. If any part of the alternate path was in use by another circuit, that circuit was placed in *PREEMPTED* **Ckt Status**. An *IDLE* **RP Action** is required to return the *ALTROUTED* circuit to its original path.

Table 20-1. Field Descriptions for the RECONFIGURATION PLAN PROVISIONING Form (Continued)

Field	Description
Status, Continued	■ *PREEMPTED* - The circuit was *ACTIVE* in the DACS, but has been temporarily disconnected for use by an *ALTROUTED* circuit. The circuit is in the DND database only and is not carrying transmission. One or more of its channels are being used by one or more *ALTROUTED* circuits. The *IDLE* **RP Action** that returns the *ALTROUTED* circuits to normal also returns the *PREEMPTED* circuits to normal. ■ *ACTIVE* - The circuit is present in the DACS and DND databases, is cross-connected in the DACS, and is carrying transmission.
Bandwidth	A display-only field indicating the circuit bandwidth.
Bandwidth Type	A display-only field indicating how bandwidth is allocated in an NPC, as described in Chapter 9: Circuit Provisioning.
NORMAL fields	Display-only fields indicating the initial TO and FROM identifying information of the circuit: the NPC number in both hierarchical and extended format, the **NPC ID**, and channel number (**Ch**).
ALTROUTE fields	User-accessible fields specifying the altrouting information, if the **Action** is *ALTROUTE*. Fill in the FROM and TO NPC and channel identifiers for this *ALTROUTE* destination, just as you would on the ALTROUTE screen. Refer to Chapter 9: Circuit Provisioning.
Preempted fields	The circuit identifiers for circuits that are preempted by this *ALTROUTE*, as they would appear on the ALTROUTE screen. Refer to Chapter 9: Circuit Provisioning.

Automatic Reconfiguration Plans

Purpose

An automatic reconfiguration plan (ARP) is a group of reconfiguration plans. It can be executed manually or executed automatically when a major or critical alarm is received from specified NPCs.

When any of the specified NPCs has a major or critical alarm, the ARP will be executed.

There are two types of items in an ARP:

- an RP to be executed
- an NPC to be added to (or removed from) the list of trigger NPCs.

DND Forms: AUTOMATIC RECONFIGURATION PLAN PROVISIONING Form

Example

From the DND Forms MAIN MENU, select PROVISIONING, then select AUTOMATIC RECONFIGURATION PLAN. The AUTOMATIC RECONFIGURATION PLAN PROVISIONING form displays. Figure 20-3 provides an example of an *Insert* **Action** on this form.

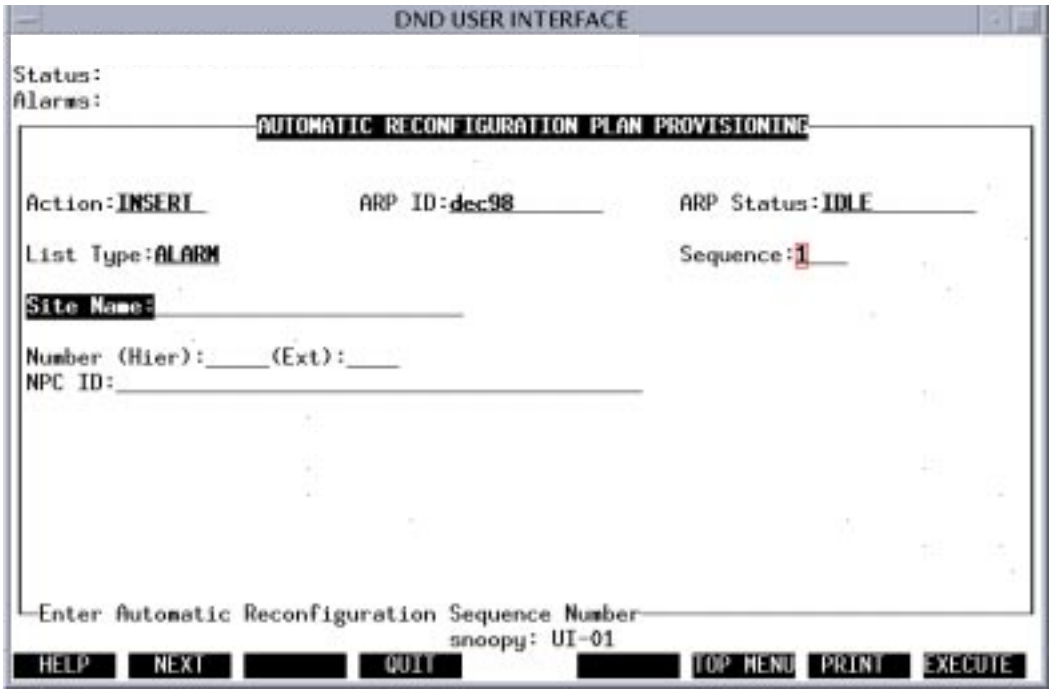


Figure 20-3. AUTOMATIC RECONFIGURATION PLAN PROVISIONING Form

AUTOMATIC RECONFIGURATION PLAN PROVISIONING Form (Continued)

Field Descriptions

The field values for the AUTOMATIC RECONFIGURATION PLAN are described in Table 20-2.

Table 20-2. Field Descriptions for the AUTOMATIC RECONFIGURATION PLAN Form

Field	Description
Action	Mandatory. Valid actions are: ■ *CREATE* - Applies to ARPs only. Creates an automatic reconfiguration plan (ARP), uniquely identified by an **ARP ID**. ■ *DESTROY* - Applies to ARPs only. Deletes the ARP. Once the *DESTROY* form has been filled in and executed, the ARP is no longer in the DND. ■ *INSERT* - Applies to ARP items only. Inserts an item into the ARP in the position indicated by the **Sequence**. If the position is already occupied, the DND places your item in front of the existing entry and adjusts the rest of the sequence numbers. If you specify a sequence number that is higher than any existing entries, the DND inserts the item at the end of the plan and assigns it the last number in the sequence. ■ *REMOVE* - Applies to items only. Removes an item from the ARP. The DND automatically renumbers all subsequent entries in the ARP. ■ *CHANGE* - Applies to items only. Changes the information in an item. An exception is the **Sequence**. It identifies the items in the ARP, and, therefore, cannot be changed directly. To change the position (**Sequence**) of an item in the plan, you must *REMOVE* the item and *INSERT* it where you want it to be.

Table 20-2. Field Descriptions for the AUTOMATIC RECONFIGURATION PLAN Form (Continued)

Field	Description
Action, Continued	■ *EXECUTE* - Applies to ARPs only. Sequentially executes the RPs in the plan specified by **ARP ID**. Once a provisioning command has been sent to the DACS specified by the RP's **Site Name**, the DND does not wait for a reply, but goes on to the next item. The replies, when they arrive, are logged. Upon completion, *EXECUTE* reports the number of items for which it sent commands, and the number that succeeded. The results of the most recent *CHECK*, *EXECUTE*, or *IDLE* overwrite the previous results in the results log for an ARP. ■ *IDLE* - Applies to ARPs only. Idles the plan specified by **ARP ID**. Idling consists of parsing each RP in the plan sequentially from last to first, and from last item to first item within a plan, and taking immediate action on each item as it is encountered. Upon completion, *IDLE* reports the number of items for which it sent commands and the number that succeeded. The results of the most recent *CHECK*, *EXECUTE*, or *IDLE* overwrite the previous results in the results log for an ARP. ■ *CHECK* - Applies to ARPs only. Checks the contents of each RP in the plan specified by **ARP ID** against the NPCs in the current DND database to determine which NPCs have been deleted from the database. If an item specifies a NPC that does not now exist, the item is internally marked null.

Table 20-2. Field Descriptions for the AUTOMATIC RECONFIGURATION PLAN Form (Continued)

Field	Description
Action, Continued	When *CHECK* completes, it displays the DND status message listing how many items can be successfully completed. To find out which items cannot complete and why, run the reconfiguration plan results report (see Chapter 17). Then correct the problems and perform *CHECK* again. *EXECUTE*, *IDLE* and *CHECK* keep a results log for each RP. The reconfiguration plan results report is taken from the log. One use of one of these **Action**s overwrites the data in the log from the previous use. ■ *CLEAN* - Applies to items only. Looks for every RP referenced in the ARP. If it does not find the RP in the appropriate DND frame database, *CLEAN* removes its reference from the ARP. If the ARP item is an *ALARM*, *CLEAN* determines whether the NPC is still provisioned. If it is not, *CLEAN* removes the *ALARM* from the list. ■ *ABORT* - Applies to ARPs only. Aborts all the RPs that were started by this ARP. Background RPs are started by *BOOT*, *IDLE*, *EXECUTE*, or *CHECK*. Once an *ABORT* is entered, the DND allows the current item to finish and stops.
ARP ID	Mandatory. Up to 12 characters. Identifies the automatic reconfiguration plan that is to be affected by the **Action**.
ARP Status	Inaccessible through this form. Indicates whether the specified item has been *EXECUTE*d or is *IDLE*. *IDLE* means either never been executed or executed and subsequently made *IDLE*. This field appears only if **List Type** is *RP*.
List Type	Specifies the type of item to which this **Action** applies: ■ *RP* - The item is an RP. ■ *ALARM* - The item is an NPC to be placed on or removed from the alarm list. If an NPC is on the list, a critical or major alarm from it will trigger the ARP.

Table 20-2. Field Descriptions for the AUTOMATIC RECONFIGURATION PLAN Form (Continued)

Field	Description
Sequence	Up to five characters. Specifies the sequence number identifying the entry, in the plan, that is to be affected by the **Action**.
Site Name	Mandatory. 1-24 alphanumeric characters. Identifies the site to which the items of the RP specified in **RP ID** are to apply, provided the **List Type** is *RP*. If the **List Type** is *ALARM*, **Site Name** identifies the site where the NPC to be placed on the alarm list is located.
RP ID	Up to 12 characters. Identifies the RP that is to execute.
Number (Hier)	Appears only for a **List Type** of *ALARM*. The NPC number in hierarchical format of the NPC whose alarm will trigger the ARP.
(Ext)	Appears only for a **List Type** of *ALARM*. The previous NPC number, but in extended format.
NPC ID	Appears only for a **List Type** of *ALARM*. 1-41 characters. The NPC ID of the NPC whose alarm will trigger the ARP. The NPC must be in the database; for example, must have been created under NPC PROVISIONING.

NPC Roll

Description

The NPC Roll feature of DND enables you to transfer all circuit connections from one facility NPC to another.

NPC Types Supported

You can use the NPC Roll feature for NPC types: DE, TE, PB, PC, DA, PA, and TA.

Conditions

In order to use NPC Roll, the NPCs affected must meet these conditions:

- Both NPCs must be present on the DACS and in the DND database.
- Both NPCs can not be under test.
- The **Current NPC** can not have channels assigned to a subrate circuit or a BCON circuit.
- The **Roll To** NPC must be in-service (State: *IS*).
- The channels on the **Roll To** NPC may not be assigned to circuits with a Circuit Status (**Ckt Status**) of *ACTIVE*, *ALTROUTED*, *PREEMPTED* or *DEROUTED*.

How NPC Roll Works

An NPC ROLL affects circuits that are *ACTIVE* or *ALTROUTED*. At the beginning of the roll, *ACTIVE* circuits are *DEACTIVATED*. *ALTROUTED* circuits are *DEROUTED*. If the NPC ROLL fails, the circuits remain deactivated or derouted. When an NPC Roll completes successfully, the circuits are returned to their original state.

DACS II NPC Roll

The DACS II NPC Roll command (*SW-ROLL-T1*) is not the same as the DND NPC Roll feature. DND does not process the echoed response of an NPC Roll using the DACS II command.

DND Forms: NPC ROLL Form

Sample Form

To transfer circuit connections from one NPC to another, from the DND Forms MAIN MENU, select PROVISIONING, then select NPC ROLL.

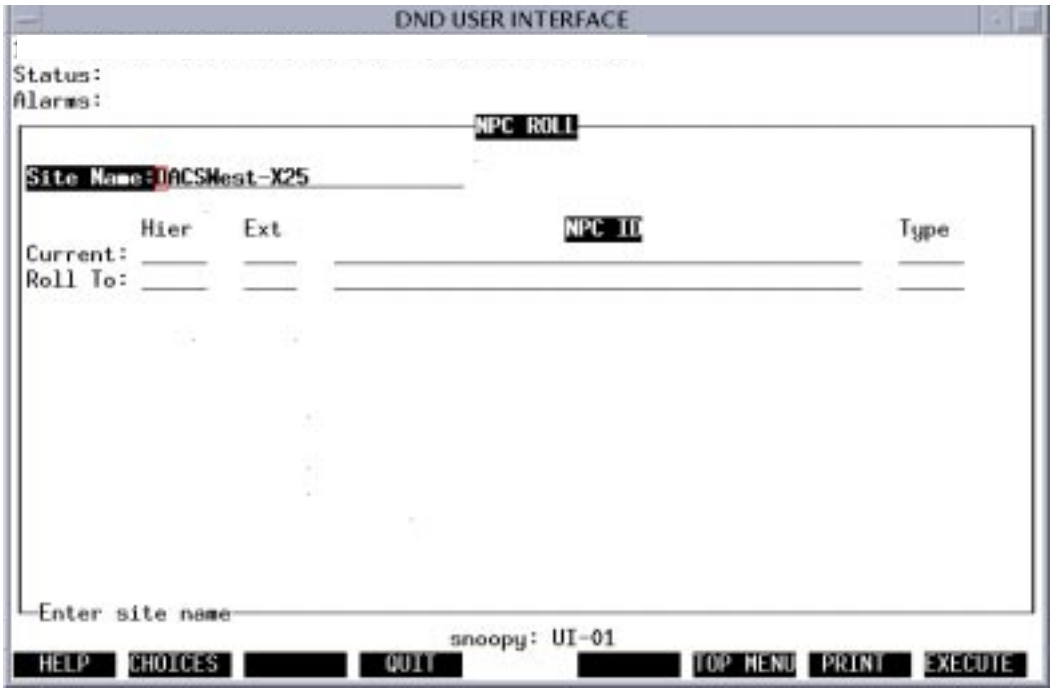


Figure 20-4. NPC ROLL Form

Test Ports and Test Access

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Background

Introduction

Test Access provides a capability to connect a test object to an object under test. An object under test is a circuit or an unmapped channel.

Objectives

This chapter provides background information to help you perform the following:

1. Create Test Port Groups and their Test Ports
2. Place a circuit or unmapped channels in Monitor or Split test access modes
3. Terminate or Unterminate a test group signal
4. Release a circuit from Test Access
5. Place a test group in Loop mode
6. Place a test group in HUB mode
7. Place a channel in CHLOOP mode
8. Generate a test signal with the Integrated Test Set
9. Monitor a test signal with the Integrated Test Set

Related tasks

For related tasks, see the following General Tasks:

DND GUI:

- Performing Circuit Test Access in Monitor Mode GT 21.1G
- Performing Unmapped Test Access in Monitor Mode GT 21.2G
- Performing Test Access in Split Mode GT 21.3G
- Performing a HUB Test Access Connection GT 21.4G
- Terminating or Unterminating the Test Group Signal GT 21.5G
- Releasing a Test Access Connection GT 21.6G
- Looping a Test Group Signal GT 21.7G
- Looping a Channel or Circuit GT 21.8G
- Unlooping a Channel or Circuit GT 21.9G
- Integrated Test Set: Initiate/Stop Test Signal Generation GT 21.10G
- Integrated Test Set: Initiate/Stop Test Signal Monitoring GT 21.11G

(Continued on next page)

Background (Continued)

Related tasks, Continued

DND Forms:

■ Creating a Test Port Group	GT 21.1U
■ Deleting a Test Port Group	GT 21.2U
■ Creating a Test Port	GT 21.3U
■ Deleting a Test Port	GT 21.4U
■ Performing Circuit Test Access in Monitor Mode	GT 21.5U
■ Performing Unmapped Test Access in Monitor Mode	GT 21.6U
■ Performing Test Access in Split Mode	GT 21.7U
■ Performing a HUB Test Access Connection	GT 21.8U
■ Terminating or Unterminating the Test Group Signal	GT 21.9U
■ Releasing a Test Access Connection	GT 21.10U
■ Looping a Test Group Signal	GT 21.11U
■ Looping a Channel or Circuit	GT 21.12U
■ Unlooping a Channel or Circuit	GT 21.13U

Related information

For related information see:

- *DACS II and DACS II ISX Operations and Maintenance Manuals*

Test Access

Types of Test Access

There are two types of Test access:

- **Test Port (TP**)—The object under test must be a circuit of bandwidth 1 or an unmapped channel. You must provision the test ports and the test port group through the TEST PORT PROVISIONING form on the DND Forms Interface, as discussed in this chapter.
- **Test Group (TG)**—The object under test is a circuit of bandwidth *n*xDS0, regardless of whether *n* is 1 or more than 1. You also may test unmapped channel(s) using a test group. Test groups can be created using the DND Forms Interface or DND GUI.

Prerequisites to Test Access

In either TP or TG access, you must have connected test equipment to one or more NPCs, which can then become either one or more test port groups or test group NPCs. The Integrated Test Set (ITS) feature does not require any external test equipment.

Test Ports and Test Port Groups

Test Port Groups

Create a Test Port Group using the DND Forms Interface before creating its Test Ports.

DACS II releases 6.0 and higher allow eight possible test port groups, numbered 1 through 8. Test port groups do not have to be created in numerical order. Within each test group are 12 test ports, which must be created in ascending numerical order.

Table 21-1 summarizes, by DACS release, the number of test port groups supported.

Table 21-1. Test Port Groups Supported, By Frame

Frame Type	No. of TP Groups	No. of TPs
DACS II before Release 6.0	4	1-48
DACS II Release 6.0 and higher	8	1-96
DACS II ISX Release 1.0 and higher	8	1-96

Test Ports

Once a Test Port Group is created, its test ports 1 through 12 can be created. Within a Test Port Group, Test Ports must be created in order and deleted in reverse order.

One test port consists of two channels, designated in the DACS manuals as channel A, or the lower- or odd-numbered channel, and channel B, or the higher- or even-numbered channel. Thus, if a hypothetical NAS NPC, JJ36N24, is designated as a test port digroup through test port provisioning, it makes available 24 test channels configured as 12 test ports: channel 1 is port 1, channel A; channel 2 is port 1, channel B; etc. The uses of these channels are explained later in this chapter.

Test port provisioning is not available to the DACScan™-2000 Controller C-Module.

Circuits Not Supported

Test Port access is not supported for BCON circuits.

DND Forms: TEST PORT PROVISIONING Form

Sample Form - Create Test Port Group

To obtain the TEST PORT PROVISIONING form, select TEST PORT from the PROVISIONING menu. A sample of the TEST PORT PROVISIONING form with the *CREATETPG* **Action** is shown in Figure 21-1.

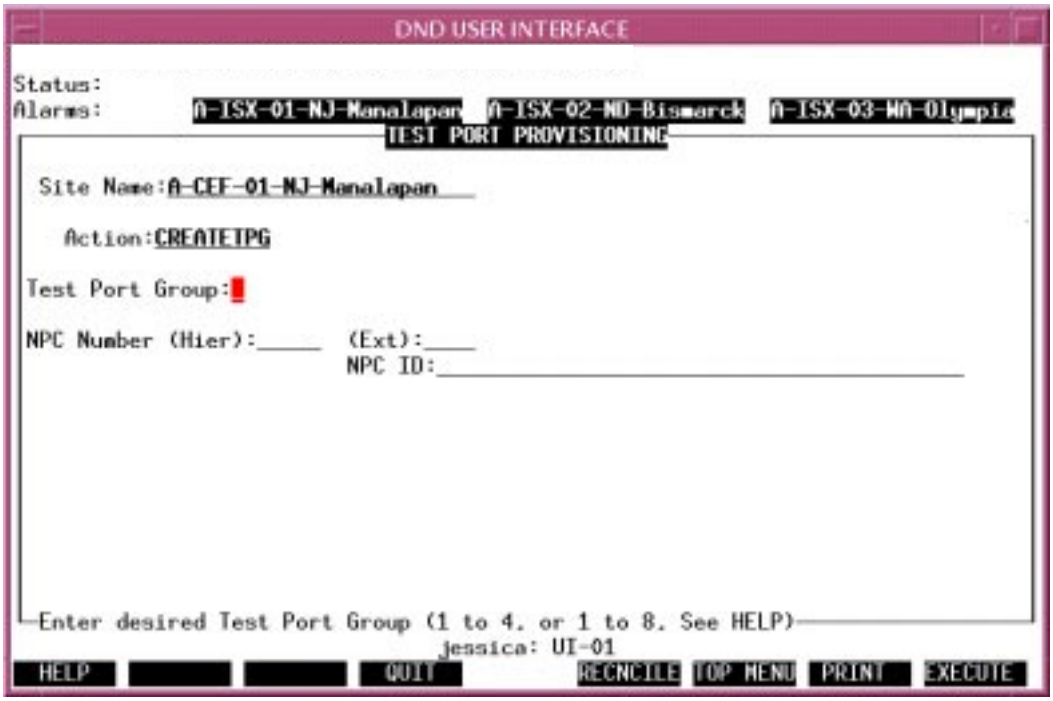


Figure 21-1. DND Forms: TEST PORT PROVISIONING Form - *CREATETPG* Action

DND Forms: TEST PORT PROVISIONING Form (Continued)

Sample Form - Create Test Port

A sample of the TEST PORT PROVISIONING form with the *CREATETP* **Action** is shown in Figure 21-2.

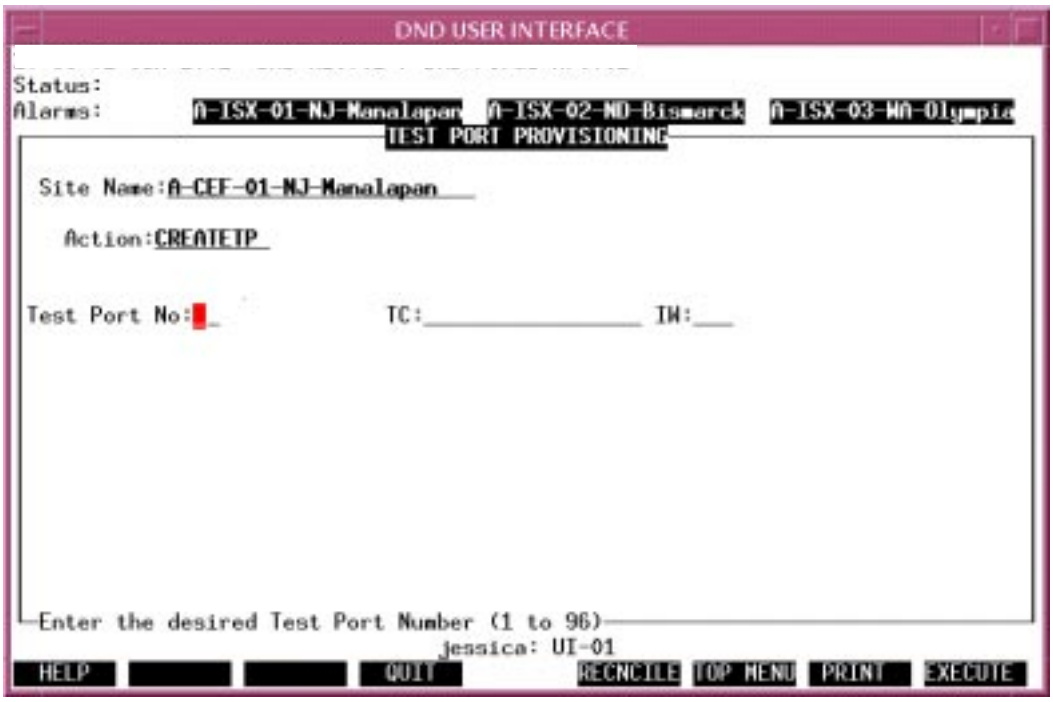


Figure 21-2. DND Forms: TEST PORT PROVISIONING Form - *CREATETP* Action

TEST PORT PROVISIONING Form (Continued)

Field Descriptions

The field values for the TEST PORT PROVISIONING form are described in Table 21-2.

Table 21-2. DND Forms: Field Descriptions for the TEST PORT PROVISIONING Form

Field	Descriptions
Site Name	Mandatory. The name of the DACS where the requested **Action** will take place. Enter or press CHOICES to select a Site Name. Site Names are created from the FRAME ADMINISTRATION form. See Chapter 5 for more details.
Action	Mandatory. The provisioning actions are: ■ CREATE TP DIGROUP (*CREATETPG*) designates a previously provisioned NPC as a test-port digroup. ■ DELETE TP DIGROUP (*DELETETPG*) removes the designation (and all associated test ports). ■ CREATE TEST PORT (*CREATETP*) designates a channel pair as a test port within a test port digroup. ■ DELETE TEST PORT *(DELETETP)* removes the designation.
Test Port Group	This field appears only for **Action**s of *CREATETPG* and *DELETETPG*. With DACS II releases prior to 6.0, the possible values are *1-4*. With DACS II Release 6.0, the possible values are *1* through *8*. Clear DS1/E1 NPCs are excluded.
Test Port No.	This field appears only for **Action**s of *CREATETP* and *DELETETP*. The number of the test port within the NPC. The test port groups contain the following test ports. TPG1: 1-12 TPG2: 13-24 TPG3: 25-36 TPG4: 37-48 TPG5: 49-60 TPG6: 61-72 TPG7: 73-84 TPG8: 85-96

Table 21-2. DND Forms: Field Descriptions for the TEST PORT PROVISIONING Form (Continued)

Field	Descriptions
TC	This field is shown only for an **Action** of *CREATETP*. The test port trunk conditioning. The values are: ■ *value* - This value is described in the Field Descriptions tables in Chapter 9, Circuit Provisioning. If entered, it applies to all channels put under test on this test port; for example, the TP conditioning is static. ■ *none* - The conditioning changes to match the circuit under test; for example, the TP conditioning is dynamic.
IW	This field appears for an **Action** of *CREATETP*. The value of **IW** depends on the value of **TC**. You can not enter an **IW** when you have not entered a **TC**. In that case, the **IW** is dynamic. If you have entered a **TC**, whether you enter a value for **IW** or not, the **IW** is static. For DACS II, the static/dynamic designation has meaning only for access to unmapped terminations. For access to a mapped circuit, trunk conditioning is always adopted from the circuit under test.
NPC Number (Hier)	This field appears only for an **Action** of *CREATETPG*. The NPC number in hierarchical format of the NPC to be designated as a test port group. It must already have been equipped, but it does not have to be in service. Alternatively, you can enter the number in extended format, or the **NPC ID**. Not every type of NPC can be grown as a TP Digroup. Specifically not supported are **Types** MJ and SR, subrate, MB, multipoint, and DE/TE, clear DS1/E1.
(Ext)	The NPC number in extended format.
NPC ID	The **NPC ID** of the NPC to be designated as a test port group.

Test Groups

Description

A test group is the object used to test the circuit (Test Object). In Test Group (TG) access, you must have connected test equipment to one or more NPCs.

You identify the NPCs to be used by the test group and supply the number of the first channel to be used in each NPC. The DND checks the bandwidth of the object under test, provisions the specified NPC(s) as a single test group, and connects the appropriate number of channels to the object under test. When you *RELEASE* the test group, the DND deletes it.

CAUTION:
*Some of these Test Access **Actions** can affect traffic in the DACS network. Consult the DACS II and DACS II ISX Operations and Maintenance Manuals to determine which actions are service-affecting.*

Test Group Constraints

The constraints on TG access are as follows:

- Deletion of the test group after use is automatic; however, if the access is interrupted by a failure, the TG might remain provisioned.
- The test group is created with bandwidth equal to the bandwidth of the object under test.

Circuits Not Supported

Test access does not support the following circuits:

- Clear DS1/E1
- A node in a real or virtual multipoint circuit. However, the EFTs can be tested.
- Subrate

Note on Diagrams

The logical diagrams shown in the following sections apply to two-way circuits. You can derive the equivalent diagrams for one-way circuits by eliminating the second direction (Rx to Tx) and all the connections to it. They are drawn from an internal point of view. An Rx from an external point of view; for example, a receiving point for line transmission, becomes the Tx for cross-connection within the DACS.

Monitor Test Access

Mapped Test Access

The most common type of access is *MONITOR*. It allows test equipment to "listen" to an existing circuit without interrupting transmission on the circuit. Signals from the FROM and the TO sides are communicated along their intended route, but are also received at the test object.

NOTE:
Figure 21-3, Figure 21-4, Figure 21-5 presume a bandwidth of 1. For their N x 64 kbps equivalents, imagine that each channel and its connection becomes *n* channels and connections.

Mapped Monitor Mode Diagram

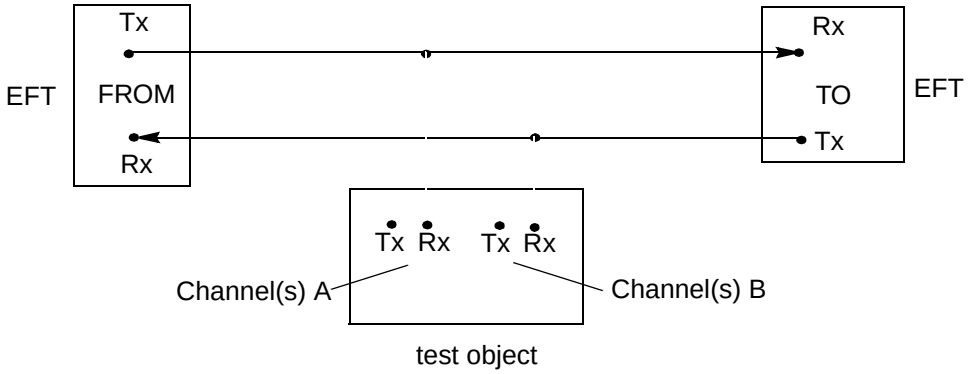


Figure 21-3. Illustration Of Mapped Monitor Test Access

In Figure 21-4, the normal circuit, which is in this case duplex, sends data from the FROM side Tx to the TO side Rx, and from the TO side Tx to the FROM side Rx.

A test connection in *MONITOR* **Status** joins Channel(s) A and Channel(s) B Rx of the test object to the circuit connection. Normal transmission on the circuit is received at both the TO side Rx and a test object Rx, and at both the FROM side Rx and a test object Rx. If the circuit were half-duplex, only the TO side Rx and the test object Rx would receive.

Monitor Test Access (Continued)

Unmapped Test Access

Unmapped test access allows test equipment to "listen" to traffic from a channel or range of channels without interrupting channel transmission.

NOTE:
For their N x 64 kbps equivalents, imagine that each channel and its connection becomes *n* channels and connections

Unmapped Monitor Mode Diagram

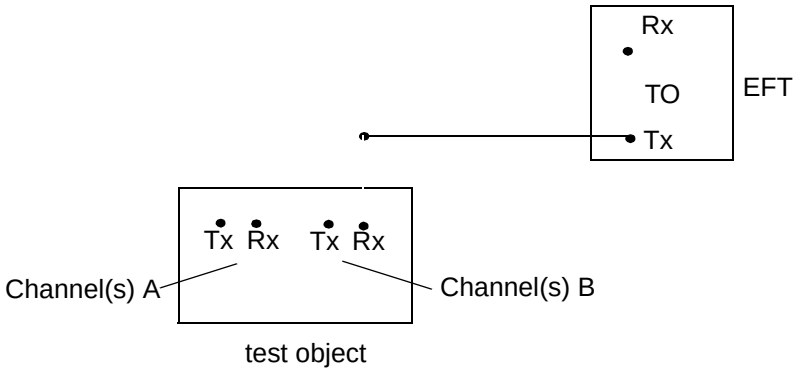


Figure 21-4. Illustration Of Unmapped Monitor Test Access

In Figure 21-4, the unmapped channel sends data from the TO side Tx to the Test Object.

Only the TO side of the Test Object is used for unmapped Test Access. Therefore, the FROM side of the Test Object is left empty in the report form for DND Forms. The FROM side does not appear in report form for DND GUI.

Monitor Test Access (Continued)

Insertion Word

If you have not entered an **Insertion Word/IW** in either the NPC or circuit provisioning forms, the DACS uses its own default; typically, the UMC. An **Insertion Word/IW** entered in NPC provisioning takes precedence over the DACS default, and an **Insertion Word/IW** entered in circuit provisioning takes precedence over either of those.

Terminate in TO Direction

If *TERMINATE* is applied to the TO side, the TO Rx receives only the **Insertion Word/IW** signal; for example, traffic is replaced by an **Insertion Word/IW** on that side. However, the test object Rx continues to monitor normal traffic on that side.

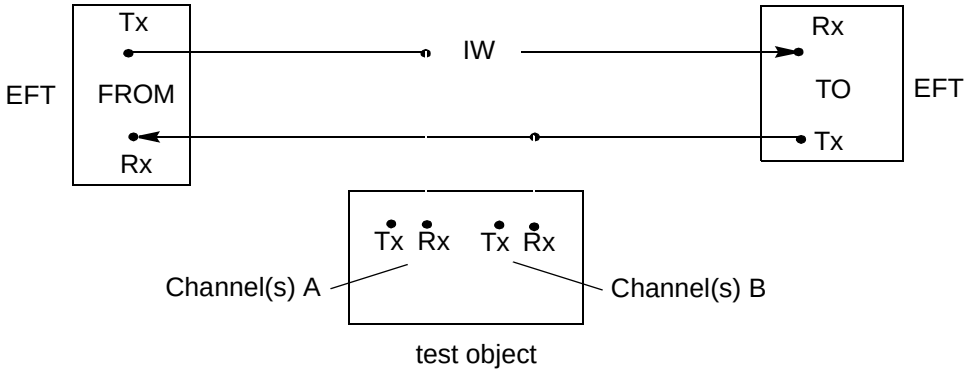


Figure 21-5. Illustration Of Monitor Test Access, TLA Applied in T Direction

Monitor Test Access (Continued)

Terminate in FROM Direction

The same may be said of FROM side TLA.

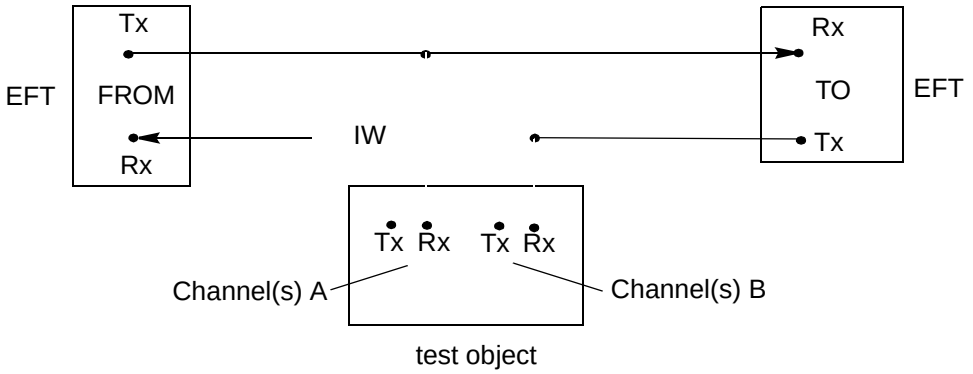


Figure 21-6. Illustration Of Monitor Test Access, TLA Applied in F Direction

Terminate in BOTH Directions

If TLA is applied to both sides, then no normal traffic is received over the circuit being tested, but the traffic is received at the test object.

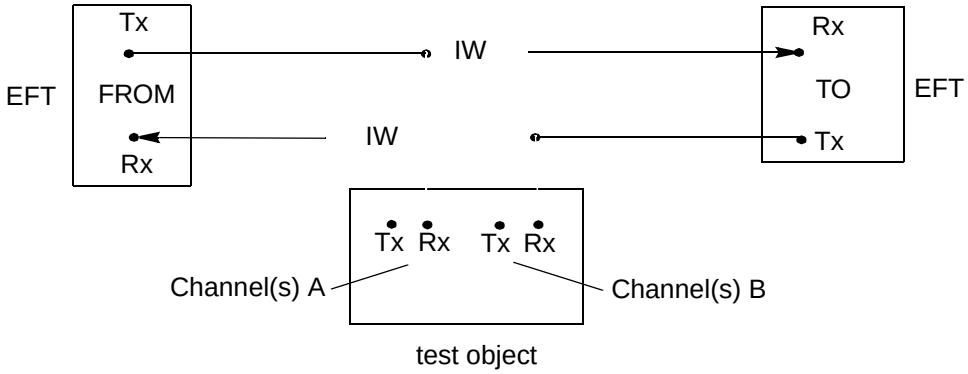


Figure 21-7. Illustration Of Monitor Test Access, TLA Applied in B(oth) Directions

Split Test Access

Description

In *SPLIT* access, transmission through the object under test is broken and the test signal is inserted at the break.

Split Mode Diagram

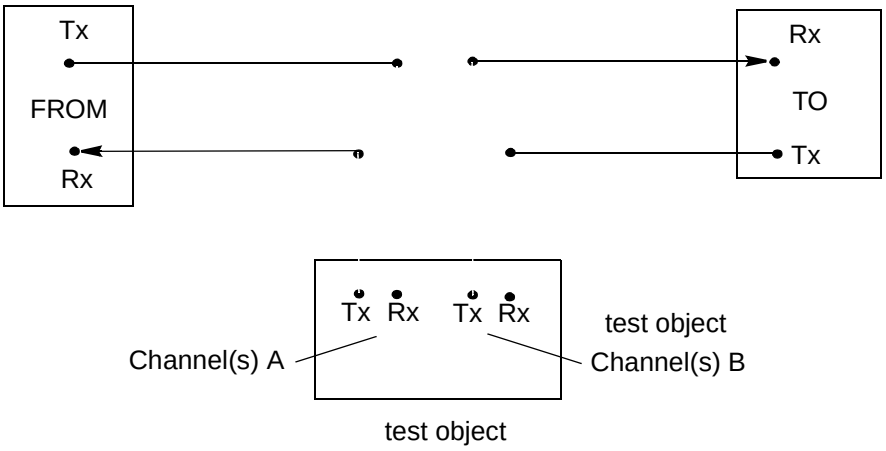


Figure 21-8. Illustration Of Split Test Access

The connection is completed through Channel(s) A by connecting Channel(s) A Tx to the FROM side Rx, and through Channel(s) B by connecting Channel(s) B Tx to the TO side Rx. Moreover, transmission from FROM Tx to TO Rx and from TO Tx to FROM Rx are broken. Although the old circuit still nominally exists, the TO side and the FROM side are both connected to the test object. The TO and FROM sides can transmit to each other only if the test object passes on the transmission externally to the DACS.

The test object both sends and receives. User test equipment can send signals to both the FROM and the TO sides of the object under test simultaneously and independently, simulating the old circuit if such simulation is desired.

Split Test Access (Continued)

Termination in TO Direction

If TLA is applied to the TO side, the traffic from the channel(s) B Tx to the TO side Rx is replaced with the **Insertion Word**.

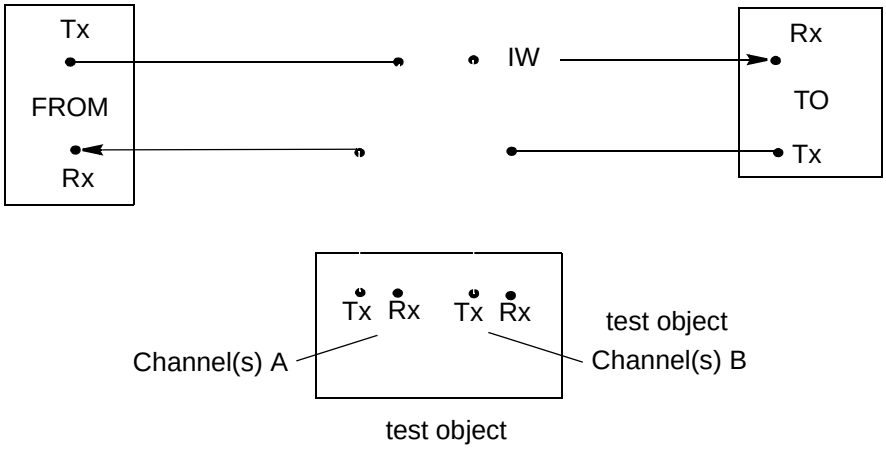


Figure 21-9. Illustration Of Split Test Access, TLA Applied in T Direction

Split Test Access (Continued)

Termination in FROM Direction

If TLA is applied to the FROM side of a circuit being tested in *SPLIT* **Status**, the return traffic from Channel(s) A Tx to the FROM side Rx is replaced by the **Insertion Word**.

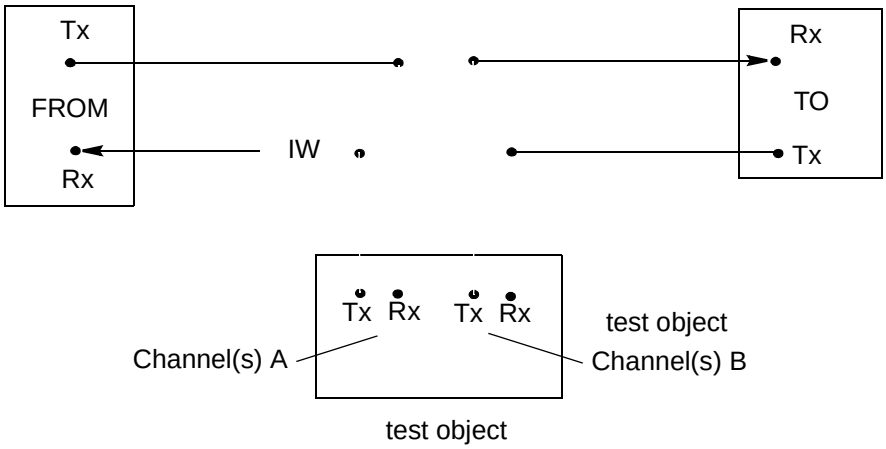


Figure 21-10. Illustration Of Split Test Access, TLA Applied in F Direction

Split Test Access (Continued)

Termination in BOTH Directions

If TLA is applied to both sides, there is still traffic from the FROM side Tx to Channel(s) A and from the TO side Tx to Channel(s) B.

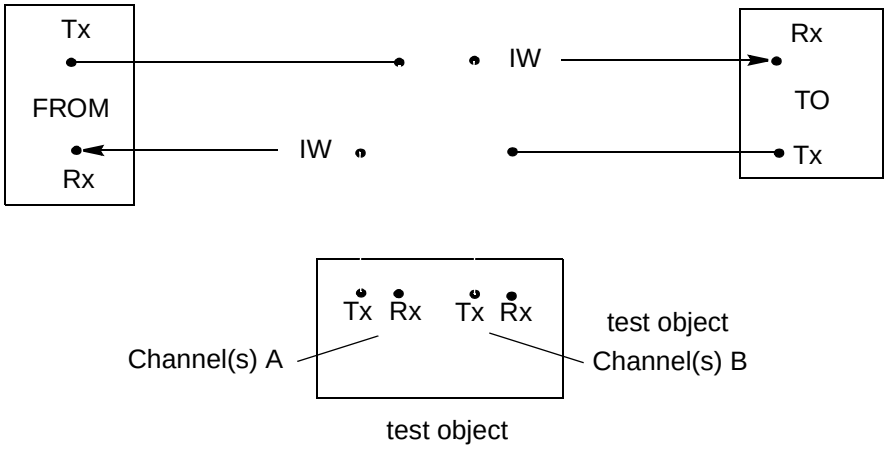


Figure 21-11. Illustration of Split Test Access, TLA Applied in B(oth) Directions

HUB Test Access

Description

The *HUB* **Action** provides a two-way cross-connection between some test object channels and other channels. With this capability, a remote test system in a HUB office can have test access to a DACS located in other offices via the HUB DACS. The *HUB* **Action** is, in fact, a way of displacing test objects to remote DACSs.

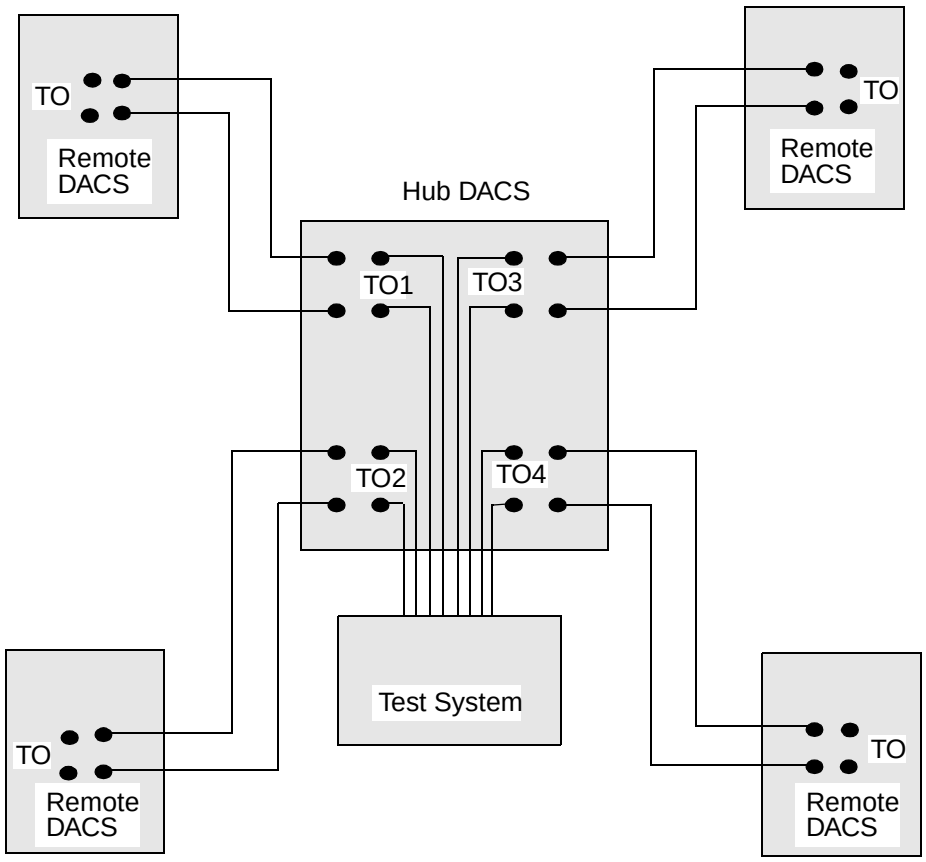


Figure 21-12. Illustration Of HUB Test Access

HUB Test Access (Continued)

HUB DACS

In Figure 21-12, channels for Test Objects 1 through 4 at the HUB DACS have been connected to a monitoring test system. In the HUB DACS, these channels have been provisioned as test objects and then have been cross-connected with a *HUB* **Action** to other EFTs, which lead to remote DACS.

Remote DACS

At a remote DACS, the far ends have been provisioned as test objects and may now be cross-connected to objects under test with a *MONITOR* **Action**. The monitoring is displaced to the test equipment at the HUB.

The LOOP Action

Description

The *LOOP* **Action** cross-connects a test object to itself. The test system can monitor and test the health of the test object. The channels of the test object are looped to themselves. The NPC and channels are test objects only for the duration of the loop and the test object cannot be used for a *MONITOR* or *SPLIT* while in the *LOOP* state.

The CHLOOP Action

Description

The *CHLOOP* **Action** loops DS0 channels for remote testing purposes. There are two ways to specify the DS0 channels to be looped:

- By NPC number and channel. The channel may be either unmapped or mapped in a two-point circuit. If the channel is mapped the *CHLOOP* **Action** will first take down the circuits in order to free the channel. The channel will then be looped back onto itself with a DACS one-way cross-connect command.
- By circuit ID. The *CHLOOP* **Action** will loop back both ends of the circuit by taking down the circuit at the DACS and looping back both ends of the circuit.

Restrictions

Only full-duplex circuits in the active state can be put in a CHLOOP state. The circuit must also be bandwidth 1, or a contiguous circuit with bandwidth greater than 1. High rate alternating circuits and random circuits cannot be put in a CHLOOP state.

The CHLOOP feature is an internal DND feature and not a DACS II feature. Circuits and channels in the CHLOOP state will be displayed as TG 999 in all Test Access Report reports and strings displayed to the user. The Test Access report displays channels that are under CHLOOP either directly or indirectly because their circuit is under CHLOOP. To find out what circuits are under CHLOOP, run a Channel Report for the channels that are under CHLOOP to see if they are in circuits.

The CHLOOP Action (Continued)

Audit/ Synchronization

The Database Audit feature will properly audit all circuits and channels in the CHLOOP state and report any discrepancies. Single channel interactive audit does not support CHLOOP. Database Synchronization is not available for circuits and channels in a CHLOOP state. Since CHLOOP is a DND feature and not a DACS II feature, some anomalies may occur. If a channel is put in a CHLOOP state in DACS ONLY mode, and a Frame Master SYNC is executed, the channel will appear to the DND as a one-way circuit. The DND will not know that the channel should be in a CHLOOP state, instead of a one-way circuit in the DND database.

NOTE:
The original circuit remains in the DND database even though the actual circuit has been taken down at the DACS. The circuit will still show an ACTIVE status in the Circuit Provisioning Form and in the Circuit and Channel reports. However, all attempts to delete the circuit will be denied.

Figure 21-13 illustrates the result of a CHLOOP Action on a channel.

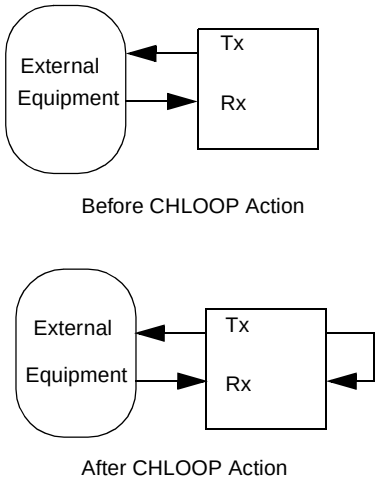


Figure 21-13. Illustration of CHLOOP Action on a Channel

The CHLOOP Action (Continued)

Figure 21-14 illustrates the result of a CHLOOP Action on a channel.

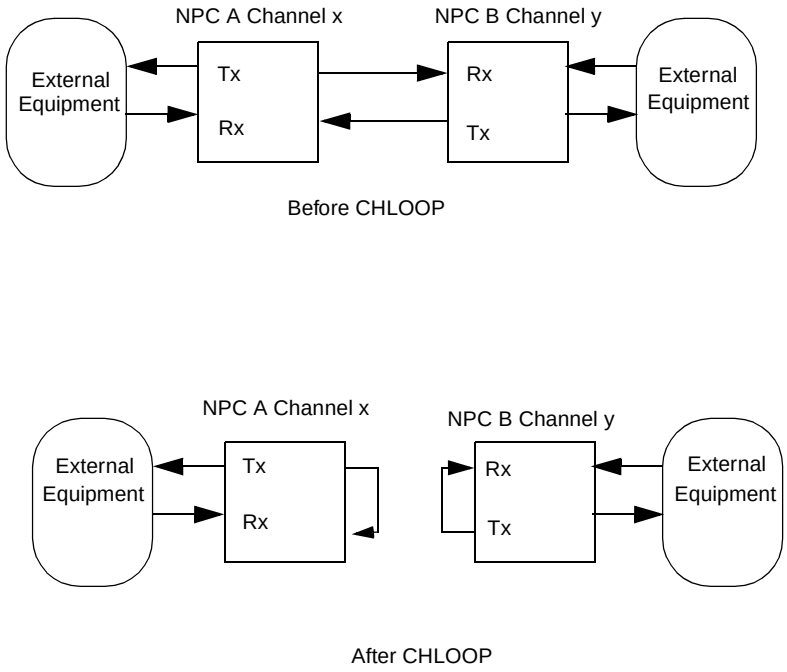


Figure 21-14. Illustration of the CHLOOP Action on a Circuit

The CHUNLOOP Action

Description

The CHUNLOOP action will reverse the action done by CHLOOP.

- By NPC number and channel. The CHUNLOOP **Action** will first disconnect the loop circuit. If the channel was originally mapped and a circuit was taken down by the *CHLOOP* **Action,** the original circuit will be put back.
- By circuit ID. The *CHUNLOOP* **Action** will disconnect both looped circuits and reactivate the original circuit.

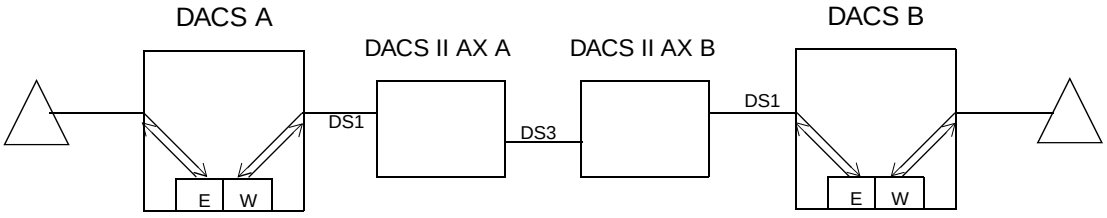
Integrated Test Set

Overview

The Integrated Test Set (ITS) feature provides the DACS II with a built-in Bit Error Ratio Tester (BERT) capability. ITS was developed for facility troubleshooting, providing the capability of generating, reading, and evaluating test signals from the DACS II without the use of external test sets. ITS test access is available for Nx64 kbit/s circuits ($1 \leq N \leq 24$ for North American NPCs and $1 \leq N \leq 31$ for international NPCs).

Testing a Network Circuit

The DND can use the ITS to test a network circuit as shown in the example below.



If the ITS on both DACS are in SPLIT state, the Integrated Test Access form can be used to control both test sets. When the bundle (East or West) is chosen for the Local Site in the form, the DND will automatically search the network circuit in that direction looking for a matching circuit under Test Access on an ITS in SPLIT state. If one is found, the Remote Site information will be populated on the form.

Each ITS is able to recognize and synchronize to the test signal types that it is generating. If each ITS is generating an identical signal, the monitoring section of the Integrated Test Access form will recognize and record any errors in the incoming channel.

ITS NPC Information

Overview

This section describes the ITS circuit pack and NPC types.

ITS Circuit Pack

The ITS is implemented on the Digital Signal Processing (DSP) circuit pack, TG193B. The DACS II TG193B pack generates and measures the test signals and provides a test access point.

Circuit Types Supported

ITS can be used with test access for fractional DS1 and E1 (Nx64 kbit/s) circuit testing for the SPLIT, HUB, and LOOP test access modes.

NOTE:
The only type of connections allowed on a ST-type NPC are test access connections. For example, CONN-CRS-T0, CONN-CRS1-T0, are not permitted.

ITS NPC Information (Continued)

Installing/ Growing ITS NPCs

To support ITS, the NPCs must be grown as ST-type NPCs. The two ST*xyz* types available are:

- ST100 - 32 channel FTM (International)
- ST110 - 24 channel FTM (North American).

Where the *x* value indicates the feature (*x*=1 indicates the ITS feature) and the *y* value indicates which FTM type the NPCs can be grown in (*y*=0 indicates the 32 channel FTM and *y*=1 indicates the 24 channel FTM).

Two NPCs can be grown on a TG193B card, providing a total of 64 channels (24 channels per NPC for the North American FTM and 32 channels per NPC for the International FTM).

The NPC type and possible card slot designations are illustrated in Table 21-3.

Table 21-3. STxyz Type Card Slot Designations

NPC Type	FTM Type	Possible FTM Card Slot Numbers
ST100	32 channel (International)	1 through 16 (32 NPCs/ FTM)
ST110	24 channel (North American)	1 through 20 (40 NPCs/ FTM)

Test Groups

ST-type NPCs must be provisioned as test groups. Test ports are not allowed for ST-type NPCs. Only one TG per pack can be in non-idle mode.

ITS Test Access

Overview

This section illustrates the test access modes available with ITS NPCs.

Test Access Modes

The following test access modes are supported for ITS NPCs:

- Monitor
- Split
- Hub
- Looped
- Release.

Figure 21-15 through Figure 21-19 illustrate each test access mode for Nx64 kbit/s circuits.

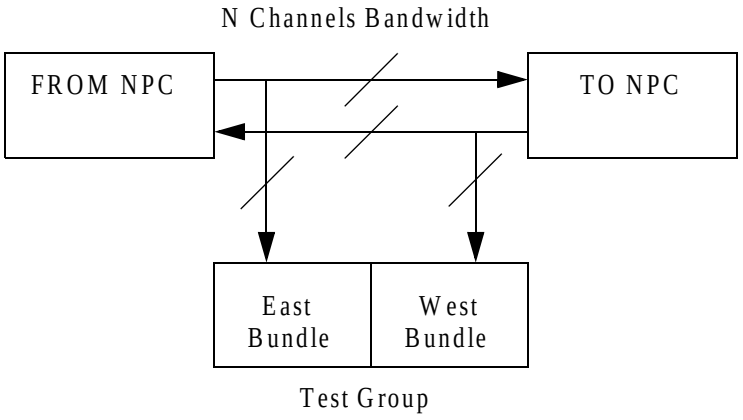


Figure 21-15. Test Access in Monitor Mode

(Continued on next page)

ITS Test Access (Continued)

Test Access Modes (Continued)

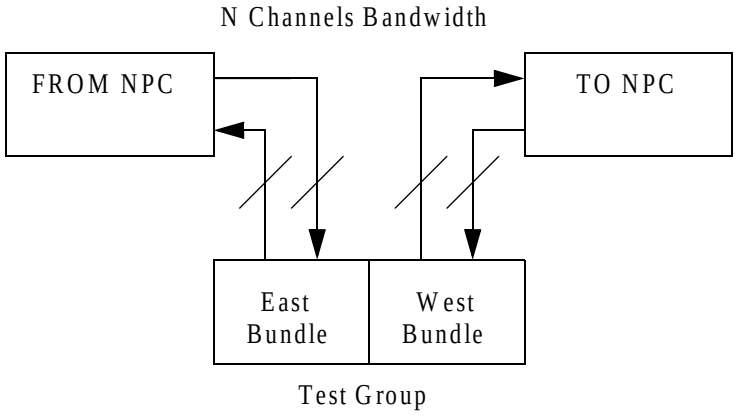


Figure 21-16. Test Access in Split Mode

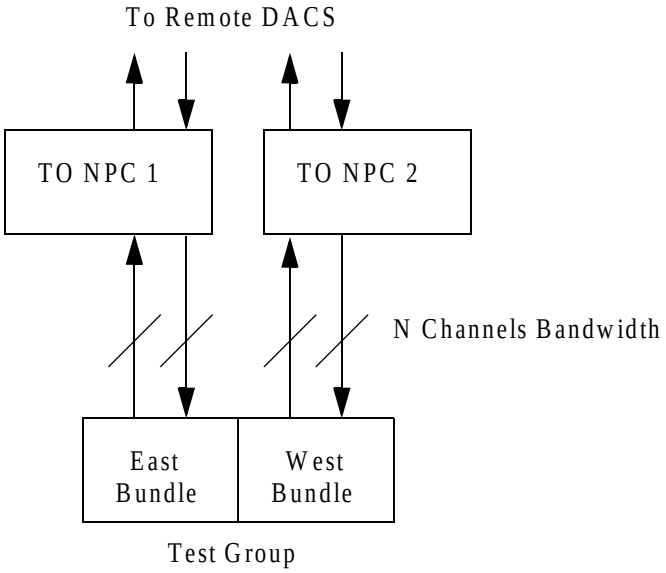


Figure 21-17. Test Access in Hub Mode

NOTE:
NPCs 1 and 2 could be the same NPC if the bandwidth is small enough.

(Continued on next page)

ITS Test Access (Continued)

Test Access Modes (Continued)

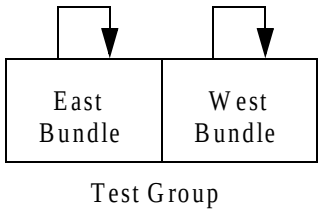


Figure 21-18. Test Access in Looped Mode

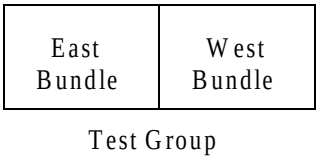


Figure 21-19. Test Access in Release Mode

ITS Test Access (Continued)

Test Signal Generation

Test signal generation will only be allowed in the SPLIT, HUB, and LOOP test access modes. While test signal generation is in progress, the test group will not be able to exit the SPLIT, HUB, or LOOP test access modes. Test signal generation cannot be stopped while test signal monitoring is in progress.

Each test group is comprised of the following two bundles:

- The East bundle
- The West bundle.

Each bundle consists N channels for an Nx64 kbit/s test access connection. The bundle of the test group (East or West) must be specified to indicate which side to transmit the signal to. An all ones signal (11111111) will be transmitted to the unspecified bundle. Only one bundle can be generating at a time.

Test Patterns

The ITS NPCs can generate the following types of test pattern for the Nx64 kbit/s test access:

- 511 PRBS (Pseudo-Random Binary Sequence)
- 2047 PRBS
- An 8-bit user-defined code (where the user selects the test pattern).

The 511 PRBS and 2047 PRBS conform to ITU Recommendation G.821.

Bit Errors

The ITS NPCs are able to insert a single bit error into the generated test signal for measuring purposes. The single bit error is created by inverting the first bit in the transmitted pattern in the next frame.

ITS Test Access (Continued)

Test Signal Monitoring

Like test signal generation, test signal monitoring will only be allowed in the SPLIT, HUB, and LOOP test access modes. Additionally, the Test Group must be in Generation mode prior to entering Test Signal Monitoring mode. While test signal monitoring is in progress, the test group will not be able to exit the SPLIT, HUB, or LOOP test access modes.

The ITS is able to recognize and synchronize to all test signal types that it is capable of generating. Additionally, the ITS is able to recognize any received bit errors in the incoming channel. In order for the ITS to be in synchronization, it must be monitoring the same signal it is generating. This can be accomplished with either a far end loopback on the remote site, or with a second ITS on the remote DACS generating an identical signal to this DACS.

Test Pattern Synchronization

The test pattern is considered in synchronization if there are 32 error-free clock cycles (frames with no errors).

Test Pattern Loss

The test pattern's synchronization is considered lost when the bit error ratio exceeds the following threshold for a period of 100 milliseconds:

- 20% for PRBS signals
- 4% for user-specified 8-bit patterns.

Test Pattern Resynchronization

Once the test pattern is declared lost, a resynchronization is automatically attempted.

ITS Test Access (Continued)

Error Performance Parameters

Error performance parameters are calculated by the ITS during test signal monitoring based on ITU Recommendation G.821. The following statistics are kept:

- Elapsed Time (S_{TOTAL}) - total time elapsed since entering the test signal monitoring mode.
- Out of Synchronization Seconds (S_{OOS}) - the number of seconds during which pattern synchronization was not maintained over the entire second.
- Unavailable Seconds ($S_{UNAVAIL}$) - a count of unavailable seconds.
- Available Seconds (S_{AVAIL}) - a count of available seconds.
  $S_{AVAIL} = S_{TOTAL} - (S_{UNAVAIL +} S_{OOS})$

  A period of unavailable time begins when the bit error rate (BER) is >= $1x10^{-3}$ for a period of ten consecutive seconds. These ten seconds are all unavailable time. A separate criteria exists for the transition from unavailable time to available time. A new period of available time begins at the onset of a period of ten consecutive seconds each of which has a BER < $1x10^{-3}$. These ten seconds are all available time.
- Bit Errors (BE) - count of logical bit errors detected.
- Bit Error Ratio (BER) - (Total Bit Errors)/(S_{AVAIL} - Data Rate).
- Errored Seconds (ES) - number of seconds in which one or more bits are in error.
- Severely Errored Seconds (SES) - number of seconds with BER >=$1x10^{-3}$.
- Errored Seconds Ratio (ESR) - ES/(S_{AVAIL}).
- Severely Errored Second Ratio (SESR) - SES/(S_{AVAIL}).

Test Monitoring Duration

The test can be set to last a period from 1 to 120 minutes, although the user is allowed to stop the test at any point. Additionally, the test interval does not have to be specified. If no time period is specified by the user, the test duration is open ended, and the test will stop only upon request from the user.

When the test is completed, a full set of error performance parameters will be displayed.

ITS Test Access (Continued)

Using the Integrated Test Set Form

The Integrated Test Set Form allows you to view the current state of the ITS and to do any of the following:

- Start or stop test signal generation
- Start or stop test signal monitoring
- Insert a bit error into the generated signal
- View the error performance parameters
- Select the signal to be generated or monitored
- Generate an Integrated Test Set report

If the DND detects a remote ITS, it's state will also be displayed and you can perform any of the actions listed above.

Start or Stop Test Signal Generation

To start or stop test signal generation on one bundle of a test access group (TG) currently in SPLIT, LOOP, or HUB test access modes, first select the pattern to generate then press Start Generation .

To stop test signal generation press Stop Generation .

For more information, see GT 21.10G, Initiate/Stop Test Signal Generation.

Inject a Bit Error

To inject a bit error in a generated signal, press Inject Bit Error . A single bit error should show up in the Bit Error field as follows:

- In the Monitor section of the Site 1 (Local) ITS if a far end loopback on the remote site has been set up.
- In the Monitor section of the Site 2 (Remote) ITS if a second ITS on the remote DACS is generating an identical signal to this ITS.

Start or Stop Test Signal Monitoring

To start test signal monitoring on one bundle of a test access group (TG) currently in SPLIT, LOOP, or HUB test access modes, and currently generating a test pattern, first select the Pattern to monitor, then press Start Monitoring .

To stop test signal monitoring press Stop Monitoring .

For more information, see GT 21.11G, Initiate/Stop Test Signal Monitoring.

(Continued on next page)

ITS Test Access (Continued)

Monitoring a Test Signal

The Monitor section lets you view the following:

- Error performance parameters
- Elapsed time
- The time that the error performance parameters were last updated

Additionally, you can click on the Retrieve Counts button to get the latest error performance parameters.

Generate an Integrated Test Set Report

Click on the Report button to generate an Integrated Test Set report. The report contains information about the monitoring interval. It records the beginning of a monitoring interval and records the counts when the interval ends.

DND GUI: Test Access Form

Sample Form

Figure 21-20 provides an example of a TEST ACCESS form.



Figure 21-20. DND GUI: TEST ACCESS Form

DND GUI: The TEST ACCESS Form (Continued)

Field Descriptions

The field descriptions for the TEST ACCESS form are listed in Table 21-4:

Table 21-4. DND GUI: Field Descriptions for the TEST ACCESS Form

Field	Description
Site Name	(Combo box) Mandatory. Select the name of the DACS where the requested **Action** will take place. Clicking this field will display a list of DACS names. By default, the list appears alphabetically. To change the sorting order, modify the setting for the SORT_NAME_BY variable using the DND Forms Interface.
Action	(Combo box) Mandatory. Specifies the TEST ACCESS operation. The valid actions are: ■ *MONITO*R - Connects an object under test, and any *ACTIVE* or *ALTROUTED* circuit/channel(s) containing the object under test, to a test object. The test object will receive data from the object under test without disrupting traffic. The **Test State** field must be *RELEASE* or *SPLIT*. ■ *SPLIT* - Connects both transmit and receive FROM and TO sides of an existing two-way circuit/unmapped channel(s) to the test object. The FROM and TO sides can then be tested simultaneously and independently. ■ *HUB* - Connects a test object in such a way that the local DACS is used as a test access concentrator, with the local test object connected to a remote test object on another DACS.

Table 21-4. DND GUI: Field Descriptions for the TEST ACCESS Form (Continued)

Field	Description
Action, Continued	■ *TERMINATE* - For a test object testing in the *MONITOR* or *SPLIT* mode, replaces the normal signal with the **Insertion Word** signal. The **Direction** field appears and you must enter a direction, when the **Action** is *TERMINATE* or *UNTERMINATE.* The extent of the replacement depends on the direction selected. You can select a replacement of the signal in the *TO* direction of the object under test, in the *FROM* direction or in *BOTH* directions for a two-way circuit. See also under the **Direction** field. ■ *UNTERMINATE* - Resumes the normal signal(s) when a *TERMINATE* has been in effect. As in the case of *TERMINATE*, the part of the circuit to be affected is specified by the **Direction** field. ■ *RELEASE* - is connects a test object from an object under test and makes the test object available for reuse. With the *OOS* option, the test object may be released even if it is out of service. ■ *LOOP* - Loops channels of a test object so that they can be tested. ■ *CHLOOP* - Loops DS0 channels for remote testing purposes. ■ *CHUNLOOP* - Unloops a DS0 channel that previously has been looped for remote testing purposes. ■ *TEST-SET* - Initiates signal generation or signal monitoring for an Integrated Test Set

Table 21-4. DND GUI: Field Descriptions for the TEST ACCESS Form (Continued)

Field	Description
Direction	(Radio buttons) The circuit ends for which **Insertion Word** is to be substituted for the normal signal when the *TERMINATE* **Action** is requested, or the circuit ends for which normal transmission is to resume when the *UNTERMINATE* **Action** is requested. This field only appears when you request a *TERMINATE* or *UNTERMINATE* **Action**. The choices are: ■ *FROM* - Replace the signal to the FROM channel with **Insertion Word**. ■ *TO* - Replace the signal to the TO channel with **Insertion Word**. ■ *BOTH* - Replace the signals to the FROM and TO channels with **Insertion Word**.
OOS	(Check box) Appears for the *RELEASE* **Action** only. The values are: ■ *Selected* - DACS to allow the release request to succeed when the test group or an NPC of the object under test is out of service. ■ *Unselected* - Default. Allows DACS to deny the release request if the NPC is out of service.
Test Specifier	(Radio buttons) Not mandatory. Check and specify either a Circuit ID or Test Group Number. If the **ACTION** is *MONITOR* and the Test Specifier is left blank, then you will test an unmapped channel.

Table 21-4. DND GUI: Field Descriptions for the TEST ACCESS Form (Continued)

Field	Description
Initial Test State	(Read-only field) A display-only field indicating the operating status of the test object connections, as follows: ■ *IDLE* - Displayed when the test object is not in use. ■ *MONITOR* - Displayed when *MONITOR* access is in effect. ■ *SPLIT* - Displayed when *SPLIT* access is in effect. ■ *HUB* - Displayed when *HUB* access is in effect. ■ *LOOP* - Displayed when *LOOP* access is in effect. ■ *CHLOOP* - Displayed when *CHLOOP* access is in effect. The **Initial Test State** field reflects the last successful **Action**.
Object Type	The type of test object. The valid types of objects are: ■ *TG* - The object is a test group, which will be automatically provisioned as required for test access.
Number	(Text field) The number of the test object to be used for performing tests. The DND selects the number by default; however, you may enter a test group number. If the test group was provisioned, the fields corresponding to this number test group are filled in. ■ *Test Group* - DACS II Releases prior to 6.0 and DACS II ISX prior to 1.1 do not support this feature. The range is *1* through *400* with DACS II Generic 6.0 and later, and *1* through *100* for DACS II ISX.

Table 21-4. DND GUI: Field Descriptions for the TEST ACCESS Form (Continued)

Field	Description
Bandwidth	(Combo box) The bandwidth of the test object. ■ *Test Group* - If the object under test is an unmapped circuit, enter the desired bandwidth. For valid bandwidths, refer to the **Bandwidth** field in the Field Description tables in Chapter 9, Circuit Provisioning. ■ *Mapped Channels* - If the object under test is a mapped circuit, the **Bandwidth** will be filled in automatically.
Trunk Conditioning	(Text field) Enter the Trunk Conditioning Code for the *LOOP* or *MONITOR* **Actions** of a new Test Group. For valid Trunk Conditioning codes, refer to the **Trunk Conditioning** field in the Field Description tables in Chapter 9, Circuit Provisioning.
Insertion Word	(Text field) This field complements **Trunk Conditioning**. For valid codes, refer to the **Insertion Word** field in the Field Description tables in Chapter 9, Circuit Provisioning.

Table 21-4. DND GUI: Field Descriptions for the TEST ACCESS Form (Continued)

Field	Description
(Test Object and Object Under Test FROM/TO) NPC Specifier/NPC	(Radio buttons and text field) Mandatory. Fields for specifying the NPCs of the Test Object and Object Under Test. The three choices for entering NPC data are: ■ *ID* - If selected, Enter the NPC name in the **NPC:** field. (For OBJECT UNDER TEST mapped channels, this is a read-only field.) ■ *Hier* - If selected, enter the NPC's hierarchical number in the **NPC:** field ■ *Extd* - If selected, enter the NPC's extended number in the **NPC:** field.
(Test Object and Object Under Test FROM/TO) Channel	(Test field) 2 numeric digits. Enter the first channel to be used as the FROM side and TO side. For mapped test access, the OBJECT UNDER TEST **Channel** fields are read-only. The TEST OBJECT **Channel** fields will always be *Contiguous*.
New Test State	(Read-only field) A display-only field indicating the new operating status of the test object connections, as follows: ■ *IDLE* - Displayed when the test object is not in use. ■ *MONITOR* - Displayed when *MONITOR* access is in effect. ■ *SPLIT* - Displayed when *SPLIT* access is in effect. ■ *HUB* - Displayed when *HUB* access is in effect. ■ *LOOP* - Displayed when *LOOP* access is in effect. ■ *CHLOOP* - Displayed when *CHLOOP* access is in effect.

DND GUI: Integrated Test Set Form

Sample Form Figure 21-21 provides an example of a INTEGRATED TEST SET form.



Figure 21-21. DND GUI: INTEGRATED TEST SET Form

DND GUI: The Integrated Test Set Form (Continued)

Field Descriptions

The field descriptions for the TEST ACCESS form are listed in Table 21-5:

Table 21-5. DND GUI: Field Descriptions for the INTEGRATED TEST SET Form

Field	Description
Site Name	(Read-Only) The name of the DACS selected in the TEST ACCESS Form.
TG Number	(Read-Only) The number of the test group selected in the TEST ACCESS Form.
Bundle	(Radio Buttons) The bundle of the Test Set to be used. ■ *East* ■ *West*
Pattern	The test pattern to be generated: ■ 511 PRBS (Pseudo-Random Binary Sequence) ■ *2047 PRBS* ■ *User Def* - An 8-bit user-defined code (where the user selects the test pattern) entered in the **Pattern Word** field.
Pattern Word	(Text Field) An 8-bit user-defined code for the test pattern.
Signaling Word	(Text Field) An 8-bit user-defined code.
Test Duration	(Text Field) The test can be set to last a period from 1 to 120 minutes, although the user is allowed to stop the test at any point. If left blank, the test runs until it is stopped manually.
Elapsed Time	(Read-Only) Total time elapsed since entering the test signal monitoring mode.
Last Updated	(Read-Only) The time that the error parameters were last updated.
Bit Errors	(Read-Only) Count of logical bit errors detected.
Errored Seconds	(Read-Only) Number of seconds in which one or more bits are in error.
Severely Errored Seconds	(Read-Only) Number of seconds with BER >=$1x10^{-3}$.

Table 21-5. DND GUI: Field Descriptions for the INTEGRATED TEST SET Form (Continued)

Field	Description
BE Ratio	(Read-Only) Total **Bit Errors** divided by **Elapsed Time**.
ES Ratio	(Read-Only) **Errored Seconds** divided by **Elapsed Time**.
SES Ratio	(Read-Only) **Severely Errored Seconds** divided by **Elapsed Time**.
Out of Sync Seconds	(Read-Only) The number of seconds during which pattern synchronization was not maintained over the entire second.
Available Seconds	(Read-Only) **Elapsed Time** - (**Out of Sync Seconds** + **Unavailable Seconds**).
Unavailable Seconds	(Read-Only) A period of unavailable time begins when the bit error rate (BER) is >= $1x10^{-3}$ for a period of ten consecutive seconds. These ten seconds are all unavailable time. A separate criteria exists for the transition from unavailable time to available time. A new period of available time begins at the onset of a period of ten consecutive seconds each of which has a BER < $1x10^{-3}$. These ten seconds are all available time.

DND Forms: The TEST ACCESS Form

Sample Form

Select TEST ACCESS from the MAIN MENU. The TEST ACCESS form is displayed. A sample TEST ACCESS form is shown in Figure 21-22.

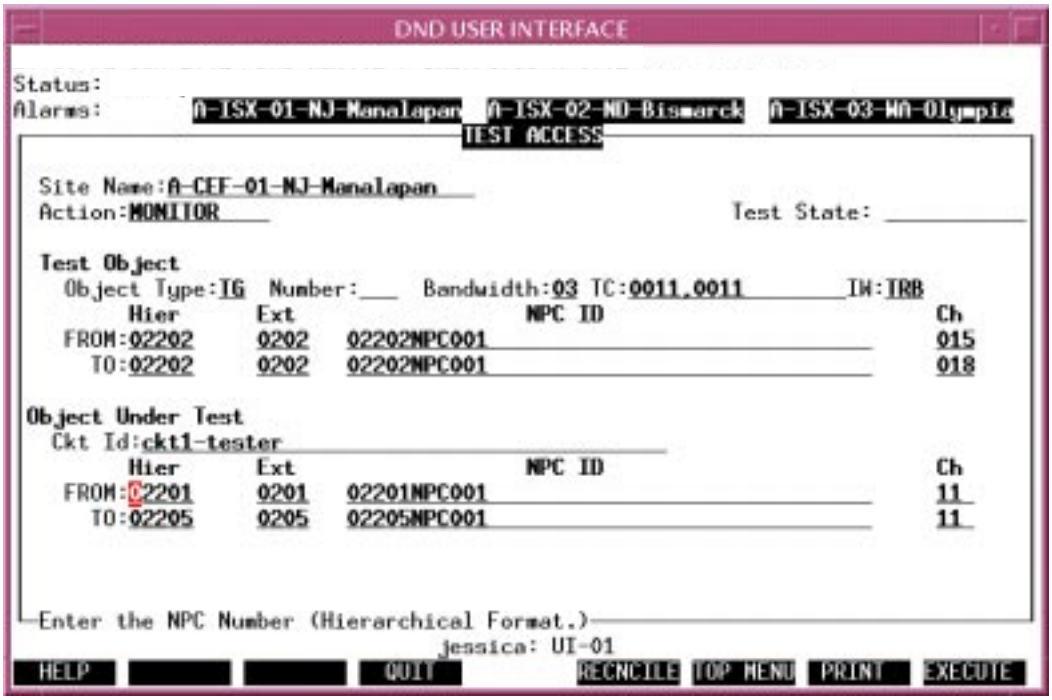


Figure 21-22. DND Forms: TEST ACCESS Form

DND Forms: The TEST ACCESS Form (Continued)

Field Descriptions

The field descriptions for the TEST ACCESS form are described in Table 21-6.

Table 21-6. DND Forms: TEST ACCESS Form Field Descriptions

Field	Description
Site Name	Mandatory. The name of the DACS where the requested **Action** will take place. Enter or press CHOICES to select a Site Name. Site Names are created from the FRAME ADMINISTRATION form. See Chapter 5 for more details.
Action	■ Mandatory. Specifies the TEST ACCESS operation. The valid actions are: ■ *MONITOR* - Connects an object under test, and any *ACTIVE* or *ALTROUTED* circuit containing the object under test, to a test object. The test object will receive data from the object under test without disrupting traffic. The **Test State** field must be *RELEASED* or *SPLIT*. ■ *SPLIT* - Connects both transmit and receive FROM and TO sides of an existing two-way circuit to the test object. The FROM and TO sides can then be tested simultaneously and independently. ■ *HUB* - Connects a circuit to a test object in such a way that the local DACS is used as a test access concentrator, with the local test object connected to a remote test object on another DACS.

Table 21-6. DND Forms: TEST ACCESS Form Field Descriptions (Continued)

Field	Description
Action (Continued)	■ *TERMINATE* - For a test object testing a circuit in the *MONITOR* or *SPLIT* mode, replaces the normal signal with the IW signal. The **Direction** field appears and you must enter a direction, when the **Action** is *TERMINATE* or *UNTERMINATE*. The extent of the replacement depends on the direction selected. You can select a replacement of the signal in the TO direction of the object under test, in the FROM direction or in BOTH directions for a two-way circuit or on all branch LEGS toward facilities for a multipoint circuit. See also under the **Direction** field. ■ *UNTERMINATE* - Resumes the normal signal(s) when a *TERMINATE* has been in effect. As in the case of *TERMINATE*, the part of the circuit to be affected is specified by the **Direction** field. ■ *RELEASE* - Disconnects a test object from an object under test and makes the test object available for reuse. With the OOS option, the test object may be released even if it is out of service. ■ *LOOP* - Loops channels of a test object so that they can be tested. ■ *CHLOOP* - Loops DS0 channels for remote testing purposes. ■ *CHUNOOP* - Unloops a DS0 channel that previously has been looped for remote testing purposes.

Table 21-6. DND Forms: TEST ACCESS Form Field Descriptions (Continued)

Field	Description
Direction	The circuit ends for which IW is to be substituted for the normal signal when the *TERMINATE* **Action** is requested, or the circuit ends for which normal transmission is to resume when the *UNTERMINATE* **Action** is requested. This field only appears when you request a *TERMINATE* or *UNTERMINATE* **Action**. The choices are: ■ *F* - Replace the signal to the FROM channel with IW. ■ *T* - Replace the signal to the TO channel with IW. ■ *B* - Replace the signals to the FROM and TO channels with IW. ■ *L* - Replace the signals on all branch LEGS toward facilities for a multipoint circuit with IW.
OOS	This field appears for the *RELEASE* **Action** only. The values are: ■ *Y* - Requests DACS to allow the release request to succeed when the test group or test port group NPC or an NPC of the object under test is out of service. ■ *N* -Default. Allows DACS to deny the release request if the NPC is out of service.
Test State	A display-only field indicating the operating status of the test object connections, as follows: ■ *RELEASED* - is displayed when the test object is not in use. ■ *MONITOR* - is displayed when *MONITOR* access is in effect. ■ *SPLIT* - is displayed when *SPLIT* access is in effect. ■ *HUB* - is displayed when *HUB* access is in effect. ■ *LOOP* - is displayed when *LOOP* access is in effect. ■ *CHLOOP* - is displayed when *CHLOOP* access is in effect. The **Test State** field reflects the last successful **Action**.

Table 21-6. DND Forms: TEST ACCESS Form Field Descriptions (Continued)

Field	Description
Object Type	The type of test object. The valid types of objects are: ■ *TP* - The object is a test port, and therefore user test port provisioning is required. ■ *TG* - The object is a test group, which will be automatically provisioned as required for test access.
Number	The number of the test object to be used for performing tests. If **Object Type** is *TP*, enter the test port number. If **Object Type** is *TG*, the DND selects the number by default; however, you may enter a test group number. If the test group was provisioned, the fields corresponding to this number test group are filled in. ■ *Test Port* - The range is *1* through *48* with DACS II generics prior to 6.0 and 1 through 96 with DACS II Generic 6.0 and later and DACS II ISX. ■ *Test Group* - DACS II generics prior to 6.0 and DACS II ISX prior to 1.1 do not support this feature. The range is *1* through *400* with DACS II Generic 6.0 and later, and *1* through *100* for DACS II ISX.
Bandwidth	The bandwidth of the test object. Values are as follows. ■ *Test Port* - Only a value of 1 is allowed. The default is *1*. ■ *Test Group* - If the object under test is a mapped circuit, enter nothing. Regardless of what you enter, the bandwidth will be taken from the object under test. If the object under test is an unmapped circuit, enter the desired bandwidth. For valid bandwidths, refer to the **Bandwidth** field in the Field Description tables in Chapter 9, Circuit Provisioning.
TC	This field appears for the *LOOP, MONITOR, SPLIT* and *HUB* **Action**s only. Enter the Trunk Conditioning Code that is to apply to the test connection. For valid TC codes, refer to the **TC** field in the Field Description tables in Chapter 9, Circuit Provisioning.

Table 21-6. DND Forms: TEST ACCESS Form Field Descriptions (Continued)

Field	Description
IW	This field complements **TC**. For valid IW codes, refer to the **IW** field in the Field Description tables in Chapter 9, Circuit Provisioning.
AtoMU	This field appears for the *MONITOR, SPLIT* and *HUB* **Action**s for Test Port test access only. The values are: ■ *Y* - Specifies A-law to Mu-law (also called x-law) conversion on a CEPT-type NPC in a Gateway type of test connection; this conversion can apply to the signal coming from either the object under test or from the test object itself. ■ *N* - Default. Disables the A-law to Mu-law conversion.
Test Object FROM Hier	This and the following three fields are the identifying information of the test object. Their values depend on the test object. ■ *Test Port* - Filled in automatically. A blank value means you have not provisioned the test port. ■ *Test Group* - The hierarchical NPC number of the NPC to be used as the FROM side of the test object. Alternatively, you may enter the extended number or the **NPC ID**. Whichever you enter, the other two fields are filled in. The NPCs must be in service.
Test Object FROM Ext	The value depends on the test object type. ■ *Test Port* - Filled in automatically. ■ *Test Group* - The extended NPC number of the NPC to be used as the FROM side of the test object.
Test Object FROM NPC ID	The value depends on the test object type. ■ *Test Port* - Filled in automatically. ■ *Test Group* - The ID of the NPC to be used as the FROM side of the test object.

Table 21-6. DND Forms: TEST ACCESS Form Field Descriptions (Continued)

Field	Description
Test Object FROM Ch	The value depends on the test object type. ■ *Test Port* - Filled in automatically. ■ *Test Group* - The first channel to be used as the FROM side of the test object. The allocation of channels depends on the **Bandwidth** and the **Bandwidth Type** of the object under test. You must insure that the test group has sufficient available channels.
Test Object TO Hier, Ext, NPC ID, Ch	The same information as for the Test Object FROM side, but referring to the TO side. FROM and TO NPCs may be the same, if the test connection calls for only one; for example, if FROM and TO are only different channels in the same NPC.
Object Under Test Ckt ID	The **Ckt ID** of the circuit to be made an object under test, if you are going to test a circuit. For unmapped channels, leave blank.
Termination State	Information concerning the termination of the object under test. ■ *F* - Terminated in FROM direction. ■ *T* - Terminated in TO direction. ■ *B* - Terminated in both directions. ■ blanks - Unterminated in both directions.
Channel Connection fields	Identify the object under test. Their values depend on the **Object Type** and the **Action**. For the *LOOP* **Action**, in which there is no object under test, the fields do not appear. If the object to be tested has been mapped, you can identify it by filling in either the **Ckt ID** or the lowest numbered FROM or TO channel along with its NPC. The remaining information is automatically filled in. If the object to be tested is an unmapped channel, you must specify the lowest-numbered channel to be tested.

Changes to Test State

Test States

With the exception of *TERMINATE* and *UNTERMINATE*, a TEST ACCESS **Action** requests a change in the **Test State**. **Test State** values can succeed each other only in a certain order; for example, certain **Action**s succeed only when requested from certain **Test States**.

Allowed Test State Sequences

The allowed **Test State** sequences are shown in Table 21-7.

To read the Test State Sequences table, follow these steps:

1. Look up the row of the current **Test State** down the left-hand column of the table.
2. Look up the column of the desired **Test State** across the top of the table.
3. Read the **Action** at the intersection of the row and column. A dash indicates that the **Action** is not allowed. **X** indicates the **Action** is allowed.

An attempt to enter an **Action** that is not allowed for the **Test State** results in the appropriate denial message.

Table 21-7. Allowed Test State Sequences

Current Test State	Desired Test State					
	MONITOR	SPLIT	HUB	LOOP	CHLOOP	RELEASED
MONITOR	-	X	-	-		X
SPLIT	X	-	-	-		X
HUB	-	-	-	-		X
LOOP	-	-	-	-		X
CHLOOP	-	-	-	-	-	X
RELEASED	X	-	X	X	X	-

Backup and Restore

22

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Background

Introduction

DND enables you to maintain backups on the DND database.

Menu Options

To perform database backup and restore functions:

- From the DND GUI interface, select Database Backup/Restore from the Provisioning menu. The DND GUI interface allows you to backup and restore from tape the databases for all of the DACS and SNMP nodes in DND. Additionally, you can schedule recurring or one time backups of all the DND databases.
- From the DND Forms interface, select Database Administration from the Main Menu, then select Backup/Restore. The DND Forms interface allows you to backup and restore databases to and from tape. The DND Forms interface also provides choices for backing up alarm logs to and from tape and diskette and for saving report formats to diskette.

NOTE:
If there are any SNMP nodes identified in DND, you cannot back up any databases to tape from the DND Forms interface.

Objectives

This chapter provides background information to help you perform the following:

From the DND GUI interface:

1. Create tape backups and restore backups from tape.
2. Schedule tape backups.

From the DND Forms interface:

1. Create tape backups and restore backups from tape.
2. Format a diskette.
3. Create backup logs on diskette and restore logs from diskette.
4. Backup report formats.

Background (Continued)

Related tasks

For related tasks, see the following General Tasks in Volume II:

DND GUI:

- Back up to Tape GT 22.1G
- Restore from Tape GT 22.2G
- Schedule a Back up of the DND Databases to Tape. GT 22.3G

DND Forms:

- Back up Selected Databases to Tape GT 22.1U
- Restore Selected Databases from Tape GT 22.2U
- Back up All Databases to Tape GT 22.3U
- Restore All Databases from Tape GT 22.4U
- Back up Selected DACS Alarm Logs to Tape GT 22.5U
- Restore Selected DACS Alarm Logs from Tape GT 22.6U
- Back up All DACS Alarm Logs to Tape GT 22.7U
- Restore All DACS Alarm Logs from Tape GT 22.8U
- Formatting a Diskette GT 22.9U
- Back up a DACS Alarm Log to Diskette GT 22.10U
- Restore a DACS Alarm Log from Diskette GT 22.11U
- Back up/Restore Report Formats to Diskette GT 22.12U
- Moving a Database from One DND to Another GT 22.13U

Backup and Restore of DND Databases

DND Databases

The DND maintains the following databases:

- The COMMON database which contains global information such as logins, network elements, and report formats.
- The DACS databases, one for each DACS (DACS II and DACS II ISX). Each DACS database contains provisioning and related information for the DACS.
- The SNMP node data (DACS II AX, AAC, IMACS, PSAX, Other) which contains a group of databases each of which holds a cluster of SNMP node data.

NOTE:
When you backup or restore a DACS database, the database at the DACS is not affected.

Options for Backup and Restore

You have access to each of the following types of options for backup and restore:

- The COMMON database can be written to tape from the DND GUI and the DND Forms interface.
- A DACS database can be written to tape from the DND GUI and the DND Forms interface.
- The SNMP node data can be written to tape from the DND GUI only.
- The Reports formats, contained in the COMMON database, can be written to diskette from the DND Forms interface only.
- The DACS Alarm Logs can be written to diskette or to tape from the DND Forms interface. SNMP Alarm Logs cannot be backed up from the DND Forms interface.
- All databases, COMMON, DACS, and SNMP, can be written to tape from the DND GUI only.

NOTE:
If there are any SNMP nodes identified in DND, you cannot back up any databases to tape from the DND Forms interface.

Backup and Restore of DND Databases (Continued)

Overwriting Contents of Tape

All backup actions to tape or diskette will overwrite the current contents of the media.

Restore Action

Before restoring the COMMON database, *REMOVE* all frames from service (refer to Chapter 5, NE Provisioning).

Reasons for Backup/Restore Failure

A backup or a database restore may fail if one of the following conditions exist:

- A FRAME ADMINISTRATION/NE Provisioning request is in progress, for example, adding or deleting a DACS, or changing the name of a DACS.
- The tape or diskette is not inserted.
- The tape cartridge or diskette write-protect switch is on.
- The tape drive is not properly connected.

A database restore may also fail or be denied:

- The database on the tape was not created from the same DACS release that is currently running on the DND.
- The language on the database is not consistent with the language of the DND.
- If you try to restore a database or log that was created from an older release of DND in to a newer release of DND.
- There is a database for a network element on the tape that does not exist on the DND and you are not restoring the COMMON database.

Backup and Restore of DND Databases (Continued)

Important Notes

NOTE:
On successful completion of a *COMMON* database *RESTORE*, the DND system restarts.

WARNING:
Restoral of the COMMON database where the current DND hardware ports configuration is not identical to that of the backup DND may cause the system to run in a faulty manner.

WARNING:
Before doing a FULL RESTORE, or any restore that involves the COMMON database, it is recommended that all DACSs be removed from service. It is also recommended that all users be logged off before doing a FULL RESTORE

WARNING:
Only one database backup or restore can be executed on the DND from either the UI or the GUI. Do not attempt to run more than one tape action on the system.

NOTE:
In general, users can continue to work while a backup is in progress. Actions, however, which are "network actions" cannot be updated while a backup is in progress. Network actions update multiple databases, and it is important that the copy of the databases on the tape is consistent with respect to network data. These actions will be denied while a backup is in progress: Intertie provisioning, End User provisioning, and NE Provisioning (if the backup happens to be operating on that NE simultaneously).

Backup and Restore of DND Databases (Continued)

Selective Restore

A selective restore is primarily for special use and for controlled circumstances. A selective restore is used when "moving" a database from one workstation to another workstation. In this case the DACS database is newly created on the new workstation. Refer to GT 22.13U for the procedure.

Selective restore of a DACS database is discouraged. Do not perform a SELECTIVE RESTORE that includes the COMMON database unless you are certain that the configuration information on the existing COMMON database and the one on tape is the same.

Database Retrofit Restore

It is possible to retrofit databases from tape using the BACKUP/RESTORE Form at the UI or at the GUI. If you insert a tape with a database which was made by an older release of the DND the form will provide an error message if that database cannot be restored from that form, or will warn you that the database is from an older release and request confirmation to allow a retrofit.

Refer to the Software Release Document for details about performing a database retrofit.

DND GUI: Backing up and Restoring the DND Database from Tape

Description

From the DND GUI Backup/Restore form, you can backup or restore the DND database. It is recommended that you do a complete backup and a complete restore, rather than backup or restore information for selected sites.

Backup

Figure 22-1 shows the *BACKUP* Action on the BACKUP/RESTORE form.



Figure 22-1. DND GUI: Database Backup/Restore Form - Backup Action

Note that the STATUS line displays messages for the start and end of each database backup/restore. This notifies the user of the current action.

DND GUI: Backing up and Restoring the DND Database from Tape (Continued)

Using Stop or Abort

If you click **Stop** or select the ABORT Action from the Database Backup/Restore Form before the backup is complete, the backup may be incomplete and the tape will not be able to be used to restore.

See GT 22.1G and GT 22.3G for details on the procedure for using the *BACKUP* Action.

DND GUI: Backing up and Restoring the DND Database from Tape (Continued)

Restore

Figure 22-2 shows the *RESTORE* Action on the Database Backup/Restore form.



Figure 22-2. DND GUI: Database Backup/Restore - Restore Action

Note that the STATUS line displays messages for the start and end of each database backup/restore. This notifies the user of the current action.

DND will restart when a *RESTORE* Action with the COMMON database has been successfully completed.

If you click **Stop** before the restore is complete, the restore may be incomplete.

See GT 22.2G for details on the procedure for using the *Restore* Action.

DND GUI: Backing up and Restoring the DND Database from Tape (Continued)

Scheduled Backup

Figure 22-3 shows a sample Database Backup/Restore form after a scheduled backup has been selected.



Current Site Choices is not a valid selection for a scheduled backup. Only full backups (all sites) can be scheduled.

Set date and time for a scheduled backup

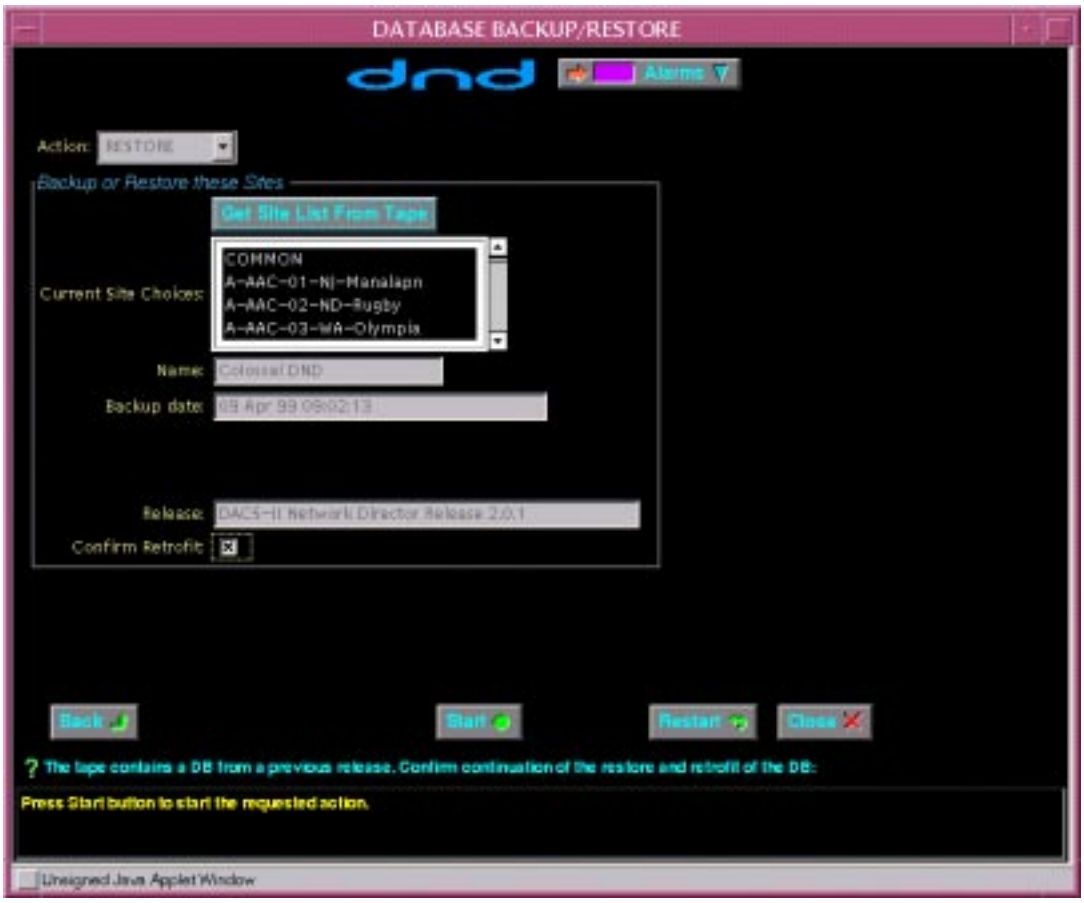
Schedule a periodic backup by selecting the number of repetitions, an interval, and scale. A *0* in the **Number of times** field means to repeat forever.

Figure 22-3. DND GUI: Database Backup/Restore -Scheduling a Backup

DND GUI: Backing up and Restoring the DND Database from Tape (Continued)

Database Retrofit

Figure 22-4 shows a sample Database Backup/Restore form when an older database has been selected for a Database Restore.



Release number of database on tape. Confirm to perform restore.

Figure 22-4. DND GUI: Database Backup/Restore - Database Retrofit

DND GUI: Database Backup/Restore Form

Field Descriptions

The field values for the DATABASE BACKUP/RESTORE form are described in Table 22-1.

Table 22-1. DND GUI: Field Descriptions for DATABASE BACKUP/ RESTORE Form

Field	Description
Action	(Combo box) Mandatory. The values are: ■ *BACKUP* - Backup to tape. ■ *RESTORE* - Restore from tape. ■ *ABORT* - Abort current scheduled backup or another user's running backup. **NOTE:** A backup which is started as a scheduled task by another user on the GUI can be aborted. From any GUI which has permission to use the Database Backup/Restore form, choose the *ABORT* action and **Execute** the form. When the currently running action is completed on the current database then the backup will be stopped and notification will be broadcast on the status line.
Current Site Choices	(Multi-select combo box) For *BACKUP* Action, this contains an alphabetic list of all of the network elements in DND, including DACS and SNMP nodes. By default all sites will be backed up. **NOTE:** A scheduled backup must select all sites. For *RESTORE* Action, this lists the network elements, including DACS and SNMP nodes, that are on the tape. By default all sites will be restored. To selectively backup/restore, CTRL click to select sites.
Name	(Display only) The DND System Name as indicated on the SYSTEM NAME CHANGE form. See Chapter 4, System Administration for details.

Table 22-1. DND GUI: Field Descriptions for DATABASE BACKUP/ RESTORE Form

Field	Description
Execution Mode	(Radio Buttons) For *BACKUP* Action: ■ *Immediate*- the backup will be performed as soon as you click Start . ■ *Schedule* - the backup is scheduled for a later date and/or time.
Date	(Combo boxes) The **Day**, **Month**, and **Year** make up the date for the scheduled backup.
Time	(Combo boxes) The **Hour** and **Sec** make up the date for the scheduled backup.
Repetition	(Combo boxes) The **Number of repetitions**, **Interval**, and **Scale** make up the repetition schedule for the backup. If 0 is entered into **Number of repetitions**, the backup will be repeated forever.
Backup Date	(Display only) Displays date of backup.
Working on:	(Display only) This field appears during the backup/ restore and displays the current database/node that is being worked on.

DND Forms: Summary of Backup and Restore Actions

Summary Table

Table 22-2 summarizes the backup and restore actions available from DND Forms.

Table 22-2. Backup and Restore Actions

Information Type	Tape Actions	Diskette Actions
DND Databases for each DACS and the COMMON Database	*FULL BACKUP* *FULL RESTORE* *SELECTIVE BACKUP* *SELECTIVE RESTORE*	None
Alarm Log	*FULL BACKUP* *FULL RESTORE* *SELECTIVE BACKUP* *SELECTIVE RESTORE*	*BACKUP* *RESTORE*
Report Formats	(automatically backed up with COMMON database)	*BACKUP* *RESTORE*

Stopping Tape Backup/Restore

From the DND Forms interface, you can abort the tape backup/restore process by pressing the DELETE key twice. The action may not stop immediately; however, the command will stop the backup/restore process after the action on the current database is complete.

DND Forms: Backing up and Restoring the DND Database from Tape

Description

From the DATABASE BACKUP/RESTORE (TAPE) form, shown in Figure 22-5, the COMMON database and the DND database for each DACS can be backed up to and restored from tape. There are four actions available from this form:

- *SELECTIVE BACKUP* -backs up selected databases to tape.
- *FULL BACKUP* - backs up all databases to tape.
- *SELECTIVE RESTORE* - restores selected databases from tape.
- *FULL RESTORE* - restores all databases from tape.

Sample Form - Full Backup

Figure 22-5 shows an example of a *FULL BACKUP* of all DND databases.

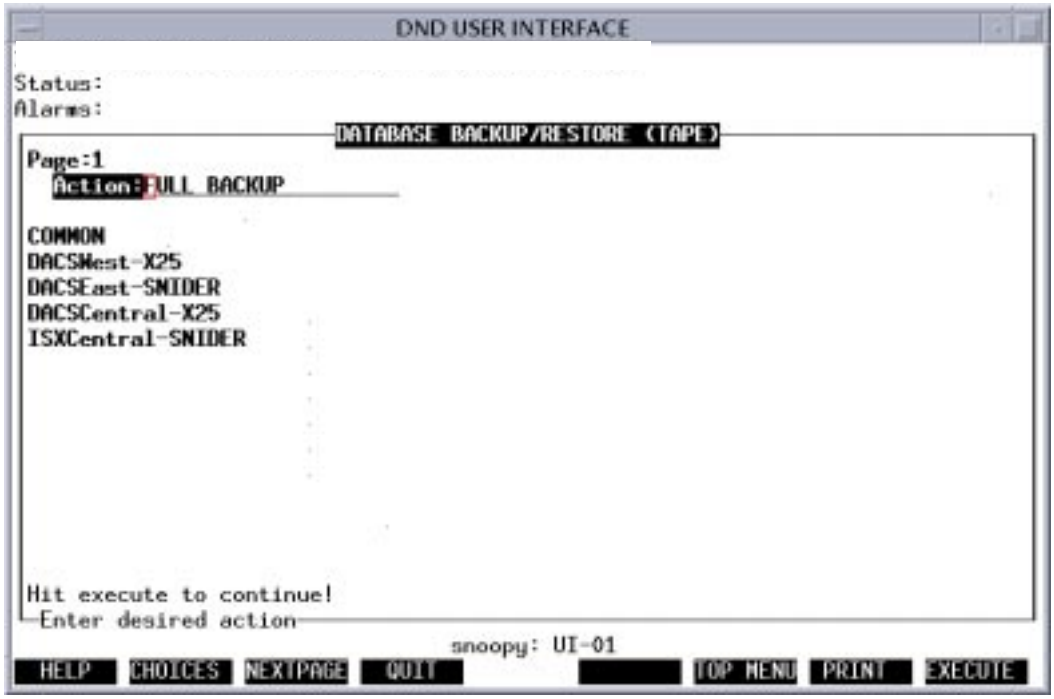


Figure 22-5. DND Forms: Full Backup of DND Databases

DND Forms: Backing up and Restoring the DND Database from Tape (Continued)

Two Pages for Full Backup and Full Restore

The DATABASE BACKUP/RESTORE form becomes two pages when you are performing a *FULL BACKUP* or *FULL RESTORE* action. When performing a *FULL BACKUP*, the list of all sites is displayed on the form. Use NEXTPAGE and PREV PAGE to move back and forth between the two forms to view all of the sites when there are more than thirty sites. When the *FULL BACKUP* or *FULL RESTORE* is running, the sites that are finished being backed up or restored from tape are backlighted. The form will automatically change from page 1 to page 2, if necessary, to show the backlighted sites. When the operation is complete, the form changes back to page 1 and displays the final completion status.

DND Forms: Backing up and Restoring the DND Database from Tape (Continued)

Sample Form - Selective Backup

Figure 22-6 shows the COMMON database being chosen for backup. Use the SELECT and UNSELECT keys on the WHICH DATABASES form to create a list of databases to back up.

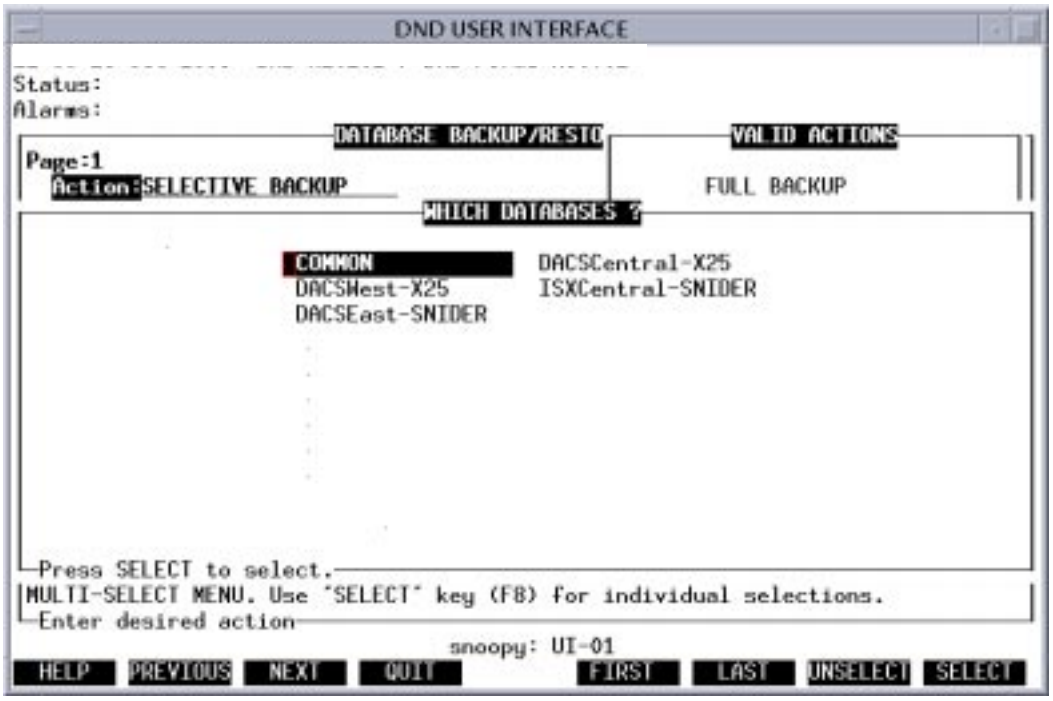


Figure 22-6. DND Forms: Selective Backup

DND Forms: Backing up and Restoring the DACS Alarm Log

Description

The DACS Alarm Log can be backed up to and restored from tape or diskette. If you use tape, you can back up the DACS Alarm Log for all databases or for selected databases. If you use diskette, you can back up the DACS Alarm Log for an individual database.

NOTE:
From the DND Forms interface, only the DACS Alarm Logs can be backed up to diskette or to tape. SNMP Alarm Logs cannot be backed up from the DND Forms interface

When an alarm log is restored it does not overwrite the existing alarm log for that DACS. The alarm log that was restored can be displayed by choosing the **Backup** choice from **Which Log** in the Alarm Log Report.

DND Forms: Backing up and Restoring the DACS Alarm Log (Continued)

Alarm Log Back up and Restore from Tape

From the LOG BACKUP/RESTORE form, shown in Figure 22-7, the ALARM LOG can be backed up to and restored from tape. There are four actions available from this form:

- *SELECTIVE BACKUP* -backs up Alarm Log for selected databases to tape
- *FULL BACKUP* - backs up Alarm Log for all databases to tape
- *SELECTIVE RESTORE* - restores Alarm Log for selected databases from tape
- *FULL RESTORE* - restores Alarm Log for all databases from tape

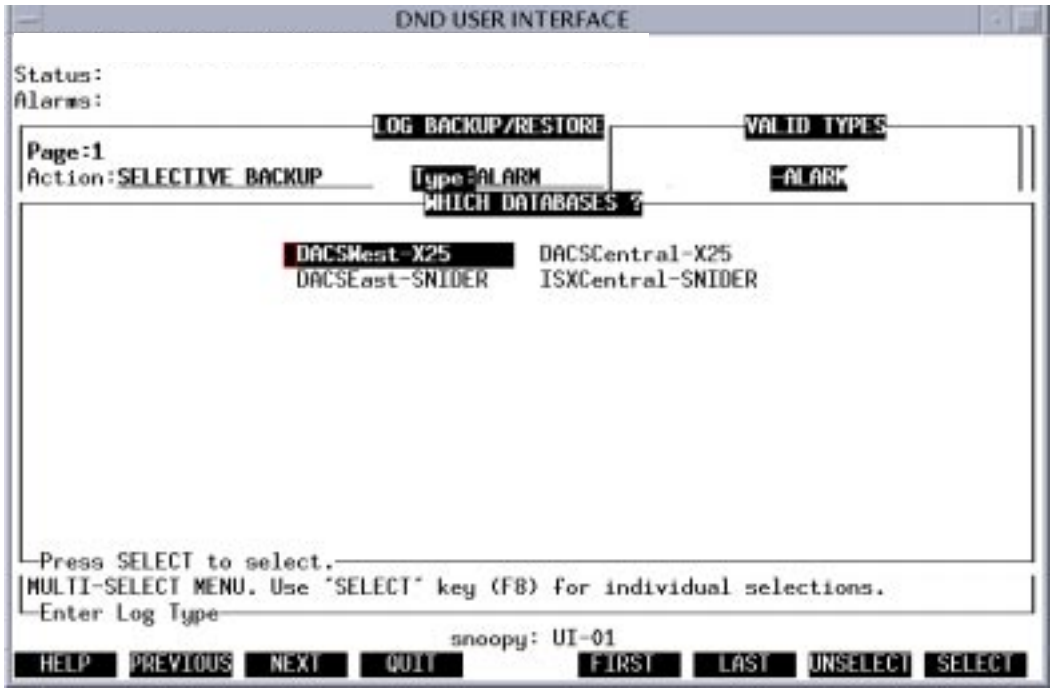


Figure 22-7. DND Forms: LOG BACKUP AND RESTORE (TAPE) Form

DND Forms: Backing up and Restoring the Alarm Log (Continued)

Alarm Log Back up and Restore from Diskette

From the LOG BACKUP/RESTORE (DISKETTE) form, shown in Figure 22-8, and individual ALARM LOG can be backed up to and restored from diskette.

There are two actions available from this form:

- *BACKUP* - backs up Alarm Log for a specified databases to diskette.
- *RESTORE* - restores Alarm Log for a specified database from diskette.

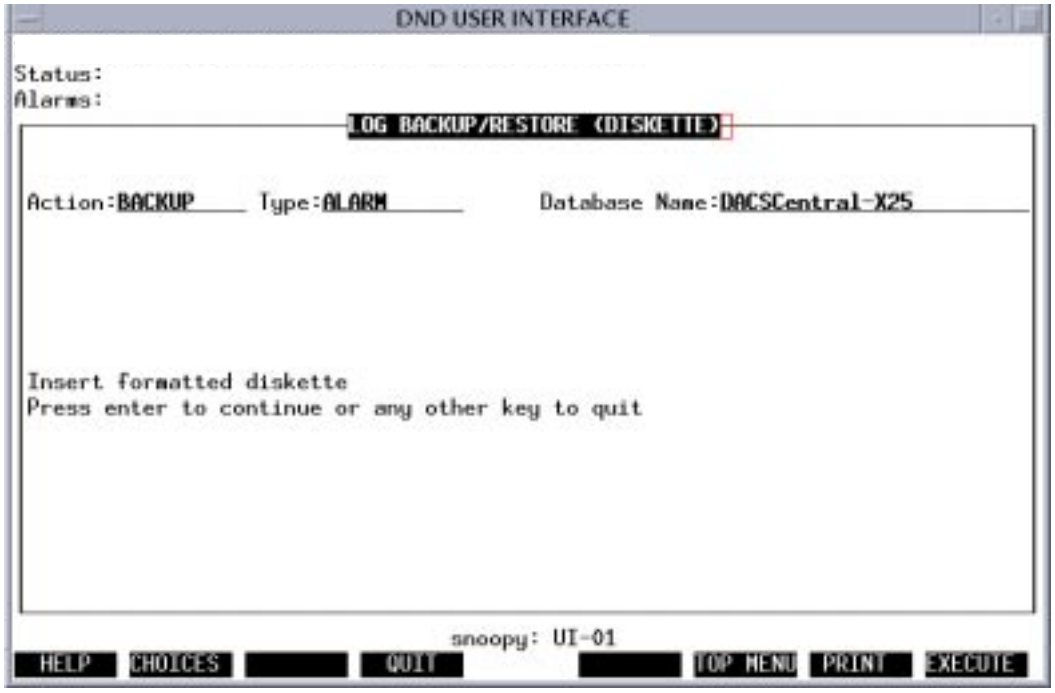


Figure 22-8. DND Forms: LOG BACKUP/RESTORE (DISKETTE) Form

DND Forms: Backing up and Restoring Report Formats

Description

Report formats are contained in the COMMON database. They are automatically backed up with the COMMON database. DND also provides the ability to save report formats on diskette. This is useful for creating report templates which can be distributed to a number of DNDs.

There are two actions available from the REPORT FORMAT BACKUP/RESTORE (DISKETTE) form:

- *BACKUP* -backs up all REPORT FORMATS to diskette.
- *RESTORE* - restores all REPORT FORMATS from diskette.

DND Forms: Formatting a Diskette

Description

DND provides a menu option that enables you to format a UNIX diskette. You must format diskettes before using them to backup the alarm log or the report formats.

Sample Form

From the DATABASE ADMINISTRATION menu, select BACKUP/RESTORE, then select FORMAT DISKETTE. Follow the prompts that appear. A sample screen is shown in Figure 22-9.



Figure 22-9. DND Forms: Format Diskette Form

When formatting is in progress, the form will display a sequence of dots (.). The diskette format is then verified and the form will display a sequence of Vs (v). The UI will display EXECUTING and block all other operations until the diskette is formatted and verified.

24-Hour Performance Monitoring

23

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Background

Introduction

DND has the capability to control and report performance monitoring parameters for NAS and CEPT type NPCs.

There are two different 24-Hour Performance Monitoring features that can be set independently in DND:

- **The DND Forms-based feature**

  This feature stores performance monitoring data for a single day and average count data for a single period of up to 999 days. In order to use this feature, set the environment variable `PM24HR_NONFT` to **YES** in *userenv*. For details, see "Environment Variables" in Chapter 2, Getting Started.

- **The DND GUI-based feature**

  This feature stores performance monitoring data for up to 14 days. In order to use this feature, select the 24-Hour Performance Monitoring option in the DND GUI's NE PROVISIONING form. for details, see "DND GUI: Field Descriptions for NE PROVISIONING Form for DACS" in Chapter 5, NE Provisioning.

Objectives

This chapter provides background information to help you perform the following:

1. Schedule Performance Monitoring Reports on the DACS
2. Browse performance statistics (DND Forms only)
3. Reset performance statistics (DND Forms only)

Related tasks

For related tasks, see the following DND GUI/Forms General Tasks in Volume II:

- Configuring DACS II for 24-Hour Performance Monitoring GT 2.5U
- Browsing 24-Hour Performance Monitoring Data GT 23.1U
- Resetting 24-Hour Performance Monitoring Statistics GT 23.2U
- Creating a 24-Hour Performance Monitoring Report ASCII File GT 23.3U

Background (Continued)

Related information

For related information, see:

- *DACS II Network Director Software Release Description*
- *DACS II and DACS II ISX Operation and Maintenance Manuals*
- *DND SNMP Northbound Interface Document.*

Related Reports

There are two reports associated with 24 Hour Performance Monitoring:

- 24-HOUR PERFORMANCE MONITORING Report (DND GUI)/24-HOUR PERFORMANCE Report (DND Forms)
  - — Generates reports for the collected PM data
  - — The report formats can be customized to display any of the collected PM data
- PM ERROR Report (DND GUI)/24-HOUR PM LOG (DND Forms) - a recording of all NPC service state discrepancies found during the PM collection process

Performance Parameters

Counters Maintained

The performance monitoring parameters are those reported in the daily 24-hour performance data reports sent by the DACS. The DND database is updated based on the output of the daily report.

There are three daily counters also maintained by the DND Forms for each NPC:

- **Days Data Collected**—The number of days for which performance data has been successfully collected.
- **Errored Days**—The number of days for which the performance data has not been successfully collected.
- **Days Since Reset**—The number of days since the performance data has been reset.

NOTE:
Days Data Collected + **Errored Days = Days Since Reset**

Data Collected

The following data is kept for each performance parameter:

- The performance data for the last 24 hours.
- The DND Forms performance monitoring feature keeps a single average for the performance data based on the number of days data was collected successfully. The DND GUI performance monitoring feature allows averages to be generated in the reports for up top the 14 days of data that are kept.

Performance Parameters (Continued)

Performance Parameters for PB/PC type NPCs

These parameters are monitored for PB/PC type NPCs:

- Loss of Frame Alignment
- Slips
- Cyclic Redundancy Check
- Degraded Minutes
- Unavailable Seconds
- Errored Seconds
- Severely Errored Seconds
- Multiframe Errors
- Framing Errors.

Performance Parameters for PA type NPCs

These parameters are monitored for PA type NPCs:

- CRC Block Errors
- Errored Seconds
- Severely Errored Seconds
- Unavailable Seconds
- Framing Errors
- Out-of-Frame Seconds
- Controlled Slip Seconds
- Coding Violations
- Unavailable Time Count
- Multiframe Errors
- Far-end Block Errors
- Far-end Errored Seconds
- Far-end Severely Errored Seconds
- Far-end Unavailable Seconds.

Performance Parameters (Continued)

Invalid PA Parameters

Not all PA performance parameters apply to all PA type NPCs. Table 23-1 and Table 23-2 highlight the inapplicable parameters based on the *x* and *y* values in the PA*xyz* NPC type.

Table 23-1. Invalid PA Parameters (Based on *x* value in PA*xyz* NPC Type)

x value parameter	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
CRC											X	X		X	X	X
MER																
FRER																
OFS																
ES																
SES																
CSS																
CV																
UAS																
UATC																
FEBE	X		X		X		X				X	X			X	X
FES	X		X		X		X				X	X			X	X
FSES	X		X		X		X				X	X			X	X
FUAS	X		X		X		X				X	X			X	X

(Continued on next page)

Performance Parameters (Continued)

Invalid PA Parameters, Continued

Table 23-2. Invalid PA Parameters (Based on *y* value in PA*xyz* NPC Type)

***y* value parameter**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**A**	**B**	**C**	**D**	**E**	**F**
CRC														X		
MER									X	X			X	X		
FRER														X		
OFS														X		
ES														X		
SES														X		
CSS																
CV																
UAS														X		
UATC														X		
FEBE														X		
FES														X		
FSES														X		
FUAS														X		

Performance Parameters (Continued)

Performance Parameters for DE/TE Type NPCs

These parameters are monitored for DE/TE type NPCs:

- 24-Hour Slips
- 24-Hour Errored Seconds
- 24-Hour Severely Errored Seconds
- Out-of-Frame
- Change of Frame Alignment
- Bipolar Violations.

Invalid DE/TE Parameters

Not all DE/TE performance parameters apply to all DE/TE type NPCs. Table 23-3 and Table 23-4 highlight the inapplicable parameters based on the *x* and *z* values in the DE*xyz* or TE*xyz* NPC type

Table 23-3. Invalid DE/TE Parameters (Based on *x* value in DE*xyz* or TE*xyz* NPC Type)

x value parameter	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
SLIP																
ERS		X							X	X						
SERS		X							X	X						
OOF																
COFA										X						
BPV																

Table 23-4. Invalid DE/TE Parameters (Based on *z* value in DE*xyz* or TE*xyz* NPC Type)

z value parameter	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
SLIP																
ERS										X						
SERS										X						
OOF																
COFA										X						
BPV																

Scheduling Performance Monitoring Reports

Configure DACS

The 24-hour performance monitoring statistics processing feature requires that you configure each DACS for 24-hour performance monitoring. Refer to GT 2.4U for instructions.

NOTE:
Do not schedule performance monitoring reports to be executed at midnight. Minor differences in time between the DACS and DND may cause the PM reports to be received on the wrong day.

When Reports Are Available to DND

After you create the DACS on the DND and configure each DACS for performance monitoring, DND will expect the first report from the DACS in the period starting 12:00 midnight and ending 24 hours later.

If only the DND Forms performance monitoring feature is turned on and you scheduled the report to run before 12:00 midnight, any data received before the first midnight will be discarded. This will also be true following a DND restart for DACS that already exist in the DND database and following DACS removals or restorations. If the DND GUI performance monitoring feature is already turned on for the DACS when a DND restart occurs, then it expects a report from the DACS if it has not already processed one for the current day.

Figure 23-1 illustrates when DND expects reports from the DACS.

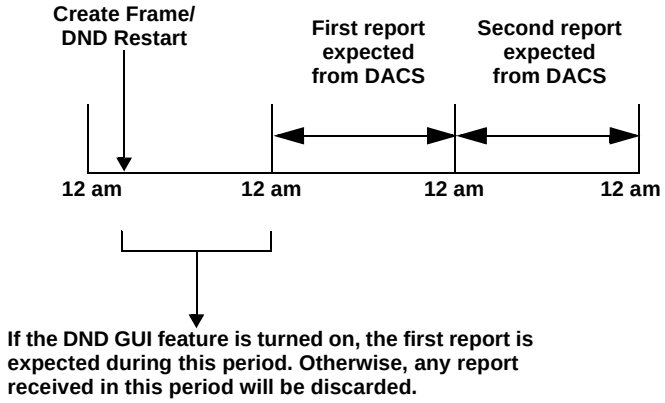


Figure 23-1. Intervals when Performance Monitoring Reports are Expected

DND GUI: 24-Hour Performance Monitoring

Description

The DND GUI can process performance monitoring data for all E1 and NAS (North American Standard) DS1 facilities if the DACS II 24 Hour midnight report is provisioned to output the NAS information.

The midnight report collects performance monitoring counts for DE/TE/PA/PB/PC-type NPCs. PM data for TH/DA/TA-type NPC PM data is not collected by the midnight report. This data can be retrieved at the DACS terminal or via DND passthrough using the RTRV-PM-T1 command, but is not processed by the DND. The data included in the 24 Hour midnight report can be configured only at the DACS.

The DND GUI is capable of storing up to 14 days worth of 24-Hour counts for an NPC.

Report Contents

Reports can be generated containing the following information:

- Some or all performance monitoring counts of a particular NPC over a period of one or more days
- Performance monitoring counts for one or more NPCs over a period of one or more days
- Average performance monitoring counts over a period of days.

NE Provisioning Form

The NE PROVISIONING form is used to identify which DACS systems will have the 24 Hour PM feature enabled. Once enabled, the DND will expect a 24-Hour midnight report for that DACS.

Customizing PM Report Formats

The 24-HOUR PERFORMANCE MONITORING Report formats can be customized to display a subset of the collected PM data. The customizing is performed using the CUSTOMIZE PERFORMANCE MONITORING REPORT FORMATS form.

DND GUI: 24-Hour Performance Monitoring (Continued)

PM Error Report

If the DND fails to collect all PM data from the DACS, or no data is received within a 24 hour period, then a failure message will be generated in the Connection and Display Status field. The PM ERROR Report is an error log created to view performance monitoring collection failures.

SNMP Interface

Performance monitoring data can be retrieved by the SNMP Northbound interface using SNMP "get" commands. For additional information, refer to the *SNMP Northbound Inteface Document*.

Creating ASCII files of PM Data

DND and UNIX provide a method for writing performance monitoring data for a particular DACS into an ASCII file. The file is delimited and can be processed or exported into various programs, such as spreasheet applications, for further manipulation. For additional information, refer to GT 23.3U.

DND GUI: 24-Hour Performance Monitoring Report Form

Purpose

The 24-HOUR PERFORMANCE MONITORING REPORT form is used to reset or browse performance statistics. To access the form, from the DND Task Bar, click Reports, then select 24-HOUR PERFORMANCE MONITORING Report. The 24-HOUR PERFORMANCE MONITORING REPORT form displays, as shown in Figure 23-3.



Figure 23-2. DND GUI: Sample 24-HOUR PERFORMANCE MONITORING REPORT Form

DND Forms: 24-Hour Performance Search Criteria Form

Purpose

The 24-Hour Performance form is used to reset or browse performance statistics. To access the form, from the DND MAIN MENU, select PROVISIONING, then select 24-HOUR PERFORMANCE. The 24-HOUR PERFORMANCE form displays, as shown in Figure 23-3.

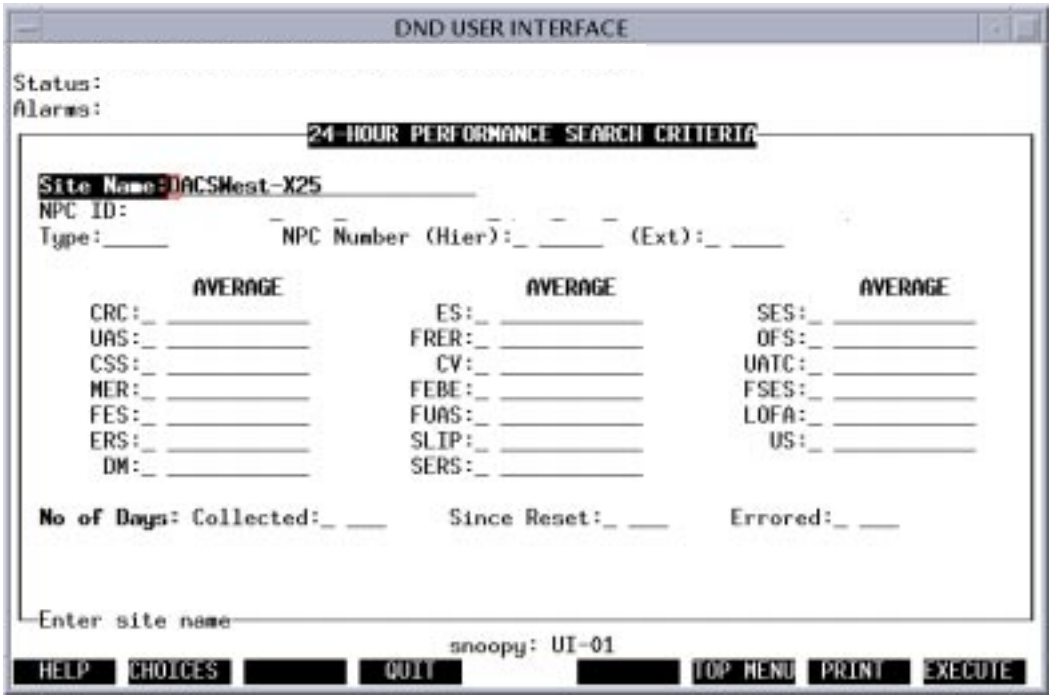


Figure 23-3. DND Forms: 24-HOUR PERFORMANCE SEARCH CRITERIA Form

NOTE:
To display the 24-HOUR PERFORMANCE option on the PROVISIONING menu, set the environment variable `PM24HR_NONFT` to **YES**.

DND Forms: 24-Hour Performance Form

Purpose

The 24-Hour Performance form is used to reset or browse performance statistics. To access the form, from the DND MAIN MENU, select PROVISIONING, then select 24-HOUR PERFORMANCE. The 24-HOUR PERFORMANCE form displays, as shown in Figure 23-4.

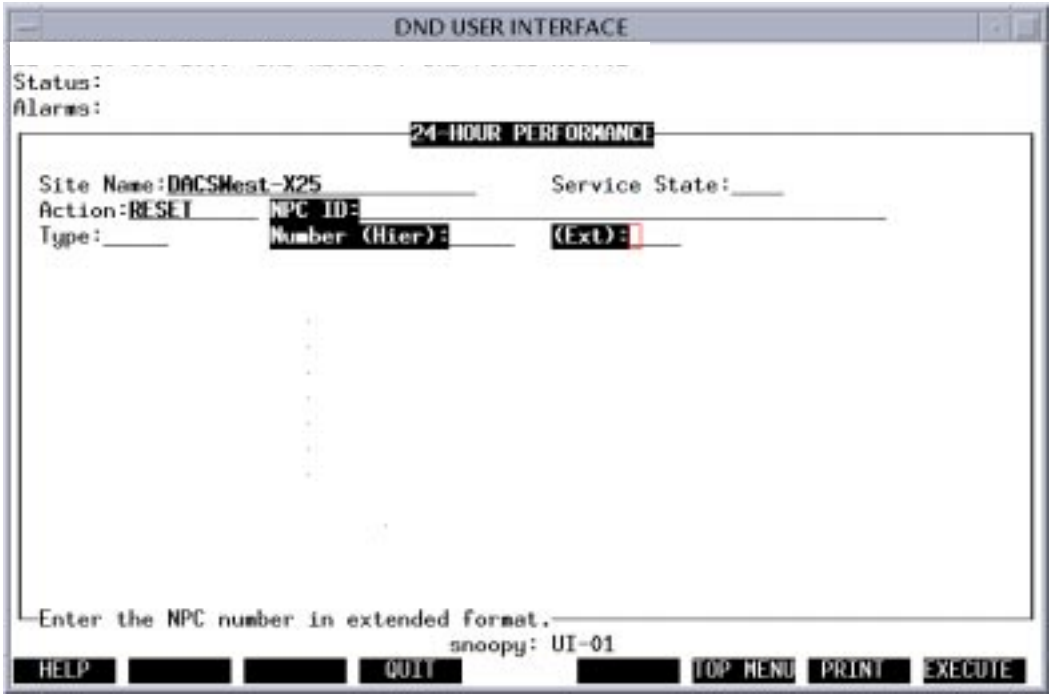


Figure 23-4. DND Forms: Resetting Performance Monitoring Statistics

NOTE:
To display the 24-HOUR PERFORMANCE option on the PROVISIONING menu, set the environment variable `PM24HR_NONFT` to **YES**.

DND Forms: 24-Hour Performance Form (Continued)

Field Descriptions

The field values for the 24-HOUR PERFORMANCE MONITORING form are described in Table 23-5.

Table 23-5. DND Forms: Field Descriptions for the 24-HOUR PERFORMANCE MONITORING Form

Field	Description
Site Name	Mandatory. The name of the DACS where the requested **Action** will take place. Enter or press CHOICES to select a Site Name. Site Names are created from the FRAME ADMINISTRATION form. See Chapter 5, NE Provisioning for more details.
Service State	The status of the NPC. This field cannot be changed by the user except as the result of an NPC Provisioning **Action**. The choices are: ■ *UEQD* - Unequipped. The NPC referenced by the **NPC ID** is not currently recorded in the DND and/or DACS databases (equipped). ■ *OOS* - Out of service. The NPC is currently equipped, but is not operable. ■ *IS* - In service. The NPC is equipped and operable.
Action	The actions are: ■ *RESET* - The RESET command resets the average performance statistics in the DND database for one NPC or all NPCs. The following daily counters will also be reset to zero: **Days Data Collected** **Days Since Reset** **Errored Days** This command does not erase the last daily 24-hour performance counts. ■ *BROWSE* - The BROWSE command allows you read-only access to the performance statistics database.
NPC ID	

Table 23-5. DND Forms: Field Descriptions for the 24-HOUR PERFORMANCE MONITORING Form (Continued)

Field	Description
Type	The type of NPC. The format is ABxyz where AB identifies the type of hardware and xyz sets certain provisioning parameters such as frame and signaling format. This is a display only field.
Number (Hier)	The number of the NPC in hierarchical (hier) numbering.
Ext	The number of the NPC in extended numbering.

Task Administration

24

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Background

Introduction

Both the DND GUI and DND Forms interface have a Task Administration function. Task administration allows you to administer scheduled tasks - such as database synchronization.

Many DND forms allow you to execute the **Action** immediately or to schedule it. You can display and delete scheduled tasks by using the Task Administration menu option from the DND GUI or DND Forms interface.

In addition, the Task Administration function available from the DND Forms interface allows you to manage print requests. In the DND GUI, print requests are managed from the Printer Administration option from the Provisioning task bar button.

Objectives

This chapter provides background information to help you perform the following:

1. List and delete scheduled tasks
2. List and delete print requests (DND Forms only)

Related tasks

For related tasks, see the following General Tasks in Volume II:

DND GUI:

- Displaying Scheduled Tasks GT 24.1G
- Deleting Scheduled Tasks GT 24.2G

DND Forms:

- Displaying Scheduled Tasks GT 24.1U
- Deleting a Scheduled Task GT 24.2U
- Displaying Print Jobs GT 24.3U
- Deleting a Print Job GT 24.4U

DND GUI: TASK ADMINSTRATION Form

Sample Screen

By selecting TASK ADMINISTRATION from the Provisioning button in the DND task bar, you can list scheduled tasks, and delete tasks by Site Name and/or User ID.



Figure 24-1. DND GUI: TASK ADMINISTRATION Form

DND GUI: TASK ADMINSTRATION Form (Continued)

Fields

The field values for the TASK ADMINISTRATION form are described in Table 24-1.

Table 24-1. DND GUI: Field Descriptions for the TASK ADMINISTRATION Form

Field	Description
Action	(Combo box) Valid choices are: ■ *LIST TASKS* - lists tasks that match the specified selection criteria ■ *DELETE TASKS* - enables you to delete individual tasks for a Site and/or User ID. ■ *DELETE ALL TASKS* - allows you to delete all scheduled tasks in the system, or all scheduled tasks for a Site and/or User ID.
Selection Options	(Radio buttons) Select display/delete options. You can display or delete tasks by Site Name, User ID or both. If no options are selected, all scheduled tasks will be displayed or deleted.
Site Name	(Combo box) Select one site from the list.
User ID	(Text field) Enter the DND login name for the user whose task schedules you wish to *LIST* or *DELETE*.

DND GUI: TASK ADMINISTRATION Form (Continued)

Display Scheduled Tasks

When you execute a *LIST* **Action** from the TASK ADMINISTRATION form, the TASK SELECTION box displays, describing the first task. Use NEXT and PREVIOUS to display descriptions of the other tasks on the list. An example of a displayed task is shown in Figure 24-2.



Figure 24-2. DND GUI: A Displayed Task

DND GUI: TASK ADMINISTRATION Form (Continued)

Field Descriptions for a Displayed Task

The field values for a displayed task are described in Table 24-2.

Table 24-2. DND GUI: Field Descriptions for Displayed Task

Field	Description
User ID	The login ID of the user who created the task.
Site	The **Site Name** of the DACS on which the task is scheduled to be implemented.
Task	The name of the form on which the task was created.
Next Run	The time when next execution of the task is scheduled to begin.
Last Run	The time when last execution of the task is scheduled to begin, if this is a task that runs more than once.
Interval	The interval, in minutes, hours or days, at which the task is scheduled to run.
Desc	A brief description of the task to be implemented.

DND Forms: TASK ADMINSTRATION Menu

Purpose

Choose the TASK ADMINISTRATION option from the DND Forms MAIN MENU to manage scheduled tasks and the print queue. The TASK ADMINISTRATION menu is shown in Figure 24-3.

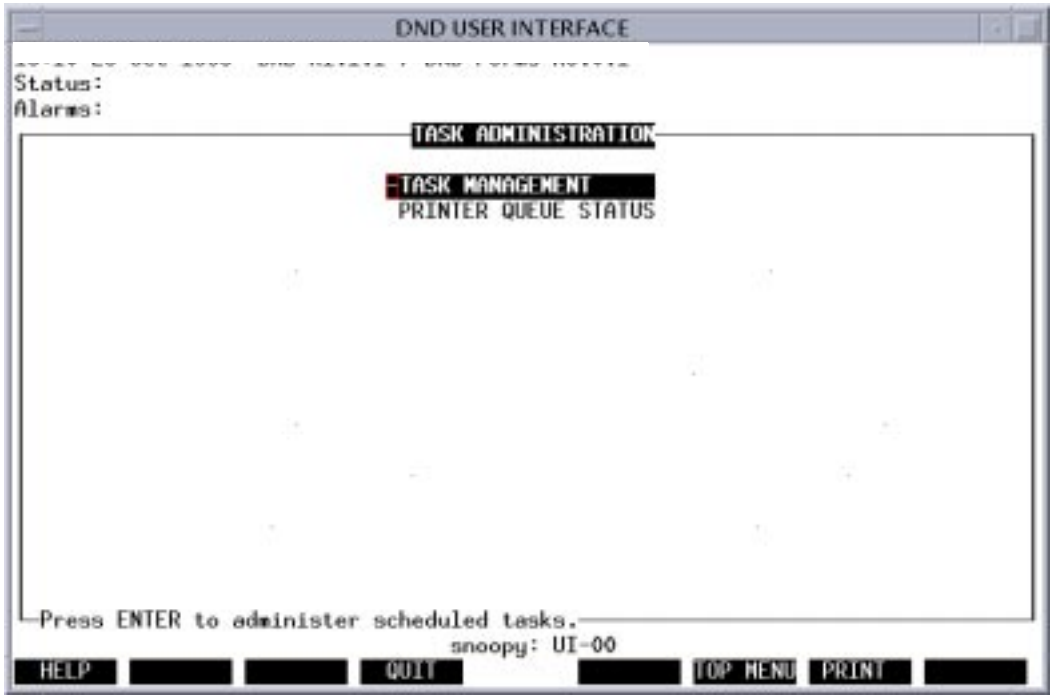


Figure 24-3. DND Forms: TASK ADMINISTRATION Menu

DND Forms: TASK ADMINISTRATION Form

Example

To display or delete a scheduled task, select TASK MANAGEMENT from the TASK ADMINISTRATION menu. The TASK ADMINISTRATION form displays, as shown in Figure 24-4.

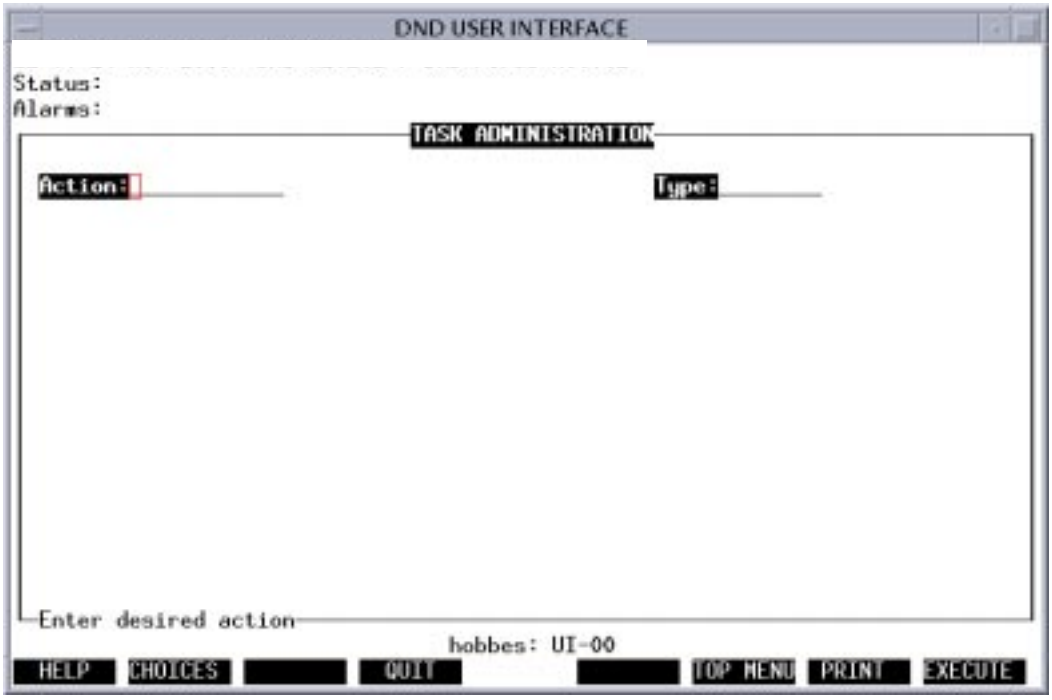


Figure 24-4. DND Forms: TASK ADMINISTRATION Form

DND Forms: TASK ADMINISTRATION Form (Continued)

Field Descriptions

The fields that appear on the screen depend on the value of **Type**. Field descriptions are described in Table 24-3.

Table 24-3. DND Forms: Field Descriptions for TASK ADMINISTRATION Form

Field	Description
Action	Mandatory. The selections for this field are: ■ *LIST* - Lists the scheduled tasks that you have specified in **Type**. ■ *DELETE* - Deletes the scheduled tasks that you have specified in **Type**. You can delete any of your own tasks. Only the system administrator can delete tasks scheduled by other users.
Type	Mandatory. Specifies which scheduled tasks you wish to list or delete. The selections are: ■ *TASK* - All tasks for a specified **Site Name** and **User ID**. ■ *SITE* - All tasks for a specified **Site Name**. ■ *USER* - All tasks for a specified **User ID**. ■ *ALL* - All scheduled tasks.
Site Name	Mandatory for *TASK* and *USER* **Type**s only. Enter the name of the DACS where the requested **Action** will take place. Pressing CHOICES displays WHICH DACS? with a list of the DACS names. These names were established during Frame Administration.
User ID	Mandatory for *TASK* and *USER* **Type**s only. Enter the DND login name for the user whose task schedules you wish to *LIST* or *DELETE*.

DND Forms: TASK ADMINISTRATION Form (Continued)

Display Scheduled Tasks

When you execute a *LIST* **Action** from the TASK ADMINISTRATION form, the TASK SELECTION window displays, describing the first task. Use NEXT and PREVIOUS to display descriptions of the other tasks on the list. An example of a displayed task is shown in Figure 24-5.

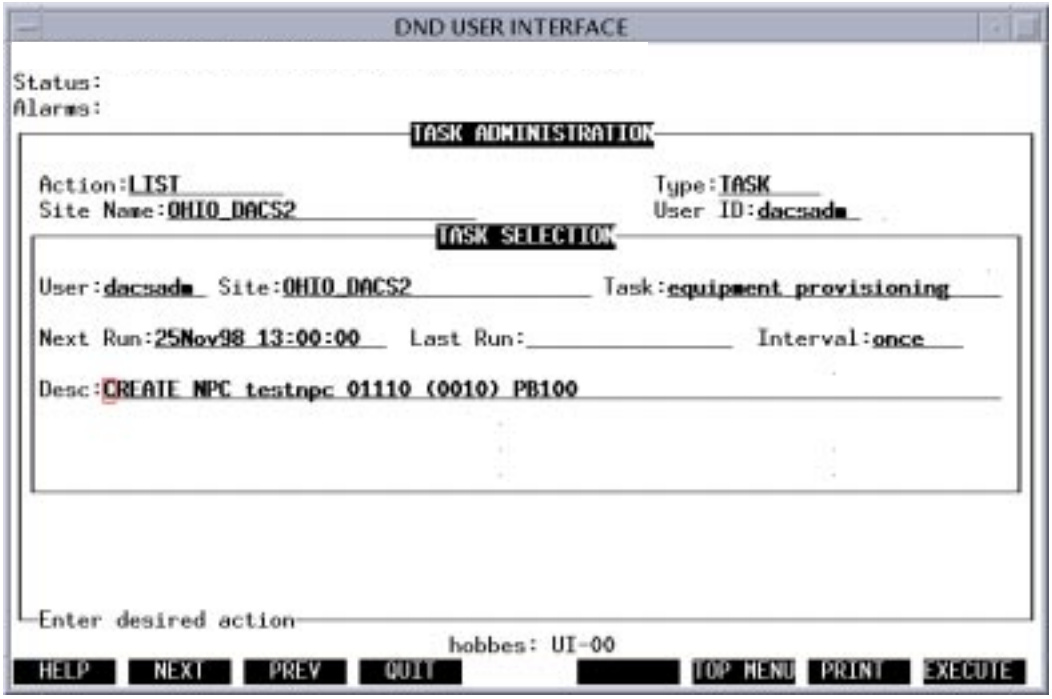


Figure 24-5. DND Forms: A Displayed Task

DND Forms: TASK ADMINISTRATION Form (Continued)

Field Descriptions for a Displayed Task

The fields for a displayed task are described in Table 24-4.

Table 24-4. DND Forms: Field Descriptions for Displayed Task

Field	Description
User ID	The login ID of the user who created the task.
Site	The **Site Name** of the DACS on which the task is scheduled to be implemented.
Task	The name of the form on which the task was created.
Next Run	The time when next execution of the task is scheduled to begin.
Last Run	The time when last execution of the task is scheduled to begin, if this is a task that runs more than once.
Interval	The interval, in minutes, hours or days, at which the task is scheduled to run.
Desc	A brief description of the task to be implemented.

Delete a Task

To delete a task, choose the *DELETE* **Action** from the TASK ADMINIISTRATION form. Before you delete specified tasks, it is a good idea to take a look at them by selecting the *LIST* from the **Action** field. A *DELETE* **Action** does not automatically list tasks.

DND Forms: PRINTER QUEUE STATUS Form

Sample Form

To list or delete print requests in the printer queue, select PRINTER QUEUE STATUS from the TASK ADMINISTRATION menu.

The results of a sample *LIST* Action on the PRINTER QUEUE STATUS form are shown in Figure 24-6.

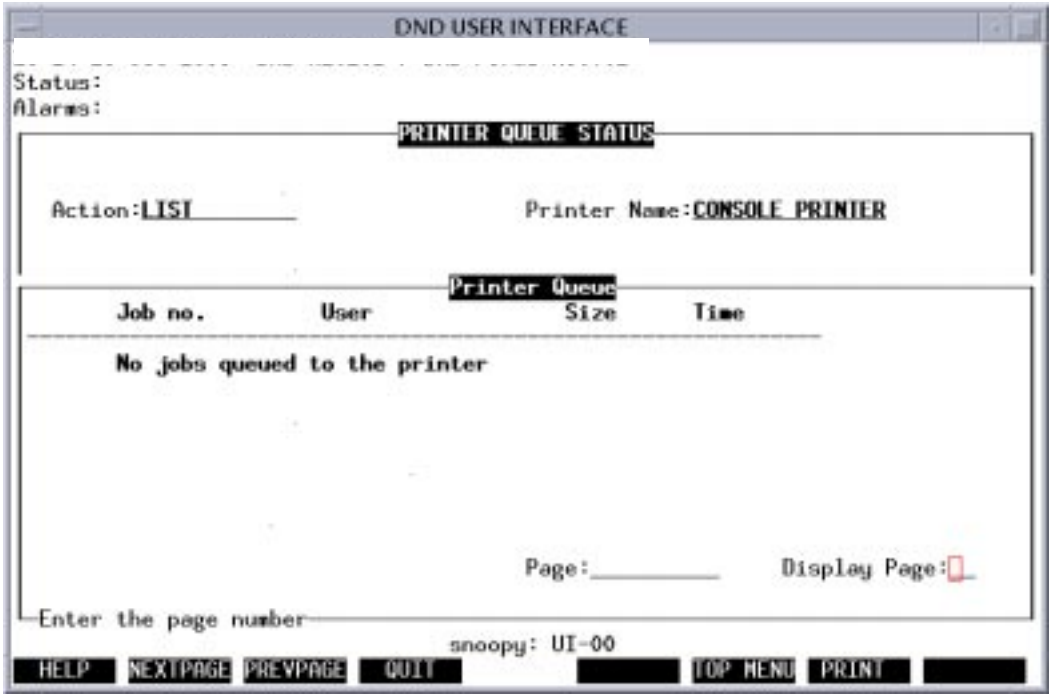


Figure 24-6. DND Forms: Sample PRINT QUEUE STATUS Form

DND Forms: PRINTER QUEUE STATUS Form (Continued)

Field Descriptions

The field values for the PRINTER QUEUE STATUS form are described in Table 24-5.

Table 24-5. DND Forms: Field Descriptions for the PRINTER QUEUE STATUS Form

Field	Description
Action	Mandatory. Enter the action to be performed with regard to the printer job. ■ *LIST* - Select *LIST* to display the printer queue. ■ *CANCEL* - Select *CANCEL* to cancel any job in the printer queue.
Printer Name	Name of the printer. Press CHOICES for a list of valid printer names.
Printer Status	The printer status.

DACS Message/Passthrough

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Background

Introduction

DND provides the user with the capability to send an MML command directly to the DACS and receive a response. This mode is used to complete DACS maintenance and administrative operations, and to operate features not supported by DND.

Menu Options

To send commands directly to the DACS:

- From the DND GUI interface, select DACS Message from the Provisioning menu
- From the DND GUI, select Telnet from the Provisioning menu (available only when the DACS is provisioned with a TCP/IP interface).
- From the DND Forms interface, select Passthrough from the Main Menu

Description

Each of the many passthrough methods behave differently and what is available and the consequences to operation of the system are different for each:

- From the DND Forms:
  - **Multiplexed Passthrough**- The user is connected to the DACS and is sharing the link that the DND is using for commands and responses. Full interactive help is not available, however, the user is able to observe all commands and responses and autonomous output being received by the DND in addition to issuing separate commands.
  - **Full Passthrough** - Full passthrough provides full interactive capabilities to the DACS on a dedicated connection to the DACS.

    If the DACS is provisioned for SNIDER communications: When a full passthrough session is made to the DACS over a SNIDER link, that passthrough session owns the communication link to the DACS. Since there is only one link available to the DACS, no other provisioning commands can be issued to the DACS by the DND.

(Continued on next page)

Background (Continued)

Description (Continued)

If the DACS is provisioned for X.25 or TCP/IP communications: A full separate connection is made to the DACS through a display window. The DACS Is able to handle up to 16 virtual circuits on the communications link, including the connection made by the DND. Thus, if the DND is in service and communicating to the DACS, there are 15 circuits available for full passthrough.

- From the DND GUI:
  - **DACS Message** - This is similar to Multiplex Passthrough. The connection to the DACS is shared with the connection used by the DND for commands and responses.
  - **Telnet** - This option is available only if the DACS is provisioned with a TCP/IP interface to the DND. It provides a direct connection (full passthrough) to the DACS which is separate from the connection used by the DND for commands and responses. The DACS is able to handle up to 16 telnet sessions including the telnet session used by the DND.

Objectives

This chapter provides background information to help you perform the following:

From the DND GUI interface:

1. Operate the DACS Message form.
2. Send a message to the DACS using the DACS Message form.
3. Create a telnet link to a DACS with a TCP/IP link.

From the DND Forms interface:

1. Send a message to the DACS by establishing a full passthrough or multiplexed passthrough session.
2. Create a command script of MML commands using the FRAME COMMAND SCRIPT option.

Background

Related tasks

For related tasks, see the following General Task in Volume II:

DND GUI:

- Sending a Message to the DACS GT 25.1G
- Creating a Telnet Link to a TCP/IP DACS GT 25.2G

DND Forms:

- Entering Multiplexed Passthrough GT 25.1U
- Entering Full Passthrough GT 25.2U
- Aborting Passthrough GT 25.3U
- Creating a Script File GT 25.4U
- Executing a Script File GT 25.5U
- Writing a Script File to DOS Diskette GT 25.6U
- Reading a Script File From DOS Diskette GT 25.7U

Related information

For related information, see

- *DACS II and DACS II ISX Command and Message Manuals*

DND GUI: DACS Message Functionality

DACS Message Processing

The DACS message function shares the same communication path as the DND. When the command is executed, the functionality of the DACS Message feature is very similar to the Multiplexed Passthrough of the DND Forms Interface. For details, see "DND Forms: Multiplexed Passthrough" later in this chapter.

While the DACS MESSAGE session is in progress, certain "multiplex passthrough" behaviors may be observed:

- The administrator can view and abort the "DACS Message" with the PASSTHROUGH ABORT option available from the DND Forms Main Menu
- The rules for the ability to perform a "DACS Message" are similar to that of Multiplexed Passthrough:
  - — The link to the DACS must be In-Service
  - — DACS Message cannot be performed when a Full Passthrough is in progress from the DND Forms Interface.

Using DACS Message begins with accessing the DACS MESSAGE form. Select the **Site Name:** you wish to communicate with, press Start , and enter the DACS command in the **Command:** field. Click Execute to send the message to the DACS. The DACS response is displayed in a separate Netscape window.

Entering Commands

When entering commands, the following is valid:

- The command line is case-insensitive; it can be entered in upper or lower case letters. DND automatically translates all letters to upper case.
- The semi-colon (;) used to end the DACS message may be omitted. DND inserts the semi-colon for you.
- The command must be in MML and must be in the correct syntax to execute. Syntax errors will be sent back by the DACS and displayed in the Command Response window.

DND GUI: DACS Message Functionality

Other Features

The DACS Message option also provides:

- Filtering options to select which types of output to display in the Command Response Window. You can view all DND and autonomous activity or limit the messages.
- Save/Delete history of commands for the DACS MESSAGE session.

Limitations

The DACS Message feature has the following limitations:

- DACS Message allows only commands not requiring login
- The "**?**" DACS on-line help facility is not supported across this interface
- Except for range commands, the DACS MESSAGE form considers a command as completed only when the entire command is completely processed.
  - — For example, a command with multiple IN_PROGRESS indicators may take a long time to display
  - — A range command is considered complete in the DACS MESSAGE form when the response to the first element of the range is completed.
- The history of saved commands is cleared when the DACS MESSAGE form is closed or restarted.

DND GUI: The DACS Message Form

DACS Message Form

Figure 25-1 displays the DACS MESSAGE form.



Figure 25-1. DND GUI: DACS MESSAGE form

DACS Command Response Window

Figure 25-2 displays the command response to the DACS Message. The DACS COMMAND RESPONSE window can scroll and hold approximately 200 lines of responses before the lines at the top of the window are truncated.

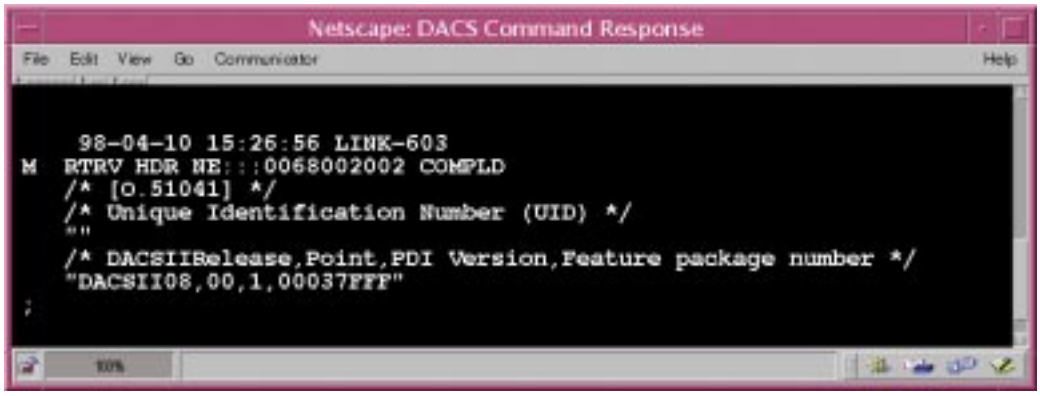


Figure 25-2. DND GUI: DACS COMMAND RESPONSE Window

DND GUI: The DACS Message Form (Continued)

Field Descriptions

The field values for the DACS MESSAGE form are described in Table 25-1.

Table 25-1. DND GUI: Field Descriptions for the DACS MESSAGE Form

Field Name	Description
Current Site Choices	(Combo box) Mandatory. Select the DACS you wish to communicate with. When the **Current Site Choices:** field is changed, the results will appear in the same Netscape Window. By default, the list appears alphabetically.
DACS Message Filtering	(Options) Mandatory. Select the type of output to be displayed in the DACS Command Response window. All output - displays all output from the DACS. Alarms and your response - displays alarms and only responses to your commands. Your responses - only displays responses to your commands.
Command:	(Text field) Mandatory. Enter the DACS command you wish to send to the DACS. Command is case-insensitive. Semi-colon (;) can be left out of the command. The correlation tags must be omitted from the command.

DND GUI: DACS Telnet Functionality

Description

The DND supports a telnet interface to the DACS II capacity frame when the ICI card is available on the DACS II. The DACS is capable of supporting up to 16 telnet sessions.

The DND can use the telnet interface as its command and response interface.

Limitations

The DACS Telnet feature has the following limitations:

- The DACS II ISX does not support the ICI card or the telnet capability.
- Only DACS users can access the DACS using telnet and it is necessary to login with a user name and password when using telnet. See Chapter 2, Getting Started for information on creating a DACS user name and password.
- An IP address must be provisioned on the DACS II. See Chapter 5, NE Provisioning for information on creating a DACS II with a TCP/IP link.

DND GUI: The DACS Telnet Form

DACS Telnet Form

Figure 25-3 displays the DACS TELNET form that is available from the Provisioning Menu. Telnet is available directly from the node icon on the network map or Network Element Summary.



Figure 25-3. DND GUI: DACS TELNET form

DND GUI: The DACS Telnet Form (Continued)

Java Security

When using the telnet interface for the first time after starting Netscape, it is necessary to enable privileges required by the DND software.

Figure 25-4 displays the dialog box that will appear if you have not yet used a Telnet link. Once you grant permission, the Telnet session will be started. It will be necessary to log into the DACS.

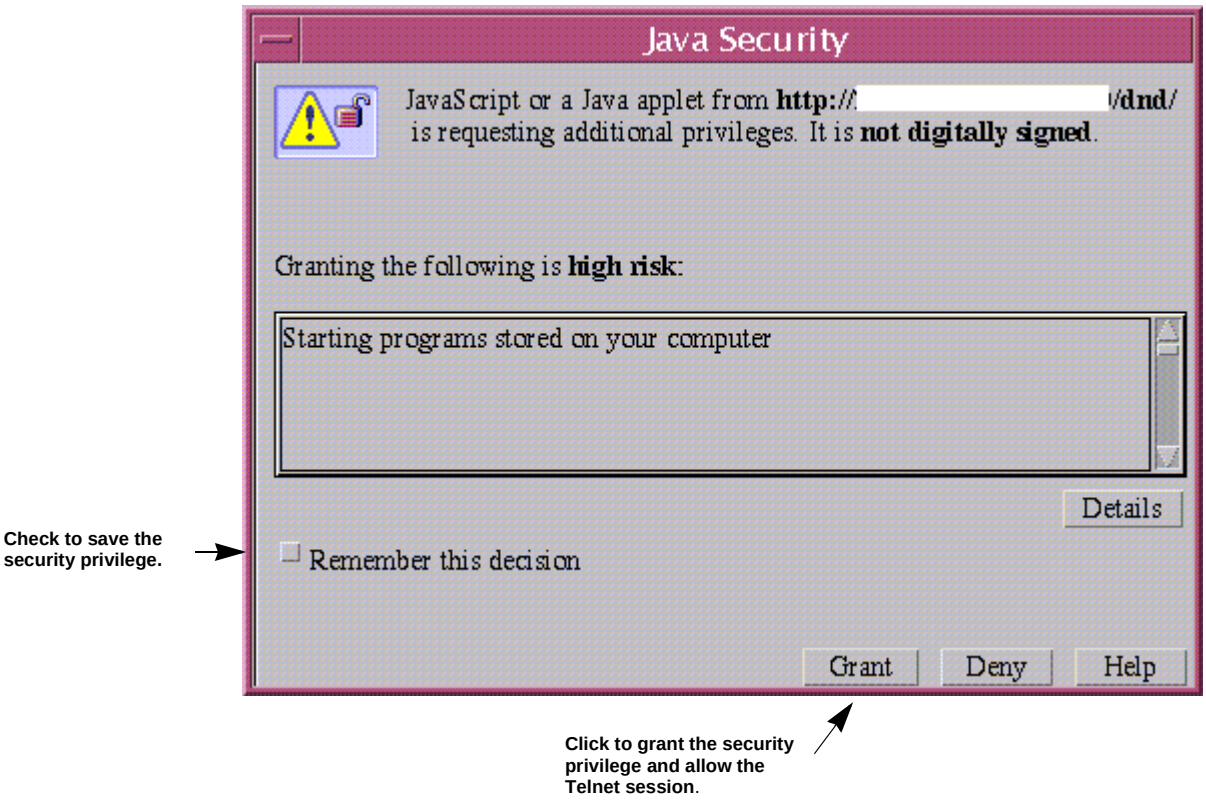


Figure 25-4. DND GUI: Java Security Dialog Box

NOTE:
To enable the Telnet function from a PC running Netscape, it is necessary to configure Netscape. The Installation Manual describes how to setup your preferences file to allow DND access to Telnet on your PC.

DND GUI: The DACS Telnet Form (Continued)

Field Descriptions

The field values for the DACS TELNET form are described in Table 25-2.

Table 25-2. DND GUI: Field Descriptions for the DACS TELNET Form

Field Name	Description
Current Site Choices	(Combo box) Mandatory. Select the DACS you wish to communicate with. When the **Current Site Choices:** field is changed, the results will appear in the same Netscape Window. By default, the list appears alphabetically.

DND Forms: Passthrough

Passthrough Menu Figure 25-5 shows the PASSTHROUGH pop-up menu.

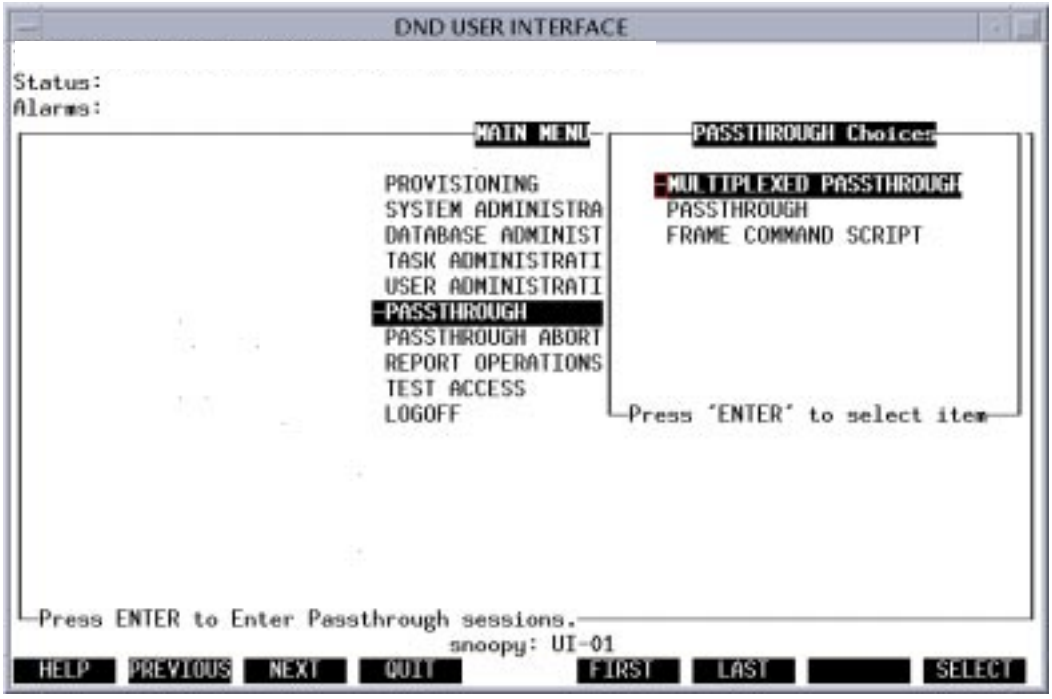


Figure 25-5. DND Forms: Passthrough Pop-Up Menu

The Passthrough pop-up menu provides three options:

- MULTIPLEXED PASSTHROUGH - use to communicate with the DACS while sharing the link with others.
- PASSTHROUGH - use to enter interactive DACS commands, such as DACS login. In this mode the link is not shared. This mode is also called *full passthrough*.
- FRAME COMMAND SCRIPT - use to create a script of MML commands.

NOTE:
Both types of passthrough are available for DACS II and DACS II ISX.

DND Forms: Passthrough (Continued)

Prerequisites

Before you can establish either type of passthrough to a DACS, you must:

- Set the link to the DACS for the MML language.
- *CREATE* the DACS under FRAME ADMINISTRATION, described in Chapter 5: NE Provisioning.
- For multiplexed passthrough, *RESTORE* the DACS. The DACS must be in-service and communicating with the DND for a multiplexed passthrough session to be established.
- For full passthrough:

  On a SNIDER connection, *RESTORE* the DACS. The DACS must be in-service and communicating with the DND.

  With an X.25 or TCP/IP link, the DACS may be in-service or out-of-service.

DND Forms: Passthrough Using an X.25 Link

SVC Connection

When you *RESTORE* a DACS with an X.25 link, a SVC connection is established from the DND to the DACS. A successful *RESTORE* results in a **Site Status** of *IS P*.

For Multiplexed Passthrough, the passthrough session shares the same SVC used by the DND for communicating to the DACS. The DACS must be in-service and communicating with the DND. The Multiplexed Passthrough session may be used to observe messages being received from the DACS and processed by the DND.

For Full Passthrough, the passthrough session sets up a new SVC connection to the DACS, which is separate from that being used for DND communications. If no more SVC connections are available, a request to open a full passthrough session to the DACS is denied.

The DACS may be in-service or out-of-service when you start a full passthrough session.

DND Forms: Passthrough Using a TCP/IP Link

Description

When you *RESTORE* a DACS with an TCP/IP link, a connection is established from the DND to the DACS. A successful *RESTORE* results in a **Site Status** of *IS P*.

For Multiplexed Passthrough, the passthrough session shares the same connection used by the DND for communicating to the DACS. The DACS must be in-service and communicating with the DND. The Multiplexed Passthrough session may be used to observe messages being received from the DACS and processed by the DND.

For Full Passthrough, the passthrough session sets up a new connection to the DACS, which is separate from that being used for DND communications. If no more connections are available, a request to open a full passthrough session to the DACS is denied.

The DACS may be in-service or out-of-service when you start a full passthrough session.

DND Forms: Passthrough Using a SNIDER Link

SNIDER Connection

Multiplexed Passthrough and Full Passthrough are also supported on a SNIDER-based connection.

For Multiplexed Passthrough, the DACS must be in-service and communicating with the DND. The passthrough session and the DND user share the same SNIDER connection to the DACS. The Multiplexed Passthrough session may be used to observe messages being received from the DACS and processed by the DND.

For a Full Passthrough session to be established through an asynchronous SNIDER connection, the DACS must be in-service and communicating to the DND. The Full Passthrough session will take over the link to the DACS and no other commands from the DND will be allowed. However, echoed responses and alarms will continue to be processed.

DND Forms: Multiplexed Passthrough

Description

This type of passthrough lets you communicate directly with the DACS in a multiplexed mode, sharing the link with others. It allows simultaneous access by all operators to a DACS over either a TCP/IP or SNIDER link or a single X.25 SVC.

The MULTIPLEXED PASSTHROUGH capability does not use an entire communication link with a DACS just for the passthrough functions. Moreover, as far as is possible, it provides the same kinds of functionality as does full PASSTHROUGH.

Functions Supported

The DND supports these MULTIPLEXED PASSTHROUGH functions:

- Simultaneous passthrough sessions for each logged-in user on any DACS that is in-service
- Command processing via the forms interface simultaneously with any active passthrough sessions
- Automatic termination of idle passthrough sessions (tuneable with the `SESSION_TIMEOUT` environment variable)
- Multiplexing of passthrough sessions onto a single communications circuit (SVC for X.25 or link for SNIDER) with the forms command processing interface for any DACS
- Aborting a session.

Constraints

The following constraints apply to MULTIPLEXED PASSTHROUGH:

- Do not use the **?** help mode on the DACS.
- Do not use interactive commands to the DACS; for example, commands to log on to the DACS, or to edit macros and maps. If you inadvertently enter an interactive command, access to the DACS is temporarily suspended, until the DACS times out.
- A multiplexed passthrough and a full passthrough session cannot be going on at the same time. The second request for a passthrough of a different type will be denied.

DND Forms: Multiplexed Passthrough Form

Sample Form Figure 25-6 shows a sample MULTIPLEXED PASSTHROUGH form.

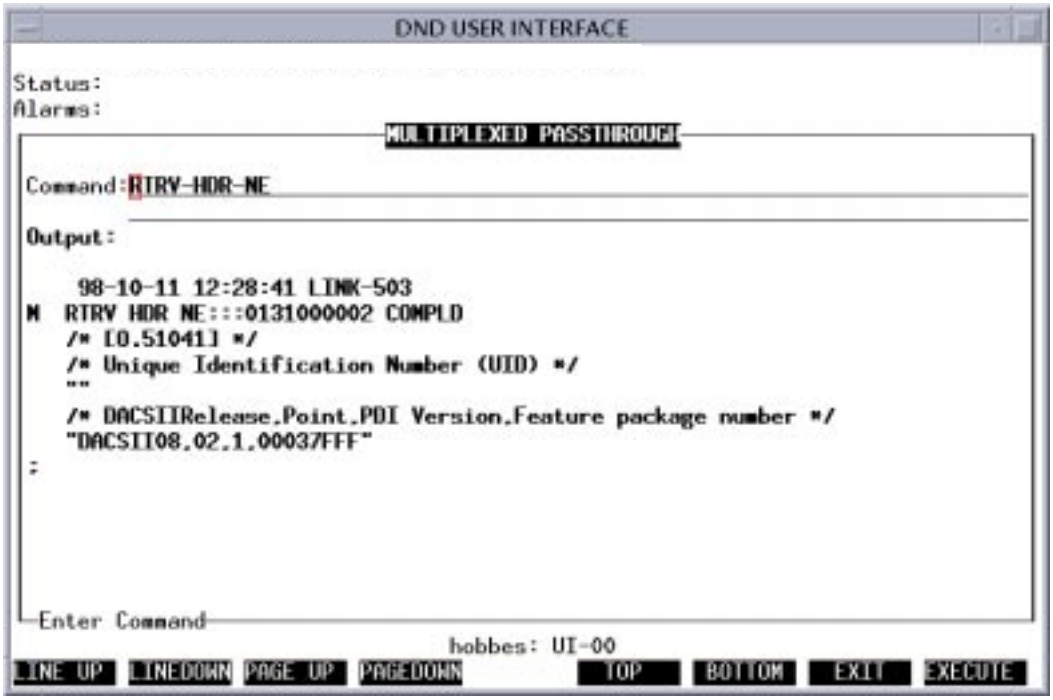


Figure 25-6. DND Forms: MULTIPLEXED PASSTHROUGH Window

DND Forms: Full Passthrough

Description

This type of passthrough lets you communicate directly with the DACS, but does not allow other users to share the link. Select this type when you must enter interactive commands to the DACS; for example, commands that require DACS login.

Constraints

The following constraints on the use of full PASSTHROUGH apply:

- If the DACS was connected to the DND in a direct configuration during installation, and a **Protocol** of *SNIDER* was specified during frame administration, entry of full PASSTHROUGH by one user restricts DND access to the DACS: no other DND users can send commands to it. An attempt to do so results in a message:

  ```
  PASS THROUGH IS IN PROGRESS
  ```

- If a DACS is connected to the DND, whether the link protocol is SNIDER or X.25, you cannot start both a multiplexed passthrough session and a full passthrough session to the same DACS.
- The system administrator has priority for PASSTHROUGH. If an operator is in the passthrough mode, the system administrator can terminate that relationship instantly with the PASSTHROUGH ABORT selection from the MAIN MENU. A pop-up box prompts *WHICH USERS?* Select the user(s) from the list given. A successful PASSTHROUGH ABORT results in the message:

  ```
  PASS THROUGH IS AVAILABLE
  ```

- Then the system administrator may enter PASSTHROUGH and, once in, cannot be displaced by DND terminal operators. However, more than one system administrator can be logged in, and any of those can terminate the passthrough session of any other with PASSTHROUGH ABORT.
- Full PASSTHROUGH sessions time out after 15 minutes of idle time.
- If the DACS was connected to the DND as a node on a Packet Data Network (PDN) and a **Protocol** of *X.25* was specified during frame administration, a maximum of 16 PASSTHROUGH sessions are supported. They require the availability of one Switched Virtual Circuit (SVC) per session.

(Continued on next page)

DND Forms: Full Passthrough (Continued)

Constraints (Continued)

- If the **Protocol** is *SNIDER*, but you change the link in PASSTHROUGH to communicate in PDS, the DND does not automatically reset the DACS to MML. Unless you do it manually before leaving PASSTHROUGH, the DND will not be able to communicate with the DACS at all after you leave PASSTHROUGH.
- If during a SNIDER FULL PASSTHROUGH session, an alarm triggers an Automatic Reconfiguration Plan, the SNIDER FULL PASSTHROUGH session will be aborted and the automatic reconfiguration plan will be executed.
- Since SNIDER FULL PASSTHROUGH assumes ownership of the SNIDER link, the request to enter FULL PASSTHROUGH will not complete until other outstanding DND commands to the DACS are complete. There may be a noticeable delay while waiting for the FULL PASSTHROUGH request to gain control of the link.

DND Forms: Full Passthrough Form

Sample Form Figure 25-7 shows a sample FULL PASSTHROUGH window.

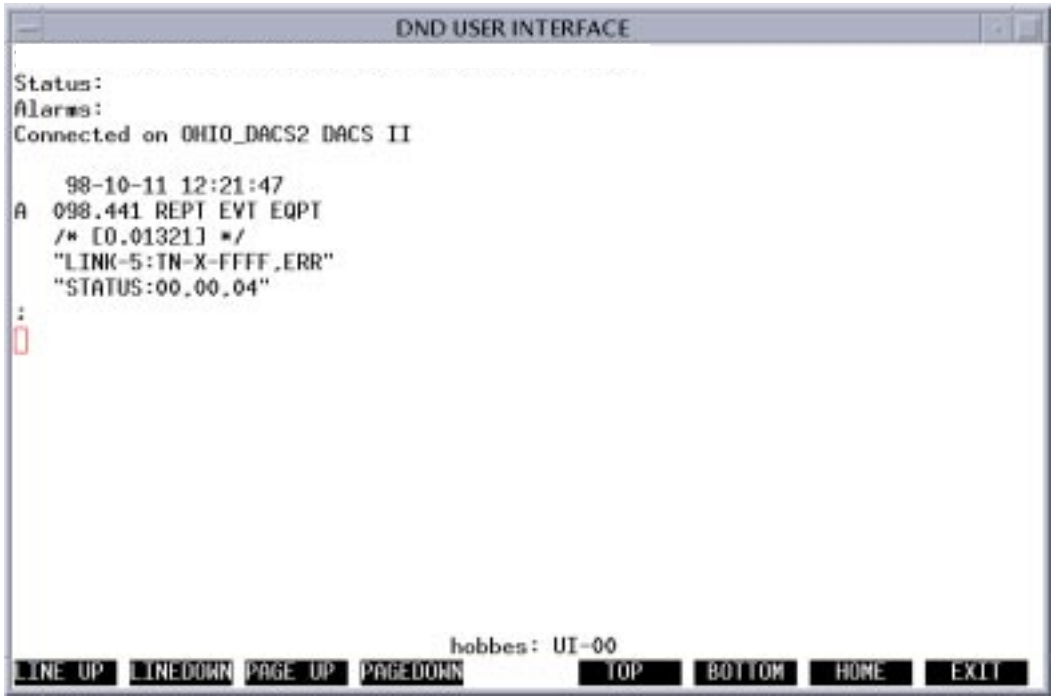


Figure 25-7. DND Forms: FULL PASSTHROUGH Window

DND Forms: Using Passthrough Selections

Screen Buffer

In PASSTHROUGH, the DND temporarily stores the last 120 lines of screen display in a special area called a screen buffer. The display includes both the commands you type and the DACS' responses to them. The screen displays 18 of those lines at any time.

In MULTIPLEXED PASSTHROUGH, the command remains on the screen. The DND saves the last 120 lines of DACS responses also. The screen displays 14 lines at a time.

The 14 or 18 lines are, therefore, a "window" to the 120 screen buffer lines. You may move, or scroll, the window up and down through the buffer by means of the function keys. However, a different set of function keys is valid for each type of passthrough.

DND Forms: Passthrough Control Keys

Full Passthrough Control Keys

Table 25-3 describes the control keys used for full passthrough.

Table 25-3. DND Forms: Full PASSTHROUGH Control Keys

F1 LINE UP Ctrl u	Scroll up (backward) one line.
F2 LINE DOWN Ctrl d	Scroll down (forward) one line.
F3 PAGE UP Ctrl b	Scroll up (backward) a full page.
F4 PAGE DOWN Ctrl f	Scroll down (forward) a full page.
F5 TOP Ctrl t	Go to top of first page.
F6 BOTTOM Ctrl l	Go to top of last page.
F7 HOME Ctrl l	Go back to last-displayed line.
F8 EXIT Ctrl e	Exit.

DND Forms: Passthrough Control Keys

Multiplexed Passthrough Control Keys

Table 25-4 lists the control keys for multiplexed passthrough.

Table 25-4. DND Forms: MULTIPLEXED PASSTHROUGH Control Keys

LINE UP	Scroll up (backward) one line.
LINE DOWN	Scroll down (forward) one line.
PAGE UP	Scroll up (backward) a full page.
PAGE DOWN	Scroll down (forward) a full page.
TOP	Go to top of first page.
BOTTOM	Go to top of last page.
EXIT	Exit
EXECUTE	Send command to DACS.

If a printer is attached to the DND console monitor, typing Ctrl o prints the contents of the screen. If no printer is attached, or if an error is encountered during the screen dump, the screen flashes and the terminal beeps once.

DND Forms: Terminating Passthrough

Sample Screen

When you choose the PASSTHROUGH ABORT option from the PASSTHROUGH menu, a screen appears, similar to the one shown in Figure 25-8.

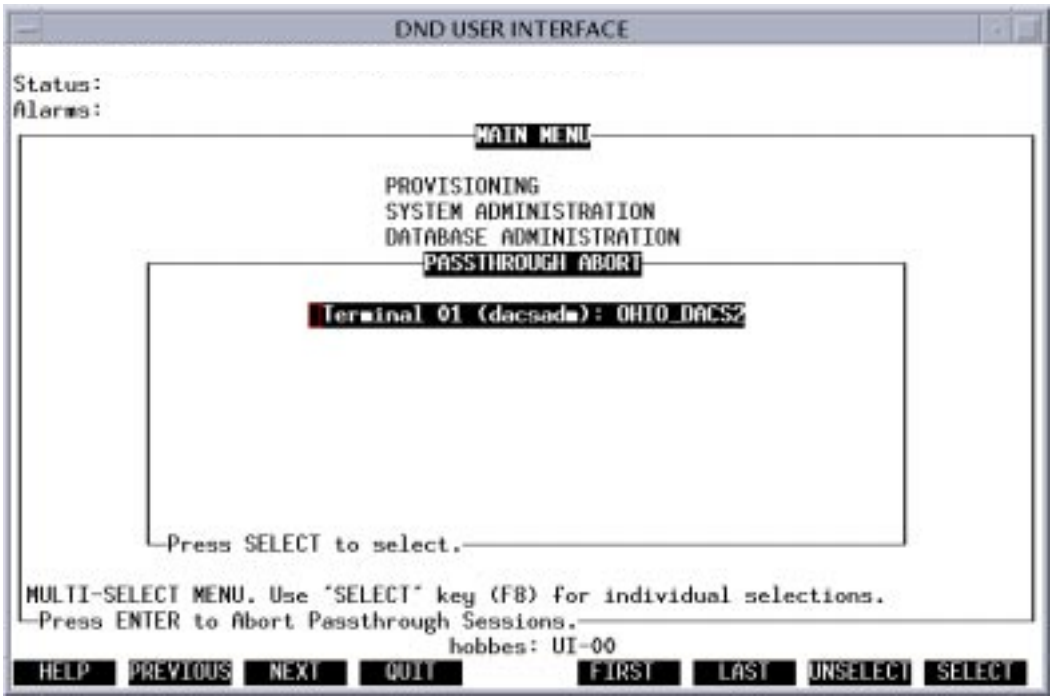


Figure 25-8. DND Forms: PASSTHROUGH ABORT Form

This capability will abort:

- DND Forms: Full Passthrough
- DND Forms Multiplexed Passthrough
- DND GUI: DACS Message

It has no control over a direct Telnet session made from the DND GUI

DND Forms: Frame Command Script

Purpose

The FRAME COMMAND SCRIPT Option allows you to create a script file of MML commands in the DND COMMON database for the DACS. You may execute the script in the background, write it on DOS diskette, edit it, delete it, or read it from DOS diskette. The maximum number of script files per DND is 100.

Database backup and restore include the script files with the other COMMON files. Manual execution of an RP and a script are mutually exclusive.

The last executed script log remains and can be viewed under REPORT OPERATIONS.

Rules for Creating Script Content

Some rules governing script content and allowed characters are as follows.

- The script language must be MML.
- Lines beginning with the # character are comment lines. They will not be sent to the DACS or logged in the log file.
- Only printable characters are allowed. The three exceptions are the | , ?, and !.
- Command lines in the script may not contain the characters *?* or *!*, or have any data following the command termination character *;*
- Empty lines are not allowed.
- The maximum length of a script line is 120 characters; the maximum file size, 150 lines.
- The only multi-line command supported by the FRAME COMMAND SCRIPT option is the login DAX command:

  ```
  LGN-USER:::DAX
  ```

- You must have changed the DAX user login to MML before executing the script containing the login DAX command.

DND Forms: FRAME COMMAND SCRIPT Form

Sample Form

To obtain the FRAME COMMAND SCRIPT option, select PASSTHROUGH from the DND Forms MAIN MENU and then FRAME COMMAND SCRIPT. An example of a frame command script is shown in Figure 25-9.

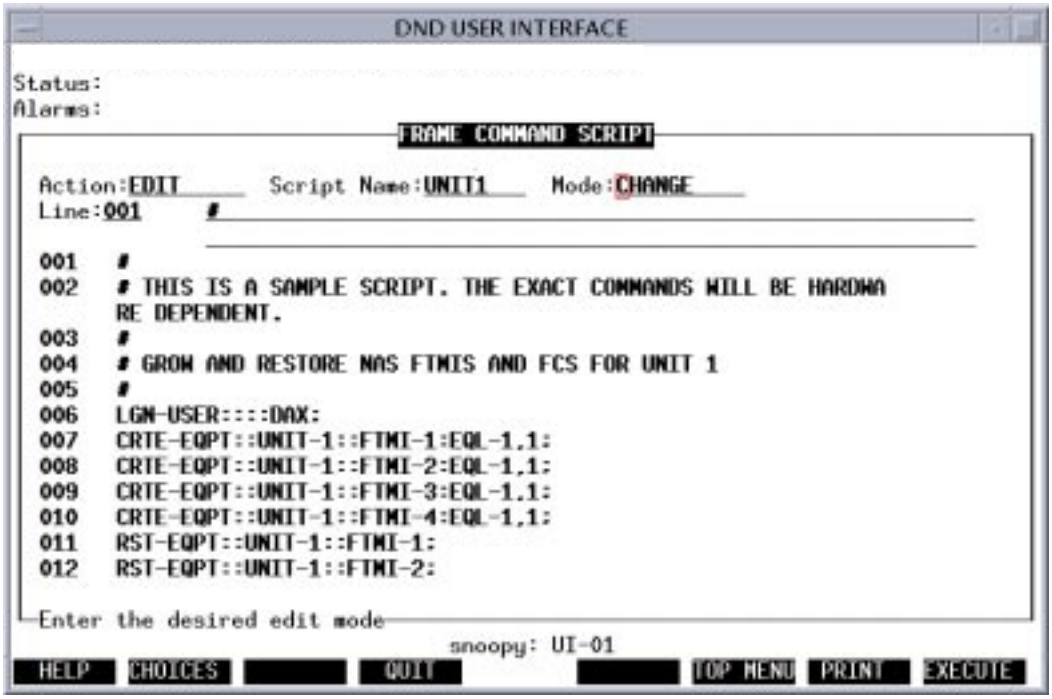


Figure 25-9. DND Forms: FRAME COMMAND SCRIPT Form

The specific fields that appear on the form depend on the **Action**.

DND Forms: FRAME COMMAND SCRIPT Form

Field Descriptions

The field values for the FRAME COMMAND SCRIPT form are described in Table 25-5.

Table 25-5. DND Forms: Field Descriptions for the FRAME COMMAND SCRIPT Form

Field	Description
Action	The FRAME COMMAND SCRIPT actions are: ■ *EDIT* - Opens the file of the given **Script Name** and displays 13 screen lines. You may specify the type of edit with the **Mode** field, and the line to be edited with the **Line** field. ■ *DELETE* - Displays the first 13 screen lines of the **Script Name** file. On your pressing EXECUTE, the DND deletes the file. ■ *DOSREAD* - Reads a DOS diskette on which you have previously stored script files in the root directory. The DND has automatically supplied a suffix of SCR. ■ *DOSWRITE* - Writes selected script files to DOS diskette. ■ *EXECUTE* - Executes the specified script. ■ *ABORT* - Terminates executing a script for a site.
Script Name	1-8 alphanumeric characters. The name of the script file to which the **Action** is to apply. The DND converts lower to upper case.
Site Name	The name of the site where the script file is to be executed or aborted.

Table 25-5. DND Forms: Field Descriptions for the FRAME COMMAND SCRIPT Form (Continued)

Field	Description
Mode	Appears for an **Action** of *EDIT* only. ■ *Insert* - On EXECUTE of this *EDIT*, insert the **Line** into the **Script Name** file. You are presumed to have finished typing the line. ■ *Change* - On EXECUTE of this *EDIT*, replace the **Line** with the one displayed. You are presumed to have finished changing it. To delete a line, simply *Change* its contents to no value.

DAX Login Password	This field appears for an *EXECUTE* **Action** if the script file contains the command:
	`LGN-USER::::DAX`
	There are two methods for entering a login command in a command script.
	Method 1. (For X.25 only) Enter the *LGN-USER::::DAX* command in the script file. Enter the password in the **DAX Login Password** field. This is the recommended method for entering a login command in a command script. DND can construct a proper login command and the password remains secure.
	Method 2. (For X.25 only) Use the official syntax of the DACS login command in the script file, as follows:
	`LGN-USER:::DAX, <password>`
	If you use Method 2 and put the password directly on the command line in the script file, the entry in the **DAX Login Password** field is ignored and the <password> in the script is used. The drawback to this method is that the password is revealed in the script file.

Line	Appears only for an **Action** of *EDIT*. The line number being referenced of the **Script Name** file.

Outage Logs

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Background

Introduction

DND enables you to keep electronic notebooks, or logs, on NPC and circuit outages that have occurred on a DACS. You collect the data to be placed in a log. An advantage to keeping the log is that you can generate a report to obtain a formatted, hard-copy log.

Two logs are available:

- NPC outage log
- Circuit outage log

The logs allow you to record when an NPC or circuit, respectively, became nonfunctional, and when you restored service on them. You can store, change, or remove records for each log.

Menu Options

To record NPC and circuit outages:

- From the DND GUI interface, select Outage from the Provisioning menu.
- From the DND Forms interface, select Database Administration from the Main Menu, then select Outage Log

Objectives

This chapter provides background information to help you perform the following:

1. Enter outage data
2. Retrieve outage data.

Related tasks

For related tasks, see the following General Tasks in Volume II:

DND GUI:

- Maintaining Outage Log Data GT 26.1G

DND Forms:

- Entering Outage Log Data GT 26.1U
- Inserting a Record in the NPC Outage Log - Example GT 26.2U

DND GUI: Outage Log Form

Sample Outage Log Form

From the Provisioning menu, select Outage Log to display the OUTAGE LOG form. A sample OUTAGE LOG form is shown in Figure 26-1.

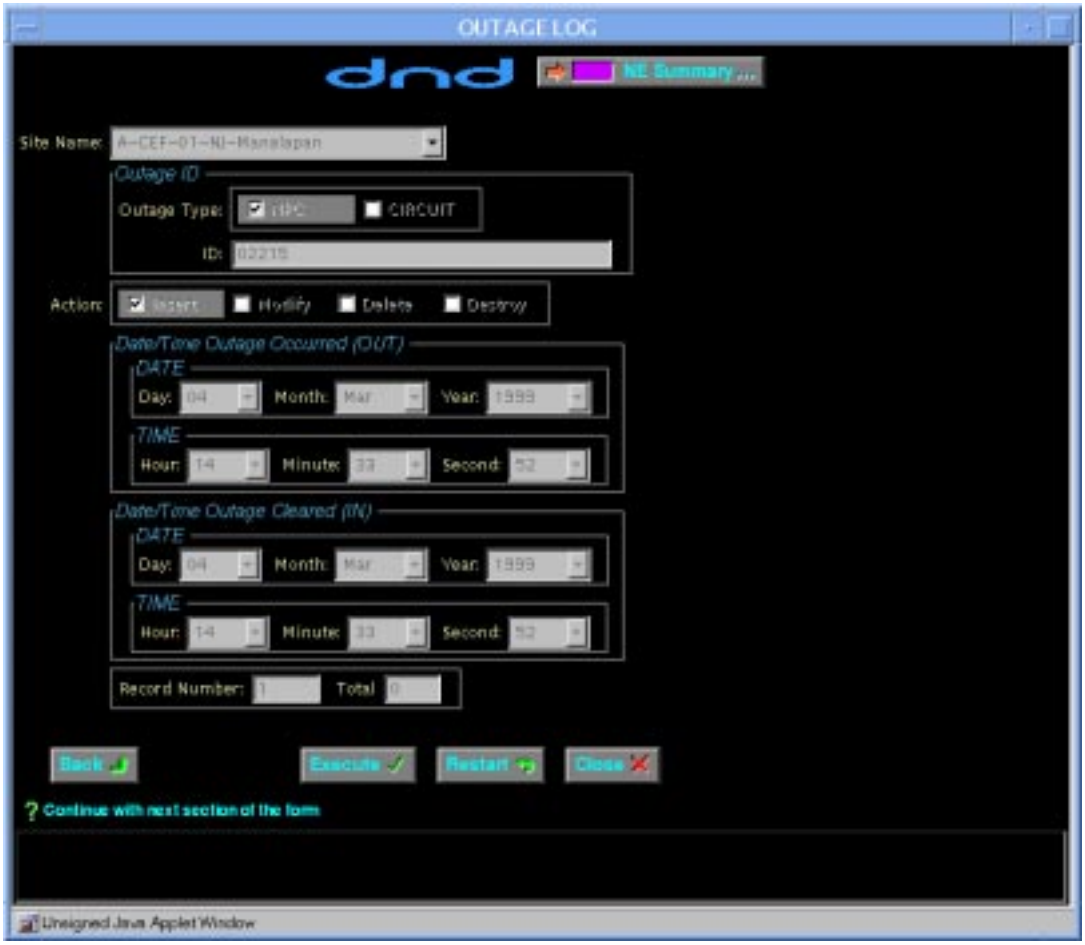


Figure 26-1. DND GUI: Outage Log Form

DND GUI: Outage Log Form (Continued)

Field Descriptions

The field values for the OUTAGE LOG form are described in Table 26-1.

Table 26-1. DND Forms: Field Descriptions for OUTAGE LOG Form

Field	Description
Site Name	Mandatory. The name of the DACS where the requested **Action** will take place.
Outage Type	Mandatory. The log to be affected by the **Action**. the choices are: ■ *NPC* - Selects the outage log for an NPC ■ *CIRCUIT* - Selects the outage log for a circuit.
ID	Mandatory. 1 through 41 characters. The ID of the NPC or circuit for which the outage is being recorded. IDs that are not provisioned are not accepted.
Action	Mandatory. The type of record handling to be performed. The choices are: ■ *INSERT* - Places the record in the log. ■ *MODIFY* - Modifies the record. ■ *DELETE* - Removes the record from the log. ■ *DESTROY* - Removes all records from the log.
Date/Time Outage Occurred (OUT)	Select the **Date** and **Time** that the outage occurred. For the **Date**, select **Day**, **Month**, and **Year**. For the **Time**, select the **Hour**, **Minute**, and **Second**.
Date/Time Outage Cleared (IN)	Select the **Date** and **Time** that the outage cleared. For the **Date**, select **Day**, **Month**, and **Year**. For the **Time**, select the **Hour**, **Minute**, and **Second**.
Record No.	A sequence number, *1* through *9999*, that is automatically assigned during an *INSERT* **Action**, and can be entered in other **Action**s. Each circuit or NPC can have up to 9999 outage records. The default is the next highest value for the set of entries for a circuit or NPC. After a deletion, the records in the sequence are renumbered automatically.
Total	Total number of outage records in the database for this ID.

DND Forms: Outage Log Form

Sample Outage Log Form

From the DATABASE ADMINISTRATION menu, select OUTAGE LOG to display the OUTAGE LOG form. A sample OUTAGE LOG form is shown in Figure 26-2.

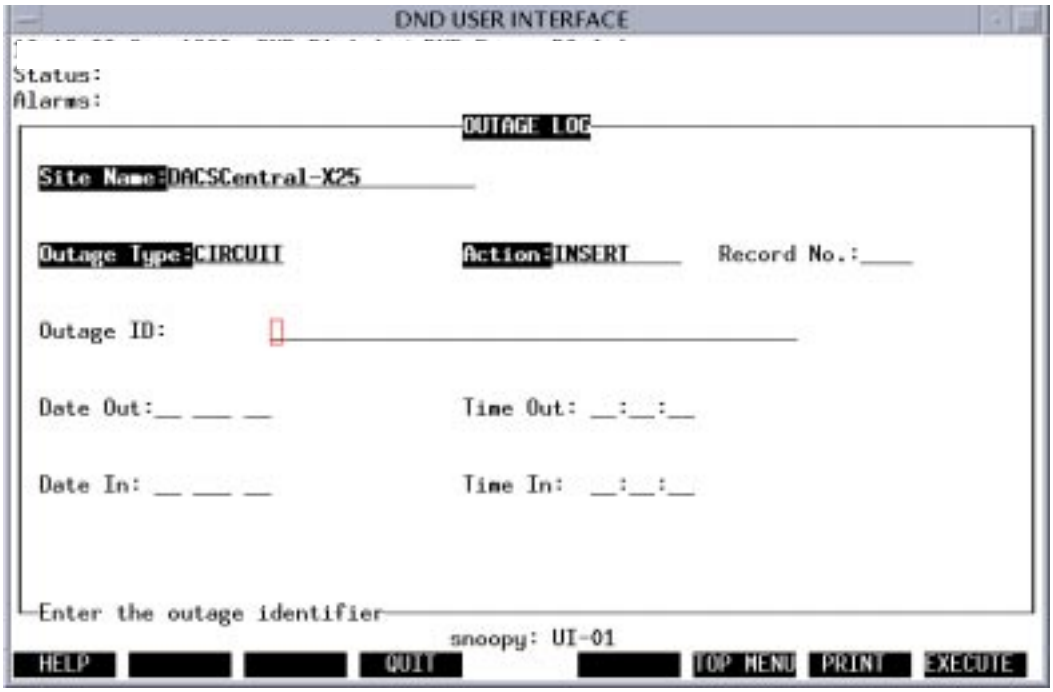


Figure 26-2. DND Forms: Outage Log Form

DND Forms: Outage Log Form (Continued)

Field Descriptions

The field values for the OUTAGE LOG form are described in Table 26-2.

Table 26-2. DND Forms: Field Descriptions for the OUTAGE LOG Form

Field	Description
Site Name	Mandatory. The name of the DACS where the requested **Action** will take place. Enter or press CHOICES to select a Site Name. Site Names are created from the FRAME ADMINISTRATION form. See Chapter 5 for more details.
Outage Type	Mandatory. The log to be affected by the **Action**. The choices are: ■ *NPC* - Selects the outage log for an NPC. ■ *CIRCUIT* - Selects the outage log for a circuit.
Action	Mandatory. The type of record handling to be performed *INSERT* Places the record in the log. *CHANGE* Modifies the record. *DELETE* Removes the record from the log. *DESTROY* Removes all records from the log.
Record No.	A sequence number, *1* through *9999*, that is automatically assigned during an *INSERT* **Action**, and can be entered in other **Action**s. Each circuit or NPC can have up to 9999 outage records. The default is the next highest value for the set of entries for a circuit or NPC. After a deletion, the records in the sequence are renumbered automatically.
Outage ID	Mandatory. 1 through 41 characters. The ID of the NPC or circuit for which the outage is being recorded. IDs that are not provisioned are not accepted.

Table 26-2. DND Forms: Field Descriptions for the OUTAGE LOG Form (Continued)

Field	Description
Date Out	Three fields stating the date on which the outage began, in the format: dd mmm yy If you do not enter a **Date Out** when inserting an outage record, the default is the current date. where dd can be one or two digits, mmm is the first three letters of the month in either upper or lower case, and yy is the last two digits of the current year. For year, any two digits are valid.
Time Out	Three fields stating the time on which the outage began, in the format: hh:mm:ss where hh is *0* through *23* hours. 00:01 follows midnight (00:00). mm is *0* through *59* minutes, and ss is *0* through *59* seconds. The default is the current time.
Date In	The date the outage was cleared. If you do not enter a **Date In** when inserting an outage record, the default is the current date.
Time In	The time the outage was cleared. The default is the current time.

Fault Management and Alarm Surveillance

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Background

Introduction

The DND receives events and alarms from the network elements it manages, including:

- DACS II CEF (Capacity Expansion Frame)
- DACS II ISX (Integrated Shelf Cross-Connect)
- DACS II AX
- ACCULINK Access Controller (AAC)
- Integrated Access Communications Server (IMACS)
- Packet Star PSAX2300 Access Concentrator (PSAX)

Users are notified when these events and alarms occur and may obtain additional information and monitor the current state of network elements using one of the following interfaces:

- Fault Management - DND GUI
- Fault Management - DND Forms

Fault Management - DND Forms

This capability is available from the DND Forms Interface only and pertains only to the DACS II and DACS II ISX elements. The report generation of alarms and events is provided in an alarm log, which provides a sequential listing of all events that have occurred.

Background (Continued)

Fault Management - DND GUI

The following fault management features are available from the DND GUI:

- Alarm Surveillance
- Network Element (NE) Summary

Alarm Surveillance

Alarm Surveillance provides a single, consolidated display of all alarms which are currently active across all NEs managed by the DND. The display is updated in real-time as alarms are activated and retired.

An alarm acknowledgement feature is also provided with alarm surveillance which includes the login name of the user who acknowleged the alarm. The ALARM SURVEILLANCE ACKNOWLEDGEMENT CONTROL form provides several sorting and filtering controls to allow the user to prioritize and consolidate the alarms presented in the window.

Network Element (NE) Summary

When a new alarm occurs in the DACS network, a red arrow appears on the Alarms... button on the DND Task Bar, next to the site icon in the Network Map, and in the NE Summary window. The NE SUMMARY reports can be generated by pressing the new alarm arrow on the icon either in the NE Summary window or on the network map.

Additionally, the Alarm Severity feature allows users to change the severity level of PA-, PB-, and PC-type NPC facility and associated shelf alarms. This gives DACS II users the flexibility of customizing their alarm severities.

Objectives

This chapter provides background information to help you perform the following:

1. Start the Alarm Surveillance display
2. Change the contents of the Alarm Surveillance display
3. Acknowledge an alarm.

The chapter also includes fault management topics and information on logged alarms and events.

(Continued on next page)

Background (Continued)

Related tasks

For related tasks, see the following General Tasks:

DND GUI:

- Monitoring Alarms GT 27.1G
- Setting Alarm Selection and Sort Criteria GT 27.2G
- Acknowledging an Alarm GT 27.3G
- Generating an NE Alarm Summary Report GT 27.4G
- Adding New Sounds for Audible Alarms GT 27.5G

DND FORMS:

- Retrieving and Acknowledging Alarms GT 27.1U

Related information

For related information see the *DACS II and DACS II ISX Operations and Maintenance Manuals* and the *DACS II AX 4/11 User's Guide.*

Fault Management Topics

Introduction

This section contains specifics on several fault management topics. Since certain information only applies to DACS, DACS IIs, or DACS II AX network elements supported by DND, a distinction is made where appropriate. If no distinction is made, the information applies to all network elements.

Alarms

An alarm is a condition on any NE that can be either active or inactive, e.g., T1 Loss of Signal or card missing. When the NE reports the alarm active, it also reports a severity assigned to the alarm, i.e., informational, minor, major, or critical).

For the AX and SNMP-based NEs, the alarm log entry shows the alarm name in the "alarm_type" column and its assigned severity value in the “severity” column. For CEF/ISX NEs, the alarm name is in the “Summary” column and the severity is in the “Sev” column of the alarm log report.

If the NE reports the alarm has cleared, the SNMP-based NE alarm log displays "clear" in the severity column. The "port" column shows the entity within the NE where the alarm occurred (e.g. equipment name, or transmission facility). The port_type column shows the type of equipment or facility that has the alarm. "Port" and "port_type" names are different for different types of NEs.

Events

An event is any logged action that is not considered an alarm. Events are a notification that something occurred on an AX or SNMP-based NE - e.g., *Coldstart, connection deleted*. An event differs from an alarm in that it is not assigned an *active* or *clear* state.

Alarm Logging

When an Alarm Set message is received by the DND, the “set” message is stored in the DND database and logged to the Alarm Log if the alarm is not already active in the DND database. When an Alarm Clear message is received by the DND, the corresponding alarm is cleared in the DND database and logged to the Alarm Log if the alarm is currently active in the DND database.

For AX NEs, an alarm is always logged regardless of whether or not it is present in the DND.

(Continued on next page)

Fault Management Topics (Continued)

Alarm Logging, (Continued)

Since Performance Monitoring messages from both domestic NPCs and DS3s cannot be cleared, these messages are always logged.

Alarm Surveillance

When an active alarm (not an event) is reported from the NE, it is added to the Alarm Surveillance window with the corresponding alarm severity.

When an alarm clear is reported to the DND, the alarm is removed from the Alarm Surveillance window. This window also displays a link alarm in the *Entity* column for those NEs with a communication state of ALM or ERR (ALM in ERR is displayed in the *Type* column).

Sequence Numbers

A sequence number is a numeric value assigned to an SNMP trap. If the NE supports sequence numbers, then a numeric value is assigned to the trap by the NE. If a subsequent trap is sent from a NE, then it is assigned the next number. The trap sequence number is displayed in the alarm log's *Seqno* column.

Only AX and AAC/IMACS NEs support sequence numbers. When a trap is received for PSAX equipment or other NEs that do not support sequence numbers, their Seqno value defaults to 0.

Sequence Number Gap

DND keeps track of each trap's sequence number. If DND detects a range of one or more missing sequence numbers - indicating that it has lost one or more traps from the NE - the message, *NE SEQNO GAP* is put in the alarm log.

NE State Changes and Link Failures

The alarm log includes NE state change entries which are not generated by a trap. It appears in the alarm log as *NE STCHG* and its possible states are: OOS, QRY, IS, ERR, ALM. For example, the log may display "NE STCHG:IS" to indicate that the NE communication state has changed to "in service".

When an X.25 link is removed from the back of a DACS, the link is automatically removed from service. The following messages may appear in the DND alarm log:

```
OOS:LINK
CLR LINK 15
```

(Continued on next page)

Fault Management Topics (Continued)

NE State Changes and Link Failures (Continued)

These messages appear when the X.25 link is down for one of the following reasons:

- Outgoing messages at the DACS are being queued faster than they can be processed. When the X.25 cable is replaced and communications are reestablished, the `OOS:LINK` and `CLR LINK 15` messages may not have been sent out. With communications with the DND fully established, the messages are sent and the placed in the alarm log.
- A Message Log Recovery is performed after the link is reestablished. The `OOS:LINK` and `CLR LINK 15` messages will be placed in the alarm log.

Note that for each of these logged entries, no further action needs to be performed.

Power Alarm

When there is a Power alarm on a DACS II or DACS II ISX, the message that will clear the alarm is only received when a link is provisioned for screening level 5. The DND does not use this screening and will not receive notification that the Power alarm has been cleared.

To clear the Power alarm, run an Alarm Sync (see *Chapter 18, Database Audit/ Synchronization* or use the MUX Passthrough (see Chapter DACS Message/ Passthrough) to issue an `INIT-REG` command to clear the alarm.

Fault Management - Alarm Message Elements in DND Forms

Overview

This feature allows you to monitor the alarm status of the DACS systems being controlled by the DND on a real time basis. In addition to notification, the feature also provides a mechanism to view the contents of the DACS Alarm Log. Details of the various fields in the Alarm Log reports are provided in this section.

NOTE:
While the information in this section pertains only to the DND Forms Interface, it may also be viewed in the DND GUI. For information on Fault Management using the DND GUI and DND Forms interfaces, refer to *Report Operations*, in the Alarm Log Report section.

DND Alarm Status Line

The DND alarm status line, labeled `Alarms`, displays equipment alarms. When this line is clear, no unacknowledged alarms are pending.

DACS Alarms

DACS Alarms are indicated when the appropriate site name appears on the alarm status line. Equipment alarms are displayed from as many DACS systems as will fit on the line.

Site Names

Site names where critical alarms arise are displayed in red (color terminal), in reverse video (monochrome terminal), or blinking (VT100 only, not the SUN console). Site names where minor or major alarms arise are displayed in red (color terminal) or in reverse video (monochrome terminal). Site names where information alarms arise are not displayed.

When a critical alarm occurs, the site name will flash until you acknowledge by pressing Ctrl + a.

Fault Management - Alarm Message Elements in DND Forms (Continued)

Alarm Message Elements

Table 27-1 through Table 27-13 describe DACS II alarm message elements. These field values help you identify the type of alarm. Explanations of each message element follow each table.The column headings in the report and their values are explained in Table 27-1.

Table 27-1. Explanation of DACS II and DACS II ISX Alarm Message Elements

Heading	Description
Date, Time	The date and time when the alarm was received. Dates are in order from most recent to least recent.
Sev	The severity of the alarm: `CR` (critical), `MAJ` (major), `MIN` (minor), `CLR` (clear) for `Idle`, and `INF` (information).
Summary	The type of alarm message. `BMTR ALARM` Backup memory transfer alarm. `BMTR IDLE` Backup memory transfer alarm retired. `BOOT FAILED` Reports that a system boot has failed during a `RST::MC` or `RST::MC,TAPE` command. `CCB ALARM` Cross-connect buffer alarm. `CCB IDLE` Cross-connect buffer alarm retired. `CCI ALARM` Clock and control interface alarm. `CCI IDLE` Clock and control interface alarm retired. `CCNI ALARM` Cross-connect network interface alarm. `CCNI IDLE` Cross-connect network interface alarm retired. `CGA` Carrier group alarm for NAS NPCs. This message reports facility alarms. The type of facility alarm is reported in the F column. `CCN IDLE` Cross-connect network alarm retired. `CGA IDLE` The message is informationally the same as for CGA. It means that the CGA has been retired. `CI RESET` Communications interface reset. A DACS II outputs this type of message immediately after a hardware reset. The `MAJ` severity notifies remote systems of the reset. `DATE RESET` Reports that a DACS II's date and/or time have been reset. `DSG` Jitter suppressor. `DSPI ALARM` Digital signal processing interface alarm. `DSPI IDLE` Digital signal processing interface alarm retired. `DSPU ALARM` Error recovery for the DSPU NPC. `ECCN IDLE` Expanded cross-connect network side (ECCN) alarm retired. `ETSI ALARM` Expanded time slot interchanger alarm.

Table 27-1. Explanation of DACS II and DACS II ISX Alarm Message Elements (Continued)

Heading	Description	
Summary Continued...	ETSI IDLE	Expanded time slot interchanger alarm retired.
	EER	Excessive Error Rate
	ERR:SXC	This autonomous message reports that the synchronizer on the specified synchronizer/cross-connect (SXC) CP has switched to a new phase locked loop operating mode or has switched to a new source of timing.
	ERR:TREF	Synchronization timing reference error.
	FC ALARM	Format converter alarm.
	FC IDLE	Format converter alarm retired.
	FMT ALARM	Formatter alarm.
	FMT IDLE	Formatter alarm retired.
	FTMI ALARM	Facility terminating module interface alarm.
	FTMI IDLE	Facility terminating module interface alarm retired.
	FTU ALARM	Error recovery for the FTU NPC. Refers to error condition code.
	IDLE:SXC	The SXC has returned to in-service state.
	LES	Loss of External Synchronization
	LES + AIS	Loss of External Synchronization and Alarm Indication Signal.
	LES + EER	Loss of External Synchronization and Excessive Error Rate.
	LES + LOFA/LOS	Loss of External Synchronization and Loss of Frame Alignment or Loss of Signal.
	LOFA/LOS	Loss of Frame Alignment or Loss of Signal.
	LOS	Loss of signal (LOS) alarm on a DA type NPC.
	LOS IDLE	LOS alarm retired.
	MC ALARM	Main controller alarm.
	MC IDLE	Main controller alarm retired.
	MC IN MCOND	Maintenance condition (MCOND) in main controller. Reports that the MC has been restored to service in the maintenance condition.
	MC REMOVED	Main controller removed. Reports that the MC was removed from service.
	OOS:CCB	Cross-connect buffer out of service.
	OOS:CCI	Clock and control interface (CCI) out of service.
	OOS:CCN	CCN out of service.
	OOS:CCNI	Cross-connect network interface (CCNI) out of service.
	OOS:DSPI	Digital signal processor interface (DSPI) out of service.
	OOS:ECCN	Expanded cross-connect network side (ECCN) out of service.
	OOS:ETSI	Expanded time slot interchanger (ETSI) out of service.
	OOS:FC	Format converter of a facility terminating unit (FTU) out of service.
	OOS:FLI	Facility line interface out of service.
	OOS:FMT	Formatter in a DS3 unit is out of service.
	OOS:FTMI	Facility terminating module interface out of service.
	OOS:LINK	Link out of service.
	OOS:MMFG	Multiplexer-multiplexer interface unit functional group (MMFG) of a DS3 unit out of service.

Table 27-1. Explanation of DACS II and DACS II ISX Alarm Message Elements (Continued)

Heading	Description	
Summary Continued...	ETSI IDLE	Expanded time slot interchanger alarm retired.
	EER	Excessive Error Rate
	ERR:SXC	This autonomous message reports that the synchronizer on the specified synchronizer/cross-connect (SXC) CP has switched to a new phase locked loop operating mode or has switched to a new source of timing.
	ERR:TREF	Synchronization timing reference error.
	FC ALARM	Format converter alarm.
	FC IDLE	Format converter alarm retired.
	FMT ALARM	Formatter alarm.
	FMT IDLE	Formatter alarm retired.
	FTMI ALARM	Facility terminating module interface alarm.
	FTMI IDLE	Facility terminating module interface alarm retired.
	FTU ALARM	Error recovery for the FTU NPC. Refers to error condition code.
	IDLE:SXC	The SXC has returned to in-service state.
	LES	Loss of External Synchronization
	LES + AIS	Loss of External Synchronization and Alarm Indication Signal.
	LES + EER	Loss of External Synchronization and Excessive Error Rate.
	LES + LOFA/LOS	Loss of External Synchronization and Loss of Frame Alignment or Loss of Signal.
	LOFA/LOS	Loss of Frame Alignment or Loss of Signal.
	LOS	Loss of signal (LOS) alarm on a DA type NPC.
	LOS IDLE	LOS alarm retired.
	MC ALARM	Main controller alarm.
	MC IDLE	Main controller alarm retired.
	MC IN MCOND	Maintenance condition (MCOND) in main controller. Reports that the MC has been restored to service in the maintenance condition.
	MC REMOVED	Main controller removed. Reports that the MC was removed from service.
	OOS:CCB	Cross-connect buffer out of service.
	OOS:CCI	Clock and control interface (CCI) out of service.
	OOS:CCN	CCN out of service.
	OOS:CCNI	Cross-connect network interface (CCNI) out of service.
	OOS:DSPI	Digital signal processor interface (DSPI) out of service.
	OOS:ECCN	Expanded cross-connect network side (ECCN) out of service.
	OOS:ETSI	Expanded time slot interchanger (ETSI) out of service.
	OOS:FC	Format converter of a facility terminating unit (FTU) out of service.
	OOS:FLI	Facility line interface out of service.
	OOS:FMT	Formatter in a DS3 unit is out of service.
	OOS:FTMI	Facility terminating module interface out of service.
	OOS:LINK	Link out of service.
	OOS:MMFG	Multiplexer-multiplexer interface unit functional group (MMFG) of a DS3 unit out of service.

Table 27-1. Explanation of DACS II and DACS II ISX Alarm Message Elements (Continued)

Heading	Description
Summary Continued...	OOS:MEMA Memory card A out of service. OOS:MEMB Memory card B out of service. OOS:PMEM Primary memory card out of service. OOS:SMEM Secondary memory card out of service. OOS:NPC NPC out of service. OOS:SYNC Synchronizer out of service. Reports that the timing extractor circuit, the phase-locked loop, the clock generator unit, or the service and reply circuit are out of service. OOS:SYNC-TB Synchronizer time base out of service. Reports that the synchronizer time base has been removed as a clock reference oscillator (CRO). OOS:SYNC-TLI Synchronizer time link interface out of service. OOS:SXC One of the SXC CPs has gone out of service as a result of either a failure and a protection switch to the duplicated side, or a manual removal of the SXC. OOS:TSI Time slot interchange out of service. OOS:TREF Synchronization timing reference out of service. OOS:UC Unit controller out of service. PBA Primary block alarm (PBA) for CEPT NPCs. PBA IDLE The PBA has been retired. POWER ALARM Power supply alarm. POWER FAIL Reports that error recovery was instigated by a DACS II because of a frame power failure. The Fld1 and Fld2 columns of the report contain field1 and field2 reported in the DACS II error status register. Refer to the description immediately following this table. DS3 THRES ALARM DS3 Threshold Alarm POWER IDLE Power supply alarm retired. SSP ALARM Synchronizer sync port alarm. SSP IDLE Synchronizer sync port alarm retired. SYNC ALARM Synchronizer alarm. SYNC IDLE Synchronizer alarm retired. THRES ALARM Threshold alarm. This message reports that the 15-minute or 24-hour threshold exception alarm for a particular NPC has been equaled or exceeded for the facility performance parameter designated under Threshold. THRESH IDLE This threshold alarm has been retired. TS0 BOVF TS0 monitor buffer overflow. TS0 IDLE TS0 monitor buffer clear. TSI ALARM Time slot interchanger alarm. TSI ALARM Time slot interchanger alarm. TSI IDLE Time slot interchanger alarm retired. UC ALARM Unit controller alarm. UC IDLE Unit controller alarm retired.

Table 27-1. Explanation of DACS II and DACS II ISX Alarm Message Elements (Continued)

Heading	Description
Type	Facility Alarm Type. For CEPT NPCs; for example, the `Summary` is `PBA`: `A` Primary AIS; for example, Alarm indication signal received in all 32 time slots. `B` BER: bit error rate detected in received signal. `C` LCMA: Loss of CRC4 multiframe alignment in TS0. `E` RBER: remote bit error rate detected in Bit 4 of TS0. `F` LOF PBF: Loss of frame primary block failure. `G` FLCMA; `I` RAIS: remote AIS detected in Bit 4 of TS0. `L` LMA: Loss of multiframe alignment in CAS Time Slot 16. `M` R16: RAI received in Bit 6 of Frame 0 of TS16. `P` PFOOF: `R` LOS PBF: Loss of signal type primary block failure, or primary block alarm (PBA). `S` SFI: synchronization failure indication in Bit 5 of TS0. `V` A16: AIS received in CAS time slot 16. `X` EER: excessive error rate. `Y` RAI: Remote alarm indication received in Bit 3 of NFW of TS0.
NPC	The NPC Number of the NPC that is the subject of the message. The NPC number is displayed in hierarchical format if the DACS is provisioned for hierarchical and displayed as 4-digit extended if provisioned for extended 3 or extended 4. (NPCs on a DACS II ISX are always displayed as 4-digit extended.) See Chapter 2, "Frame Administration."
Threshold	See Table 23-2.
Unit	The unit number of the alarming facility.
Side	The side number of the alarming facility.
Sub	The subunit number of the alarming facility.
FLD1,FLD2	See Table 23-3 and Table 23-4.

Table 27-2. Alarm Thresholds

Threshold	Description
BER	Bit error rate.
COFA	Change of frame alignment error.
CRC15MIN	15-minute CRC block errors.
CRCDAILY	Daily CRC block errors.
CSS15MIN	15-minute controlled slip seconds.
CSSDAILY	Daily controlled slip seconds.
CV15MIN	15-minute coding violations.
CVDAILY	Daily coding violations.
DM1H	Degraded minutes after 1 hour.
DM24H	Degraded minutes after 24 hours.
ERS15M	Errored seconds after 15 minutes.
ERS24H	Errored seconds after 24 hours.
ES15MIN	15-minute errored seconds.
ESDAILY	Daily errored seconds
FEBE15MIN	15-minute far -end block errors.
FEBEDAILY	Daily far-end block errors
FES15MIN	15-minute far-end seconds.
FESDAILY	Daily far-end errored seconds.
FRER15MIN	15-minute framing errors.
FRERDAILY	Daily frame errors.
FSESDAILY	Daily far-end severely errored seconds.
FUAS15MIN	15-minute far-end unavailable seconds.
FUASDAILY	Daily far-end unavailable seconds.
IDLE SIG	Idle signal.
LOS	Loss of signal.
MER15MIN	15-minute multiframe errors.
MERDAILY	Daily multiframe errors.
OFS15MIN	15-minute out of frame seconds.
OFSDAILY	Daily out of frame seconds.
OOF	Out of frame
SAFE	Shelf alarm far end.
SANE	Shelf alarm near end.
SERS15M	Severe errored seconds after 15 minutes.
SERS24H	Severe errored seconds after 24 hours.
SES15MIN	15-minute severely errored seconds.
SESDAILY	Daily severe errored seconds.
SLIP	Slip count.
SLIPS15M	Slip count after 15 minutes.
SLIPS24H	Slip count after 24 hours.
UAS15MIN	15-minute unavailable seconds.
UASDAILY	Daily unavailable seconds.
UATC15MIN	15-minute unavailable time count.
UATCDAILY	Daily unavailable time count.
US15M	Unavailable seconds after 15 minutes.
US24H	Unavailable seconds after 24 hours

Table 27-2. Alarm Thresholds

Threshold	Description
DS3 Threshold Crossing Alerts	
CVL_24HR	Daily coding violations for the DS3 line
CVL_15MN	15-minute coding violations for the DS3 line
CVP_24HR	Daily Code Violations for the DS3 path
CVP_15MN	15-Minute Code Violations for the DS3 path
ESL_24HR	Daily errored seconds for the DS3 line
ESL_15MN	15-minute errored seconds for the DS3 line
ESP_24HR	Daily errored seconds for the DS3 path
ESP_15MN	15-minute errored seconds for the DS3 path
FMP_24HR	Daily F- or M- bit errors for the DS3 path
FMP_15MN	15-minute F- or M- bit errors for the DS3 path
FSESP_24HR	Daily far-end severely errored seconds for the DS3 path
FSESP_15MN	15-Minute far-end severely errored seconds for the DS3 path
SESL_24HR	15-minute unavailable seconds for the DS3 path.
SESL_15MN	Daily unavailable seconds for the DS3 path.
SESP_24HR	Daily severely errored seconds for the DS3 path
SESP_15MN	15-Minute severely errored seconds for the DS3 path
UASP15M	15-Minute severely errored seconds for the DS3 Line
UASP24H	Daily severely errored seconds for the DS3 Line
Domestic Threshold Crossing Alerts	
CSSP_24HR	Daily path controlled slip seconds
CSSP_15MN	15-minute path controlled slip seconds
CVL_24HR	Daily line coding violations
CVL_15MN	15-minute line coding violations
CVP_24HR	Daily path code violations
CVP_15MN	15-minute path code violations
ESL_24HR	Daily line errored seconds
ESL_15MN	15-minute line errored seconds
ESP_24HR	Daily path errored seconds
ESP_15MN	15-minute path errored seconds
SEFS_25HR	Daily path severely errored framing seconds
SEFS_15MN	15-minute path severely errored framing seconds
SESL_24HR	Daily line severely errored seconds
SESL_15MN	15-minute line severely errored seconds
SESP_24HR	Daily path severely errored seconds
SESP_15MN	15-minute path severely errored seconds
UASP15M	15-minute path unavailable seconds .
UASP24H	Daily path unavailable seconds

Fault Management - DACS II Alarm Message Elements (Continued)

Power Failure Messages

The POWER FAIL Message

For a POWER FAIL message, Fld1 and Fld2 contain field1 and field2 reported in the error status register. These fields are described in the *DACS II Command and Message Manual* of the appropriate release, for message number 0.01301.

Each field consists of four hexadecimal digits that are 16-bit masks. A bit set to 1 indicates a power error and the source of the error. The maps of bit position into power source are as follows.

For field1 (Unit):

Table 27-3. Error Status Register *field1* Bit Mask

Bit	Failed Power Supply	Bit	Failed Power Supply
15-08	Not used	03	CCN/ECCN 1 PWR failure
07	MC 1, 484GA	02	CCN/ECCN 0 PWR failure
06	MC 0, SM565	01	SYNC 1 PWR failure
05	MC 1, 484GA power converter in MC	00	SYNC 0 PWR failure
04	MC 0, SM565 power converter in MC		

For field2:

Table 27-4. Error Status Register *field2* Bit Mask

Bit	Failed Power Supply	Bit	Failed Power Supply
15	Unit 16	07	Unit 8
14	Unit 15	06	Unit 7
13	Unit 14	05	Unit 6
12	Unit 13	04	Unit 5
11	Unit 12	03	Unit 4
10	Unit 11	02	Unit 3
09	Unit 10	01	Unit 2
08	Unit 9	00	Unit 1

(Continued on next page)

Fault Management - DACS II Alarm Message Elements (Continued)

Power Failure Messages (Continued)

The ISX_PWR FAIL Message

For an ISX_PWR FAIL message, Fld1 and Fld2 contain field1 and field2 reported in the error status register. Each field consists of two hexadecimal digits. Expand the two hex digits to 8 bits before comparing to the table below.

A bit set to 1 indicates a power error or a unit not installed. For example, if field1 contains C0, then the 8-bit expansion is 11000000, indicating that main shelf PU3 and PU2 are not installed.

The maps of bit position into units are as follows.

For field1:

Table 27-5. Error Status Register *field1* Bit Mask

Bit	Unit
07-03	Reserved.
02	Main shelf PU3 not installed.
01	Main shelf PU2 not installed.
00	Main shelf PU1 not installed.

For field2:

Table 27-6. Error Status Register *field2* Bit Mask

Bit	Unit
07	Expansion shelf PU4 not installed.
06	Expansion shelf PU5 not installed.
05	Main shelf feeder A or fuse failure to PU1, PU2 or PU3.
04	Main shelf feeder B or fuse failure to PU1, PU2 or PU3.
03	Main shelf +5 V output failure on PU1, PU2 or PU3.
02	Expansion shelf feeder A or fuse failure to PU4 or PU5.
01	Expansion shelf feeder B or fuse failure to PU4 or PU5.
00	Expansion shelf +5 V output failure on PU4 or PU5.

Fault Management - Alarm Message Elements in DND Forms (Continued)

DACS II AX Alarms and Events

Beginning with DND GUI Release 5.0.1/Forms Release 10.0.1, support for alarms and events produced in DACS II AX equipment has been extended to DND's alarm logging and alarm surveillance features.

The Circuit Alarm Report is available for DACS II AX. In addition, all DACS II AX alarms now appear in the Alarm Report (formerly the SNMP Port Alarm Report).

NOTE:
This enhanced support applies to Release 9.0.3 AX equipment (and above). In order for the extended features to work, the *Sets*, *Traps*, and *Authentication Traps* parameters must be set to **Enabled**, and the *Provisioning Traps* parameter must be set to **Disabled** on the AX's *SNMP Agent Configuration Menu*. (See *GT-2.3G, Configuring the DACS II AX for Communicating with DND* in this users manual *or* Chapter 4 of the *DACS II AX 4/11 User's Guide* for more information.)

(Continued on next page)

Fault Management - Alarm Message Elements in DND Forms (Continued)

Table 27-7 below describes the columns of the alarm log report. The Alarm_Type, Port, Port_Type, and Severity are also in the alarm report and have the same meaning. Note that the alarm log has alarms (sets and clears), informational events, and other AX non-alarm traps/events, i.e., all SNMP traps sent from the NE. The alarm report only has the current active alarms for the NE.

Table 27-7. Alarm Log Columns Table

Heading	Description
SeqNo	Sequence number from the SNMP trap received by the DND. Since PSAX and "other" type SNMP NEs do not have sequence numbers, this field is populated with 0 for those NEs.
Alarm_Type	The type of alarm or event that occurred. See Table 27-8 through Table 27-11 for types of alarms and events sent by the DACS II AX.
Port	The entity where this alarm or event occurred. For DACS II AX, this can be: ■ SMCA, SMCB (SMC A and B respectively) ■ PSA, PSB (Power Supplies A and B respectively) ■ X01 (Protection Switch Module) ■ L1..L11 (Protection Switch Line Cards for slots 1..11) ■ P1..P11 (Device Cards 1..11) ■ Px-y (Port (y) on device card in slot (x) where x=1..11, y=1..28. (x) depends on the number of I/O slots in the AX. For AX4, x=1..4. For AX11, x=1..11. (y) depends on the type of card in the slot (e.g., T3 card has y=28 T1 ports, Octal E1/T1 has y=8 ports). This applies to all port types except T3, Ht3, and Sts-1. ■ Px-1 (HS) [T3, Ht3, or Sts- port on device in slot (x)]
Port_Type	The type of Port or device card being reported. See Table 27-8 through Table 27-11 for possible values.

Table 27-7. Alarm Log Columns Table (Continued)

Heading	Description
Severity	■ Clear (Indicates "Alarm_Type" has cleared. Also used for AX non-alarm traps) See Table 27-11. ■ Informational (AX Informational Event) ■ Minor (Minor Alarm) ■ Major (Major Alarm) ■ Critical (Critical Alarm)
Date	Date when alarm or event occurred.
Time	Time when alarm or event occurred.
Description	Additional information for AX non-alarm traps (See Table 27-11)

The remaining tables in this section have AX Equipment and Transmission Facility (Port) alarms and events data. Table 27-8 contains AX Equipment Alarms; Table 27-9 lists AX Facility (Port) alarms; Table 27-10 lists AX Informational Events that are only logged in the alarm log; Table 27-11 displays other non-alarm AX traps that are only logged in the alarm log with their sequence number and CLEAR severity.

Table 27-8. Explanation of DACS II AX Equipment Alarms

Alarm Category	Alarm_Type Column Values	"Port" Column Values	"Port_Type" Column Values
Slot Level	`Slotmismatch` `Slotmissing`	P1 through P11 for I/O card slots 1 through 11.	Slot

Device (or Pack Level) Alarm	`DevFrameSyncNotPresent`
	`DevSystemClockNotPresent`
	`DevSMCsDatabaseNotInsync`
	`DevFreeRunError`
	`DevOffline`
	`DevDefective`
	`DevBusError`
	`DevConfigError`
	`DevNoRearCard`
		SMCA, SMCB; P1 through P11 for I/O card slots 1 through 11	System Manager for SMCA, SMCB, OctalE1T1, QuadHighSpeed, OctalHighSpeed, QuadOcu, QuadT1, T3, TestAccess, Voice, VoiceEM, VoiceFXO, VoiceFXS for Slots P1 through P11.

Table 27-8. Explanation of DACS II AX Equipment Alarms (Continued)

Alarm Category	Alarm_Type Column Values	"Port" Column Values	"Port_Type" Column Values
Power Supply Alarms	PowerSupplyNotPresent PowerSupplyProblem	PSA, PSB for Power Supply A and B	Power Supply
Protection Switch Module Alarms	PsxPowerSupplyANotOk PsxPowerSupplyBNotOk PsxFan01NotOk PsxFan02NotOk PsxFan03NotOk	X01=Protection Switch Card	Protection Switch
Protection Switch Line Card Alarms	PsxLineCardRelay SwitchToSpare PsxLineCardCable missing PsxLineCardMissing PsxLineCardMismatch PsxLineCardRelay Malfunction	L1 through L11 for Protection Switch Line Cards	psxNarrowband (Narrowband Line Card) psxNarrowbandSpare =Narrow-band Protection Line psxBroadband =Broadband Card psxBroadbandspare =Broadband Protection Line Card

Table 27-9. Explanation of DACS II AX Facility (Port) Alarms

Alarm Type	Alarms	Port Column Values	Port Type Values
T1/E1 Port Alarms	T1E1RcvFarEndLOF T1E1NearEndSendLOF T1E1FarEndSendingAIS T1E1NearEndSendingAIS T1E1NearEndLOF T1E1NearEndLossOfSignal T1E1Ts16AIS T1E1FarEndSendingTs16LOMF T1E1NearEndSendingTs16LOMF T1E1OtherLineStatus T1E1NearEndUnavailableSig T1E1DS2PayloadAIS T1E1DS2ThresholdExceeded T1E1NearEndTxSlip T1E1NearEndRxSlip T1E1NearEndSeverErrored Frame T1E1ChangeFrameAlignment T1E1ConfigError	P1-n..P11-n (where n=1 through 28)	"OctalE1" for E1 facility on octalE1T1 card (n=1..8) "OctalT1" for T1 facility on octalE1T1 card (n=1..8) QuadT1 for T1 facility on quadT1 card (n=1..4) linkT3-T1 for T1 facility on T3 card (n=1..28) linkSts1-T1E1 for T1 or E1 facility on Sts1 card (n=1..28) linkHt3-T1E1 for T1 or E1 facility on Hybrid T1E1 card (same as linkSts1)
Octal and Quad High Speed Port Alarms	HsRcvFIFOError HsXmtFIFOError HsClockEdgeError HsConfigError	P1-n..P11-n	OctalHighSpeed (n=1 through 8) QuadHighSpeed (n=1 through 4)
T3 Port Alarms	T3RcvFarEndLOF T3NearEndSendLOF T3FarEndSendingAIS T3NearEndSendingAIS T3NearEndLOF T3NearEndLossOfSignal T3OtherLineStatus T3NearEndUnavailableSig T3NearEndSeverErrored Frame T3TxRxClockFailure T3TxFarEndBlockError T3TxPbitCbitParityError T3MbitsInError T3LIUOtherStatus T3LIUExcessZeros T3LIUCodingViolation T3LIUPrbsError T3ConfigError	P1-1 (HS)..P11-1 (HS) **Note:** T3, HybridT3, and Sts-1 port alarms have HS designation after port name to distinguish them from lower speed T1/E1 port names.	T3

Table 27-9. Explanation of DACS II AX Facility (Port) Alarms (Continued)

Alarm Type	Alarms	Port Column Values	Port Type Values
Quad OCU Port Alarms	OcuNearEndLOS OCUOtherLineStatus OcuNearEndSeverErrored Frame OCUConfigError	Px-y where x=1..11, y=1..4	QuadOcu
Test Access Port	TamConfigError	Px-y where x=1..11, y=1..4	TestAccess
Voice Card Port Alarms	VoiceConfigError	Px-y where x=1..11, y=1..8	Voice, VoiceEM, VoiceFXO, VoiceFXS
Router Card Port Alarms	RtrUserAlarm1 RtrUserAlarm2 RtrUserAlarm3 RtrConfigError	P1-1..P11-1	Router
STS-1 Port Alarms	Sts1RcvFarEndLOF Sts1NearEndSendLOF Sts1FarEndSendingAIS Sts1NearEndSendingAIS Sts1NearEndLOF Sts1NearEndLOP Sts1NearEndOOF Sts1NearEndAIS Sts1OtherLineStatus Sts1NearEndUnavailableSig Sts1TxRxClockFailure StsNearEndLOMF StsNearEndTraceError Sts1DigitalLOS Sts1AnalogLOS Sts1LIUExcessZeros Sts1LIUCodingViolation Sts1LIUPrbsError Sts1ConfigError	P1-1 (HS)..P11-1 (HS)	Sts1

(Continued on next page)

Table 27-9. Explanation of DACS II AX Facility (Port) Alarms

Alarm Type	Alarms	Port Column Values	Port Type Values
Hybrid T3 Port Alarms	Ht3FarEndSendingAIS Ht3NearEndSendingAIS Ht3NearEndOOF Ht3NearEndLossOfSignal Ht3FarEndRcvFailure Ht3NearEndLCVError Ht3NearEndFERRError Ht3NearEndExcessZeros Ht3TxFarEndBlockError Ht3TxPbitCbitParityError Ht3LIUDigitalLOS Ht3LIUAnalogLOS Ht3LIUExcessZeros Ht3LIUCodingViolation Ht3LIUPrbsError Ht3ConfigError	P1-1 (HS)..P11-1 (HS)	HybridT3

Table 27-10. DACS II AX Events

Event	Port Column Values	Port Type Values
`Coldstart` (i.e., the pack has been restarted)	P1..P11	System Manager for SMCA, SMCB, OctalE1T1, QuadHighSpeed, OctalHighSpeed, QuadOcu, QuadT1, T3, TestAccess, Voice, VoiceEM, VoiceFXO, VoiceFXS for Slots P1 through P11.

`DevOnline`
`DevStandby`
`DevOutOfService`
`DevNotOnline`
`DevNotStandby`
`DevInService`
	P1..P11	System Manager for SMCA, SMCB, OctalE1T1, QuadHighSpeed, OctalHighSpeed, QuadOcu, QuadT1, T3, TestAccess, Voice, VoiceEM, VoiceFXO, VoiceFXS for Slots P1 through P11.

`T1E1NearEndLooped`
`T1E1CarrierEquipOutOfService`
`T1E1InTest`
`T1E1OutOfService`
`T1E1NearEndLoopOff`
`T1E1CarrierEquipInService`
`T1E1TestOff`
`T1E1InService`
	P1-n to P11-n
	
	(where n=1 through 28).
		OctalE1 for E1 facility on octalE1T1 card (n=1..8)
		
		OctalT1 for T1 facility on octalE1T1 card (n=1..8)
		
		QuadT1 for T1 facility on quadT1 card (n=1..4)
		
		linkT3-T1 for T1 facility on T3 card (n=1..28)
		
		linkSts1-T1E1 for T1 or E1 facility on Sts1 card (n=1..28)
		
		linkHt3-T1E1 for T1 or E1 facility on Hybrid T1E1 card (same as linkSts1)

Table 27-10. DACS II AX Events

Event	Port Column Values	Port Type Values
HsNoBtsAssigned HsOutOfService HsBtsAssigned HsInService	P1-n..P11-n	OctalHighSpeed (n=1 through 8) QuadHighSpeed (n=1 through 4)
T3NearEndLooped T3CarrierEquipOutOfService T3InTest T3OutOfService T3NearEndLoopOff T3CarrierEquipInService T3TestOff T3InService	P1-1 (HS)..P11-1 (HS)	T3
OCUOutOfService OCUInService	Px-y x=1..11 y=1..4	QuadOcu
TAMOutOfService TAMInService	Px-y x=1..11 y=1..4	Test Access
VoiceOutOfService VoiceInService	Px-y x=1..11 y=1..8	Voice, VoiceEM, VoiceFXO, VoiceFXS
RtrOutOfService RtrInService	P1-1..P11-1	Router
Sts1CarrierEquipOutOfService Sts1OutOfService Sts1CarrierEquipInService Sts1InService	P1-1 (HS) ..P11-1 (HS)	Sts1
Ht3CarrierEquipOutOfService Ht3OutOfService Ht3CarrierEquipInService Ht3InService	P1-1 (HS) ..P11-1 (HS)	HybridT3

Table 27-11. DACS II AX Events (with assigned sequence numbers)

Event	Explanation	Port Column Values	Port Type Values	Description Column
`deleteResource`	A device or port has been deleted (e.g., pack extraction).	Px-y x=1..11 y=1..28	N/A	A device or port has been deleted (e.g., pack extraction).
`connectionEvent`	A cross connection has been changed, added or deleted.	N/A	N/A	trap sequence, map containing the connection (map01..map05), the internal AX connection number, the operation that occurred: "update-successful", "delete-successful", "add-successful"
`connMapMgr`	A connection map has been modified, (e.g., tagged for copy) or has become active.	N/A	N/A	trap sequence, map number (1..5), map cmd status: "update-successful" or "activate-successful"
`slotConfig`	The slot configuration has changed for a slot.	P1 through P11	N/A	trap sequence, slot number: 1..11, cmd status entries: update-successful -- modified slot configuration delete-successful, -- slot provisioning was deleted switch-successful -- manual protection switch or restore-successful -- manual restore from protection

Table 27-11. DACS II AX Events (with assigned sequence numbers)

Event	Explanation	Port Column Values	Port Type Values	Description Column
bulkConnPurge	All connections within a connection map for a slot or port have been deleted.	P1 through P11 (indicates all connects on a slot have been deleted) P1-x through P11-x (indicates all connects on a port have been deleted) x=the port number on the card. This will vary depending on the type of card.	N/A	trap sequence, AX internal port number, map number where connections were deleted (1..5), number of connections deleted

Table 27-11. DACS II AX Events (with assigned sequence numbers)

Event	Explanation	Port Column Values	Port Type Values	Description Column
ndrGroupStatus	This event indicates that due to an alarm condition or system state change, the N+1 Redundancy Groups have been modified. For example, when one or more devices have been removed or added to the actual N+1 Redundancy Groups, this effects which cards will be protected (switched) in the event of a failure.	N/A	N/A	trap sequence, ndrState = (disabled, frozen, delayed, enabled) This is the current N+1 Device Redundancy state. Values are: disabled (1) N+1 Redundancy disabled by the user. frozen (2) N+1 Redundancy is not active due to missing hardware components. delayed (3) N+1 Redundancy is delayed due to switchover. enabled (4) N+1 Redundancy enabled and ready. ndrBroadbandGroup: This number is a bitmap of which slots 1..11 are configured to be in the NDR broadband group. bits 0..10 represent slots 1..11 ndrNarrowbandGroup: This number is a bitmap of which slots 1..11 are configured to be in the NDR narrowband group bits 0..10 represent slots 1..11

Table 27-11. DACS II AX Events (with assigned sequence numbers)

Event	Explanation	Port Column Values	Port Type Values	Description Column
`hds3PortConfig`	This trap is used to notify a NMS that a user has updated the Link configuration for a given HDS3 Port entry.	Px-1 (HS) x=1..11	N/A	- trap sequence - port number in MIB notation: (e.g., 0.10.1.0) - CmdStatus: "update-successful"
`hds3T1E1Config`	This trap is used to notify a NMS that a user has updated the Link configuration for a given HDS3-T1/E1 channel entry.	Px-y x=1..11 y=1..28	N/A	- trap sequence - link number in MIB notation: (e.g., 0.10.28.0) - CmdStatus: "update-successful" or "copy_successful"
`oT1E1Config`	This trap is used to notify a NMS that a user has updated the Link configuration for a given T1E1 port entry on an Octal T1/E1 card.	Px-y x=1..11 y=1..8	N/A	- trap sequence - link number in MIB notation: (e.g., 0.3.8.0) - CmdStatus: "update-successful" or "copy_successful"
`sts1MapperConfig`	This trap is used to notify a NMS that a user has updated the Link configuration for a given STS-1 Mapper entry.	Px-y x=1..11 y=1..28	N/A	- trap sequence - mapper address in MIB notation: (e.g., 0.10.1.0) - CmdStatus: "update-successful"

Table 27-11. DACS II AX Events (with assigned sequence numbers)

Event	Explanation	Port Column Values	Port Type Values	Description Column
`sts1T1E1Config`	This trap is used to notify a NMS that a user has updated the Link configuration for a given STS-1T1E1 channel entry.	Px-y x=1..11 y=1..28	N/A	- trap sequence - link number in MIB notation: (e.g., 0.10.28.0)- CmdStatus: "update-successful" or "copy_successful"
`t3PortConfig`	This trap is used to notify a NMS that a user has updated the Link configuration for a given T3 Port entry.	Px-1 (HS) x=1..11	N/A	- trap sequence - T3 port address in MIB notation: (e.g., 0.10.1.0) - CmdStatus: "update-successful"
`t3T1Config`	This trap is used to notify a NMS that a user has updated the Link configuration for a given T3/T1 channel entry.	Px-y x=1..11 y=1..28	N/A	- trap sequence - link number in MIB notation: (e.g., 0.10.28.0) - CmdStatus: "update-successful" or "copy_successful"

ALARM SURVEILLANCE Display

Overview

Alarm Surveillance provides a single display of all active alarms that are contained in the DND database for all managed network elements. The display is updated in "near" real time, that is, as new alarms are recorded by the DND, the alarms are added to the display, and as alarms are retired they are removed from the display, without any user intervention required.

The feature is available from the Graphical User Interface only and each GUI user can view their own alarm surveillance display.

The Alarm display (and database information) may also be updated by certain DND actions:

- Alarm SYNC (DND/DACS)
- NPC provisioning that updates alarm information
- NE provisioning actions.

Only events that are classified as alarms are shown in this report. These are events that have clear start and end conditions. For example DS1 PM events on NAS NPCs are not included since they have no clear indicator, however, E1 PM events on CEPT NPCs are included since they have clear begin and end indicators on the DACS. DACS II AX informational events are not shown since they do not come in “set” and “clear” pairs.

Total Number of Displayed Alarms

The total number of alarms on the system is displayed at the bottom of the display, as well as the number of alarms that match the selection criteria, and the number of alarms that are displayed. Up to 200 alarm records can be displayed in the Alarm Surveillance window at a time. If more than 200 alarms match the selection criteria, only the first 200 will be displayed, according to the sort criteria.

Alarm Display Updates

The Alarm display is updated approximately every 15 seconds, if necessary.

NOTE:
The actual time may vary, depending on other processing activity on the system.

ALARM SURVEILLANCE Display (Continued)

Changing the Display Criteria

Use the Change Selection and Sort Criteria button to change the criteria used to display alarms and to change the manner that the alarms are sorted. The Alarm Surveillance display shows all active alarms according to the Selection and Sort criteria. The Selection/Sort criteria by which the display report was generated is shown in the display.The display may be blank if no alarms match the selection and sort criteria.

Acknowledging Alarms

Individual alarm reports can be "acknowledged" by the user who is logged in. This acknowledgement contains the login name of the user, the date and time of the acknowledgement, and a 77-character free format remarks field to record comments by the user. This acknowledgement information is also contained in the alarm surveillance display. Alarms can also be “reacknowledged” (edited), and "unacknowledged" by the same user, identified by the login name.

Adjusting the Field Widths

The width of fields in the alarm display can be stretched if some of the field contents do not fit in the default width of the display. Grab the line and left-click-drag the column at the column heading.

ALARM SURVEILLANCE Display (Continued)

Sample Displays

Samples of the ALARM SURVEILLANCE display are shown in Figures 27-1 and 27-2. To obtain the ALARM SURVEILLANCE display, select *ALARM SURVEILLANCE* from the ALARMS menu.



Figure 27-1. ALARM SURVEILLANCE Display - DACS II Related Alarms

(Continued on next page)

ALARM SURVEILLANCE Display (Continued)

Sample Displays, Continued

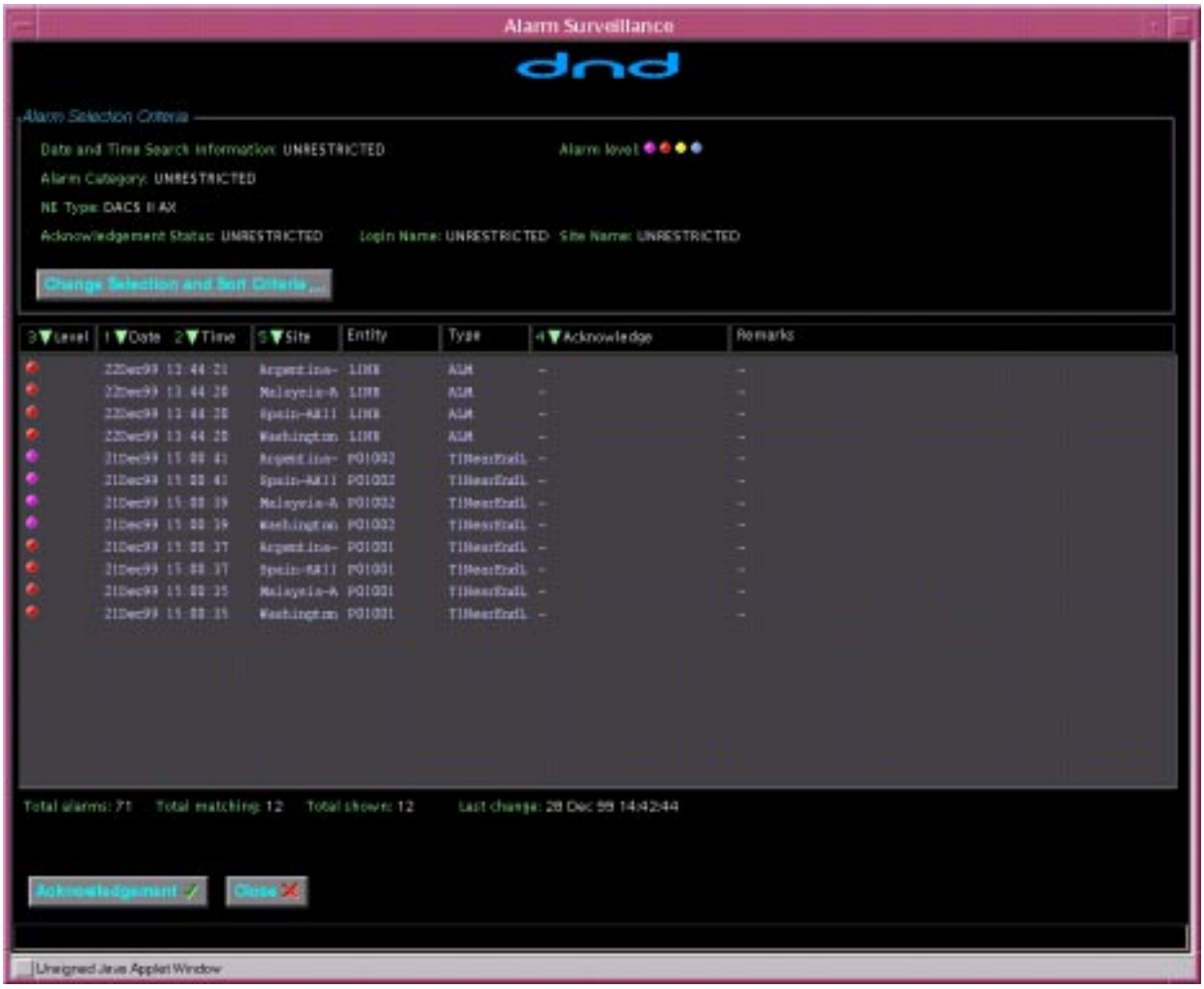


Figure 27-2. ALARM SURVEILLANCE Display - DACS II AX Related Alarms

ALARM SURVEILLANCE Display (Continued)

Field Descriptions

The field values for the ALARM SURVEILLANCE display are described in Table 27-12.

Table 27-12. Field Descriptions for the ALARM SURVEILLANCE Display

Field	Description
Alarm Selection Criteria	The current Alarm Selection Criteria are displayed for reference in the topmost group box of the Alarm Surveillance window. These criteria can only be changed in the ALARM SURVEILLANCE SELECTION AND SORT CONTROL form, which is obtained by clicking on the Change Selection and Sort Criteria button in the same group box. Each field shows a specific selection criteria as follows: ■ Date and Time Search Information: the current selection range for date, time, or both. If neither date nor time restriction is in effect, the value is "UNRESTRICTED." ■ Alarm Severity: The alarm levels allowed in the current display, shown as one or more colored "LEDs." When all four LED's are shown, magenta through blue, the Alarm Severity criteria is unrestricted. ■ Alarm Category: lists all alarm categories allowed in the current display, or "UNRESTRICTED" when all are allowed. ■ NE Type: lists all NE types allowed in the current display, or "UNRESTRICTED" when all are allowed. ■ Acknowledgement Status: shows if the current display is limited to either "Acknowledged" or "Unacknowledged" alarms, or "UNRESTRICTED" when either acknowledgement status is allowed. ■ Login Name: shows the login name associated with all alarms in the current display, or "UNRESTRICTED" when no login name criteria was specified. ■ Site Name: shows the site name associated with all alarms in the current display, or "UNRESTRICTED" when no site name criteria was specified.

Table 27-12. Field Descriptions for the ALARM SURVEILLANCE Display (Continued)

Field	Description
Alarm Sort Criteria	The current Alarm Sort Criteria are displayed for reference in the corresponding column headings of the alarms display. For each sort category, the sort priority and sort direction are shown immediately to the left in light green, where a down arrow indicates the default sort direction and an up arrow indicates the reverse.
Site	The **Site:** field indicates the name of the Network Element where the alarm occurred.
Date	The **Date:** field indicates the date/time the alarm occurred. The format of this string is specified using the `DATE_FORMAT` environmental variable. See Chapter 2, *Getting Started*, for more information.
Entity	The **Entity:** field indicates the equipment associated with the alarm being displayed: ■ NPC number: For DACS II and DACS II ISX PBA/CGA and Performance Monitoring alarms this field contains the NPC number. The NPC number is displayed in the format specified by the NPC Addressing field on the NE PROVISIONING form. ■ Common Equipment: For DACS II and DACS II ISX Common Equipment alarms this field contains a string representing the equipment in alarm. See Table 27-13 for examples of some of the common equipment entity types. ■ SNMP Slot/Port: For DACS II AX, AAC, and IMACS this field shows the slot or port in alarm. For a description of the SNMP slot/port names refer to the appropriate mib definitions: — DACS II AX alarms - DACS II AX SMC-MIB. Release 1.0. — AAC/IMACS alarms - PREMISYS-COMMON-MIB, Version #3

Table 27-12. Field Descriptions for the ALARM SURVEILLANCE Display (Continued)

Field	Description
Type	The **Type** field indicates the type of alarm being displayed (where applicable). The alarm type strings fall into the following categories: ■ Primary Block Alarm/Carrier Group Alarm (PBA/CGA): These alarms apply to the DACS II and the DACS II ISX. For a description of these alarm types refer to Table 27-1. ■ Performance Monitoring: These alarms apply to the DACS II and the DACS II ISX. For a description of these alarm types refer to Table 27-2. ■ Equipment Failure: These alarms apply to the DACS II, DACS II AX and the DACS II ISX. This field is blank for all equipment failure alarms with the exception of the NE summary where the field is set to 'Alarm Summary'. ■ Link Failure: Indicates Network Elements with communication failures. ■ Other: Alarms that are not classified as PBA/CGA, PM, or Equipment Failure.
Severity	The **Sev** field contains a colored LED representing the severity of the alarm displayed on the given line. The colored LEDs represent the following: ■ Magenta - Critical Alarm ■ Red - Major Alarm ■ Yellow - Minor Alarm ■ Blue - Informational Alarm Most lines contain a single LED with the exception of the NE summary line for DACS type nodes. This line may contain multiple LEDs that represent a summary of the alarms severities active on the DND node. For example, if a critical alarm and major alarm exists on the DND DACS, both the magenta and red LEDs would appear in the alarm severity field.

(Continued on next page)

ALARM SURVEILLANCE Display (Continued)

Field Descriptions, Continued

Table 27-13. Entity Examples

Entity	Description
MEMB	memory B failure
UNIT-11-DS3-2	DS3-2 failure on unit 11
1SYNC	sync failure on side 1
UNIT-5-0FC-1	format converter 1 failure on unit 5,side 1

ALARM SURVEILLANCE ACKNOWLEDGEMENT CONTROL Form

Overview

The ALARM SURVEILLANCE ACKNOWLEDGEMENT CONTROL form is used to:

- Acknowledge an alarm. If there is no acknowledgement information in the DND database, you can acknowledge an alarm. Acknowledgement of an alarm will cause the alarm information to contain your login name, the date of the acknowledgement, and a 77 character remarks field in which you can enter information regarding this alarm.
- Unacknowledge an alarm. If you have previously acknowledged an alarm, then you may remove that acknowledgement. You can only unacknowledge alarms that are acknowledged by your login. Another user logged in under a different login name cannot unacknowledge an alarm.
- Reacknowledge (re-edit) an alarm. This is used to update your remarks information. The date and time will also reflect the date/time of your most recent (re)acknowledgement.

When the alarm is cleared, the record of the alarm is removed from the display and all record of the acknowledgement is also removed.

Sample Form

A sample of the ALARM SURVEILLANCE ACKNOWLEDGEMENT CONTROL form is shown in Figure 27-3.

There are two ways to get to the ALARM SURVEILLANCE ACKNOWLEDGEMENT CONTROL form:

- Double-click on the alarm.
- Select an alarm by single-clicking on the alarm; the alarm will be backlit. Then push Acknowledgement on the ALARM SURVEILLANCE display.

(Continued on next page)

ALARM SURVEILLANCE ACKNOWLEDGEMENT CONTROL Form (Continued)

Sample Form, Continued

Figure 27-3 is a sample Alarm Surveilance Acknowledgement Control Form.



Click **Acknowledge** to acknowledge an alarm.

Figure 27-3. ALARM SURVEILLANCE ACKNOWLEDGEMENT CONTROL Form

ALARM SURVEILLANCE ACKNOWLEDGEMENT CONTROL Form (Continued)

Field Descriptions The field values for the ALARM SURVEILLANCE ACKNOWLEDGEMENT CONTROL form are described in Table 27-14.

Table 27-14. Field Descriptions for the ALARM SURVEILLANCE ACKNOWLEDGEMENT CONTROL Form

Field	Descriptions
Login Name	(Read-only) The name of the user currently logged in to the DND.
Remarks	(Text field) Comments entered by the user who is acknowledging the alarm. This field is 77 characters wide.

ALARM SURVEILLANCE SELECTION AND SORT CONTROL Form

Overview

The ALARM SURVEILLANCE SELECTION AND SORT CONTROL form is used to set filters to determine which alarms are displayed and to specify how the alarms are sorted. The values only become effective when you push Set Criteria.

Default Buttons

The Default Selection and Default Sort buttons reset the selection or sort values to the default settings. See Table 27-15 for descriptions of the defaults.

Default Selections

When the ALARM SURVEILLANCE form is closed, the Sort and Selection criteria set by a user is not saved. When the ALARM SURVEILLANCE form is opened again, the default selection and sort criteria is set.

ALARM SURVEILLANCE SELECTION AND SORT CONTROL Form (Continued)

Sample Form

A sample of the ALARM SURVEILLANCE SELECTION AND SORT CONTROL form is shown in Figure 27-4. You can get to this form by pressing Change Selection and Sort Criteria on the ALARM SURVEILLANCE display.



Click to return the Selection Criteria to the defaults.

Click to return the Sort Criteria to the defaults.

Click to save the Selection and Sort Criteria.

Figure 27-4. ALARM SURVEILLANCE SELECTION AND SORT CONTROL Form

Alarm Surveillance Selection and Sort Control Form (Continued)

Field Descriptions

The field values for the ALARM SURVEILLANCE SELECTION AND SORT CONTROL form are described in Table 27-15.

Table 27-15. Field Descriptions for the ALARM SURVEILLANCE SELECTION AND SORT CONTROL Form

Field	Descriptions
Date	(Combo Boxes) **Day:**, **Month:**, and **Year:** options. Each of these 3 fields collectively specifies the **DATE**.The default setting is an asterick (*) in each field, which means the display will not restrict the report by date. **NOTE:** You cannot specify one or two of the date fields. For example, for **Date** you must specify a day and a month and a year.
Time	(Combo Boxes) **Hour:**, **Minutes:**, and **Second:** options. Each of these 3 fields collectively specifies the **TIME**. The default setting is an asterick (*) in each field, which means the display will not restrict the report by time. **NOTE:** You cannot specify one or two of the time fields. For example, for **Time** you must specify an hour, and a minute and a second.
Range	(Radio Buttons) There is a range selection for time and one for date. It is possible to choose: ■ = equal to the date or time specification ■ < before this date or time specification ■ > after this date or time specification
Alarm Level or Intervention Level	(Radio Buttons) Specifies whether alarms are displayed and sorted by Alarm Level or Intervention Level. The Alarm Severity and Intervention Level fields described below will only be active when the corresponding radio button has been selected.

Table 27-15. Field Descriptions for the ALARM SURVEILLANCE SELECTION AND SORT CONTROL Form (Continued)

Field	Descriptions
Alarm Severity	(Checkboxes) When selected, alarms of that severity will be shown in the ALARM SURVEILLANCE display. The default setting is that all alarm severities are checked (unrestricted). ■ Critical (CR) ■ Major (MJ) ■ Minor (MN) ■ Informational (IN)
Intervention Level	(Checkboxes) When selected, alarms of that intervention level will be shown in the ALARM SURVEILLANCE display. The default setting is that all intervention levels are checked (unrestricted). ■ Immediate Maintenance Action (IMA) ■ Deferred Maintenance Action (DMA)
Alarm Type	(Checkboxes) When selected, alarms of that type will be shown in the ALARM SURVEILLANCE display. The default setting is that all alarm types are checked. (unrestricted). ■ PBA/CGA ■ Performance Monitoring ■ Equipment Failure (Includes the NE alarm type) ■ Link Failure ■ Other

Table 27-15. Field Descriptions for the ALARM SURVEILLANCE SELECTION AND SORT CONTROL Form (Continued)

Field	Descriptions
NE Type	(Checkboxes) When selected, alarms originating on that network element type will be shown in the ALARM SURVEILLANCE display. The default is all NE type (unrestricted). ■ DACS II ■ DACS II ISX ■ DACS II AX ■ AAC ■ IMACS ■ PSAX ■ OTHER
Sort Criteria	Alarms can be sorted by any of the following criteria. The following lists the sort criteria in the default order. In each case, it is possible to reverse the sort.) ■ Date (default is newest to oldest) ■ Time (default is newest to oldest) ■ Severity (default is highest to lowest) **NOTE:** A "blank' login name will have the lowest precedence, thus blank fields in the acknowledgement status column will appear first when A-Z ordering is selected. ■ Sitename (default is A-Z)

Table 27-15. Field Descriptions for the ALARM SURVEILLANCE SELECTION AND SORT CONTROL Form (Continued)

Field	Descriptions
Acknowledgement Status	(Radio Buttons) When selected, alarms of this acknowledgement status will be shown in the ALARM SURVEILLANCE display. The default is both acknowledged and unacknowledged. ■ Acknowledged ■ Unacknowledged
Login Name	(Text field) Valid only when the Acknowledgement Status is Acknowledged, this field is the login name of the user who acknowledged the alarm.
Site Name	(Combo Box) Alarms originating at a single network element with this site name will be shown in the ALARM SURVEILLANCE display. The default is * (all sites).

NE Summary Report

Description

The NE SUMMARY reports are generated by clicking on the new alarm (red) arrow located either:

- Next to the site name in the NE SUMMARY window
- Next to the site icon in the Network Map.

The NE SUMMARY window appears when the Alarms... button is selected from either the DND Task Bar or from any DND GUI form/window.

The report only displays new alarms that have occurred since:

- You have logged in
- The previous display of a NE SUMMARY report.

When a new alarm occurs in the DACS network, a red arrow appears on the Alarms... button on the DND Task Bar, as shown in Figure 27-5. If the Audible Alarm feature is ON for the user and has not been disabled through the DND GUI, then the Audible Alarm Indicator is also displayed.The color of the Alarm Status Indicator (ASI) represents the highest alarm severity currently in the DACS network.

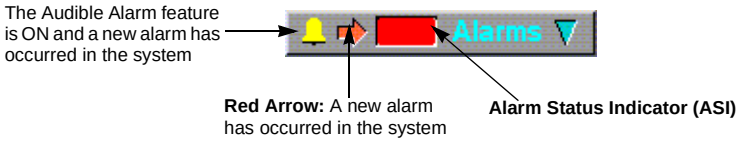


Figure 27-5. Alarms Button

NE Summary Report (Continued)

NE SUMMARY Window

When Alarms... is clicked, the Alarms menu appears. When you select *NE Summary...*, the NE SUMMARY window appears on the screen displaying icons for each Network Element in the user's partition. These icons behave similarly to the Alarms... button. Each NE SUMMARY icon displays the Network Element name and alarm color, indicating the highest alarm severity on the particular Network Element. The icons are arranged according to severity (highest severity sites appear at the top) and by alphanumeric order.

NE SUMMARY window icons with the red arrow beside it indicate a new alarm has occurred on the particular Network Element. When the red arrow is clicked, it disappears and the NE SUMMARY report (similar to the ALARM LOG Report) is displayed in a separate Netscape window. If the Audible Alarm Indicator was displayed when the red arrow was clicked, then the Audible Alarm Indicator will also disappear.

Once the red arrow for an icon is clicked, it cannot be clicked again until a new alarm occurs on the Network Element and the red arrow reappears next to the icon.

Clearing All New Alarm Indicators

When you select *Clear All New Alarm Indicators* from the Alarms... button menu, all current New Alarm Indicators (red arrows) will disappear from the Network Map, the Alarms... button on all forms, and from the NE Summary Window. No new alarm indicators will appear until a new alarm enters the system.

NE Summary Report (Continued)

Sample NE SUMMARY Window

Figure 27-6 displays a sample NE SUMMARY window for a large network. The NE SUMMARY icons without red arrow and yellow bell icons to the left of them have no new alarms; NE SUMMARY reports cannot be generated for those sites.

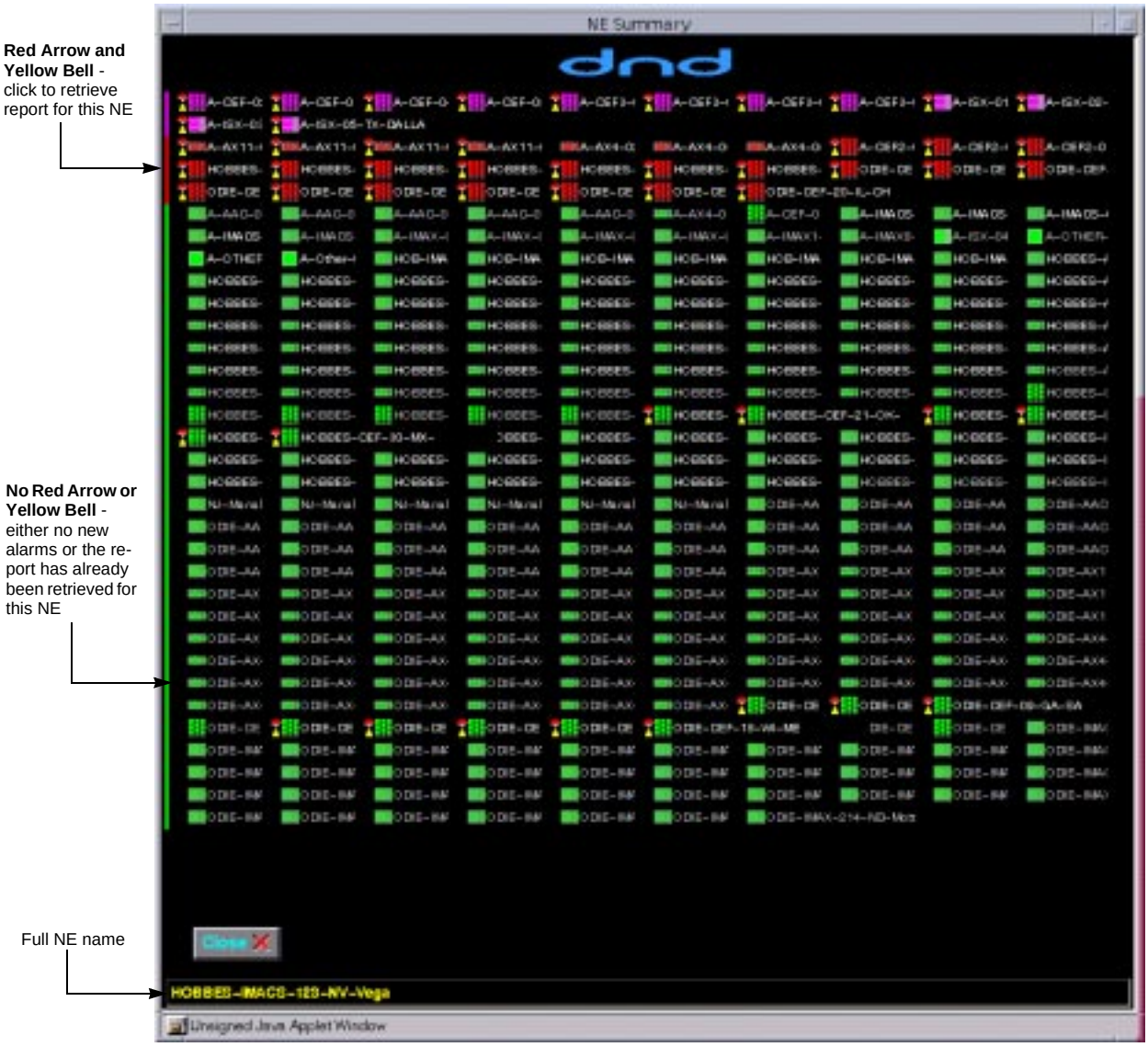


Figure 27-6. Sample NE SUMMARY Window

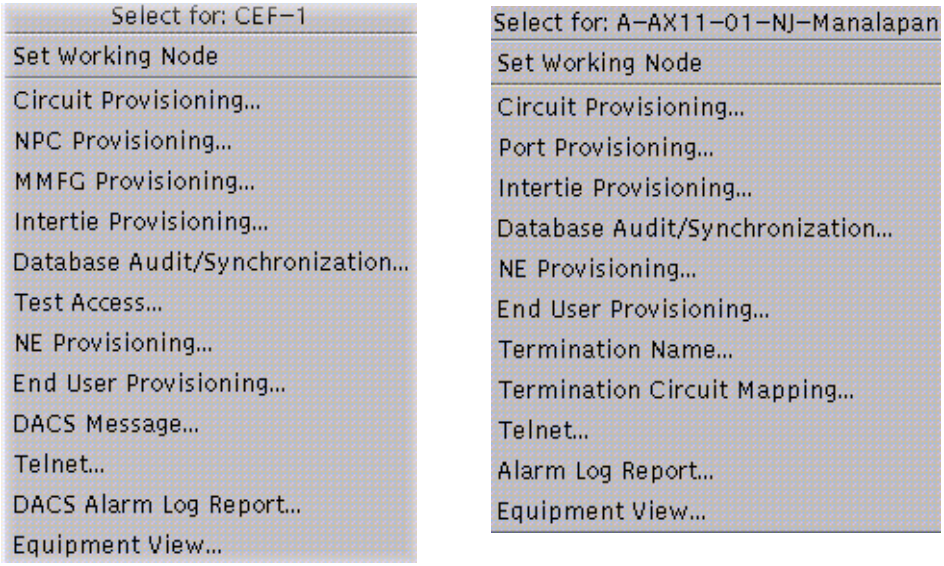
NE Summary Report (Continued)

Truncated Site Names

For larger networks with many sites, the entire site name will be truncated to fit all of the icons in the NE SUMMARY window. To see the entire name of the site, slide the mouse pointer over the icon, and the entire site name will appear at the bottom of the NE SUMMARY window.

NE SUMMARY Icon Menus

Similar to the Network Map, right-clicking on a NE SUMMARY icon will display a menu of provisioning form options. When provisioning/report option is selected, the respective form will appear pre-populated with the known information about the selected Network Element. Figure 27-7 displays the options available for DACS icons and SNMP icons in the NE SUMMARY window.



NE SUMMARY DACS Menu

NE SUMMARY SNMP Menu (Release 9.03 and greater)

Figure 27-7. NE SUMMARY Icon Menus

Audible Alarm Feature

Description

When the audible alarm feature is set, a sound will periodically play if a new alarm exists on one or more network elements. The sound will continue to play periodically until the NE Summary Alarm Log Report has been viewed (unless the Audible Alarm feature is manually disabled).

The continuous audible beep feature applies only to the DND GUI. DND Forms has an exisiting one-time audible beep feature for new alarms.

Audible Alarm Indicator

New alarm activity is indicated an audible alarm indicator, a yellow, bell-shaped figure beside the network element icon (under the red arrow) in the Network Map, in the NE Summary display, and on the Alarms... button in the DND Task Bar. The audible alarm indicator will be displayed beside a group icon if any of its contained elements has an audible indicator.

The audible alarm indicator behaves similarly to the new alarm indicator (red arrow), however, the audible alarm indicator is not "clickable". Clicking on the visual alarm indicator will clear the visual and audible alarm indicators. The audible alarms will clear when all of the audible alarm indicators are cleared.



Enabling/ Disabling Audible Alarms

The audible alarm feature is provisionable on a per user basis via the USER ADMINSTRATION form. On the form, the following audible alarm characteristics can be set:

- Alarm Sound
- Alarm sound interval (how frequent the alarm will sound).

In addition, the user can customize up to three additional alarm sounds for the audible alarms. For additional information, refer to GT 27.5G

Audible Alarm Feature (Continued)

Disabling Audible Alarms using the DND Task Bar

A user can temporarily disable audible alarms from the DND Task Bar using the Alarms... button pull-down menu. This might be helpful if, for instance, the user is currently investigating the problem, but does not want further audible notification.

From the Alarms... pull-down menu, select *Disable Audible Alarms*. A notification message appears, indicating that the audible alarms are disabled, and all audible alarm indicators are removed from the DND Network Map. No further audible alarms are heard for new alarms. Selecting *Clear All Audible Alarms* will disable all audible alarms and remove all audible alarm indicators from the Network Map until a new alarm enters the DND system.

To re-enable audible alarms, select *Enable Audible Alarms* from the pull-down menu. The audible alarm beeps will sound, indicating that the audible alarms feature has been re-enabled.

Alarm Severity and Intervention Level

Alarm Severity - Overview

The Alarm Severity feature allows users to change the severity level of PA-, PB-, and PC-type NPC facility and associated shelf alarms to one of the following:

- PMA-Critical (Prompt Maintenance Action CRITICAL Alarm Severity)
- PMA-Major (Prompt Maintenance Action MAJOR Alarm Severity)
- DMA-Minor - (Deferred Maintenance Action MINOR Alarm Severity)
- Maintenance Information (MESSAGE INFORMATION Alarm Severity)

This allows DACS II users the flexibility of customizing their alarm severities. When the Alarm Severity feature is on, the Alarm Surveillance display and the NE Summary Report will indicate the assigned severities.

Setting the Alarm Severity

See *Chapter 5, NE Provisioning* for details on turning on the Alarm Severity feature while creating a DACS.

Intervention Level

With the Intervention Level Setting feature, alarms for individual NPCs, TLIs, Synchronizer or Cross Connects can be escalated or de-escalated by the DACS administrator. See also *Chapter 5, NE Provisioning* for details on turning on the Alarm Intervention feature.

DND Interfaces

28

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Background

Introduction

The DND supports the following interfaces:

- **SNMP Northbound Interface**

  This interface provides SNMP trap reporting capability for DACS II, DACS II AX, and DACS II ISX alarms and events. It also provides SNMP retrieval of the following:

  - All equipment provisioned on the DND (DACS II, DACS II ISX, DACS II AX, AAC, IMACS, PSAX, and OTHER SNMP-based equipment)
  - DACS II, DACS II AX, and DACS II ISX NPC, port and common equipment alarms
  - DACS II, DACS II AX, and DACS II ISX alarm logs as well as NPC, T1/E1 Port, Circuit Provisioning, and NE Provisioning events
  - DACS II, DACS II AX, and DACS II ISX NPC, T1/E1 Port, and Circuit Provisioning information.

- **Northbound G2 Serial Alarm Interface**

  There is a message interface to the DND for reporting DACS II, DACS II AX, and DACS II ISX alarms. This interface concentrates and reports DACS alarms to an Alarm Management system for further processing. This can be enabled by setting the G2_INTERFACE environment variable.

- **ITM-NM/XMC Management Interface**

  The DND has a control interface to the ITM-NM/XMC (a Lucent Technologies Management System). This control interface allows the ITM-NM/XMC to provide order based end-to-end circuit management on DACS II and DACS II ISX using the DND as an interface to the DACS.

- **Alarm Messages**

  The DND is able to redirect MML alarm messages from the DACS to a serial port on the DND workstation. This can be one of the default devices on the workstation (ttya or ttyb) or to a port on the serial expansion unit. The DND will redirect the DACS messages from the DACS that it recognizes as being alarm messages to this serial port. This can be enabled by setting the ALARM_DEV environment variable.

Background (Continued)

Introduction (Continued)

- **BT Interface**

  The DND manages a proprietary management interface for service provisioning and test access. This interface is a binary interface which uses Remote Procedure Calls on a TCP/IP connection as its method for receiving commands and sending responses.

Objectives

This chapter provides background information to help you:

- Provision the SNMP Northbound Interface

Related tasks

For related tasks, see the following General Tasks:

DND GUI:

- Provisioning the SNMP Northbound Interface GT 28.1G

Related information

For related information, refer to:

- *DND SNMP Northbound Interface Document*
- *DACS II and DACS II ISX Operations and Maintenance Manuals.*

SNMP Northbound Interface

Description

The DND supports SNMP retrieval of DACS provisioning and alarm information and trap monitoring capabilities to the DACS, DACS II AX, and DACS II ISX equipment managed by the DND. An SNMP trap corresponds to a DACS II autonomous event.

SNMP MIBs

The DND supports four enterprise MIBs and part of the MIB-II specification:

- **DND MIB -** The DND MIB allows an administrator to tell the DND where to report SNMP traps, what community names to use in those traps, and what trap types are filtered out for each management IP address. All of the variables in this MIB can also be accessed from the DND GUI by the DND administrator.
- **DACS MIB -** The DACS MIB contains the current provisioning and alarm information on all DACS II and DACS II ISX equipment managed by the DND. The SNMP manager can access all DACS, NPC, and Circuit provisioning as well as the current NPC and Common Equipment alarms.

  The DACS MIB also allows an SNMP manager to provision a DACS II or DACS II ISX. The following provisioning actions can be performed on a DACS II or DACS II ISX via this MIB:

  — NPC

  — Circuit

  — DND database synchronization

  — Test Access
- **DACSAX MIB -** The DACSAX MIB contains the current provisioning and alarm information on all DACS II AX equipment managed by the DND. The SNMP manager can access all DACS II AX, T1/E1 Port, and Circuit provisioning as well as the current device and facility alarms. The DACSAX MIB also allows an SNMP manager to provision a DACS II AX. The following provisioning actions can be performed on a DACS II AX via this MIB:

  — T1/E1 Port

  — Circuit

  — DND database synchronization

(Continued on next page)

SNMP Northbound Interface, (Continued)

SNMP MIBs (Continued)

- **EVENT MIB -** The EVENT MIB describes the SNMP traps that are sent by the DND and the corresponding event logs that can be retrieved. Certain events that occur at the DND can generate one or more SNMP traps. This MIB describes the different types of traps that correspond to different kinds of events that occur at the DND and explains under what conditions the traps are generated by the DND.
- **MIB-II** - DND supports the system and interface groups of MIB-II. The interface group contains all of the NEs provisioned in the DND.

See the DND MIBs documentation for additional details. The DND MIBs and a high-level overview are contained on the DND CD and are available from the `Programs->DND DOCS` choice on the DND host server or through the HELP Button on a PC or Workstation client.

SNMP Communities

The DND supports SNMP requests, although all autonomous events are sent to the SNMP Northbound manager via SNMP traps. The manager must supply the correct community name to have read or write access to the MIBs.

- **Administrator -** The administrator community has the highest privilege set. It can access all of the above MIBS. Additionally, it can modify the administrator community and operator community names. The DND administrator can also modify the administrator community and operator community names through the DND GUI.

NOTE:
The SNMP administrator community name has no relation to the DND administrator login.

- **Operator -** The operator community has the second highest privilege set. It has all the privileges of the administrator community, except that it cannot read or modify the administrator community and operator community names.
- **Public -** The public community has the least access. It can read the MIB-II variables supported by the DND. The public community name is always *public*, and cannot be changed.

SNMP Northbound Interface (Continued)

SNMP Managers

The DND supports up to four SNMP managers, each with an associated IP address. The following can be configured for each manager:

- IP Address of the manager
- The community name included in traps sent to that manager
- The traps that are not sent to the manager - known as trap filters

SNMP Logs

The DND logs each trap sent to the SNMP Northbound manager. Each trap has an associated trap sequence number, which starts at 1 and is incremented with each new trap. This trap sequence number can be accessed via an SNMP GET request or through the DND GUI. The SNMP manager can determine if any traps have not been received by examining the trap sequence number in each trap and by periodically checking the trap sequence number via SNMP GET.

The SNMP logs can be reset (deleted) by the SNMP manager or through the DND GUI. Resetting a log will set the next sequential trap number to 1.

SNMP NB Provisioning of NPCs, Ports, and Circuits

NPC, T1/E1 port, circuit provisioning, and DND Database synchronization can be performed using the SNMP Northbound management interface. For additional information, refer to the *DND SNMP Northbound Interface Document*.

Provisioning information can be set at the DND and DACS databases for creating, restoring, and managing NPCs. Note that:

- Only DS1/E1 facility NPCs can be provisioned (DE/PA type NPCs); NPCs used for DSP applications cannot be provisioned.
- Only T1/E1 ports on DACS II AX can be provisioned; T3 port provisioning is not available through the SNMP interface.

Provisioning information can be set at the DND and DACS databases for activating and deleting two-point, single and multi-bandwidth cross-connections. Cross-connections can be established only on DS1/E1 facilities.

SNMP Northbound Interface (Continued)

SNMP NB Provisioning of NPCs, Ports, and Circuits (Continued)

The SNMP manager can synchronize the DND database to a DACS II and DACS II ISX with respect to the following information:

- alarms
- NPC provisioning
- MMFG provisioning
- Circuit provisioning

The SNMP manager can synchronize the DND database to a DACS II AX with respect to the following information:

- device card provisioning
- T1E1 port provisioning
- T3 port provisioning
- circuit provisioning

NOTE:
AX alarms are kept up to date in the DND whenever communication is restored to the AX.

SNMP Northbound Provisioning Form

Sample Forms

Figure 28-1 display a sample SNMP Northbound Provisioning Form.

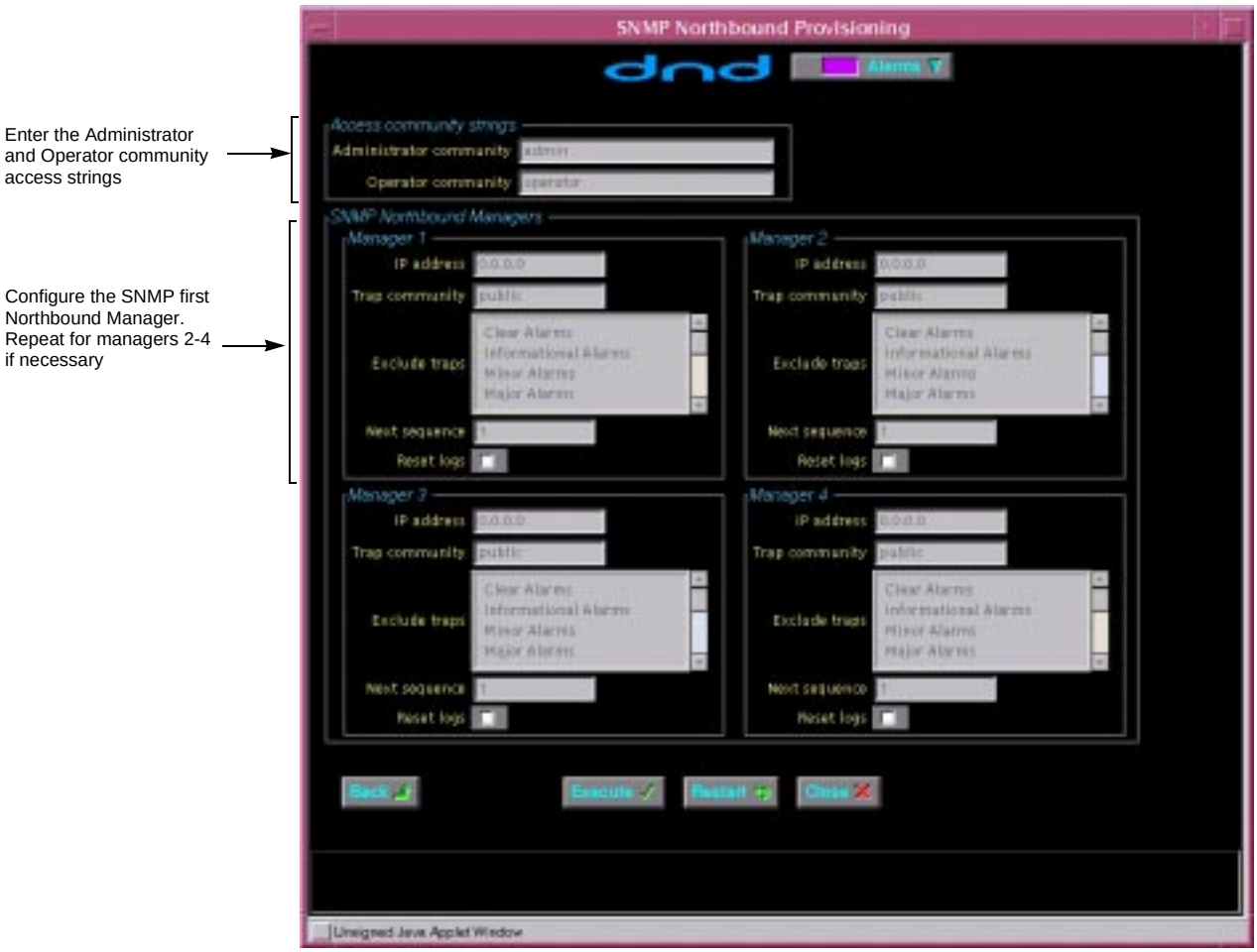


Figure 28-1. DND GUI: SNMP Northbound Provisioning Form

SNMP Northbound Provisioning Form

Field Descriptions

The field values for the SNMP NORTHBOUND PROVISIONING form are described in Table 28-1.

Table 28-1. Field Descriptions for the SNMP Northbound Provisioning Form

Field	Descriptions
Administrator community	(Text field) The access string for the administrator community.
Operator community	(Text field) The access string for the operator community.
IP address	The IP address of the SNMP manager. When this value is 0.0.0.0, that manager is ignored.
trap community	(Text field) The community to whom traps will be sent. The default is **public**.
Exclude traps	(Combo box) Select events that you do not want to be sent to the SNMP manager.
Next sequence	(Read-only field) Displays the next number that will be added to a trap sent to that SNMP manager.
Reset logs	(Checkbox) Select **Reset logs** to delete the trap logs. Resetting the logs will set the Next Sequence number back to 1.

Northbound G2 Serial Alarm Interface

Description

There is a message interface to the DND for reporting DACS II, DACS II AX, and DACS II ISX alarms. This interface concentrates and reports DACS alarms to an Alarm Management system for further processing. These alarm messages apply only to the DACS II, DACS II AX, and DACS II ISX systems, and not to any of the other SNMP-based elements. These alarms are ASCII-based messages and contain alarm source, alarm type, and alarm severity information for all alarms that apply to the DACS II, DACS II AX, and DACS II ISX systems that are controlled by the DND. The format of the message is G2 (name/value pairs) and can be routed over any of the DND serial port interfaces.

Further Information

For detailed information about this interface, see the *DND G2 Interface Description, Version 2.0*. The interface specification is distributed on the DND CD and is available from the `Programs->DND DOCS` choice or the DND host server or through the HELP Button on a PC or Workstation client. Further information on the installation of the interface is contained in the *DACS II Network Director (DND) R 5.0 Installation Manual*. See Chapter 2, *Getting Started* for information on the environment variables which provide control of this interface.

ITM-NM/XMC Management Interface

Description

The DND has a control interface to the ITM-NM/XMC (a Lucent Technologies Management System). This control interface allows the ITM-NM/XMC to provide order based end-to-end circuit management on DACS II and DACS II ISX using the DND as an interface to the DACS. At the same time, full functionality of the DND remains available while the ITM-NM/XMC interface is enabled. These ITM-NM/XMC services apply to the DACS II and DACS II ISX systems, and not to the DACS II AX system, or any other SNMP-based elements.

Enabling the Interface

This interface is an X.25 or TCP/IP based interface and is enabled by purchasing the ITM-NM/XMC option which enables the feature on the DND feature diskette.

Further Information

Further information on the installation and start-up of the management interface is contained in the *DACS II Network Director (DND) R 5.0 Installation Manual*. See Chapter 2, *Getting Started* for information on the `ITM_INTERFACE` environment variable which determines whether the X.25 or TCP/IP interface is used.

Alarm Messages

Description

The DND is able to redirect alarm messages from the DACS to a serial port on the DND workstation. This can be one of the default devices on the workstation (ttya or ttyb) or to a port on the serial expansion unit. The DND will redirect the DACS messages from the DACS that it recognizes as being alarm messages to this serial port. The messages are in ascii format as received from the DACS. Minimal processing of the DACS message is performed to remove extraneous line feeds and control characters. Otherwise, the message is presented as it is received from the DACS. All alarm messages from the DACS are redirected to this serial port when this feature is enabled. This feature only applies to DACS II and DACS II ISX network elements.

Setup and Control

This interface is setup and controlled by the ALARM_DEV and the ALARM_DEV_SPEED environment variables defined in the user_env file. The ALARM_DEV_SPEED identifies which of the serial ports on the DND is to be used. There are no other controls available to this feature. See Chapter 2, *Getting Started*.

Performance Considerations

Care should be taken when enabling the alarm device. The highest possible speed should be used, since a prolonged period of alarm messages from the DACS which are to be sent to the alarm device which are accumulated may cause performance slow down on the DND. The alarm device should never be enabled unless there is an active device (terminal or computer) on the serial port which is identified as the alarm device.

BT Interface

Description

The DND manages a proprietary management interface for service provisioning and test access. This is a binary interface which uses Remote Procedure Calls on a TCP/IP connection as its method for receiving commands and sending responses. Basic commands are made available for NPC provisioning, circuit provisioning, and test access. This interface is currently used by British Telecom for their own management.

Further Information

Further information or information on how to obtain the interface agreement specifications, contact your Lucent Technologies representative.

Northbound View

Description

There are two alternate GUI presentations available. One displays a network map while the other does not.

The DND is configured to display a limited GUI when:

- the DND is being used by a Northbound management system, and
- network management features are not desired at the DND because they may conflict with or cause confusion to information at the actual Northbound management system.

See Figure 28-2 and Figure 28-3 for examples of the Northbound View's GUI presentations.

Northbound View (Continued)

Sample GUI View #1

Figure 28-2 displays a sample view of the Element Management System (EMS only) GUI using a network map.

You can use this view to place nodes on the network map, but no intertie or end-user information is available or displayed.

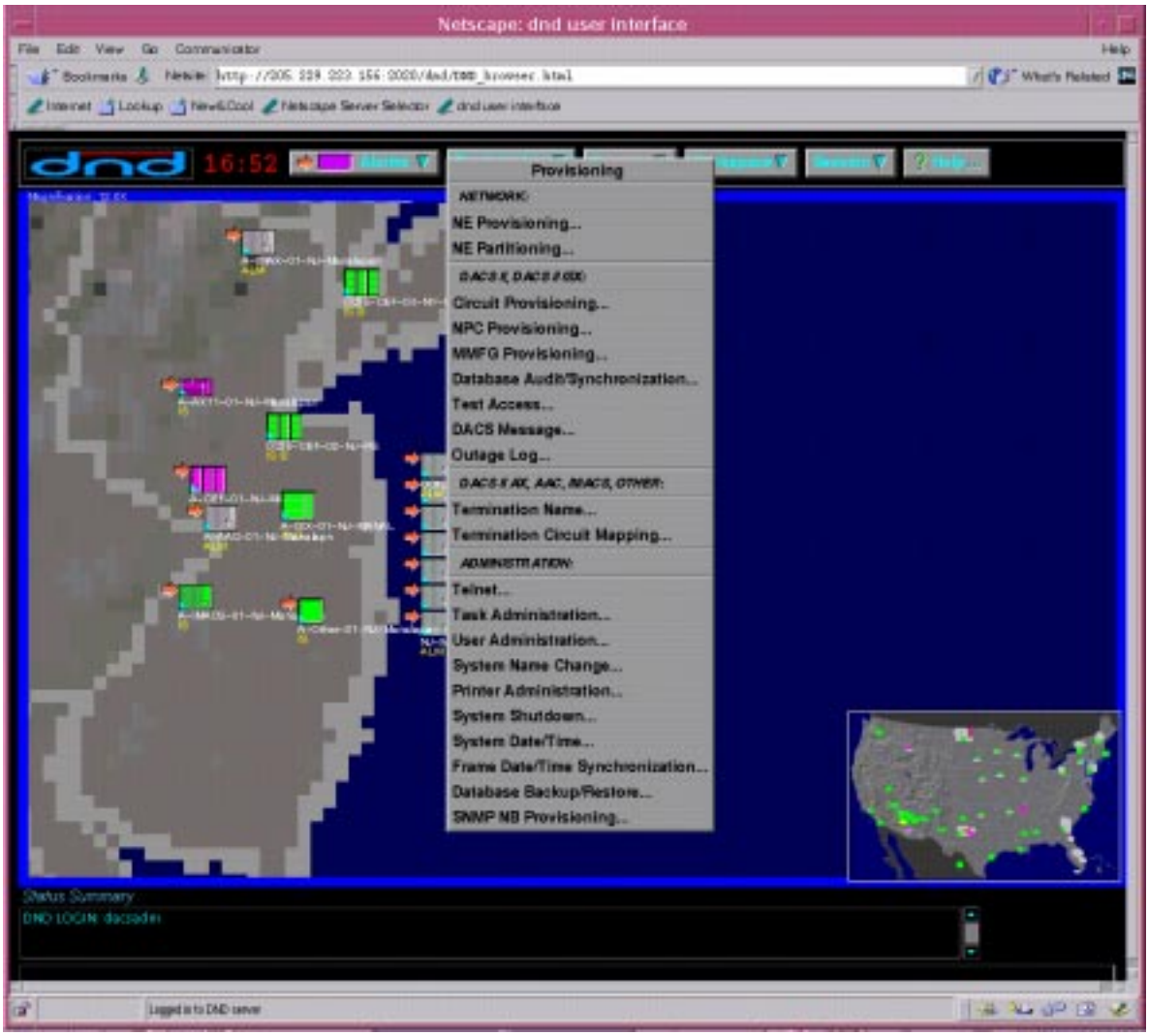


Figure 28-2. SNMP Northbound Interface GUI with Map

Northbound View (Continued)

Sample GUI View #2

Figure 28-3 displays a sample view of the Element Management System (EMS only) GUI with no background map.

All forms, reports, and equipment views are obtained only from the NE Summary Display.

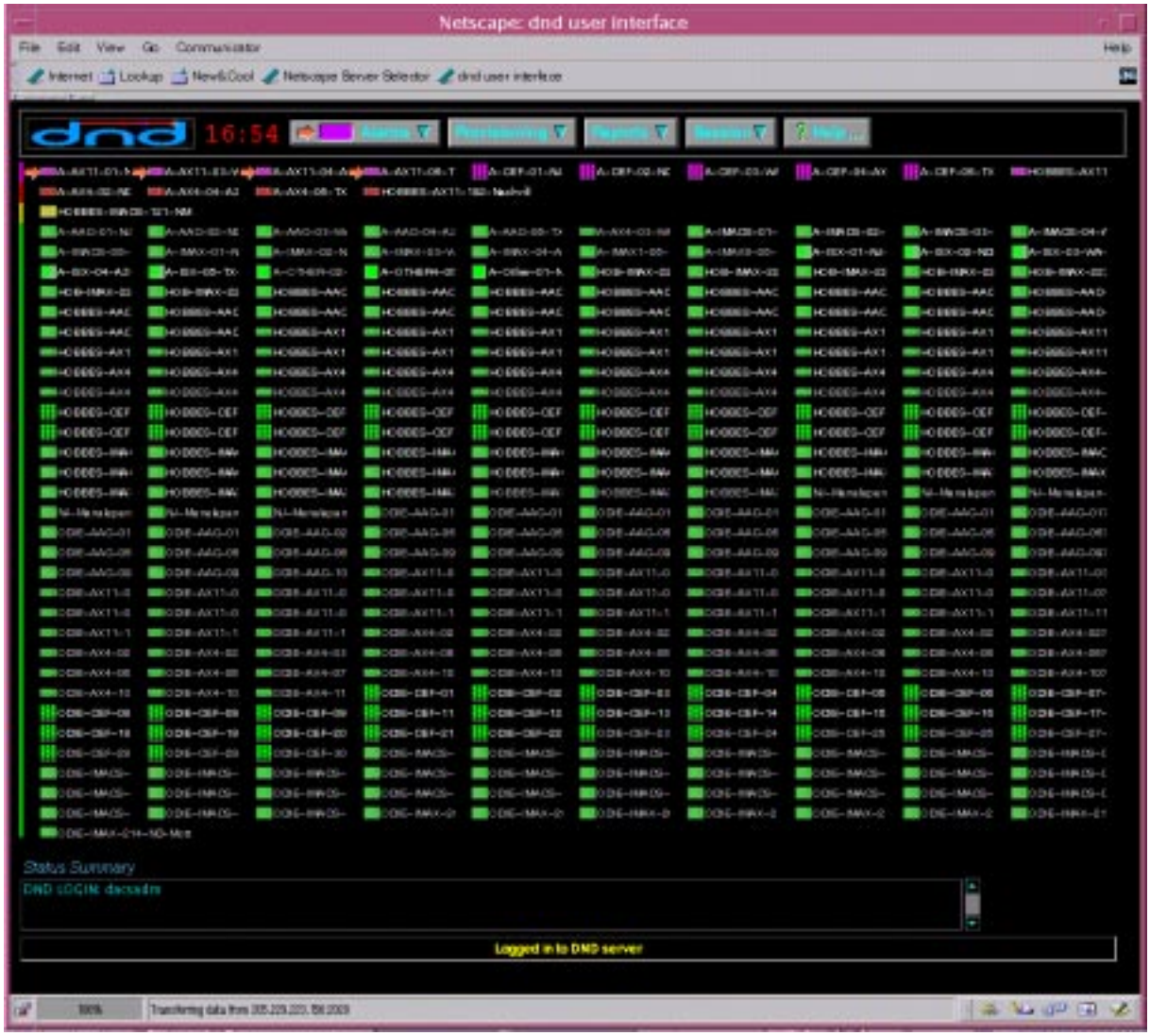


Figure 28-3. SNMP Northbound Interface GUI with No Map

Summary of Fields for Customized Reports

A

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Background

Introduction

The EDIT CUSTOM REPORT FORMAT feature allows you to design a report in one of a number of categories, which are based on type of information. Each category makes available a range of fields, from which you may select for inclusion on your report.

To find out how to create and maintain reports, refer to "Custom Report Formats" in Chapter 16, Report Operations.

NOTE:
The Echoed Response Processing and Audit/Synchronization Report fields cannot be customized.

Purpose

This appendix states the full range of fields available, by category, and gives a brief description of each, and its form of origination. In some instances, there is no form of origination, but the data was generated by the system. In that case, the field is the only way to access that data. All data comes from the DND database.

Related tasks

For related tasks, see the following General Tasks in Volume II:

DND GUI:

- Generating a Report GT 16.1G
- Generating an Alarm Summary Report GT 16.2G

DND Forms:

- Generating Reports GT 16.1U
- Displaying and Printing Reports GT 16.2.U
- Transferring Reports To DOS Diskette GT 16.3U
- Creating a New Report Format GT 16.4U
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- Renaming a Report Format GT 16.6U
- Deleting a Report Format GT 16.7U
- Generating an Alarm Query Report GT 16.8U

Background (Continued)

Related information

For related information, refer to Chapter 16, Report Operations.

ALARM LOG Reports

Fields Table A-1 displays the ALARM LOG report fields that can be customized.

Table A-1. ALARM LOG Report Fields

Name	Form of Origination	Description
Alm_Date	None.	The date on which the DND received the alarm.
Alm_Time	None.	The time at which the DND received the alarm.
NPC_Hier	NPC PROVISIONING *Forms*: **Number (Hier)** field *GUI:* **NPC Specifier (Hier)** checkbox, **NPC**: field	The hierarchical number of the NPC in alarm.
NPC_Ext	NPC PROVISIONING *Forms:* **(Ext)** field *GUI*: **NPC Specifier (Extd)** checkbox, **NPC:** field	The extended number of the NPC in alarm.
NPC_ID	NPC PROVISIONING *Forms:* **NPC ID** field *GUI:* **NPC Specifier (ID)** checkbox, **NPC:** field	The NPC ID of the NPC in alarm.
FE_Site	NPC PROVISIONING *Forms:* **FE Site** field *GUI:* **Far End Site** field	User-defined name of the DACS at the other end of the DS1 line terminating at the NPC in alarm.
Severity	None.	The severity of the alarm: CR, MAJ, MIN, INF, CLR
Alm_Summary	None.	The reason for the alarm.
Threshold	None.	The name of the threshold stored in the frame.
Fac_A_Type	None.	The type of facility alarm in a message **Summary** of *CGA*.
Side	None	The side number of the alarming facility.

Table A-1. ALARM LOG Report Fields (Continued)

Name	Form of Origination	Description
Unit	None.	The unit number of the alarming facility.
S_Unit	None.	The subunit of the alarming facility.
Field1	None.	Field1 of the Error Status Register, for a power fail message.
Field2	None	Field2 of the Error Status Register, for a power fail message.
NPC_Num	*Forms:* FRAME PROVISIONING **NPC (Hier)** or (**Ext**) field *GUI:* NE PROVISIONING **NPC Addressing (Hier**), (**Ext3**), or (**Ext4**) checkboxes	The format of the NPC number, either hierarchical or extended.
NE_Alm_Date	None.	The date reported in the alarm message received from the NE.
NE_Alm_Time	None.	The time reported in the alarm message received from the NE.
Intrv_Lev	None	The intervention level value reported by the NE when intervention is active.

CIRCUIT ALARM Report

Fields Table A-2 displays the CIRCUIT ALARM report fields that can be customized.

Table A-2. CIRCUIT ALARM Report Fields

Name	Form of Origination	Description
NPC_Hier	CIRCUIT PROVISIONING *Forms*: **Number (Hier)** field *GUI:* **NPC Specifier (Hier)** checkbox, **NPC**: field	The hierarchical number of the NPC in alarm.
NPC_Ext	CIRCUIT PROVISIONING *Forms*: **(Ext)** field *GUI*: **NPC Specifier (Extd)** checkbox, **NPC:** field	The extended number of the NPC in alarm.
NPC_ID	CIRCUIT PROVISIONING *Forms*: **NPC ID** field *GUI*: **NPC Specifier (ID)** checkbox, **NPC:** field	The NPC ID of the NPC in alarm.
Service_State	NPC PROVISIONING **Service State** field	The operational status of the NPC in alarm.
Ch	CIRCUIT PROVISIONING *Forms*: **Ch** field *GUI*: **Channel** field	The channel, of the NPC in alarm, that is connected in the circuit.
Alarm_State	NPC PROVISIONING **Alarm State** field	The status of the alarm.
Term_State	None.	The actual termination state of the EFT in the alarming NPC. The EFT can acquire this state by a variety of methods.
Circuit_ID	CIRCUIT PROVISIONING *Forms:* **Ckt ID** field *GUI:* **Circuit ID** field	The circuit ID of the circuit containing the NPC in alarm.

Table A-2. CIRCUIT ALARM Report Fields (Continued)

Name	Form of Origination	Description
Ckt_Status	CIRCUIT PROVISIONING *Forms:* **Ckt Status** field *GUI:* **Status** field	The operating status of the circuit containing the EFT of the NPC in alarm.
Class	CIRCUIT PROVISIONING **Ckt Class** field	The class of the circuit containing the EFT of the NPC in alarm: FDX, HDX, etc.
Customer_Name	CIRCUIT PROVISIONING **Customer Name** field	The user-defined name of the customer owning the circuit containing the alarming NPC.
TC	CIRCUIT PROVISIONING *Forms:* **TC** field *GUI:* **Trunk Conditioning** field	Trunk conditioning of the circuit containing the NPC in alarm.
IW	CIRCUIT PROVISIONING *Forms:* **IW** field *GUI:* **Insertion Word** field	Insertion word of the circuit containing the NPC in alarm.
T_NPC_Hier	CIRCUIT PROVISIONING *Forms*: **Number (Hier)** field *GUI:* **(Connecting To) NPC Specifier (Hier)** checkbox, **NPC**: field	The hierarchical number of the NPC at the other side of the circuit containing the alarming NPC.
T_NPC_Ext	CIRCUIT PROVISIONING *Forms*: **(Ext)** field *GUI*: **(Connecting To) NPC Specifier (Extd)** checkbox, **NPC:** field	The extended number of the NPC at the other side of the circuit containing the alarming NPC.
T_NPC_ID	CIRCUIT PROVISIONING *Forms*: **NPC ID** field *GUI*: **(Connecting To) NPC Specifier (ID)** checkbox, **NPC:** field	The ID of the NPC at the other side of the circuit containing the alarming NPC.
T_Service_State	NPC PROVISIONING **Service State** field	The service status of the NPC at the other side of the circuit containing the alarming NPC.

Table A-2. CIRCUIT ALARM Report Fields (Continued)

Name	Form of Origination	Description
T_Ch	CIRCUIT PROVISIONING *Forms:* **TO Ch** field *GUI*: **TO Channel** field	The EFT at the other side of the circuit containing the alarming NPC.
T_Alarm_State	CIRCUIT PROVISIONING **Alarm State** field	The alarm status of the NPC at the other side of the circuit containing the alarming NPC.
T_Term_State	None.	The actual termination state of the NPC at the other side of the circuit containing the alarming NPC. The EFT can acquire this state by a variety of methods.
Ckt_Priority	CIRCUIT PROVISIONING *Forms:* **Ckt Priority** field *GUI:* **Priority** field	The priority of the circuit containing the alarming NPC.
Bandwidth	CIRCUIT PROVISIONING **Bandwidth** field	The bandwidth of the circuit containing the alarming NPC.
SC	CIRCUIT PROVISIONING *Forms:* **SC** field *GUI:* **Signaling Conversion** field	The signalling conversion specification of the circuit containing the alarming NPC.
Framing	CIRCUIT PROVISIONING **Framing** field	The new values of the framing bits in Channel 0 to non-Channel 0 connections in a circuit containing the alarming NPC.
Options_AIS	CIRCUIT PROVISIONING *Forms:* **Options** field value *GUI:* **Circuit Options (AIS)** checkbox	The value AIS, for transmit Alarm Indication Signal, if **Options** is set to B for the circuit in which the alarming NPC appear.
Location_A	CIRCUIT PROVISIONING *Forms:* **Loc A** field *GUI:* **Location A** field	A user-defined field stating the station ID of the FROM side of the circuit containing the alarming NPC.
Location_Z	CIRCUIT PROVISIONING *Forms:* **Loc Z** field *GUI:* **Location Z** field	A user-defined field stating the station ID of the TO side of the circuit containing the alarming NPC.

NPC ALARM Report

Fields Table A-3 displays the NPC ALARM report fields that can be customized.

Table A-3. NPC ALARM Report Fields

Name	Form of Origination	Description
NPC_Hier	NPC PROVISIONING *Forms*: **Number (Hier)** field *GUI:* **NPC Specifier (Hier)** checkbox, **NPC**: field	The hierarchical number of the NPC in alarm.
NPC_Ext	NPC PROVISIONING *Forms*: **(Ext)** field *GUI*: **NPC Specifier (Extd)** checkbox, **NPC:** field	The extended number of the NPC in alarm.
NPC_ID	NPC PROVISIONING *Forms*: **NPC ID** field *GUI*: **NPC Specifier (ID)** checkbox, **NPC:** field	The NPC ID of the NPC in alarm.
Service_State	NPC PROVISIONING **Service State** field	The operational status of the NPC in alarm.
Alarm_State	NPC PROVISIONING **Alarm State** field	The status of the alarm.
Alarm_Aging	NPC PROVISIONING *Forms:* **Alarm Aging** field *GUI:* **Alarm Age** field	The threshold in seconds before the DND takes action on the alarm.
Severity	*Forms:* ALARM REPORT **Sev** field *GUI:* ALARM LOG REPORT **Alarm Severity** field	The severity of the alarm.
Type	NPC PROVISIONING *Forms:* **Type** field *GUI:* **NPC Type** field	The type of the NPC in alarm.

Table A-3. NPC ALARM Report Fields (Continued)

Name	Form of Origination	Description
FE_Site	NPC PROVISIONING *Forms:* **FE Site** field *GUI:* **Far End Site** field	The user-defined name of the DACS at the far end of the line terminating at the alarming NPC.
Insertion_Word	NPC PROVISIONING *Forms:* **IW** field *GUI:* **Insertion Word** field	The insertion word of the NPC in alarm.
NFS	NPC PROVISIONING *Forms:* **NFS** field *GUI:* **NFW** field	The treatment of the non-framing bits in Channel 0 to non-Channel 0 connections.
Interv_Lev	NPC PROVISIONING *Forms*: **Interv. Level** field *GUI*: **Intervention Level** checkboxes	Intervention level setting (1-6) where 1 specifies highest maintenance action and 6 is the lowest maintenance action.
Intv_Lev	None	The intervention level value calculated from the alarm severity and intervention level setting.

COMMON EQUIPMENT ALARM Report

Fields

Table A-4 displays the COMMON EQUIPMENT ALARM report fields that can be customized.

Table A-4. COMMON EQUIPMENT ALARM Report Fields

Name	Form of Origination	Description
EqpDate	None.	The date on which the DND received the alarm.
EqpTime	None.	The time at which the DND received the alarm.
Status	None.	The severity of the alarm.
Device	None.	The device name under alarm.
Sub_Device	None.	The sub-device name under alarm.
Side	None.	The side under alarm.
Unit	None.	The unit under alarm.
Sub_Unit	None.	The subunit under alarm.
Intv_Lev	None	The intervention level value reported by the NE when intervention is active.

CIRCUIT Report

Fields Table A-5 displays the CIRCUIT report fields that can be customized.

Table A-5. CIRCUIT Report Fields

Name	Form of Origination	Description
Remarks	CIRCUIT PROVISIONING *Forms:* **Rmks** field *GUI:* **Remarks** field	User-defined information concerning the circuit.
Ckt_Status	CIRCUIT PROVISIONING *Forms:* **Ckt Status** field *GUI:* **Status** field	The operating status of the circuit.
Circuit_ID	CIRCUIT PROVISIONING *Forms:* **Ckt ID** field *GUI:* **Circuit ID** field	User-assigned circuit name.
Class	CIRCUIT PROVISIONING **Ckt Class** field	The type of circuit: *FDX, HDX, BBL, BRD, DMB*.
Customer_Name	CIRCUIT PROVISIONING **Customer Name** field	User-defined name of the customer owning the circuit.
Location_A	CIRCUIT PROVISIONING *Forms:* **Loc A** field *GUI:* **Location A** field	User-defined station ID of the FROM side of the circuit.
Location_Z	CIRCUIT PROVISIONING *Forms:* **Loc Z** field *GUI:* **Location Z** field	User-defined station ID of the TO side of the circuit.
F_NPC_Hier	CIRCUIT PROVISIONING *Forms*: **Number (Hier)** field *GUI:* **(FROM) NPC Specifier (Hier)** checkbox, **NPC:** field	Hierarchical number of the circuit's FROM side NPC.

Table A-5. CIRCUIT Report Fields (Continued)

Name	Form of Origination	Description
F_NPC_Ext	CIRCUIT PROVISIONING *Forms*: **(Ext)** field *GUI*: **(FROM) NPC Specifier (Extd)** checkbox, **NPC:** field	Extended number of the circuit's FROM side NPC.
F_NPC_ID	NPC PROVISIONING *Forms*: **NPC ID** field *GUI*: **(FROM) NPC Specifier (ID)** checkbox, **NPC:** field	NPC ID of the circuit's FROM side NPC.
F_Ch	CIRCUIT PROVISIONING *Forms:* **FROM Ch** field *GUI:* **FROM Channel:** field	The circuit's FROM side channel number.
T_NPC_Hier	CIRCUIT PROVISIONING *Forms*: **Number (Hier)** field *GUI:* **(TO) NPC Specifier (Hier)** checkbox, **NPC:** field	Hierarchical number of the circuit's TO side NPC.
T_NPC_Ext	CIRCUIT PROVISIONING *Forms*: **(Ext)** field *GUI*: **(TO) NPC Specifier (Extd)** checkbox, **NPC:** field	Extended number of the circuit's TO side NPC.
T_NPC_ID	NPC PROVISIONING *Forms*: **NPC ID** field *GUI*: **(TO) NPC Specifier (ID)** checkbox, **NPC:** field	NPC ID of the circuit's TO side NPC.
T_Ch	CIRCUIT PROVISIONING *Forms:* **TO Ch** field *GUI:* **TO Channel** field	The circuit's TO side channel number.

Table A-5. CIRCUIT Report Fields (Continued)

Name	Form of Origination	Description
F_Mode	CIRCUIT PROVISIONING *Forms:* **FROM Mode** field *GUI:* **FROM Channel** field	The use of the FROM channel in a DMB circuit: *SYM, BRD, BBL, LEG.*
T_Mode	CIRCUIT PROVISIONING *Forms:* **TO Mode** field *GUI:* **(TO) Mode**	The use of the TO channel in a DMB circuit: *SYM, BRD, BBL, LEG*
TC	CIRCUIT PROVISIONING *Forms:* **TC** field *GUI:* **Trunk Conditioning** field	Trunk conditioning. Specifies whether A/B-robbed-bit signaling will signal circuit failure.
IW	CIRCUIT PROVISIONING *Forms:* **IW** field *GUI:* **Insertion Word** field	Insertion word. Specifies the OOS signal of mapped channels.
SC	CIRCUIT PROVISIONING *Forms:* **SC** field *GUI:* **Signaling Conversion** field	Signaling conversion. Specifies the CAS channel values for CEPT and GATEWAY.
Bandwidth	CIRCUIT PROVISIONING **Bandwidth** field	The number of channels in a high-rate circuit.
Bandwidth_Type	CIRCUIT PROVISIONING **Bandwidth Type** field	The placement of channels in a high-rate circuit: *C: Contiguous, A: Alternating, R: Random*
Service_Date	CIRCUIT PROVISIONING **Service Date** field	User-defined date when the circuit was first placed in service. *GUI:* **Day**, **Month**, and **Year** fields
Options_NAM	CIRCUIT PROVISIONING *Forms:* **Options** field value *GUI:* **Circuit Options NAM** checkbox	The value NAM, for no a-to-mu law conversion: *Forms:* If **Options** is set to A; otherwise, blanks. *GUI:* If checkbox is selected

Table A-5. CIRCUIT Report Fields (Continued)

Name	Form of Origination	Description
Options_AIS	CIRCUIT PROVISIONING *Forms:* **Options** field value *GUI:* **Circuit Options AIS** checkbox	The value *AIS*, for transmit Alarm Indication Signal *Forms:* If **Options** is set to B *GUI:* If checkbox is selected
Options_RDLD	CIRCUIT PROVISIONING *Forms:* **Options** field value *GUI:* **Circuit Options RDLD** checkbox	The value *RDLD*, for disconnect red-lined circuits: *Forms:* If **Options** is set to C *GUI:* If checkbox is selected
Options_OOS	CIRCUIT PROVISIONING *Forms:* **Options** field value *GUI:* **Circuit Options OOS** checkbox	The value *OOS*, for disconnect on channel going *OOS:* *Forms:* If **Options** is set to D *GUI:* If checkbox is selected
Options_INCL	CIRCUIT PROVISIONING *Forms:* **Options** field value *GUI:* **Circuit Options INCL** checkbox	The value *INCL*, for authorize disconnect of red-lined circuits: *Forms:* If **Options** is set to E *GUI:* If checkbox is selected
Options_DCC	CIRCUIT PROVISIONING *Forms:* **Options** field value *GUI:* **Circuit Options DCC** checkbox	The value *DCC*, for assert IW as disconnect code *Forms:* If **Options** is set to F *GUI:* If checkbox is selected
Termination_State	CIRCUIT PROVISIONING *Forms:* **Options** field value *GUI:* **Circuit Options TLA** checkbox	The value TLA, for terminate normal traffic *Forms:* If **Options** is set to G *GUI:* If checkbox is selected
NTR	CIRCUIT PROVISIONING *Forms:* **NTR** field value *GUI:* **Circuit Options No Transmit (NTR)** combo boxes	No transmit. Specifies that a direction of a DMB leg will not carry traffic: *Forms:* T or F *GUI: T: TO*, *F: FROM*

Table A-5. CIRCUIT Report Fields (Continued)

Name	Form of Origination	Description
CP	CIRCUIT PROVISIONING *Forms:* **Ckt Priority** field value *GUI:* **Priority** field	Determines the importance of a circuit for restoral actions.
Framing	CIRCUIT PROVISIONING **Framing** field value	The value of the framing bits in CEPT Channel 0 cross-connection.

CHANNEL Reports

Fields Table A-6 displays the CHANNEL report fields that can be customized.

Table A-6. CHANNEL Report Fields

Name	Form of Origination	Description
NPC_Hier	CIRCUIT PROVISIONING *Forms*: **Number (Hier)** field *GUI:* **NPC Specifier (Hier)** checkbox, **NPC:** field	The hierarchical number of the NPC. This NPC is to be understood as the FROM NPC.
NPC_Ext	CIRCUIT PROVISIONING *Forms*: **(Ext)** field *GUI*: **NPC Specifier (Extd)** checkbox, **NPC:** field	The extended number of the NPC.
NPC_ID	NPC PROVISIONING *Forms*: **NPC ID** field *GUI*: **NPC Specifier (ID)** checkbox, **NPC:** field	User-assigned NPC name.
Ch	CIRCUIT PROVISIONING *Forms:* **TO Ch** field *GUI:* **TO Channel** field	The number of the channel under consideration, within the specified NPC.
Status	CIRCUIT PROVISIONING *Forms:* **Ckt Status** field *GUI:* **Status** field	The status of the circuit in which the channel appears.
Circuit_ID	CIRCUIT PROVISIONING *Forms:* **Ckt ID** field *GUI:* **Circuit ID** field	The ID of the circuit in which the channel appears.
Class	CIRCUIT PROVISIONING **Ckt Class** field	The type of circuit: FDX, HDX, BBL, BRD, DMB, BKB, LEG.
TC	CIRCUIT PROVISIONING *Forms:* **TC** field *GUI:* **Trunk Conditioning** field	Trunk conditioning. Specifies whether A/B-robbed-bit signaling will signal circuit failure.

Table A-6. CHANNEL Report Fields (Continued)

Name	Form of Origination	Description
IW	CIRCUIT PROVISIONING *Forms:* **IW** field *GUI:* **Insertion Word** field	Insertion word. Specifies the OOS signal of mapped channels.
To_NPC_Hier	CIRCUIT PROVISIONING *Forms*: **Number (Hier)** field *GUI:* **(TO) NPC Specifier (Hier)** checkbox, **NPC:** field	The hierarchical number of the TO NPC.
To_NPC_Ext	CIRCUIT PROVISIONING *Forms*: **(Ext)** field *GUI*: **(TO) NPC Specifier (Extd)** checkbox, **NPC:** field	The extended number of the TO NPC.
To_NPC_ID	NPC PROVISIONING *Forms*: **NPC ID** field *GUI*: **(TO) NPC Specifier (ID)** checkbox, **NPC:** field	User-assigned TO NPC name.
To_Ch	CIRCUIT PROVISIONING *Forms:* **TO Ch** field *GUI:* **TO Channel** field	Specifies the TO channel.
TS	None. This information is reported only in this report form.	Reports the termination state of the EFT represented by the channel, as it was when the report was generated. Values are TLA, TLR, or blanks.

NPC Report

Fields Table A-7 displays the NPC report fields that can be customized.

Table A-7. NPC Report Fields

Name	Form of Origination	Description
NPC_Hier	NPC PROVISIONING *Forms*: **Number (Hier)** field *GUI:* **NPC Specifier (Hier)** checkbox, **NPC**: field	The hierarchical number of the NPC.
NPC_Ext	NPC PROVISIONING *Forms*: **(Ext)** field *GUI*: **NPC Specifier (Extd)** checkbox, **NPC:** field	The extended number of the NPC.
NPC_ID	NPC PROVISIONING *Forms*: **NPC ID** field *GUI*: **NPC Specifier (ID)** checkbox, **NPC:** field	User-assigned NPC name.
Type	NPC PROVISIONING *Forms:* **Type** field *GUI:* **NPC Type** field	The DND type of NPC, which is based on the hardware module providing it.
FE_Site	NPC PROVISIONING *Forms:* **FE Site** field *GUI:* **Far End Site** field	User-defined name of the DACS at the other end of the DS1 line terminating at the NPC.
Service_State	NPC PROVISIONING **Service State** field	The operating status of the NPC.
Alarm_State	NPC PROVISIONING **Alarm State** field	The status of an alarm currently being received or asserted by this NPC.
Alarm_Aging	NPC PROVISIONING *Forms:* **Alarm Aging** field *GUI:* **Alarm Age** field	The number of seconds after an alarm is received before the DND takes action.

Table A-7. NPC Report Fields (Continued)

Name	Form of Origination	Description
Insertion_Word	NPC PROVISIONING *Forms:* **IW** field *GUI:* **Insertion Word** field	The value transmitted by an *IS* NPC on unassigned channels.
AIS	NPC PROVISIONING *Forms:* **AIS** field *GUI:* **Alarm Indication Signal (AIS)** field	Specifies Alarm Indication Signal alarm level for this NPC. Values are: *MI* (Informational), *MN* (Minor), *MJ* (Major), *CR* (Critical).
NFS	NPC PROVISIONING *Forms:* **NFS** field *GUI:* **NFW** field	Non-frame word setting. Specifies how the spare bits of time slot 0 are to be handled.
TS0	NPC PROVISIONING **TS0** field	Describes how to process bits for transmission in a CEPT time slot 0.
TS0M	NPC PROVISIONING **TS0M** field	Describes what CEPT time slot 0 bits are to be monitored by the frame.
Min_Slips	NPC PROVISIONING *Forms:* **Minor Alarm Option/Slips** field *GUI:* **Minor Alarm Thresholds**/**Slips** checkbox	Specifies the threshold of a minor alarm on a slips error in an NAS NPC.
Min_BER	NPC PROVISIONING Forms: **Minor Alarm Option/Bit Error Rate** field GUI: **Minor Alarm Thresholds/Bit Error Rate** checkbox	Specifies the threshold of a minor alarm on a bit error rate in an NAS NPC.
Min_Frame_Align	NPC PROVISIONING *Forms:* **Minor Alarm Option/Frame Alignment** field *GUI:* **Minor Alarm Thresholds/Change of Frame Alignment** checkbox	Specifies the threshold of a minor alarm on a frame alignment error in an NAS NPC.

Table A-7. NPC Report Fields (Continued)

Name	Form of Origination	Description
Maj_Slips	NPC PROVISIONING *Forms:* **Major Alarm Option/Slips** field *GUI:* **Major Alarm Thresholds/Slips** checkbox	Specifies the threshold of a major alarm on a slips error in an NAS NPC.
Maj_BER	NPC PROVISIONING Forms: **Major Alarm Option/Bit Error Rate** field GUI: **Major Alarm Thresholds/Bit Error Rate** checkbox	Specifies the threshold of a major alarm on a bit error rate in an NAS NPC.
Maj_Frame_Align	NPC PROVISIONING *Forms:* **Major Alarm Option/Frame Alignment** field *GUI:* **Major Alarm Thresholds/Change of Frame Alignment** checkbox	Specifies the threshold of a major alarm on a frame alignment error in an NAS NPC.
Maj_Err_Sec	NPC PROVISIONING *Forms:* **Major Alarm Option/Errored Seconds** field *GUI:* **Major Alarm Thresholds/Errored Seconds** checkbox	Specifies the threshold of a major alarm on errored seconds in an NAS NPC.
Maj_Sev_Err_Sec	NPC PROVISIONING *Forms:* **Major Alarm Option/Severe Errored Seconds** field *GUI:* **Major Alarm Thresholds/Severe Errored Seconds** checkbox	Specifies the threshold of a major alarm on severe errored seconds in an NAS NPC.

Table A-7. NPC Report Fields (Continued)

Name	Form of Origination	Description
Short_Slips	NPC PROVISIONING *Forms:* **Short Interval Option/Slips** field *GUI:* **Near End 15 Minute Counts/Slips** checkbox	Specifies the short-interval threshold of a slips alarm in a CEPT non-PA NPC.
Short_Degraded_Min	NPC PROVISIONING *Forms:* **Short Interval Option/Degraded Minutes** field *GUI:* **Near End 15 Minute Counts/Degraded Minutes** checkbox	Specifies the short-interval threshold of a degraded minutes alarm in a CEPT non-PA NPC.
Short_Unavail_Sec	NPC PROVISIONING *Forms:* **Short Interval Option/Unavailable Seconds** field *GUI:* **Near End 15 Minute Counts/Unavailable Seconds** checkbox	Specifies the short-interval threshold of an unavailable seconds alarm in a CEPT non-PA NPC.
Short_Err_Sec	NPC PROVISIONING *Forms:* **Short Interval Option/Errored Seconds** field *GUI:* **Near End 15 Minute Counts/Errored Seconds** checkbox	Specifies the short-interval threshold of an errored seconds alarm in a CEPT non-PA NPC.
Short_Sev_Err_Sec	NPC PROVISIONING *Forms:* **Short Interval Option/Severe Errored Seconds** field *GUI:* **Near End 15 Minute Counts/Severe Errored Seconds** checkbox	Specifies the short-interval threshold of a severe errored seconds alarm in a CEPT non-PA NPC.
Long_Slips	NPC PROVISIONING *Forms:* **Long Interval Option/Slips** field *GUI:* **Near End 24 Hour Counts/Slips** checkbox	Specifies the long-interval threshold of a slips alarm in a CEPT non-PA NPC.

Table A-7. NPC Report Fields (Continued)

Name	Form of Origination	Description
Long_Degraded_Min	NPC PROVISIONING *Forms:* **Long Interval Option/Degraded Minutes** field *GUI:* **Near End 24 Hour Counts/Degraded Minutes** checkbox	Specifies the long-interval threshold of a degraded minutes alarm in a CEPT non-PA NPC.
Long_Unavail_Sec	NPC PROVISIONING *Forms:* **Long Interval Option/Unavailable Seconds** field *GUI:* **Near End 24 Hour Counts/Unavailable Seconds** checkbox	Specifies the long-interval threshold of an unavailable errors alarm in a CEPT non-PA NPC.
Long_Err_Sec	NPC PROVISIONING *Forms:* **Long Interval Option/Errored Seconds** field *GUI:* **Near End 24 Hour Counts/Errored Seconds** checkbox	Specifies the long-interval threshold of an errored seconds alarm in a CEPT non-PA NPC.
Long_Sev_Err_Sec	NPC PROVISIONING *Forms:* **Long Interval Option/Unavailable Seconds** field *GUI:* **Near End 24 Hour Counts/Unavailable Seconds** checkbox	Specifies the long-interval threshold of a severe errored seconds alarm in a CEPT non-PA NPC.
NE_Daily_CRC_Err	NPC PROVISIONING *Forms:* **Daily NE CRC Block Errors** field *GUI:* **Near End 24 Hour Counts/CRC Block Errors** checkbox	Specifies the daily near end CRC block errors for a CEPT PA NPC.

Table A-7. NPC Report Fields (Continued)

Name	Form of Origination	Description
NE_Daily_Err_Sec	NPC PROVISIONING *Forms:* **Daily NE Errored Seconds** field *GUI:* **Near End 24 Hour Counts/Errored Seconds** checkbox	Specifies the daily near end errored seconds for a CEPT PA NPC.
NE_Daily_S_Err_Sec	NPC PROVISIONING *Forms:* **Daily NE Severe Errored Seconds** field *GUI:* **Near End 24 Hour Counts/Severe Errored Seconds** checkbox	Specifies the daily near end severe errored seconds for a CEPT PA NPC.
NE_Daily_Unavl_Sec	NPC PROVISIONING *Forms:* **Daily NE Unavailable Seconds** field *GUI:* **Near End 24 Hour Counts/Unavailable Seconds** checkbox	Specifies the daily near end unavailable seconds for a CEPT PA NPC.
NE_Daily_Frame_Err	NPC PROVISIONING *Forms:* **Daily NE Framing Errors** field *GUI:* **Near End 24 Hour Counts/Framing Errors** checkbox	Specifies the daily near end framing errors for a CEPT PA NPC.
NE_Daily_OOF_Sec	NPC PROVISIONING *Forms:* **Daily NE Out-of-Frame Seconds** field *GUI:* **Near End 24 Hour Counts/Out-of-Frame Seconds** checkbox	Specifies the daily near end out-of-frame seconds for a CEPT PA NPC.

Table A-7. NPC Report Fields (Continued)

Name	Form of Origination	Description
NE_Daily_Slip_Sec	NPC PROVISIONING *Forms:* **Daily NE Controlled Slip Seconds** field *GUI:* **Near End 24 Hour Counts/Controlled Slip Seconds** checkbox	Specifies the daily near end controlled slip seconds for a CEPT PA NPC.
NE_Daily_Code_Vltn	NPC PROVISIONING *Forms:* **Daily NE Controlled Coding Violations** field *GUI:* **Near End 24 Hour Counts/Coding Violations Seconds** checkbox	Specifies the daily near end coding violations for a CEPT PA NPC.
NE_Daily_Unavl_Cnt	NPC PROVISIONING *Forms:* **Daily NE Unavailable Time Count** field *GUI:* **Near End 24 Hour Counts/Unavailable Time Count** checkbox	Specifies the daily near end unavailable time count for a CEPT PA NPC.
NE_Daily_Mfram_Err	NPC PROVISIONING *Forms:* **Daily NE Multiframe Errors** field *GUI:* **Near End 24 Hour Counts/Multiframe Errors** checkbox	Specifies the daily near end multiframe errors for a CEPT PA NPC.
FE_Daily_CRC_Err	NPC PROVISIONING *Forms:* **Daily FE CRC Block Errors** field *GUI:* **Far End 24 Hour Counts/CRC Block Errors** checkbox	Specifies the daily far end CRC block errors for a CEPT PA NPC.

Table A-7. NPC Report Fields (Continued)

Name	Form of Origination	Description
FE_Daily_Err_Sec	NPC PROVISIONING *Forms:* **Daily FE Errored Seconds** field *GUI:* **Far End 24 Hour Counts/Errored Seconds** checkbox	Specifies the daily far end errored seconds for a CEPT PA NPC.
FE_Daily_S_Err_Sec	NPC PROVISIONING *Forms:* **Daily FE Severe Errored Seconds** field *GUI:* **Far End 24 Hour Counts/Severe Errored Seconds** checkbox	Specifies the daily far end severe errored seconds for a CEPT PA NPC.
FE_Daily_Unavl_Sec	NPC PROVISIONING *Forms:* **Daily FE Unavailable Seconds** field *GUI:* **Far End 24 Hour Counts/Unavailable Seconds** checkbox	Specifies the daily far end unavailable seconds for a CEPT PA NPC.
NE_15M_CRC_Err	NPC PROVISIONING *Forms:* **15-Min NE CRC Block Errors** field *GUI:* **Near End 15 Minute Counts/CRC Block Errors** checkbox	Specifies the 15-minute near end CRC block errors for a CEPT PA NPC.
NE_15M_Err_Sec	NPC PROVISIONING *Forms:* **15-Min NE Errored Seconds** field *GUI:* **Near End 15 Minute Counts/Errored Seconds** checkbox	Specifies the 15-minute near end errored seconds for a CEPT PA NPC.

Table A-7. NPC Report Fields (Continued)

Name	Form of Origination	Description
NE_15M_S_Err_Sec	NPC PROVISIONING *Forms:* **15-Min NE Severe Errored Seconds** field *GUI:* **Near End 15 Minute Counts/Severe Errored Seconds** checkbox	Specifies the 15-minute near end severe errored seconds for a CEPT PA NPC.
NE_15M_Unavl_Sec	NPC PROVISIONING *Forms:* **15-Min NE Unavailable Seconds** field *GUI:* **Near End 15 Minute Counts/Unavailable Seconds** checkbox	Specifies the 15-minute near end unavailable seconds for a CEPT PA NPC.
NE_15M_Frame_Err	NPC PROVISIONING *Forms:* **15-Min NE Framing Errors** field *GUI:* **Near End 15 Minute Counts/Framing Errors** checkbox	Specifies the 15-minute near end framing errors for a CEPT PA NPC.
NE_15M_OOF_Sec	NPC PROVISIONING *Forms:* **15-Min NE Out-of-Frame Seconds** field *GUI:* **Near End 15 Minute Counts/Out-of-Frame Seconds** checkbox	Specifies the 15-minute near end out-of frame seconds for a CEPT PA NPC.
NE_15M_Slip_Sec	NPC PROVISIONING *Forms:* **15-Min NE Controlled Slip Seconds** field *GUI:* **Near End 15 Minute Counts/Controlled Slip Seconds** checkbox	Specifies the 15-minute near end controlled slip seconds for a CEPT PA NPC.

Table A-7. NPC Report Fields (Continued)

Name	Form of Origination	Description
NE_15M_Code_Vltn	NPC PROVISIONING *Forms:* **15-Min NE Coding Violations** field *GUI:* **Near End 15 Minute Counts/Coding Violations** checkbox	Specifies the 15-minute near end coding violations for a CEPT PA NPC.
NE_15M_Unavl_Cnt	NPC PROVISIONING *Forms:* **15-Min NE Unavailable Time Count** field *GUI:* **Near End 15 Minute Counts/Unavailable Time Count** checkbox	Specifies the 15-minute near end unavailable time count for a CEPT PA NPC.
NE_15M_Mfram_Err	**15-Min NE Multiframe Errors** NPC PROVISIONING *Forms:* **15-Min NE Unavailable Time Count** field *GUI:* **Near End 15 Minute Counts/Unavailable Time Count** checkbox	Specifies the 15-minute near end multiframe errors for a CEPT PA NPC.
FE_15M_CRC_Err	NPC PROVISIONING *Forms:* **15-Min FE CRC Block Errors** field *GUI:* **Far End 15 Minute Counts/CRC Block Errors** checkbox	Specifies the 15-minute far end CRC block errors for a CEPT PA NPC.
FE_15M_Err_Sec	NPC PROVISIONING *Forms:* **15-Min FE Errored Seconds** field *GUI:* **Far End 15 Minute Counts/Errored Seconds** checkbox	Specifies the 15-minute far end errored seconds for a CEPT PA NPC.

Table A-7. NPC Report Fields (Continued)

Name	Form of Origination	Description
FE_15M_S_Err_Sec	NPC PROVISIONING *Forms:* **15-Min FE Severe Errored Seconds** field *GUI:* **Far End 15 Minute Counts/Severe Errored Seconds** checkbox	Specifies the 15-minute far end severe errored seconds for a CEPT PA NPC.
FE_15M_Unavl_Sec	NPC PROVISIONING *Forms:* **15-Min FE Unavailable Seconds** field *GUI:* **Far End 15 Minute Counts/Unavailable Seconds** checkbox	Specifies the 15-minute far end unavailable seconds for a CEPT PA NPC.
Trans	NPC PROVISIONING *Forms:* **Lpbk Trans** field *GUI:* **Loopback Trans-mission** checkboxes	The transmission parameter of a loopback state. Values/checkboxes are: A - loop the signal, send AIS, turn off PM and alarms B - loop the signal, send AIS, perform PM and alarm processing C - Loop the signal, turn off PM, freeze alarms T - Loop the signal, perform PM and process alarms N - No loopback is up
Dir	NPC PROVISIONING *Forms:* **Dir** field *GUI:* **Direction** checkboxes	The Direction parameter of a loopback state. Values/checkboxes are: F/**Facility** - Facility, back to the facility E/**Equipment** - Equipment, back to the DACS N/**None** - No loopback
Interv_Lev	NPC PROVISIONING *Forms*: **Interv. Level** field *GUI*: **Intervention Level** checkboxes	Intervention level setting (1-6) where 1 specifies highest maintenance action and 6 is the lowest maintenance action.

ALTROUTES/PREEMPTIONS Reports

Fields

Table A-8 displays the ALTTOUTE/PREEMPTION report fields that can be customized for the DND Forms Interface Only.

Table A-8. ALTROUTES/PREEMPTIONS Report Fields

Name	Form of Origination	Description
Circuit_ID	**Ckt ID** field, CIRCUIT PROVISIONING	The circuit ID of the altrouted circuit.
CP	**Ckt Priority field**, CIRCUIT PROVISIONING	The circuit priority of the altrouted circuit. The CP partly determines its order of normalization.
TC	**TC** field, CIRCUIT PROVISIONING	Trunk conditioning of the altrouted circuit.
IW	**IW** field, CIRCUIT PROVISIONING	Insertion word of the altrouted circuit.
Alt_Date	**Altroute Date & Time**, CIRCUIT PROVISIONING	The date the circuit was altrouted.
Alt_Time	**Altroute Date & Time**, CIRCUIT PROVISIONING	The time the circuit was altrouted.
NPC_Hier	**NORMAL Hier**, CIRCUIT PROVISIONING	The hierarchical NPC number of the EFT that was changed in altrouting.
NPC_Ext	**NORMAL Ext** field, CIRCUIT PROVISIONING	The extended NPC number of the EFT that was changed in altrouting.
NPC_ID	**NORMAL NPC ID** field, CIRCUIT PROVISIONING	The NPC ID of the EFT that was changed in altrouting.
Alt_Ch	**ALTROUTE Ch** field, CIRCUIT PROVISIONING	The channel to which the NORMAL channel was changed.
Preemp_Ckt_ID	**Preempted Ckt ID** field, CIRCUIT PROVISIONING	The NPC ID of the first circuit that was preempted by this altroute, if any.
Preemp_CP	**Preempted CP** field, CIRCUIT PROVISIONING	The circuit priority of the preempted circuit, if any.

RECONFIGURATION PLANS Reports

Fields

Table A-9 displays the RECONFIGURATION PLANS report fields that can be customized for the DND Forms Interface Only.

Table A-9. RECONFIGURATION PLANS Report Fields

Name	Form of Origination	Description
Reconfiguration_ID	**RP ID** field, RECONFIGURATION PLAN PROVISIONING	The user-defined name of this plan.
Circuit_ID	**Ckt ID** field, RECONFIGURATION PLAN PROVISIONING	The circuit ID of the circuit on which this item of the plan operates.
Status	**Status** field, RECONFIGURATION PLAN PROVISIONING	The current operating status of the circuit on which this item of the plan operates.
Circuit_Action	**Action** field, RECONFIGURATION PLAN PROVISIONING	The **Action** to be performed on the circuit of this item.
T_NPC_Ext	CIRCUIT PROVISIONING *Forms*: **(Ext)** field *GUI*: **(TO) NPC Specifier (Extd)** checkbox, **NPC:** field	Extended number of the circuit's TO side NPC.

RECONFIGURATION PLAN ALTROUTE Reports

Fields Table A-10 displays the RECONFIGURATION PLAN ALTROUTE report fields that can be customized for the DND Forms Interface Only.

Table A-10. RECONFIGURATION PLAN ALTROUTE Report Fields

Name	Form of Origination	Description
Reconfiguration_ID	**RP ID** field, RECONFIGURATION PLAN PROVISIONING	The user-defined name of this plan.
Circuit_ID	**Ckt ID** field, RECONFIGURATION PLAN PROVISIONING	The circuit ID of the circuit on which this item of the plan operates.
Status	**Status** field, RECONFIGURATION PLAN PROVISIONING	The current operating status of the circuit on which this item of the plan operates.
Circuit_Action	**Action** field, RECONFIGURATION PLAN PROVISIONING	The **Action** to be performed on the circuit of this item.
Sequence	**Sequence** field, RECONFIGURATION PLAN PROVISIONING	The sequence number of this item in the plan.
NPC_Hier	**FROM Hier** field, CIRCUIT PROVISIONING	The hierarchical number of the NPC. This NPC is to be understood as the FROM NPC.
NPC_Ext	**FROM Ext** field, CIRCUIT PROVISIONING	The extended number of the NPC.
NPC_ID	**FROM NPC ID** field, CIRCUIT PROVISIONING	User-assigned NPC name.
Ch	**FROM Ch** field, CIRCUIT PROVISIONING	The number of the channel under consideration, within the specified NPC.
Alt_NPC_Hier	**ALTROUTE Hier** field, CIRCUIT PROVISIONING	The hierarchical number of the NPC to which the NORMAL NPC was changed.
Alt_NPC_Ext	**ALTROUTE Ext** field, CIRCUIT PROVISIONING	The extended number of the NPC to which the NORMAL NPC was changed.
Alt_NPC_ID	**ALTROUTE NPC ID** field, CIRCUIT PROVISIONING	The NPC number to which the NORMAL NPC was changed.
Alt_Ch	**ALTROUTE Ch** field, CIRCUIT PROVISIONING	The channel to which the NORMAL channel was changed.

Table A-10. RECONFIGURATION PLAN ALTROUTE Report Fields (Continued)

Name	Form of Origination	Description
F_Preemp_Ckt_ID	**Preempted Ckt ID** field, CIRCUIT PROVISIONING	A circuit preempted by the FROM side of an altrouted circuit, if any.
F_Preemp_CP	**Preempted CP** field, CIRCUIT PROVISIONING	The circuit priority of the circuit preempted by the FROM side of the altrouted circuit.
T_Preemp_Ckt_ID	**Preempted Ckt ID** field, CIRCUIT PROVISIONING	A circuit preempted by the TO side of an altrouted circuit, if any.
T_Preemp_CP	**Preempted CP** field, CIRCUIT PROVISIONING	The circuit priority of the circuit preempted by the TO side of the altrouted circuit.

AUTO RECONFIGURATION PLAN Reports

Fields Table A-11 displays the AUTO RECONFIGURATION PLAN report fields that can be customized for the DND Forms Interface Only.

Table A-11. AUTO RECONFIGURATION Report Fields

Name	Form of Origination	Description
ARP_ID	**ARP ID** field, AUTOMATIC RECONFIGURATION PLAN PROVISIONING	The user-defined name of this ARP.
ARP_Status	**ARP Status** field, AUTOMATIC RECONFIGURATION PLAN PROVISIONING	The execution status of the ARP.
RP_Sequence	**Sequence** field, AUTOMATIC RECONFIGURATION PLAN PROVISIONING	The sequence number of the RP listed in the ARP.
RP_Status	**RP Status** field, RECONFIGURATION PLAN PROVISIONING	The execution status of an RP on the ARP.
RP_Site	**Site Name** field, RP and ARP forms.	The name of the site where the RP was or is to be executed.
RP_ID	**RP ID** field, RP and ARP forms.	The ID of the RP that was or is to be executed.
RP_Date	None.	The date when the RP was executed.
RP_Time	None	The time when the RP was executed.
NPC_Sequence	**Sequence** field, AUTOMATIC RECONFIGURATION PLAN PROVISIONING	The sequence number of an item placing an NPC on the alarm list.
NPC_Site	**Site Name** field, AUTOMATIC RECONFIGURATION PLAN PROVISIONING	The site of the NPC being placed on the alarm list.

Table A-11. AUTO RECONFIGURATION Report Fields (Continued)

Name	Form of Origination	Description
NPC_Hier	**Number (Hier)** field, AUTOMATIC RECONFIG-URATION PLAN PROVI-SIONING	The hierarchical number of the NPC being placed on the alarm list.
NPC_Ext	**(Ext)** field, AUTOMATIC RECONFUGURATION PLAN PROVISIONING	The extended number of the NPC being placed on the alarm list.
NPC_Date	None.	The date on which the NPC issued an alarm, triggering the RP.
NPC_Time	None.	The time at which the NPC issued an alarm.

OUTAGES Reports

Fields

Table A-12 displays the OUTAGES report fields that can be customized for the DND Forms Interface Only.

Table A-12. OUTAGES Report Fields

Name	Form of Origination	Description
Outage_Type	**Outage Type** field, OUTAGE LOG	The type of log: `NPC` or `CIRCUIT`.
Record_Number	**Record No.** field, OUTAGE LOG	The sequence number of the record in the log.
Outage_ID	**Outage ID** field, OUTAGE LOG	The ID of this outage record. It is in fact an NPC ID or a circuit ID.
CP	**Ckt Priority** field, CIRCUIT PROVISIONING	The priority of the circuit referenced by the **Outage ID**.
Date_Out	**Date Out** field, OUTAGE LOG	Three fields stating the date on which the outage began.
Time_Out	**Time Out** field, OUTAGE LOG	Three fields stating the time on which the outage began.
Date_In	**Date In** field, OUTAGE LOG	The date when the outage was cleared.
Time_In	**Time In** field, OUTAGE LOG	The time the outage was cleared.

TEST PORT Reports

Fields

Table A-13 displays the TEST PORT report fields that can be customized for the DND Forms Interface Only.

Table A-13. TEST PORT Report Field

Name	Form of Origination	Description
Test_Port	**Test Port No.** field, TP PROVISIONING	The test port number.
Test_Port_Group	**Test Port Group** field, TP PROVISIONING	The test port group.
Test_Port_State	Test State field, TEST ACCESS	The operating status of the test port.
TP_NPC_Hier	**NPC Number (Hier)** field, TP PROVISIONING	The hierarchical number of the NPC being used for this test port group.
TP_NPC_Ext	**(Ext)** field, TP PROVISIONING	The extended number of the NPC being used for this test port group.
TP_NPC_ID	**NPC ID** field, TP PROVISIONING	The NPC ID of the NPC being used for this test port group.
Static_TC	**TC** field, TP PROVISIONING	The test port trunk conditioning, if the TC is static for this port.
Static_IW	**IW** field, TP PROVISIONING	The test port insertion word, if the IW is static for this port.
F_NPC_Hier	**FROM Hier** field, TEST ACCESS form	The hierarchical number of the FROM NPC of the object under test.
F_NPC_Ext	**FROM Ext** field, TEST ACCESS form	The extended number of the FROM NPC of the circuit under test.
F_NPC_ID	**FROM NPC ID** field, TEST ACCESS form	The ID of the FROM NPC of the circuit under test.
F_Ch	**FROM Ch** field, TEST ACCESS form	The FROM channel number of the circuit under test.
T_NPC_Hier	**TO Hier** field, TEST ACCESS form	The hierarchical number of the TO NPC of the circuit under test.
T_NPC_Ext	**TO Ext** field, TEST ACCESS form	The extended number of the TO NPC of the circuit under test.
T_NPC_ID	**TO NPC ID** field, TEST ACCESS form	The ID of the TO NPC of the circuit under test.

Table A-13. TEST PORT Report Field (Continued)

Name	Form of Origination	Description
T_Ch	**TO Ch** field, TEST ACCESS form	The TO channel number of the circuit under test.
Circuit_ID	**Ckt ID**, TEST ACCESS form	The circuit ID of the object under test.
Term_State	**Termination State** field TEST ACCESS form.	The actual termination state of the object under test.
Ckt_Status	**Ckt Status** field, CIRCUIT PROVISIONING	The operational status of the circuit under test.

TEST ACCESS Reports

Fields

Table A-14 displays the TEST ACCESS report fields that can be customized for the DND Forms Interface Only.

Table A-14. TEST ACCESS Report Fields

Name	Form of Origination	Description
Test_Object_Number	**Test Object Number** field, TEST ACCESS	The test object number.
IW	**IW** field, TEST ACCESS	The IW of the test object.
F_Test_Obj_NPC_ID	**Test Object F NPC ID**, TEST ACCESS	The FROM NPC ID of the test object.
T_Test_Obj_NPC_ID	**Test Object T NPC ID**, TEST ACCESS	The TO NPC ID of the test object.
FIRST_F_Test_Ch	**Test Object FROM Ch** TEST ACCESS	The channel number of the first channel of the band, of the FROM side of the test object.
Test_Object_Type	**Object Type** field, TEST ACCESS	The type of test object, TP or TG.
TC	**TC** field, TEST ACCESS	The trunk conditioning of the object under test, if the TC is static for this port.
F_Test_Obj_NPC_Ext	**Test Object FROM Ext**, TEST ACCESS	The extended number of the test object FROM NPC.
T_Test_Obj_NPC_Ext	**Test Object TO Ext**, TEST ACCESS	The extended number of the test object TO NPC.
FIRST_T_Test_Ch	**Test Object TO Ch**, TEST ACCESS	The channel number of the first channel of the band, of the TO side of the test object.
Test State	**Test State** field, TEST ACCESS	The operating status of the test access connections: RELEASED, MONITOR, etc.
AtoMU	**AtoMU** field, TEST ACCESS	A-law to Mu-law conversion in effect, Y or N.
F_Test_Obj_NPC_Hier	T**est Object F Hier**, TEST ACCESS	The hierarchical number of the of the test object FROM NPC.
T_Test_Obj_NPC_Hier	**Test Object T Hier**, TEST ACCESS	The hierarchical number of the test object TO NPC.
BW	**Bandwidth** field, TEST ACCESS	The bandwidth of the test object.

Table A-14. TEST ACCESS Report Fields (Continued)

Name	Form of Origination	Description
Circuit_ID	**Object Under Test Ckt ID**, TEST ACCESS	The circuit ID of the circuit being tested.
F_NPC_ID	**Obj. Under Test F NPC ID**, TEST ACCESS	The FROM NPC ID of the circuit under test.
T_NPC_ID	**Obj. Under Test T NPC ID**, TEST ACCESS	The TO NPC ID of the circuit under test.
F_Ch	**Obj. Under Test F Ch**, TEST ACCESS	The first FROM channel of the object under test.
Ckt_Status	**Ckt Status** field, CIRCUIT PROVISIONING	The circuit status of the circuit under test.
F_NPC_Ext	**Obj. Under Test F Ext,** TEST ACCESS	The extended number of the FROM NPC in the circuit under test.
T_NPC_Ext	**Obj. Under Test T Ext,** TEST ACCESS	The extended number of the TO NPC in the circuit under test.
T_Ch	**Obj. Under Test T Ch**, TEST ACCESS	The first TO channel of the object under test.
F_NPC_Hier	**Obj. Under Test F Hier**, TEST ACCESS	The hierarchical number of the FROM NPC in the circuit under test.
T_NPC_Hier	**Obj. Under Test T Hier**, TEST ACCESS	The hierarchical number of the TO NPC in the circuit under test.
Termination_State	**Termination State** field, TEST ACCESS	The termination state of the circuit under test.

FRAMES/LINKS Reports

Fields

Table A-15 displays the FRAMES/LINKS report fields that can be customized for the DND Forms Interface Only.

Table A-15. FRAMES/LINKS Report Fields

Name	Form of Origination	Description
Site_Name	**Site Name** field, FRAME ADMINISTRATION	The user-assigned name of the frame being provisioned.
Site_Status	**Site Status** field, FRAME ADMINISTRATION	The status of the frame.
Protocol	**Protocol** field, FRAME ADMINISTRATION	The protocol in effect over the path between the DND and the frame: SNIDER or X.25.
Location	**Location** field, FRAME ADMINISTRATION	User-defined value stating the physical location of the frame.
Generic	**Generic** field, FRAME ADMINISTRATION	States the software release of the frame software.
NPC_Addressing	**NPC Addr** field, FRAME ADMINISTRATION	The type of NPC addressing used in frame commands generated by the DND: HIER, EXT3, EXT4.
Language	**Language** field, FRAME ADMINISTRATION	The command language used for frame commands generated by the DND: MML, PDS.
Frame_Type	**Type** field, FRAME ADMINISTRATION	The type of frame: DACS II, D II ISX.
Alarm_Sync	**NPC Alarm Sync**, FRAME ADMINISTRATION	The selection or non-selection of NPC alarm synchronization for this frame.
Speed	**Speed** field, FRAME ADMINISTRATION	The baud rate for the SNIDER port.
Primary_Line	**Primary Line**, FRAME ADMINISTRATION	The number of the line between the DND and the network or the frame.
Primary_Conn_Type	**Connection Type**, X.25 LINK ADMINISTRATION	The connection type of the primary line: PDN or DIRECT.
Primary_Netwk_Addr	**Network Address**, FRAME ADMINISTRATION	The network address of the primary line.
Primary_Link_Stat	**Status** field, FRAME ADMINISTRATION	The operational status of the primary line.

Table A-15. FRAMES/LINKS Report Fields (Continued)

Name	Form of Origination	Description
Backup_Line	**Backup Line**, FRAME ADMINISTRATION	The number of the backup line.
Backup_Conn_Type	**Connection Type**, X.25 LINK ADMINISTRATION	The connection type of the backup line: PDN or DIRECT.
Backup_Netwk_Addr	**Network Address**, FRAME ADMINISTRATION	The network address of the backup line.
Backup_Link_Stat	**Status** field, FRAME ADMINISTRATION	The operational status of the backup line.
ERP_Control	**ERP Control**, FRAME ADMINISTRATION	The selection or non-selection of conditional echoed response processing for this frame.
Comm_Status	None.	Whether or not the DND received a response after it sent out a command to the frame. A * means communication occurred.
Log_Recovery	**DACS Log Recovery**, FRAME ADMINISTRATION	The maximum number of messages that will be retrieved from the NE message log after a link recovery occurs.
Link_Failure	**DACS Link Failure**, FRAME ADMINISTRATION	The minimum time, in seconds, the link to the DACS must be failed for the DACS message log recovery action to occur.
IP_Address	**IP Address**, GUI NE PROVISIONING Form	IP address for TELNET DACS.
DACS_UserName	**DACS User Name**, GUI NE PROVISIONING Form	User name provisioned at DACS and used to login with TELNET session.
Alm_Interv	**Alarm Intervention**, GUI NE PROVISIONING Form	Indicates whether alarm intervention is enabled/disabled at the DACS.

USER ADMINISTRATION Reports

Fields

Table A-16 displays the USER ADMINISTRATION report fields that can be customized.

Table A-16. USER ADMINISTRATION Report Fields

Name	Form of Origination	Description
Login	**Login Name** field *Forms:* USER MANAGEMENT	The login name by which the user is known to the DND system.
Class	**User Class** field *Forms:* USER MANAGEMENT	The type of login: OPERATOR, ADMIN, CONTROLLER.
User_Name	**User Name** field *Forms:* USER MANAGEMENT	The name of the person owning the login.
Phone	**Phone** field *Forms:* USER MANAGEMENT	User-defined value stating the user's telephone number.
Address	**Address** field *Forms:* USER MANAGEMENT	User-defined value stating the user's address.
City	**City** field *Forms:* USER MANAGEMENT	User-defined value stating the user's city.
UI_Aud_Alarm	**UI Audible Alarms** field *Forms:* USER MANAGEMENT	Whether or not an audible alarm should sound at the user terminal when a frame alarm occurs: ON or OFF.
Idle	**UI Idle Option** field *Forms:* USER MANAGEMENT	The logoff threshold in seconds of terminal idle time.
Printer_Name	**Printer Name** field *Forms:* USER MANAGEMENT	Printer Name
Type	**Type** field *Forms:* USER MANAGEMENT	ASYNC, X25, LOCAL
GUI_Aud_Alarm	**GUI Audible Alarms** field *GUI:* USER ADMINISTRATION	Whether or not an audible alarm should sound at the user GUI when a frame alarm occurs: ON or OFF.

Table A-16. USER ADMINISTRATION Report Fields (Continued)

Name	Form of Origination	Description
CR_Alm_Sound	**Critical (CR)** field *GUI:* USER ADMINISTRATION	The desired sounds to use for critical alarms: *Boat Horn, Horn, Ding, Loud Ding, Chord, Submarine, Doh, User Def 1, User Def 2, User Def 3*.
MJ_Alm_Sound	**Major (MJ)** field *GUI:* USER ADMINISTRATION	The desired sounds to use for major alarms: *Boat Horn, Horn, Ding, Loud Ding, Chord, Submarine, Doh, User Def 1, User Def 2, User Def 3*.
MN_Alm_Sound	**Minor (MN)** field *GUI:* USER ADMINISTRATION	The desired sounds to use for minor alarms: *Boat Horn, Horn, Ding, Loud Ding, Chord, Submarine, Doh, User Def 1, User Def 2, User Def 3*.
CR_Alm_Intv	Critical (CR) **Interval** field *GUI:* USER ADMINISTRATION	The audible alarm beeping interval for critical alarms. The values are from 5 to 300 seconds.
MJ_Alm_Intv	Major (MJ) **Interval** field *GUI:* USER ADMINISTRATION	The audible alarm beeping interval for major alarms. The values are from 5 to 300 seconds.
MN_Alm_Intv	Minor (MN) **Interval** field *GUI:* USER ADMINISTRATION	The audible alarm beeping interval for minor alarms. The values are from 5 to 300 seconds.
Partition	**Network Partition Name** field *GUI*: USER ADMINISTRATION	The name of the GUI network partition the user is assigned to.

LOST RESPONSE LOG Reports

Fields

Table A-17 displays the LOST RESPONSE LOG report fields that can be customized for the DND Forms Interface Only.

Table A-17. LOST RESPONSE LOG Report Fields

Name	Form of Origination	Description
L_Date	None.	The date on which the DND issued the response.
L_Time	None.	The time at which the DND issued the response.
Request_Type	None	FRAME, NPC or CIRCUIT.
Status	None	S (Success) or F (Failure).
Message_No	None	The message number.
Denial_Message		The reason for denial.

24-HOUR PERFORMANCE MONITORING STATISTICS Reports

Fields

Table A-18 displays the 24-HOUR PERFORMANCE MONITORING STATISTICS report fields that can be customized for the DND Forms Interface Only.

Table A-18. 24-HOUR PERFORMANCE MONITORING STATISTICS Report Fields

Name	Form of Origination	Description
NPC_ID	**NPC ID** field, NPC PROVISIONING.	The NPC ID.
NPC_Type	**NPC Type** field, NPC PROVISIONING.	The NPC Type.
NPC_Hier	**Number (Hier)** field, NPC PROVISIONING	The hierarchical number of the NPC.
NPC_Ext	**Number (EXT)** field, NPC PROVISIONING	The extended number of the NPC.
CRC_Avg	**CRC_AVG** field, 24-HOUR PERFORMANCE	Average Cyclic Redundancy Check counts.
ES_Avg	**ES_AVG** field, 24-HOUR PERFORMANCE	Average Errored Seconds counts.
SES_Avg	**SES_AVG** field, 24-HOUR PERFORMANCE	Average Errored Severely Seconds counts.
UAS_Avg	**UAS_AVG** field, 24-HOUR PERFORMANCE	Average Unavailable Seconds counts.
FRER_Avg	**FRER_AVG** field, 24-HOUR PERFORMANCE	Average Framing Errors counts.
OFS_Avg	**OFS_AVG** field, 24-HOUR PERFORMANCE	Average Out of Frame Seconds counts.
CSS_Avg	**CSS_AVG** field, 24-HOUR PERFORMANCE	Average Control Slips Seconds counts.
CV_Avg	**CV_AVG** field, 24-HOUR PERFORMANCE	Average Coding Violations counts.
UATC_Avg	**UATC_AVG** field, 24-HOUR PERFORMANCE	Average Unavailable Time Count counts.
MER_Avg	**MER_AVG** field, 24-HOUR PERFORMANCE	Average Multiframe Error counts.
FEBE_Avg	**FEBE_AVG** field, 24-HOUR PERFORMANCE	Average Far End Bit Error counts.

Table A-18. 24-HOUR PERFORMANCE MONITORING STATISTICS Report Fields (Continued)

Name	Form of Origination	Description
FSES_Avg	**FSES_AVG** field, 24-HOUR PERFORMANCE	Average Far End Severely Errored Seconds counts.
FES_Avg	**FES_AVG** field, 24-HOUR PERFORMANCE	Average Far End Errored Seconds counts.
FUAS_Avg	**FUAS_AVG** field, 24-HOUR PERFORMANCE	Average Far End Unavailable Second counts.
LOFA_Avg	**LOFA_AVG** field, 24-HOUR PERFORMANCE	Average Loss of Frame Alignment counts.
ERS_Avg	**ERS_AVG** field, 24-HOUR PERFORMANCE	Average Errored Seconds counts.
SLIP_Avg	**SLIP_AVG** field, 24-HOUR PERFORMANCE	Average SLIP counts.
US_Avg	**US_AVG** field, 24-HOUR PERFORMANCE	Average Unavailable Second counts.
DM_Avg	**DM_AVG** field, 24-HOUR PERFORMANCE	Average Degraded Minutes counts.
SERS_Avg	**SERS_AVG** field, 24-HOUR PERFORMANCE	Average Severely Errrored Seconds counts.
Collected	**No. of Days Collected** field, 24-HOUR PERFORMANCE	Number of days collected.
Reset	**Reset** field, 24-HOUR PERFORMANCE	Number of days since data was reset.
Error	**Error** field, 24-HOUR PERFORMANCE	Number of days data not collected.
CRC_24hr	**CRC_24hr** field, 24-HOUR PERFORMANCE	Cyclic Redundancy Check counts.
ES_24hr	**ES_24hr** field, 24-HOUR PERFORMANCE	Errored Seconds counts.
SES_24hr	**SES_24hr** field, 24-HOUR PERFORMANCE	Errored Severely Seconds counts.
UAS_24hr	**UAS_24hr** field, 24-HOUR PERFORMANCE	Unavailable Seconds counts.
FRER_24hr	**FRER_24hr** field, 24-HOUR PERFORMANCE	Framing Errors counts.

Table A-18. 24-HOUR PERFORMANCE MONITORING STATISTICS Report Fields (Continued)

Name	Form of Origination	Description
OFS_24hr	**OFS_24hr** field, 24-HOUR PERFORMANCE	Out of Frame Seconds counts.
CSS_24hr	**CSS_24hr** field, 24-HOUR PERFORMANCE	Control Slips Seconds counts.
CV_24hr	**CV_24hr** field, 24-HOUR PERFORMANCE	Coding Violations counts.
UATC_24hr	**UATC_24hr** field, 24-HOUR PERFORMANCE	Unavailable Time Count counts.
MER_24hr	**MER_24hr** field, 24-HOUR PERFORMANCE	Multiframe Error counts.
FEBE_24hr	**FEBE_24hr** field, 24-HOUR PERFORMANCE	Far End Bit Error counts.
FSES_24hr	**FSES_24hr** field, 24-HOUR PERFORMANCE	Far End Severely Errored Seconds counts.
FES_24hr	**FES_24hr** field, 24-HOUR PERFORMANCE	Far End Errored Seconds counts.
FUAS_24hr	**FUAS_24hr** field, 24-HOUR PERFORMANCE	Far End Unavailable Second counts.
LOFA_24hr	**LOFA_24hr** field, 24-HOUR PERFORMANCE	Loss of Frame Alignment counts.
ERS_24hr	**ERS_24hr** field, 24-HOUR PERFORMANCE	Errored Seconds counts.
SLIP_24hr	**SLIP_24hr** field, 24-HOUR PERFORMANCE	SLIP counts.
US_24hr	**US_24hr** field, 24-HOUR PERFORMANCE	Unavailable Second counts.
DM_24hr	**DM_24hr** field, 24-HOUR PERFORMANCE	Degraded Minutes counts.
SERS_24hr	**SERS_24hr** field, 24-HOUR PERFORMANCE	Severely Errored Seconds counts.
Alarm_State	**Alarm_State** field, 24-HOUR PERFORMANCE	Current alarm state on the NPC.

Error Messages

B

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Background

Introduction

The DND software will report errors when it encounters unusual situations it cannot handle. These error messages can appear in three places:

- **The DND Console**

  These are messages from the UNIX operating system, but some system related DND messages may also be broadcast here as well. These are not described here but will indicate problems with workstation devices or workstation resources. It is always recommended that a Console window be permanently displayed on the DND workstation.

- **The DND Forms Status Line and the DND GUI Status Summary Window**

  A number of messages may be displayed on the DND status line. Most of these are self explanatory except for those messages that indicate unusual internal conditions. When the DND software detects an unusual or invalid condition, it signal this through a STATUS message and also supplies trace information in an internal INFORMIX table setup specifically to record error messages. Refer to Table 1-1 for a list of messages and corrective actions.

- **DND GUI Application Messages**

  These messages appear in the Connection and Display Status field on the DND Main Window. They indicate errors encountered by the DND GUI application running on the DND browser. Refer to Table 1-2 for a list of messages and corrective actions.

Purpose

This appendix provides:

- A listing of Status error messages
- Troubleshooting suggestions for:
  - — DND resource problems
  - — DND internal software problems.
- A listing of DND application messages

Status Error Messages

Table 1-1 contains a complete listing of status error messages that appear in the Status Summary window on the DND Main Window (DND GUI) or on the top of each form (DND Forms).

Table 1-1. Status Error Messages

Error Message	Description	Error Code and Number	Corrective Action
"A database error occurred."	Redundant with DB_ERR	DB_ERROR 1096	See Resource Problems in Troubleshooting
"A database error prevented command completion"	An error was detected reading, writing, opening or closing a database table. In some cases this may be a logical error (i.e. an expected/ unexpected record was not found/ found) or it may be a physical error (e.g. the table does not exist).	DB_ERR 1023,	See Resource Problems in Troubleshooting
"A history file error occurred."	The process which maintains the DACS message log (history file) was unable to open, close or otherwise set the history file.	HISTORY_FILE_ERROR 1006	See Resource Problems in Troubleshooting
"A message failure occurred"	This is an error in using the interprocessor communication facility of UNIX. A variety of failures may account for this, most commonly it is because the receiving process does not exist. This can commonly happen (i.e. normal operations) when a DACS link failure occurs. That is, a message was being sent to the process which handles DACS communications, and the DACS link went down. This was very common in R4.0 and earlier releases. In R4.1.2 and later releases, this is no longer reported as an "error."	IPC_FAILURE 1005	See Resource Problems in Troubleshooting
"A message processing error occurred."	A process has received an unexpected message. Each message is keyed with a message type, the processed received a message type it is not coded to handle.	MSG_ERR 1012	See Software Failure Resolution in Troubleshooting

Table 1-1. Status Error Messages (Continued)

Error Message	Description	Error Code and Number	Corrective Action
"An invalid parameters error occurred."	Typically the default of a c language switch statement, and this indicates that an unexpected condition/definition was passed to a software routine. Similar to SOFT_ERR.	INV_PARM_ERR 1031	See Software Failure Resolution in Troubleshooting
"An SNMP error occurred"	This message will appear when an error is detected in the SNMP interface to one of the nodes. This may happen when the DND is attempting to query information and receives unexpected data, or when unexpected data is received in an autonomous trap message from the device. It may also indicate an error had occurred in the SNMP BRASS agent software.	SNMP_ERR 5127	If the problem occurs once, then no corrective action is required. If the problem persists or is periodic, then see SNMP Error Resolution in Troubleshooting
"An unexpected message or a completion message to a previous command which timed out has been received by this browser (job number #)."	This message appears in the STATUS SUMMARY window on the DND Main screen in possible response to a previous form action. The form action had previously timed out at the browser interface. The job number as displayed in the message corresponds to the job number of the command which timed out, indicated in the time out message (T_B_UA_TIMER_EXPIRE 2602) on the form.	T_B_LATE_COMPL 3027	None
"An unexpected response was received."	While waiting for a response to a command sent to the DACS, an unexpected response was received (e.g. not a timeout, or a reply). Typically, indicative of a software defect. The command in progress has been aborted.	UNEXP_RSP 1084	See Software Failure Resolution in Troubleshooting
"An unexpected signal was received."	Processes set themselves up to receive and do certain processes upon receiving certain UNIX signals (e.g. alarm clock signal). A process has received a signal it did not expect or set itself up to handle.	UNEXPECTED_SIGNAL 1004	See Software Failure Resolution in Troubleshooting

Table 1-1. Status Error Messages (Continued)

Error Message	Description	Error Code and Number	Corrective Action
"A printer error occurred."	As part of printer operations, when printer logging is enabled, the process (e.g. history process to log dacs commands) was unable to open a UNIX communication pipe to the UNIX line printer software.	LP_PIPE_ERROR 1008	See Resource Problems in Troubleshooting
"A receive message error occurred."	Interchangeable with IPC_FAILURE when receiving messages.	RECEIVE_ERROR 1010	See Resource Problems in Troubleshooting
"A send message error occurred."	Interchangeable with IPC_FAILURE when sending messages.	SEND_ERR 1011	See Resource Problems in Troubleshooting
"A site port error occurred."	A serial SNIDER port was unable to be opened or configured for unknown reasons, possibly because it is being used.	DACS_PORT_ERROR 1001	See Resource Problems in Troubleshooting
"A software error occurred"	A piece of software has encountered a condition it is not prepared to handle. Typically this are indicative of software deficiencies, or unexpected error handling has not been coded.	SOFT_ERR 1030	See Resource Problems in Troubleshooting
"A temporary history file error occurred."	Similar to HISTORY_FILE_ERROR	TMP_HIST_FILE_ERRO R 1007	See Resource Problems in Troubleshooting
"Audit/ synchronization autonomously aborted."	An audit sync that is in progress has stopped itself due to an internal verification error (software error).	ABORT_SYNC 4539	See Software Failure Resolution in Troubleshooting
"Bad process ID."	A reference was made to a process which is not identified in the DND system.	OAM_BAD_PROC_ID 3075	See Software Failure Resolution in Troubleshooting
"DND failed to attach to shared memory segment."	Shared memory is used to store global information between process. An attempt to attach to the shared memory has failed.	SHMAT_ERR 1020	See Resource Problems in Troubleshooting

Table 1-1. Status Error Messages (Continued)

Error Message	Description	Error Code and Number	Corrective Action
"Failed to open a file."	Many processes open and write to files for many different reasons.This signifies that an open, close, read or write of an ordinary UNIX file failed.	OPEN_FILE_ERR 1022	See Resource Problems in Troubleshooting
"Memory allocation failed."	A process was unable to allocate memory from the system memory pool, typically because it is exhausted.	ALLOC_ERR 1021	See Resource Problems in Troubleshooting
"Message log sequencing error. Details in error log"	During a message log recovery, the DACS, when a link is restored, the message log sequencing is examined, if an out of sequence message is detected, a message is output.	MSG_SEQ_ERR 5099	See Software Failure Resolution in Trouble-shooting
"No more SVC available locally"	Currently for the FT feature, the selected link is established directly by the X.25 software, if no more SVCs on any link can be found locally, then this message is output.	B_T_X25_OUTSVC_L 5079	See Resource Problems in Troubleshooting
"No more SVC available locally on Backup link"	Similar to X25_OUTSVC_L_P, except for the backup link.	X25_OUTSVC_L_B 5021	See Resource Problems in Troubleshooting
"No more SVC available locally on Primary link"	Similar to B_T_X25_OUTSVC_L, except that for non-FT customers, the link is specified at frame provi-sioning time. The SVCs on the pri-mary link are exhausted.	X25_OUTSVC_L_P 5020	See Resource Problems in Troubleshooting
"No more SVC available remotely on Backup link"	Similar to X25_OUTSVC_R_P except this occurs on the backup link.	X25_OUTSVC_R_B 5023	See Resource Problems in Troubleshooting
"No more SVC available remotely on Primary link"	Similar to X25_OUTSVC_L_P, except the problem is on the remote side of the connection.	X25_OUTSVC_R_P 5022	See Resource Problems in Troubleshooting
None.	No longer used.	X25_PROTOCOL_ERRO R 5001	

Table 1-1. Status Error Messages (Continued)

Error Message	Description	Error Code and Number	Corrective Action
"No such reconfiguration circuit."	May accompany an Automatic Replan request. There are no records associated with the requested routing plan.	NO_PPRCKT 1511	See Software Failure Resolution in Troubleshooting
"No users."	An error has occurred in trying to read the password file for a user, the user does not exist.	OAM_NO_USER 3098	See Software Failure Resolution in Troubleshooting
"Passthrough fork failed."	Similar to OAM_FORK_FAILED, except applied to the User Interface process when attempting to start a Passthrough session.	UI_FORK_FAIL 2002	See Resource Problems in Troubleshooting
"Passthrough pipe failed."	Similar LP_PIPE_ERROR, but applied to other operations that require UNIX pipes, such as passthrough and other printer actions.	PIPE_FAIL 2001	See Resource Problems in Troubleshooting
"Passthrough request failed."	An error was detected when the user attempted to exit a passthrough session, may be accompanied by other system error output. Typically this was in inability to release resources.	PASSTHRU_FAIL 2000	See Software Failure Resolution in Trouble-shooting
"PSAX Configura-tion Error"	The PSAX likely contains hardware that is not officially supported by the DND or by the official DACS II Destiny Product.	PSAX_CFG_ERR 5137	Insure that only the DS3 and OC3 interfaces for the DACS II Destiny are used.. Otherwise, if this hardware is required for other applications, ignore this message.
"Received an unknown message from ITM-NM/XMC"	The DND received a message request from the ITM-NM/XMC, but was unable to decode the related ASN. This may occur upon link failure conditions.	ITM_BAD_ASN 5135	Single occurances of this may be ignored, espe-cially if associated with link failure conditions. If the problems persists, contact Lucent Customer.

Table 1-1. Status Error Messages (Continued)

Error Message	Description	Error Code and Number	Corrective Action
"Received invalide login/ password from ITM-NM/XMC"	There was an apparent attempt from the ITM-NM/XMC to connect and login to the DND, but the login or password did not match what was provisioned in the DND.	ITM_BAD_LOGIN 5134	Modify the login/password at the DND and/or the ITM-NM/XMC so that they match and restore communication from the ITM-NM/XMC.
"Reconfiguration ID mismatch."	The reconfiguration plan ID does not match the ID of the database.	MISMATCH_PPR 1509	See Software Failure Resolution in Troubleshooting
"Reconfiguration sequence mismatch."	May accompany an Automatic Replan request, when deleting a circuit from the plan, there is a mismatch in the sequencing of the circuit plan.	MISMATCH_CKT_SQN 1508	See Software Failure Resolution in Troubleshooting
"Size error: echo response ID line."	The construction of a line in the ERP log has created a string greater than the maximum size that can be stored in the log. The string has been truncated prior to insertion in the log.	ERPIDLINE_SZERR 4514	See Software Failure Resolution in Troubleshooting
"Size error: input database name."	Similar to DACSNAME_ERR, except the associated database to the DACS has failed verification.	DBNAME_SZERR 4513	See Software Failure Resolution in Troubleshooting
"Size error: site name."	Similar to DACSNAME_ERR, except the size of the DACS name, as received, fails verification.	DACSNAME_SZERR 4529	See Software Failure Resolution in Troubleshooting
"The backbone leg must be the last leg."	When setting up a multipoint circuit (virtual, dmb), the backbone leg must be the last to be deleted. This typically accompanies a circuit provisioning denial.	BBL_NOT_LAST 1058	See Software Failure Resolution in Troubleshooting

Table 1-1. Status Error Messages (Continued)

Error Message	Description	Error Code and Number	Corrective Action
"The browser interface failed waiting for a completion response from the system. The command (job number #) may still be in progress and complete later."	A command or action may take longer than the integrity timer set for these responses. The form which initiated the action will display this message. The job number may be retained, and a STATUS message will be displayed if that command or action ultimately completes.	T_B_UA_TIMER_EXPIRE 2602	See Software Failure Resolution in Troubleshooting
"The calling function is invalid."	A message was received by a process, but from an unknown sender.	BAD_SENDER 1517	See Software Failure Resolution in Troubleshooting
"The circuit action is invalid"	A circuit has an invalid status and cannot be normalized (un-altroute).	BAD_ACTION_ST 1044	See Software Failure Resolution in Troubleshooting
"The circuit band-width is invalid."	An invalid bandwidth was received by circuit provisioning, it was less than 1 or greater than 32 channels in width. Typically accompanied by a circuit provisioning failure.	BAD_BW 1045	See Software Failure Resolution in Troubleshooting
"The circuit bandwidth type is invalid."	Internal circuit provisioning checking has received a bad bandwidth type.	BAD_BWTYPE 1046	See Software Failure Resolution in Troubleshooting
"The circuit chan-nel is invalid."	A request was made to operate on a channel that failed validation (e.g. greater than 32), for example an echoed response was received from the DACS that was incorrect.	CH_SZERR 1063	See Software Failure in Troubleshooting

Table 1-1. Status Error Messages (Continued)

Error Message	Description	Error Code and Number	Corrective Action
"The circuit class is invalid."	Typically accompanied by a circuit provisioning failure, this indicates that the software has received an invalid circuit class (e.g. FDX, HDX....LEG). The circuit class received is not a member of the known circuit classes. This can possibly happen due to database corruption, a software error or an improperly parsed DACS message, all of which imply software defect and should be reported to technical support.	BAD_OPERATION 1052	See Software Failure in Troubleshooting
"The circuit does not exist."	An operation was attempted on a circuit, but that circuit did not exist, i.e. an echoed response was received from a DACS, which operated on a circuit that the DND has no record of, or a pre-planned route operation was requested on a circuit which does not exist.	NO_CKT 4533	See Software Failure in Troubleshooting
"The DBA process died"	The lock monitor process controls single user access to the database. The lock monitor process has been restarted and the application processes have been notified, all in progress actions are aborted. The lock monitor process will exit if it has encountered an internal software defect, or more likely it is unable to allocation more memory to maintain its lock request queues.	DBA_DIE 1106	See Resource Problems in Troubleshooting
"The message length is bad"	The maximum length string that can be passed through a "passthrough" session, or through a "passthrough script" is 140 characters, this has been exceeded.	STRING_TOO_LONG 1000	See Software Failure Resolution in Troubleshooting
"The message type is invalid."	A message was received a software process, but one or more of its internal contents fail consistency checking or some other validation of the parameters.	BAD_MSG 1051	See Software Failure Resolution in Troubleshooting

Table 1-1. Status Error Messages (Continued)

Error Message	Description	Error Code and Number	Corrective Action
"The new reconfiguration plan must have a unique ID."	Typically accompanies deny of an ARP request to CREATE a pre-planned route, the ID has already been used.	DUPL_PPRID 1507	See Software Failure Resolution in Troubleshooting
"The NPC specification is inconsistent."	Circuit provisioning detected and internal problem with the NPC number in the provisioning request.	INCONSISTENT_NPC 1070	See Software Failure Resolution in Troubleshooting
"There are no more spare legs."	The BCON circuit already has the maximum of 99 legs, or the virtual circuit has the maximum of 20 legs.	OVER_MAX_LEG 1078	None
"The reconfiguration LIST is invalid."	An error was found in a pre-planned routing list, the list appears to be out of order, the sequence of the list can be altered with the CHECK action.	BAD_PPR_LST 1503	See Software Failure Resolution in Troubleshooting
"The virtual circuit specification is inconsistent."	There is a mismatch between internal virtual circuit number and the internal circuit number.	MISMATCH_VCKT 1075	See Software Failure Resolution in Troubleshooting
"The virtual NPC/ channel is invalid."	The virtual (site only) provisioning command could not be executed because the circuit was not found in the database and no virtual NPC was specified.	BAD_VEFT 1056	See Software Failure Resolution in Troubleshooting
"Too many ERP created circuits for the same points. Cleanup database now!."	The system is running out of internally generated circuit names for these end points in response to echoed responses from the DACS. The circuits created through echoed response should be modified and given proper names. This error will occur for the creation of multipoint circuits only.	ALT_CKTID 4505	Rename circuits created by echoed response processing
"Unable to get site name for system."	Verification of the DACS "name" has failed, the process has received a message but the associated DACS information is incorrect and is not present in the common database.	DACSNAME_ERR 4517	See Software Failure Resolution in Troubleshooting

Table 1-1. Status Error Messages (Continued)

Error Message	Description	Error Code and Number	Corrective Action
"Unable to send messages to the ITM-NM/XMC"	The DND was unable to send a message to the ITM-NM/XMC when communications were established. The link to the ITM-NM/XMC may have gone down while transmission was in progress.	ITM_BAD_SEND 5131	Single occurances of this may be ignored, especially if associated with link failure conditions. If the problems persists, contact Lucent Customer.
"UNIX system error (cannot exec process)."	Similar to OAM_FORK_FAILED.	OAM_EXEC_FAILED 3082	See Software Failure Resolution in Troubleshooting
"UNIX system error (cannot fork)."	An attempt to spawn another process has failed, possibly because of system resources, possibly because the executable for the process cannot be found.	DACS_FORK_FAILED 1009	See Resource Problems in Troubleshooting
"UNIX system error (cannot fork process)."	Similar to DACS_FORK_FAILED but applied to the OAM process which is the parent process for all DND processes. OAM was not able to start or restart a process, possibly due to system resources, or due to the fact that the executable does not exist (i.e. program installation error).	OAM_FORK_FAILED 3083	See Resource Problems in Troubleshooting
"UNIX system error (message queues are gone)."	A process' message queue has inexplicably been removed from global shared memory.	OAM_MSGQ_GONE 3085	See Software Failure Resolution in Troubleshooting

Troubleshooting

Overview

There are only two classifications of error described in this section:

- Errors that indicate DND resource problems
- Errors that indicate a DND internal software problem (bug).

Hardware or Solaris internal problems (bugs) problems usually manifest in more severe ways, such as CPU panic messages, erratic screen or keyboard behavior, or UNIX messages that appear on the system console. It is always good practice to keep a console window open and periodically (daily) check to see if any messages are present. Disk, printer, asynchronous port, X.25, and tape drive, problems are often written to the console. These types of problems are beyond the scope of this manual.

If you suspect an installation problem (for example, unable to connect to the DND server) contact your next level of support.

WARNING:
All troubleshooting procedures should only be done on the DND server and by the DND system administrator.

Resource Problems

Resource problems relate to the following types of errors:

- Free disk space
- RAM
- CPU usage and processing
- Internal UNIX resource.

Resource problems may also be evident on the system console as well. The following errors from Table 1-1 may indicate resource problems on the DND:

- ALLOC_ERR
- B_T_X25_OUTSVC_L
- DACS_FORK_FAILES
- DACS_PORT_ERROR
- DB_ERR

(Continued on next page)

Troubleshooting (Continued)

Resource Problems (Continued)

- DB_ERROR
- DBA_DIE
- HISTORY_FILE_ERROR
- IPC_FAILURE
- LP_PIPE_ERROR
- OAM_FORK_FAILED
- OAM_EXEC_FAILED
- OPEN_FILE_ERR
- PIPE_FAIL
- RECEIVE_ERROR
- SEND_ERR
- SHMAT_ERR
- SOFT_ERR
- TMP_HIST_FILE_ERROR
- UI_FORK_FAIL
- X25_OUTSVC_L_P
- X25_OUTSVC_L_B
- X25_OUTSVC_R_P
- X25_OUTSVC_R_B.

Resource Problem Resolution

When one of these errors occurs, take the following actions:

1. Installation problems may cause some of the abnormal behaviors. The user should insure that:
   - Proper amount of RAM has been installed
   - X.25 package has been installed
   - X.25 network is operating properly
   - There are no other software applications using memory, disk and TTY resources.

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Troubleshooting (Continued)

Resource Problem Resolution, Continued

2. If a process is a runaway, stuck, or insane process (running and consuming resources but doing no real work), one way to detect this is to use the following UNIX command:

   unix> `/usr/ucb/ps -aux | head`

   The response will be of the following form:

```
USER        PID   %CPU    %MEM     SZ    RSS TT       S     START   TIME COMMAND
root        401   50.1     0.8   2856   1984 ?        S  09:14:12   0:00 userint -f -u
root        402    0.1     0.8   2856   1984 ?        S  09:14:12   0:00 /usr/ems/bin/proc2
root        403    0.1     0.8   2856   1984 ?        S  09:14:12   0:00 /usr/ems/bin/proc3
```

   In this example, the %CPU utilization of the first process on the list is named `userint`, indicated that it is consuming a great deal of the system. If the system is known to be idle and no reason can be found to determine the cause of this, then this process is possibly in an error state. A process that is persistently consuming more than 20% to 30% CPU is possibly in an "insane" condition.

   There is a known problem where, if the CDE window manager exits with one or more user interfaces up, the "userint" process may not die.

   It is possible to kill this process with the following command:

   unix> `kill -9 <PID>`

   Where `<PID>` in this case would be 401.

CAUTION:
Be careful when killing processes. Most processes will restart, however, some may not and cause serious system damage. Whenever in doubt, contact your next level of support with the data you have collected.

3. If installation errors are not suspect, then typically resource problems occur because of DACS activities. Significant activity on a single DACS or on multiple DACS may exceed the capacity of the workstation. Wait for the activity to diminish.

   Isolate the offending DACS by observing DACS activity in the DND Forms Interface Multiplexed Passthrough for each DACS to identify busy DACS and then modify the DACS behavior.

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Troubleshooting (Continued)

Resource Problem Resolution, Continued

If improper behavior is still apparent, the administrator can remove the DACS from service.

4. Actions can cause temporary and residual files to be created in various places. For example, a report operation requires storage in /tmp and stores the final report in /usr/ems/reports. The storage required in /tmp is oftentimes quite large. User data (e.g. tar files) have also been known to consume excessive amounts of data. You can observe an overall summary of utilization by using the following command:

   unix> `df -k`

   The response will be of the following form:

```
Filesystem             kbytes      used     avail  capacity  Mounted on
/dev/dsk/c0t0d0s0     1539719     89715   1446155     6%          /
/dev/dsk/c0t0d0s6     2011919    629605   1375608    32%        /usr
/proc                       0         0         0     0%        /proc
fd                          0         0         0     0%       /dev/fd
swap                   392840      1592    391248     1%        /tmp
```

   Primary file systems are the "root" file system (/), the "user" file system (/usr) and swap (also virtual storage). A capacity utilization of 80% or greater in any of these implies a possible problem and typically usage is normally much less.

   To seek out files on disk which are consuming a great deal of space, the following commands are often useful:

   unix> `du`

   unix> `du -s`

   The first command will provide a recursive display of all files and file systems from the current directory downward. The second will provide a summary display of the current directory utilization. An example output is as follows:

   unix> `du -s /usr`

   `1259576 /usr`

   This means that /tmp is currently consuming 1,259,576 blocks of 512 bytes each. This implies disk usage of approximately 0.6 Mb.

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Troubleshooting (Continued)

Resource Problem Resolution, Continued

5. To monitor the overall performance information on the system, use the `vmstat` command. Its output requires particular expert interpretation, but the on-line UNIX manual (e.g. man vmstat) provides the detailed information. An example usage is:

   unix> `vmstat 5 5`

   Which implies a sample of 5, every 5 seconds. An example output is as follows:

```
 procs     memory            page                  disk        faults         cpu
 r b w    swap   free  re   mf  pi  po  fr  de  sr  s0  s6  --  --   in    sy    cs  us  sy  id
 0 0 0  486200  43832   0  278  23  15  32   0   5  12   0   0   0  292  2954   265   8   7  86
 0 0 0  387992   6000   0  100   0   0   0   0   0   1   0   0   0  256   972   148   2   1  97
 0 0 0  387922   5992   0    0   0   0   0   0   0   7   0   0   0  256   112   103   0   1  99
 0 0 0  387992   5984   0   28   0   0   0   0   0   5   0   0   0  237   476   131   0   1  99
 0 0 0  387922   5984   0    0   0   0   0   0   0   0   0   0   0  207    96    97   0   0 100
```

   The last column, cpu (id), is CPU idle percentage. This shows that idle time is 97 to 100%.

6. Problems may arise with communication to one of the SCSI devices. These are the tape drive and the 16-port and 32-port Serial Expansion Units (SEUs). If any of these have been powered down or recabled, problems accessing the SCSI bus may occur. These can be cleared by:

   a. Insuring that the last device on the SCSI bus chain is terminated with a SCSI terminator (typically the tape drive is the last device).

   b. Forcing the workstation to re-evaluate the SCSI devices on the workstation. Perform this by:

      i. Shutting down the workstation to the ok> prompt (SYSTEM ADMINISTRATION form -> SHUTDOWN form -> IMMEDIATE option -> SHUTDOWN)

      ii. Power cycle the devices (i.e. turn then on/off)

      iii. Reboot the machine with a special option

      ok> `reboot -r`

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Troubleshooting (Continued)

Resource Problem Resolution, Continued

7. Memory problems may occur for a number of reasons. "Swap" space is virtual memory contained on disk. If a large number of applications are running (and the Netscape browser does require a large amount of swap space), then swap space may run out. Another type of memory resource is internal "malloc" memory, a fixed pool of which is assigned to each process. Under heavy load conditions (i.e. very long duration of heavy DACS message activity), malloc memory may run out.

   To clear these errors, attempt the following steps (proceed with each possibility until the problem disappears:

   a. Try to reduce the number of applications running on the DND server temporarily. Logoff of the Forms Interface, close applications and close as many windows as possible.

   b. REMOVE/RESTORE the DACS connection to the babbling DACS. Restoring the DACS restarts the processes to that DACS and frees up memory.

   c. Restart the DND. This restarts all of the processes and frees up memory (SYSTEM ADMINISTRATION form -> SHUTDOWN form -> IMMEDIATE option -> RESTART)

   d. Reboot the DND (SYSTEM ADMINISTRATION form -> SHUTDOWN form -> IMMEDIATE option -> REBOOT).

   e. If Steps c and d cannot be performed, then the following commands will reboot the DND:

      i. Login as root

      ii. Type the following at the prompt:
      unix> `# reboot`

Troubleshooting (Continued)

Software Failure Resolution

All of the errors that do not appear to be resource problems, based on the prior section, may indicate a software failure. Typically these occur during some command activity or some autonomous activity as a result of a message from the DACS. When these occur and cause a command or action to not successfully complete, take the following actions:

1. Write down the STATUS message that appears on the STATUS line.
2. Identify and note the command or action that cause the abnormal STATUS message.
3. Write down the state of the system at the time of the error, including the following information:
   - Which form was being filled out
   - What fields were filled in
4. If the error is associated with some DACS messages (for example, circuit provisioning action, NPC provisioning, or ERP) use the DND Forms Interface REPORTS form to display the HISTORY LOG for that DACS and print the last 3 or 4 pages in the log.
5. Perform a backup of the COMMON database to tape.
6. If it is clear that the error was associated with a particular DACS, also backup that particular DACS to another tape.
7. Send all of the above information to your next level of support, identifying this as a possible software problem.

SNMP Error Resolution

If the error appears to be caused by an SNMP device, take the following actions:

- Retrieve the error log file. Additional descriptive information is often contained in the error log. Retrieve the error log by performing the following steps:
  1. Unload the internal error log by typing the following at the UNIX prompt:

     unix> **`echo "select * from lgser where erdata=today" | isql ems`**
  2. Read the error log file to determine what is wrong.

(Continued on next page)

Troubleshooting (Continued)

SNMP Error Resolution, Continued

- If the previous action does not help you, perform the following steps:
  1. Insure that the BRASS agent software is installed. This is installed in the /usr/snmp directory. If the BRASS agent is not installed, install it using the instructions from the *DACS II Network Director (DND) Installation Manual*.
  2. Insure that the BRASS agent process is running by typing the following command at the UNIX prompt:

     unix> **`ps -ef | grep brassagt`**

     If the BRASS agent process is not running, then reboot the system to restart it.
  3. Make sure that the correct elements are identified in NE PROVISIONING, and that the device is correctly identified.
  4. Make sure communications exist between all of the elements and the DND server. Attempt to "ping" or "telnet" to the device.
  5. If the problem still persists, contact your next level of support, identifying this as a possible software error.

DND Application Messages

Table 1-2 contains the most common DND application messages displayed in the Connection and Display Status field.

Table 1-2. DND Application Messages

Error Message	Description	Corrective Action
"Error occurred when sending a message."	This message appears on the DND Login form. The DND was unable to login to the system because no reply was received from the application software. The system may be unusually busy and unable to honor the login request.	Retry your operation. If thecondition persists, look for other signs of excessive CPU usage. If there are none, then the application software that handles the login may not be running and it may be necessary to restart the DND software.
"Exception: Netscape's network connection was refused by the server. The server may not be accepting connections or may be busy. Try connecting later."	This message appears on the Connection and Display Status field. The web server is not running at the DND host or the host machine is not running.	Use the browser to connect to the Netscape server, as per the *DND Installation Manual* and attempt to restart the server.
"Server error: java.io.IOException:"	This message appears on the Connection and Display Status field. It is likely that the DND is not installed correctly. The server was unable to find the application software in order to establish a request. For remote clients, it could mean that the LAN connection to the DND is also not operating.	Pull up a UNIX terminal window on the DND server and search for the files **/usr/ems/bin/dnd.cgi** and **/usr/ns-home/docs/dnd/dnd.cgi**. If the files are not present, then the correct version of the DND has not been installed correctly. Install DND from the CD.
"The DND server received an error response contacting the User Agent."	This message appears on the Connection and Display Status field. If this is seen from the browser when you are logged in and operating normally, it means that a browser request for some information timed out waiting for a response from the DND application software. This may occur when the browser to the host connection is very slow or the DND is extraordinarily busy and unable to reply promptly.	A single occurrence of this message can be ignored. Continued or persistent occurrence may imply an overloaded system, or may imply that the application software unexpectedly died without properly logging the user off. Restart the DND. If that fails, contact your DND Technical Support personnel.

Abbreviations and Acronyms

Numerics

4GL
Fourth-generation lanuage

A

A
Alarm indication signal

AAC
Acculink™ Access Controller

ac
Alternating current

AC
Alternating current

adm
Administrat-or, -ive

admn
Administrat-or, -ive

AIS
Alarm Insertion Signal

Alm
Alarm

ALM
Alarm

ALMS
Alarms

alt
Altroute

ATZ
Alternate Time Zone

ANSI
American National Standards Institute

arp
Automatic Reconfiguration Plan

ARP
Automatic Reconfiguration Plan

ASCII
American Standard Code for Information Interchange

ASI
Alarm Summary Indicator

AT&T
American Telephone and Telegraph

AX (DACS II AX)
Access Cross-connect

B

b
Bits

B
Bytes

B
Both red and yellow alarms

BBL
Backbone leg

BCD
Business Communications Device

Bd
Baud

BER
Bit-error rate

bf
Boldface

BF
Boldface

BMTR
Backup Memory Transfer Alarm

bps
bits per second

BPSS
Basic Packet-Switching Service

BRD
Broadcast

C

CAS
Channel Associated Signaling

CCB
Cross-connect Buffer

CCI
Clock and control interface

CCITT
Comite Consultatif Internationel Telegraphique et Telephonique

CCM
Cross-connect Module

CCN
Cross-connect Network

CCNI
CCN interface

CCU
Cross-connect Unit

cd
Change Directory

CEF
Capacity Expanded Frame

CEPT
Conference European Postale et Telephonique

CGA
Carrier-group alarm (carrier group = digroup)

Ch
Channel

CH
Channel

Chan
Channel

CHAN
Channel

CHG
Change

CI
Communications interface

Ckt
Circuit

CKT
Circuit

ckts
Circuits

CLR
Clear

cmd
Command

CNC
Customer Network Controller

CO
Central Office

COFA
Change of Frame Alignment Error

COMCODE
Component Code

cond
Condition

CP
Circuit Pack

CPU

Central Processing Unit

CR
Critical

CRC
Cyclic Redundancy Check

CRIT
Critical

CRO
Clock Reference Oscillator

CRT
Cathode Ray Tube

CRTE
Create

CSS
Controlled slip seconds

Ctrl
Control

CTS
Clear to Send

CUS
Customer

CV
Coding violation

cw
Constant Width

CW
Constant Width

D

DACS
Digital Access and Cross-connect System

dacsadm
DACS administrator

DB
Database

dc
Direct current

DCC
Disconnect-channel code

DCD
Data Carrier Detect

DCE
Data Circuit-terminating Equipment

DCON
Disconnect

dd
Day (2 chars.)

DD
Day (2 chars.)

DDC
Default Disconnect Code

DDC
Dual-digroup card

DDS
Digital Data System

DE
Digroup-enhanced

DEV
Device

DEX
Digital Electronic Cross-connect System

DGRTH
De-growth

DISC
Disconnect

DM
Degraded Minutes

DM

Dual multiplexer

DMA
Deferred Maintenance Alarm

DMB
Digital Multipoint Bridge

DND
DACS II Network Director

DPC
Dual primary circuit

DSPU
Digital Signal Processing Unit

DSR
Data Set Ready

DSX
Digital Signal Cross-Connect

DS0
Digital signal level 0

DS1
Digital signal level 1

DS3
Digital signal level 3

DS3U
DS3 Unit

DSPI
Digital Signal Processing Interface

DTE
Data Terminal Equipment

DTR
Data Terminal Ready

E

E
Extended

E&M
Earth and Magnetic

ECCN
Extended or Expanded cross-connect network

ECEF
Extended Capacity Expanded Frame

EDDC
Enhanced Dual Digroup Circuit

EDPC
Enhanced Dual Primary Circuit

EER
Excessive error rate

EFT
External Facility Termination

EIA
Electronic Industries Association

EISA
Extended Industry Standard Architecture

eq
Equipment

EQD
Equipped

EQL
Embedded Query Language

EQPT
Equipment

ERM
Echoed Response Message(s)

ERM
Errored Minutes

ERP
Echoed Response Processing

ERS
Errored Seconds

ES

Errored seconds

Esc
Escape

ESD
Electrostatic discharge

ESDI
Enhanced Small Device Interface

ESQL
Embedded Structured Query Language

EST
Eastern Standard Time

ETSI
Extended time slot interchange

Ext
Extended

Extd
Extended

F

F
Female

FACE
Framed Access Command Environment

FAX
Facsimile

FC
Format converter

FDD
Floppy Disk Drive

FDX
Full duplex

FE
Far end

FEBE
Far end block error

FFER
Frame Format Error rate

FLI
Facility Line Interface

FMLI
Form and Menu Language Interpreter

FMT
Format

Fr
From

FR
From

FRER
Framing errors

FTM
Facility Terminating Module

FTMI
Facility Terminating Module Interface

FTU
Facility Terminating Unit

FUAS
Far end unavailable seconds

FW
Framing Word

FX
Foreign Exchange

FXO
Foreign Exchange Office

FXS
Foreign Exchange Subscriber or Station

G

GMT
Greenwich Mean Time

GPSC
General Purpose Synchronous Controller

GRP
Group

GRTH
Growth

H

H
Hierarchical

HDU
Hard Disk Unit

HDX
Half duplex

HSU
High Speed Unit

I

IC
Integrated Circuit

ID
Identifier or identification

IDLD
Idled

IF
Interface

IMACS
Integrated Multiple Access Communications Server

IMX
Informix

INCL
Inclusive

INFO
Informational

ipc
Interprocess communications

IP
Internet Protocol

IPC
Intelligent Ports Card

IRQ
Interrupt request

IS
In service

ISA
Industry Standard Architecture

ISO
International Organization For Standardization

ISX
Integral Shelf Cross-connect

ITU-T
International Telecommunications Union - Telephony

IW
Insertion Word

K

k
Kilo or x 1000

kb
Kilobits

kB
kilobytes

KB
kilobytes

kbd
Keyboard

KBD
Keyboard

Kbps
Kilo-bits per second

L

L
Local multiframe alarm

LAN
Local Area Network

LED
Light Emitting Diode

LFER
Line Format Error rate

lgn
Login

LMA
Local Multiframe Alarm

LMA
Loss of Multiframe Alignment

Loc
Location

LOFA
Loss of Frame Alignment

LOS
Loss of Signal

LP
Logging Printer

M

M
Male

M
Remote multiframe alarm

M
Mega or x 1,000,000

Maj
Major

MAJ
Major

MAX
Maximum

Mb
Megabits

MB
Megabytes

MB
Multipoint Bridge

Mbps
Megabits per second

MC
Main Controller

MCOND
Maintenance Condition

MEM
Memory

MER
Multiframe errors

MI
Minor

MI
Maintenance information

MIB
Management Information Base

MIN
Minor

Mj
Major alarm

MJ
Major alarm

MJ
Multipoint Junction Unit

MJU
Multipoint Junction Unit

MMFG
Multiplexer-Multiplexer Interface Unit Functional Group

mml
HuMan Machine Language

MML
HuMan Machine Language

mmm
Month (3 chars.)

MMM
Month (3 chars.)

MN
Minor Alarm

MP
Multipoint

msg
Message

mux
Multiplex, -ed, -ing, -or

MUX
Multiplex, -ed, -ing, -or

M1X
DS1 to DS*X* Multiplexer

N

NAM
No a-to-mu-law conversion

NAS
North American Standard

NAU
Network-access unit

NE
Near end

net
Network

NFS
Non-framing Word Setting

NFW
Non-framing Word

NI
Network Interface

NMS
Network Management System

NPC
Network Processing Circuit

NPCTP
NPC Test Port

NTR
No Transmit

Num
Number

O

OCON
One-way cross-connect

OCU-DP

Office Channel Unit-Data Port

OFS
Out-of-frame seconds

OOF
Out of Frame

OOS
Out of service

O&M
Operation and Maintenance

openwin
OpenWindows

P

PAM
Pulse Amplitude Modulation

PARAM
Parameter

passwd
password

PB
Primary block

PBA
Primary Block Alarm

PBF
Primary block failure

PBX
Private Branch Exchange

PC
Personal computer

PCM
Pulse Code Modulation

PDN
Packet Data Network

PDS
Product Documentation Standard

PEC
Price Element Code

PII
Peripheral Interrupt Interface.

PMA
Prompt Maintenance Alarm

PU
Power Unit

PVC
Permanent Virtual Circuit

PWR
Power

Q

QIC
Quarter-Inch Cartridge

R

R
Red alarm

RAI
Remote Alarm Indicator/Indication

RAIS
Remote AIS

RAM
Random Access Memory

RBER
Remote bit error rate

RCNCILE
Reconcile

RDLD
Red-lined

rlogin
Remote login

RMA
Remote Multiframe Alarm

Rmks
Remarks

RMV
Remove

RP
Restoration or restoral priority

RP
Reconfiguration Plan

RST
Restore

RTS
Request to Send

Rx
Receive

S

s
Second(s)

SAFE
Shelf Alarm Far End

SANE
Shelf Alarm Near End

SC
Signal(ing) Conversion

SCSI
Small Computer Systems Interface

SE
Standard Engine

Seq
Sequence

SERS
Severe errored seconds

SES
Severe errored seconds

SEV, sev
Severity

SFI
Synchronizer/Synchronization Failure Indicator/Indication

SHMEM
Shared memory

SIMM
Single In-Line Memory Module

SMC
System Management Card

SME
Synchronous Modem Eliminator

SNMP
Single Network Management Protocol

SQL
Structured Query Language

SR
Subrate (multiplexer)

SRD
Software Release Description

SRM
Subrate Multiplexer

SRU
Subrate Unit

SSP
Synchronizer Sync Port

Str
String

stty

Set tty

Sub
Subunit

SV
System V

SVC
Switched Virtual Circuit

SW
Software; switch

SXC
Synchronizer cross-connect

SYNC
Synchronizer, Synchronization

T

TB
Time Base

TC
Trunk conditioning

TCP
Transport Control Protocol

TCS
T-Carrier Cross-Connect System

TDM
Time Division Multiplexing

TE
Timing Extractor

Telco
Telephone Company

terminfo
Terminal information

tid
Terminal ID

TID
Terminal ID

TLA
Terminate and Leave Activated

TLI
Time link interface

TLR
Terminate and Leave Released

TP
Test port

TPG
Test Port Group

TRB
Trouble word

TREF
Timing reference

TRSP
Transparent signaling

TSI
Time Slot Interchanger

TS0
Time slot zero

TS0M
Time Slot 0 Monitor

tty
Teletype

Tx
Transmit

TZ
Time Zone

U

UAS
Unavailable seconds

UATC
Unavailable time count

UC
Unit Controller

UCR
Unit Controller

UEQD
Unequipped

UI
User interface

UMC
Unassigned Multiplexer Channel Code

US
Unavailable Seconds

V

VDC
Video Display Console

VGA
Video Graphics Analog

W

WAN
Wide Area Network

WGS
Work-Group Station

Y

Y
Yellow alarm

yy

Year (2 chars.)

YY
Year (2 chars.)

Glossary

A

Acculink™ Access Controller (AAC)
: A multiplexer which allows the management of data from up to 32 Digital Signal level 0 (DS0s) per line from any of 8 DACS lines to distribute data to local WAN and User Cards for grooming. It can accommodate hundreds of subrate and superrate data and voice interfaces. This device is very similar to the IMACS.

Action
: An operation specified to the DND by entry of a predefined value into the **Action** field of many DND forms. The **Action** value is the command verb of the DND user interface. It may generate one or more MML command verbs to the DACS, or it may designate an operation that is strictly local to the DND computer.

Activate
: Place in service as a transmission-carrying circuit.

Aging
: With reference to alarms, delaying action on the alarm after its receipt.

Alarm
: A message sent by an NPC indicating that transmission is impaired. Alarms are classified by cause as Circuit Pack Failure, Carrier Failure (see CGA) and Facility Performance. They are also classified by severity for purposes of response or notification.

Alarm Indication Signal (AIS)
: See Blue Alarm.

Alarm Monitor Port
: An RS232C asynchronous port of the DND computer. On the port are placed all alarm messages sent to the DND from a DACS. This port was formerly called the alarm broadcast port.

Alarm Status Indicator (ASI)
: The rectangular colored box located on the New Alarm Summary button, on every DND GUI form, and on the subassembly representations in the equipment view. The color of the ASI represents the new alarm severity that has entered the system or indicates the alarm severity of a DACS II sub-assembly in the equipment view.

A-law
: A set of companding rules used for CEPT transmission. See Compander, Gateway.

Alternate Bandwidth
: Channels that are allocated alternately to a high-rate circuit; e.g., 3, 5, 7.

Altroute -ed -ing
: Alternate routing of transmissions paths. See also Real Altroute and Pseudo-Altroute.

Asynchronous Transmission
: A method of transmitting digital signals in which the bits are sent when they are initiated, rather than in synchronization with a timing signal; for example, keystrokes. Communication between the DND computer and its terminals is asynchronous.

Audible Alarm Indicator
: A bell-shaped icon located on the Alarms button on every DND GUI form and window when the DND GUI Audible Alarm feature is turned ON. The presence of the icon represents a new alarm has entered the system.

Audit
: An DND **Action** under DATABASE ADMINISTRATION by which differences between the DND database and a frame database are tracked and logged.

Automatic Reconfiguration Plan (ARP)
: A file containing a sequence of references to Reconfiguration Plans to be executed when the ARP is executed. See also Reconfiguration Plan.

B

Backbone Leg
: In a Broadcast Circuit, the transmission source: the one-way circuit from the FROM side to the virtual branch point. In a Polling Data Circuit, it is the branch between the Rx of the transmission EFT and the DMB channel, along with the corresponding Tx side of the same EFT, which branches to the other EFTs without going through the DMB. In the latter case, the Tx branch point is in the CCN only, while the Rx branch point is the DMB channel.

Backup Line
: In the DND, the SVC designated as a backup line in the FRAME ADMINISTRATION form. It will be the path to the DACS to which the DND automatically reverts when the primary line is not operable.

Bandwidth
: The number of channels used for a high-rate circuit.

Baud Rate
: The number of bauds per second. One baud, named after J.M.E. Baudot, is one signaling element. For example, in an 8-state code system, one baud is one code representing one state of the 8. If such a code were represented by bits, one baud would be three bits. In a two-state system, one baud is one bit, and the baud rate is identical to the bit rate; however, the term baud rate is preferred when it refers to the speed at which terminals communicate. Here, "baud rate" is used of the terminal line speed and "bit rate" is used of channel transmission speed.

Bit Error Rate
A DACS concept referring to the rate at which wrong bits are received. The number of wrong bits over an interval is calculated from a checksum.

Bit Rate
The speed at which binary digital signals are transmitted, usually expressed in bits per second (bps).

Blue Alarm
Also known as an Alarm Indication Signal (AIS). An all 1s pattern asserted at an intermediary point in a facility when loss of transmission is detected. A yellow alarm is sent in the direction of the loss and a blue alarm is sent downstream. See also Alarm.

Boot
In general, to load and start the operating system of a computer. In the DND, boot means to load an DND database with data reflecting the provisioning present in a specified DACS, or to provision the DACS so that it matches provisioning data stated in the DND database.

Branch Legs
In a virtual broadcast circuit, the one-way circuits from the virtual branch point to the broadcast points. In a Polling Data Circuit, a DMB channel takes the place of the virtual branch point on the Rx side. On the Tx side, the branch is in the CCN. See also Backbone Leg.

brassagt
A third party UNIX daemon process that implements the SNMP protocol for the DND.

Broadcast Circuit or Cross-connection
A virtual multipoint circuit, connecting a channel on one side with multiple channels on the other. The cross-connection is one-way, and can be high-rate. Connection is through a virtual node, which is a logical, or software, entity performing the signal switching. The circuit on the FROM side is the Backbone Leg and the circuits on the TO side are the Branch Legs.

C

Capacity Expansion Frame (CEF)
An expanded DACS II frame able to configure up to 2560 NPCs.

Carrier Group Alarm (CGA)
Also called a Carrier Failure Alarm. One of three classes of DACS-II alarms (see Alarm). An alarm asserted by an NAS NPC to indicate loss of an incoming signal or receipt of a remote alarm signal from the other side of the line. The loss of an incoming signal is reported in an output message as a Red Alarm, and an alarm from the other end is reported as a Yellow Alarm. A variety of other types of CGA alarms can be generated. The equivalent type of alarm for CEPT NPCs is a PBA.

Cascade

There are many kinds of cascade in the electronics industry and in the communications business. In general, it signifies a circuit in which one configuration branches to another of its kind indefinitely. With reference to DMB multipoint circuits, a cascade of conferences is achieved when a leg of one conference is simultaneously the leg of another; i.e., two DMB channels are connected. Additional DMB channels can be connected also, leading to a longer cascade of conferences.

CEPT Facility
An NPC terminating DS1 signals that were multiplexed according to the CEPT standard.

Channel
A continuous stream of coded output signals. The channel may be carried by a variety of media, and may be broken into segments for discontinuous transmission. In the DND, a channel is a DS0 signal provided by an NPC.

Channelized
Said primarily of DS1 to distinguish it from Clear DS1.

Circuit
A cross-connection between channels. A two-point circuit connects two channels; a multipoint circuit connects more than two. A circuit may be a one-way circuit, where one transmission direction is used for each channel or a circuit may be a two-way circuit, where both transmission directions are used for each channel. Thus, the same channel can be in two active one-way circuits.

Circuit Pack
A hardware module that can be easily installed or removed from a DACS. Units such as power supplies, CCNs and DDCs are implemented as CPs.

Clear DS1 Signal
A nonchannelized, 193-bit DS1 signal on an NAS NPC. The 24 8-bit DS0 channels and one framing bit are cross-connected as one DS1 signal, 193 bits wide.

Clear E1 Signal
A nonchannelized, 256-bit DS1 signal on a CEPT NPC. The 32 8-bit DS0 channels are cross-connected as one DS1 signal, 256 bits wide.

Channel
A DS0-level signal that can be cross-connected in a circuit. Channels are provided by NPCs. An NPC makes available two directions per channel.

Channel Associated Signaling (CAS)
A signaling format in which the signal bits for all channels in an NPC are placed in a signaling channel, separate from the message channels. In CEPT facilities the signaling channel is Channel 31.
Command.

In the DND, a command is, strictly speaking, an MML command generated by an DND **Action**; however, a command may also be, by analogy, any I-2000 **Action**, whether it generates one or more, or no, commands to the DACS.

Compander
Compressor-expander, a device used to protect low-level voice volumes from noise by increasing them

for transmission; i.e., compressing the range of volumes and expanding the range again at the other end of the transmission. See also A-law and Mu-law.

Conference
A multipoint circuit. The Symmetric Voice Circuit most closely fits the English meaning of *conference*, although the term is used of any multipoint circuit. In DMB multipoint circuits, *conference* also means the DMB channel number.

Conference Number
The channel number of the DMB side of a leg in a circuit of **Class** DMB. Since one conference includes only one DMB channel, which is used as one side of every leg, this channel number uniquely identifies the conference. For an exception, see under Cascade.

Conference European Postale et Telephonique (CEPT)
The standard of DS1 level telephone transmission used predominantly outside the United States. CEPT NPCs consist of 32 channels containing 64 Kilobits per second each. Numbering is from 0 to 31, but not all 32 are ordinarily available to the user: 0 and 31 are not available. Channel 0 is available as a special case in DACS II release 6, as an option under CIRCUIT PROVISIONING.

Constant Width (CW)
A typewriter-style typeface used for emphasis; in the DND manuals, primarily to mark field values that you type or that appear on the screen. Displayed messages also are quoted in CW.

Contiguous Bandwidth
Channels that are allocated contiguously to a high-rate circuit.

Contiguous Cross-connections
Multiple cross-connections such that the channels on the FROM side and the TO side are each consecutively numbered channels in a single NPC.

Controller
A device that takes the initiative in sequencing operations, and which uses feedback to make decisions. In the DND's case, switching of multiplexed telephone communications is controlled.

Create
An DND **Action** used in a number of forms to register an object in the DND database. Some objects that can be created are a DACS and an NPC.

Cross-connect -ion -ing
A circuit between two or more channels. The DACS interchanges channels from a time slot in one NPC to another time slot in the same or in a different NPC, as designated by the DND. The hardware module that accomplishes cross-connection is the Cross-connect Network (CCN).

Cross-connect Frame
Same as Distribution Frame.

Cross-connect Module (CCM)
A DACS I hardware unit contained within a CCU and containing up to eight NPCs.

Cross-connect Network (CCN)

A hardware module that is used to implement cross-connection. It contains Time Slot Interchangers (TSIs).

Cross-connect Unit (CCU)
A DACS I hardware unit containing a maximum of four CCMs.

Custom Report
A report for which the format can be changed by use of the Edit Custom Report Format form. A fixed-format report may not be changed in format. Some custom report formats are predesigned and are furnished with the DND. These can be selected like fixed-format reports; nevertheless, they can be changed and are custom formats.

D

DACS
Used without further qualification, DACS means any supported, configured cross-connect frame.

DACS Database
The DND database that is named with a frame Site Name and stores DND information concerning that frame. This database is distinct from the frame's own database, here termed the *remote* or *facility* database, which is installed on the frame itself.

DACS I, DACS II
A Lucent Technologies product that terminates DS3- or DS1-level multiplexed signals and has the capability of separating them into DS0 signals for purposes of cross-connecting them. The DND provides a user-friendly interface to generate the commands that instruct the DACS to perform the appropriate cross-connections.

DACS II AX
A compact Lucent Technolgies product that terminates DS3-, DS1-, or DS0 level multiplexed digital signals, using DS1, E1, DS3, and analog voice ports, and supporting test access on those cards. DACS II AX is available in two configurations: DACS II AX 4 (4 application card slots) and DACS II AX 11 (11 application card slots).

DACS II Destiny AX
A Lucent Technologies product (treated as a group in the DND) which is a combination of the following Lucent products: exactly one PSAX element and up to seven DACS II AX elements.

Database
A collection of logically united data. Here, the term does not imply any specific structure of code or organization of data on disk or in memory. The data might be tracked in various ways and be stored at disparate locations. A screen, for example, is not necessarily a record in a file, as it would be in COBOL or PL-1.

Data Circuit-terminating Equipment (DCE)
A type of equipment recognized by standards organizations such as the EIA, the CCITT and the ISO. A data circuit is a network equipment configuration that provides data services. The DACS is DCE.

Dataset
In DACS II, a stored set of Facility Performance Parameters.

Data Terminal Equipment (DTE)
A type of equipment recognized by standards organizations such as the EIA, the CCITT and the ISO. A data terminal is a remote device used with a computer for data input and output: teletypewriters, CRTs and host computers. Each DND terminal is DTE

Default Disconnect Code (DDC)
The DDC is a disconnect channel code asserted by an equipped NPC on all of its unmapped channels, unless it is replaced by a value entered into the **IW** field on the NPC PROVISIONING form.

Delete
An DND **Action** used in a number of forms to delete an object from the DND database. Some objects that can be deleted are a DACS and an NPC.

De-grow
A DACS II term meaning to delete from the frame database perhaps with a DGRTH (de-growth) command in MML. In the I-2000, the DELETE Action takes its place. The DELETE functionality is a superset of DGRTH functionality.

Digital Multipoint Bridge (DMB)
A physical module containing the electronic circuits that can establish two types of two-way multipoint circuits, beginning with Release 2.0: the Symmetric Voice Circuit and the Polling Data Circuit. The DMB makes available DMB NPCs and channels, from which the user may select one as the branch point. This DMB channel number is used as the conference number.

Digital Signal level 0-Data Port (DS0-DP) Card
One of the data cards for the AAC and IMACS systems.

Digital Signal Processing Unit (DSPU)
A type of DACS unit containing the ICs used to create specialized circuits, such as DMB or subrate. These units contain more specialized TSIs than a CCN.

Digroup
For NAS transmission, a digroup is 24 (two groups of 12) DS0-level signals. It is a specific kind of NPC, provided by a DDC.

Digroup Roll
The former name of the NPC Roll feature.

Direct Configuration.
See Point-to-point.

Disconnect Channel Code
A signal, a digital word, that is sent on the unmapped (unassigned) channels of an equipped NPC. If it is not supplied by the operator as an **IW** field value on the NPC PROVISIONING form, the Default Disconnect Code is used.

Display
In the DND, to display always means to show on the screen.

Distributing Frame
A mechanical chassis on which multiple transmission lines are terminated to allow cross-connections of transmission signals. In early equipment, the cross-connections were made by jumpers. Today's frames provide an electronic cross-connection capability.

See DACS II.

DND
The DACS II Network Director is a network management system that allows you to provision and monitor networks with up to 316 network elements, including up to 60 DACS II and DACS II ISX elements (maximum 30,720 NPCs) and 256 SNMP nodes.

Domestic
A term in use in earlier DACS documentation and I-2000 manuals to mean North American Standard; however, strictly speaking, it only applies to within the U.S.

DS0
A level in the TDM hierarchy, at which one channel is sampled and the digital transmission rate is 64 kilobits per second.

DS1
A level in the TDM hierarchy. For NAS transmission, 24 channels are sampled and the transmission rate is 1.544 Mbps. For CEPT transmission, 32 channels are sampled and the transmission rate is 2.048 Mbps.

DS3
A level in the TDM hierarchy. For NAS transmission, 672 channels are sampled and the transmission rate is 44.736 Mbps.

DS3 Unit
A DACS II hardware module containing a maximum of six DS3 terminations.

Dual Digroup Card (DDC)
A DACS II card containing two NPCs for NAS transmission.

Dual Primary Circuit (DPC)
A DACS II card containing two NPCs for CEPT transmission.

Dumb
Used of terminals; incapable of doing any preprocessing.

E

E1
Also known as a DS1 line; the European standard (and most of the rest of the world) comprised of 32 DS0s for a total signaling rate of 2.048 Mbps.

Earth and Magnetic (E&M) Card
One of the voice cards for the AAC and IMACS systems; the signaling leads on inter-switch voice connections.

Echoed Response Processing (ERP)
An Echoed Response Message is a message from a DACS to the DND that is not in response to an I-2000 process waiting for it. Echoed Response Messages often indicate that provisioning has been performed in the DACS but is not matched by provisioning in the DND. Echoed Response Processing is DND-only NPC or circuit provisioning automatically performed for the purpose of making the DND provisioning match the frame provisioning indicated by the message.

Encoding
Representing by 8-bit binary numbers the numbers resulting from quantizing a PAM Signal. See Pulse Code Modulation.

Enhanced Small Device Interface (ESDI)
A standard interface, which achieves faster throughput than standard fixed-disk controllers by shifting functionality to the Hard Disk Unit (HDU). It also defines a disk format.

Environmental Variable
A shell variable, which can be set by a variety of methods. The DND uses an environmental variable file, .dncrc, which stores the default values.

Equipment Provisioning
Prior to DND Release 3.2, the term used for NPC provisioning in DND forms.

Equipped
In the DACS II, "to equip" is to grow with a CRTE command in MML. In the DND, the *CREATE* **Action** performs this function, sending commands to the DACS when necessary. An NPC that has been created can, therefore, be said to have been equipped. "Equipped" is thus a status that is NOT unequipped (UEQD); i.e., a **Service Status** value referencing an object that is described in the DND database. However, no explicit "equipped" **Service Status** is used; instead, IS or OOS is used to mean "equipped" by implication.

Errored Seconds
The number of seconds a transmission facility was not working properly over an interval.Execute

In general, to set a software procedure in motion. In the DND, "to execute" implies to use the Execute button to set an DND or DACS procedure in motion; however, sometimes it is used in the general sense.

Extended Numbering or Addressing

A system of numbers used to address NPCs in I-2000 forms and DACS commands. Extended numbering maps a whole number from 1 through 2564 to an NPC.

External Facility Termination (EFT)
A channel that is coming from outside the DACS and terminates in a DACS II DDC or DPC, or in a DACS I NPC. A node in a multipoint circuit is NOT an EFT.

F

Facility
In the telephone vocabulary, a device for transmitting telephone signals. With reference to a DACS, "facility" is typically used to mean NPC.

Facility Performance Alarm Parameters
One of the categories of DACS alarms (see Alarms). A line status error alarm resulting when errors on a monitored line exceed a stored threshold value for a defined parameter. Microprocessor circuits in the line interface circuits detect and count various types of line error conditions for each NPC. The parameters monitored are the Bit Error Rate, Frame Alignment Errors, Errored Seconds, Severely Errored Seconds, Slips, Degraded Minutes and Unavailable Seconds.

Facility Terminating Module (FTM)
A DACS II hardware module contained in an FTU. The FTM contains up to 20 NPC Cards, supporting 40 digroups, or NPCs.

Facility Terminating Unit (FTU)
A DACS II hardware module mounted on a DACS II. It contains up to 4 FTMs.

Far End
With regard to a cross-connection, the far end is the NPC at the other end of a line terminating in one of the sides of the circuit. Thus, a two-point, single-channel cross-connection has two far ends.

Field
A named and delineated space on the screen, where data entry is expected; also, the logical entity associated with the name. Fields are not necessarily mapped into any scheme of DND data records, C language structures or shell variables; however, all of these devices are utilized to store fields.

Form, Screen
A terminal display showing field names into which you enter data.

Form Control Keystroke
A keystroke that positions the cursor among the fields within a form.

Frame
See Time Frame, Distributing Frame. In this manual, frame is used most often to mean any distributing frame that becomes an object in the DND system through provisioning.

Frame Alignment Error

A concept referring to errors detected in framing bits received. The errors must be severe enough to require the receiver to be resynchronized with the transmitter.

Framing, Framing Bits, Framing Word
The process of marking the beginning of a time frame or two time frames in a PCM stream. The NAS standard uses one bit, the framing bit, making a total of 193 bits per frame. The CEPT standard uses an 8-bit pattern, the framing word, in alternate time slots. The other alternate contains the non-framing word.

FROM Side
One side in a cross-connection. For one-way circuits (two-point or multipoint), the FROM side is the channel that sends the transmission (Tx) and the TO side is the channel that receives the transmission (Rx). The name derives from the fact that the DACS II command that establishes the cross-connection identifies the channel number of this point with a FROM qualifier.

For two-way circuits, the second direction of the FROM and TO channels is used. It also has Tx and Rx sides. Thus, the FROM side and the TO side each have a Tx and Rx direction.

Front End
Hardware or software that preprocesses data before it is massaged by the main hardware or software under consideration. The DND is a front end to the frame, because it generates frame switching commands.

Full Duplex Circuit
A two-way cross-connection.

Function Key
One of the keys across the top row of the keyboard. Many of them are assigned special functions in the I-2000. These functions are labeled pictorially in a display line at the bottom of the screen, for functions that are valid with that screen.

Foreign Exchange (FX)
Not the nearest Central Office (CO). An FX line goes from a CO or PBX to beyond the PBX or CO's normal service area.

Foreign Exchange Office (FXO)
Encodes analog to digital and digital to analog transmission.

Foreign Exchange Office (FXO) Card
One of the voice cards for the AAC and IMACS systems.

Foreign Exchange Subscriber / Station (FXS)
An interface at the end of an FX line connected to a telephone or PBX, decodes digital to analog and analog to digital transmission.

Foreign Exchange Subscriber / Station (FXS) Card
One of the voice cards for the AAC and IMACS systems.

G

Gateway
A cross-connection between a channel in an NAS NPC and a channel in a CEPT NPC. For transmission of digitized voice signals, the difference in companding rules must be taken into consideration; i.e., an A-to-Mu Law Conversion may be necessary. This conversion is not necessary for transmission of data signals.

Generate a Report
To instruct the DND to create a report in an electronic file. Printing or displaying the file is a separate step.

Generic
Formerly the release number of the software and, therefore, the "type" of software. One generic is not necessarily compatible with another. Currently the use of generic has been dropped and "release" is being used instead.

Grow
A DACS II term meaning to record an NPC in the frame database with a CRTE command in MML. In the DND, the *CREATE* Action takes its place, and is a superset of it.

H

Half Duplex Circuit
A one-way cross-connection.

Hierarchical Numbering or Addressing
A system of numbers used to address NPCs in I-2000 forms and DACS commands. Hierarchical numbering maps, to each NPC, a number consisting of the shelf or unit number followed by the module number followed by the NPC within the module.

High-rate Circuit
A single circuit defined to be multiple one-way or two-way two-point cross-connections. The number of cross-connections, which is the same as the number of channels on a side, is the bandwidth. Bandwidth is allocated on channels numbered contiguously or alternately.

History File
A file storing DND/DACS communications just as they were generated or received, in circumstances for which a history file has been defined.

High Speed Unit (HSU) Card
One of the data cards for the AAC and IMACS systems.

Hub Test Configuration, Hub DACS
A test circuit configuration in which any number of signals to be tested are brought from remote DACSs to a hub DACS and there are routed to test equipment.

HuMan-Machine Language
A software command language that is used in the human interface to the DACS.

I

I-2000
A controller that offers a user-friendly interface between operators at terminals and multiple DACS frames stationed on a Packet Data Network or in a point-to-point configuration. I-2000 is the product that preceded DND.

Idle
A concept based on the IDLE **Action** of Reconfiguration Plan Provisioning. To idle a plan means to restore all circuits acted upon by actions in the plan to their previous status.

Integrated Multiple Access Communications Server (IMACS)
See AAC.

In Service (IS)
A value that can be had by a status field, indicating that the object referenced by the form is fully operable. For example, if the object is an NPC, an NPC that is *IS* has been created and restored. Only in-service NPCs can provide transmission.

INSERT Mode
A typing mode in which the typed character pushes other characters to the right.

Insertion Word (IW)
In general, an insertion word is a signal, an 8-bit data word, that is inserted into a DS0 channel for some reason. The DND defines two types of insertion words:

NPC Provisioning. The *unassigned* insertion word. Entered into the **IW** field of the NPC PROVISIONING form, this word replaces the DDC as a standard disconnect code to be sent on all unmapped (unassigned) channels on an equipped NPC.

Circuit Provisioning. Entered into the **IW** field of the CIRCUIT PROVISIONING form, this word is sent on mapped channels of an NPC after it has gone out of service (carrier or NPC failure).

Integral Shelf Cross-connect (ISX)
A member of the DACS II family of products that combines the capacity expanded DACS with the single bay DACS. Offering a subset of DACS II capabilities, it is positioned for smaller applications. Both NAS and CEPT DS0 cross-connects are supported.

Interval
In the DND, the number of scale units between successive executions of scheduled tasks.

Italics
A slanted typeface used for emphasis; in the DND manuals, in quotations and for variable names.

K

Keystroke
The signal resulting from pressing a key once. Be sure to do so sharply, since more than one keystroke may result from holding the key down.

L

Leg
In a multipoint circuit, the connection from an EFT to the branch point. The branch point can be a virtual node if the circuit is one-way (Broadcast Circuit) or a DMB channel if the circuit is two-way (Symmetric Voice Circuit or Polling Data Circuit).

Line
A connection between a computer and a peripheral, such as a terminal. In general, however, a line can be any stream of transmission or facility for carrying it.

Link
A connection to a network.

Link Protection
The presence of an additional link for every link from the DND to the PDN or from the PDN to the DACS. If the primary link is disconnected, the backup link becomes functional. You can acquire link protection by backing up the port or by merely backing up the link within the port.

Local Database
The DND database, named after a DACS Site Name, that stores information concerning the DACS.

Local-only Mode
A mode of the Execute function, selected from the WHICH DATABASE? menu. Local-only specifies that the Action implemented by the Execute is to apply to the DND database only.

Log
A file containing records of predefined events resulting from various defined circumstances. Some logs are automatically generated by the DND; others can be electronically kept by the user in the DND.

Log-in Port
An asynchronous connection to the DND computer, to which a user terminal is attached.

Loop Circuit
A cross-connect in which the Tx direction is connected to the Rx direction of the same channel.

M

Management Information Base (MIB)
: A conceptually organized database containing the management information accessed through SNMP. DND supports MIB II as defined in RFC1213.

Master
: In database audit/synchronization, the database designated as the standard to which other databases are made to conform.

Menu
: A list of selections from a pull-down or combo box. Make your selection by highlighting and clicking on your choice.

Menu Control Keystroke
: A keystroke that positions the cursor relative to the selections within a menu.

Midnight Report
: A 24-hour performance monitoring count report sent once a day at the scheduled DACS "midnight" time.

Modem
: Modulator-demodulator, a device that converts signals from data processing into signals suitable for transmission over telephone lines (modulation) and vice versa (demodulation). A modem is required to transmit the synchronous signals to and from the PDN.

Monitor Test Circuit
: A test circuit configuration in which the Tx and Rx signals in a cross-connection also are received at test ports. The circuit being tested is not interrupted.

Multiplexing
: Multiplexing is the combining of a number of signals into one transmission stream. Demultiplexing is the separation of a multiplexed stream into consistent signals. See Time Division Multiplexing.

Multipoint Circuit
: A cross-connection in which a signal can be sent from a single source to a number of destinations. A virtual multipoint is one-way and features a virtual node as a branch point. The virtual node is a software entity. A true DACS multipoint is two-way and features a DMB channel as a branch point. See also Broadcast Circuit.

Mu-law
: A set of companding rules used for NAS transmission. See Compander, Gateway.

N

NAS Facility
An NPC terminating DS1 signals that were multiplexed according to the Time-Division Multiplexing (TDM) hierarchy in use in the North American Standard (NAS).

Near End
With regard to a cross-connection, the near end is the cross-connected NPC in the DACS on which you are working in the DND system.

Network
A set of communication pathways. Networks consist of nodes connected by links.

Network Address
In the FRAME PROVISIONING form, the address of the synchronous link between the PDN and the DACS. This link must already be operable. The "address" is in the form of the link's telephone number.

Network Card
A CPU card, Server card, or WAN card.

Network Processing Circuit (NPC)
As used in this manual, an NPC is any IC that provides terminations for cross-connection. FTU NPCs in the DACS II and CCU NPCs in the DACS I provide EFTs, but other types of NPC, such as DMB and Subrate, provide other types of terminations. In the DACS I, an NPC is implemented as one CP, but in the DACS II, the NPC is one digroup on a DDC or DPC, which is implemented as a CP.

Non-framing Word (NFW)
The 8 bits of time slot 0 in alternate DACSs of a CEPT transmission. The other alternates contain the framing word.

Normalize
Return an *ALTROUTED* circuit to its original path or a *PREEMPTED* circuit to *ACTIVE*.

North American Standard (NAS)
A standard of transmission in use in the United States and elsewhere. Within the US it is termed domestic.

Northbound
Refers to the Element Management System (EMS) system in which DND is connected to and sends database and alarm information.

NPC Provisioning
The process of growing NPCs through use of the NPC PROVISIONING form. Prior to release 3.2, this was called the EQUIPMENT PROVISIONING form.

NPC Roll
The transfer of all the circuits connected to an NPC to another NPC. Only certain kinds of NPC can be rolled.

NULL Status
A value returned to a **Status** field, when no record of the object described by the form exists in the DND database. An example of an object that can have a *NULL* status is a login port.

O

Office Channel Unit-Data Port (OCU-DP) Card
One of the data cards for the AAC and IMACS systems.

One-way Cross-connect or Circuit
A cross-connect that utilizes only one transmission direction.

Operator
As used in the DND, a person who has logged on with a login and password assigned by the system administrator. An operator does not have access to the selections listed on the SYSTEM ADMINISTRATION menu.

Outage Log
A DATABASE ADMINISTRATION feature by which the system administrator is allowed to keep electronic logs of NPC or circuit outages, and can print a log at any time.

Out of Service (OOS)
A value that can be had by a status field indicating that the object referenced by the form exists in the database but is not yet operable. For example, an NPC that is OOS is equipped but is not placed in active service. An out-of-service NPC cannot be expected to transmit data.

OVERLAY Mode
A typing mode in which the typed character replaces the character on which it is typed.

P

Packet Data Network (PDN)
A network on which data is transmitted by breaking it up into packets. Commonly, the X.25 protocol is used in a PDN. Connection to a customer X.25 PDN by the DND is through the X.25 Interface Board. See also Switched Virtual Circuit, X.25.

Passthrough
A special mode of the DND, which allows an operator at an DND terminal to communicate directly to a DACS as though the terminal were a DACS terminal.

Passthrough Control Keystroke
A keystroke that positions the cursor in passthrough mode.

Pattern Matching Buffer
The logical entity that stores keystrokes as you type them.

Pending
Said of circuits that exist in the DND only and are marked with a *PENDING* **Ckt Status**. They are waiting to be activated.

Performance Alarm
See Facility Performance Alarm.

Permanent Virtual Circuit (PVC)
A virtual circuit set up for longer than the duration of a call on an X.25 Packet Data Network; i.e., across calls.

ping
A command/program used to test IP-level connectivity from one IP address to another.

Point-to-point
Used of a connection between pieces of hardware (nodes) where a network does not intervene.

Polling Data Circuit
A type of multipoint circuit in which the backbone leg broadcasts information (polling) to the branch, or tributary legs, and they return the replies through a DMB to the backbone leg.

Port
A physical and logical connection to a computing system. The DND features asynchronous, RS232C ports for its operator terminals and also for the Alarm Broadcast Port. These ports are provided by the IPC-900 and IPC-1600 Boards. Synchronous ports, for connection to the PDN, are provided by GPSC-AT/E Boards.

Preempt -ing, -ed, -ion
Deactivate a circuit and place it in *PREEMPTED* **Ckt Status** so that one or more of its channels can be used by another circuit.

Primary Block Alarm (PBA)
An alarm asserted by a CEPT NPC. A variety of PBA alarms can be generated. The equivalent type of alarm for NAS NPCs is a CGA.

Primary Line
In the DND, the SVC designated as primary in the FRAME ADMINISTRATION form. It will be the path over which the DND will communicate with the DACS, so long as that SVC is operable.

Print
In the DND, to print is always to place on the printer; i.e., you never "print" to screen.

Private Branch Exchange (PBX)
A small phone switch inside a company location.

Protocol
A conventional format and set of rules for initiating, maintaining and terminating data communications. The DND utilizes one of two for communication with each DACS: SNIDER or X.25.

Provisioning
The process of making available various communications resources. In the DND, the resources are mainly NPCs and circuits.

Pseudo-Altroute
An altroute in which each channel end is altrouted to itself. Note that a pseudo-altroute does not merely reroute to the same circuit: an altroute in which the channel ends are reversed is a real altroute, even though the circuit is the same. See also Real Altroute.

Pulse Amplitude Modulation (PAM) Signal
A stream of pulses resulting from Pulse Code Modulation of an analog signal. See Time Division Multiplexing.

Pulse Code Modulation (PCM)
Digital transmission of an analog voice signal by converting it into a digital signal.

Q

Quantizing
Assigning numbers to the amplitudes of the pulses in a PAM Signal. See Pulse Code Modulation.

R

Real Altroute
Alternate routing of circuits to different end points. See also Pseudo-Altroute.

Reconcile
In the DND, making the DND databases and the frame databases contain the same or nearly the same NPC and circuit configuration data. Alarm data also can be reconciled. "To reconcile" can be to use the **Reconcile Mode** options or to perform a database synchronization.

Reconfiguration
In the DND, the alteration of a circuit in any way, whether by changing its **Ckt Status** or its terminations.

Reconfiguration Plan (RP)
A defined collection of circuit provisioning actions.

Red Alarm
A CGA alarm signaled by an NPC when it detects loss of transmission. See also Alarm.

Red-lined

Selected out for some purpose. In the DND, circuits can be red-lined via the RDLD **Option** for purposes of not being allowed to be disconnected without additional authorization.

Released
See Terminate and Leave Activated, Released.

Remote Database
The frame-installed database utilized by the DACS to record provisioning information. The DACS contains this database of its own even if it is not connected to an DND.

Remove
As used in the DND, to take an object out of service. Some objects that can be removed are an asynchronous port, a synchronous link, a DACS and an NPC.

Reset
A restart of a computer's executive software. Turning the power switch off and on accomplishes a reset, but there is typically a reset button. Reset of the I-2000 is not recommended; instead, shut it down, if possible.

Restore
As used in the DND, to place an object in service. Some objects that can be restored are an asynchronous port, a synchronous link, a DACS and an NPC. The term is also applied to retrieving a database from backup.

Robbed-Bit Signaling
A signaling format in which the signal bits associated with a DS0 channel overwrite some of the message bits in that channel.

Root
The highest-level directory of any UNIX system. In the DND system, root is the initial login of the system and also grants full access to it. The root password is the password associated with root.

S

Scale
In the DND, the unit in which time frequency is measured: **MINUTES, HOURS, DAYS**.

Schedule
In the DND, to place an Execute on queue, to be executed at the time and frequency specified in the scheduling insert.

Screen, Form
A terminal display showing named fields into which you enter data.

Search Criteria
In the DND, a field value or range of values, specified on a SEARCH CRITERIA form, that restrict the scope of the report data to be found by keying in on that field.

Severely Errored Seconds
A concept referring to the number of seconds transmission was severely impaired on a facility.

Severity
The importance of an alarm message. Three severities are recognized: Major (MAJ), Minor (MIN) and Informational (Inf).

Side
One of two duplicate NPCs with the same address provided by a DMB circuit pack. They are identified as Side 0 and Side 1.

Signaling
A method of sending network-level signals bits, which can be used in the transmission network to determine the treatment of DS0 channels at the receiving side of the transmission. Channel Associated Signaling and Robbed-Bit Signaling are two commonly used signaling formats.

Slip Error
A transmission concept referring to a difference in the number of bits received on a facility over an interval relative to the number expected.

Small Computer Systems Interface
An interface established to support mass storage for microcomputers and minicomputers. Published in ANSI Standard X3.131, it defines a standard for attaching intelligent peripherals to computers. In the case of HDUs, SCSI defines a disk format also.

SNIDER
The Asynchronous Data Link Protocol, an EIA RS-449 based AT&T handshaking routine used to handle input transactions to a DACS and output messages from it.

SNMP
A standard network protocol that is used primarily to manage TCP/IP networks.

Speed
The baud rate over an asynchronous line. The DND offers baud rates of 1200, 2400, 4800, or 9600.

Split Test Circuit
A test circuit configuration in which the circuit being tested is broken and its traffic is rerouted to test ports.

Stand-alone
Hardware or software that function without the assistance of other hardware or software. A DACS can be used as a stand-alone device, without either the I-2000 or the DACScan-2000 Controller C-Module.

Status or Service Status
In the DND, one of a number of fields not accessible to the user, which display the current predefined mode of activity of an object. Some of the objects that have a status are a login port, a synchronous link, an NPC and a circuit. Sometimes state is used as a synonym. Some of the major status values are *IS* (In Service), *OOS* (Out of Service), *UEQD* (Unequipped), *NULL*.

Subchannel
A facility provided by the DS0-B format.

Subrate
A facility consisting of less than the full bit rate available on a DS0 channel. Subrate facilities are available at 2.4 Kbps, 4.8 Kbps, 9.6 Kbps, and 56 Kbps. Two formats are available, DS0-A and DS0-B.

Subrate Multiplexer
The hardware module that provides two-point subrate circuits.

Subrate Multipoint Junction Unit
The hardware module that provides multipoint circuits between sub-channels.

Subrate Unit (SRU) Card
One of the data cards for the AAC and IMACS systems.

Switched Virtual Circuit (SVC)
A virtual circuit set up for the duration of a call on an X.25 Packet Data Network. An X.25 card provides 20 SVCs. Each installed DACS reserves one for its primary link and possibly another for backup.

Symmetric Voice Circuit
A type of circuit in which all (possibly more than two) the terminations are on-line all the time; i.e., all the legs are two-way circuits. Symmetric voice circuits provide customers with the ability to carry on round table discussions. This is one type of DMB circuit.

Synchronize, Synchronization
To make predefined logical objects contain the same or similar data in parallel. An example of parallel objects are the time and date in both the DND and a DACS. Synchronization is also an DND **Action** under DATABASE ADMINISTRATION by which differences between the DND database and the frame database for a given DACS are reconciled, subject to certain restrictions. This is termed "scheduled" synchronization. Echoed Response Processing also performs some automatic synchronization. Synchronization of alarm information can be turned on or off in DND CIRCUIT PROVISIONING.

Synchronous Modem Eliminator (SME)
A line device for simulating a network connection by providing synchronous timing signals. In DND, SMEs can be used to establish a direct connection with an X.25 interface, which normally connects to a PDN.

Synchronous Transmission
A method of transmitting digital signals in which the bits are moved in synchronization with a cyclical timing signal.

System Administrator

As used in the DND Non-GUI, a person who has logged on as dacsadm with the root password. The system administrator has access to the selections listed on the SYSTEM ADMINISTRATION menu.

T

T1
See DS1.

T3
See DS3.

Task
As used in the DND, a set of commands or an DND-only operation that has been initiated on the DND system with the Execute button. It may or may not be identical with one or more UNIX tasks. An DND task may be executed in the background or foreground, or may be placed on queue for scheduled execution.

TCP/IP
Transmission Control Protocol/Internet Protocol

TDM Hierarchy
A set of digital levels determining the number of channels that will be sampled during one time frame in Pulse Code Modulation transmission. Since the time frame is fixed at 1/8000 sec., a number of channels implies a digital transmission rate. For example, at the DS0 level, 1 channel is sampled and the rate is 0.064 Mbps. At the DS1 level for the NAS, 24 channels are sampled and the rate is 1.544 Mbps. The higher rate comes from the greater number of words per frame. For the CEPT standard, 32 channels are sampled and the transmission rate is 2.048 Mbps. See Time Division Multiplexing.\

Telnet
An application protocol offering virtual terminal services in the Internet suite of protocols.

Test Access
Cross-connecting test ports in test circuits.

Terminate And Leave Activated, Released
A term that is somewhat ambiguous in English, but is to be construed as follows. "Terminate" means "end normal traffic on this circuit". "Terminate And Leave" makes the inhibition of normal traffic a condition that can be switched on or off. "Terminate And Leave Activated" (TLA) activates the condition, ending the traffic. "Terminate And Leave Released" (TLR) releases the condition, restoring the traffic.

Test Port
Two contiguous channels that have been designated as a test port through TEST PORT PROVISIONING. They must be located in an NPC that has been designated as a Test Port Group.

Test Port Group
An equipped NPC that has been further designated as a collection of test ports through TEST PORT

PROVISIONING.

TG80
A hardware module that makes available Clear DS1 in the DACS II.

Threshold
An error rate below which no alarm is generated for a Facility Performance Parameter. A DACS II stores sets of Facility Performance Parameter Thresholds for each performance parameters.

Time Division Multiplexing (TDM)
The multiplexing of a number of channels for transmission purposes by taking samples of the signal on each channel at time intervals.

Sampling occurs once every time frame, where the time frames are contiguous. Since the sampling rate is 8000 samples per sec., a time frame is 1/8000 sec.

The number of channels sampled depends on the level in the TDM hierarchy at which multiplexing has been designed to operate. See TDM hierarchy. A DACS II assumes multiplexing is at the DS1 or DS3 levels.

One sample of one channel obtains a number representing the amplitude of the signal on that channel. The resulting stream of numbers is termed a Pulse Amplitude Modulation (PAM) Signal.

The PAM outputs from each channel for one frame are switched sequentially into a common encoder, which represents each one by an 8-bit word. The frame can then be sent as a stream of 8-bit words. The conversion of pulses into words is called Pulse Code Modulation (PCM).

In the transmission phase, the frame of words is transmitted via a single line. At the far end of the line, the PCM signal is converted back to analog signal in demultiplexing.

Time Frame
A 1/8000 sec. time interval within which analog signals are sampled for digitization and transmission. See Pulse Code Modulation, Time Division Multiplexing.

Timeout
A time to wait after the onset of some condition before the software takes action concerning it.

Time Slot
A timed position in a formatted stream of 8-bit words resulting from TDM. An NAS NPC provides time frames of 193 bits divided into 24 channels plus one framing bit. The first 8 data bits are time slot 0, channel 1, the second 8 are time slot 1, channel 2, etc.

A CEPT NPC provides time frames of 256 bits divided into 32 channels. The first 8 bits are time slot 0, channel 0, the second 8 are time slot 1, channel 1, etc. Time slot 0 in alternate frames contains a framing word. The other frame contains signalling information in those bits, called the non-framing word.

Time Slot Interchanger (TSI)
One of many circuits within a CCN that accomplish cross-connection by routing output from a time slot in one NPC to a time slot in another (or the same) NPC.

Time Zone (TZ)
A region whose conventional clocks are set at the same displacement from Greenwich Mean Time (GMT). UNIX treats daylight savings time as an alternate time zone (ATZ). It has a different displacement from GMT, even though its displacement applies to the same region as does the TZ. UNIX is programmed to change between the TZ and the ATZ twice a year. Since the day of one change varies from year to year, the UNIX administrator must set the days of change once a year in the TZ command. The DND provides an interface to enter a TZ command.

TO Side
One side in a two-point cross-connection. In one-way circuits, the TO side is the receiving side (Rx). Its name is derived from the fact that the frame command that establishes the cross-connection identifies the channel number of this point with a TO qualifier. In two-way circuits, the second direction also has a Tx side and Rx side. Thus, if two channels are connected in a two-way circuit, the FROM side and the TO side each have a Tx and Rx side.

Transparent
For the object of which it is predicated, not exhibiting any of its distinguishing characteristics. To the DACScan-2000 Controller C-Module operator, the DND is transparent.

Tributary Leg
Same as branch leg.

Trunk Conditioning Code
A code associated with cross-connected channels or a provisioned test port. The code tells the DACS what signals to place on each channel if the facility fails. It indicates signaling bits to be sent in each direction on the circuit for the first 2.5 seconds after transmission is lost and another set to be sent thereafter.

Two-point Circuit or Cross-connection
A cross-connection between two DS0 channels.

Two-way Cross-connection
A two-point cross-connection that connects the channels in both transmission directions.

Type
The kind of NPC, where "type" gets its significance from the **Type** field of the NPC PROVISIONING form. Different types of NPC are provided by different hardware modules.

U

UB
A DACS II power unit.

Unassigned Multiplexer Channel Code
A value of Hex 18, or 00011000. A code that is sent as the disconnect channel code on unmapped channels of a provisioned NPC when the DS1 lines terminate at the far end on DDS second stage multiplexers.

Unequipped (UEQD)
A value returned to a status field, after you press Enter, when no record of the object described by the form exists in the DND database. The major objects referenced by this status are an NPC or a DACS.

Unprovision
A term used in this manual to mean to remove from the DND database, after having taken out of service.

Upload
An DND **Action** under DATABASE ADMINISTRATION, by which the current provisioning of a DACS is recorded in the DND database, subject to certain restrictions.

Upper NPC
The higher-addressed NPC of the two contiguously numbered DMB NPCs that must be grown at a time.

User Card
A Voice card, Data card, or Alarm Card.

V

Virtual
Apparent, simulating some function or other entity, but not actually it. "Virtual memory", for example, is not really electronic memory, but is disk storage space.

Virtual Multipoint Circuit
A Broadcast Circuit. It is called virtual because the connection is not provided by a DMB, as it is in a true multipoint circuit. Instead, it is a software emulation.

Virtual Node
The branch point in a Virtual Multipoint Circuit. It is not a channel of a DMB NPC, as it is in DMB multipoint, but is a software emulation. Ordinarily the virtual node is system-selected from the 0 through 500 range.

W

White Space
Characters, such as blanks, that have no meaning to the system and are treated as blanks.

Wild-card Character
More technically called a metacharacter, it is a character that can stand for a defined range of other characters in a name, just as a joker can stand for any other card when jokers are wild. The major DND metacharacters are *, which can replace any number of characters, and ?, which can replace one character.

Window
A delineated work region on the screen. In the Sun systems, more than one window can be in use. The background is termed the root window. In other systems, you get only the root window. There is no continuity between windows.

X

X.25
An AT&T implementation of CCITT Recommendation X.25, a packet-switching protocol defining standards of communication between DTE and DCE; i.e., the DTE/DCE interface. The recommendation defines the physical, data link, and network layers of the Reference Model For Open Systems Interconnection, an international convention for data communication.

Y

Yellow Alarm
A CGA alarm sent by an NPC in the direction of transmission when it detects loss of signal. At the same time, the card signals a red alarm to its own DACS. If the line is down, the yellow alarm will not be received, and both sending and transmitting frames will signal red alarm. See also Alarm.

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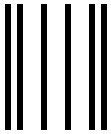
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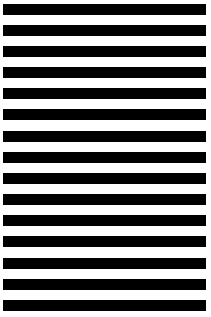
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2

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DND GUI: Logging In to the DND GUI System

2.1G

Background

When to Use

Use this General Task to log in to the DND GUI.

Before You Begin

Before you begin this task:

- Your login/password must already have been set up by the DND administrator
- If this is a workstation that is connected to the DND over the LAN (i.e. not on the DND server) the login/password and set up of the user workspace on the workstation must have already been set up (see `setup_login`)
- If this is a PC, then you must have a network connection to DND already set up. You must have Netscape installed and you should know the URL of the host DND.

Related Information

For related information, refer to Chapter 2, Getting Started.

Instructions

Task Complete the following steps to log in to the DND GUI system:

Step	Action	Reference
1	Choose one of the following actions: ■ If you are logging in from the DND host workstation or a client workstation, skip to Step 3. ■ If you are logging on from a PC, go to Step 2.	
2	To log in from a PC: a. Start Netscape from your PC. b. Enter the DND URL in the **Netsite:** box and press Enter. c. Create a bookmark for the DND URL using the Netscape Bookmarks tool. For example, the DND URL from a PC that is connected to the DND via a LAN is typically: http://<IP ADDRESS>:2020/dnd/DND_browser.html d. Press Enter. e. Skip to Step 7.	
3	To log in from a workstation: move the mouse to a window-free spot on the working screen and right-click. The Workspace Menu appears on the screen.	
4	Select the *Programs* option from the **Workspace** menu. The **Programs** menu appears on the screen.	
5	Select *DND GUI* from the Programs menu. After 5-10 seconds, a Netscape window appears on the screen.	

Instructions (Continued)

Task, Continued

Step	Action	Reference
6	Click the dnd user interface bookmark button on the Netscape Personal Toolbar to connect to the DND server and load the DND application. This bookmark has been previously set up to point to the URL of the DND application. Once clicked, a login form will appear on the screen.	
7	Enter your DND login name in the **Login Name:** field. A DND login should already be set up for you by the system administrator. You cannot gain access to the DND system without a login. The system administrator's default login name is *dacsadm.*	
8	Enter your DND password in the **Password:** field. The default password set up at installation time is *dacs123*.	
9	Click Execute . When the login and password have been verified, you will have access to the DND. Access is evident by noticing the following: ■ The Provisioning button and other buttons in the DND Task bar become active ■ The DND logo will automatically start flashing periodically ■ The DACS network map will appear in the DND Workspace **NOTE:** If either the login or password is incorrect, the DND will not allow you access into the system.	
10	**Stop! End of Task.**	

DND GUI: Logging Out of the DND GUI System

2.2G

Background

When to Use

Use this General Task to log out of the DND GUI system.

Before You Begin

Before you begin this task, you must already be logged in to the DND GUI system (GT 2.1G).

Related Information

For related information, refer to Chapter 2: Getting Started.

Instructions

Task

Complete the following steps to log out of the DND GUI system:

Step	Action	Reference
1	Click on the Session button located on the DND Main screen. The Session menu appears on the screen.	
2	Select *Logoff* from the Session menu. Notice the following: ■ The DND login form appears on the screen ■ The DACS network map will disappear ■ The Provisioning button and other buttons in the DND Task bar become inactive ■ The DND logo will stop flashing	
3	Click Close on the login window and exit Netscape.	
4	**Stop! End of Task.**	

DND GUI: Configuring the DACS II AX for Communicating with DND

2.3G

Background

When to Use

Use this procedure to set up a DACS II AX so that it can communicate with DND.

Related Information

For related information, refer to Chapter 2: Getting Started.

Also, refer to the *DACS II AX 4/11 User's Guide*.

Instructions

Task

To set up the DACS II AX:

Step	Action	Reference
1	On DND, obtain the DND IP address: **vi /etc/hosts**	
2	Log in to the DACS II AX.	
3	From the Main Menu, select System Configuration.	
4	Select "Port IP Addresses".	
5	Note the entry in the LAN IP address field. This identifies the IP address of the unit. Save this information. It is required for the NE PROVISIONING form.	GT 5.1G
6	Exit to the System Configuration menu and select SNMP Agent Configuration.	
7	Check the parameters under Trap Controls. Traps should be enabled. **NOTE:** To enable alarm logging and alarm surveillance for Release 9.0.3 AX equipment (and above), the *Sets*, *Traps*, and *Authentication Traps* parameters must be set to **Enabled**, and the *Provisioning Traps* parameter must be set to **Disabled** on the AX's *SNMP Agent Configuration Menu*.	
8	Enter the DND IP address in one of the unused field under Client-manager IP Addresses.	
9	Under Community Profile, set read-only to *public* and set read-write to *private*. You must enter either *public* or *private* in the community field of the NE PROVISIONING form.	GT 5.1G
10	Log out of the DACS II AX.	
11	**Stop! End of Task.**	

DND GUI: Configuring the AAC/ IMACS for Communicating with DND

2.4G

Background

When to Use

Use this procedure to set up a AAC/IMACS so that it can communicate with DND.

Related Information

For related information, refer to Chapter 2: Getting Started.

Also, refer to the *AAC and IMAC Reference Guides*.

Instructions

Task

To set up the AAC or IMACS:

Step	Action	Reference
1	On DND, obtain the DND IP address: **vi /etc/hosts**	
2	Log in to the AAC/IMACS.	
3	Select CPU XCON screen from the Main Menu. Note the value of the MANAGER field (typically *Manager*). This value is required on the NE provisioning form in the Community field.	GT 5.1G
4	Select tcp/Ip by typing **I**.	
5	Set or note the entry in the HOST IP ADDR field. This identifies the IP address of the unit. Save this information. It is required for the NE PROVISIONING form.	GT 5.1G
6	Enter the DND IP address in one of the unused entries: RPT1, RPT2, or RPT3 IP ADDR.	
7	Enter "public**"** in the corresponding RPT1, RPT2, or RPT3 COMMUN STR field.	
8	Log out of the AAC/IMACS.	
9	**Stop! End of Task.**	

DND GUI: Configuring the PSAX for Communicating with DND

2.5G

Background

When to Use

Use this procedure to set up a PSAX so that it can communicate with DND.

Before You Begin

You must obtain the IP Address that the DND will use to communicate with the PSAX.

Related Information

For related information, refer to Chapter 2: Getting Started.

Also, refer to the *PacketStar PSAX2300 Access Concentrator User's Guide*.

Instructions

Task To set up the PSAX:

Step	Action	Reference
1	Log in to the PSAX.	
2	Select Site Specific Configuration from the Main Menu and press Return. The Site Specific Configuration Menu appears.	
3	Select Site Specific Configuration from the Main Menu and press Return. The Site Specific Configuration Dialog Box appears.	
4	The PSAX requires 3 IP addresses. Set a unique IP address in the **CPU IP Addr** field of each CPU pack. This can be done by logging into the CPU pack via the console port on the pack. Set the Switch IP address on the active CPU pack. Note the entry in the SWITCH IP ADDR field. This identifies the IP address of the unit. Save this information. It is required for the NE PROVISIONING form.	GT 5.1G
5	Enter cntrl-a to save the information.	
6	From the Console Interface Main Menu, select *User Options*. From the User Options screen, take note of the Current SNMP read write community string. This community string is required in the NE PROVISIONING form.	
7	Log out of the PSAX.	
8	**Stop! End of Task.**	

Selecting MML as the Input Language for User DAX

2.1U

Background

When to Use

Use this General Task to change the user language to MML for the DACS login (DAX).

Before You Begin

You must complete this task before using DND to provision a DACS.

You must complete this task before going on to GT 2.2U or GT 2.3U.

Related Information

For related information, refer to Chapter 2, Getting Started.

Instructions

Task

Complete the following steps to verify the language setting for DACS II and DACS II ISX Release 1.0 and higher.

Step	Action	Reference

1	Log in directly at a DACS terminal as a frame administrator using either MML or PDS.
	■ For **MML**, type in the following commands:
	`LGN-USER:::DAX`
	(enter password)
	■ For **PDS**, type in the following commands:
	`LOGIN::USER DAX`
	(enter password)	

2	If the USER DAX input language is **PDS**, change it to **MML** following these steps:
	a. Type in the following command:
	`ADD::USER DAX, LANG M`
	b. Log off:
	`LOGOFF::USER DAX`
	c. Log in again:
	`LGN-USER:::DAX`	

3	**Stop! End of Task.**	
	Select one of the following: ■ Configure the DACS for SNIDER protocol ■ Configure the DACS for X.25 protocol	 GT 2.2U GT 2.3U

Configuring the DACS II for SNIDER Protocol

2.2U

Background

When to Use

Use this General Task to configure the DACS II as a node in a SNIDER configuration.

Before You Begin

The DACS login (DAX) must be set to use the MML language. Refer to GT 2.1U.

NOTE:
(DACS II only) On reset, a DACS II with an ECI card defaults the port default speed to 1200 baud until the DACS reboot is completed. If the administrative link is set to any other speed through the DND FRAME ADMINISTRATION form, communication will be temporarily lost during the DACS reboot. The default port speed of the ICI card is 9600 and so all boot related messages will appear on link setup for 9600.

Related Information

For related information, refer to Chapter 2, Getting Started.

Instructions

Task

Complete the following steps to configure the DACS II as a node in a SNIDER configuration.

Step	Action	Reference
1	Log in directly at a DACS terminal as a frame administrator using MML. Type in the following commands: `LGN-USER:::DAX` (enter password)	
2	Use the following command to configure the link with these settings: enable Enq/Ack, disable xon/xoff, set the protocol to SNIDER, set backspace to the backspace key, and set the link's baud rate: `ED-PRMTR-LINK::n::ENQ-1, XON-0, PTCOL-S, BS-0, BAUD-bb;` n is the link number 1, 2, 3, or 4 and refers to the DACS link. bb is the baud rate. Enter 12, 24, 48, or 96.	
3	Set the language to MML (M) and select the NPC addressing system. Type in the following command: `SET-PRVG-TERM:::n:LANG-M:NPCAD-m;` where m is: E — for 3-digit extended numbering (default for DACS II ISX) X — for 4-digit extended numbering H — for hierarchical numbering (recommended for DACS II)	

Step	Action	Reference

4	Choose either to enable or disable echoed responses from the DACS II, then enter one of the following commands:
	■ To disable echoed responses from the DACS II, set the link screening level to 2:
	`SET-PRVG-TERM:::n:SCR-2;`
	■ To enable echoed responses from the DACS II, set the link screening level to 4:
	`SET-PRVG-TERM:::n:SCR-4, GR-1&-1&-1&-1&-0&-1;`	

5	Repeat steps 1 through 4 for all DACS IIs using SNIDER protocol.	
6	**Stop! End of Task.**	

Configuring DACS II for X.25 Protocol

2.3U

Background

When to Use

Use this General Task to configure the DACS II as a node in an X.25 configuration.

Before You Begin

The DACS login (DAX) must be set to use the MML language. Refer to GT 2.1U.

Related Information

For related information, refer to Chapter 2, Getting Started.

Instructions

Task

Complete the following steps to configure the DACS II as a node in an X.25 configuration.

Step	Action	Reference
1	Log in directly at a DACS terminal as a frame administrator using MML. Type in the following commands: `LGN-USER:::DAX` (enter password)	
2	Using MML, initialize one or both frame links to handle X.25. `ED-PRMTR-LINK::n::PTCOL-X:INIT;` n is the link number. The only valid entry for DACS II ISX is 5. For DACS II, valid entries are 5 or 6.	
3	Change the default setting of 8 SVCs and 8 PVCs per link to 16 SVCs and no PVCs per link: `ED-PRMTR-LINK::n::VC-0016&-0000;`	

4	Set each virtual circuit on the link to the MML language:
	`SET-PRVG-TERM:::n01:LANG-M:NPCAD-m;`
	`SET-PRVG-TERM:::n02:LANG-M:NPCAD-m;`
	...
	`SET-PRVG-TERM:::n16:LANG-M:NPCAD-m;`
	
	n is the link number. The valid entries for DACS II ISX are 501 to 516. Valid entries for DACS II are: 501 to 516 and 601 to 616),
	
	Values for m are:
	E for 3-digit extended NPC numbering
	X for 4-digit extended numbering
	H for hierarchical numbering.	

5	Set the screening of virtual circuits on the link.	

Step	Action	Reference

6	Choose either to enable or disable echoed responses from the DACS II, then enter one of the following commands:
	
	■ To disable echoed responses from the DACS II, set the link screening level to 2:
	
	`SET-PRVG-TERM:::n01:SCR-2;`
	`SET-PRVG-TERM:::n02:SCR-2;`
	`...`
	`SET-PRVG-TERM:::n16:SCR-2;`
	
	■ To enable echoed responses from the DACS II, set the link screening level to 4:
	
	`SET-PRVG-TERM:::n01:SCR-4,GR-1&-1&-1&-1&-0&-1;`
	`SET-PRVG-TERM:::n02:SCR-4,GR-1&-1&-1&-1&-0&-1;`
	`...`
	`SET-PRVG-TERM:::n16:SCR-4,GR-1&-1&-1&-1&-0&-1;`	

7	Set the frame level 2 parameters to match the parameters of the DND: `ED-PRMTR-LINK::n::K-3,N2-7,T1-6;`	
8	**Stop! End of Task.**	

Configuring DACS II for TCP/IP Protocol

2.4U

Background

When to Use

Use this General Task to configure the DACS II as a node in a TCP/IP configuration.

Before You Begin

The DACS login (DAX) must be set to use the MML language. Refer to GT 2.1U. You must obtain an Internet Protocol (IP) address from your network administrator for the DACS.

Related Information

For related information, refer to Chapter 2, Getting Started.

Instructions

Task

Complete the following steps to configure the DACS II as a node in an X.25 configuration.

Step	Action	Reference
1	Log in directly at a DACS terminal as a frame administrator using MML. Type in the following commands: `LGN-USER:::DAX` (enter password)	

2	Using MML, configure the IP address:
	`SET-IP-ADDR::::XXX.XXX.XXX.XXX;`
	`SET-GATEWAY-ADDR::::XXX.XXX.XXX.XXX;`
	`SET-IPMASK-ADDR::::255.255.255.0;`
	
	NOTE:
	Obtain the IP address from your local network administrator. Use the same address for the Gateway address	

3	Reboot the DACS.	

4	Create a login/password at the DACS:
	`CRTE-LGN::::<login>,NEW:<password>`
	`SET-PRVG-USER::::<login>:LANG-M:\`
	`NPCAD-H:LEV-3&-3&-3&-3&-3&-3;`
	`SET-PRVG-USER::::<login>:\`
	`SCR-4,GR-1&-1&-1&-1&-0&-1;`
	If you want DND users who access the system through DND Passthrough to have maintenance privileges:
	SET-PRVG-USER::::<login>::MCON;
	If you do NOT want DND users who access the system through DND Passthrough to have maintenance privileges:
	SET-PRVG-USER::::<login>::MCOFF;	

(Continued on next page)

Instructions

Task (continued)

Step	Action	Reference
5	Note the IP Address used in Step 2 and the user name and password used in Step 4. You will need them again for NE Provisioning.	
6	**Stop! End of Task.**	

Configuring DACS II for 24-Hour Performance Monitoring

2.5U

Background

When to Use

Use this General Task to schedule 24-Hour Performance Monitoring at the DACS and DACS II ISX.

Before You Begin

Ensure that the 24-Hour Performance Monitoring option is enabled on the DND. Refer to GT 5.2G, GT 5.3G, GT 5.4G, GT 5.7G, and GT 2.8U.

If DND supports multiple DACSs, consider these recommendations for scheduling performance monitoring reports:

- Each DACS should have a different execution time for performance monitoring reports, so that two or more DACSs are not reporting performance data at the same time.
- Performance monitoring reports should be set to execute during off-peak usage hours when the DND is not being heavily used.
- Do not schedule performance reports to execute at midnight.

Background (Continued)

Related Information

For related information, refer to:

- *Chapter 2, Getting Started*
- *Chapter 21, 24 Hour Performance Monitoring.*

For details on the MML commands, refer to the *DACS II or DACS II ISX Command and Message Manuals.*

Instructions

Task

Complete the following steps to set up a schedule for 24-Hour Performance Monitoring reports.

Step	Action	Reference
1	Log in directly at a DACS terminal as a frame administrator using MML. Type in the following commands: `LGN-USER:::DAX` (enter password)	

2	A gateway DACS supports both T1 and E1 lines. At each gateway or international DACS II, enter the following commands:
	
	For the DND Forms Performance Monitoring feature:
	`SCHED-PMREPT-ALL:::HH-MM-SS,FAC-X-0002B5,PRIM-X-FBFF;`
	`SCHED-PMREPT-ALL:::HH-MM-SS,MONDAT;`
	
	For the DND GUI Performance Monitoring feature:
	`SCHED-PMREPT-ALL:::HH-MM-SS,FAC-X-0003F7,PRIM-X-FBFF;`
	`SCHED-PMREPT-ALL:::HH-MM-SS,MONDAT;`
	
	NOTE:
	Turn on Performance Monitoring for both PA and non-PA type NPCs in the DND GUI NE PROVISIONING form.	

Step	Action	Reference

3	At each DACS II ISX enter the following commands:
	
	`SCHED-PMREPT-ALL::::HH-MM-SS,PRIM-X-FBFF;`
	`SCHED-PMREPT-ALL::::HH-MM-SS,MONDAT;`
	
	NOTE:
	For the DND GUI Performance Monitoring feature, only turn on Performance Monitoring for PA type NPCs in the DND GUI NE PROVISIONING form.	

4	At each domestic DACS II, enter the following commands: **For the DND GUI Performance Monitoring feature :** `SCHED-PMREPT-ALL::::HH-MM-SS,FAC-X-0003F7;` **NOTE:** Only turn on the Performance Monitoring feature for non-PA type NPCs in the DND GUI NE PROVISIONING form.	
5	**Stop! End of Task.**	

Turning on Message Logging

2.6U

Background

When to Use

Use this General Task to turn on the Message Logging feature at the DACS.

This feature is available for DACS II, Release 8.2.3 and later and DACS II ISX, Release 3.1 and later.

NOTE:
The DND does not verify the existence of this feature at the DACS if it is enabled at the DND. See Chapter 5, NE Provisioning.

Related Information

For related information, refer to Chapter 2, Getting Started.

For details on the MML commands, refer to the *DACS II or DACS II ISX Command and Message Manuals*.

Instructions

Task

Complete the following steps to turn on the Message Logging feature at the DACS.

Step	Action	Reference
1	Log in directly at a DACS terminal as a frame administrator using MML. Type in the following commands: `LGN-USER:::DAX` (enter password)	
2	To turn on Message Logging, enter the following command: `ED-PRMTR-MSGLOG:::ON`	
3	**Stop! End of Task.**	

Turning on Alarm Intervention

2.7U

Background

When to Use

Use this General Task to turn on the Alarm Intervention feature at the DACS.

This feature is available for DACS II, Release 8.2.3 and later and DACS II ISX, Release 3.1 and later.

NOTE:
The DND does not verify the existence of this feature at the DACS if it is enabled at the DND. See Chapter 5, NE Provisioning.

Related Information

For related information, refer to Chapter 2, Getting Started.

For details on the MML commands, refer to the *DACS II or DACS II ISX Command and Message Manuals*.

Instructions

Task

Complete the following steps to turn on the Alarm Intervention feature at the DACS.

Step	Action	Reference
1	Log in directly at a DACS terminal as a frame administrator using MML. Type in the following commands: `LGN-USER:::DAX` (enter password)	
2	To turn on Alarm Intervention, enter the following command: `ED-PRMTR-INTV:::ON;`	
3	**Stop! End of Task.**	

Changing Environment Variables

2.8U

Background

When to Use

Use this General Task to change the settings for the environment variables used by DND.

Before You Begin

You must know the UNIX text editor “vi” to complete this procedure.

Related Information

For related information, refer to “Environment Variables” in Chapter 2: Getting Started.

Instructions

Task

Complete the following steps to change the values for the environment variables used by DND.

Step	Action	Reference
1	Log in to DND as **dacsadm**.	GT 2.8U
2	Open a terminal window. To open a terminal window, right-click on the CDE wallpaper, then choose Programs from the Workspace menu. Choose terminal.	
3	Type **vienv** to edit the environment file.	

4	Find the name of the variable and change the value.
	
	For each variable, two lines appear in this format:
	name**=**value
	export name
	where name is the name of the variable and value is the new value. Use only one entry per line. White space is allowed for value only, provided the value is a string, not a number, and enclosed in double quotes.
	Examples:
	`SEND_ALARM_EVENTS=YES`
	`export SEND_ALARM_EVENTS`
	`SEND_ALARM_EVENTS`
	`export SEND_ALARM_EVENTS`
	The first example sets the variable to YES. The second example sets it to no value.	

5	Exit from vi.	
6	Restart DND. From the DND MAIN MENU, select SYSTEM ADMINISTRATION, then SHUTDOWN. Specify IMMEDIATE and DND REBOOT.	GT 4.11U
7	**Stop! End of Task.**	

Setting/Changing Default Values for NPC and Circuit Provisioning Forms

2.9U

Background

When to Use

Use this General Task to set or change the default field values for the NPC and Circuit Provisioning Forms.

To set or change the default field values, you must make the changes in three files:

- ui_dval.ini
- ui_dval.fre
- ui_dval.eng

Before You Begin

You must know the UNIX text editor “vi” to complete this procedure.

Related Information

For related information, refer to Chapter 2, Getting Started.

Instructions

Task

Complete the following steps to change or set the default field values that appear on the NPC and Circuit Provisioning forms.

Step	Action	Reference
1	If you are logged on as dacsadm, log off. Type **exit**.	
2	At the login CDE splash form, enter **root**.	
3	Enter the **root** password.	
4	Open a terminal window. To open a terminal window, right-click on the CDE wallpaper, then choose Programs from the Workspace menu. Choose terminal.	
5	Type: **cd /user/ems/initstr** The three files that must be edited are included in this directory.	
6	Type: **vi <filename>** where **<filename>** is the name of one of the files to be edited: ui_dval.ini ui_dval.fre ui_dval.eng	
7	Find the default value to be changed. The default value is surrounded by double quotes. A description of the default value is contained in the comment on the same line, as shown in the figure following this procedure.	
8	Use **:w!** to save the changes.	
9	Exit from vi.	
10	Repeat Steps 3 through 6 for all three files: ui_dval.ini, ui_dval.fre, ui_dval.eng.	
11	Log off. Type **exit**.	
12	Restart the DND to have the new value take effect. Use the Shutdown form on the GUI or UI and choose the DND REBOOT shutdown type.	
13	**Stop! End of Task.**	

Instructions

Sample ui_dval.eng File

The following figure shows a sample ui_dval.eng file

```
/*ENGLISH customized default values for CIRCUIT and NPC
provisioning forms */

      /* CIRCUIT PROVISIONING DEFAULTS */

1 “0011.0011”  /*trunk conditioning (CKT_TC) */
2 “TRB”        /* insertion word (CKT_IW) */
3 “”           /*tso to non-ts0 framing bits in FW
(CKT_FW) */
4 “”           /* framing other */
5 “”           /* Signaling conversion (CKT_SC) */
6 “A”          /* bandwidth type */

      /* NPC PROVISIONING DEFAULTS */

7 “PB100”      /* NPC type for DACS II (NPC_TYPE_DACS2)
*/
8 “PA100”      /* NPC type for DACS II ISX
(NPC_TYPE_ISX) */
9 “”           /* insertion word (NPC_TYPE_IW) */
10 “MJ”        /* AIS (NPC_AIS) */
11 “PPPPPPPPP” /* NFS (NPC_NFS) */
12 “10”        /* cbit aging (CBIT_AGING) */
```

Figure GT 2.6U-1. Sample ui_dval.eng File

Setting the Time Zone

2.10U

Background

When to Use

Typically, the time zone information is set on the Sun workstation at installation time and need not be reset during the life of the workstation. Time zone information and daylight savings time adjustments (if necessary) will take place automatically for most time zones around the world.

Use this General Task only if you have one of the following situations:

- You wish to change the default time zone for special applications, i.e., all users are in a time zone that is different from the location of the DND server.
- The installation procedure was unable to identify the proper time zone for your region.
- The automatic time zone adjustments made by the workstation are inaccurate and there is another time zone which better reflects the regional adjustments.

NOTE:
Once the time zone is adjusted manually using the DND's `timezone` command, you are obligated to update the time zone information on a yearly basis to update the daylight savings time information for that year.

Background (Continued)

Related Information

For related information, refer to:

- Chapter 2, Getting Started

Instructions

Task Complete the following steps to set the time zone:

Step	Action	Reference
1	Log into the DND Forms Interface as **dacsadm** and verify that the current year is displayed in the top line of the menu. If necessary, use the DND Forms Interface's SYSTEM ADMINISTRATION form to set the date and time.	GT 2.8U GT 2.9U GT 4.11U
2	Open a terminal window. To open a terminal window, right-click on the CDE wallpaper, then choose Programs from the Workspace menu. Choose terminal.	
3	Type **timezone** to start the timezone command.	
4	A series of menus are displayed to facilitate time zone selection. Enter the menu item that corresponds to the appropriate country or time zone. **NOTE:** **Help** provides additional information about menu items.	
5	Fill out the menu items to select time zone parameters.	
6	You will be prompted to confirm time zone modification and restart DND. Type **y** to confirm the time zone modification restart.	
7	Log in as a DND administrator and verify that the correct time and date is displayed on the top line of the main menu.	GT 2.8U
8	**Stop! End of Task.**	

DND Forms: Logging In from a Workstation

2.11U

Background

When to Use

Use this procedure to log in to DND UI from the DND host workstation or a client workstation.

Related Information

For related information, refer to Chapter 2, Getting Started.

Instructions

Task

To log into the DND computer from a workstation, follow these steps:

Step	Action	Reference
1	Turn on the DND computer. Wait for the computer to boot. Wait the for Common Desktop Environment (CDE) to start up. Do not login to the system until the CDE login form is displayed.	
2	In the CDE login form, enter your login name. You must have a login already set up. If you are logging in as a system administrator, enter **dacsadm** or any other login set up by the system administration. Press Enter.	GT 13.1U
3	Enter the password and press Enter. The CDE window manager will appear on the screen.	
4	Right-click on the CDE wallpaper to display the Workspace Menu.	
5	Select the *Programs* option. A Programs menu will appear.	
6	To start the DND Forms User Interface, select the *DND UI* option. If the DND Forms User Interface is left idle for a specified number of minutes, you will be automatically logged off. To specify the length of the idle time before you are automatically logged off, modify the environment variable IDLE_THRESHOLD. Refer to Chapter 2, Getting Started for details..	
7	To open a terminal window, select *Terminal*.	
8	To open a console window, select *Console*.	
9	**Stop! End of Task.**	

DND Forms: Logging In From a Terminal

2.12U

Background

When to Use

Use this procedure to log in from any of the following:

- PC with terminal emulator
- DECserver700

  The DND and the remote station must be located on the same LAN. The interface to DND is through the DECserver 700.
- X.25 PAD
- PC over LAN using telnet
- Terminal directly connected to the Serial Expansion Unit

Background (Continued)

Before you begin

For DECserver 700:

- The remote station must be defined to DND before you can log in remotely through the DECserver 700. Refer to the *DACS II Network Director (DND) Installation Manual* for this release.
- In addition, the */etc/hosts* file of your login station must contain entries for each DECserver 700 that it will access.

For X.25:

- When the user disconnects or a link failure occurs, DND updates the list of users connected. The total number of X.25 UI sessions that can be used to access the DND cannot exceed 15.

Related Information

For related information, refer to Chapter 2, Getting Started.

Instructions

Task To log into the DND computer from a terminal:

Step	Action	Reference
1	(DECserver 700 only) At the DECserver 700 system prompt, enter: **telnet hostname** where: **hostname** is the name of the DND.	
2	(All users logging in from a terminal) Enter the login name, password, and terminal type when prompted. The DND Forms User Interface will automatically start up. If the DND Forms User Interface is left idle for a specified number of minutes, you will be automatically logged off. To specify the length of the idle time before you are automatically logged off, modify the environment variable `IDLE_THRESHOLD`. Refer to Chapter 2, Getting Started for details.	
3	**Stop! End of Task.**	

DND Forms: Logging Out of the DND System

2.13U

Background

When to Use

Use this General Task to log out of the DND system.

Before You Begin

Before you begin this task, you must already be logged in to the DND system (GT2.9U or GT 2.10U).

Related Information

For related information, refer to Chapter 2, Getting Started.

Instructions

Task

Complete the following steps to log out of the DND system:

Step	Action	Reference
1	Select LOGOFF from the DND MAIN MENU.	
2	**Stop! End of Task.**	

DND Screens and Form Navigation General Tasks

3

Contents

- DND GUI
  - Replacing the DND GUI Workspace Background Image GT 3.1G
  - Replacing the DND GUI Mini-Map Background Image GT 3.2G

DND GUI: Replacing the DND GUI Workspace Background Image

3.1G

Background

When to Use

Use this General Task to change the DND Workspace background image.

Before You Begin

Before you begin this task, you must already have the replacement image in the .gif format saved on your system.

NOTE:
If possible, replace the background image before provisioning network elements and interties.

Related Information

For related information, see *Chapter 3, DND Screens and Form Navigation.*

Instructions

Task

Complete the following steps to replace the DND Workspace background image:

Step	Action	Reference
1	Right-click and hold in the CDE window. A pull-down menu appears on the screen.	
2	Select *TERMINAL* from the menu. A terminal window appears on the screen.	
3	At the UNIX prompt, type the following command: unix> **cd /usr/ns-home/docs/dnd** This will change your present directory to the one indicated above.	
4	At the UNIX prompt, type the following command: unix> **ls** A listing of all files associated with the browser will appear in the window. The background image is called **main_map.gif**.	
5	Save the replacement image with the filename **main_map.gif**. At the UNIX prompt, type the following command to move this picture into the **/usr/ns-home/docs/dnd** directory: unix> **mv main_map.gif /usr/ns-home/docs/dnd** **CAUTION:** *Before doing this, you may want to rename the original background image or move it to another directory to avoid overwriting it.*	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
6	The size of the image may affect the size of the DND Workspace. Ideally, the replacement image should have the same dimensions as the original image. If this is not the case, perform ONE of the following: ■ If the replacement image is larger than the original image, edit the **DND_browser.html** file: — Change the following parameter values with values that correspond to the size of your image: **WIDTH** = *1050* and **HEIGHT** = *810* ■ If the replacement image is smaller than the original image and network elements exist in the DND Workspace: 1. Drag the network elements to the left side of the DND Workspace 2. Click Workspace and select *Save Workspace* 3. Move the replacement image to the **/usr/ns-home/docs/dnd** directory (see Step 5) 4. Drag the network elements to the desired positions on the DND Workspace 5. Click Workspace and select *Save Workspace*	
7	**Stop! End of Task.**	

DND GUI: Replacing the DND GUI Mini-Map Background Image

3.2G

Background

When to Use

If you have changed the DND Workspace background image, then use this General Task to change the DND mini-map image. The smaller version should represent the same geographic area as the DND Workspace background image.

This procedure is used to do either of the following:

- If a replacement image is available, this procedure is used to replace the mini-map image with your own replacement image
- If a replacement image is not available, this procedure is used to remove the existing mini-map image. If there is no mini-map image, DND will scale the DND Workspace background image to fit in the mini-map area.

Before You Begin

If you are replacing the image, you must already have the replacement image in the .gif format saved on your system. The dimensions of the image are allowed to vary, but an approximate 1/4 scale version of the larger image is recommended.

NOTE:
If possible, replace the mini-map background image before provisioning network elements and interties.

Background (Continued)

Related Information

For related information, see *Chapter 3, DND Screens and Form Navigation.*

Instructions

Task

Complete the following steps to replace the DND Workspace background image:

Step	Action	Reference
1	Right-click and hold in the CDE window. A pull-down menu appears on the screen.	
2	Select *TERMINAL* from the menu. A terminal window appears on the screen.	
3	At the UNIX prompt, type the following command: unix> **cd /usr/ns-home/docs/dnd** This will change your present directory to the one indicated above.	
4	At the UNIX prompt, type the following command: unix> **ls** A listing of all files associated with the browser will appear in the window. The background image is called **main_map_mini.gif**.	
5	Do one of the following: ■ If you do not have a replacement image, continue with Step 6. ■ If you do have a replacement image, skip to Step 7.	

Step	Action	Reference

6	If you do *not* have a replacement mini-map, copy the existing file to another location, then delete the original.
	
	Example:
	
	`cp main_map_mini.gif mm_mini.gif.sys_default`
	
	`rm main_map_mini.gif`
	
	NOTE:
	Do not use the **mv** command to rename the file. Because of certain characteristics of the web browser and the operating system, the old file may still appear during DND operation.	

7	If you *do* have a replacement mini-map, move the existing file to another location, then copy in the new image.
	
	Example:
	
	`mv main_map_mini.gif mm_mini.gif.sys_default`
	
	`cp <directory>/new_image.gif main_map_mini.gif`
	where <directory> is the location of the new image.	

8	**Stop! End of Task.**	

System Administration General Tasks

4

Contents

- DND GUI
  - Enabling a Printer GT 4.1G
  - Disabling a Printer GT 4.2G
  - Displaying Print Jobs Queued GT 4.3G
  - Removing Prints Jobs Queued GT 4.4G
  - Printing/Stop Printing Output or Frame Alarms GT 4.5G
  - Shutting Down DND GT 4.6G
  - Setting the Date and Time GT 4.7G
  - Synchronizing Frame Date & Time GT 4.8G

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Contents (Continued)

■ DND Forms

Enabling a Login Port	GT 4.1U
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Printing/Stop Printing Output or Frame Alarms	GT 4.9U
Shutting Down DND	GT 4.10U
Setting the Date and Time	GT 4.11U
Synchronizing Frame Date & Time	GT 4.12U

DND GUI: Enabling a Printer

4.1G

Background

When to Use

Use this General Task to enable a printer.

Before You Begin

Before any printing can occur, you must enable the printer.

Related Information

For related information, refer to *Chapter 4, System Administration.*

Instructions

Task Complete the following steps to enable a printer:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Printer Administration**. The PRINTER ADMINISTRATION form will appear on the screen.	
3	Select *ENABLE* from the **Action:** field.	
4	Click Continue... .	
5	Select a printer in the **Printer:** field.	
6	Click Continue... .	
7	Press EXECUTE. — The **Printer Status** field changes to *ENABLED*. — `Printer now enabled` message is displayed.	
8	**Stop! End of Task.**	

DND GUI: Disabling a Printer

4.2G

Background

When to Use

Use this General Task to disable a printer.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task

Complete the following steps to disable a printer:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Printer Administration**. The PRINTER ADMINISTRATION form will appear on the screen.	
3	Select *DISABLE* from the **Action:** field.	
4	Click Continue... .	
5	Select a printer in the **Printer:** field.	
6	Click Continue... .	
7	Press EXECUTE. — The **Printer Status** field changes to *DISABLED*. — `Printer now disabled` message is displayed.	
8	**Stop! End of Task.**	

DND GUI: Displaying Print Jobs Queued

4.3G

Background

When to Use

Use this General Task to display queued print jobs.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task Complete the following steps to display queued print jobs

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Printer Administration**. The PRINTER ADMINISTRATION form will appear on the screen.	
3	Select *LIST* from the **Action:** field.	
4	Click Continue... .	
5	Select a printer in the **Printer:** field.	
6	Click Continue... . A chronological list of the queued print jobs for all users is displayed. The list reflects the status of the queue at the time you pressed Continue... . The list includes the following information for each job in the queue: — job number — print request originator — file size — time and date	
7	If no jobs are on the queue, a message is displayed: `No jobs queued to the printer.`	
8	**Stop! End of Task.**	

DND GUI: Removing Prints Jobs Queued

4.4G

Background

When to Use

Use this General Task to remove a queued print job.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task

Complete the following steps to remove queued print jobs.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Printer Administration**. The PRINTER ADMINISTRATION form will appear on the screen.	
3	Select *CANCEL* from the **Action:** field.	
4	Click Continue... .	
5	Select a printer in the **Printer:** field.	
6	Click Continue... . A chronological list of the queued print jobs for all users is displayed. The list reflects the status of the queue at the time you pressed Continue... . The list includes the following information for each job in the queue: — job number — print request originator — file size — time and date	
7	Select jobs to be canceled.	
8	Click Continue... .	
9	Click EXECUTE to delete the selected jobs.	
10	**Stop! End of Task.**	

DND GUI: Printing/Stop Printing Output or Frame Alarms

4.5G

Background

When to Use

Use this General Task to print or stop printing the output or alarms of a DACS.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task

You can print a log of output or a log of alarms from a DACS. Complete the following steps to print or stop printing..

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Printer Administration**. The PRINTER ADMINISTRATION form will appear on the screen.	
3	Select one of the following **Action**s: ■ *LOGALL* - To print a log of all output from the **Site Name** you select. ■ *LOGALARMS* - To print a log of only the alarms issued by the **Site Name** you select. ■ *STOPLOGGING* - To stop printing the log of output or alarms for the **Site Name** you select.	
4	Click Continue... .	
5	Select the **Site Name** of the DACS from which you wish to apply this action, then click Continue... . The **Logging Status** indicates the current status for the site you selected: *ALL*, *ALARMS*, or *OFF*..	
6	Click EXECUTE. `The command completed successfully` message is displayed.	
7	The log is printed when the print buffer contains one page (66 lines). A separate page buffer is maintained for each DACS.	
8	**Stop! End of Task.**	

DND GUI: Shutting Down DND

4.6G

Background

When to Use

Use this General Task to shut down DND.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Before you begin

CAUTION:
Select SYSTEM SHUTDOWN before removing power from DND. Important files may be lost.

Instructions

Task Complete the following steps to shut down DND.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **System Shutdown**. The SYSTEM SHUTDOWN form will appear on the screen.	
3	Select a **Shutdown Type** and **Shutdown Time**.	
4	Click Continue... .	
5	Click Execute .	
6	If you selected the 1, 5 or 10 minute options, at intervals of 1 minute, a status line message is braodcast to each user: `SYSTEM GOING DOWN IN X MINUTES, PLEASE LOG OFF`	
7	At the end of the last minute, the **Status** displays: `SYSTEM GOING DOWN, PLEASE LOG OFF NOW`	
8	A number of messages will be displayed as DND shuts down. When the software has finished shutting down, follow the established policy regarding turning off the hardware or leaving it on.	
9	**Stop! End of Task.**	

DND GUI: Setting the Date and Time

4.7G

Background

When to Use

Use this General Task to set the date and time on the DND computer.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task

Complete the following steps to set the date and time on the DND computer.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **System Date/Time**. The SYSTEM DATE/TIME form will appear on the screen.	
3	Select a **Time** and **Date**.	
4	Click Continue... .	
5	Click Execute .	

DND GUI: Synchronizing Frame Date & Time

4.8G

Background

When to Use

Use this General Task to synchronize the frame date and time with the DND date and time.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task

Complete the following steps to set the date and time on the DND computer.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Synchronize Frame Date & Time**. The Synchronize Frame Date & Time form will appear on the screen.	
3	Select a **Site Name**.	
4	Click Continue... .	
5	Click Execute .	

DND Forms: Enabling a Login Port

4.1U

Background

When to Use

Use this General Task to enable a login port and set the login port speed.

Before you begin

Login ports must have been installed. Login ports are installed during system installation when the Central Data drives are installed.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task Complete the following steps to enable a login port.

Step	Action	Reference
1	Obtain the LOGIN PORT ADMINISTRATION form.	
2	Enter an **Action** of RESTORE.	
3	Enter the **Port** number. The DND displays that port's current speed, if there is one. The **Status** now reflects the status of the **Port**.	
4	(Optional) Enter a new **Speed.** The default speed is **1200**. To change the speed, overwrite the speed with the desired value. Use CHOICES to display the available speeds.	
5	Press EXECUTE and answer YES to ARE YOU SURE? The results are: — The **Status** changes to or remains IS (In Service). — `The command completed successfully` message is displayed.	
6	**Stop! End of Task**.	

DND Forms: Disabling a Login Port

4.2U

Background

When to Use

Use this General Task to disable a login port that has been previously enabled..

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task

Complete the following steps to disable a login port.

Step	Action	Reference
1	Obtain the LOGIN PORT ADMINISTRATION form	
2	Enter an **Action** of REMOVE.	
3	Enter the **Port** number. The DND displays that port's current speed, if there is one. The **Status** now reflects the status of the **Port**.	
4	Press EXECUTE and answer YES to ARE YOU SURE?	
5	**Stop! End of Task.**	

DND Forms: Placing an X.25 Line In-Service

4.3U

Background

When to Use

Use this General Task to place an X.25 line in-service in the DND database.

Before you begin

Before you can complete this task, the X.25 line must be equipped from the SunLink X.25 tool. This process is completed during installation. For instructions on equipping the X.25 line from the SunLink X.25 tool, refer to the *DACS II Network Director (DND) Installation Manual*.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task

Complete the following steps to place a X.25 line in-service.

Step	Action	Reference
1	Obtain the X.25 LINK PROVISIONING form.	
2	Enter an **Action** of RESTORE.	
3	Fill in **Line No.**	
4	The **Status** is now displayed. Verify that it is OOS.	
5	Press EXECUTE and answer YES to ARE YOU SURE? When the link is successfully established: — The **Status** field changes to IS. — `The command completed successfully` message is displayed.	
6	**Stop! End of Task.**	

DND Forms: Removing an X.25 Line From Service

4.4U

Background

When to Use

Use this General Task to remove an X.25 line from service. This operation will only be used to remove the X.25 from service.

Before you begin

Before you can complete this task, all DACS frames using this line must be removed from service. Usually, you will want to re-assign all of the DACS using this X.25 line to another line.

Refer to the *DACS II Network Director (DND) Installation Manual* for information on how to disable the line from the SunLink X.25 tool.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task

Complete the following steps to remove an X.25 line from service.

Step	Action	Reference
1	Obtain the X.25 LINK ADMINISTRATION form.	
2	Fill in the following fields: — **Action**: REMOVE — **Line No.**: x where x is the number of the line. The **Status** is filled in automatically. Verify that it is IS.	
3	Press EXECUTE and answer YES to ARE YOU SURE? When the link has been taken out of service: — The **Status** field changes to OOS. — The command completed successfully message is displayed. **NOTE:** If any packet level connections are active through this link, this action is denied.	
4	**Stop! End of Task.**	

DND Forms: Enabling a Printer

4.5U

Background

When to Use

Use this General Task to enable a printer.

Before You Begin

Before any printing can occur, you must enable the printer.

Related Information

For related information, refer to *Chapter 4, System Administration.*

Instructions

Task

Complete the following steps to enable a printer:

Step	Action	Reference
1	Obtain the PRINTER MANAGEMENT form.	
2	Select an **Action** of ENABLE from the CHOICES menu.	
3	Select a **Printer Name** from the CHOICES menu.	
4	Press EXECUTE. — The **Printer Status** field changes to ENABLED. — `Printer now enabled` message is displayed.	
5	**Stop! End of Task.**	

DND Forms: Disabling a Printer

4.6U

Background

When to Use

Use this General Task to disable a printer.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task

Complete the following steps to disable a printer:

Step	Action	Reference
1	Obtain the PRINTER MANAGEMENT form.	
2	Select an **Action** of `DISABLE` from the CHOICES menu.	
3	Select a **Printer Name** from the CHOICES menu.	
4	Press EXECUTE. — The **Printer Status** field changes to `DISABLED`. — `Printer now disabled` message is displayed.	
5	**Stop! End of Task.**	

DND Forms: Displaying Print Jobs Queued

4.7U

Background

When to Use

Use this General Task to display queued print jobs.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task

Complete the following steps to display queued print jobs.

Step	Action	Reference
1	Obtain the PRINTER MANAGEMENT form.	
2	Select an **Action** of LIST from the CHOICES menu.	
3	Select a **Printer Name** from the CHOICES menu.	
4	Press EXECUTE. A chronological list of the queued print jobs for all users is displayed. The list reflects the status of the queue at the time you execute `LIST` or select `JOB STATUS`, but the jobs continue to be processed. The list includes the following information for each job in the queue: — job number — print request originator — file size	
5	To return to the PRINTER MANAGEMENT form, press QUIT. If no jobs are on the queue, a message is displayed: `No jobs queued to the printer.`	
6	**Stop! End of Task.**	

DND Forms: Removing Prints Jobs Queued

4.8U

Background

When to Use

Use this General Task to remove a queued print job.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task

Complete the following steps to remove queued print jobs.

Step	Action	Reference
1	Obtain the PRINTER MANAGEMENT form.	
2	Select an **Action** of CANCEL from the CHOICES menu.	
3	Select a **Printer Name** from the CHOICES menu.	
4	Press EXECUTE. The jobs are listed as for the `LIST` **Action**. However, an additional field, **Cancel**, appears before **Job No.**	
5	Using Enter, move the cursor to the beginning of the line for the job you wish to cancel and type an `x` or `X`.	
6	Press CANCEL. **NOTE:** If the cursor remains on **Display Page**, you are in `LIST` rather than in `CANCEL`. Press QUIT and enter `CANCEL` as an **Action**.	
7	**Stop! End of Task.**	

DND Forms: Printing/Stop Printing Output or Frame Alarms

4.9U

Background

When to Use

Use this General Task to print or stop printing the output or alarms of a DACS.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task

You can print a log of output or a log of alarms from a DACS. Complete the following steps to print or stop printing.

Step	Action	Reference
1	Obtain the PRINTER MANAGEMENT form.	
2	Enter one of the following **Action**s: ■ LOGALL - To print a log of all output from the **Site Name** you select. ■ LOGALARMS - To print a log of only the alarms issued by the **Site Name** you select. ■ STOPLOGGING - To stop printing the log of output or alarms for the **Site Name** you select.	
3	Enter the **Site Name** of the DACS from which you wish to log all output or alarms only, then press EXECUTE. — Depending on the **Action** you chose, the **Logging Status** indicates ALL, ALARMS, or OFF. — The command completed successfully message is displayed.	
4	To print or stop printing the output or alarms from another site, perform the previous steps again, changing the **Site Name.** The print buffer holds one page at a time; that is, it does not print until it contains one page (66 lines). A separate page buffer is maintained for each DACS.	
5	**Stop! End of Task.**	

DND Forms: Shutting Down DND

4.10U

Background

When to Use

Use this General Task to shut down DND.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task Complete the following steps to shut down the DND.

Step	Action	Reference
1	From the SYSTEM ADMINISTRATION menu, select SHUTDOWN to power down DND. ⚠ **CAUTION:** *Select SHUTDOWN before removing power from DND. Important files may be lost.*	
2	From the SHUTDOWN TIME menu, select a value.	
3	If you selected the 1, 5 or 10 minute options, at intervals of 1 minute, a command line message appears at the bottom of the screen: `SHUTDOWN STARTING IN X MINUTES`	
4	A **Status** message is broadcast to every terminal: `SYSTEM GOING DOWN IN X MINUTES, PLEASE LOG OFF`	
5	At the end of the last minute, the **Status** displays: `SYSTEM GOING DOWN, PLEASE LOG OFF NOW`	
6	When the SHUTDOWN TYPE pop-up menu is displays, choose an option	
7	If you selected `QUIT` or `NO`, the following **status** message is displayed: `SYSTEM SHUTDOWN HAS BEEN ABORTED`	
8	If you chose any of the shutdown selections, the DND **Status** now changes to: `SYSTEM SHUTDOWN IS NOW IN PROGRESS`	
9	A number of messages will be displayed as DND shuts down. When the software has finished shutting down, follow the established policy regarding turning off the hardware or leaving it on.	
10	**Stop! End of Task.**	

DND Forms: Setting the Date and Time

4.11U

Background

When to Use

Use this General Task to set the date and time on the DND computer.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task

Complete the following steps to set the date and time on the DND computer.

Step	Action	Reference
1	Select DATE AND TIME from the SYSTEM ADMINISTRATION menu.	
2	Enter the desired hour, `0-23`.	
3	Enter the minute, `00-59`.	
4	Enter the day, `1-31`.	
5	Enter the first three letters of the month.	
6	Press EXECUTE. — The new date and time appear on the screen. — `The command completed successfully` message is displayed.	
7	Perform SHUTDOWN and restart so that the new time and date will be reflected by automatic functions that use them.	GT 4.10U
8	**Stop! End of Task.**	

DND Forms: Synchronizing Frame Date & Time

4.12U

Background

When to Use

Use this General Task to synchronize the frame date and time.

Related Information

For related information, refer to *Chapter 4, System Administration*.

Instructions

Task

Complete the following steps to synchronize the frame date and time.

Step	Action	Reference
1	Select SYNCHRONIZE FRAME DATE & TIME from the SYSTEM ADMINISTRATION menu. The WHICH DACS? prompt and the list of DACSs appears in an insert.	
2	Select the desired DACS, confirm and press Enter. DND sends a time and date command to the DACS.	
3	**Stop! End of Task.**	

NE Provisioning General Tasks

5

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  - Creating an SNMP-based Network Element — GT 5.1G
    - What's Next for NE Provisioning — SE 5.1.1G
  - Creating a DACS, X.25 Link — GT 5.2G
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Deleting a DACS	GT 5.7U

DND GUI: Creating an SNMP-based Network Element

5.1G

Background

When to Use

Use this General Task to create an SNMP-based network element. The SNMP-based network elements are the DACS II AX, IMACS, AAC, PSAX, or Other-type SNMP node. DND will use SNMP to communicate with these network elements on the TCP/IP network using SNMP.

Before You Begin

Before you begin this task, you must have logged on the DND GUI (GT 2.1G).

Only a DND administrator (e.g. login=*dacsadm*) may perform this procedure.

You must have the SNMP node's IP address and community string to complete this procedure. Refer to GT 2.3G for DACS II AX, GT 2.4G for AAC/IMACS , and GT2.5G for PSAX.

Related Information

For related information, refer to Chapter 5, NE Provisioning.

Instructions

Task Complete the following steps to create an SNMP-based network element:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NE Provisioning...** The NE PROVISIONING form will appear on the screen.	
3	Select *CREATE* from the **Action:** field.	
4	Click Continue... .	
5	Select an **Element Type**. Select DACS II AX, IMACS, AAC, or Other.	
6	Type a desired site name in the **New Site Name:** field.	
7	Click Continue... .	
8	(Optional) Enter the physical location of the NE in the **Location:** field.	
9	(Optional) Check **Automatic Device Sync** to request an automatic device synchronization to occur between DND and a DACS II AX when communications to the DACS is restored. (Applies to AX equipment in Release 9.0.3 and above only.)	
10	(Optional) Assign this node to specific partitions in the **Assign to Partition:** multi-select combo box. (By default, the node is assigned to all partitions.)	
11	Enter the node's **IP Address**.	
12	Enter the **Community** string (password) used for communications between DND and the node.	

Instructions (Continued)

Task, Continued

Step	Action	Reference
13	Click Continue... . All fields on the form become read-only.	
14	Verify the information on the form to ensure you are creating the desired NE.	
15	When you have approved the information on the form, click Execute . On the Network Map, the new NE icon will appear in the upper left corner of the DND Workspace.	
16	Drag the NE icon to the desired position on the DND Workspace.	
17	Click Workspace and select the *Save to Server* selection to save the new network map in the DND database.	
18	**Stop! End of Task.**	
	Select a What's Next Option.	SE 5.1.1G

SE 5.1.1G What's Next Options for NE Provisioning

What's Next? Perform one of the following options below upon completion of the task:

Options	Reference
Click New Action to perform a new action on the current NE.	GT 5.1G - GT 5.9G
Click New NE to work on a new NE.	
Click Restart to clear and initialize the form and select an **Action:** for another NE.	
Click Close to exit the NE PROVISIONING form.	

DND GUI: Creating a DACS, X.25 Link

5.2G

Background

When to Use

Use this General Task to create a DACS representation in the DND database. The DND will use X.25 to communicate to this DACS. Upon completion of this task, the DACS communications information will be inserted into the database and a DND database will be created for storage of DACS equipment and circuit information. If the DND GUI is running, then a new DACS icon will appear on the DND Workspace in the upper left hand corner.

Before You Begin

Before you begin this task, you must have logged on the DND GUI (GT 2.1G).

NOTE:
Only a DND administrator (e.g. login=*dacsadm*) may perform this procedure.

Related Information

For related information, refer to Chapter 5, NE Provisioning.

Instructions

Task

Complete the following steps to create a DACS using an X.25 link:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NE Provisioning...** The NE PROVISIONING form will appear on the screen.	
3	Select *CREATE* from the **Action:** field.	
4	Select DACS II or DACS II ISX for **Element Type.**	
5	Click Continue... . The **New Site Name:** field appears on the form.	
6	Type a desired site name in the **New Site Name:** field.	
7	Click Continue... . DND Processing Options and DACS Information boxes appear on the form.	
8	Select a **Conditional ERP:** and a **Programmable Priority:** option.	
9	Enter an **Alarm Sync:** value.	
10	Select a **DACS Type:** option. **NOTE:** The DND **Language:** option defaults to MML. The PDS language cannot be used.	
11	Select the **NPC Addressing:** option.	
12	Enter the DACS software generic number in the **Generic:** field.	
13	Select *X.25* for the **Protocol:** option.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
14	(Optional) Enter the physical location of the DACS in the **Location:** field.	
15	(Optional) Select *YES* if you want to turn on the Alarm Intervention feature. Available for DACS II, Release 8.2.3 and later and DACS II ISX, Release 3.1 and later.	
16	(Optional) Fill in the **DACS Log Recovery** and **DACS Failure Length** fields. Available for DACS II, Release 8.2.3 and later and DACS II ISX, Release 3.1 and later.	
17	(Optional) Select the **24-Hour Performance Monitoring** Processing *ON* option for non-PA and PA type NPCs.	
18	Click Continue... . The **X.25 Communications Protocol Information** box will appear on the form. The **X.25 Link Status Information** box displays the status of each of the four possible X.25 links. The fields within these boxes are read-only.	
19	Select the **Primary Line:** option. Choose one of the in-service lines by clicking on the radio button. Enter the corresponding address/phone number in the associated **Network Address:** field.	
20	(Optional) Select the X.25 line as the **Backup Line:** You have the option of selecting NONE for a Backup Line. Choose one of the in-service lines by clicking on the radio button.Enter the corresponding address/phone number in the **Network Address:** field.	
21	Click Continue... . All fields on the form become read-only.	
22	Verify the information on the form to ensure you are creating the desired DACS.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
23	When you have approved the information on the form, click Execute. On the Network Map, the new DACS icon will appear in the upper left corner of the DND Workspace.	
24	Drag the DACS icon to the desired position on the DND Workspace. The Workspace button in the DND Task bar becomes active.	
25	Click Workspace and select the *Save to Server* selection to save the new network map in the DND database.	
26	**Stop! End of Task.**	
	Select a What's Next option.	SE 5.1.1G

DND GUI: Creating a DACS, SNIDER Link

5.3G

Background

When to Use

Use this General Task to create a DACS representation in the DND database. The DND will use SNIDER to communicate to this DACS. Upon completion of this task, the DACS communications information will be inserted into the database and a DND database will be created for storage of DACS equipment and circuit information. If the DND GUI is running, then a new DACS icon will appear on the DND Workspace in the upper left hand corner.

Before You Begin

Before you begin this task, you must have logged on the DND GUI (GT 2.1G).

NOTE:
Only a DND administrator (e.g. login=*dacsadm*) may perform this procedure.

Related Information

For related information, refer to Chapter 5, NE Provisioning.

Instructions

Task

Complete the following steps to create a DACS using a SNIDER link:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NE Provisioning...** The NE PROVISIONING form will appear on the screen.	
3	Select DACS II or DACS II ISX for **Element Type.**	
4	Select *CREATE* from the **Action:** field.	
5	Click Continue... . The **New Site Name:** field appears on the form.	
6	Type a desired site name in the **New Site Name:** field.	
7	Click Continue... . DND Processing Options and DACS Information boxes appear on the form.	
8	Select a **Conditional ERP:** and a **Programmable Priority:** option.	
9	Enter an **Alarm Sync:** value.	
10	Select a **DACS Type:** option. **NOTE:** The DND **Language:** option defaults to MML. The PDS language cannot be used.	
11	Select the **NPC Addressing:** option.	
12	Enter the DACS software generic number in the **Generic:** field.	
13	Select *SNIDER* for the **Protocol:** option.	
14	(Optional) Enter the physical location of the DACS in the **Location:** field.	

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Instructions (Continued)

Task, Continued

Step	Action	Reference
15	(Optional) Select *YES* if you want to turn on the Alarm Intervention feature. Available for DACS II, Release 8.2.3 and later and DACS II ISX, Release 3.1 and later.	
16	(Optional) Fill in the **DACS Log Recovery** and **DACS Failure Length** fields. Available for DACS II, Release 8.2.3 and later and DACS II ISX, Release 3.1 and later.	
17	(Optional) Select the **24-Hour Performance Monitoring** Processing *ON* option for non-PA and PA type NPCs.	
18	Click Continue... . The **SNIDER Communications Protocol Information** box will appear on the form.	
19	Select the desired SNIDER **Line Number:** option. The dialog window lists only the asynchronous port link numbers which are not in-use.	
20	Select the **Baud Rate:** option.	
21	Click Continue... . All fields on the form become read-only.	
22	Verify the information on the form to ensure you are creating the desired DACS.	
23	When you have approved the information on the form, click Execute .	
24	**Stop! End of Task.**	
	Select a What's Next option.	SE 5.1.1G

DND GUI: Creating a DACS, TCP/IP Link

5.4G

Background

When to Use

Use this General Task to create a DACS representation in the DND database. The DND will use TCP/IP to communicate to this DACS. Upon completion of this task, the DACS communications information will be inserted into the database and a DND database will be created for storage of DACS equipment and circuit information. If the DND GUI is running, then a new DACS icon will appear on the DND Workspace in the upper left hand corner.

Before You Begin

Before you begin this task, you must have logged on the DND GUI (GT 2.1G).

NOTE:
Only a DND administrator (e.g. login=*dacsadm*) may perform this procedure.

Related Information

For related information, refer to Chapter 5, NE Provisioning.

Instructions

Task

Complete the following steps to create a DACS using an TCP/IP link:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NE Provisioning...** The NE PROVISIONING form will appear on the screen.	
3	Select *CREATE* from the **Action:** field.	
4	Select DACS II or DACS II ISX for **Element Type.**	
5	Click Continue... . The **New Site Name:** field appears on the form.	
6	Type a desired site name in the **New Site Name:** field.	
7	Click Continue... . DND Processing Options and DACS Information boxes appear on the form.	
8	Select a **Conditional ERP:** and a **Programmable Priority:** option.	
9	Enter an **Alarm Sync:** value.	
10	Select a **DACS Type:** option. **NOTE:** The DND **Language:** option defaults to MML. The PDS language cannot be used.	
11	Select the **NPC Addressing:** option.	
12	Enter the DACS software generic number in the **Generic:** field.	
13	Select *TCP/IP* for the **Protocol:** option.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
14	(Optional) Enter the physical location of the DACS in the **Location:** field.	
15	(Optional) Select *YES* if you want to turn on the Alarm Intervention feature Available for DACS II, Release 8.2.3 and later and DACS II ISX, Release 3.1 and later..	
16	(Optional) Fill in the **DACS Log Recovery** and **DACS Failure Length** fields. Available for DACS II, Release 8.2.3 and later and DACS II ISX, Release 3.1 and later.	
17	(Optional) Select the **24-Hour Performance Monitoring** Processing *ON* option for non-PA and PA type NPCs.	
18	Click Continue... . The **TCP/IP Communications Protocol Information** box will appear on the form.	
19	Enter the **IP address**. **NOTE:** The IP address must be set at the DACS before DND can use the DACS II telnet interface. See Chapter 2, Getting Started.	
20	Enter a **DACS user name** using all UPPER CASE characters. **NOTE:** The user name must be created at the DACS before DND can use the DACS II telnet interface. See Chapter 2, Getting Started.	

(Continued on next page)

Instructions (Continued)

Task, Continued

21	Enter a **DACS user password** using all UPPER CASE characters. **NOTE:** The user password must be created at the DACS before DND can use the DACS II telnet interface. See Chapter 2, Getting Started.	
22	Click Continue... . All fields on the form become read-only.	
23	Verify the information on the form to ensure you are creating the desired DACS.	
24	When you have approved the information on the form, click Execute . On the Network Map, the new DACS icon will appear in the upper left corner of the DND Workspace.	
25	Drag the DACS icon to the desired position on the DND Workspace. The Workspace button in the DND Task bar becomes active.	
26	Click Workspace and select the *Save to Server* selection to save the new network map in the DND database.	
27	**Stop! End of Task.**	
	Select a What's Next option.	SE 5.1.1G

DND GUI: Restoring a DACS

5.5G

Background

When to Use

Use this General Task to restore a DACS in the DND system to service.

When the task is complete, the DND will be communicating to the DACS and the automatic alarm sync or message log recovery may start, if provisioned.

NOTE:
When newer DACS II AX equipment (Release 9.0.3 or greater) is restored, all termination names and cross connects are automatically deleted from the database.

Before You Begin

Before you begin this task, you must have a DACS created in the DND system (GT 5.2G, GT 5.3G, or 5.4G) which is currently Out-of-Service.

Related Information

For related information, refer to Chapter 5, NE Provisioning.

Instructions

Task

Complete the following steps to restore a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NE Provisioning...** The NE PROVISIONING form will appear on the screen.	
3	Select *RESTORE* from the **Action:** field.	
4	Click Continue... . The **Current Site Choices:** field appears on the form.	
5	Select the site name from the **Current Site Choices:** field.	
6	Click Continue... . All of the DACS provisioning information fields appear on the form in read-only mode.	
7	Verify the information on the form to ensure you are restoring the desired DACS.	
8	When you have approved the information on the form, click Execute .	
9	**Stop! End of Task.**	
	Select a What's Next option.	SE 5.1.1G

DND GUI: Restoring on an X.25 Backup Link

5.6G

Background

When to Use

Use this General Task to use the X.25 backup link for establishing the main communications link between DND and DACS and bring the DACS into service. If the backup link goes down, the primary link will act as the secondary link.

Before You Begin

Before you begin this task, you must have a DACS created in the DND database (GT 5.2G, GT 5.3G, or 5.4G) which is currently Out-of-Service. In addition, a backup line and corresponding Network Address must have been provisioned.

Related Information

For related information, see Chapter 5, NE Provisioning.

Instructions

Task

Complete the following steps to restore a DACS using the backup link:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NE Provisioning...** The NE PROVISIONING form will appear on the screen.	
3	Select *BRESTORE* from the **Action:** field.	
4	Click Continue... . The **Current Site Choices:** field appears on the form.	
5	Select the site name from the **Current Site Choices:** field. Click on the field and select a choice from the dialog window.	
6	Click Continue... . All of the DACS provisioning information fields appear on the form in read-only mode.	
7	Verify the information on the form to ensure you are restoring the desired DACS.	
8	When you have approved the information on the form, click Execute .	
9	**Stop! End of Task.**	
	Select a What's Next option.	SE 5.1.1G

DND GUI: Modifying a DACS

5.7G

Background

When to Use

Use this procedure to modify the DACS provisioning information on a DACS that is already created (GT 5.2G, GT 5.3G, or 5.4G).

Before You Begin

Before you begin this task, you must have a DACS created (GT 5.2G, GT 5.3G, or 5.4G) or restored (GT 5.5G or GT 5.6G) in the DND system.

Many of the communications parameters can only be changed if the DACS is out-of-service. To remove a DACS from service, see GT 5.9G.

Related Information

For related information, see Chapter 5, NE Provisioning.

Instructions

Task Complete the following steps to modify a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NE Provisioning...** The NE PROVISIONING form will appear on the screen.	
3	Select *MODIFY* from the **Action:** field.	
4	Click Continue... . The **Current Site Choices:** field appears on the form.	
5	Select the site name from the **Current Site Choices:** field.	
6	Click Continue... . The **DND Processing Options** box and **DND Information** box displays options which the user may modify.	
7	Modify all necessary fields. Fields listed are: ■ **Conditional ERP:** ■ **Programmable Priority:** ■ **Alarm Sync:** ■ **DACS Type:*** ■ **NPC Addressing:*** ■ **Generic:*** ■ **Protocol:*** ■ **Location:** ■ **24-Hour PM Processing (non-PA type NPCs)** ■ **24-Hour PM Processing (PA type NPCs)** The following fields only apply to DACS II Release 8.2.3 or greater and DACS II ISX Release 3.1 and greater. ■ **Alarm Intervention:** ■ **DACS Log Recovery:** ■ **DACS Link Failure Length:** **NOTE:** If you are modifying any of these (*) fields, you must place the DACS in the OOS state.	

Step	Action	Reference
8	Click Continue... . The **X.25 Communication Protocol** box, the **SNIDER Communication Protocol** box or the the **TCP/IP Communication Protocol** box will appear.	
9	Perform one of the following: ■ For an X.25 connection, edit the **X.25 Line** and **Network Address** fields. ■ For a SNIDER connection, edit the **SNIDER Line** and **Baud Rate** fields. ■ For a TCP/IP connection, edit the **IP Address**, **DACS User Name**, and **DACS User Password** fields.	
10	Click Continue... . All of the DACS provisioning information fields appear on the form in read-only mode.	
11	Verify the information on the form to ensure you are modifying the desired DACS.	
12	When you have approved the information on the form, click Execute .	
13	**Stop! End of Task.**	
	Select a What's Next option.	SE 5.1.1G

DND GUI: Changing the Site Name of an NE

5.8G

Background

When to Use

Use this General Task to change the site name of an NE previously created in the DND database.

Related Information

For related information, refer to Chapter 5, NE Provisioning.

Instructions

Task

Complete the following steps to restore a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NE Provisioning...** The NE PROVISIONING form will appear on the screen.	
3	Select *CHGSITE* from the **Action:** field.	
4	Click Continue... . The **Current Site Choices:** field appears on the form.	
5	Select the site name from the **Current Site Choices:** field.	
6	Click Continue... . The **New Site Name:** field appears on the form.	
7	In the **New Site Name:** field, enter your new site name.	
8	Click Continue... . The populated fields appear in read-only mode.	
9	Verify the information on the form to ensure you are changing the name of the correct NE.	
10	When you have approved the information on the form, click Execute . The **New Site Name** will be placed in the **Current Site Choices** when complete.	
11	**Stop! End of Task.**	
	Select a What's Next option.	SE 5.1.1G

DND GUI: Removing a DACS

5.9G

Background

When to Use

Use this General Task to disconnect a communications link between the DND and DACS.

Before You Begin

Before you begin this task, you must have a DACS in your DND which is In-Service. You cannot remove a DACS that is already Out-of-Service.

Related Information

For related information, see Chapter 5, NE Provisioning.

Instructions

Task

Complete the following steps to remove a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NE Provisioning...** The NE PROVISIONING form will appear on the screen.	
3	Select *REMOVE* from the **Action:** field.	
4	Click Continue... . The **Current Site Choices:** field appears on the form.	
5	Select the site name from the **Current Site Choices:** field.	
6	Click Continue... . All of DACS provisioning information fields appear on the form in read-only mode.	
7	Verify the information on the form to ensure you are removing the desired DACS.	
8	When you have approved the information on the form, click Execute .	
9	**Stop! End of Task.**	
	Select a What's Next option.	SE 5.1.1G

DND GUI: Deleting a DACS

5.10G

Background

When to Use

Use this procedure to delete all information related to the DACS from the DND database.

Before You Begin

Before you begin this task, you must have a DACS in your DND system which is Out-of-Service. You cannot delete a DACS that is In-Service. Also, you cannot delete a DACS which has an intertie connected to it.

Related Information

For related information, refer to Chapter 5, NE Provisioning.

Instructions

Task

Complete the following steps to delete a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NE Provisioning...** The NE PROVISIONING form will appear on the screen.	
3	Select *DELETE* from the **Action:** field.	
4	Click Continue... . The **Current Site Choices:** field appears on the form.	
5	Select the site name from the **Current Site Choices:** field.	
6	Click Continue... . The **Confirm DELETE Action** box appears on the form.	
7	Select the **Confirm:** check box. All other DACS provisioning information fields appear on the form in read-only mode.	
8	Verify the information on the form to ensure you are deleting the desired DACS.	
9	When you have approved the information on the form, click Execute . **NOTE:** If you do not select the **Confirm:** check box before you click Execute , DND displays a denial message. To delete the DACS, click Back to select the **Confirm:** box, then click Execute to complete the action.	
10	**Stop! End of Task.**	
	Select a What's Next option.	SE 5.1.1G

DND Forms: Creating a DACS, X.25 Link

5.1U

Background

When to Use

Use this General Task to create a DACS representation in the DND database. The DND will use X.25 to communicate to this DACS. Upon completion of this task, the DACS communications information will be inserted into the database and a DND database will be created for storage of DACS equipment and circuit information.

Before You Begin

Only a DND administrator (e.g. login=*dacsadm*) may perform this procedure.

Related Information

For related information, refer to Chapter 5, NE Provisioning.

Instructions

Task

Complete the following steps to create a DACS using an X.25 link:

Step	Action	Reference
1	From the DND MAIN MENU, select SYSTEM ADMINISTRATION, then select FRAME ADMINISTRATION. The FRAME ADMINISTRATION form displays.	
2	Select CREATE from the **Action** field.	
3	Type a desired site name in the **Site Name**. The **Site Status** changes to UEQD, provided the site is not already provisioned. If it is provisioned, the provisioning information is filled into the appropriate fields. Verify that the **Site Status** is UEQD.	
4	In the **Type** field, enter DACS II or DACS II ISX.	
5	Enter X.25 in the **Protocol** field. After you enter the **Protocol**, the fields **Primary Line** and **Backup Line** appear.	
6	Enter MML in the **Language** field. (The PDS language cannot be used.)	
7	In the **NPC Addr** field, specify the NPC addressing scheme. Enter HIER3, HIER4, or EXT.	
8	Enter values for **ERP Control**, **NPC Alarm Sync**, **Programmable Priority Output**.	
9	(Optional) Fill in the **DACS Log Recovery** and **DACS Link Failure Length** fields. Available for DACS II, Release 8.2.3 and later and DACS II ISX, Release 3.1 and later.	
10	For **Primary Line**, enter a link number (1-4). Enter the corresponding address/phone number in the **Network Address** field.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
11	(Optional) For **Backup Line**, enter a link number (1-4). Enter the corresponding address/phone number in the **Network Address** field.	
12	Verify the information on the form to ensure you are creating the desired DACS.	
13	When you have approved the information on the form, click Execute and answer YES to ARE YOU SURE?	
14	When the DACS is successfully provisioned: — The **Site Status** changes to OOS. — The command completed successfully message is displayed.	
15	**Stop! End of Task.**	
	Select a What's Next option.	SE 5.1.1U

SE 5.1.1U: What's Next for DACS Provisioning

What's Next?

Perform one of the following options below upon completion of the task:

Options	Reference
Change the **Action** to perform a new action on the current DACS.	GT 5.1U - GT 5.7U
Select TOPMENU to return to the MAIN MENU.	
Click QUIT to return to the SYSTEM ADMINISTRATION MENU.	

DND Forms: Creating a DACS, SNIDER Link

5.2U

Background

When to Use

Use this General Task to create a DACS representation in the DND database. The DND will use SNIDER to communicate to this DACS. Upon completion of this task, the DACS communications information will be inserted into the database and a DND database will be created for storage of DACS equipment and circuit information.

Before You Begin

Only a DND administrator (e.g. login=*dacsadm*) may perform this procedure.

Related Information

For related information, refer to Chapter 5, NE Provisioning.

Instructions

Task

Complete the following steps to create a DACS using an X.25 link:

Step	Action	Reference
1	From the DND MAIN MENU, select SYSTEM ADMINISTRATION, then select FRAME ADMINISTRATION. The FRAME ADMINISTRATION form displays.	
2	Select CREATE from the **Action** field.	
3	Type a desired site name in the **Site Name field**. The **Site Status** changes to UEQD, provided the site is not already provisioned. If it is provisioned, the provisioning information is filled into the appropriate fields. Verify that the **Site Status** is UEQD.	
4	In the **Type** field, enter DACS II or DACS II ISX.	
5	Enter SNIDER in the **Protocol** field. After you enter the **Protocol**, the field **Primary Line** appears.	
6	Enter MML in the **Language** field. (The PDS language cannot be used.)	
7	In the **NPC Addr** field, specify the NPC addressing scheme. Enter HIER, EXT3, or EXT4.	
8	(Optional) Fill in the **DACS Log Recovery** and **DACS Link Failure Length** fields. Available for DACS II, Release 8.2.3 and later and DACS II ISX, Release 3.1 and later.	
9	Enter values for **ERP Control**, **NPC Alarm Sync**, **Programmable Priority Output**.	
10	For **Primary Line**, enter 1. Enter the **Speed**.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
11	Verify the information on the form to ensure you are creating the desired DACS.	
12	When you have approved the information on the form, click Execute and answer YES to ARE YOU SURE?.	
13	When the DACS is successfully provisioned: — The Site Status changes to OOS — The `command completed successfully` message is displayed.	
14	**Stop! End of Task.**	
	Select a What's Next option.	SE 5.1.1U

DND Forms: Restoring a DACS

5.3U

Background

When to Use

Use this General Task to restore a DACS in the DND system to service.

When the task is complete, the DND will be communicating to the DACS and the automatic alarm sync or message log recovery may start, if provisioned.

Before You Begin

Before you begin this task, you must have a DACS created in the DND system (GT 5.1U or GT 5.2U) which is currently Out-of-Service.

Related Information

For related information, refer to Chapter 5, NE Provisioning.

Instructions

Task

Complete the following steps to restore a DACS:

Step	Action	Reference
1	From the DND MAIN MENU, select SYSTEM ADMINISTRATION, then select FRAME ADMINISTRATION. The FRAME ADMINISTRATION form displays.	
2	Select RESTORE from the **Action** field.	
3	Enter the site name in the **Site Name** field.	
4	Verify that the **Site Status** is OOS.	
5	Press Execute and confirm. The `command completed successfully` message is displayed.	
6	The Site Status may not change immediately It may transition to RCY, QRY, or AS. When the DACS is in service: — For X.25, the Site Status changes to `IS P.` — For SNIDER, the Site Status changes to `IS.`	
7	**Stop! End of Task.**	
	Select a What's Next option.	SE 5.1.1U

DND Forms: Restoring an X.25 Backup Link

5.4U

Background

When to Use

Use this General Task to use the X.25 backup link for establishing the main communications link between DND and DACS and bring the DACS into service on the backup X.25 link.

If the backup link goes down, the primary link will act as the secondary link.

Before You Begin

Before you begin this task, you must have a DACS created in the DND database (GT 5.1U) which is currently Out-of-Service. In addition, a backup line and corresponding Network Address must have been provisioned.

Related Information

For related information, see Chapter 5, NE Provisioning.

Instructions

Task

Complete the following steps to restore a DACS using the backup link:

Step	Action	Reference
1	From the DND MAIN MENU, select SYSTEM ADMINISTRATION, then select FRAME ADMINISTRATION. The FRAME ADMINISTRATION form displays.	
2	Select BRESTORE from the **Action** field.	
3	Enter the site name in the **Site Name** field.	
4	Verify that the **Site Status** is OOS.	
5	Press Execute and confirm. The `command completed successfully` message is displayed.	
6	As the DACS is coming in service on the backup path, the Site Status may transition to RCY, QRY, or AS. When the DACS is in service, the Site Status then changes to `IS B`.	
7	**Stop! End of Task.**	
	Select a What's Next option.	SE 5.1.1U

DND Forms: Modifying a DACS

5.5U

Background

When to Use

Use this procedure to modify the DACS provisioning information on a DACS that is already created (5.1U or GT 5.2U).

Before You Begin

Before you begin this task, you must have a DACS created and out-of-service (GT 5.1U or GT 5.2U) or in-service (GT 5.3U or GT 5.4U) in the DND system. Many of the provisioning options can only be changed if the DACS is out-of-service.

Related Information

For related information, see Chapter 5, NE Provisioning.

Instructions

Task

Complete the following steps to modify a DACS:

Step	Action	Reference
1	From the DND MAIN MENU, select SYSTEM ADMINISTRATION, then select FRAME ADMINISTRATION. The FRAME ADMINISTRATION form displays.	
2	Select `MODIFY` from the **Action** field.	
3	Enter the site name in the **Site Name** field.	
4	Modify all necessary fields. **NOTE:** Some fields require that you place the DACS in the OOS state.	
5	Verify the information on the form to ensure you are modifying the desired DACS.	
6	When you have approved the information on the form, click Execute .	
7	**Stop! End of Task.**	
	Select a What's Next option.	SE 5.1.1U

DND Forms: Removing a DACS

5.6U

Background

When to Use

Use this General Task to disconnect a communications link between the DND and DACS.

Before You Begin

Before you begin this task, you must have a DACS in your DND which is In-Service. You cannot remove a DACS that is already Out-of-Service.

Related Information

For related information, see Chapter 5, NE Provisioning.

Instructions

Task

Complete the following steps to remove a DACS:

Step	Action	Reference
1	From the DND MAIN MENU, select SYSTEM ADMINISTRATION, then select FRAME ADMINISTRATION. The FRAME ADMINISTRATION form displays.	
2	Select REMOVE from the **Action** field.	
3	Enter the site name in the **Site Name** field.	
4	Verify the information on the form to ensure you are removing the desired DACS.	
5	Press Execute and answer YES to ARE YOU SURE?	
6	**Stop! End of Task.**	
	Select a What's Next option.	SE 5.1.1U

DND Forms: Deleting a DACS

5.7U

Background

When to Use

Use this procedure to delete all information related to the DACS from the DND database.

Before You Begin

Before you begin this task, the DACS must be Out-of-Service (GT 5.6U).

Related Information

For related information, see Chapter 5, NE Provisioning.

Instructions

Task

Complete the following steps to remove a DACS:

Step	Action	Reference
1	From the DND MAIN MENU, select SYSTEM ADMINISTRATION, then select FRAME ADMINISTRATION. The FRAME ADMINISTRATION form displays.	
2	Select DELETE from the **Action** field.	
3	Enter the site name in the **Site Name** field.	
4	Verify the information on the form to ensure you are deleting the desired DACS.	
5	Press Execute . This warning appears: `Warning! You are about to delete a frame database from the DND.`	
6	Press Enter to continue. A pop-up window displays: ARE YOU SURE?	
7	Answer YES.	
8	**Stop! End of Task.**	
	Select a What's Next option.	SE 5.1.1U

End User Provisioning General Tasks

6

Contents

- DND GUI
  - Creating an End User — GT 6.1G
    - What's Next Options for End User Provisioning — SE 6.1.1G
  - Modifying an End User — GT 6.2G
  - Deleting an End User — GT 6.3G

DND GUI: Creating an End User

6.1G

Background

When to Use

Use this General Task to create an End User for a Network Element. An End User represents customer equipment, such as switches, other Network Elements, etc., that is not controllable by the DND. End User equipment can be graphically represented in the DND and associated to a particular Network Element.

Before You Begin

Before you begin this task, you must have a Network Element created in your network (GT 5.1G, GT 5.2G, or GT 5.3G) to associate with the End User.

Related Information

For related information, refer to *Chapter 6, End User Provisioning*.

Instructions

Task Complete the following steps to create an End User:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **End User Provisioning...** The END USER PROVISIONING form will appear on the screen.	
3	Select *CREATE* from the **Action:** field.	
4	Select the Network Element **Element Type:** for which the End User is to be created. The **Site Name:** field will automatically update with all Network Elements of type **Element Type:** which do not have End Users.	
5	Select a Network Element **Site Name:** for the End User.	
6	Click Continue... . The **End User Information** box will be displayed on the form.	
7	Enter a name in the **End User ID:** field to identify the End User.	
8	(Optional) Enter some explanatory information about the end-user in the **Remarks:** field.	
9	Click Continue... . Fields on the END USER PROVISIONING form will be displayed in read-only mode.	
10	Verify information to ensure you are creating an End User for the correct Network Element. If needed, click Back until you reach the section of the END USER PROVISIONING form to select a different Network Element. Click Continue... to move forward through the form.	
11	When you have approved the information on the form, click Execute .	
12	**Stop! End of Task.**	
	Select a What's Next Option.	SE 6.1.1G

SE 6.1.1G: What's Next Options for End User Provisioning

What's Next? Perform one of the following options when the task is completed:

Options	Reference
Click New Action to perform another action on the current End User.	GT 6.1G - GT 6.3G
Click Intertie to display the INTERTIE PROVISIONING form with the site name populated and the End User box pre-selected. This option is useful in order to connect an End User which has just been created to its associated Network Element.	
Click Restart to clear and initialize the form and perform an action on another End User.	
Click Close to exit the END USER PROVISIONING form.	

DND GUI: Modifying an End User

6.2G

Background

When to Use

Use this General Task to modify End User information previously entered when created.

Before You Begin

Before you begin this task, you must have an End User created in the network (GT 6.1G).

Related Information

For related information, refer to *Chapter 6, End User Provisioning.*

Instructions

Task

Complete the following steps to modify an End User:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **End User Provisioning...** The END USER PROVISIONING form will appear on the screen.	
3	Select *MODIFY* from the **Action:** field.	
4	Select the Network Element **Element Type:** for which the End User is to be modified. The **Site Name:** field will automatically update with all Network Elements of type **Element Type:** which have End Users.	
5	Select a Network Element **Site Name:** for the End User.	
6	Click Continue... . The End User information fields appear on the form.	
7	Edit the information in the following fields: ■ **End User ID:** ■ (Optional) **Remarks:**	
8	Click Continue... . Fields on the form appear in read-only mode.	
9	Verify information to ensure you have modified the correct End User information. If needed, click Back until you reach the section of the END USER PROVISIONING form to select a different Network Element. Click Continue... to move forward through the form.	
10	When you have approved the information on the form, click Execute .	
11	**Stop! End of Task.**	
	Select a What's Next Option.	SE 6.1.1G

DND GUI: Deleting an End User

6.3G

Background

When to Use

Use this General Task to delete an End User from the DND system.

NOTE:
You cannot delete an End User if it is connected to an intertie.

Before You Begin

Before you begin this task, you must have an End User created in the DND system (GT 6.1G).

Related Information

For related information, refer to *Chapter 6, End User Provisioning.*

Instructions

Task Complete the following steps to delete an End User:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **End User Provisioning...** The END USER PROVISIONING form will appear on the screen.	
3	Select *DELETE* from the **Action:** field.	
4	Select the Network Element **Element Type:** for which the End User is to be deleted. The **Site Name:** field will automatically update with all Network Elements of type **Element Type:** which have End Users.	
5	Select a Network Element **Site Name** for the End User.	
6	Click Continue... . The End User information fields will be populated in read-only mode.	
7	Verify information to ensure you are deleting the correct End User.	
8	When you have approved the information on the form, click Execute .	
9	**Stop! End of Task.**	
	Select a What's Next Option.	SE 6.1.1G

Intertie Provisioning General Tasks

7

Contents

- DND GUI
  - Creating an Intertie — GT 7.1G
    - Selecting SITE2, Creating an Intertie — SE 7.1.1G
    - What's Next Options for Intertie Provisioning — SE 7.1.2G
  - Modifying an Intertie — GT 7.2G
    - Selecting SITE2, Modifying an Intertie — SE 7.2.1G
  - Adding Ports to an Intertie — GT 7.3G
    - Identifying a Port — SE 7.3.1G
  - Deleting Ports from an Intertie — GT 7.4G
    - Entering Port Numbers for NPC1/PORT1 and NPC2/PORT2 — SE 7.4.1G
  - Deleting an Intertie — GT 7.5G

DND GUI: Creating an Intertie

7.1G

Background

When to Use

Use this General Task to create an intertie between one of the following:

- Two Network Elements
- A Network Element and an End User

Interties graphically represent the connections between Network Elements (NE) in your network.

Before You Begin

Before you begin this task, you must have at least 2 Network Elements created in your network (GT 5.1G, GT 5.2G, or GT 5.3G). The intertie connections can be either NE-to-NE or NE-to-EU.

Related Information

For related information, refer to *Chapter 7, Intertie Provisioning.*

Instructions

Task Complete the following steps to create an intertie:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Intertie Provisioning...** The INTERTIE PROVISIONING form will appear on the screen.	
3	Select *CREATE* from the **Action:** field.	
4	Select the Network Element **Element Type:** for **SITE 1**. The **Site Name:** field for **SITE 1** will automatically update with sites of type **Element Type:**.	
5	Select a **Site Name:** for **SITE 1**.	
6	Select the Network Element **Element Type:** for **SITE 2**. The **Site Name:** field for **SITE 2** will automatically update with sites of type **Element Type:** that do not have an intertie with SITE 1. If the **Element Type:** is *End User*, then the **Site Name:** field will disappear. Skip to Step 8.	
7	Select a **Site Name:** for **SITE 2**.	
8	Click Continue... . The **Intertie Information** box appears on the form.	
9	Enter a name for the **Intertie ID:**.	
10	Select an **Intertie Type:**. If this is a NE-to-EU intertie, the only allowable choice for the **Intertie Type** is *Direct* and the field will be read-only.	
11	(Optional) Enter some explanatory information about the intertie in the **Remarks:** field.	
12	Click Continue... . Information previously entered in all fields appears in read-only mode.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
13	Verify information to ensure you are creating the correct intertie.	
14	When you have approved the information on the form, click Execute. An intertie is drawn between **SITE 1** and **SITE 2** on the Network Map.	
15	**Stop! End of Task.**	
	Select a What's Next Option.	SE 7.1.1G

SE 7.1.1G: What's Next Options for Intertie Provisioning

What's Next? Perform one of the following options when the task is completed:

Options	Reference
Click New Action to perform another action on the current intertie.	GT 7.1G - GT 7.5G
Click Restart to clear and initialize the form and select a new action for another intertie.	
Click Close to exit the INTERTIE PROVISIONING form.	

DND GUI: Modifying an Intertie

7.2G

Background

When to Use

Use this General Task to modify intertie information previously entered when the intertie was created (GT 7.1G).

Before You Begin

Before you begin this task, you must have an intertie created in your network.

Related Information

For related information, refer to *Chapter 7, Intertie Provisioning.*

Instructions

Task

Complete the following steps to modify an intertie:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Intertie Provisioning...** The INTERTIE PROVISIONING form will appear on the screen.	
3	Select *MODIFY* from the **Action:** field.	
4	Select the Network Element **Element Type:** for **SITE 1**. The **Site Name:** field for **SITE 1** will automatically update with sites of type **Element Type:**.	
5	Select a **Site Name:** for **SITE 1**.	
6	Select the Network Element **Element Type:** for **SITE 2**. The **Site Name:** field for **SITE 2** will automatically update with sites of type **Element Type:** that have an intertie with **SITE1**. If the **Element Type:** is *End User*, then the **Site Name:** field will disappear. Skip to Step 8.	
7	Select a **Site Name:** for **SITE 2**.	
8	Click Continue... . The **Intertie Information** fields for **SITE 2** appear on the form. The **Intertie Bandwidth:** field also appears indicating the number of ports connected to either side of the intertie in read-only mode.	
9	Edit the following fields as needed: ■ **Intertie ID:** ■ **Intertie Type:** ■ **(Optional) Remarks:**	
10	Click Continue... . All previously entered information will appear in read-only mode.	

(Continued on next page)

Instructions (Continued)

Tasks, Continued

Step	Action	Reference
11	Verify the Intertie Information fields to ensure you have modified the intertie information correctly.	
12	When you have approved the information on the form, click Execute .	
13	**Stop! End of Task.**	
	Select a What's Next Option.	SE 7.1.1G

DND GUI: Adding Ports to an Intertie

7.3G

Background

When to Use

Use this General Task to add DACS NPCs, MMFGs and/or SNMP site ports to an intertie to establish connection paths between network elements. Ports cannot be added to a side connected to an End User. DACS NPCs and MMFGs do not need to exist in the DND database in order to be added to the intertie.

Before You Begin

Before you begin this task, you must have an intertie created in your network (GT 7.1G).

Related Information

For related information, refer to *Chapter 7, Intertie Provisioning.*

Instructions

Task

Complete the following steps to add ports to an intertie:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Intertie Provisioning...** The INTERTIE PROVISIONING form will appear on the screen.	
3	Select *ADDPORTS* from the **Action:** field.	
4	Select the Network Element **Element Type:** for **SITE 1**. The **Site Name:** field for **SITE 1** will automatically update with sites of type **Element Type:**.	
5	Select a **Site Name:** for **SITE 1**.	
6	Select the Network Element **Element Type:** for **SITE 2**. The **Site Name:** field for **SITE 2** will automatically update with sites of type **Element Type:** that have an intertie with **SITE 1**. If the **Element Type:** is *End User*, then the **Site Name:** field will disappear. Skip to Step 8.	
7	Select a **Site Name:** for **SITE 2**.	
8	Click Continue... . The intertie information boxes appear in read-only mode and the NPC/PORTS fields appear on the form.	
9	Select the desired port **Speed:**. The Port information fields which have appeared on the form will reflect the type of site(s) and port speed selected.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
10	Identify the port. The fields shown will depend on the type of site and the speed previously chosen. ■ For a DACS site: Specify ONE of the following choices: — for DS1: **NPC Specifier:/NPC:**, or... — for DS3: **MMFG Specifier:/MMFG:**. ■ For an SNMP site: Specify ONE of the following choices: — for DS0, DS1: **Slot Type**, **Slot Number,** and **Port Number** — for DS3: **Slot Type** and **Slot Number**. — for ATM: **Slot Type, Slot Number**, **VPI,** and **VCI**.	SE 7.3.1G
11	Verify the intertie information fields to ensure you are adding NPCs/ports to the correct intertie.	
12	Click Continue... . This will display all previously entered information in read only mode. This presents a final opportunity to check all information before executing the action.	
13	When you have approved the information on the form, click Execute .	
14	**Stop! End of Task.**	
	Select a What's Next Option.	SE 7.1.1G

SE 7.3.1G: Identifying a Port

Procedure

Perform the steps below to enter the appropriate information when identifying a port:

IF you want to specify...	THEN...
The NPC ID name (DS1)	1. Select the **ID** option in the **NPC Specifier:** field. 2. Enter the NPC ID name into the **NPC:** field.
The NPC number using the Hierarchical Numbering scheme (DS1)	1. Select the **Hier** option in the **NPC Specifier:** field. 2. Enter the hierarchical NPC number into the **NPC:** field.
The NPC number using the Extended Numbering scheme (DS1)	1. Select the **Extd** option in the **NPC Specifier:** field. 2. Enter the extended NPC number into the **NPC:** field.
The MMFG ID (DS3 - DACS II CEF)	1. Select the **MMFG ID** option in the **MMFG Specifier:** field. 2. Enter the MMFG ID name into the **MMFG:** field.
The MMFG Number (DS3 - DACS II CEF)	1. Select the **Number** option in the **MMFG Specifier:** field. 2. Enter the MMFG number into the **MMFG:** field (such as 11-4).
An SNMP element port	1. Select the slot type in the **Slot Type** field.

Stop! End of Procedure.

DND GUI: Deleting Ports from an Intertie

7.4G

Background

When to Use

Use this General Task to delete DACS NPCs and/or SNMP site ports from an intertie with ports assigned to it. An SNMP port cannot be deleted from an intertie if there is a Termination provisioned on it.

Before You Begin

Before you begin this task, you must have an intertie with ports assigned to it in your network (GT 7.3G).

Related Information

For related information, refer to *Chapter 7, Intertie Provisioning.*

Instructions

Task

Complete the following steps to delete ports from an intertie:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Intertie Provisioning...** The INTERTIE PROVISIONING form will appear on the screen.	
3	Select *DELPORTS* from the **Action:** field.	
4	Select the Network Element **Element Type:** for **SITE 1**. The **Site Name:** field for **SITE 1** will automatically update with sites of type **Element Type:**.	
5	Select a **Site Name:** for **SITE 1**.	
6	Select the Network Element **Element Type:** for **SITE 2**. The **Site Name:** field for **SITE 2** will automatically update with sites of type **Element Type:** that have an intertie with **SITE 1**. If the **Element Type:** is *End User*, then the **Site Name:** field will disappear. Skip to Step 8.	
7	Select a **Site Name:** for **SITE 2**.	
8	Click Continue... . The intertie information field appears in read-only mode. The PORTS fields also appear. If intertie is a NE-to-End User intertie, only one set of port fields will appear.	
9	Identify the intertie port number(s): ■ For a DACS site: — Enter the NPC (DS1), or ... — Enter the MMFG (DS3) ■ For an SNMP site: Enter the port information.	SE 7.4.1G

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
10	Verify the information in the fields to ensure you are deleting ports from the correct intertie. If needed, click Back until you reach the section of the INTERTIE PROVISIONING form to edit. Click Continue... to move forward through the form.	
11	When you have approved the information on the form, click Execute.	
12	**Stop! End of Task.**	
	Select a What's Next Option.	SE 7.1.1G

SE 7.4.1G: Entering Port Numbers for NPC1/MMFG1/PORT1 and NPC2/ MMFG2/PORT2

Procedure

Perform the steps below to enter port numbers.

If you KNOW at least ONE of the ports:

1. Select the intertie port **Speed**:.
2. Perform ONE of the tasks below:

IF you...	THEN...
Enter a number for NPC1/MMFG1/PORT1	Click Find Match near the NPC2/PORT2 field to find the corresponding port match on the other side of the intertie.
Enter a number for NPC2/MMFG2/PORT2	Click Find Match near the NPC1/PORT1 field to find the corresponding port match on the other side of the intertie

If you DO NOT KNOW either port, and...

IF you...	THEN...
Leave the NPC1/ MMFG1/PORT1 or NPC2/MMFG2/PORT2 fields blank	Clear the port fields and: 1. Click Find Match on either port side to display the port numbers. Continue to click Find Match until the desired port is found. The form will scroll through all ports that exist on the intertie. 2. Click Find Match once on the other side to find the corresponding port.

Stop! End of Procedure.

DND GUI: Deleting an Intertie

7.5G

Background

When to Use

Use this General Task to delete an intertie between one of the following:

- Two Network Elements
- A Network Element and an End User

The graphical representation of the connection between the two elements in the network will be removed from the DND Workspace window.

Before You Begin

Before you begin this task, you must have an intertie created between two network elements (GT 7.1G).

Related Information

For related information, refer to *Chapter 7, Intertie Provisioning.*

Instructions

Task

Complete the following steps to delete an intertie:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Intertie Provisioning...** The INTERTIE PROVISIONING form will appear on the screen.	
3	Select *DELETE* from the **Action:** field.	
4	Select the Network Element **Element Type:** for **SITE 1**. The **Site Name:** field for **SITE 1** will automatically update with sites of type **Element Type:**.	
5	Select a **Site Name:** for **SITE 1**.	
6	Select the Network Element **Element Type:** for **SITE 2**. The **Site Name:** field for **SITE 2** will automatically update with sites of type **Element Type:** that have an intertie with **SITE 1**. If the **Element Type:** is *End User*, then the **Site Name:** field will disappear. Skip to Step 8.	
7	Select a **Site Name:** for **SITE 2**.	
8	Click Continue... . Information previously entered while creating your intertie will populate all fields. These fields appear in read-only mode. The **Confirm:** field also appears.	
9	Select the **Confirm:** checkbox to confirm the intertie deletion action.	
10	Verify information to ensure you are deleting the correct intertie.	
11	When you have approved the information on the form, click Execute .	
12	**Stop! End of Task.**	
	Select a What's Next Option.	SE 7.1.1G

DACS II, DACS II ISX NPC Provisioning General Tasks

8

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DND GUI: Creating NPCs

8.1G

Background

When to Use

Use this General Task to create an NPC or a group of NPCs on a DACS.

Before You Begin

Before you begin this task, you must at least have one DACS in the DACS network which is In-Service (GT 5.2G/GT 5.3G and GT 5.4G). The equipment to support the NPC must be installed at the DACS.

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning.*

Instructions

Task Complete the following steps to grow NPCs on a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NPC Provisioning...** The NPC PROVISIONING form will appear on the screen.	
3	Select the **Site Name:** where the NPC resides.	
4	Select *CREATE* from the **Action:** field.	
5	(Optional) Select a **Profile ID:** to use a previously created profile to fill in the form. The following Continue... clicks will not be necessary and some of the fields will be read-only.	
6	Click Continue... . The **NPC** box will appear on the form.	
7	Specify the NPC's addressing scheme as either **Hier**: or **Extd:**.	
8	Enter the **NPC Number:**. Specify a name for the NPC in the **ID:** field.	
9	Click Continue... . Additional NPC fields in the **NPC** box appear on the form. The **NPC Type:** field is automatically filled in with a default type, depending on the NPCs in the DACS.	
10	Enter a valid NPC type in the **NPC Type:** field. **NOTE:** The **Service State:** field populates *UNEQ* for unequipped into the field automatically; it cannot be changed.	SE 8.1.1G
11	Click Continue... . The Specify PM Options button becomes active, if PM options apply. Also, the **NPC Range:** field appears on the form.	

Step	Action	Reference
12	Select the performance monitoring options if you want to change the values, otherwise: a. They will assume the values specified in `ui_dval`, or... b. They will be set to the values as specified in the last *CREATE* **Action**, or ... c. They will be as provided by the profile, if you are using a profile.	SE 8.1.2G
13	Select the number of NPCs to provision in the **NPC Range:** field. The maximum number of NPCs available will depend the module type. ■ If a range greater than "1" is selected, the NPC RANGE SPECIFICATION form will appear on the screen. ■ If no **NPC Range:** is selected (i.e., **NPC Range:** is "1"), skip to Step 17.	
14	Enter names for the NPCs you wish to *CREATE* in the **ID:** field next to the corresponding NPC numbers. Blank **ID:** names will be skipped. The NPC numbers (**Hier:**/**Extd:**) and the NPCs' **Service State:** appears in read-only mode.	
15	Click Continue... . All fields on the NPC RANGE SPECIFICATION form appear in read-only mode. Verify the information on the form entered is accurate.	
16	Click Apply to accept the information on the NPC RANGE SPECIFICATION form. The screen will return to the NPC PROVISIONING form.	
17	Click Continue... . The NPC PROVISIONING form will appear on the screen with additional provisioning options.	
18	Enter the appropriate insertion word in the **Insertion Word (IW):** field.	
19	Select the alarm priority in the **Alarm Indication Signal (AIS):** field.	
20	(Optional) Enter a value for the alarm aging in the **Alarm Age:** field.	

Step	Action	Reference
21	(Optional) Select the option box to **Disable Alarm Reporting:**.	
22	Select a **Reconcile:** option.	SE 8.1.3G
23	(If desired) Select the **Restore NPC:** option box to *CREATE* and *RESTORE* the NPC in one step. **NOTE:** If you select the *RESTORE* option, you cannot schedule this **Action:**.	
24	(Optional) In the **Execution Mode** box, select the desired scheduling **Mode:**. **NOTE:** If you are growing a range of NPCs, you cannot schedule this **Action:**.	SE 8.1.4G
25	Click Continue... . The **Profile** box will appear on the form.	
26	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
27	Verify the information on the form to ensure you are creating the desired NPC.	
28	When you have approved the information on the form, Click: a. Execute if growing a single NPC, or... b. Start if growing a range of NPCs. The **Working On:** field indicates which NPC is currently being provisioned. The Stop button is available if provisioning must be abruptly interrupted.	
29	**Stop! End of Task.**	
	Select a What's Next option.	SE 8.1.6G

SE 8.1.1G: Selecting an NPC Type

Procedure

Perform the steps below to select a valid NPC type:

1. Click the Specify XYZ Details button to set the values of the XYZ options. The NPC XYZ OPTIONS form will appear on the screen.
2. Verify the parameter settings for each X, Y or Z parameter. The options are displayed in read-only mode. To change the value of an X, Y, or Z parameter, perform one of the following choices:

IF you want to...	THEN you should...
a. Customize your XYZ options	Do **ONE** of the following: ■ Select a value for the **X Value:**, **Y Value:**, and **Z Value:** fields. ■ Click Next X, Next Y, or Next Z to change the XYZ numbers to the next consecutive number. For example, if the X value is 2, clicking Next X will change the value to 3. ■ Select an option from the **Option Description:** field. The dialog window lists various common XYZ option descriptions. Selecting a description will automatically change the XYZ option value.
b. Choose from the common XYZ options	Select one of the options from the **Common Choices:** field (excluding *(Customize)*).
c. Choose another NPC Type	1. Press Back to obtain a list of NPC types. 2. Select an NPC type and then repeat **a** and **b**.

3. Once you are satisfied with the XYZ options, click Apply. The NPC XYZ OPTIONS form will disappear from the screen, revealing the NPC PROVISIONING form and the NPC type chosen will appear in the **NPC Type** field.

   Stop! End of Procedure.

SE 8.1.2aG: Selecting Performance Monitoring Options for NAS NPCs

Procedure

Perform the steps below to customize performance monitoring options:

1. Click Specify PM Options. The PERFORMANCE MONITORING SPECIFICATION form will appear on the screen
2. Select the appropriate data set from the **data set:** field or choose NONE, which disables PM reporting.

NOTE:
Data set 0 is the default.

3. Select the PM Thresholds on which to apply the chosen data set. To select all options, click Select All Parameters.
4. Click Apply to Selected to apply the data set to the selected PM Threshold options.
5. To assign a different data set to another parameter, repeat Steps 2-4.
6. Click Apply.

Stop! End of Procedure.

SE 8.1.2bG: Selecting Performance Monitoring Options for CEPT NPCs

Procedure

Perform the steps below to customize performance monitoring options:

1. Click Specify PM Options. The PERFORMANCE MONITORING SPECIFICATION form will appear on the screen
2. Select the appropriate data set from the **data set:** field.

NOTE:
The default data sets are always available at the DACS. Other data sets must be provisioned at the DACS as a separate operation.

3. Select the alarm level from the **alarm level:** field. The dialog window lists each of the choices.
4. Select the PM Threshold Options to be set to the indicated data set/alarm level. To select all options, click Select All Parameters.
5. Click Apply to Selected to apply the data set to the selected PM Threshold options.
6. To set other PM Threshold Options to different data sets/alarm level, repeat Steps 2, 3, 4 and 5.
7. Click Apply.

Stop! End of Procedure.

SE 8.1.3: Selecting a Reconcile Mode

Procedure

Perform ONE of the following options to select the appropriate Reconcile **Mode**:

IF you want to execute this Action...	THEN select...
On the DACS and DND	The **DACS and DND** option box (default).
On the DND only	The **DND only** option box.
On the DACS only	The **DACS only** option box.

Stop! End of Procedure.

SE 8.1.4G: Scheduling an Action

Procedure

Perform the steps below to set a specified date, time, and frequency for the DND system to perform an action:

IF you...	THEN...
Execute this action immediately (now)	Select the **Immediate** option box (default).
Schedule the action	1. Select the desired **Day:**, **Month:**, and **Year:** options to set the start **DATE**. 2. Select the desired **Hour:** and **Minute:** options to set the **TIME**. 3. If the action will be performed more than once, enter a value for **Number of times:** and **Interval:** and select the time scale from the **Scale:** field. **NOTE:** If number of times is set to 0, then the task will repeat indefinitely (until the end of time in 2038). For example, if the form has the following information: — **Day:** 3 — **Month:** May — **Year:** 1999 — **Hour:** 9 — **Minute:** 30 — **Number of times:** 1 — **Interval:** 0 — **Scale:** None Then, the DND will create this NPC beginning at May 3, 1999 at 9:30 AM.

Stop! End of Procedure.

SE 8.1.5G: Adding or Deleting a Profile

Procedure

Perform the steps below to add or delete a profile:

IF you...	THEN...
Want to add a profile	Enter a name for the profile in the **Profile ID:** field and select the desired accessibility in the **Availability:** field. Click Save.
Want to delete a profile	Specify the **Profile ID:** and click Delete.

SE 8.1.6G: What's Next Options for NPC Provisioning

What's Next?

Options	Reference
Click New Action to perform a new action on the current NPC.	GT8.1G - GT 8.8G
Click New NPC to perform an action on a different NPC.	
Click Restart to clear and initialize the form and select an action for another NPC.	
Click Close to close the NPC PROVISIONING form	

DND GUI: Creating a DSPU NPC

8.2G

Background

When to Use

Use this General Task to create a DSPU NPC (DMB, MJU, SRM, and CB NPC types) on a DACS.

Before You Begin

Before you begin this task, you must have at least one DACS in the DND network which is In-Service (GT 5.2G/GT 5.3G and GT 5.4G) with one or more DSPU circuit packs populated in the DSPU of the correct type.

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning.*

Instructions

Task Complete the following steps to grow a DSPU NPC on a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NPC Provisioning...** The NPC PROVISIONING form will appear on the screen.	
3	Select the **Site Name:** where the NPC resides	
4	Select *CREATE* from the **Action:** field.	
5	(Optional) Select a **Profile ID:** to use a previously created profile to fill in the form. The following Continue... clicks will not be necessary and some of the fields will be read-only.	
6	Click Continue... . The **NPC** box will appear on the form.	
7	Specify the NPC's addressing scheme as either **Hier**: or **Extd:**.	
8	Enter the **NPC Number:**. Specify a name for the NPC in the **ID:** field.	
9	Click Continue... . Additional NPC fields in the **NPC** box appear on the form. The **NPC Type:** field is automatically filled in with a default type. If the NPC is a DSPU NPC, then the default NPC type is *MB100* for new forms.If the unit is a DS3U, then the default NPC type is TE100. If the unit is an HDS3U, then the default type is TH000.	
10	Enter a valid NPC type in the **NPC Type:** field. **NOTE:** The **Service State:** field populates UNEQ for unequipped into the field automatically; it cannot be changed.	SE 8.1.1G

Step	Action	Reference
11	Click Continue... . If this is a DMB NPC, the **NPC 2** sub-box within the **NPC** box and the **Control Options** box will appear on the form. Fill in an ID for the second NPC on the DMB. The DMB card has 2 NPCs on it. After the 1st NPC identified, the form will automatically fill in the **Hier:** and **Extd:** fields for NPC 2 with next consecutive number of the one previously entered for NPC 1.	
12	Select a **Reconcile:** option.	SE 8.1.3G
13	(Optional) In the **Execution Mode** box, select the desired scheduling **Mode:**. If you select the **Immediate** option box, proceed to Step 15.	SE 8.1.4G
14	Click Continue... . The **Profile** box appears on the form.	
15	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
16	Click Continue... . All fields will appear in on the form in read-only mode.	
17	Verify the information on the form to ensure you are creating the desired NPC.	
18	When you have approved the information on the form, Click Execute .	
19	**Stop! End of Task.**	
	Select a What's Next option.	SE 8.1.6G

DND GUI: Restoring NPCs on a DACS

8.3G

Background

When to Use

Use this General Task to restore an NPC or a group of NPCs on a DACS. Restoring NPCs places them In-Service so they can be used for creating circuits.

Before You Begin

Before you begin this task, you must have at least one NPC on a DACS in your DND network which has been previously created and is Out-of-Service (GT 8.1G or GT 8.2G).

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning.*

Instructions

Task Complete the following steps to restore NPCs on a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NPC Provisioning...** The NPC PROVISIONING form will appear on the screen.	
3	Select the **Site Name:** where the NPC resides	
4	Select *RESTORE* from the **Action:** field.	
5	Specify the NPC.	SE 8.3.1G
6	Click Continue... . The NPC PROVISIONING form will be populated with fields containing previously entered information in read-only mode. The **NPC Range:** field (for DS1 NPCs) and **Control Options** box also appears on the form. If restoring a DSPU NPC, skip to Step 10.	
7	(If a DS1/E1 NPC) Select the number of NPCs to provision in the **NPC Range:** field. The maximum number of NPCs available will depend on the module type. ■ If a range is selected, The NPC RANGE SPECIFICATION form will appear on the screen. All fields will be in read-only mode. ■ If no **NPC Range:** is selected (i.e., **NPC Range:** is "1"), skip to Step 11.	
8	Verify the information in the fields of the NPC RANGE SPECIFICATION form is accurate.	
9	Click Apply to accept the information on the NPC RANGE SPECIFICATION form. The screen will return to the NPC PROVISIONING form.	
10	(If a DSPU NPC) Select the CCN side to restore. When restoring a DSPU NPC, you will need to perform 2 restore actions on the NPC; one for side 1 and one for side 2.	
11	Select a **Reconcile:** mode.	SE 8.1.G

Step	Action	Reference
12	(Optional) In the **Execution Mode** box, select the desired scheduling **Mode:**. **NOTE:** If you are restoring a range of NPCs, you cannot schedule this **Action:**.	SE 8.1.4G
13	Click Continue... . The **Profile** box appears on the form.	
14	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
15	Click Continue... . All fields will appear on the form in read-only mode.	
16	Verify the information on the form to ensure you are restoring the desired NPC.	
17	When you have approved the information on the form, Click: a. Execute if restoring a single NPC, or... b. Start if restoring a range of NPCs. The **Working On:** field indicates which NPC is currently being provisioned. The Stop button is available if provisioning must be abruptly interrupted.	
18	**Stop! End of Task.**	
	Select a What's Next option.	SE 8.1.6G

SE 8.3.1G: Specifying an NPC

Procedure

Perform the following steps to specify an NPC:

1. In the **NPC Specifier:** field, select which type of specifier you will use to identify the NPC. Select **ID** for NPC ID, **Hier** for hierarchical number, or **Extd** for extended number.
2. In the **NPC:** field, enter the identifier for the NPC.

IF you select NPC Specifier...	THEN you enter in the NPC: field ...
ID	the NPC ID
Hier	NPC's hierarchical number
Extd	NPC's extended number

Stop! End of Procedure.

DND GUI: Modifying NPCs

8.4G

Background

When to Use

Use this General Task to modify NAS/CEPT NPC information for a single NPC or a group of NPCs.

Before You Begin

Before you begin this task, you must have at least one NPC on a DACS in your DND network which has been previously created (GT 8.1G or GT 8.2G).

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.

Instructions

Task Complete the following steps to modify NPCs on a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NPC Provisioning...** The NPC PROVISIONING form will appear on the screen.	
3	Select the **Site Name:** where the NPC resides.	
4	Select *MODIFY* from the **Action:** field.	
5	Specify the NPC.	SE 8.3.1G
6	Click Continue... . The NPC PROVISIONING form will be populated with fields containing previously entered information in read-only mode. The **NPC Type:** field also appears on the form.	
7	(If necessary) Modify the XYZ options in the **NPC Type:**.	SE 8.1.1G
8	Click Continue... . The **NPC Range:** field appears on the form and (only if applicable) the Specify PM Options button becomes active .	
9	(If a DS1/E1 NPC) Select the number of NPCs to provision in the **NPC Range:** field. The maximum number of NPCs available will depend on the unit type. ■ If a range is selected, The NPC RANGE SPECIFICATION form will appear on the screen. All fields will be in read-only mode. ■ If no **NPC Range:** is selected (i.e., **NPC Range:** is "1"), skip to Step 12.	
10	Verify the information in the fields of the NPC RANGE SPECIFICATION form is accurate.	
11	Click Apply to accept the information on the NPC RANGE SPECIFICATION form. The screen will return to the NPC PROVISIONING form.	
12	(If necessary) Modify the performance monitoring options.	SE 8.1.2G

Step	Action	Reference
13	Click Continue... . The **DACS** and **DND Provisioning Options** boxes and the **Control Options** box appear on the form.	
14	(If necessary) Modify the appropriate insertion word in the **Insertion Word (IW):** field, the alarm priority in the **Alarm Indication Signal (AIS):** field, the value for the alarm aging in the **Alarm Age:** field, and the option to **Disable Alarm Reporting:**.	
15	Select a **Reconcile:** mode.	SE 8.1.3G
16	(If desired) Select the **Remove NPC (OOS):** option box to *MODIFY* and *REMOVE* the NPC in one step. **NOTE:** If you made changes to the **NPC Type** or **Insertion Word,** and the NPC is In-Service, you will need to *REMOVE* the NPC from service (OOS). Select the **Remove NPC (OOS):** option to allow the DND to remove the NPC from service, make the change, and place it back in service. **CAUTION:** *Removing the NPC will interrupt traffic.*	
17	In the **Execution Mode** box, select the desired scheduling **Mode:**. **NOTE:** If you are modifying a range of NPCs, you cannot schedule this **Action:**.	SE 8.1.4G
18	Click Continue... . The **Profile** box appears on the form.	
19	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
20	Click Continue... . The fields will appear in read-only mode.	
21	Verify the information on the form to ensure you are modifying the desired NPC.	

Step	Action	Reference
22	When you have approved the information on the form, Click: a. Execute if modifying a single NPC, or... b. Start if modifying a range of NPCs. The **Working On:** field indicates which NPC is currently being provisioned. The Stop button is available if provisioning must be abruptly interrupted.	
23	**Stop! End of Task.**	
24	Select a What's Next option.	SE 8.1.6G

DND GUI: Removing NPCs from a DACS

8.5G

Background

When to Use

Use this General Task to remove an NPC or a group of NPCs from a DACS from service and (if desired) delete the NPC from the DACS network (if it is not a DSPU NPC).

Before You Begin

Before you begin this task, you must have at least one NPC on a DACS in your DND network which is In-Service (GT 8.1G/8.2G and 8.3G).

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.

Instructions

Task Complete the following steps to remove NPCs from service:

Step	Action	Reference
25	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
26	Select **NPC Provisioning...** The NPC PROVISIONING form will appear on the screen.	
27	Select the **Site Name:** where the NPC resides.	
28	Select *REMOVE* from the **Action:** field. The form automatically transitions to the next stage.	
29	Specify the NPC.	SE 8.3.1G
30	Click Continue... . The fields in the **NPC** box (except **NPC Range:**) and the **DACS** and **DND Provisioning Options** boxes appear on the form in read-only mode. Also, the **Control Options** box appears on the form. If removing a DSPU NPC, skip to Step 34.	
31	(If a DS1/E1 NPC) Select the number of NPCs to remove in the **NPC Range:** field. The maximum number of NPCs available will depend on the module type. ■ If a range is selected, The NPC RANGE SPECIFICATION form will appear on the screen. All fields will be in read-only mode. ■ If no **NPC Range:** is selected (i.e., **NPC Range:** is "1"), skip to Step 35.	
32	Verify the information in the fields of the NPC RANGE SPECIFICATION form is accurate.	
33	Click Apply to accept the information on the NPC RANGE SPECIFICATION form. The screen will return to the NPC PROVISIONING form.	
34	If the NPC is a DMB NPC, the DND displays NPC information fields for both NPCs. Select the **Side:** to remove from service.	
35	Select a **Reconcile:** mode.	SE 8.1.3G

Step	Action	Reference
36	If you are removing an NPC which may have a red-line or customer-controlled circuit, select the **Inclusive (INCL):** option box.	
37	Select the **Delete NPC:** option box to *REMOVE* and *DELETE* the NPC in one step. **NOTE:** This option is only available to NAS/CEPT NPCs.	
38	(Optional) In the **Execution Mode** box, select the desired scheduling **Mode:**. **NOTE:** If you are removing a range of NPCs, you cannot schedule this **Action:**.	SE 8.1.4G
39	Click Continue... . The **Profile** box appears on the form.	
40	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
41	Click Continue... . The fields will appear in read-only mode.	
42	Verify the information on the form to ensure you are removing the desired NPC.	
43	When you have approved the information on the form, Click: a. Execute if removing a single NPC, or... b. Start if removing a range of NPCs. The **Working On:** field indicates which NPC is currently being provisioned. The Stop button is available if provisioning must be abruptly interrupted.	
44	**Stop! End of Task.**	
	Select a What's Next option.	SE 8.1.6G

DND GUI: Deleting NPCs from a DACS

8.6G

Background

When to Use

Use this General Task to delete an NPC or a group of NPCs from a DACS. You can also delete a generic NAS/CEPT NPC from a *REMOVE* **Action:** (GT 8.5G).

Before You Begin

Before you begin this task, you must have at least one NPC on a DACS in your DACS network which is Out-of-Service (GT 8.1G/8.2G or 8.5G) or (for a DSPU NPC) Out-of-Service on at least one side.

Before you can delete an NPC, delete all circuits on the NPC at the DND and/or the DACS.

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning.*

Instructions

Task

Complete the following steps to delete NPCs from a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NPC Provisioning...** The NPC PROVISIONING form will appear on the screen.	
3	Select the **Site Name:** where the NPC resides.	
4	Select *DELETE* from the **Action:** field.	
5	Specify the NPC.	SE 8.3.1G
6	Click Continue... . The fields in the **NPC** box (except **NPC Range:**) and the **DACS** and **DND Provisioning Options** boxes appear on the form in read-only mode. Also, the **Control Options** box appears on the form.	
7	(If a DS1/E1 NPC) Select the number of NPCs to remove in the **NPC Range:** field. The maximum number of NPCs available will depend on the unit type. ■ If a range is selected, The NPC RANGE SPECIFICATION form will appear on the screen. All fields will be in read-only mode. ■ If no **NPC Range:** is selected (i.e., **NPC Range:** is "1"), skip to Step 10.	
8	Verify the information in the fields of the NPC RANGE SPECIFICATION form is accurate.	
9	Click Apply to accept the information on the NPC RANGE SPECIFICATION form. The screen will return to the NPC PROVISIONING form.	
10	Select a **Reconcile:** mode.	SE 8.1.3G
11	(Optional) In the **Execution Mode** box, select the desired scheduling **Mode:**. **NOTE:** If you are deleting a range of NPCs, you cannot schedule this **Action:**.	SE 8.1.4G

Step	Action	Reference
12	Click Continue... . The **Profile** box appears on the form.	
13	(Optional) To add or delete a profile, enter information in the **Profile** box.	SE 8.1.5G
14	Click Continue... . The fields will appear in read-only mode.	
15	Verify the information on the form to ensure you are deleting the correct NPC.	
16	When you have approved the information on the form, Click: a. Execute if deleting a single NPC, or... b. Start if deleting a range of NPCs. The **Working On:** field indicates which NPC is currently being provisioned. The Stop button is available if provisioning must be abruptly interrupted.	
17	**Stop! End of Task.**	
	Select a What's Next option.	SE 8.1.6G

DND GUI: Placing NPCs in Loopback Mode

8.7G

Background

When to Use

Use this General Task to place an NPC or a group of NPCs on a DACS in the Loopback mode. This is typically used to isolate and test a signal on one side of a circuit. This action is applicable only to PA/PB/PC-type NPCs.

Before You Begin

Before you begin this task, you must have at least one NPC on a DACS in your DACS network which is In-Service (GT 8.1G/8.7G and GT 8.3G).

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning.*

Instructions

Task

Complete the following steps to place NPCs in Loopback mode:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NPC Provisioning...** The NPC PROVISIONING form will appear on the screen.	
3	Select the **Site Name:** where the NPC resides.	
4	Select *LOOPBACK* from the **Action:** field. The form automatically transitions to the next stage.	
5	Specify the NPC.	SE 8.3.1G
6	Click Continue... . Additional NPC provisioning fields appear on the form.	
7	(If a DS1 NPC) Select the number of NPCs to remove in the **NPC Range:** field. The maximum number of NPCs available will depend on the unit type. ■ If a range is selected, The NPC RANGE SPECIFICATION form will appear on the screen. All fields will be in read-only mode. ■ If no **NPC Range:** is selected (i.e., **NPC Range:** is "1"), skip to Step 10.	
8	Verify the information in the fields of the NPC RANGE SPECIFICATION form is accurate.	
9	Click Apply to accept the information on the NPC RANGE SPECIFICATION form. The screen will return to the NPC PROVISIONING form.	
10	Select the **Loopback Transmission:** option.	
11	(For PA NPC types only) Select a **Loopback Direction:** option.	
12	Select a **Reconcile:** mode.	SE 8.1.3G

Step	Action	Reference
13	(Optional) In the **Execution Mode** box, select the desired scheduling **Mode:**. **NOTE:** If you are placing a range of NPCs in loopback, you cannot schedule this **Action:**.	SE 8.1.4G
14	Click Continue... . The **Profile** box appears on the form.	
15	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
16	Click Continue... . The fields will appear in read-only mode.	
17	Verify the information on the form to ensure you are deleting the correct NPC.	
18	When you have approved the information on the form, Click: a. Execute if placing a single NPC in loopback, or... b. Start if placing a range of NPCs in loopback. The **Working On:** field indicates which NPC is currently being provisioned. The Stop button is available if provisioning must be abruptly interrupted.	
19	**Stop! End of Task.**	
	Select a What's Next option.	SE 8.1.6G

DND GUI: Removing NPCs from Loopback Mode

8.8G

Background

When to Use

Use this General Task to remove an NPC or group of NPCs from Loopback mode.

Before You Begin

Before you begin this task, you must have at least one NPC on a DACS in your DACS network which is in Loopback mode (GT 8.7G).

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning.*

Instructions

Task

Complete the following steps to remove NPCs from Loopback mode:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NPC Provisioning...** The NPC PROVISIONING form will appear on the screen.	
3	Select the **Site Name:** where the NPC resides.	
4	Select *LOOPBACK* from the **Action:** field.	
5	Specify the NPC.	SE 8.3.1G
6	Click Continue... . NPC information fields appear on the form in read-only mode. The **Loopback Transmission:** field (if PA type **Loopback Direction:**) and **Control Options** box appear on the form.	
7	(If a DS1 NPC) Select the number of NPCs to remove in the **NPC Range:** field. The maximum number of NPCs available will depend on the unit type. ■ If a range is selected, The NPC RANGE SPECIFICATION form will appear on the screen. All fields will be in read-only mode. ■ If no **NPC Range:** is selected (i.e., **NPC Range:** is "1"), skip to Step 10.	
8	Verify the information in the fields of the NPC RANGE SPECIFICATION form is accurate.	
9	Click Apply to accept the information on the NPC RANGE SPECIFICATION form. The screen will return to the NPC PROVISIONING form.	
10	Select the **N** option box for the **Loopback Transmission:**.	
11	(For PA NPC types only) Select the **N** option box for the **Loopback Direction:**.	
12	Select a **Reconcile:** mode.	SE 8.1.3G

Step	Action	Reference
13	(Optional) In the **Execution Mode** box, select the desired scheduling **Mode:**. **NOTE:** If you are removing a range of NPCs from loopback, you cannot schedule this **Action:**.	SE 8.1.4G
14	Click Continue... . The **Profile** box appears on the form.	
15	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
16	Click Continue... . The fields will appear in read-only mode.	
17	Verify the information on the form to ensure you are deleting the correct NPC.	
18	When you have approved the information on the form, Click: a. Execute if removing a single NPC from loopback, or... b. Start if removing a range of NPCs from loopback. The **Working On:** field indicates which NPC is currently being provisioned. The Stop button is available if provisioning must be abruptly interrupted.	
19	**Stop! End of Task.**	
	Select a What's Next option.	SE 8.1.6G

DND Forms: Creating an NPC

8.1U

Background

When to Use

Use this General Task to create an NPC on a DACS by using the DND Forms interface.

Before You Begin

Before you begin this task, you must log in and start the DND Forms Interface.

You must also have at least one DACS in the DACS network which is In-Service (GT 5.1U - GT 5.3U). The NPC must not already exist.

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning.*

Instructions

Task Complete the following steps to grow an NPC on a DACS:

Step	Action	Reference
1	Select PROVISIONING from the MAIN MENU. The PROVISIONING menu appears.	
2	Select **NPC** from the PROVISIONING menu. The NPC PROVISIONING form will appear on the screen.	
3	Enter the **Site Name** or press CHOICES to select the DACS where the NPC resides.	
4	Select CREATE from the **Action** field.	
5	Enter an identification name for the NPC in the **NPC ID** field.	
6	Enter the NPC Type in the **Type** field. This field is automatically filled in with a default type, depending on values in the `ui_dval` file.	
7	Enter the NPC number in either the **Number (Hier)** or the **(Ext)** fields. DND automatically converts and fills in the other.	
8	Default values will appear for other provisioning options. Override any of the default values. For example, you may want to change the values for the PM fields. For further information on the fields, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning*.	
9	(Optional) Press RECNCILE to choose an option for updating the DND database and/or the DACS.	SE 8.1.1U

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
10	When you have approved the information on the form, Press EXECUTE . and select a scheduling option.	SE 8.1.2U
11	**Stop! End of Task.**	
	Select a What's Next option.	SE 8.1.3U

SE 8.1.1U: Selecting a Reconcile Mode

Description

This task is used to reconcile differences between the DND and the DACS databases. This is an optional operation. If you do not choose a Reconcile option, then the action will always default to executing the action on both the DACS and the DND.

WARNING:
Reconcile can CREATE discrepancies between the DND and the DACS database. Use with caution.

Procedure

Perform ONE of the following options to select the appropriate Reconcile Mode:

IF you want to execute this Action...	THEN select...
On the DACS and DND	**DACS and DND** (default)
On the DND only	**DND only**
On the DACS only	**DACS only**

Stop! End of Procedure.

SE 8.1.2U: Scheduling an Action

Procedure

Scheduling an action allows you to execute a task one or more times in the future.

Perform the steps below to set a specified date, time, and frequency for the DND system to perform an action:

IF you...	THEN...
Execute this action immediately (now)	Select **Immediate** (default).
Schedule the action	1. Select the desired **Day:**, **Month:**, and **Year:** options to set the start **DATE**. 2. Select the desired **Hour:** and **Minute:** options to set the **TIME**. 3. If the action will be performed more than once, enter a value for **Number of times:** and **Interval:** and select the time scale from the **Scale:** field. **NOTE:** If number of times is set to 0, then the task will repeat indefinitely (until the end of time in 2038). For example, if the form has the following information: — **Day:** 3 — **Month:** May — **Year:** 1999 — **Hour:** 9 — **Minute:** 30 — **Number of times:** 1 — **Interval:** 0 — **Scale:** None Then, the DND will create this NPC beginning at May 3, 1999 at 9:30 AM.

Stop! End of Procedure.

SE 8.1.3U: What's Next Options for NPC Provisioning

What's Next?

Options	Reference
To perform another NPC Provisioning action, fill in the Site Name and Action on the NPC PROVISIONING form.	GT 8.1U - GT 8.9U
Select TOP MENU to return to the DND Forms MAIN MENU.	
Select QUIT to return to the PROVISIONING MENU.	

DND Forms: Restoring an NPC on a DACS

8.2U

Background

When to Use

Use this General Task to restore an NPC on a DACS using the DND Forms interface. Restoring NPCs places them In-Service so they can be used for creating circuits.

Before You Begin

Before you begin this task, you log in and start the DND Forms interface.

Before you begin this task, you must have at least one NPC on a DACS in your DND network which has been previously created and is Out-of-Service (GT 8.1U).

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning.*

Instructions

Task

Complete the following steps to restore an NPC on a DACS:

Step	Action	Reference
1	Select PROVISIONING from the MAIN MENU. The PROVISIONING menu appears.	
2	Select **NPC** from the PROVISIONING menu. The NPC PROVISIONING form will appear on the screen.	
3	Enter the **Site Name** or press CHOICES to select the DACS where the NPC resides.	
4	Select RESTORE from the **Action:** field.	
5	Identify the NPC to be restored by entering one of the following: ■ The identification name for the NPC in the **NPC ID** field ■ The NPC number in either the **Number (Hier)** or the **(Ext)** fields	
6	DND automatically displays the related data for the specified NPC.	
7	(If a DSPU NPC) Select the CCN side to restore. When restoring a DSPU NPC, you will need to perform 2 restore actions on the NPC; one for side 0 and one for side 1.	
8	(Optional) Press RECNCILE to choose an option for updating the DND database and/or the DACS	SE 8.1.1U
9	Verify the information on the form to ensure you are restoring the desired NPC.	
10	When you have approved the information on the form, Select EXECUTE and select a scheduling option.	SE 8.1.12U
11	**Stop! End of Task.**	
	Select a What's Next option.	SE 8.1.3U

DND Forms: Modifying an NPC

8.3U

Background

When to Use

Use this General Task to modify generic NAS/CEPT NPC information previously entered when an NPC was created.

Before You Begin

Before you begin this task, you must log in and start the DND Forms interface.

Before you begin this task, you must have at least one NPC on a DACS in your DND network which has been previously created (GT 8.1U).

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning.*

Instructions

Task

Complete the following steps to modify an NPC on a DACS:

Step	Action	Reference
1	Select PROVISIONING from the MAIN MENU. The PROVISIONING menu appears.	
2	Select **NPC** from the PROVISIONING menu. The NPC PROVISIONING form will appear on the screen.	
3	Enter the **Site Name** or press CHOICES to select the DACS where the NPC resides.	
4	Select `MODIFY` from the **Action** field.	
5	Identify the NPC to be modified. Enter one of the following: ■ The identification name for the NPC in the **NPC ID** field ■ The NPC number in either the **Number (Hier)** or the **(Ext):** fields	
6	DND automatically displays the related data for the specified NPC.	
7	Modify all necessary fields. For further information on the fields, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning*. If you are changing **IW** or **Type**, the NPC must be out-of-service. If it is not currently out-of-service, put YES in the **OOS** field so that DND will remove the NPC from service when the action is executed.	
8	(Optional) Press RECNCILE to choose an option for updating the DND database and/or the DACS	SE 8.1.1U
9	Verify the information on the form.	
10	When you have approved the information on the form, Select EXECUTE and select a scheduling option.	SE 8.1.2U
11	**Stop! End of Task.**	
	Select a What's Next option.	SE 8.1.3U

DND Forms: Removing an NPC from a DACS

8.4U

Background

When to Use

Use this General Task to remove an NPC on a DACS from service.

Before You Begin

Before you begin this task, you must access the DND Forms interface.

Before you begin this task, you must have at least one NPC on a DACS in your DND network which is In-Service (GT 8.2U).

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning.*

Instructions

Task

Complete the following steps to remove an NPC:

Step	Action	Reference
1	Select PROVISIONING from the MAIN MENU. The PROVISIONING menu appears.	
2	Select **NPC** from the PROVISIONING menu. The NPC PROVISIONING form will appear on the screen.	
3	Enter the **Site Name** or press CHOICES to select the DACS where the NPC resides.	
4	Select REMOVE from the **Action** field.	
5	Identify the NPC to be modified. Enter one of the following: ■ The identification name for the NPC in the **NPC ID:** field ■ The NPC number in either the **Number (Hier):** or the **(Ext):** fields	
6	DND automatically displays the related data for the specified NPC. Verify the data for the NPC and that the **Service State**: field is IS.	
7	If the **Type:** is MB, specify the **SIDE:** to be removed.	
8	(Optional) Press RECNCILE to choose an option for updating the DND database and/or the DACS.	SE 8.1.1U
9	When you have approved the information on the form, Select EXECUTE and select a scheduling option. If you select IMMEDIATE, these results are displayed: — **Service State:** field changes to OOS — **Alarm State:** changes to NONE — DND command completion message is displayed.	SE 8.1.2U
10	**Stop! End of Task.**	
	Select a What's Next option.	SE 8.1.3U

DND Forms: Deleting an NPC from a DACS

8.5U

Background

When to Use

Use this General Task to delete an NPC from a DACS.

Before You Begin

Before you begin this task, you must access the DND Forms interface.

Before you begin this task, you must have at least one NPC on a DACS in your DND network which is Out-of-Service (GT 8.1U or GT 8.4U).

If you are deleting a DSPU NPC, at least one side must be Out-of-Service.

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning.*

Instructions

Task

Complete the following steps to delete an NPC:

Step	Action	Reference
1	Select PROVISIONING from the MAIN MENU. The PROVISIONING menu appears.	
2	Select **NPC** from the PROVISIONING menu. The NPC PROVISIONING form will appear on the screen.	
3	Enter the **Site Name** or press CHOICES to select the DACS where the NPC resides.	
4	Select DELETE from the **Action** field.	
5	Identify the NPC to be modified. Enter one of the following: ■ The identification name for the NPC in the **NPC ID** field ■ The NPC number in either the **Number (Hier)** or the **(Ext)** fields	
6	DND automatically displays the related data for the specified NPC. Verify the data for the NPC.	
7	(Optional) Press RECNCILE to choose an option for updating the DND database and/or the DACS.	SE 8.1.1U
8	When you have approved the information on the form, Select EXECUTE and select a scheduling option. If you select IMMEDIATE, these results are displayed: — **Service State:** field changes to UEQD — **Alarm State:** is now blank — DND command completion message is displayed.	SE 8.1.2U
9	**Stop! End of Task.**	
	Select a What's Next option.	SE 8.1.3U

DND Forms: Placing an NPC in Loopback Mode

8.6U

Background

When to Use

Use this General Task to place an NPC on a DACS in the Loopback mode. This is typically used to isolate and test a signal on one side of a circuit. You can select LOOPBACK for NPCs that are out of service (OOS), or in service (IS). In addition, this action can also be applied to a traffic-carrying NPC.

Before You Begin

Before you begin this task, you must access the DND Forms interface.

Before you begin this task, you must have at least one NPC on a DACS in your DND network which has been created. (GT 8.1U).

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning.*

Instructions

Task

Complete the following steps to place an NPC in loopback mode:

Step	Action	Reference
1	Select PROVISIONING from the MAIN MENU. The PROVISIONING menu appears.	
2	Select **NPC** from the PROVISIONING menu. The NPC PROVISIONING form will appear on the screen.	
3	Enter the **Site Name** or press CHOICES to select the DACS where the NPC resides.	
4	Select L00PBACK from the **Action** field.	
5	Identify the NPC. Enter one of the following: ■ The identification name for the NPC in the **NPC ID** field ■ The NPC number in either the **Number (Hier)** or the **(Ext)** fields	
6	DND automatically displays the related data for the specified NPC. Verify the data for the NPC.	
7	Enter a **Lpbk Trans** option.	
8	(For PA NPC types only) Enter a Loopback direction in the **Dir** field.	
9	(Optional) Press RECNCILE to choose an option for updating the DND database and/or the DACS.	SE 8.1.1U
10	When you have approved the information on the form, Select EXECUTE and select a scheduling option.	SE 8.1.2U
11	**Stop! End of Task.**	
	Select a What's Next option.	SE 8.1.3U

DND Forms: Removing an NPC from Loopback Mode

8.7U

Background

When to Use

Use this General Task to remove an NPC from Loopback mode.

Before You Begin

Before you begin this task, you must access the DND Forms interface.

Before you begin this task, you must have at least one NPC on a DACS in your DND network which is in Loopback mode (GT 8.6U).

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning.*

Instructions

Task

Complete the following steps to remove an NPC from loopback mode:

Step	Action	Reference
1	Select PROVISIONING from the MAIN MENU. The PROVISIONING menu appears.	
2	Select **NPC** from the PROVISIONING menu. The NPC PROVISIONING form will appear on the screen.	
3	Enter the **Site Name** or press CHOICES to select the DACS where the NPC resides.	
4	Select L00PBACK from the **Action** field.	
5	Identify the NPC. Enter one of the following: ■ The identification name for the NPC in the **NPC ID** field ■ The NPC number in either the **Number (Hier)** or the **(Ext)** fields	
6	DND automatically displays the related data for the specified NPC. Verify the data for the NPC.	
7	Enter **N** in the **Lpbk Trans** field.	
8	(For PA NPC types only) Enter **N** for the Loopback direction in the **Dir:** field.	
9	(Optional) Press RECNCILE to choose an option for updating the DND database and/or the DACS.	SE 8.1.1U
10	When you have approved the information on the form, Select EXECUTE and select a scheduling option.	SE 8.1.2U
11	**Stop! End of Task.**	
	Select a What's Next option.	SE 8.1.3U

DND Forms: Querying an NPC

8.8U

Background

When to Use

Use this General Task to retrieve the current provisioning and status information for an NPC from the DACS and display it on the screen.

Before You Begin

Before you begin this task, you must access the DND Forms interface.

Before you begin this task, you must have at least one NPC on a DACS in your DND network which has been created (GT 8.1U).

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning.*

Instructions

Task

Complete the following steps to query an NPC:

Step	Action	Reference
1	Select PROVISIONING from the MAIN MENU. The PROVISIONING menu appears.	
2	Select **NPC** from the PROVISIONING menu. The NPC PROVISIONING form will appear on the screen.	
3	Enter the **Site Name** or press CHOICES to select the DACS where the NPC resides.	
4	Select QUERY from the **Action:** field. The fields on the lower part of the screen become temporarily blank.	
5	Identify the NPC. Enter one of the following: ■ The identification name for the NPC in the **NPC ID:** field ■ The NPC number in either the **Number (Hier):**or the **(Ext):** fields	
6	Select EXECUTE and select IMMEDIATE. The first page of the QUERY form is displayed. **NOTE:** If <<MISMATCH>> appears, these is an inconsistency between the data retrieved from the DACS and the data in the DND database. In that case, all the information on the form reflect the values retrieved from the DACS.	SE 8.1.1U
7	(For NPC Type PA only) Use NEXTPAGE to display the second page of the QUERY form.	
8	**Stop! End of Task.**	
	Select a What's Next option.	SE 8.1.3U

DND Forms: Browsing NPCs

8.9U

Background

When to Use

Use this General Task to retrieve the current provisioning and status information for a range of NPCs from the DACS and display it on the screen. The BROWSE action can retrieve information for up to 50 NPCs at one time.

Before You Begin

Before you begin this task, you must access the DND Forms interface.

Before you begin this task, you must have at least one NPC on a DACS in your DND network which has been created (GT 8.1U).

Related Information

For related information, refer to *Chapter 8, DACS II, DACS II ISX NPC Provisioning.*

Instructions

Task Complete the following steps to browse NPCs:

Step	Action	Reference
1	Select PROVISIONING from the MAIN MENU. The PROVISIONING menu appears.	
2	Select **NPC** from the PROVISIONING menu. The NPC PROVISIONING form will appear on the screen.	
3	Enter the **Site Name** or press CHOICES to select the DACS where the NPC resides.	
4	Select BROWSE from the **Action:** field. The fields on the lower part of the screen become temporarily blank.	
5	Enter search criteria in one of the following ways: ■ Enter data in the **NPC ID** field. You can use wild-card characters (*?), in the **NPC ID** field only, to match any character or set of characters. ■ To browse the first 50 NPCS, enter ***** in the **NPC ID** field. ■ To search for NPCs that match certain criteria, specify values in any of the other fields that appear on the screen.	
6	Select EXECUTE and select IMMEDIATE. DND searches for the specified NPCs, and displays the data for the first NPC found.	SE 8.1.2U
7	Press NEXT to display the next NPC.	
8	To stop browsing, press QUIT .	
9	**Stop! End of Task.**	
	Select a What's Next option.	SE 8.1.3U

DACS II AX Port Provisioning

9

Contents

- DND GUI
  - Restoring a T1/E1 Port GT 9.1G
  - Modifying a T1/E1 Port GT 9.2G
  - Removing a T1/E1 Port GT 9.3G
  - Modifying a T3 Port GT 9.4G

Restoring a T1/E1 Port

9.1G

When to Use

Use this General Task to restore a T1/E1 Port.

Before You Begin

Before you begin this task, you must identify a unique Port ID or Port Number corresponding to the T1/E1 port to be restored.

Related Information

For related information, refer to Chapter 9, *DACS II AX Port Provisioning.*

Instructions

Task Complete the following steps to restore a T1/E1 port to In Service State.

Step	Action	Reference
1	Click Provisioning at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Port Provisioning**... The DACS II AX PORT PROVISIONING form appears on the screen.	
3	Select the desired DACS II AX **Site Name**. **WARNING:** *The selected DACS II AX must exist in the DND database and must be in service only if the Reconcile Mode is "DND and AX".*	
4	Select *RESTORE* from the **Action:** field. The **PORT IDENTIFICATION** box displays on the form.	
5	Choose **ID** or **SLOT/PORT** in the **Port Specifier** field, then continue with one if the following selections. ■ If you chose **ID**, enter the **Port ID**, choose **T1/E1** in the **Type of Port** field, then proceed to Step 7. ■ If you chose **SLOT/PORT, s**elect a value in the **Slot** field then continue with one of the following options: — If the **Slot** value you selected is a T3 signal and you wish to choose a T1 within it, select **T3-T1** in the **Port Type** field, select the **Port Number** field and proceed to Step 6. — If the **Slot** value you selected is T1/E1, select the **Port Number** field and proceed to Step 6.	
6	Click Continue... . Additional fields display on the form.	

Step	Action	Reference
7	In the **Range** field, optionally change the number of ports to provision in the **Range:** field. The maximum number of ports available will depend the slot type. ■ If a range greater than "1" is selected, the PORT RANGE SPECIFICATION form will appear on the screen. ■ If no **Range:** is selected (e.g., **Range:** is "1"), skip to 10.	
8	Click Continue... . All fields on the PORT RANGE SPECIFICATION form appear in read-only mode. Verify the information on the form entered is accurate.	
9	Click Apply to accept the information on the PORT RANGE SPECIFICATION form. The screen will return to the DACS II AX PORT PROVISIONING form.	
10	Select a Reconcile Option.	SE 9.1.1G
11	In the Execution Mode box, select the desired scheduling **Mode**:. ■ If you choose the **Schedule** option box, click Continue... , select the appropriate scheduling options then proceed to the next step.	SE 8.1.4G
12	Click Continue... . The **Profile:** box will appear on the form. All other fields will appear in read-only mode.	
13	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
14	Verify the information on the form to ensure that it is correct.	
15	When you have approved the information, click Execute .	
16	**Stop! End of Task.**	
	Select a What's Next option.	SE 9.1.2G

SE 9.1.1G: Selecting a Reconcile Mode

Procedure

Perform ONE of the following options to select the appropriate Reconcile **Mode**:

IF you want to execute this Action...	THEN select...
On the DND and AX	The **DND and AX** option box (default).
On the DND only	The **DND only** option box.

Stop! End of Procedure.

SE 9.1.2G: What's Next Options for Port Provisioning

What's Next?

Options	Reference
Click New Action to perform another action on the current port.	GT 9.1G - GT 9.4G
Click New Port to perform the same action on a different port.	GT 9.1G
Click Restart to clear and initialize the form and select an action for another port.	
Click Close to close the AX PORT PROVISIONING form	

Modifying a T1/E1 Port

9.2G

When to Use

Use this General Task to modify a T1/E1 Port.

Before You Begin

Before you begin this task, you must identify a unique Port ID or Port Number corresponding to the T1/E1 port to be modified.

Related Information

For related information, refer to Chapter 9, *DACS II AX Port Provisioning.*

Instructions

Task Complete the following steps to modify an In Service or Out of Service T1/E1 port.

Step	Action	Reference
1	Click Provisioning at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Port Provisioning**... The DACS II AX PORT PROVISIONING form appears on the screen.	
3	Select the desired DACS II AX **Site Name**. **WARNING:** *The selected DACS II AX must exist in the DND database and must be in service only if the Reconcile Mode is "DND and AX".*	
4	Select a **Profile ID** (optional).	
5	Select *MODIFY* from the **Action:** field. The **PORT IDENTIFICATION** box displays on the form.	
6	Choose **ID** or **SLOT/PORT** in the **Port Specifier** field, then continue with one if the following selections. ■ If you chose **ID**, enter the **Port ID**, choose **T1/E1** in the **Type of Port** field, then proceed to Step 8. ■ If you chose **SLOT/PORT, s**elect a value in the **Slot** field then continue with one of the following options: — If the **Slot** value you selected is a T3 signal and you wish to choose a T1 within it, select **T3-T1** in the **Port Type** field, select the **Port Number** field and proceed to Step 7. — If the **Slot** value you selected is T1/E1, select the **Port Number** field and proceed to Step 7.	
7	Click Continue... . Additional fields display on the form.	

Step	Action	Reference
8	In the **Range** field, optionally change the number of ports to provision in the **Range:** field. The maximum number of ports available will depend the module type. ■ If a range greater than "1" is selected, the PORT RANGE SPECIFICATION form will appear on the screen. ■ If no **Range:** is selected (e.g., **Range:** is "1"), skip to Step 12.	
9	(Optional). Enter the names for the port you wish to modify in the **ID:** field next to the corresponding port numbers. Blank **ID:** names will be skipped.	
10	Click Continue... . All fields on the PORT RANGE SPECIFICATION form appear in read-only mode. Verify the information on the form entered is accurate.	
11	Click Apply to accept the information on the PORT RANGE SPECIFICATION form. The screen will return to the DACS II AX PORT PROVISIONING form.	
12	In the **New ID** field, optionally select a new DND ID for the port.	
13	In the **New Site Port ID** field, optionally select a new Site ID for the port.	

Step	Action	Reference
14	You may optionally modify the additional information. **NOTE:** Most of the following fields display on this form however if the field is marked with a single asterisk, (*) then it only displays if you selected a **T3-T1** type of port. If the field is marked with a double asterisk, (**) then it only displays if you selected an OctalE1T1 port type. ■ Framing* ■ Density* ■ Clear (**) ■ Linetype (**) ■ NetLoop ■ Yellow alarm ■ Recover Time ■ Unused DS0's ■ LBO (**) ■ Long Haul (**) ■ ESF Format	
15	Select a Reconcile Mode.	SE 9.1.1G
16	In the Execution Mode box, select the desired scheduling **Mode**:. ■ If you choose the **Schedule** option box, click Continue... , select the appropriate scheduling options then proceed to the next step.	SE 8.1.4G
17	Click Continue... . The **Profile:** box will appear on the form. All other fields will appear in read-only mode.	
18	Verify the information on the form to ensure that it is correct.	

Step	Action	Reference
19	When you have approved the information, click Execute.	
20	**Stop! End of Task.**	
	Select a What's Next option.	SE 9.1.2G

Removing a T1/E1 Port

9.3G

When to Use

Use this General Task to remove a T1/E1 Port.

Before You Begin

Before you begin this task, you must identify the unique Port ID or Port Number corresponding to the T1/E1 port to be removed. The port must reside on the DND database and must be assigned an In Service status.

Related Information

For related information, refer to Chapter 9, *DACS II AX Port Provisioning.*

Instructions

Task

Complete the following steps to remove a T1/E1 port and change its status to Out of Service.

Step	Action	Reference
1	Click Provisioning at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select Port Provisioning... The DACS II AX PORT PROVISIONING form appears on the screen.	
3	Select the desired DACS II AX **Site Name**. **WARNING:** *The selected DACS II AX must exist in the DND database and must be in service only if the Reconcile Mode is "DND and AX".*	
4	Select *REMOVE* from the **Action:** field. The **PORT IDENTIFICATION** box displays on the form.	
5	Choose **ID** or **SLOT/PORT** in the **Port Specifier** field, then continue with one if the following selections. ■ If you chose **ID**, enter the **Port ID**, choose **T1/E1** in the **Type of Port** field, then proceed to Step 6. ■ If you chose **SLOT/PORT, s**elect a value in the **Slot** field then continue with one of the following options: — If the **Slot** value you selected is a T3 signal and you wish to choose a T1 within it, select **T3-T1** in the **Port Type** field, select the **Port Number** field and proceed to Step 6. — If the **Slot** value you selected is T1/E1, select the **Port Number** field and proceed to Step 6.	
6	Click Continue... . Additional fields display on the form.	

Step	Action	Reference
7	In the **Range** field, optionally change the number of ports to remove in the **Range:** field. The maximum number of ports available will depend the port type. ■ If a range greater than "1" is selected, the PORT RANGE SPECIFICATION form will appear on the screen. ■ If no **Range:** is selected (e.g., **Range:** is "1"), skip to 10.	
8	Click Continue... . All fields on the PORT RANGE SPECIFICATION form appear in read-only mode. Verify the information on the form entered is accurate.	
9	Click Apply to accept the information on the PORT RANGE SPECIFICATION form. The screen will return to the DACS II AX PORT PROVISIONING form.	
10	Select a Reconcile Mode.	SE 9.1.1G
11	In the Execution Mode box, select the desired scheduling **Mode**:. ■ If you choose the **Schedule** option box, click Continue... , select the appropriate scheduling options then proceed to the next step.	SE 8.1.4G
12	Click Continue... . The **Profile:** box will appear on the form. All other fields will appear in read-only mode.	
13	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
14	Verify the information on the form to ensure that it is correct.	
15	When you have approved the information, click Execute .	
16	**Stop! End of Task.**	
	Select a What's Next option.	SE 9.1.2G

Modifying a T3 Port

9.4G

When to Use

Use this General Task to modify a T3 port.

Before You Begin

Before you begin this task, you must identify a unique Port ID or Port Number corresponding to the T3 port to be modified.

Related Information

For related information, refer to Chapter 9, *DACS II AX Port Provisioning.*

Instructions

Task

Complete the following steps to modify an In Service or Out of Service T3 port.

Step	Action	Reference
1	Click Provisioning at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Port Provisioning**... The DACS II AX PORT PROVISIONING form appears on the screen.	
3	Select the desired AX **Site Name**. **WARNING:** *The selected DACS II AX must exist in the DND database and must be in service only if the Reconcile Mode is "DND and AX".*	
4	Optionally select a **Profile ID**.	
5	Select *MODIFY* from the **Action:** field.The **PORT IDENTIFICATION** box displays on the form.	
6	Choose **ID** or **SLOT/PORT** in the **Port Specifier** field, then continue with one if the following selections. ■ If you chose **ID**, enter the **Port ID**, choose **T3** in the **Type of Port** field, then proceed to Step 7. ■ If you chose **SLOT/PORT:** a. Select a **T3** slot value in the **Slot** field. b. Select **T3** in the Port Type field. c. Proceed to Step 7.	
7	Click Continue... . Additional fields display on the form.	
8	In the **New ID** field, optionally enter a new DND ID for the port.	
9	In the **New Site Port ID** field, optionally enter a new Site ID for the port.	

Step	Action	Reference
10	You may optionally modify the additional information. ■ M13 Opcode ■ M13 RemLoop ■ Rcv. Loop Timing ■ Rcv. AIS ■ Short Haul ■ Xmit. AIS	
11	(Optional) Select a Reconcile Mode.	SE 9.1.1G
12	(Optional) In the Execution Mode box, select the desired scheduling **Mode**:. ■ If you choose the **Schedule** option box, click Continue... , select the appropriate scheduling options then proceed to the next step.	SE 8.1.4G
13	Click Continue... . The **Profile:** box will appear on the form. All other fields will appear in read-only mode.	
14	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
15	Verify the information on the form to ensure that it is correct.	
16	When you have approved the information, click Execute .	
17	**Stop! End of Task.**	
	Select a What's Next option.	SE 9.1.2G

Circuit Provisioning General Tasks

10

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  - Activating or Pending a New Circuit, Full or Half Duplex — GT 10.1G
    - What's Next Options for Circuit Provisioning — SE 10.1.1G
  - Activating or Pending a New Circuit, Digital Multipoint Bridge — GT 10.2G
  - Modifying a Circuit — GT 10.3G
  - Combining Multiple Circuits — GT 10.4G
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DND GUI: Activating or Pending a New Circuit, Full or Half Duplex

10.1G

Background

When to Use

Use this General Task to activate a cross-connection on a DACS.

Before You Begin

Before you begin this task, you must have at least one NPC on a DACS in the DND network which is In-Service. (GT 8.1G-8.4G).

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task

Complete the following steps to activate a new two-point, one- or two-way circuit on a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Circuit Provisioning**... The CIRCUIT PROVISIONING form appears on the screen.	
3	Select the desired **Site Name:** where the circuit will reside.	
4	(Optional) Select a **Profile ID:** to use a previously created profile to fill in the form. The following Continue... clicks will not be necessary and some of the fields will be read-only.	
5	Select one of the following from the **Action:** field: ■ *ACTIVATE* to create an *ACTIVE* new circuit ■ *PEND* to create a *PENDING* circuit in the DND database. The **Ckt Class:** field appears on the form.	
6	Select ONE of the following circuit types in the **Ckt Class:** field: ■ *HDX: HALF DUPLEX* for a one-way cross-connection ■ *FDX: FULL DUPLEX* for a two-way cross-connection	
7	Click Continue... . The **Circuit ID:** field appears on the form.	
8	Enter a name for the circuit in the **Circuit ID:** field.	
9	Click Continue... . The **CIRCUIT ENDPOINTS** box appears on the form. The **Initial status:** field indicates a status of *NULL* for the circuit being activated.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
10	Enter the NPC information for the **FROM NPC** and **TO NPC** sides of the circuit. If using clear DS1/E1 NPCs, skip to Step 15.	
11	Click Continue... . Additional **CIRCUIT ENDPOINTS** fields appear on the form.	
12	Select the **Bandwidth Type:** for the circuit.	
13	Select the **Bandwidth:** size of the circuit.	
14	Enter the FROM and TO channel number (or the first FROM and TO channel numbers for a **Bandwidth:** larger than 1) in the **FROM Channel:** and **TO Channel:** fields, respectively. You may choose to use the Find buttons to let the form find the next available channel or set of channels.	SE 10.1.1G
15	Click Continue... . The **CIRCUIT INFORMATION** and **Control Options** boxes appear on the form. If one of the NPCs has been added to an intertie, then the **CIRCUIT NETWORK INFORMATION** box also appears.	
16	Select the desired **Circuit Options**.	
17	Enter values for the following fields: ■ **Trunk Conditioning:** ■ **Insertion Word:** ■ **Signaling Conversion:**	

(Continued on next page)

Instructions (Continued)

Task, Continued

18	Enter information into the following fields: ■ (Optional) **Location A:** ■ (Optional) **Location Z:** ■ (Optional) **Customer Name:** ■ **Priority** ■ (Optional) **Remarks:**	
19	Select the **Service Date** when the circuit will be made available to the Customer. The DND will default to the current date.	
20	Select a **Reconcile:** option.	SE 8.1.3G
21	In the **Execution Mode:** box, select the desired scheduling mode.	SE 8.1.4G
22	Click Continue... . The **Profile:** box will appear on the form. All other fields will appear in read-only mode.	
23	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
24	Verify the information on the form to ensure you are activating the desired circuit.	
25	When you have approved the information on the form, Click Execute . The **New Status:** field will appear indicating the new status of your circuit.	
26	**Stop! End of Task.**	
	Select a What's Next option.	SE 10.1.2G

SE 10.1.1G: Finding Available Channels

Procedure

Perform the following steps to have the CIRCUIT PROVISIONING form find available channels:

IF you...	THEN...
KNOW the channel number(s)	Type the number(s) in the **Channels:** field.
DON'T KNOW the channel number(s)	1. Click Find on both sides (**TO** and **FROM** sides) to find the first available channel. 2. Check the **Connection and Display Status** field message to determine if Find was successful.

Stop! End of Procedure.

SE 10.1.2G: What's Next Options for Circuit Provisioning

What's Next? Perform one of the following options below upon completion of the task:

Options	Reference
Click New Action to perform another action on the current circuit.	GT 10.1G - GT 10.12G
(If NPC is connected to an intertie) Click FROM NPC to trace the circuit through the FROM side through the intertie.	
(If NPC is connected to an intertie) Click TO NPC to trace the circuit through the TO side of the intertie.	
(If NPC is connected to an intertie) Click TRACE MAP DISPLAY to display a circuit trace table and map of the circuit through the entire network.	GT 10.12G
Click Restart to clear and initialize the form and select an action for another NPC.	
Click Close to close the CIRCUIT PROVISIONING form	

SE 10.1.3G: What's Next Options for AX Circuit Provisioning

What's Next? Perform one of the following options below.

Options	Reference
Click New Action to perform another action on the current circuit.	GT 10.13G - GT 10.17G
(If port is connected to an intertie) Click FROM PORT to trace the circuit from the FROM side through the intertie.	
(If port is connected to an intertie) Click TO PORT to trace the circuit from the TO side through the intertie.	
(If port is connected to an intertie) Click TRACE MAP DISPLAY to display a circuit trace table and map of the circuit through the entire network.	GT 10.17G
Click Restart to clear and initialize the form and select an action for another port.	
Click Close to close the AX CIRCUIT PROVISIONING form.	

DND GUI: Activating or Pending a New Circuit, Digital Multipoint Bridge

10.2G

Background

When to Use

Use this General Task to activate a Digital Multipoint Bridge (DMB) circuit on a DACS.

NOTE:
At this time, DMB circuits can only be activated on a DACS II.

Before You Begin

Before you begin this task, you must have at least one NPC on a DACS in the DND network which is In-Service.(GT 8.1G-8.4G).

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task

Complete the following steps to activate a circuit on a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Circuit Provisioning**... The CIRCUIT PROVISIONING form appears on the screen.	
3	Select the desired **Site Name:** where the circuit will reside.	
4	(Optional) Select a **Profile ID:** to use a previously created profile to fill in the form. The following Continue... clicks will not be necessary and some of the fields will be read-only.	
5	Select one of the following from the **Action:** field: ■ *ACTIVATE* to create an *ACTIVE* new circuit ■ *PEND* to create a *PENDING* circuit in the DND database	
6	Click Continue... . The **Ckt Class:** field appears on the form.	
7	Select *DMB: DIGITAL MPT BRIDGE* in the **Ckt Class:** field. The **Circuit ID:** field automatically appears on the form.	
8	Enter a name for the circuit in the **Circuit ID:** field.	
9	Click Continue... . The **Initial status:** field indicates a status of *NULL* for the circuit being activated.	
10	Select the desired DMB circuit type using the **FROM DMB Mode:** and **TO DMB Mode:** fields.	
11	Click Continue... . The **CIRCUIT ENDPOINTS** box appears on the form.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
12	Enter the NPC information for the **FROM NPC** and **TO NPC** sides of the circuit. The DMB Mode must match the NPC type: ■ For the *LEG* mode - enter a regular NPC number ■ For the *SYM, BBL*, or *BRD* modes - enter a DMB NPC number	
13	Click Continue... . The **FROM Channel: and TO Channel:** fields appear on the form. The **Bandwidth Type:** field will indicate *C: Contiguous* and the **Bandwidth:** field will indicate *1* in read-only mode. This cannot be changed for a DMB circuit.	
14	Enter the FROM and TO channel numbers in the **FROM Channel:** and **TO Channel:** fields, respectively.	
15	Click Continue... . The **CIRCUIT INFORMATION**, the **Control Options** and (if an NPC in the circuit is connected to an intertie) **CIRCUIT NETWORK INFORMATION** boxes appear on the form.	
16	Select the **No Transmit (NTR):** checkbox and other desired **Circuit Options**.	
17	Enter values for the following fields: ■ **Trunk Conditioning:** ■ **Insertion Word:** ■ **Signaling Conversion:**	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
18	Enter information into the following fields: ■ (Optional) **Location A:** ■ (Optional) **Location Z:** ■ (Optional) **Customer Name:** ■ **Priority** ■ (Optional) **Remarks:**	
19	Select the **Service Date** when the circuit will be made available to the Customer. The DND defaults to the current date.	
20	Select a **Reconcile:** option.	SE 8.1.3G
21	In the **Execution Mode:** box, select the desired scheduling mode.	SE 8.1.4G
22	Click Continue... . The **Profile:** box will appear on the form. All other fields will appear in read-only mode.	
23	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
24	Verify the information on the form to ensure you are activating the desired circuit.	
25	When you have approved the information on the form, Click Execute . The **New Status:** field will appear indicating the new status of your circuit.	
26	**Stop! End of Task.**	
	Select a What's Next option.	SE 10.1.2G

DND GUI: Modifying a Circuit

10.3G

Background

When to Use

Use this General Task to modify circuit information.

Before You Begin

Before you begin this task, you must have an existing circuit in the DACS network (GT 10.1G/10.2G).

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task Complete the following steps to modify a circuit on a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Circuit Provisioning...* The CIRCUIT PROVISIONING form appears on the screen.	
3	Select the desired **Site Name:** where the circuit will resides.	
4	Select *MODIFY* from the **Action:** field.	
5	Click Continue... . The **Circuit ID:** and **New Circuit ID:** fields appear on the form.	
6	Enter the name of the circuit in the **Circuit ID:** field. To modify the circuit name, enter a new circuit name into the **New Circuit ID:** field.	
7	Click Continue... . What appears on the form next depends on the state of the circuit. ■ If the circuit is in the *ACTIVE, ALTROUTED,* or *P_ACTIVE* states, then the NPC and circuit information fields will appear on the form in read-only mode. ■ Otherwise, the DND will allow you to change the endpoints and all information relating to the circuit	
8	Select a Reconcile **Mode:** option. **NOTE:** DND will not accept *DND only* as a selection. The DND system is unable to perform modifications to the local database only.	SE 8.1.3G
9	In the **Execution Mode:** box, select the desired scheduling mode.	SE 8.1.4G

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
10	Click Continue... . The **Profile:** box will appear on the form. All other fields will appear in read-only mode.	
11	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
12	Verify the information on the form to ensure you are modifying the desired circuit.	
13	When you have approved the information on the form, Click Execute . The **New Status:** field will appear indicating the new status of your circuit.	
14	**Stop! End of Task.**	
	Select a What's Next option.	SE 10.1.2G

DND GUI: Combining Multiple Circuits

10.4G

Background

When to Use

Use this General Task to combine multiple circuits to create a high-rate (larger bandwidth) circuit.

Before You Begin

Before you begin this task, you must have existing circuits in the DACS network (GT 10.1G/GT 10.2G) that have the same **Bandwidth Type:**. No circuits used in this combination can have *Random* as the **Bandwidth Type:**.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task

Complete the following steps to combine multiple circuits on a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Circuit Provisioning...* The CIRCUIT PROVISIONING form appears on the screen.	
3	Select the desired **Site Name:** where the circuit will resides.	
4	Select *COMBINE* from the **Action:** field. The **Ckt Class:** field automatically appears on the form.	
5	Select ONE of the following circuit types in the **Ckt Class:** field: ■ *HDX: HALF DUPLEX* for a one-way cross-connection ■ *FDX: FULL DUPLEX* for a two-way cross-connection.	
6	Click Continue... . The **Circuit ID:** field appears on the form.	
7	Enter the name of the circuit (either a new name or an existing circuit name) in the **Circuit ID:** field.	SE 10.4.1G
8	Click Continue... . The **CIRCUIT ENDPOINTS** box appears on the form. The **Initial status:** field indicates a status of *NULL* for the circuit being activated.	
9	Enter the NPC information for the **FROM NPC** and **TO NPC** sides of the circuit.	
10	Click Continue... . Additional **CIRCUIT ENDPOINTS** fields appear on the form.	
11	Select the **Bandwidth Type:** for the circuit.	
12	Select the **Bandwidth:** size of the circuit.	

(Continued on next page)

Instructions (Continuned)

Task, Continued

Step	Action	Reference
13	Enter the FROM and TO channel number (or the first FROM and TO channel numbers for a **Bandwidth:** larger than 1) in the **FROM Channel:** and **TO Channel:** fields, respectively. You may choose to enter a value in either the **FROM** or **TO Channel:** field and use the Find :buttons to let the form find the next available channel or set of channels.	SE 10.1.1G
14	Click Continue... . The **CIRCUIT INFORMATION** and **Control Options** boxes appear on the form.	
15	Select the Reconcile **Mode:**.	SE 8.1.3G
16	In the **Execution Mode:** field, select the desired scheduling mode.	SE 8.1.4G
17	Click Continue... . The **Profile:** box will appear on the form. All other fields will appear in read-only mode.	
18	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
19	Verify the information on the form to ensure you are combining the desired circuits.	
20	When you have approved the information on the form, Click Execute . The **New Status:** field will appear indicating the new status of your circuit.	
21	**Stop! End of Task.**	
	Select a What's Next option.	SE 10.1.2G

SE 10.4.1: Entering Circuit Information for a Combined Circuit

Task

Perform the following steps to enter the correct circuit information for a combined circuit:

IF you entered...	THEN, DND will...	...AND you should...
An existing circuit ID name	Create the combined circuit using this Circuit ID name. DND will populate the form with the NPC, **Bandwidth Type** and **Initial status** fields in read-only mode. The **Bandwidth** field appears fully selectable.	1 Select a new bandwidth for the combined circuit. 2 Click Continue... . 3 Modify the channel numbers for the **FROM** and **TO** sides if necessary.
A new circuit ID name	Create a combined circuit using the new Circuit ID name. DND will populate the form with NPC information, the **Bandwidth Type:** and the **Bandwidth:** appears fully selectable.	1 Identify the **NPC Specifier:** and **NPC:** of an equipped NPC for the **FROM** and **TO** sides of the circuit (SE 8.3.1G). 2 Click Continue... . 3 Select the desired **Bandwidth Type:**. 4 Click Continue... . 5 Select a new **Bandwidth:** for the combined circuit. 6 Click Continue... . 7 Enter the **FROM** and **TO** channels for the combined circuit, specifying the starting point of the circuit combination range.

Stop! End of Procedure.

DND GUI: Adding a Leg to a Broadcast Circuit (BCON)

10.5G

Background

When to Use

Use this General Task to add a leg to a broadcast (BCON) circuit.

Before You Begin

Before you begin this task, you must have an existing circuit on a DACS (GT 10.1G/GT 10.2G) to which you will add additional legs.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning*.

nstructions

Task

Complete the following steps to add a leg to a broadcast circuit:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Circuit Provisioning...* The CIRCUIT PROVISIONING form appears on the screen.	
3	Select the desired **Site Name:** where the circuit will reside.	
4	Select *ADDLEG* from the **Action:** field. The **Circuit ID:** field automatcially appears on the form.	
5	Enter the **Circuit ID:** for the leg you are adding.	
6	Click Continue... . What appears next depends on the type of circuit: ■ If the circuit is a *FULL DUPLEX* circuit, the following will appear on the form: — The **Ckt Class:** will indicate *FDX: FULL DUPLEX* in read-only mode — The **Initial Status:** of the circuit — The **CIRCUIT ENDPOINTS** box in read-only mode — **BCON SOURCE BROADCAST SIDE** box — **BCON LEG CIRCUIT ENDPOINTS** box	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
6	(Continued) ■ If the circuit is an existing BCON circuit, the following will appear on the form: — The **Ckt Class:** will indicate *BKB: BCON BACKBONE* in read-only mode — The **Initial Status:** of the circuit — The **CIRCUIT ENDPOINTS** box in read-only mode — The **BCON SOURCE BROADCAST SIDE** will indicate the NPC information for the selection you chose when building the BCON circuit in read-only mode — The **BCON LEG CIRCUIT ENDPOINTS** box	
7	(If the **Ckt Class:** is *FDX*) Select the **BCON Direction:**.	
8	Identify the **NPC** for the new NPC leg in the **BCON LEG CIRCUIT ENDPOINTS** box.	
9	Click Continue... . The **LEG Channel:** field appears on the form.	
10	Enter the channel number for the new leg in the **LEG Channel:** field.	
11	Click Continue... . The **CIRCUIT INFORMATION** and **Control Options** boxes appears on the form. If the circuit has an NPC connected to an intertie, then the **CIRCUIT NETWORK INFORMATION** box will also appear.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
12	Select the desired **Circuit Options** for your new leg.	
13	Select the **Service Date** when the new leg circuit will be made available to the Customer.	
14	Select a Reconcile **Mode:** option.	SE 8.1.3G
15	In the **Execution Mode:** box, select the desired scheduling mode.	SE 8.1.4G
16	Click Continue... . The **Profile:** box will appear on the form. All other fields will appear in read-only mode.	
17	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
18	Verify the information on the form to ensure you are adding a leg from the correct circuit.	
19	When you have approved the information on the form, Click Execute . Notice the following results when the action is performed successfully: ■ The **New Status:** field appears on the form, indicating a circuit status of *ACTIVE*. ■ The **LEG Circuit ID:** field appears on the form, indicating the DND generated Circuit ID and number of the leg added. DND uses the next available lowest number for your leg.	
20	**Stop! End of Task.**	
	Select a What's Next option.	SE 10.1.2G

DND GUI: Deleting a Leg from a Broadcast Circuit (BCON)

10.6G

Background

When to Use

Use this General Task to delete a leg from a broadcast (BCON) circuit.

Before You Begin

Before you begin this task, you must have previously added a BCON leg to a broadcast circuit (GT 10.5G).

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task

Complete the following steps to delete a leg from a broadcast circuit:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Circuit Provisioning...* The CIRCUIT PROVISIONING form appears on the screen.	
3	Select the desired **Site Name:** where the circuit will reside.	
4	Select *DELLEG* from the **Action:** field. The **Circuit ID:** field automatically appears on the form.	
5	Enter the **Circuit ID:** for the leg you are deleting.	
6	Click Continue... . The **Circuit Options** and **Control Options** boxes appear on the form and all other information fields for that leg appear in read-only mode.	
7	Select the desired **Circuit Options** for your new leg.	
8	Select a Reconcile **Mode:** option.	SE 8.1.3G
9	In the **Execution Mode:** box, select the desired scheduling mode.	SE 8.1.4G
10	Click Continue... . The **Profile:** box will appear on the form. All other fields will appear in read-only mode.	
11	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
12	Verify the information on the form to ensure you are deleting a leg from the correct circuit.	
13	When you have approved the information on the form, Click Execute . The **New Status:** field appears on the form, indicating a circuit status of *NULL*.	
14	**Stop! End of Task.**	
	Select a What's Next option.	SE 10.1.2G

DND GUI: Changing the Return Path for a Broadcast Circuit

10.7G

Background

When to Use

Use this General Task to change a broadcast circuit's (BCON) return path.

Before You Begin

Before you begin this task, you must have previously added a BCON leg to a broadcast circuit (GT 10.5G).

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task

Complete the following steps to change the return path of a broadcast leg:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Circuit Provisioning...* The CIRCUIT PROVISIONING form appears on the screen.	
3	Select the desired **Site Name:** where the circuit will reside.	
4	Select *CHGRPATH* from the **Action:** field. The **Circuit ID:** field automatically appears on the form.	
5	Enter the **Circuit ID:** for the leg you want to make the return path.	
6	Click Continue... . The **Circuit Options** and **Control Options** boxes appear on the form and all other information fields for that leg appear in read-only mode.	
7	Select the desired **Circuit Options** for your new leg.	
8	Select a Reconcile **Mode:** option.	SE 8.1.3G
9	In the **Execution Mode:** box, select the desired scheduling mode.	SE 8.1.4G
10	Click Continue... . The **Profile:** box will appear on the form. All other fields will appear in read-only mode.	
11	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
12	Verify the information on the form to ensure you are changing the path of the correct leg.	
13	When you have approved the information on the form, Click Execute . The **New Status:** field will appear indicating the new status of your circuit.	
14	**Stop! End of Task.**	
	Select a What's Next option.	SE 10.1.2G

DND GUI: Creating an Alternate Route Circuit for an Existing Circuit

10.8G

Background

When to Use

Use this General Task to set up alternate route paths for circuits in case of NPC failure.

Before You Begin

Before you begin this task, you must have at least one In-Service NPC available (GT 8.1G-8.4G) on a DACS which can be readily used to set up the alternate route cross-connection.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task

Complete the following steps to create an alternate route for an active circuit:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Circuit Provisioning**... The CIRCUIT PROVISIONING form appears on the screen.	
3	Select the desired **Site Name:** where the circuit will reside.	
4	Select *ALTROUTE* from the **Action:** field. The **Ckt Class:** field automatically appears on the form.	
5	Select the circuit type from the **Ckt Class:** field.	
6	Click Continue... . The **Circuit ID:** field appears on the form.	
7	Enter a name for the circuit in the **Circuit ID:** field.	
8	Click Continue... . The **CIRCUIT ENDPOINTS** box appears on the form in read-only mode. The **ALTROUTE CIRCUIT ENDPOINTS** box appears on the form.The **Initial status:** field indicates a status of *ACTIVE.*	
9	Specify the NPC for the **FROM** and **TO** sides of the altrouted cross-connection path.	
10	Click Continue... . The **FROM Channel:** and **TO Channel:** fields appear on the form.	
11	Enter the **FROM Channel:** and **TO Channel:** designations for the altrouted path. You may choose to enter a value in either the **FROM** or **TO Channel:** field and use the Find :buttons to let the form find the next available channel or set of channels.	SE 10.1.1G

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Instructions (Continued)

Task, Continued

Step	Action	Reference
12	Click Continue... . The following will appear on the form: ■ **CIRCUIT INFORMATION** and **Control Options** boxes ■ (If an NPC in the circuit is connected to an intertie) **CIRCUIT NETWORK INFORMATION** box If there is no existing cross-connection on the new path, then skip to Step 14.	
13	A separate Netscape window appears on the screen with a table containing the preempting information in it. On the CIRCUIT PROVISIONING form, an **ALTROUTE INFORMATION** field appears with the text, "Verify it is OK to preempt the circuits in the PREEMPT pop-up." ■ If it is OK to proceed with the preempting, select the **Verified:** checkbox. ■ Otherwise, click Back until you return to the part of the form to re-enter new **ALTROUTE CIRCUIT ENDPOINT** designations	
14	Select the desired **Circuit Options**.	
15	Enter values for the following fields: ■ **Trunk Conditioning:** ■ **Insertion Word:** ■ **Signaling Conversion:**	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
16	Enter information into the following fields: ■ (Optional) **Location A:** ■ (Optional) **Location Z:** ■ (Optional) **Customer Name:** ■ **Priority** ■ (Optional) **Remarks:**	
17	Select the **Service Date** when the altrouted circuit will be made available to the Customer.	
18	Select a Reconcile **Mode:** option.	SE 8.1.3G
19	In the **Execution Mode:** box, select the desired scheduling mode.	SE 8.1.4G
20	Click Continue... . The **Profile:** box will appear on the form. All other fields will appear in read-only mode.	
21	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
22	Verify the information on the form to ensure you are altrouting the desired circuit.	
23	When you have approved the information on the form, Click Execute . A **New Status:** field appears on the form, indicating the *ALTROUTED* status of the circuit.	
24	**Stop! End of Task.**	
	Select a What's Next option.	SE 10.1.2G

DND GUI: Normalizing a Circuit

10.9G

Background

When to Use

Use this General Task to change the status of a circuit from *ALTROUTE* to *ACTIVE*. The circuit will follow the path in which it was initially created.

Before You Begin

Before you begin this task, you must have an altrouted circuit in the DACS network (GT 10.8G).

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning*.

Instructions

Task Complete the following steps to modify a circuit on a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Circuit Provisioning...* The CIRCUIT PROVISIONING form appears on the screen.	
3	Select the desired **Site Name:** where the circuit will resides.	
4	Select *NORMALIZE* from the **Action:** field. The **Circuit ID:** field automatically appears on the form.	
5	Enter the name of the circuit in the **Circuit ID:** field.	
6	Click Continue... . The following appears on the form: ■ The **Ckt Class:** field in read-only mode ■ The **CIRCUIT ENDPOINTS** box in read-only mode ■ The **ALTROUTE CIRCUIT ENDPOINTS** box ■ The **ALTROUTE Date and Time:** field, which indicates the date and time the circuit was *ALTROUTED* ■ The **CIRCUIT INFORMATION** box in read-only mode, except for the **CIrcuit Options:** field. ■ (If an NPC in the circuit is connected to an intertie) The **CIRCUIT NETWORK INFORMATION** box.	
7	Select the desired **Circuit Options:**.	

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Instructions (Continued)

Task, Continued

Step	Action	Reference
8	Select a Reconcile **Mode:** option.	SE 8.1.3G
9	In the **Execution Mode:** box, select the desired scheduling mode.	SE 8.1.4G
10	Click Continue... . The **Profile:** box will appear on the form. All other fields will appear in read-only mode.	
11	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G
12	Verify the information on the form to ensure you are normalizing the correct circuit.	
13	When you have approved the information on the form, Click Execute . A **New Status:** field appears on the form, indicating the new status of *ACTIVE* for your circuit.	
14	**Stop! End of Task.**	
	Select a What's Next option.	SE 10.1.2G

DND GUI: Deactivating a Circuit

10.10G

Background

When to Use

Use this General Task to deactivate a cross-connection on a DACS. The circuit is removed from service, but still remains in the DND database.

Before You Begin

Before you begin this task, you must have an activated circuit in the DND network (GT 10.1G/10.2G).

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task

Complete the following steps to deactivate a circuit on a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Circuit Provisioning...* The CIRCUIT PROVISIONING form appears on the screen.	
3	Select the desired **Site Name:** where the circuit will resides.	
4	Select *DEACTIVATE* from the **Action:** field. The **Circuit ID:** field appears on the form.	
5	Enter the circuit name in the **Circuit ID:** field.	
6	Click Continue... . The following will appear on the form: ■ **Ckt Class:** field in read-only mode ■ **CIRCUIT ENDPOINTS** box in read-only mode ■ **CIRCUIT INFORMATION** box ■ (If an NPC in the circuit is connected to an intertie) **CIRCUIT NETWORK INFORMATION** box ■ **Control Options** box	
7	(Optional) Modify any fully selectable circuit information fields as necessary.	GT 10.4G
8	Select a Reconcile **Mode:** option.	SE 8.1.3G
9	In the **Execution Mode:** box, select the desired scheduling mode.	SE 8.1.4G
10	Click Continue... . The **Profile:** box will appear on the form. All other fields will appear in read-only mode.	
11	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G

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Instructions (Continued)

Task, Continued

Step	Action	Reference
12	Verify the information on the form to ensure you are deactivating the desired circuit.	
13	When you have approved the information on the form, Click Execute. The **New Status:** field will appear indicating the new status of your circuit.	
14	**Stop! End of Task.**	
	Select a What's Next option.	SE 10.1.2G

DND GUI: Deleting a Circuit

10.11G

Background

When to Use

Use this General Task to delete a cross-connection from a DACS. The circuit is disconnected and removed from the DND database.

Before You Begin

Before you begin this task, you must have an existing circuit in the DND network (GT 10.1G/10.2G). The circuit will not be deleted if it is associated with an intertie.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task

Complete the following steps to delete a circuit from a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Circuit Provisioning..**. The CIRCUIT PROVISIONING form appears on the screen.	
3	Select the desired **Site Name:** where the circuit will resides.	
4	Select *DELETE* from the **Action:** field. The **Circuit ID:** field automatically appears on the form.	
5	Enter the circuit name in the **Circuit ID:** field.	
6	Click Continue... . The following will appear on the form: ■ **Ckt Class:** field in read-only mode ■ **CIRCUIT ENDPOINTS** box in read-only mode ■ **CIRCUIT INFORMATION** box in read-only mode except for the **Circuit Options:** field. ■ (If an NPC in the circuit is connected to an intertie) **CIRCUIT NETWORK INFORMATION** box ■ **Control Options** box	
7	If you have a red-lined or customer-controlled circuit, select the **INCL:** option from the **Circuit Options:** field. Select any other **Circuit Options:** relevant to this circuit.	
8	Select a Reconcile **Mode:** option.	SE 8.1.3G
9	In the **Execution Mode:** box, select the desired scheduling mode.	SE 8.1.4G
10	Click Continue... . The **Profile:** box will appear on the form. All other fields will appear in read-only mode.	
11	(Optional) To add or delete a profile, enter information in the **Profile:** box.	SE 8.1.5G

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Instructions (Continued)

Task, Continued

Step	Action	Reference
12	Verify the information on the form to ensure you are deleting the desired circuit.	
13	When you have approved the information on the form, Click Execute. The **New Status:** field will appear indicating the new status of *NULL* for your circuit.	
14	**Stop! End of Task.**	
	Select a What's Next option.	SE 10.1.2G

DND GUI: Performing a Circuit Trace

10.12G

Background

When to Use

Use this General Task to display the circuit trace of a network circuit.

Before You Begin

Before you begin this task, you must have an existing circuit with a traceable path in the DACS network (via interties and common channel circuits on a DACS).

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task

Complete the following steps to display a circuit trace map:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Circuit Provisioning...** The CIRCUIT PROVISIONING form appears on the screen.	
3	Select the desired **Site Name:** where the circuit will resides.	
4	Select *TRACE* from the **Action:** field. The **Circuit ID:** field appears on the form.	
5	Enter the circuit name in the **Circuit ID:** field.	
6	Click Continue... . The **CIRCUIT NETWORK INFORMATION** box appears on the form. All fields appear on the form in read-only mode.	
7	Click TRACE MAP DISPLAY. The following appears on the screen: ■ A separate Netscape window with a table listing all circuit IDs and DACS systems in the network circuit ■ A separate Netscape window displaying the circuit trace network map over a greyed out background picture	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
8	Close the circuit trace Netscape windows: ■ Double-click on the Window Menu Icon to close the circuit trace table window ■ Click Close to close the circuit trace diagram window	
9	**Stop! End of Task.**	
	Select a What's Next option.	SE 10.1.2G

DND GUI: Activating a New or Existing DACS II AX Circuit

10.13G

Background

When to Use

Use this General Task to activate a cross-connection on a DACS II AX.

Before You Begin

Before you begin this task, identify at least one port on a DACS II AX in the DND Network which is In-Service (GT 9.1G, GT 9.2G, and GT 9.4G).

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task

Complete the following steps to activate a new or existing two-point, two-way circuit on a DACS II AX:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Circuit Provisioning...** The DACS II AX CIRCUIT PROVISIONING form appears on the screen.	
3	Select the **Site Name:** where the circuit resides. **NOTE:** This field is required for new and existing circuits.	
4	Select *ACTIVATE* from the **Action:** field.	
5	Click Continue... . The **Connection Map**:, **Circuit ID**:, and **Circuit Class**: fields appear on the form. The **Circuit Class:** field is populated with *FULL DUPLEX* for two-way cross connection.	
6	Enter a value in the **Connection Map** field to identify the map containing the circuit to be activated.	
7	Enter a circuit name in the **Circuit ID:** field. **NOTE:** The **Circuit ID:** field is required for new and existing circuits.	
8	Click Continue... . The **CIRCUIT ENDPOINTS** box appears on the form.	
9	Enter the port information for the **FROM PORT** and **TO PORT** sides of the circuit.	
10	Click Continue... . Additional **Channel Data** fields and the **CIRCUIT INFORMATION** and **Control Options** boxes appear on the form. If one of the ports has been added to an intertie, the **CIRCUIT NETWORK INFORMATION** box also displays. If this is for clear DS1/E1 ports, skip to Step 14.	
11	Select the **Bandwidth:** for the circuit.	
12	Select the **Bandwidth Speed:** of the circuit.	

Step	Action	Reference
13	Enter the FROM and TO Channel Number (or the first FROM and TO channel numbers for a Bandwidth: larger than 1) in the **FROM Channel/TO Channel**: fields, respectively. You may choose the Find **:** button to request the next available channel or set of channels.	SE 10.1.1G
14	Enter information into the following fields: ■ **Location A**: (Optional) ■ **Location Z**: (Optional) ■ **Customer Name**: (Optional) ■ **Priority**: ■ **Site Circuit Name**: ■ **Voice/Data**: ■ **Remarks**: (Optional)	
15	Select the **Service Date** when the circuit will be made available to the customer. The DND will default to the current date.	
16	(Optional) Select a Reconcile **Mode**.	SE 8.1.3G
17	(Optional) In the **Execution Mode:** box, select the desired scheduling mode.	SE 8.1.4G
18	Click Continue... . The fields will display in read-only mode.	
19	Verify the information on the form to ensure that it is correct. When you have approved the information, click Execute .	
20	**Stop! End of Task.**	
21	Select a What's Next option.	SE 10.1.3G

DND GUI: Modifying a DACS II AX Circuit

10.14G

Background

When to Use

Use this General Task to modify a cross-connection on a DACS II AX.

Before You Begin

Before you begin this task, you must have an existing circuit in the DACS II AX network (GT 10.13G).

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task

Complete the following steps to modify an existing two-point, two-way circuit on a DACS II AX:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Circuit Provisioning...** The DACS II AX CIRCUIT PROVISIONING form appears on the screen.	
3	Select the **Site Name:** where the circuit resides.	
4	Select *MODIFY* from the **Action:** field.	
5	Click Continue... . The **Connection Map**:, **Circuit ID**:, **Circuit Class**: and **New Circuit ID**: fields appear on the form. **NOTE:** The **Circuit ID:** field is required for new and existing circuits. The **Circuit Class:** field is populated with *FULL DUPLEX* for two-way cross connection.	
6	Enter a value from *1* to *5* in the **Connection Map** field to identify the map containing the circuit to be modified.	
7	Enter a circuit name in the **Circuit ID:** field. To modify the circuit name, enter a value in the **New Circuit ID:** field.	
8	Click Continue... . The DACS II AX CIRCUIT PROVISIONING form displays the attributes assigned to this circuit.	
9	Change the displayed circuit endpoints, bandwidth, channel, circuit, or service date information as necessary. **NOTE:** The circuit port numbers cannot be changed.	
10	(Optional) Select a Reconcile **Mode**.	SE 8.1.3G
11	(Optional) In the **Execution Mode:** box, select the desired scheduling mode.	SE 8.1.4G

Step	Action	Reference
12	Click Continue... . The fields will display in read-only mode.	
13	Verify the information on the form to ensure that it is correct.	
14	When you have approved the information, click Execute .	
15	**Stop! End of Task.**	
16	Select a What's Next option.	SE 10.1.3G

DND GUI: Changing a DACS II AX Active Map

10.15G

Background

When to Use

Use this General Task to change the active cross connect map on the AX.

Before You Begin

Before you begin this task, determine the Connection Map number value to be activated (GT 10.14G).

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task

Complete the following steps to change the active cross connect map on the AX:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Circuit Provisioning...** The DACS II AX CIRCUIT PROVISIONING form appears on the screen.	
3	Select the **Site Name:** where the circuit resides.	
4	Select *CHANGE ACTIVE MAP* from the **Action:** field.	
5	Enter a value from *1* to *5* in the **Connection Map:** field to specify the map to be activated.	
6	Click Continue... . The **Execution Mode:** box is displayed.	
7	(Optional) In the **Execution Mode:** box, select the desired scheduling mode.	SE 8.1.4G
8	Click Continue... . The fields will display in read-only mode.	
9	Verify the information on the form to ensure that it is correct.	
10	When you have approved the information, click Execute .	
11	**Stop! End of Task.**	
12	Select a What's Next option.	SE 10.1.3G

DND GUI: Deleting a DACS II AX Circuit

10.16G

Background

When to Use

Use this General Task to delete a cross-connection from a DACS II AX. The circuit is disconnected and removed from the DND database.

Before You Begin

Before you begin this task, you must have an existing circuit in the DND network (GT 10.13G). The circuit will not be deleted if it is associated with an intertie.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task

Complete the following steps to delete an existing two-point, two-way circuit from a DACS II AX:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Circuit Provisioning...** The DACS II AX CIRCUIT PROVISIONING form appears on the screen.	
3	Select the **Site Name:** where the circuit resides.	
4	Select *DELETE* from the **Action:** field. The **Connection Map**: and **Circuit ID**: fields appear on the form.	
5	Enter a value from *1* to *5* in the **Connection Map** field to identify the map containing the circuit to be deleted.	
6	Enter a circuit name in the **Circuit ID:** field.	
7	Click Continue... . The following information displays. ■ **Circuit Class** (in read-only mode) ■ **CIRCUIT ENDPOINTS** box (in read-only mode) ■ **CIRCUIT NETWORK INFORMATION** box (if a port is connected to an intertie)	
8	(Optional) Select a Reconcile **Mode**.	SE 8.1.3G
9	(Optional) In the **Execution Mode:** box, select the desired scheduling mode.	SE 8.1.4G
10	Click Continue... . The fields will display in read-only mode.	
11	Verify the information on the form to ensure that you are deleting the desired circuit information. When you have approved the information, click Execute .	
12	**Stop! End of Task.**	
13	Select a What's Next option.	SE 10.1.3G

DND GUI: Performing a Circuit Trace on a DACS II AX

10.17G

Background

When to Use

Use this General Task to display the circuit trace of a network circuit.

Before You Begin

Before you begin this task, you must have an existing circuit with a traceable path in the DACS II AX network via interties and common channel circuits on a DACS.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task Complete the following steps to display a circuit trace map:

Step	Action	Reference
1	Click Provisioning at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Circuit Provisioning...** The DACS II AX CIRCUIT PROVISIONING form appears on the screen.	
3	Select the **Site Name:** where the circuit resides.	
4	Select *TRACE* from the **Action:** field.	
5	Enter a value from *1* to *5* in the **Connection Map** field to identify the map containing the circuit to be displayed. The **Circuit ID:** field appears on the form.	
6	Enter the circuit name in the **Circuit ID:** field.	
7	Click Continue... . The **CIRCUIT NETWORK INFORMATION** box appears on the form.	
8	Continue with one of the following selections. ■ Click FROM PORT OR TO PORT to trace the circuit through an intertie then proceed to Step 10. ■ Click TRACE MAP DISPLAY to display two Netscape windows containing: — A separate circuit trace table that lists all site names and circuits connected throughout the DACS network. — A circuit trace network map representing the circuit path throughout the DACS network. This map displays over a greyed out, background picture.	

Step	Action	Reference
9	When you are finished viewing the Netscape windows: a. Double click on the Window Menu icon to close the circuit trace table window. b. Click Close to close the circuit trace diagram window.	
10	**Stop! End of Task.**	
11	Select a What's Next option.	SE 10.1.3G

DND GUI: Activating Network Circuit Provisioning

10.18G

Background

When to Use

Use this General Task to activate Network Circuit Provisioning.

Before You Begin

Before you begin this task, determine the A and Z network circuit sites to be used.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task Complete the following steps to activate network circuit provisioning:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Network Circuit Provisioning...** The NETWORK CIRCUIT PROVISIONING form appears on the screen.	
3	Select *ACTIVATE* from the **Action:** field.	
4	Enter a circuit name in the **Circuit ID:** field.	
5	Choose the **Site 1 Element Type** and select the **Site Name** where the circuit resides.	
6	Choose the **Site 2 Element Type** and select the **Site Name** where the circuit resides.	
7	Click Continue... . Based on your Site 1 and Site 2 selections, the Site 1 and Site 2 fields in the CIRCUIT ENDPOINTS area of the form displays one of the following: ■ Port specifier information ■ NPC specifier information ■ a Termination combo box	

Step	Action	Reference
8	Complete the Site 1 and Site 2 information as follows. ■ If the endpoint requires port specifier information, choose **ID** or **SLOT/PORT** in the **Port Specifier** field, then continue with one of the following options. — If you chose **ID**, complete the **Port ID** field then proceed to Step 9. — If you chose **SLOT/PORT, choose** a value in the **Slot** field, choose a **Port Number** then proceed to Step 9. ■ If the endpoint requires NPC specifier information, choose the NPC specifier, enter the NPC ID, Hierarchical NPC number or Extended NPC Number, then proceed to Step 9. ■ If the endpoint is a termination, choose a termination from the combo box then proceed to Step 9.	
9	Click Continue... .	
10	Select the **Bandwidth:** for the circuit. **NOTE:** If an endpoint is a termination, channels and bandwidths are already predetermined, therefore, you do not have to choose those values.	
11	Enter the FROM and TO Channel Numbers in the **FROM Channels/TO Channels**: fields, respectively. You may choose the Find **:** button to request the next available channels.	SE 10.1.1G
12	Choose a maximum alarm severity in the Max Alarm Severity field then click Continue... . The form displays the Site Name, From and To ports, and channels for each element in the network path that was found.	

Step	Action	Reference
13	To display a trace preview of how the network circuit will appear once the form is executed, use the information below, otherwise continue with Step 14. ■ Click TRACE MAP DISPLAY. Two Netscape windows display containing: — A separate circuit trace table that lists all site names and circuits to be connected throughout the DACS network. — A circuit trace network map representing the circuit path throughout the DACS network. This map displays over a greyed out, background picture. ■ To close the circuit trace table window, double click on the Window Menu icon. ■ To close the circuit trace diagram window, click Close .	
14	In the CIRCUIT INFORMATION area of the screen, optionally choose **Circuit Options** and **Channel Options**, then complete the required **Bandwidth Speed** and **Voice/Data** fields.	
15	Click Continue... .	
16	Verify the information on the form to ensure that it is correct. When you have approved the information, click Execute . The DND will put up the requested cross connects if it locates the path and specify Success or Failure per connection.The DND will rollback changes to circuits that have been successfully cross connected if it cannot locate successful paths.	
17	**Stop! End of Task.**	
18	Select a What's Next option.	SE 10.1.4G

DND GUI: Modifying Network Circuit Provisioning

10.19G

Background

When to Use

Use this General Task to modify Network Circuit Provisioning information.

Before You Begin

Before you begin this task, determine the Circuit ID to be modified.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task

Complete the following steps to modify end to end circuit provisioning information:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Network Circuit Provisioning...** The NETWORK CIRCUIT PROVISIONING form appears on the screen.	
3	Select *MODIFY* from the **Action:** field.	
4	Enter a circuit name in the **Circuit ID:** field.	
5	Choose the **Site 1 Element Type** and select the **Site Name** where the circuit resides.	
6	Click Continue... . The NETWORK CIRCUIT PROVISIONING form displays the attributes assigned to this circuit.	
7	Optionally change data in the CIRCUIT INFORMATION area of the screen. **NOTE:** The SITE 1 and SITE 2, CIRCUIT ENDPOINTS, and NETWORK PATH sections cannot be changed.	
8	Click Continue... .	
9	Verify the information on the form to ensure that it is correct. When you have approved the information, click Execute .	
10	**Stop! End of Task.**	
11	Select a What's Next option.	SE 10.1.4G

DND GUI: Deleting Network Circuit Provisioning

10.20G

Background

When to Use

Use this General Task to delete Network Circuit Provisioning information.

Before You Begin

Before you begin this task, determine the Circuit ID to be deleted.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning.*

Instructions

Task

Complete the following steps to delete end to end circuit provisioning information:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Network Circuit Provisioning...** The NETWORK CIRCUIT PROVISIONING form appears on the screen.	
3	Select *DELETE* from the **Action:** field.	
4	Enter a circuit name in the **Circuit ID:** field.	
5	Click Continue... . Optionally change data in the CIRCUIT INFORMATION area of the screen. **NOTE:** The SITE 1 and SITE 2, CIRCUIT ENDPOINTS, and NETWORK PATH sections cannot be changed.	
6	Verify the information on the form to ensure that you are deleting the desired circuit information. When you have approved the information, click Execute .	
7	**Stop! End of Task.**	
8	Select a What's Next option.	SE 10.1.4G

DND Forms: Activating a New Circuit, Full Duplex or Full Duplex Loopback

10.1U

Background

When to Use

Use this General Task to provision a full duplex contiguous or alternating circuit.

Before You Begin

For Full Duplex Loopback circuits, the FROM and TO sides must be the same channel of the same NPC.

The full-duplex loopback circuit is *only* available when the environment variable FDX_LOOP_CKT is set to 1. For more information on environment variables, refer to *Chapter 2, Getting Started*.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning*.

Instructions

Task Complete the following steps to provision a full duplex circuit.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select CIRCUIT. The CIRCUIT PROVISIONING form displays and may already have values in it; these are defaults. The **Ckt Status** field displays `NULL`.	
2	Enter the following data, or use the displayed defaults: — **Site Name:** — **Action**: `ACTIVATE` — **Ckt ID**: — **Ckt Class**: `FDX` — **Bandwidth Type**: `A` or `C`	
3	Identify the **From NPC** by entering the NPC ID, or its hierarchical or extended number.	
4	Identify the **FROM Ch**.	
5	Identify the **To NPC** by entering the NPC ID, or its hierarchical or extended number.	
6	Identify the **To Ch**.	
7	Enter values for the following: — **Bandwidth**: — **TC/IW**: Valid values for **TC** and **IW** are dependent upon the types of NPCs chosen for this circuit.	
8	Press EXECUTE or use the RECNCILE key to select the database and then press EXECUTE. If the command completes successfully: The **Ckt Status** field changes from `NULL` to `ACTIVE`. In addition, the `command completed successfully` message is displayed.	
9	**Stop! End of Task.**	
	Select a What's next option.	SE 10.1.1U

SE 10.1.1U: What's Next Options for Circuit Provisioning

Task

Options	Reference
Select another **Action**.	GT 10.1U - GT 10.10U
Select TOPMENU to return to the MAIN MENU.	
Select QUIT to return to the PROVISIONING MENU.	

DND Forms: Activating a New Circuit, Clear DS1 Full Duplex or Half Duplex

10.2U

Background

When to Use

Use this General Task to provision a clear DS1 full duplex or half duplex circuit.

Before You Begin

NOTE:
A clear DS1/E1 NPC can only connect to another clear DS1/E1 NPC.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning*.

Instructions

Task

Complete the following steps to provision a clear DS1 full duplex or half duplex circuit.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select CIRCUIT. The CIRCUIT PROVISIONING form displays and may already have values in it; these are defaults. The **Ckt Status** field displays `NULL`.	
2	Enter the following data, or use the displayed defaults: — **Site Name:** — **Action**: `ACTIVATE` — **Ckt ID**: — **Ckt Class**: `FDX` or `HDX`	
3	Identify the **From NPC** by entering the NPC ID, or its hierarchical or extended number.	
4	Identify the **To NPC** by entering the NPC ID, or its hierarchical or extended number.	
5	Press EXECUTE or use the RECNCILE key to select the database and then press EXECUTE. If the command completes successfully: The **Ckt Status** field changes from `NULL` to `ACTIVE`. In addition, the `command completed successfully` message is displayed.	
6	**Stop! End of Task.**	
	Select a What's next option.	SE 10.1.1U

DND Forms: Activate a New Circuit, Half-Duplex or Half-Duplex Loopback

10.3U

Background

When to Use

Use this General Task to provision a circuit with a half-duplex contiguous and alternating circuit.

Before You Begin

For Half Duplex Loopback circuits, the FROM and TO sides must be the same channel of the same NPC.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning*.

Instructions

Task

Complete the following steps to provision a circuit with a half-duplexed circuit.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select CIRCUIT.	
2	Enter the following data: — **Site Name** — **Action**: `ACTIVATE` — **Ckt ID** — **Ckt Class**: `HDX` — **Bandwidth Type**: `A` or `C`	
3	Identify the **From NPC** by entering the NPC ID, or its hierarchical or extended number.	
4	Identify the **FROM Ch**.	
5	Identify the **To NPC** by entering the NPC ID, or its hierarchical or extended number.	
6	Identify the **To Ch**.	
7	Enter the following values for **Bandwidth**, **TC** and **IW**. — **Bandwidth**: — **TC**/**IW**: Valid values for **TC** and **IW** are dependent upon the types of NPCs chosen for this circuit.	
8	Press EXECUTE or use the RECNCILE key to select the database and then press EXECUTE. If the command completes successfully: The **Ckt Status** field changes from `NULL` to `ACTIVE`. In addition, the `command completed successfully` message is displayed. Transmission is shut off toward the FROM direction and toward the TO direction.	
9	**Stop! End of Task.**	
	Select a What's next option.	SE 10.1.1U

DND Forms: Activating a New Circuit, Full-Duplex Random or Full-Duplex Random Loopback

10.4U

Background

When to Use

Use this General Task to provision a full duplex random circuit.

Before You Begin

For Full Duplex Loopback circuits, the FROM and TO sides must be the same channel of the same NPC.

The full-duplex loopback circuit is *only* available when the environment variable FDX_LOOP_CKT is set to 1. For more information on environment variables, refer to *Chapter 2, Getting Started*.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning*.

Instructions

Task

Complete the following steps to provision a full duplex random circuit.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select CIRCUIT.	
2	Enter the following data: — **Site Name**: — **Action**: ACTIVATE — **Ckt ID**: — **Ckt Class**: FDX — **Bandwidth Type**: R	
3	Identify the **From NPC** by entering the NPC ID, or its hierarchical or extended number.	
4	Identify the **To NPC** by entering the NPC ID, or its hierarchical or extended number.	
5	Enter the following values: — **Bandwidth**: — **F_CH:** Enter the channel numbers. The number of channels entered must match the bandwidth. — **T_CH:** Enter the channel numbers. The number of channels entered must match the bandwidth. — **TC/IW:** Valid values for **TC** and **IW** are dependent upon the types of NPCs chosen for this circuit.	
6	Press EXECUTE or use the RECNCILE key to select the database and then press EXECUTE. If the command completes successfully: The **Ckt Status** field changes from NULL to ACTIVE. In addition, the `command completed successfully` message is displayed.	
7	**Stop! End of Task.**	
	Select a What's next option.	SE 10.1.1U

DND Forms: Combining Multiple Circuits

10.5U

Background

When to Use

Use this General Task to combine multiple circuits to create a high rate (larger bandwidth) circuit.

Before You Begin

Before you begin this task, you must have existing circuits in the DACS network (GT 10.1U/GT 10.2U) that have the same **Bandwidth Type**. No circuits used in this combination can have *Random* as the **Bandwidth Type**.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning*.

You may combine multiple circuits into one high-rate circuit on the same NPCs. The procedure given in this example can be used to recombine an original high-rate circuit of Bandwidth *n* that was restored in the DND as *n* single-channel circuits by an `UPLOAD` or `CHANNEL SYNC` **Action** under database synchronization. (See *Chapter 17, Database Audit/Synchronization*.)

(Continued on next page)

Background (Continued)

Related Information (Continued)

The technical reason for this anomaly during synchronization is that the frame, when queried by the DND for its cross-connect map, cannot provide information that *n* DS0 cross-connects were actually *nx*DS0 cross-connects of one high-rate circuit in the DND. Therefore, without this critical information, the DND during synchronization is required to generate separate circuit records for each cross-connect extracted from the frame.

You must perform this procedure prior to the DACScan-2000 Controller Circuit Module placing an existing wide-band circuit in Effect (IE-IE).

You can identify circuits resulting from a CHANNEL SYNC or from an UPLOAD, which utilizes a CHANNEL SYNC, by the format of their circuit IDs.

The format is:

SYN from_npc-from_ch to_npc-to_ch BW/01 FDX:000

where:

from_npc	is the FROM NPC number in hierarchical or extended format, depending on how the frame was provisioned.
from_ch	is the FROM channel number.
to_npc	is the TO NPC number in hierarchical or extended format.
to_chan	is the TO channel number.

You should verify that the source circuits conform to the requirements for a successful COMBINE. These requirements are started in the CIRCUIT PROVISIONING Field Descriptions. You can obtain the information by:

Generating a CIRCUIT CONNECTIONS report through the CIRCUITS selection of the REPORT OPERATIONS menu using wild-cards in the SEARCH CRITERIA form to obtain only circuits of the given FROM NPC.

For circuits to be recombined after a CHANNEL SYNC, we recommend a circuit ID search string of:

SYN from_npc *

Obtain a display, which you can print with the PRINT key, through the BROWSE **Action** of the CIRCUIT PROVISIONING form. Use the same search string in the **Ckt ID** field.

Instructions

Task

Complete the following steps to combine single-channel circuits, follow the procedure below. Here, we are going to recall the channel information of the first circuit to the screen, so that we can reuse it, however this step is not necessary. You could enter the information for the combined circuit independently.

Step	Action	Reference

1	Verify the range of the single-channel circuits.
	
	In this example, the **Ckt ID** search string is `SYN 000*` which lists the following:
	
	`SYN 0001-001 ...BW/01 FDX:00`
	
	`SYN 0001-002 ...BW/01 FDX:00`
	
	...
	
	`SYN 0001-024 ...BW/01 FDX:00`	

2	From the DND Forms MAIN MENU, select PROVISIONING, then select CIRCUIT.	
3	Recall the first circuit to the screen: — **Site Name**: `DACS00` — **Ckt ID**: `SYN 0001-002 ... BW/01 FDX:000`	
4	Enter the following information, noting that we are reusing the previous **Ckt ID** and therefore do not have to change it: — **Action**: `COMBINE` — **Bandwidth**: `24` — **Bandwidth Type**: `C`	

Step	Action	Reference
5	Press EXECUTE or use the RECNCILE key to select the database and then press EXECUTE. If the command completes successfully: The source circuits are deleted. In addition, the `command completed successfully` message is displayed, indicating that the combined circuit has been created successfully. **NOTE:** If a time-out message appears, the `COMBINE` may be in-progress. If full-Bandwidth `COMBINE`s are issued simultaneously, on different terminals, all but one are placed on queue and timeout messages may appear while there are in the queue. They are then executed successively after completion of the first one. A full-Bandwidth `COMBINE` requires over a minute to complete. Lower-rate `COMBINE`s require less time.	
6	**Stop! End of Task.**	
	Select a What's next option.	SE 10.1.1U

DND Forms: Activating a Circuit, Virtual Multipoint Circuit

10.6U

Background

When to Use

Use this General Task to provision virtual multipoint circuits.

Before You Begin

For each leg, complete a CIRCUIT PROVISIONING form.

Each form must have a different **Ckt ID**. High-rate circuits count as one leg and take one form to specify. In that case, channels are displayed on the real EFT line only.

All legs must have the same **Bandwidth**, and the **Bandwidth Type** must be `C` (contiguous).

You must establish the backbone leg first. The broadcast legs cannot exist without it; if you try to create a BRD before a BBL, your attempt is denied.

The NPCs must not be `UEQD`. If they are `OOS`, the DND accepts the form, but the frame does not accept the command. A successful circuit must contain NPCs that are all `IS`.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning*.

Instructions

Task Complete the following steps to provision a virtual multipoint circuit.

Step	Action	Reference
To create the BBL:		
1	From the DND Forms MAIN MENU, select PROVISIONING, then select CIRCUIT	
2	Enter the following data: — **Site Name**: — **Action**: ACTIVATE — **Ckt ID**: — **Ckt Class**: BBL — **Bandwidth Type**: C	
3	Identify the **From NPC** by entering the NPC ID, or its hierarchical or extended number.	
4	Identify the **FROM Ch**.	
5	Enter values for the following: — **Bandwidth**: — **TC**: TRSP — **IW**: FF	
6	Press EXECUTE or use the RECNCILE key to select the database and then press EXECUTE. If the command completes successfully: The **Ckt Status** field changes from NULL to ACTIVE. In addition, the command completed successfully message is displayed. The virtual NPC and conference number are displayed in the **TO NPC** and **TO Ch** fields.	
To create the BRD:		

Step	Action	Reference
7	Provision one BRD, by entering the following: — **Ckt ID**: — **Ckt Class**: BRD — **BBL ID**: Enter the Ckt ID of the BBL that this BRD will conference with. The virtual node appears in the FROM fields. — **Bandwidth Type**: C (should already be filled in) — **TO NPC ID**: — **TO Ch**: — **Bandwidth**: (should already be filled in) — **TC**: TRSP (should already be filled in) — **IW**: FF (should already be filled in)	
8	Press EXECUTE and select IMMEDIATE.The **Ckt Status** changes to ACTIVE. In addition, the command completed successfully message is displayed.	
9	Repeat Steps 7 and 8 for each BRD. Specify a new **Ckt ID** for each BRD.	
10	**Stop! End of Task.**	
	Select a What's next option.	SE 10.1.1U

DND Forms: Activating a Circuit, DMB Multipoint Symmetrical Circuits

10.7U

Background

When to Use

Use this General Task to provision a DMB multipoint symmetrical circuit.

Before You Begin

NOTE:
DMB multipoint is supported *only* for DACS II.

NOTE:
The DMB NPC number must be in the range supported by the DMB circuit pack. If it is not, the NPC is not a DMB NPC. If you do not know the ranges of each type of NPC, consult your system administrator.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning*.

Instructions

Task Complete the following steps to provision a DMB multipoint symmetrical circuit.

Step	Action	Reference
To create the first leg:		
1	From the DND Forms MAIN MENU, select PROVISIONING, then select CIRCUIT	
2	Enter the following data: — **Site Name**: — **Action**: `ACTIVATE` — **Ckt ID**: — **Ckt Class**: `DMB`	
3	Identify the NPC in the **From NPC** and **From Ch** fields. Enter the NPC ID, or its hierarchical or extended number. For this example, this NPC contains EFTs.	
4	Enter `LEG` for **FROM Mode**.	
5	Identify the **To NPC** by entering the NPC ID, or its hierarchical or extended number.	
6	Identify the NPC in the **TO NPC** and **TO Ch** fields. Enter the NPC ID, or its hierarchical or extended number. For this example, this is the DMB NPC.	
7	Enter `SYM` for **TO Mode**.	
8	Enter or select values for any other relevant data fields.	
9	Press EXECUTE and confirm. The **Ckt Status** changes to `ACTIVE`. In addition, the `command completed successfully` message is displayed.	
To create the second leg:		

Step	Action	Reference
10	Enter the following information, understanding that the **Ckt Class** is still DMB: — **Ckt ID**: — **FROM NPC ID**: — **FROM Ch**: — **FROM Mode**: LEG — **TO NPC ID**: (enter the same **NPC ID** as the first leg) — **TO Ch**: (enter the same **Ch** as the first leg) — **TO Mode**: SYM	
11	Press EXECUTE and confirm. The **Ckt Status** displays ACTIVE. In addition, the command completed successfully message is displayed.	
To create the third leg:		
12	Enter the following information, understanding that the **Ckt Class** is still DMB: — **Ckt ID**: — **FROM NPC ID**: — **FROM Ch**: — **FROM Mode**: LEG — **TO NPC ID**: (enter the same **NPC ID** as the first leg) — **TO Ch**: (enter the same **Ch** as the first leg) — **TO Mode**: SYM	
13	Press EXECUTE and confirm. The **Ckt Status** displays ACTIVE. In addition, the command completed successfully message is displayed	
14	**Stop! End of Task.**	
	Select a What's next option.	SE 10.1.1U

DND Forms: Activating a Circuit, DMB Multipoint Polling Data Circuit

10.8U

Background

When to Use

Use this General Task to provision a DMB multipoint polling data circuit.

Before You Begin

NOTE:
DMB multipoint is supported *only* for DACS II.

NOTE:
The DMB NPC number must be in the range supported by the DMB circuit pack. If it is not, the NPC is not a DMB NPC. If you do not know the ranges of each type of NPC, consult your system administrator.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning*.

Instructions

Task Complete the following steps to provision a DMB multipoint polling data circuit.

Step	Action	Reference
To create the backbone leg:		
1	From the DND Forms MAIN MENU, select PROVISIONING, then select CIRCUIT.	
2	Enter the following data: — **Site Name**: — **Action**: ACTIVATE — **Ckt ID**: — **Ckt Class**: DMB	
3	Identify the NPC in the **From NPC** and **From Ch** fields. Enter the NPC ID, or its hierarchical or extended number. For this example, this NPC contains EFTs.	
4	Enter LEG for **FROM Mode**	
5	Identify the **To NPC** by entering the NPC ID, or its hierarchical or extended number. This isn the DMB NPC	
6	Identify the NPC in the **TO NPC** and **TO Ch** fields. Enter the NPC ID, or its hierarchical or extended number. For this example, this is the DMB NPC.	
7	Enter BBL for **TO Mode**.	
8	Enter or select values for any other relevant data fields.	
9	Press EXECUTE and confirm. The **Ckt Status** changes to ACTIVE. In addition, the `command completed successfully` message is displayed.	
To create the first broadcast leg:		

Step	Action	Reference
10	Enter the following information, understanding that the **Ckt Class** is still DMB: — **Ckt ID**: — **FROM NPC ID**: — **FROM Ch**: — **FROM Mode**: LEG — **TO NPC ID**: (enter the same **NPC ID** as the backbone leg) — **TO Ch**: (enter the same **Ch** as the backbone leg) — **TO Mode**: BRD	
11	Press EXECUTE and confirm. The **Ckt Status** displays ACTIVE. In addition, the command completed successfully message is displayed.	
To create the second broadcast leg:		
12	Enter the following information, understanding that the **Ckt Class** is still DMB: — **Ckt ID**: — **FROM NPC ID**: — **FROM Ch**: — **FROM Mode**: LEG — **TO NPC ID**: (enter the same **NPC ID** as the backbone leg) — **TO Ch**: (enter the same **Ch** as the backbone leg) — **TO Mode**: BRD	
13	Press EXECUTE and confirm. The **Ckt Status** displays ACTIVE. In addition, the command completed successfully message is displayed.	
14	**Stop! End of Task.**	
	Select a What's next option.	SE 10.1.1U

DND Forms: Adding a BCON LEG to a Full-Duplex Contiguous Circuit

10.9U

Background

When to Use

Use this General Task to add a BCON LEG to a contiguous circuit.

Before You Begin

Create a full duplex contiguous circuit to be used as the BCON backbone, or use an existing BCON backbone.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning*.

Instructions

Task

Complete the following steps to add a leg to a contiguous 64 Kbps circuit.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select CIRCUIT.	
2	Enter the following data: — **Site Name**: — **Action**: `ADDLEG` — **BKB Ckt ID**: (enter the CKT ID of the FDX circuit to be converted into the BCON backbone or enter an existing BCON backbone) — **LEG NPC ID**: — **LEG Ch**: — **Dir:** `F` or `T` (if an existing BCON backbone is used, this field will be read-only)	
3	Press EXECUTE and select `IMMEDIATE`. The **Ckt Status** field changes from `NULL` to `ACTIVE`. In addition, the `command completed successfully` message is displayed. The **LEG Ckt ID** field will be filled in automatically after the form executes.	
4	**Stop! End of Task.**	
	Select a What's next option.	SE 10.1.1U

DND Forms: Adding a BCON LEG to a Full-Duplex Random Circuit

10.10U

Background

When to Use

Use this General Task to add a BCON LEG to a random circuit.

Before You Begin

Create a full duplex random circuit to be used as the BCON backbone, or use an existing BCON backbone.

Related Information

For related information, refer to *Chapter 10, Circuit Provisioning*.

Instructions

Task

Complete the following steps to add a LEG to a random 64 Kbps circuit.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select CIRCUIT.	
2	Enter the following data: — **Site Name**: — **Action**: `ADDLEG` — **BKB Ckt ID**: — **LEG NPC ID**: — **Dir:** `F` — **L_Ch**:	
3	Press EXECUTE and select `IMMEDIATE`. The **Ckt Status** field changes from `NULL` to `ACTIVE`. In addition, the `command completed successfully` message is displayed. The **LEG Ckt ID** field will be filled in automatically after the form executes.	
4	**Stop! End of Task.**	
	Select a What's next option.	SE 10.1.1U

MMFG Provisioning General Tasks

11

Contents

- DND GUI
  - Creating an MMFG GT 11.1G
  - Modifying an MMFG GT 11.2G
  - Restoring an MMFG on a DACS GT 11.3G
  - Removing an MMFG from a DACS GT 11.4G
  - Deleting an MMFG from a DACS GT 11.5G

DND GUI: Creating an MMFG

11.1G

Background

When to Use

Use this General Task to create an MMFG on a DACS.

Before You Begin

Before you begin this task, you must have at least one DACS in the DACS network which is In-Service (See Chapter 5, NE Provisioning). The equipment to support the MMFG must be installed at the DACS and in service. The DS3 unit must be provisioned. FMT and FLI packs must be restored. The correct MXR and optional MIU must be inserted in the slots.

Related Information

For related information, refer to Chapter 11, MMFG Provisioning.

Instructions

Task Complete the following steps to grow an MMFG on a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **MMFG Provisioning...** The MMFG PROVISIONING form will appear on the screen.	
3	Select the **Site Name:** where the MMFG resides.	
4	Select *CREATE* from the **Action:** field.	
5	Click Continue... . The **MMFG** box will appear on the form.	
6	Enter the **MMFG Number:** in the format *uu-n* where *uu* is the unit number and *n* is the MMFG number in that unit.	
7	Specify a name for the MMFG in the **ID:** field.	
8	Click Continue... . Additional MMFG fields appear on the form. The **Service State:** field populates *UNEQ* for unequipped into the field automatically; it cannot be changed.	
9	Select an MXR type in the **MXR Type:**. **NOTE:** If a Hybrid DS3 type is selected additional Performance Monitoring Fields appear on the form.	
10	Select an MIU type in the **MIU Type:** ■ *No MIU* - no MIU is present ■ *MIU100* **NOTE:** The MIU is only supported on the EXxyz type of MXR on a DS3U type MMFG.	

Step	Action	Reference
11	Specify the following DACS Provisioning Options if you want to change the values: ■ BERM (bit error rate method) ■ BERT (bit error rate threshold) ■ LBO (line buildout)	
12	Specify the following DACS Provisioning Options if you want to change the values: ■ BERM (bit error rate method) ■ BERT (bit error rate threshold) ■ LBO (line buildout)	
13	Specify the Performance Monitoring options for HXxyz type MXRs.	SE 11.1.1G
14	Select a **Reconcile:** option.	SE 11.1.2G
15	(If desired) Select the **Restore MMFG:** option box to *CREATE* and *RESTORE* the MMFG in one step.	
16	Click Continue... . The fields will appear in read-only mode.	
17	Verify the information on the form to ensure you are creating the desired MMFG.	
18	When you have approved the information on the form, Click Execute .	
19	**Stop! End of Task.**	
	Select a What's Next option.	SE 11.1.3G

SE 11.1.1: Selecting Performance Monitoring Options for HXxyx type MMFGs

Procedure

Perform the steps below to customize performance monitoring options:

3. Select the appropriate data set from the **data set:** field.

NOTE:
Data set 0 is the default.

4. Select the PM Thresholds on which to apply the chosen data set. To select all options, click Select All Parameters and go to Step 4.
5. Click Apply to Selected to apply the data set to the selected PM Threshold options.
6. To assign a different data set to another parameter, repeat steps 2-4.

Stop! End of Procedure.

SE 11.1.2: Selecting a Reconcile Mode

Procedure

Perform ONE of the following options to select the appropriate Reconcile **Mode**:

IF you want to execute this Action...	THEN select...
On the DACS and DND	The **DACS and DND** option box (default).
On the DND only	The **DND only** option box.
On the DACS only	The **DACS only** option box.

Stop! End of Procedure.

SE 11.1.3: What's Next Options for MMFG Provisioning

What's Next?

Options	Reference
Click New Action to perform a new action on the current MMFG.	GT11.1G - GT 11.5G
Click New MMFG to perform an action on a different MMFG.	
Click Restart to clear and initialize the form and select an action for another MMFG.	
Click Close to close the MMFG PROVISIONING form	

DND GUI: Modifying an MMFG

11.2G

Background

When to Use

Use this General Task to modify MMFG information previously entered when an MMFG was created.

Before You Begin

Before you begin this task, you must have at least one MMFG on a DACS in your DND network which has been previously created.

Related Information

For related information, refer to Chapter 11, MMFG Provisioning.

Instructions

Task Complete the following steps to modify an MMFG on a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **MMFG Provisioning...** The MMFG PROVISIONING form will appear on the screen.	
3	Select the **Site Name:** where the MMFG resides.	
4	Select *MODIFY* from the **Action:** field.	
5	Specify the MMFG.	SE 11.1.1G
6	Click Continue... . The MMFG PROVISIONING form is displayed with all of the current provisioning options. You can now modify: ■ MMFG ID ■ MXR Type ■ MIU Information ■ BERM, BERT, and LBO options ■ PM Parameters (type HXxyx MMFG only)	GT 11.1G
7	Click Continue... . Additional fields and the **Control Options** box appear on the form.	
8	Select a **Reconcile:** mode.	SE 11.1.2G
9	Click INCL if you want to RESTORE all of the equipped NPCs associated with the MMFG.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
10	Click Continue... . The fields will appear in read-only mode.	
11	Verify the information on the form to ensure you are modifying the desired MMFG.	
12	When you have approved the information on the form, Click Execute .	
13	**Stop! End of Task.**	
	Select a What's Next option.	SE 11.1.2G

DND GUI: Restoring an MMFG on a DACS

11.3G

Background

When to Use

Use this General Task to restore an MMFG on a DACS. Restoring MMFGs places them In-Service.

Before You Begin

Before you begin this task, you must have at least one MMFG on a DACS in your DND network which has been previously created and is Out-of-Service.

Related Information

For related information, refer to Chapter 11, MMFG Provisioning.

Instructions

Task

Complete the following steps to restore an MMFG on a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **MMFG Provisioning...** The MMFG PROVISIONING form will appear on the screen.	
3	Select the **Site Name:** where the MMFG resides	
4	Select *RESTORE* from the **Action:** field.	
5	Specify the MMFG.	SE 11.1.1G
6	Click Continue... . The MMFG PROVISIONING form will be populated with fields containing previously entered information in read-only mode. The **Control Options** box also appears on the form.	
7	Select a **Reconcile:** mode.	SE 11.1.2G
8	Click INCL if you want to RESTORE all of the equipped NPCs associated with the MMFG.	
9	Click Continue... . All fields will appear on the form in read-only mode.	
10	Verify the information on the form to ensure you are restoring the desired MMFG.	
11	When you have approved the information on the form, Click Execute .	
12	**Stop! End of Task.**	
	Select a What's Next option.	SE 11.1.2G

DND GUI: Removing an MMFG from a DACS

11.4G

Background

When to Use

Use this General Task to remove an MMFG on a DACS from service and (if desired) delete the MMFG from the DACS network.

Before You Begin

Before you begin this task, you must have at least one MMFG on a DACS in your DND network which is In-Service.

Related Information

For related information, refer to Chapter 11, MMFG Provisioning.

Instructions

Task

Complete the following steps to remove an MMFG from service:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **MMFG Provisioning...** The MMFG PROVISIONING form will appear on the screen.	
3	Select the **Site Name:** where the MMFG resides.	
4	Select *REMOVE* from the **Action:** field.	
5	Specify the MMFG.	SE 11.1.1G
6	Click Continue... . MMFG information fields appear on the form in read-only mode. The **Control Options** box also appears on the form.	
7	Select a **Reconcile:** mode.	SE 11.1.2G
8	If you are removing an MMFG and want to remove the associated NPCs, select the **Inclusive (INCL):** option box.	
9	If you are removing an MMFG which has no protection, select the **Force (FRC):** option box.	
10	Select the **Delete MMFG:** option box to *REMOVE* and *DELETE* the MMFG in one step.	
11	Click Continue... . The fields will appear in read-only mode.	

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Instructions (Continued)

Task, Continued

Step	Action	Reference
12	Verify the information on the form to ensure you are removing the desired MMFG.	
13	When you have approved the information on the form, Click Execute.	
14	**Stop! End of Task.**	
	Select a What's Next option.	SE 11.1.3G

DND GUI: Deleting an MMFG from a DACS

11.5G

Background

When to Use

Use this General Task to delete an MMFG on a DACS.

Before You Begin

Before you begin this task, you must have at least one MMFG on a DACS in your DACS network which is Out-of-Service.

Related Information

For related information, refer to Chapter 11, MMFG Provisioning.

Instructions

Task

Complete the following steps to delete an MMFG from a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **MMFG Provisioning...** The MMFG PROVISIONING form will appear on the screen.	
3	Select the **Site Name:** where the MMFG resides.	
4	Select *DELETE* from the **Action:** field.	
5	Specify the MMFG.	SE 11.3.1G
6	Click Continue... . MMFG information fields appear on the form in read-only mode. The **Control Options:** field also appears on the form.	
7	Select a **Reconcile:** mode.	SE 11.1.2G
8	Click Continue... . The fields will appear in read-only mode.	
9	Verify the information on the form to ensure you are deleting the correct MMFG.	
10	When you have approved the information on the form, Click Execute .	
11	**Stop! End of Task.**	
	Select a What's Next option.	SE 11.1.2G

Termination Naming and Circuit Mapping General Tasks

12

Contents

- DND GUI
  - Creating a Termination GT 12.1G
    - What's Next Options for Termination Naming SE 12.1.1G
  - Modifying a Termination GT 12.2G
  - Deleting a Termination GT 12.3G
  - Creating a Termination Circuit Map GT 12.4G
    - What's Next Options for Termination Circuit Mapping SE 12.4.1G
  - Modifying a Termination Circuit Map GT 12.5G
  - Deleting a Termination Circuit Map GT 12.6G
  - Performing a Circuit Trace on a Termination Circuit Map GT 12.7G

Creating a Termination

12.1G

Background

When to Use

Use this General Task to create a termination on an SNMP. The port for the termination must already be added to an intertie.

Before You Begin

Before you begin this task, you must have an SNMP provisioned in your network (GT 5.1G).

Related Information

For related information, refer to *Chapter 12, Termination Naming and Connections.*

Instructions

Task Complete the following steps to create a termination on an SNMP site:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Termination Name...** The TERMINATION NAME form will appear on the screen.	
3	Select *CREATE* from the **Action:** field.	
4	Select the type of site in the **Element Type:** field. The **Site Name:** field is automatically populated with the site names with the **Element Type:** selected.	
5	Select the **Site Name:** where the termination will be created.	
6	Specify a name for the termination in the **Termination Name:** field.	
7	Specify the **Slot Type** and **Slot Number.**	
8	Click Continue... . Additional termination information fields will appear on the form.	
9	Select the **Termination Speed** from the available choices.	
10	Specify one of the following: ■ For DS1, E1 **Termination Speed**: Specify **Port Number** (DS1, E1 number) ■ For DS0 **Termination Speed**: Specify **Port Number** and **DS0 Bandwidth**. If not DS0 facilily speed, then **Channels** must also be specified. ■ For ATM **Termination Speed**: Specify **VPI** and **VCI**.	
11	(Optional) Enter comments for the termination in the **Remarks:** field.	
12	Click Continue... . The fields will appear on the form in read-only mode.	

Step	Action	Reference
13	Verify the information on the form to ensure you are creating the desired termination.	
14	When you have approved the information on the form, Click Execute .	
15	**Stop! End of Task.**	
	Select a What's Next option.	SE 12.1.1G

SE 12.1.1G: What's Next Options for Termination Naming

What's Next?

Options	Reference
Click New Action to perform a new action on the current termination.	GT 12.1G - GT 12.3G
Click Restart to clear and initialize the form and select an action for another termination.	
Click Close to close the TERMINATION NAME form	

Modifying a Termination

12.2G

Background

When to Use

Use this General Task to modify a termination on an SNMP.

Before You Begin

Before you begin this task, you must have a termination created on an SNMP (GT 12.1G).

Related Information

For related information, refer to *Chapter 12, Termination Naming and Connections.*

Instructions

Task

Complete the following steps to modify a termination on an SNMP site:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Termination Name...** The TERMINATION NAME form will appear on the screen.	
3	Select *MODIFY* from the **Action:** field.	
4	Select the type of site in the **Element Type:** field. The **Site Name:** field is automatically populated with the site names with the **Element Type:** selected.	
5	Select the **Site Name:** where the termination will be modified.	
6	Specify a name for the termination in the **Termination Name:** field.	
7	Click Continue... . Additional termination information fields appear on the form. The **Port** information fields appear in read-only mode and cannot be modified.	
8	Modify the following termination fields as necessary: ■ **DS0 Bandwidth:** ■ **Channels:** ■ **Remarks:**.	
9	Click Continue... . The fields will appear on the form in read-only mode.	
10	Verify the information on the form to ensure you are modifying the desired termination.	
11	When you have approved the information on the form, Click Execute .	
12	**Stop! End of Task.**	
	Select a What's Next option.	SE 12.1.1G

Deleting a Termination

12.3G

Background

When to Use

Use this General Task to delete a termination from an SNMP. A termination cannot be deleted if it is part of a Termination Circuit Mapping.

Before You Begin

Before you begin this task, you must have a termination created on an SNMP (GT 12.1G).

Related Information

For related information, refer to *Chapter 12, Termination Naming and Connections.*

Instructions

Task Complete the following steps to delete a termination from an SNMP site::

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Termination Name...** The TERMINATION NAME form will appear on the screen.	
3	Select *DELETE* from the **Action:** field.	
4	Select the type of site in the **Element Type:** field. The **Site Name:** field is automatically populated with the site names with the **Element Type:** selected.	
5	Select the **Site Name:** where the termination will be deleted.	
6	Specify a name for the termination in the **Termination Name:** field.	
7	Click Continue... . The **Termination** information fields will appear on the form in read-only mode.	
8	Verify the information on the form to ensure you are deleting the desired termination.	
9	When you have approved the information on the form, Click Execute .	
10	**Stop! End of Task.**	
	Select a What's Next option.	SE 12.1.1G

Creating a Termination Circuit Map

12.4G

Background

When to Use

Use this General Task to create a termination circuit map.

Before You Begin

Before you begin this task, you must have at least two termination ports created on an SNMP (GT 12.1G).

Related Information

For related information, refer to *Chapter 12, Termination Naming and Connections*.

Instructions

Task

Complete the following steps to create a termination on an SNMP site:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Termination Circuit Mapping...** The TERMINATION CIRCUIT MAPPING form will appear on the screen.	
3	Select *CREATE* from the **Action:** field.	
4	Select the type of site in the **Element Type:** field. The **Site Name:** field is automatically populated with the site names with the **Element Type:** selected.	
5	Select the **Site Name:** where the termination mapping will be created.	
6	Specify a name for the circuit map in the **Circuit ID:** field.	
7	Click Continue... . Additional circuit mapping information fields will appear on the form.	
8	Specify the **Termination Name:** for both sides of the circuit map.	
9	(Optional) Enter comments for the termination circuit map in the **Remarks:** field.	
10	Click Continue... . Information on both terminations will appear on the form in read-only mode. The **CIRCUIT NETWORK INFORMATION** box also appears on the form, displaying the far-end connections for each termination (if any).	
11	Verify the information on the form to ensure you are creating the desired termination circuit map.	
12	When you have approved the information on the form, Click Execute .	
13	**Stop! End of Task.**	
	Select a What's Next option.	SE 12.4.1G

SE 12.4.1G: What's Next Options for Termination Circuit Mapping

What's Next?

Options	Reference
Click New Action to perform a new action on the current termination circuit map.	GT 12.4G - GT 12.7G
Click Restart to clear and initialize the form and select an action for another termination.	
Click TERM 1 or TERM 2 to trace the termination's far end connection for further provisioning on the far end site. ■ If the far end site is an SNMP, then the TERMINATION CIRCUIT MAPPING form will appear with some fields pre-populated. ■ If the far end site is a DACS, then the CIRCUIT PROVISIONING form will appear with some fields pre-populated	
Click TRACE MAP DISPLAY to display a circuit trace.	
Click Close to close the TERMINATION NAME form	

Modifying a Termination Circuit Map

12.5G

Background

When to Use

Use this General Task to modify a termination circuit map.

Before You Begin

Before you begin this task, you must have a termination circuit map created in the network circuit (GT 12.4G).

Related Information

For related information, refer to *Chapter 12, Termination Naming and Connections.*

Instructions

Task

Complete the following steps to create a termination on an SNMP site:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Termination Circuit Mapping...** The TERMINATION CIRCUIT MAPPING form will appear on the screen.	
3	Select *MODIFY* from the **Action:** field.	
4	Select the type of site in the **Element Type:** field. The **Site Name:** field is automatically populated with the site names with the **Element Type:** selected.	
5	Select the **Site Name:** where the termination will be modified.	
6	Specify a name for the circuit map in the **Circuit ID:** field.	
7	Click Continue... . Additional circuit mapping information fields will appear on the form in read-only mode. The only field which can be modified is the **Remarks:** field. **NOTE:** To change other information in the circuit map, *DELETE* the map and re-*CREATE* it.	
8	(Optional) Enter comments for the termination circuit map in the **Remarks:** field.	
9	Click Continue... . Information on both terminations will appear on the form in read-only mode. The **Circuit Network Information** box also appears on the form, displaying the far-end connections for each termination (if any).	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
10	Verify the information on the form to ensure you are modifying the desired termination circuit map.	
11	When you have approved the information on the form, Click Execute .	
12	**Stop! End of Task.**	
	Select a What's Next option.	SE 12.4.1G

Deleting a Termination Circuit Map

12.6G

Background

When to Use

Use this General Task to delete a termination circuit map.

Before You Begin

Before you begin this task, you must have a termination circuit map created in your network circuit (GT 12.4G).

Related Information

For related information, refer to *Chapter 12, Termination Naming and Connections.*

Instructions

Task

Complete the following steps to delete a termination on an SNMP site:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Termination Circuit Mapping...** The TERMINATION CIRCUIT MAPPING form will appear on the screen.	
3	Select *DELETE* from the **Action:** field.	
4	Select the type of site in the **Element Type:** field. The **Site Name:** field is automatically populated with the site names with the **Element Type:** selected.	
5	Select the **Site Name:** where the termination will be deleted.	
6	Specify a name for the circuit map in the **Circuit ID:** field.	
7	Click Continue... . Information on both terminations will appear on the form in read-only mode. The **Circuit Network Information** box also appears on the form, displaying the far-end connections for each termination (if any).	
8	Verify the information on the form to ensure you are deleting the desired termination.	
9	When you have approved the information on the form, Click Execute .	
10	**Stop! End of Task.**	
	Select a What's Next option.	SE 12.4.1G

Performing a Circuit Trace on a Termination Circuit Map

12.7G

Background

When to Use

Use this General Task to display the circuit trace of a network circuit.

Before You Begin

Before you begin this task, you must have a termination circuit map created in the network circuit (GT 12.4G).

Related Information

For related information, refer to *Chapter 12, Termination Naming and Connections.*

Instructions

Task

Complete the following steps to perform a circuit trace on a termination circuit map:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Termination Circuit Mapping...** The TERMINATION CIRCUIT MAPPING form will appear on the screen.	
3	Select *TRACE* from the **Action:** field.	
4	Select the type of site in the **Element Type:** field. The **Site Name:** field is automatically populated with the site names with the **Element Type:** selected.	
5	Select the **Site Name:** where the termination will be created.	
6	Specify a name for the circuit map in the **Circuit ID:** field.	
7	Click Continue... . Information on both terminations will appear on the form in read-only mode. The **Circuit Network Information** box also appears on the form, displaying the far-end connections for each termination (if any).	
8	Click TRACE MAP DISPLAY . The following appears on the screen: ■ A separate Netscape window with a table listing all circuit IDs and DACS/SNMP systems in the network circuit ■ A separate Netscape window displaying the circuit trace network map over a greyed out background picture	
9	**Stop! End of Task.**	
	Select a What's Next option.	SE 12.4.1G

Subrate Provisioning General Tasks

13

Contents

- DND Forms:
  - Provisioning Subrate Circuits GT 13.1U
    - Creating/Activating an NPC as a Subrate Type SE 13.1.1U
    - Activating a DS0 Channel SE 13.1.2U
    - Provisioning a Subrate Cross Connection SE 13.1.3U
  - Browsing DS0 Channel Information GT 13.2U
  - Browsing Subrate Cross Connects GT 13.3U

Provisioning Subrate Circuits

13.1U

Background

When to Use

Use this General Task to perform all the steps needed to create a subrate cross-connection.

Related Information

For related information, refer to *Chapter 13, Subrate Provisioning*.

Instructions

Task

Complete the following steps to provision a subrate circuit:

Step	Action	Reference
1	Create an NPC as a subrate type.	SE 13.1.1U
2	Establish a DS0 channel.	SE 13.1.2U
3	Activate a subrate cross connection.	SE 13.1.3U
4	**Stop! End of Task.**	

SE 13.1.1U: Creating/Activating an NPC as a Subrate Type

Task

Complete the following steps to create an NPC as a subrate type:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select NPC.	
2	Enter the **Site Name**.	
3	Enter *CREATE* in the **Action** field.	
4	Enter an **NPC ID**.	
5	For **Type**, enter *SD111*.	
6	Enter an odd number in either the **Number (Hier)** or **(Ext)** field.	
7	Press Execute and select `IMMEDIATE`. The **Service State** field changes to `OOS`. **Alarm State** changes to `None`. Command completed message is displayed.	
8	Move to the **Action** field and select *RESTORE*.	
9	Press Execute and select `IMMEDIATE`. The **Service State** field changes to `IS`. Command completed message is displayed.	
10	**Stop! End of Task.**	
	Establish DS0 channels for this subrate NPC.	SE 13.1.2U

SE 13.1.2U: Activating a DS0 Channel

Task

Complete the following steps to activate DS0 channels on a subrate type NPC:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select ESTABLISH DSO CHANNEL.	
2	Enter the **Site Name**.	
3	Enter *ACTIVATE* in the **Action** field.	
4	Enter the **Ckt ID**.	
5	Specify the **From NPC ID** and channel (**CH**).	
6	Specify the **TO NPC**.	
7	Enter the Transmission Standard, either *X.50* or *X.57*.	
8	(For X.57 only) Enter the **Transmission Rate**. Valid entries are *2.4*, *4*, *8*, or *9.6*.	
9	Enter *F20* for **Bit Framing Pattern** or leave this field blank.	
10	(Optional) Enter values for **UMC**, **MUX**, and **SIG**.	
11	Press Execute and choose `IMMEDIATE`. When the command completes, a completion message displays and the **Ckt Status** changes to `ACTIVE`.	
12	Repeat steps 3 through 11 for all DS0 channels to be activated.	
13	**Stop! End of Task.**	
	Provision a subrate cross-connection.	SE 13.1.3U

SE 13.1.3U: Provisioning a Subrate Cross-Connection

Task

Complete the following steps to create a subrate cross-connection:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select SUBRATE CROSS CONNECT.	
2	Enter the **Site Name**.	
3	Enter *ACTIVATE* in the **Action** field.	
4	Enter either the Circuit ID of the From DS0 channel in the **FROM EST CHANNEL CKT ID** field OR enter the **From NPC** and **From Ch**.	
5	Enter either the Circuit ID of the To DS0 channel in the **TO EST CHANNEL CKT ID** field OR enter the **To NPC** and **To Ch**.	
6	Specify the customer numbers in the **From CUST** and **To Cust** fields.	
7	Enter the **Data Rate**.	
8	Press Execute and select `IMMEDIATE`. The **Ckt Status** field changes to `ACTIVE`. In addition, the command completed successfully message is displayed.	
9	**Stop! End of Task.**	

Browsing DS0 Channel Information

13.2U

Background

When to Use

Use this General Task to display provisioning and status information for established DS0 channels stored in the DND database.

Related Information

For related information, refer to *Chapter 13, Subrate Provisioning*.

Instructions

Task

Complete the following steps to browse through the established DS0 channels in the DND database:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select ESTABLISH DS0 CHANNEL.	
2	Enter *BROWSE* in the **Action** field. The ESTABLISHED DS0 CHANNELS SEARCH CRITERIA Form displays.	
3	Enter search criteria in one or more fields. To display the first 50 records, enter * in the **NPC ID** field.	
4	Press Execute . When the search is complete, the first record that matches the search criteria is displayed.	
5	To display the data for the next DS0 channel, press NEXT.	
6	To stop the BROWSE, press QUIT.	
7	**Stop! End of Task.**	

Browsing Subrate Cross Connects

13.3U

Background

When to Use

Use this General Task to display provisioning and status information for subrate cross connects stored in the DND database.

Related Information

For related information, refer to *Chapter 13, Subrate Provisioning*.

Instructions

Task

Complete the following steps to browse through the established DS0 channels in the DND database:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select SUBRATE CROSS CONNECT.	
2	Enter *BROWSE* in the **Action** field. The ESTABLISHED DS0 CHANNELS SEARCH CRITERIA Form displays.	
3	Enter search criteria in one or more fields. To display the first 50 records, enter * in the **NPC ID** field.	
4	Press Execute . When the search is complete, the first record that matches the search criteria is displayed.	
5	To display the data for the next DS0 channel, press NEXT.	
6	To stop the BROWSE, press QUIT.	
7	**Stop! End of Task.**	

Equipment View General Tasks

14

Contents

NOTE:
There are no general tasks for Equipment Views.

Partitioning General Tasks

15

Contents

- DND GUI
  - Modifying a Partition GT 15.1G
    - What's Next Options for Partitioning SE 15.1.1G

DND GUI: Modifying a Partition

15.1G

Background

When to Use

Use this General Task to modify a partition's name and/or Network Element members.

Before You Begin

Before you begin this task, you should have Network Elements created (GT 5.1G, GT 5.2G, GT 5.3G) in your network. Otherwise, you will only be able to modify the partition name.

Related Information

For related information, refer to:

- *Chapter 5, NE Provisioning*
- *Chapter 16, User Administration*.

Instructions

Task Complete the following steps to modify a partition:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **NE Partitioning...** The NE PARTITIONING form will appear on the screen. The **Action:** field automatically defaults to *MODIFY*.	
3	Select the **Network Partition Name** to modify.	
4	Click Continue... . New fields will appear on the form.	
5	(Optional) Enter a new name for the partition in the **New Partition Name** field.	
6	(Optional) Select the site(s) in the **Current Site Choices** field to assign to the partition. **NOTE:** Clicking the **Select All Sites:** field will select all of the sites from the list for the current Action, but it will not update the field (highlight all sites) until the next Action is underway.	Chapter 3, DND GUI: Parts of a Form section.
7	Verify information to ensure you have modified the correct partition.	
8	When you have approved the information on the form, click Execute .	
9	**Stop! End of Task.**	
	Select a What's Next Option.	SE 15.1.1G

SE 15.1.1G: What's Next Options for NE Partitioning

What's Next? Perform one of the following options when the task is completed:

Options	Reference
Click Back to modify this partition again.	GT 15.1G
Click New Partition or Restart to modify another partition.	GT 15.1G
Click Close to exit the NE PARTITIONING form.	

User Administration General Tasks

16

Contents

- DND GUI
  - Adding a User — GT 16.1G
    - What's Next Options for User Administration — SE 16.1.1G
  - Modifying User Information — GT 16.2G
  - Deleting a User — GT 16.3G
  - Changing a Password as an Operator — GT 16.4G
  - Changing a Password as an Administrator — GT 16.5G
  - Adding a User with Password Aging Enabled — GT 16.6G
  - Restricting or Changing User Access — GT 16.7G
- DND Forms
  - Adding a User — GT 16.1U
    - What's Next Options for User Administration — SE 16.1.1U
  - Changing User Information — GT 16.2U
  - Deleting a User — GT 16.3U
  - Changing a Password as an Operator — GT 16.4U
  - Changing a Password as an Administrator — GT 16.5U
  - Resetting a Forgotten Password — GT 16.6U

DND GUI: Adding a User

16.1G

Background

When to Use

Use this General Task to add a user to the DND database. This task is performed by the system administrator only.

Before You Begin

Make sure the login port is enabled, before a user attempts to log in. For additional information, refer to GT 4.1U.

Related Information

For related information, refer to *Chapter 16, User Administration.*

Instructions

Task Complete the following steps to add a user:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *User Administration...* The USER ADMINISTRATION form appears on the screen.	
3	Select *USER ADD* from the **Action** field.	
4	Enter a name in the **Login Name** field to identify the User.	
5	Enter the name of the person who will own the login in the **User Name** field.	
6	Select the **User Class** and **Printer** for the new user.	
7	Select one of the following: ■ To restrict user access to the DND GUI, check **GUI Only**. ■ To restrict user access to the DND UI, check **DND UI Only**. ■ To permit access to the DND GUI and UI, check **GUI** and **UI**.	
8	Enter the user's **Phone**, **Address**, and **City** information.	
9	Select *ON* or *OFF* options for **UI Audible Alarms** and **UI Idle** fields.	
10	Enter the user's password in the **New Password** and **Re-enter the password** fields. The letters you type appear on the form as astericks (*).	
11	(Optional) Enter the minimum number of days in the **Min Password Aging** field that a password must be active before a user is permitted to change it. **NOTE:** The system defaults to "No Aging" (0) if no value is entered.	

Step	Action	Reference
12	(Optional) Enter the total number of days in the **Max Password Aging** field that a password will be active before a user is prompted to change it. **NOTE:** The system will default to "No Aging" (0) if no value is entered.	
13	Assign the user to a partition by selecting the appropriate **Network Partition Name**.	
14	(Optional) Select the **Audible Alarm** enabling setting.	
15	(Optional) Select the desired sound and **Interval** for the **Critical (CR)**, **Major (MN)**, and the **Minor (MN)** alarms.	
16	Click Continue... . All fields will appear in read-only mode.	
17	Verify the information on the form to ensure the information on the form is correct.	
18	When you have approved the information on the form, Click Execute .	
19	**Stop! End of Task.**	
	Select a What's Next option.	SE 16.1.1G

SE 16.1.1G: What's Next Options for User Administration

What's Next? Perform one of the following options when the task is completed:

Options	Reference
Click Back to perform the same **Action** on the USER ADMINISTRATION form.	GT 16.1G
Click Restart to clear and initialize the form and select another USER ADMINISTRATION form **Action**.	GT 16.2G - GT 16.7G
Click Close to exit the USER ADMINISTRATION form.	

DND GUI: Modifying User Information

16.2G

Background

When to Use

Use this General Task to modify user information. All users can modify their own user information, except their **User Class** and **UI Idle**. System administrators can modify any information for anyone's login information.

If the user is currently logged in, the changes will take effect during their next login session.

To change a password, see GT 16.4G - GT 16.5G. To change the Login Name, you must delete the login, and then add the new one. Refer to GT 16.1G and GT 16.3G.

Before You Begin

The user must have already been added to the DND database (GT 16.1G).

Related Information

For related information, refer to *Chapter 13, User Administration*.

Instructions

Task

Complete the following steps to modify a user:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *User Administration...* The USER ADMINISTRATION form appears on the screen.	
3	Select *USER MODIFY* from the **Action** field.	
4	Enter a name in the **Login Name** field to identify the User.	
5	Click Continue... . All fields will appear on the form.	
6	Enter/change the desired information on the form.	GT 16.1G
7	Click Continue... . All fields will appear in read-only mode.	
8	Verify the information on the form to ensure the information on the form is correct.	
9	When you have approved the information on the form, Click Execute .	
10	**Stop! End of Task.**	
	Select a What's Next option.	SE 16.1.1G

DND GUI: Deleting a User

16.3G

Background

When to Use

Use this General Task to delete a user.

If the user is currently logged in, the user cannot be deleted. When this **Action** is executed, The USER ADMINISTRATION form will display a message indicating that the user is currently logged in.

This task is performed by system administrators only.

Before You Begin

The user must have already been added to the DND database (GT 16.1G).

Related Information

For related information, refer to *Chapter 13, User Administration*.

Instructions

Task

Complete the following steps to delete a user:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *User Administration...* The USER ADMINISTRATION form appears on the screen.	
3	Select *USER DELETE* from the **Action** field.	
4	Enter a name in the **Login Name** field to identify the User.	
5	Click Continue... . All fields will appear in read-only mode.	
6	Verify the user on the form to ensure the deletion of the correct login.	
7	When you have approved the information on the form, Click Execute .	
8	**Stop! End of Task.**	
	Select a What's Next option.	SE 16.1.1G

DND GUI: Changing a Password as an Operator

16.4G

Background

When to Use

DND operators should use this General Task to change their own passwords. Administrators should refer to GT 16.5G for instructions on changing their own password or the passwords of other users.

Before You Begin

The login must have already been added to the DND database (GT 16.1G).

Related Information

For related information, refer to *Chapter 13, User Administration*.

Instructions

Task

Complete the following steps to change your own password:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *User Administration...* The USER ADMINISTRATION form appears on the screen.	
3	Select *CHANGE PASSWORD* from the **Action** field.	
4	Click Continue... . The **Old Password** field appears on the form.	
5	Enter your user password in the **Old Password** field. User.	
6	Click Continue... . The **Password Information** box appears on the form.	
7	Enter your new password into the **New Password** and **Re-enter the password** fields. All passwords will appear as astericks (*) on the form.	
8	Click Continue... . All fields will appear in read-only mode.	
9	Click Execute .	
10	**Stop! End of Task.**	
	Select a What's Next option.	SE 16.1.1G

DND GUI: Changing a Password as an Administrator

16.5G

Background

When to Use

System administrators should use this General Task to change their own password or the password of another user. Operators should refer to GT 16.4G for password changing instructions.

Before You Begin

The login must have already been added to the DND database (GT 16.1G).

Related Information

For related information, refer to *Chapter 13, User Administration*.

Instructions

Task

Complete the following steps to change a password if you are an administrator.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *User Administration...* The USER ADMINISTRATION form appears on the screen.	
3	Select *CHANGE PASSWORD* from the **Action** field.	
4	Click Continue... .	
5	Enter the user's Login Name.	
6	Enter the new password in the **New Password** and **Re-enter the password** fields. The password in both fields must be identical. The passwords will appear as astericks (*) on the form.	
7	(Optional) Enter the minimum and maximum password aging values.	
8	Click Continue... . All fields will appear in read-only mode.	
9	Click Execute .	
10	**Stop! End of Task.**	
	Select a What's Next option.	SE 16.1.1G

DND GUI: Adding a User With Password Aging Enabled

16.6G

When to Use

Use this General Task to add or remove password aging values from GUI or UI login IDs.

Before You Begin

Make sure the login port is enabled before a user attempts to log in. For additional information, refer to GT 4.1U.

NOTE:
Only a DND Administrator (e.g., login=*dacsadm*) may perform this procedure.

Related Information

For related information, refer to Chapter 16, *User Administration.*

Instructions

Task Complete the following steps to add or remove password aging values.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *User Administration...* The USER ADMINISTRATION form appears on the screen.	
3	Select *USER ADD* from the **Action** field.	
4	Continue with one of the following options. — **Login Name** — **User Name** — **User Class** — **Printer** — **User Access** — **Phone** — **Address** — **City** — **UI Audible Alarms** — **UI Idle** — **New Password** — **Re-enter the password**	
5	(Optional) Enter the minimum number of days in the **Min Password Aging** field that a password must be active before a user is permitted to change it. **NOTE:** The system defaults to "No Aging" (0) if no value is entered.	

Step	Action	Reference
6	(Optional) Enter the total number of days in the **Max Password Aging** field that a password will be active before a user is prompted to change it. **NOTE:** The system will default to "No Aging" (0) if no value is entered.	
7	Click Continue... . All fields will appear in read-only mode.	
8	Verify the information on the form to ensure the information on the form is correct.	
9	When you have approved the information on the form, Click Execute .	
10	**Stop! End of Task.**	
	Select a What's Next option.	SE 16.1.1G

DND GUI: Restricting or Changing User Access

16.7G

When to Use

Use this General Task to restrict user access to the DND GUI or DND UI or to permit access to both.

Before You Begin

The user must have already been added to the DND database (GT 16.1G).

NOTE:
Only a DND Administrator (e.g., login=*dacsadm*) may perform this procedure.

Related Information

For related information, refer to Chapter 16, *User Administration.*

Instructions

Task

Complete the following steps to restrict or change user access.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *User Administration...* The USER ADMINISTRATION form appears on the screen.	
3	Select *USER MODIFY* from the **Action** field.	
4	Enter a name in the **Login Name** field to identify the User.	
5	Click Continue... . All fields will appear on the form.	
6	At the User Access area of the form, select one of the following: ■ To restrict user access to the DND GUI, check **GUI Only**. ■ To restrict user access to the DND UI, check **DND UI Only**. ■ To permit access to the DND GUI and the UI, check **GUI** and **UI**.	
7	Click Continue... . All fields will appear in read-only mode.	
8	Verify the information on the form to ensure the information on the form is correct.	
9	When you have approved the information on the form, Click Execute .	
10	**Stop! End of Task.**	
	Select a What's Next option.	SE 16.1.1G

DND Forms: Adding a User

16.1U

Background

When to Use

Use this General Task to add a user to the DND system. This task is performed by the system administrator only.

Before You Begin

Make sure the login port is enabled, before a user attempts to log in. See GT 4.1U for further information.

Related Information

For related information, refer to Chapter 16, User Administration.

Instructions

Task Complete the following steps to add a user:

Step	Action	Reference
1	From the DND MAIN MENU, select USER ADMINISTRATION.	
2	From the USER ADMINISTRATION MENU, select USER MANAGEMENT.	
3	Select *ADD* from the **Action** field.	
4	Enter a name in the **Login Name** field to identify the User.	
5	Enter the user class. Enter *SYSTEM ADMINISTRATOR, OPERATOR,* or *CONTROLLER.*	
6	Enter the **User Name**, **Phone**, **Address**, and **City**.	
7	Enter *ON* or *OFF* for **Alarm Audible** and **UI Idle Option**.	
8	Enter the user's password in the **Password** field and press Enter . The letters you type do not appear on the screen.	

9	The PASSWORD VERIFY FORM appears with the following message:
	
	`Reenter the password`
	`Reenter the password and type VERIFY key`
	The label of the F8 key becomes VERIFY.
	
	Retype the password and press VERIFY.
	
	The cursor goes to **User name**. The password is never displayed.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
10	Press Execute and confirm. The `command completed successfully` message is displayed.	
11	**Stop! End of Task.**	
	Select a What's Next Option.	SE 16.1.1U

SE 16.1.1U:What's Next Options for User Provisioning

What's Next? Perform one of the following options when the task is completed:

Options	Reference
From the USER MANAGEMENT form, select an **Action** to perform another action on the current user login.	GT16.1U - GT 16.4U
From the PASSWORD CHANGE form, enter another login.	GT 16.5U
Reset a Forgotten Password.	GT 16.6U
From any USER ADMINISTRATION form, select TOPMENU to return to the MAIN MENU.	
From any USER ADMINISTRATION form, select QUIT to return to the USER ADMINISTRATION MENU.	

DND Forms: Changing User Information

16.2U

Background

When to Use

Use this General Task to modify user information. All users can modify their own user information, except their **User Class** and **UI Idle**. System administrators can modify any information for any one's login.

If the user is currently logged in, the changes will take effect during their next login session.

To change a password, see GT 16.4U - GT 16.6U. To change the Login Name, you must delete the login, and then add the new one. Refer to GT 16.1U and GT 16.3U.

Before You Begin

The user must have already been added to the DND database (GT 16.1U).

Related Information

For related information, refer to Chapter *16*, *Chapter 13, User Administration*.

Instructions

Task

Complete the following steps to change user information:

Step	Action	Reference
1	From the DND MAIN MENU, select USER ADMINISTRATION.	
2	From the USER ADMINISTRATION MENU, select USER MANAGEMENT.	
3	Select *CHANGE* from the **Action** field.	
4	Enter the name in the **Login Name** field.	
5	Change the user information.	
6	Press Execute and confirm. The `command completed successfully` message is displayed.	
7	**Stop! End of Task.**	
	Select a What's Next Option.	SE 16.1.1U

DND Forms: Deleting a User

16.3U

Background

When to Use

Use this General Task to delete a user.

If the user is currently logged in, the user cannot be deleted. When this **Action** is executed, The USER ADMINISTRATION form will display a message indicating that user is currently logged in.

This task is performed by system administrators only.

Before You Begin

The user must have already been added to the DND database (GT 16.1U).

Related Information

For related information, refer to Chapter 16, *Chapter 13, User Administration*.

Instructions

Task

Complete the following steps to delete a user:

Step	Action	Reference
1	From the DND MAIN MENU, select USER ADMINISTRATION.	
2	From the USER ADMINISTRATION MENU, select USER MANAGEMENT.	
3	Select *DELETE* from the **Action** field.	
4	Enter the name in the **Login Name** field.	
5	Press Execute and confirm. The `command completed successfully` message is displayed.	
6	**Stop! End of Task.**	
	Select a What's Next Option.	SE 16.1.1U

DND Forms: Changing a Password as an Operator

16.4U

Background

When to Use

DND operators should use this General Task to change their own passwords. Administrators should refer to GT 16.5U for instructions on changing their own password or the passwords of other users.

Before You Begin

The login must have already been added to the DND database (GT 16.1U).

Related Information

For related information, refer to Chapter *16*, *Chapter 13, User Administration*.

Instructions

Task

Complete the following steps to change your own password:

Step	Action	Reference
1	From the DND MAIN MENU, select USER ADMINISTRATION.	
2	From the USER ADMINISTRATION MENU, select CHANGE PASSWORD.	
3	For the prompt *Old password*, enter your old password. What you type does not appear on the screen. If you decide to cancel the procedure, simply press Delete without typing a password. The message: `Sorry. Incorrect password.` is displayed, and you are returned to the USER ADMINISTRATION menu.	
4	For the prompt *New password*, enter your new password and press Enter. If you decide to cancel the procedure, press Delete to return to the USER ADMINISTRATION menu.	
5	For the prompt *Reenter new password,* reenter your new password and press Enter. It is accepted only if it matches the new password just entered letter for letter, including case. At the bottom of the screen the following message is displayed: `Password successfully changed.`	
6	**Stop! End of Task.**	
	Select a What's Next Option.	SE 16.1.1U

DND Forms: Changing a Password as an Administrator

16.5U

Background

When to Use

System administrators should use this General Task to change their own password or the password of another user. Operators should refer to GT 16.4U for password changing instructions.

Before You Begin

The login must have already been added to the DND database (GT 16.1U).

Related Information

For related information, refer to Chapter 16, *Chapter 13, User Administration*.

Instructions

Task

Complete the following steps to change a password if you are an administrator:

Step	Action	Reference
1	From the DND MAIN MENU, select USER ADMINISTRATION.	
2	From the USER ADMINISTRATION MENU, select CHANGE PASSWORD.	
3	Enter the user's **Login Name**.	
4	Enter the user's **New Password**. For the prompt *Reenter new password,* reenter your new password and press Enter. It is accepted only if it matches the new password just entered letter for letter, including case. At the bottom of the screen the following message is displayed: `Password successfully changed`	
5	**Stop! End of Task.**	
	Select a What's Next Option.	SE 16.1.1U

DND Forms: Resetting a Forgotten Password

16.6U

Background

When to Use

If a user forgets their password, use this General Task to log in as **root** and reset the user's password. This task is performed by system administrators only.

Before You Begin

You will need to know the **root** password to use this procedure. This password was established at software installation.

NOTE:
It is extremely important to enter and to remember a **root** password, both to prevent unauthorized access from the **root** login, and for purposes of recovery.

The user login must have already been added to the DND database (GT 16.1U).

Related Information

For related information, refer to Chapter 16, User Adminstration.

Instructions

Task

Complete the following steps to reset a user's password:

Step	Action	Reference
1	At the login prompt, enter **root**.	
2	At the password prompt, enter the **root** password.	
3	At the # prompt, type a command in the format: **passwd** {user} For example, if a new password is to be entered for the for the user **ems**, type: **passwd ems**	
4	When prompted, enter a new password.	
5	When prompted, re-enter the password.	
6	At the # prompt, type **exit** and press ENTER.	
7	Log in as the user and verify that the new password is working.	
8	**Stop! End of Task.**	

Report Operations General Tasks

17

Contents

DND GUI:

- Generating a Report GT 17.1G
  - Setting the Date and Time for a Report SE 17.1.1G
  - Entering a Range for a Report Field SE 17.1.2G
  - What's Next Options for Report Generation SE 17.1.3G
- Printing a Report GT 17.2G
- Generating a Performance Monitoring Error Report GT 17.3G
- Creating/Modifying a 24-Hour Performance Monitoring Report Format GT 17.4G
- Deleting a 24-Hour Performance Monitoring Report Format GT 17.5G

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Contents (Continued)

DND Forms:

- Generating a Report GT 17.1U
  - What's Next Options for Report Generation SE 17.1.1U
- Displaying and Printing a Report GT 17.2U
- Transferring a Report To DOS Diskette GT 17.3U
- Creating a New Report Format GT 17.4U
- Modifying a Report Format GT 17.5U
- Renaming a Report Format GT 17.6U
- Deleting a Report Format GT 17.7U
- Generating an Alarm Query Report GT 17.8U

DND GUI: Generating a Report

17.1G

Background

When to Use

Use this General Task to generate full and specialized reports using the DND GUI.

Related Information

For related information, refer to *Chapter 17, Report Operations*.

Instructions

Task

Complete the following steps to generate and display a full and specialized report:

Step	Action	Reference
1	Click Reports located at the top of the DND USER INTERFACE window. The REPORTS task menu is displayed.	
2	Select the report type you wish to generate from the REPORTS task menu. A report SEARCH CRITERIA form, displaying the fields for the particular report type, appears on the screen.	
3	Specialize the report by entering/selecting values or options into these fields to find the corresponding records that match in the DND database. Leaving a field blank or with the wildcard character (*) will display records with all possible values for the field. Leaving all fields blank or with the wildcard character (*) will result in a full report.	SE 17.1.1G, SE 17.1.2G
4	Click Continue... . One of the following may occur: ■ All fields on the form appear in read-only mode. ■ Additional fields may appear on the form (depending on your selections in Step 3). Continue to specialize the report following Step 135 until all fields on the form appear in read-only mode.	
5	Verify the information on the form to ensure you are retrieving the desired report.	
6	When you have approved the information on the form, Click Execute . A separate Netscape window appears with the desired report. **NOTE:** With large databases, report generation can take a few minutes.	
7	**Stop! End of Task.**	
	Select a What's Next option.	SE 17.1.3G

SE 17.1.1G: Setting the DATE and TIME for a Report

Procedure

Perform the steps below to set the **DATE** and **TIME** fields for a report:

IF you want to specify the...	THEN...
DATE	Select the **Day:**, **Month:**, and **Year:** option. Each of these 3 fields collectively specifies the **DATE**.
TIME	Select the **Hour:**, **Minutes:**, and **Second:** options. Each of these 3 fields collectively specifies the **TIME**.

NOTE:
An asterisk (*) in a field will display all possible choices for that category.

Stop! End of Procedure.

SE 17.1.2G: Entering the Range for a Report Field

Procedure

Perform ONE of the steps below to set the **Range:** for a report form field:

IF you want a report on...	THEN select...
The specified field value	The (**=**) option in the **Range:** field
The field values less than the specified field value	The (**<**) option in the **Range:** field
The field values greater than the specified field value	The (**>**) option in the **Range:** field

For example, if the **Channel:** field indicates a value of *3*, selecting the (**<**) option in the **Range:** field will generate a report for channels LESS than Channel 3.

Stop! End of Procedure.

SE 17.1.3G: What's Next Options for Generating Reports

What's Next?

Perform ONE of the following options below upon completion of the task:

Options	Reference
Click Back to retrieve another report of the same type, retaining the information of the previous form.	GT 17.1G
Click Restart to clear and initialize the form and enter new information for a report of the same type.	GT 17.1G
Click Close to exit the report form.	
Print the report displayed in the report window.	GT 17.2G
Click Close in the report window to exit the report window.	

DND GUI: Printing a Report

17.2G

Background

When to Use

Use this General Task to send a generated report to a network printer.

Some generated reports can be very wide, causing information to be lost off the right edge of the page.This procedure will adjust the report fonts, so all of the information can fit on the page.

Before You Begin

Before you begin this task, you should have the generated report (GT 17.1G) visible on your screen.

Related Information

For related information, refer to Chapter 17, Report Operations.

Instructions

Task

Complete the following steps to print a generated report:

Step	Action	Reference
1	Make sure the report window is visible on the screen. If needed, use the Tab key to bring the window to the front.	
2	Click on the underlined text ("printable version") in the text line just below the Close button. A new version of the form appears with smaller text and the DND logo on the print page.	
3	Select *File* from the window's task bar. A list of choices appears in a pull-down menu.	
4	Select the *Print Frame* choice from the pull-down menu. A Print Frame window appears with options to select.	
5	Select the *Landscape* option from the **Orientation** field.	
6	Click on the PRINT button. The report will be sent to the network printer.	
7	**Stop! End of Task.**	
	Select a What's Next option.	SE 17.1.3G

DND GUI: Generating the Performance Monitoring Error Report

17.3G

Background

When to Use

Use this General Task to generate a report of the Performance Monitoring collection failure log. This log indicates the date performance monitoring data was not received for an NPC.

Before You Begin

Before you begin this task, you should have the midnight report set both at the DACS and at the DND. There must be performance monitoring data in the DND database to generate this report.

Related Information

For related information, refer to:

- *Chapter 5, NE Provisioning*
- *Chapter 17, Report Operations.*

Instructions

Task

Complete the following steps to generate a PERFORMANCE MONITORING ERROR REPORT:

Step	Action	Reference
1	Click Reports located at the top of the DND USER INTERFACE window. The REPORTS task menu is displayed.	
2	Select **24-Hour Performance Monitoring Report...** The 24-HOUR PERFORMANCE MONITORING REPORT form will appear on the screen.	
3	Select the desired DACS from the **Site Name:** field.	
4	Select *PM Error Report* from the **Report Type:** field.	
5	Click Continue... . The **Available Formats: and Report Title:** fields appears on the form.	
6	Select the desired **Available Formats:** option. If new ones were not created, the only format available is *24-HOUR PERFORMANCE ERRORS*.	
7	Enter a desired name for the **Report Title:**. If none is entered, the DND will automatically set the title of the report to the choice selected in **Available Formats:**.	
8	Click Continue... . The **NPC**, **Date**, and **Parameter Search Information** field boxes appear on the form.	
9	(Optional) Specify/select the following on the form: ■ **NPC**, NPC Range(**NPC** and **Last NPC**), and/or **NPC Type** ■ The **Start Date:** and **End Date:** report delimiters ■ The desired **Parameter:** in which to display data.	SE 8.3.1G
10	Click Continue... . All fields on the form become read-only.	
11	Verify the information on the form to ensure you are generating the desired log report.	
12	When you have approved the information on the form, click Execute . The report will appear on the screen.	
13	**Stop! End of Task.**	

DND GUI: Creating/Modifying a 24-Hour Performance Monitoring Report Format

17.4G

Background

When to Use

Use this General Task to create or modify a report format for the 24-HOUR PERFORMANCE MONITORING REPORT form. The new/changed format appears as a selection in the Availlable Formats combo box.

Related Information

For related information, refer to *Chapter 17, Report Operations.*

Instructions

Task

Complete the following steps to create or modify a 24-HOUR PERFOMANCE MONITORING REPORT format:

Step	Action	Reference
1	Click Reports located at the top of the DND USER INTERFACE window. The REPORTS task menu is displayed.	
2	Select **Customize PM Report Formats...** The CUSTOMIZE PERFORMANCE MONITORING REPORT FORMATS form will appear on the screen.	
3	Select the desired **Report Type:**. This is the 24-Hour Performance Monitoring report type which will receive the new format.	
4	Select the desired activity from the **Action:** field: ■ To *CREATE* a new report format, goto Step 5. ■ To *MODIFY* a report format, goto Step 7.	
5	Click Continue... . The **New Report Name:** field and the **Report Columns** field box appears on the form. The **Column Name** fields and **Size** fields appear in read only. The **Column Name** fields that appear will depend on the **Report Type:** previously selected in Step 3. The numbers in the **Size** field represent default width values.	
6	Enter a name for the new format in the **New Format Name:** field. There is a limit of 8 formats that may be created for each **Report Type:**. Goto Step 9.	
7	Click Continue... . The **Available Formats:** field appears on the screen.	

Step	Action	Reference
8	Select the desired format to modify from the **Available Formats:** field. The form automatically advances to the next section of the form, and... ■ The **Report Columns** field box appears. ■ The **Column Name** fields and **Size** fields appear in read only. ■ The **Column Name** fields that appear depend on the **Report Type:** previously selected in Step 3. ■ The numbers in the **Size** field represent default width values.	
9	Select/change the fields desired in the report by entering a rank number in the **Column Order** fields corresponding to the desired field.	
10	Click Continue... . The **Report Columns** field box appears on the form, including formatting columns for only the selected fields.	
11	(Optional) Specify the following on the form: ■ Change the field names as they appear under **Column Name** by entering a new names in the **Column Heading** fields. ■ Change the field widths as they appear under **Size** by entering new values in the **New Size** fields. ■ Specify the order that the data rows appear going down the report by entering values in the **Sort Order** fields. The number of fields with a **Sort Order** selected may not exceed 8. ■ Select the desired **Sort Direction** of the fields.	
12	Click Continue... . All fields on the form become read-only. The **Report Width:** field appears, displaying the total width of the report.	
13	Verify the information on the form to ensure you are creating or modifying the desired format.	
14	When you have approved the information on the form, click Execute .	
15	**Stop! End of Task.**	

DND GUI: Deleting a 24-Hour Performance Monitoring Report Format

17.5G

Background

When to Use

Use this General Task to delete a report format for the 24-HOUR PERFORMANCE MONITORING REPORT form. The deleted format will be removed as a selection in the Availlable Formats combo box.

Before You Begin

You should have created at least one customized format (GT 17.5G).

Related Information

For related information, refer to *Chapter 16, Report Operations.*

Instructions

Task

Complete the following steps to delete a 24-HOUR PERFOMANCE MONITORING REPORT format:

Step	Action	Reference
1	Click Reports located at the top of the DND USER INTERFACE window. The REPORTS task menu is displayed.	
2	Select **Customize PM Report Formats...** The CUSTOMIZE PERFORMANCE MONITORING REPORT FORMATS form will appear on the screen.	
3	Select the desired **Report Type:**. This is the 24-Hour Performance Monitoring report type which will receive the new format.	
4	Select *DELETE* from the **Action:** field.	
5	Click Continue... . The **Available Formats:** field appears on the screen.	
6	Select the desired format to modify in from the **Available Formats:** field. The form automatically advances to the next section of the form. The **Report Width:** field and the **Report Columns** field box appear on the form in read-only.	
7	Verify the information on the form to ensure you are deleting the desired format.	
8	When you have approved the information on the form, click Execute .	
9	**Stop! End of Task.**	

DND Forms: Generating a Report

17.1U

Background

When to Use

Use this General Task to generate a report.

Related Information

For related information, refer to Chapter 17, Report Operations.

Instructions

Task Complete the following steps to generate a report.

Step	Action	Reference
1	Select REPORT OPERATIONS from the DND Forms MAIN MENU.	
2	Select a report category.	
3	If the selected category has several report formats, a pop-up window displays the list of formats. Select the format.	
4	A SEARCH CRITERIA form displays for most report forms. Enter values into these fields to find the records that match. If you leave all fields blank, all records in the database are reported.	
5	When you have entered the selection criteria, press EXECUTE and answer YES to `ARE YOU SURE?` A command response window notifies you that the `COMMAND WILL BE EXECUTED IN BACKGROUND`.	
6	Press Enter to acknowledge the command response. The REPORT OPERATIONS MENU is displayed, with the cursor at DISPLAY LAST GENERATED REPORT. Report generation is complete when the following message is displayed: `REPORT IS COMPLETED` **NOTE:** With large databases, report generation can take several minutes.	
7	**Stop! End of Task.**	
	Select a What's Next Option	SE 17.1.1U

SE 17.1.1U What's Next Option

What's Next

Perform one of the following options when the task is completed:

Options	Reference
Display or print the most recently generated report.	GT 17.2U
Select TOPMENU to return to the MAIN MENU.	
Select QUIT to return to the MAIN MENU.	

DND Forms: Displaying and Printing a Report

17.2U

Background

When to Use

Use this General Task to display or print the most recently generated report.

Related Information

For related information, refer to Chapter 17, Report Operations.

Instructions

Task

Complete the following steps to display or print the most recently generated report.

Step	Action	Reference
1	From the REPORT OPERATIONS MENU, select DISPLAY LAST GENERATED REPORT or DISPLAY ALARM QUERY. A pop-up window appears listing the output medium choices.	
2	Select SCREEN or PRINTER.	
3	If you select SCREEN, the last generated report appears on your terminal screen. Use NEXTPAGE, PREVPAGE, TOPPAGE, and LASTPAGE to page through the report or specify a page in the **Display Page** field.	
4	If you select PRINTER, the report is sent to the printer.	
5	**Stop! End of Task.**	
	Select a What's Next Option	SE 17.1.1U

DND Forms: Transferring Reports To DOS Diskette

17.3U

Background

When to Use

Use this General Task to transfer reports to a DOS diskette.

Related Information

For related information, refer to Chapter 17, Report Operations.

Instructions

Task

Complete the following steps to transfer reports to a DOS diskette.

Step	Action	Reference
1	Insert a DOS diskette in the diskette drive.	
2	From the REPORT OPERATIONS MENU, select one of these options: HISTORY LOG DISPLAY LAST GENERATED REPORT DACS COMMAND SCRIPT LOG DISPLAY ALARM QUERY A pop-up window appears listing the output medium choices.	
3	Select `REPORT TO DOS DISKETTE`.	
4	Enter the file name.	
5	Press EXECUTE.	
6	**Stop! End of Task.**	
	Select a What's Next Option	SE 17.1.1U

DND Forms: Creating a New Report Format

17.4U

Background

When to Use

Use this General Task to create a new report format.

Related Information

For related information, refer to Chapter 17, Report Operations.

Instructions

Task

Complete the following steps to create a new report format.

Step	Action	Reference
1	Select EDIT CUSTOM REPORT FORMAT from the REPORT OPERATIONS MENU. The pop-up menu REPORT FORMAT CATEGORIES is displayed	
2	Select the category for which you want to create a format. A new screen appears with mandatory fields **Action** and **Report Name** highlighted.	
3	Enter CREATE in the **Action** field.	
4	Enter a **Report Name** for the format you are creating. **NOTE:** If the sum of the site name, report format category name and report name would exceed 78 characters, which is the width of the screen, then the report format category name is truncated.	
5	Press EXECUTE and confirm. When the database has been updated, the following message is displayed: REPORT FORMAT HAS BEEN CREATED **NOTE:** If you exit at this point, you have created a default report format with database items taken in the order they appear in the database (for this category) and as many as can fit across the page (78 columns). You can modify this basic format to suit your own needs.	
6	**Stop! End of Task.**	

DND Forms: Modifying a Report Format

17.5U

Background

When to Use

Use this General Task to modify a report format.

Related Information

For related information, refer to Chapter 17, Report Operations.

Instructions

Task Complete the following steps to modify a report format.

Step	Action	Reference
1	Select EDIT CUSTOM REPORT FORMAT from the REPORT OPERATIONS MENU.	
2	Select the category for which the format was created. A new screen appears with mandatory fields **Action** and **Report Name** highlighted.	
3	Enter `MODIFY` in the **Action** field.	
4	Enter the **Report Name**. The screen flashes in the upper right corner: `SEARCHING`	
5	The lower fields on the screen become active and are filled in with values representing the current state of the format. Change the values in these fields to redesign your format.	
6	Press EXECUTE and confirm. When the database has been updated, the following message appears: `REPORT FORMAT HAS BEEN MODIFIED`	
7	**Stop! End of Task.**	

DND Forms: Renaming a Report Format

17.6U

Background

When to Use

Use this General Task to rename a report format.

Related Information

For related information, refer to Chapter 17, Report Operations.

Instructions

Task

Complete the following steps to rename a report format.

Step	Action	Reference
1	Select EDIT CUSTOM REPORT FORMAT from the REPORT OPERATIONS MENU.	
2	Select the category for which the format was created. A new screen appears with mandatory fields **Action** and **Report Name** highlighted.	
3	Enter RENAME in the **Action** field.	
4	Enter the **Report Name**.	
5	A new field appears, **New Name**. Enter the new report name.	
6	Press EXECUTE and confirm. When the database has been updated, the following message appears: REPORT FORMAT HAS BEEN RENAMED	
7	**Stop! End of Task.**	

DND Forms: Deleting a Report Format

17.7U

Background

When to Use

Use this General Task to delete a report format.

Related Information

For related information, refer to Chapter 17, Report Operations.

Instructions

Task

Complete the following steps to delete a report format.

Step	Action	Reference
1	Select EDIT CUSTOM REPORT FORMAT from the REPORT OPERATIONS MENU.	
2	Select the category for which the format was created. A new screen appears with mandatory fields **Action** and **Report Name** highlighted.	
3	Enter `DELETE` in the **Action** field	
4	Enter the **Report Name**.	
5	Press EXECUTE and confirm. When the database has been updated, the following message is displayed: `REPORT FORMAT HAS BEEN DELETED`	
6	**Stop! End of Task.**	

DND Forms: Generating an Alarm Query Report

17.8U

Background

When to Use

Use this General Task to generate an alarm query report.

Related Information

For related information, refer to Chapter 17, Report Operations.

Instructions

Task

Complete the following steps to generate an alarm query report.

Step	Action	Reference
1	Select ALARM QUERY REPORT from the REPORT OPERATIONS MENU.	
2	Enter the **Site Name** on the ALARM QUERY SEARCH CRITERIA form.	
3	Press EXECUTE and confirm. Wait for the completion message.	
4	To access the report, select DISPLAY ALARM QUERY from the REPORT OPERATIONS MENU. **NOTE:** This is the only report not accessed via DISPLAY LAST GENERATED REPORT.	
5	**Stop! End of Task.**	

Database Audit/Synchronization General Tasks

18

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DND GUI: Performing an Alarm Synchronization

18.1G

Background

When to Use

Use this General Task to synchronize the alarm state of the NPCs on the DACS and in the DND database.

Before You Begin

Before you begin this task, you must have NPCs created (GT 8.1G/GT 8.2G/ GT 8.3G) in both the DND and DACS databases.

Related Information

For related information, refer to Chapter 18, Database Audit/Synchronization.

Instructions

Task Complete the following steps to perform an alarm synchronization:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Database Audit/Synchronization...* The DATABASE AUDIT/SYNCHRONIZATION form appears on the screen.	
3	Select the desired **Site Name:** where the synchronization will take place.	
4	Select *ALARM SYNC* from the **Action:** field.	
5	Click Continue... . The **Execution Mode:** field appears on the form.	
6	In the **Execution Mode:** field, select the desired scheduling mode.	SE 8.1.4G
7	Click Continue... . All fields will appear in read-only mode.	
8	Verify the information on the form to ensure the information on the form is correct.	
9	When you have approved the information on the form, Click Execute .	
10	**Stop! End of Task.**	
	Select a What's Next option.	SE 18.1.1G

SE 18.1.1G: What's Next Options for Database Audit/Synchronization

What's Next?

Options	Reference
Click New Action to perform another action on the current DACS.	GT 18.1G - GT 18.5G
Click Report to display the DATABASE AUDIT/SYNCHRONIZATION Report Form.	GT 17.1G
Click Restart to clear and initialize the form and select an action for another DACS.	
Click Close to exit the DATABASE AUDIT/ SYNCHRONIZATION form.	

DND GUI: Performing a Database Audit

18.2G

Background

When to Use

Use this General Task to compare the local and facility databases, and log the differences in parameters between them. Subrate audits are available only if you are running the X.50 Subrate Application on a DACS in your network.

Before You Begin

Before you begin this task, you must have NPCs and circuits created (GT 8.1G/GT 8.2G/GT 8.3G/GT 10.1G/GT 10.2G/GT10.3G) in both the DND and DACS databases.

Related Information

For related information, refer to Chapter 18, Database Audit/Synchronization.

Instructions

Task Complete the following steps to perform a database audit:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING menu appears.	
2	Select *Database Audit/Synchronization...* The DATABASE AUDIT/SYNCHRONIZATION form appears on the screen.	
3	Select the desired **Site Name:** where the synchronization will take place.	
4	In the **Action:** field, select one of the following: ■ *CHANNEL AUDIT* ■ *NPC AUDIT* ■ *SUBRATE AUDIT* ■ *MMFG AUDIT*	
5	Select the appropriate option in the **Mode:** field to set the audit range. If the **Mode:** selected is *ALL FACILITY NPCS*, *ALL LOCAL NPCS*, *ALL FACILITY MMFGS*, *ALL LOCAL MMFGS*, then skip to Step 8.	
6	Perform ONE of the following: ■ If the **Mode:** selected is *RANGE OF FACILITY NPCS or RANGE OF LOCAL NPCS*, the NPC and LAST NPC boxes will appear on the form. Select the audit range by identifying the **NPC Specifier:** and **NPC:** for the **NPC** and **LAST NPC** boxes.	

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Instructions (Continued)

Task, Continued

Step	Action	Reference
6	(Continued) ■ If the **Mode:** selected is *SINGLE NPC*, the **NPC** box will appear on the form. Identify the **NPC Specifier:** and **NPC:**. ■ (Appears only when the **Action:** is *CHANNEL AUDIT*) If the **Mode:** selected is *SINGLE CHANNEL*, the **NPC** box and **Channel:** field will appear on the form. Identify the **NPC Specifier:**, **NPC:, and Channel:** number for the single channel audit. Skip to Step 9; this **Action:** cannot be scheduled. ■ If the **Mode:** selected is *RANGE OF FACILITY MMFGS or RANGE OF LOCAL MMFGS*, the MMFG and LAST MMFG boxes will appear on the form. Select the audit range by identifying the **MMFG Specifier:** and **MMFG:** for the **MMFG** and **LAST MMFG** boxes. ■ If the **Mode:** selected is *SINGLE MMFG*, the **MMFG** box will appear on the form. Identify the **MMFG Specifier:** and **MMFG:**.	
7	Click Continue... . The **Execution Mode:** field and NPC or MMFG fields appear on the form.	
8	In the **Execution Mode:** field, select the desired scheduling mode.	SE 8.1.4G
9	Click Continue... . All fields will appear in read-only mode.	
10	Verify the information on the form to ensure the information on the form is correct.	

Instructions (Continued)

Task, Continued

Step	Action	Reference
11	When you have approved the information on the form, Click Execute . If the **Action:** is *SINGLE CHANNEL AUDIT*, a separate Netscape window appears, displaying a table with the results of the audit. Otherwise, the **Action:** will complete in the background. You are notified of its completion status in the **Status Summary** field at the bottom of the network map window.	
12	**Stop! End of Task.**	
	Select a What's Next option.	SE 18.1.1G

DND GUI: Performing a Database Synchronization

18.3G

Background

When to Use

Use this General Task to compare the local and facility databases, and log the differences in parameters between them.

Before You Begin

Before you begin this task, you must have NPCs and circuits created (GT 8.1G/GT 8.2G/GT 8.3G/GT 10.1G/GT10.2G/GT 10.3G) in both the DND and DACS databases.

Related Information

For related information, refer to Chapter 18, Database Audit/Sychronization.

Instructions

Task

Complete the following steps to perform a database synchronization:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Database Audit/Synchronization...* The DATABASE AUDIT/SYNCHRONIZATION form appears on the screen.	
3	Select the desired **Site Name:** where the synchronization will take place.	
4	In the **Action:** field, select one of the following: ■ *CHANNEL SYNC.* ■ *NPC SYNC* ■ *SUBRATE SYNC* ■ *MMFG SYNC*	
5	Select the appropriate option in the **Master DB:** field to set the master database for the synchronization.	
6	Select the appropriate option in the **Mode:** field to set the sync range. If the **Mode:** selected is *ALL FACILITY NPCS*, *ALL LOCAL NPCS*, *ALL FACILITY MMFGS*, or *ALL LOCAL MMFGS*, then skip to Step 9.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
8	Perform ONE of the following: ■ If the **Mode:** selected is *RANGE OF FACILITY NPCS* or *RANGE OF LOCAL NPCS*, the NPC and LAST NPC boxes will appear on the form. Select the sync range by identifying the **NPC Specifier:** and **NPC:** for the **NPC** and **LAST NPC** boxes ■ If the **Mode:** selected is *SINGLE NPC*, the **NPC** box will appear on the form. Identify the **NPC Specifier:** and **NPC:**. ■ If the **Mode:** selected is *SINGLE CHANNEL*, the **CHANNEL** box will appear on the form. Identify the **CHANNEL**:. ■ If the **Mode:** selected is *RANGE OF FACILITY MMFGS or RANGE OF LOCAL MMFGS*, the MMFG and LAST MMFG boxes will appear on the form. Select the audit range by identifying the **MMFG Specifier:** and **MMFG:** for the **MMFG** and **LAST MMFG** boxes. ■ If the **Mode:** selected is *SINGLE MMFG*, the **MMFG** box will appear on the form. Identify the **MMFG Specifier:** and **MMFG:**.	
9	Click Continue... . The **Execution Mode:** field appears on the form.	
10	In the **Execution Mode:** field, select the desired scheduling mode.	SE 8.1.4G
11	Click Continue... . All fields will appear in read-only mode.	
12	Verify the information on the form to ensure the information on the form is correct.	

Instructions (Continued)

Task, Continued

Step	Action	Reference
13	When you have approved the information on the form, Click Execute . If the **Action:** is not *SINGLE CHANNEL SYNC*, the **Action:** will complete in the background. You are notified of its completion status in the **Status Summary** field at the bottom of the network map window.	
14	**Stop! End of Task.**	
	Select a What's Next option.	SE 18.1.1G

DND GUI: Performing an Upload

18.4G

When to Use

Use this General Task to upload the DACS NPC and channel databases into the DND database.

Before You Begin

Before you begin this task, you must have NPCs and circuits created (GT 8.1G/GT 8.2G/GT 8.3G/GT 10.1G/GT 10.2G/GT 10.3G) on the DACS. The NPCs may or may not exist previously in the DND database.

Related Information

For related information, refer to Chapter 18, Database Audit/Sychronization.

Instructions

Task Complete the following steps to perform an upload:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Database Audit/Synchronization...* The DATABASE AUDIT/SYNCHRONIZATION form appears on the screen.	
3	Select the desired **Site Name:** where the synchronization will take place.	
4	Select *UPLOAD* from the **Action:** field:.	
5	Click Continue... . The **Execution Mode:** field appears on the form.	
6	In the **Execution Mode:** field, select the desired scheduling mode.	SE 8.1.4G
7	Click Continue... . All fields will appear in read-only mode.	
8	Verify the information on the form to ensure the information on the form is correct. If it is not the correct, click Back until you reach the section of the DATABASE AUDIT/SYNCHRONIZATION form you want to edit. Click Continue... to move forward through the form.	
9	When you have approved the information on the form, Click Execute .	
10	**Stop! End of Task.**	
	Select a What's Next option.	SE 18.1.1G

DND GUI: Performing an Abort

18.5G

When to Use

Use this General Task to abort an audit or synchronization action in progress or in the job queue.

Before You Begin

Before you begin this task, you must have an active audit/synchronization action in progress or in the queue.

Related Information

For related information, refer to Chapter 18, Database Audit/Synchronization.

Instructions

Task

Complete the following steps to perform an abort:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Database Audit/Synchronization...* The DATABASE AUDIT/SYNCHRONIZATION form appears on the screen.	
3	Select the desired **Site Name:** where the synchronization will take place.	
4	Select *ABORT* from the **Action:** field:. The *ABORT* **Action:** occurs immediately; it cannot be scheduled.	
5	Click Continue... . All fields will appear in read-only mode.	
6	Verify the information on the form to ensure the information on the form is correct.	
7	When you have approved the information on the form, Click Execute .	
8	**Stop! End of Task.**	
	Select a What's Next option.	SE 18.1.1G

DND Forms: Performing an Alarm Synchronization

18.1U

Background

When to Use

Use this General Task to synchronize the alarm state of the NPCs on the DACS and in the DND database.

Before You Begin

Before you begin this task, you must have NPCs created in both the DND and DACS databases.

Related Information

For related information, refer to Chapter 18, Database Audit/Sychronization.

Instructions

Task

Complete the following steps to perform an alarm synchronization.

Step	Action	Reference
1	From the DND Forms Main Menu, select PROVISIONING. The DATABASE ADMINISTRATION menu is displayed.	
2	From the DATABASE ADMINISTRATION menu, select DATABASE AUDIT/SYNCHRONIZATION.	
3	Select the desired **Site Name** where the synchronization will take place.	
4	Select *ALARM SYNC* from the **Action:** field.	
5	Press Execute . The EXECUTION MODE pop-up menu appears.	
6	Select a scheduling mode from the EXECUTION MODE menu.	SE 18.1.1U
7	Press Execute (if the EXECUTION MODE is *SCHEDULE*). The **Action** will complete in the background. You are notified of its completion status in the **Status:** field at the top of the screen.	
8	**Stop! End of Task.**	
	Select a What's Next option.	SE 18.1.2U

SE 18.1.1U: Selecting an Execution Mode

Procedure

Select ONE of the following choices from the EXECUTION MODE pop-up menu:

IF you select...	THEN the DND will...
QUIT or NO	Jump you back to the DATABASE AUDIT/ SYNCHRONIZATION form.
IMMEDIATE or YES	Process the form and perform the Action: in the background.
SCHEDULE	The TASK SCHEDULING menu will appear. Enter the **Date:**, **Time:**, and **Number of Times:** for the task.

Stop! End of Procedure.

SE 18.1.2U: What's Next Options for Database Audit/Synchronization

What's Next?

Options	Reference
Perform another **Action** on the current DACS.	GT 18.1U - 18.4U
Cancel the audit or synchronization.	GT 18.5U
View the results of an audit, synchronization, or upload.	GT 18.6U
Press TOP MENU to return to the DND MAIN MENU.	
Press QUIT to return to the DND MAIN MENU.	

DND Forms: Performing a Database Audit

18.2U

Background

When to Use

Use this General Task to compare the local and facility databases, and log the differences in parameters between them. Subrate audits are available only if you are running the X.50 Subrate Application on a DACS in your network.

Before You Begin

Before you begin this task, you must have NPCs and circuits created in both the DND and DACS databases.

Related Information

For related information, refer to Chapter 18, Database Audit/Sychronization.

Instructions

Task

Complete the following steps to perform a database audit:

Step	Action	Reference
1	From the DND Forms Main Menu, select DATABASE ADMINISTRATION. The DATABASE ADMINISTRATION menu is displayed.	
2	From the DATABASE ADMINISTRATION menu, select DATABASE AUDIT/SYNCHRONIZATION.	
3	Select or enter the **Site Name**.	
4	In the **Action:** field, select one of the following: ■ *CHANNEL AUDIT* ■ *NPC AUDIT* ■ *SUBRATE AUDIT*.	
5	Select the appropriate option in the **Mode:** field to set the audit range. If the **Mode:** selected is *ALL FACILITY NPCS or ALL LOCAL NPCS,* then skip to Step 7.	
6	Perform ONE of the following: ■ If the **Mode:** selected is *RANGE OF FACILITY NPCS* or *RANGE OF LOCAL NPCS*, select the audit range by identifying the first NPC in the **NPC ID, Ext,** or **Hier** fields and the last NPC in the range in the **Last NPC ID, Ext,** or **Hier** fields. ■ If the **Mode:** selected is *SINGLE NPC*, identify the **NPC ID, Ext,** or **Hier** fields to audit all channels on the single NPC.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
6	(Continued) ■ (Appears only if the **Action:** is *CHANNEL AUDIT*) If the **Mode** selected is *SINGLE CHANNEL*, identify the **NPC ID, Ext or Hier and Channel:** number for the single channel audit.	
7	Press Execute . The EXECUTION MODE pop-up menu appears.	
8	Select a scheduling mode from the EXECUTION MODE menu.	SE 18.1.1U
9	Press Execute (if the EXECUTION MODE is *SCHEDULE*). If the Action **Mode:** is *SINGLE CHANNEL AUDIT*, then a table is displayed a table with the results of the audit. Otherwise, the **Action** will complete in the background. You are notified of its completion status in the **Status:** field at the top of the screen.	
10	**Stop! End of Task.**	
	Select a What's Next option.	SE 18.1.2U

DND Forms: Performing a Database Synchronization

18.3U

Background

When to Use

Use this General Task to compare the local and facility databases, and log the differences in parameters between them.

Before You Begin

Before you begin this task, you must have NPCs and circuits created in both the DND and DACS databases.

Related Information

For related information, refer to Chapter 18, Database Audit/Sychronization.

Instructions

Task

Complete the following steps to perform a database synchronization:

Step	Action	Reference
1	From the DND Forms Main Menu, select DATABASE ADMINISTRATION. The DATABASE ADMINISTRATION menu is displayed.	
2	From the DATABASE ADMINISTRATION menu, select DATABASE AUDIT/SYNCHRONIZATION.	
3	Enter the **Site Name**.	
4	In the **Action** field, select one of the following: ■ *CHANNEL SYNC* ■ *NPC SYNC* ■ *SUBRATE SYNC.*	
5	Select the appropriate option in the **Master DB** field to set the master database for the synchronization.	
6	Select the appropriate option in the **Mode** field to set the sync range. If the **Mode** selected is *ALL FACILITY NPCS or ALL LOCAL NPCS,* then skip to Step 8.	
7	Perform ONE of the following: ■ If the **Mode** selected is *RANGE OF FACILITY NPCS* or *RANGE OF LOCAL NPCS,* select the sync range by identifying the first NPC in the **NPC ID, Ext,** or **Hier** fields and the last NPC in the range in the **Last NPC ID, Ext,** or **Hier** fields. ■ If the **Mode** selected is *SINGLE NPC*, identify the **NPC ID, Ext,** or **Hier** fields to sync all channels on the single NPC. ■ (Appears only if the **Action:** is *CHANNEL SYNC*.) If the **Mode** selected is *SINGLE CHANNEL,* identify the **NPC ID, Ext,** or **Hier** and the **Channel** number for the single channel sync.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
8	Press Execute . The EXECUTION MODE pop-up menu appears.	
9	Select a scheduling mode from the EXECUTION MODE menu.	SE 18.1.1U
10	Press Execute (If the EXECUTION MODE is *SCHEDULE*). If the **Action:** is not *SINGLE CHANNEL SYNC*, The **Action:** will complete in the background. You are notified of its completion status in the **Status:** field at the top of the screen.	
11	**Stop! End of Task.**	
	Select a What's Next option.	SE 18.1.2U

DND Forms: Performing an Upload

18.4U

When to Use

Use this General Task to upload the DACS NPC and channel databases into the DND database.

Before You Begin

Before you begin this task, you must have NPCs and circuits created on the DACS. The NPCs may or may not exist previously in the DND database.

Related Information

For related information, refer to Chapter 18, Database Audit/Sychronization.

Instructions

Task

Complete the following steps to perform a scheduled upload:

Step	Action	Reference
1	From the DND Forms Main Menu, select DATABASE ADMINISTRATION. The DATABASE ADMINISTRATION menu is displayed	
2	From the DATABASE ADMINISTRATION menu, select DATABASE AUDIT/SYNCHRONIZATION.	
3	Enter the **Site Name**.	
4	In the **Action:** field, select *UPLOAD*.	
5	Press Execute . The EXECUTION MODE pop-up menu appears.	
6	Select the scheduling mode from the EXECUTION MODE menu.	SE 18.1.1U
7	(If the EXECUTION MODE is *SCHEDULE*) Press Execute . The **Action:** will complete in the background. You are notified of its completion status in the **Status:** field at the top of the screen.	
8	**Stop! End of Task.**	
	Select a What's Next option.	SE 18.1.2U

DND Forms: Performing an Abort

18.5U

When to Use

Use this General Task to cancel a scheduled or in progress audit or synchronization.

Before You Begin

Before you begin this task, you must have an audit or synchronization action scheduled or in progress.

Related Information

For related information, refer to Chapter 18, Database Audit/Sychronization.

Instructions

Task

Complete the following steps to cancel a scheduled or in progress synchronization or audit:

Step	Action	Reference
1	From the DND Forms Main Menu, select DATABASE ADMINISTRATION. The DATABASE ADMINISTRATION menu is displayed.	
2	From the DATABASE ADMINISTRATION menu, select DATABASE AUDIT/SYNCHRONIZATION.	
3	Enter the **Site Name**.	
4	In the **Action:** field, select *ABORT*.	
5	Press Execute . The **Action:** occurs immediately.	
6	**Stop! End of Task.**	
	Select a What's Next option.	SE 18.1.2U

DND Forms: Viewing the Results of an Audit or Synchronization

18.6U

Background

When to Use

Use this General Task to view the results of an audit or synchronization.

Before You Begin

When an audit/synchronization is complete, you are notified on the **Status** line at the top of the screen.

Related Information

For related information, refer to Chapter 18, Database Audit/Sychronization.

Instructions

Task

Complete the following steps to view the results of an audit or synchronization:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select REPORT OPERATIONS. The REPORT OPERATIONS menu is displayed.	
2	From the REPORT OPERATIONS menu, select AUDIT/SYNCHRONIZATION RESULTS. The AUDIT/ SYNCHRONIZATION SEARCH CRITERIA form is displayed.	
3	Enter the **Site Name** and **Action**.	
4	Press Execute . The ARE YOU SURE? pop-up menu appears. Select *YES*. The report is executed in the background. When the report is complete, the following status message displays: `Report Generation is completed.`	
5	Press Enter . The DND will return to the REPORT OPERATIONS menu.	
6	Select *DISPLAY LAST GENERATED REPORT* from the REPORT OPERATIONS menu.	
7	From the ALLOWED CHOICES menu, select *SCREEN* or *PRINTER*.	
8	If you select *SCREEN*, the last generated report appears on your terminal screen. Use NEXTPAGE, PREVPAGE, TOPPAGE, and LASTPAGE to page through the report or specify a page in the **Display Page** field. If you select *PRINTER*, the report is sent to the printer.	
9	**Stop! End of Task.**	

DACS II AX Audit/Synchronization

19

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  - Performing a DACS II AX Circuit Sync GT 19.2G
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  - Uploading DACS II AX GT 19.11G

DND GUI: Performing a DACS II AX Circuit Audit

19.1G

When to Use

Use this General Task to compare circuits on DACS II AX local and facility databases and to produce a report containing parameter value differences.

Before You Begin

Before you begin this task, be sure that:

- the node is provisioned
- communications are up
- the AX software release is 9.03 or greater.

NOTE:
Only a DND Administrator (e.g., login=*dacsadm*) may perform this procedure.

Related Information

For related information, refer to Chapter *19, DACS II AX Audit/Synchronization*.

Instructions

Task Complete the following steps to audit DACS II AX circuit information.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Database Audit/Synchronization* under DACS II AX. The DACS II AX AUDIT/SYNCHRONIZATION form appears on the screen.	
3	Select the desired **Site Name:** where the synchronization will take place.	
4	Select *CIRCUIT AUDIT* from the **Action:** field.	
5	Choose one of the following options in the **Mode**: field to set the audit range: ■ *ALL CIRCUITS* ■ *ALL CIRCUITS ON MAP* ■ *SINGLE CIRCUIT*	
6	Continue with one of the following options. ■ If you chose *ALL CIRCUITS*, proceed to Step 7 to continue. ■ If you chose *ALL CIRCUITS ON MAP*, then select a map then proceed to Step 7. ■ If you chose *SINGLE CIRCUIT*: — Use the Circuit Name Specifier to choose a Site Circuit Name or Circuit ID (name of circuit or DND). — Enter the appropriate name in the field then proceed to Step 7.	
7	Click Continue... .	
8	In the **Execution Mode:** field, select the desired scheduling mode.	SE 8.1.4.G
9	Click Continue... . All fields will appear in read-only mode if *Immediate* was selected in the Execution Mode field.	

Step	Action	Reference
10	Verify the information on the form to ensure the information on the form is correct.	
11	When you have approved the information on the form, click Execute . If the command is accepted, a message, "The command will be be executed in background" will display. The completion status will display in the Status Summary field at the bottom of the network map window.	
12	**Stop! End of Task.**	
	Select a What's Next option.	SE 19.1.1.G

SE 19.1.1G: What's Next Options for DACS II Audit Synchronization

What's Next?

Options	Reference
Click New Action to perform another action on the current site; all existing data entries are remembered in the form.	GT 19.1G - GT 19.11G
Click Report to display the DACS II AX AUDIT/SYNCHRONIZATION Report Form.	GT 17.1G
Click Restart to clear and initialize the form and select an action for another DACS II AX.	
Click Close to exit the DACS II AX DATABASE AUDIT/SYNCHRONIZATION form.	

DND GUI: Performing a DACS II AX Circuit Synchronization

19.2G

When to Use

Use this General Task to compare circuits on DACS II AX local and facility databases, produce a report containing parameter value differences, and reconcile differences between the DACS II AX and the DND.

Before You Begin

Before you begin this task, be sure that:

- the node is provisioned
- communications is up
- the AX software release is 9.03 or greater.

NOTE:
Only a DND Administrator (e.g., login=*dacsadm*) may perform this procedure.

Related Information

For related information, refer to Chapter *19, DACS II AX Audit/Synchronization.*

Instructions

Task

Complete the following steps to synchronize DACS II AX circuit information.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Database Audit/Synchronization* under DACS II AX. The DACS II AX AUDIT/SYNCHRONIZATION form displays.	
3	Select the desired **Site Name:** where the synchronization will take place.	
4	Select *CIRCUIT SYNC* from the **Action:** field.	
5	Choose the **Master DB** value, *Frame* for DACS II AX or *Local* for DND.	
6	In the **Delete Slave DB Conflicts?:** field, choose **Yes** to delete discrepancies found on the slave database or **No** to not delete conflicting information.	
7	Choose one of the following options in the **Mode**: field to set the synchronization range: ■ *ALL CIRCUITS* ■ *ALL CIRCUITS ON MAP* ■ *SINGLE CIRCUIT*	
8	Continue with one of the following options. ■ If you chose *ALL CIRCUITS*, proceed to Step 8 to continue. ■ If you chose *ALL CIRCUITS ON MAP*, then select a map then proceed to Step 9. ■ If you chose *SINGLE CIRCUIT*: — Use the Circuit Name Specifier to choose a Site Circuit Name or Circuit ID (name of circuit or DND). — Enter the appropriate name in the field then proceed to Step 9.	
9	Click Continue... .	

Step	Action	Reference
10	In the **Execution Mode:** field, select the desired scheduling mode.	SE 8.1.4.G
11	Click Continue... . All fields will appear in read-only mode if *Immediate* was selected in the Execution Mode field.	
12	Verify the information on the form to ensure that it is correct.	
13	When you have approved the information on the form, click Execute . If the command is accepted, a message, "The command will be be executed in background" will display. The completion status will display in the Status Summary field at the bottom of the network map window.	
14	**Stop! End of Task.**	
	Select a What's Next option.	SE 19.1.1.G

DND GUI: Performing a DACS II AX Device Audit

19.3G

When to Use

Use this General Task to compare device data on DACS II AX and DND databases and to produce a report containing parameter value differences.

Before You Begin

Before you begin this task, determine the devices to be audited on the specific DAX II AX.

NOTE:
Only a DND Administrator (e.g., login=*dacsadm*) may perform this procedure.

Related Information

For related information, refer to Chapter *19, DACS II AX Audit/Synchronization.*

Instructions

Task Complete the following steps to audit DACS II AX device information.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Database Audit/Synchronization* under DACS II AX. The DACS II AX AUDIT/SYNCHRONIZATION form displays.	
3	Select the desired **Site Name:** where the audit will take place.	
4	Select *DEVICE AUDIT* from the **Action:** field.	
5	Choose one of the following options in the **Mode**: field to set the audit range: ■ *ALL DEVICES* ■ *SINGLE DEVICE*	
6	Continue with one of the following. ■ If the **Mode**: selected is *ALL DEVICES*, then skip to Step 7. ■ If the **Mode**: selected is *SINGLE DEVICE*: — choose a device in the Slot Number field then proceed to Step 7.	
7	Click Continue... .	
8	In the **Execution Mode:** field, select the desired scheduling mode.	SE 8.1.4.G
9	Click Continue... . All fields will appear in read-only mode if *Immediate* was selected in the Execution Mode field.	

Step	Action	Reference
10	Verify the information on the form to ensure that it is correct. When you have approved the information on the form, Click Execute . If the command is accepted, a message, "The command will be be executed in background" will display. The completion status will display in the Status Summary field at the bottom of the network map window.	
11	**Stop! End of Task.**	
	Select a What's Next option.	SE 19.1.1.G

DND GUI: Performing a DACS II AX Device Synchronization

19.4G

When to Use

Use this General Task to compare devices on DACS II AX local and facility databases and to produce a report containing parameter value differences, and reconcile differences between the DACS II AX and the DND.

Before You Begin

Before you begin this task, determine the devices to be synchronized on the specific DACS II AX. Be sure that:

- the node is provisioned
- communications is up
- the AX software release is 9.03 or greater.

NOTE:
Only a DND Administrator (e.g., login=*dacsadm*) may perform this procedure.

Devices and their associated ports are only synchronized using the Frame as the Master, i.e., data is uploaded from the DACS II AX.

Related Information

For related information, refer to Chapter *19, DACS II AX Audit/Synchronization.*

Instructions

Task

Complete the following steps to synchronize DACS II AX device information.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Database Audit/Synchronization* under DACS II AX. The DACS II AX AUDIT/SYNCHRONIZATION form displays.	
3	Select the desired **Site Name:** where the synchronization will take place.	
4	Select *DEVICE SYNC* from the **Action:** field.	
5	Select the appropriate option in the **Mode**: field to set the synchronization range.	
6	Choose a **Master DB** value, *Frame* or *Local*.	
7	In the **Delete Slave DB Conflicts?:** field, choose **Yes** to delete discrepancies found on the slave database or **No** to not overwrite conflicting information.	
8	Continue with one of the following. ■ If the **Mode**: selected is *ALL DEVICES*, then skip to Step 8. ■ If the **Mode**: selected is *SINGLE DEVICE*: — select the device in the **Slot Number** field then proceed to Step 8.	
9	Click Continue... .	
10	In the **Execution Mode:** field, select the desired scheduling mode.	SE 8.1.4.G
11	Click Continue... . All fields will appear in read-only mode if *Immediate* was selected in the Execution Mode field.	
12	Verify the information on the form to ensure that it is correct.	

Step	Action	Reference
13	When you have approved the information on the form, Click Execute . If the command is accepted, a message, "The command will be be executed in background" will display. The completion status will display in the Status Summary field at the bottom of the network map window.	
14	**Stop! End of Task.**	
	Select a What's Next option.	SE 19.1.1.G

DND GUI: Performing a T1E1 Port Audit

19.5G

When to Use

Use this General Task to compare T1/E1 port data on DACS II AX and DND databases and to produce a report containing parameter value differences.

Before You Begin

Before you begin this task, be sure that the device has been inserted at the DACS II AX and the device information is synchronized between the DND and the DACS II AX. Also be sure that:

- the node is provisioned
- communications is up
- the AX software release is 9.03 or greater.

NOTE:
Only a DND Administrator (e.g., login=*dacsadm*) may perform this procedure.

Related Information

For related information, refer to Chapter *19, DACS II AX Audit/Synchronization.*

Instructions

Task Complete the following steps to audit DACS II AX T1/E1 port information.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Database Audit/Synchronization* under DACS II AX. The DACS II AX AUDIT/SYNCHRONIZATION form appears on the screen.	
3	Select the desired **Site Name:** where the audit will take place.	
4	Select *T1E1 PORT AUDIT* from the **Action:** field.	
5	Select the appropriate option in the **Mode**: field to set the audit range.	
6	Choose one of the following options in the **Mode**: field to set the audit range: ■ *ALL PORTS* ■ *ALL PORTS ON DEVICE* ■ *SINGLE PORT*	
7	Continue with one of the following options. ■ If you chose *ALL PORTS*, proceed to Step 8 to continue. ■ If you chose *ALL PORTS ON DEVICE*, then select a map then proceed to Step 8. ■ If you chose *SINGLE PORT*: — Choose a Port Specifier (ID or Slot/Port) then enter the appropriate value.) — Enter the appropriate name in the field then proceed to Step 8.	
8	Click Continue... .	
9	In the **Execution Mode:** field, select the desired scheduling mode.	SE 8.1.4.G

Step	Action	Reference
10	Click Continue... . All fields will appear in read-only mode if *Immediate* was selected in the Execution Mode field.	
11	Verify the information on the form to ensure that it is correct.	
12	When you have approved the information on the form, Click Execute . If the command is accepted, a message, "The command will be be executed in background" will display. The completion status will display in the Status Summary field at the bottom of the network map window.	
13	**Stop! End of Task.**	
	Select a What's Next option.	SE 19.1.1.G

DND GUI: Performing a T1E1 Port Synchronization

19.6G

When to Use

Use this General Task to compare T1/E1 ports on DACS II AX local and facility databases, to produce a report containing parameter value differences, and to reconcile the differences by changing the slave database.

Before You Begin

Before you begin this task, be sure that the device is inserted at the DACS II AX and the device information is synchronized. Also be sure that:

- the node is provisioned
- communications is up
- the AX software release is 9.03 or greater

NOTE:
Only a DND Administrator (e.g., login=*dacsadm*) may perform this procedure.

Related Information

For related information, refer to Chapter *19, DACS II AX Audit/Synchronization.*

Instructions

Task Complete the following steps to synchronize DACS II AX port information.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Database Audit/Synchronization* under DACS II AX. The DACS II AX AUDIT/SYNCHRONIZATION form appears on the screen.	
3	Select the desired **Site Name:** where the synchronization will take place.	
4	Select *T1E1 PORT SYNC* from the **Action:** field.	
5	Choose the **Master DB** value, *Frame* or *Local*.	
6	In the **Delete Slave DB Conflicts?:** field, choose **Yes** to delete discrepancies found on the slave database or **No** to not overwrite conflicting information.	
7	Choose one of the following options in the **Mode**: field to set the audit range: ■ *ALL PORTS* ■ *ALL PORTS ON DEVICE* ■ *SINGLE PORT*	
8	Continue with one of the following options. ■ If you chose *ALL PORTS*, proceed to Step 8 to continue. ■ If you chose *ALL PORTS ON DEVICE*, then select a map then proceed to Step 8. ■ If you chose *SINGLE PORT*: — Choose a Port Specifier (ID or Slot/Port) then enter the appropriate value.) — Enter the appropriate name in the field then proceed to Step 8.	
9	Click Continue... .	
10	In the **Execution Mode:** field, select the desired scheduling mode.	SE 8.1.4.G

Step	Action	Reference
11	Click Continue... . All fields will appear in read-only mode if *Immediate* was selected in the Execution Mode field.	
12	Verify the information on the form to ensure that it is correct.	
13	When you have approved the information on the form, Click Execute . If the command is accepted, a message, "The command will be be executed in background" will display. The completion status will display in the Status Summary field at the bottom of the network map window.	
14	**Stop! End of Task.**	
	Select a What's Next option.	SE 19.1.1.G

DND GUI: Performing a T3 Port Audit

19.7G

When to Use

Use this General Task to compare T3 port data on DACS II AX and DND databases, to produce a report containing parameter value differences, and to reconcile the differences by changing the slave database.

Before You Begin

Before you begin this task, be sure that the device has been inserted at the DACS II AX and the device information is synchronized between the DND and the DACS II AX. Also be sure that:

- the node is provisioned
- communications is up
- the AX software release is 9.03 or greater
- the device information between the AX and DND is synchronized.

NOTE:
Only a DND Administrator (e.g., login=*dacsadm*) may perform this procedure.

Related Information

For related information, refer to Chapter *19, DACS II AX Audit/Synchronization.*

Instructions

Task Complete the following steps to audit DACS II AX T3 port information.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Database Audit/Synchronization* under DACS II AX. The DACS II AX AUDIT/SYNCHRONIZATION form appears on the screen.	
3	Select the desired **Site Name:** where the audit will take place.	
4	Select *T3 PORT AUDIT* from the **Action:** field.	
5	Select the appropriate option in the **Mode**: field to set the audit range.	
6	Choose one of the following options in the **Mode**: field to set the audit range: ■ *ALL PORTS* ■ *ALL PORTS ON DEVICE* ■ *SINGLE PORT*	
7	Continue with one of the following options. ■ If you chose *ALL PORTS*, proceed to Step 8 to continue. ■ If you chose *ALL PORTS ON DEVICE*, then select a map then proceed to Step 8. ■ If you chose *SINGLE PORT*: — Choose a Port Specifier (ID or Slot/Port) then enter the appropriate value.) — Enter the appropriate name in the field then proceed to Step 8.	
8	Click Continue... .	
9	In the **Execution Mode:** field, select the desired scheduling mode.	SE 8.1.4.G

Step	Action	Reference
10	Click Continue... . All fields will appear in read-only mode if *Immediate* was selected in the Execution Mode field.	
11	Verify the information on the form to ensure that it is correct.	
12	When you have approved the information on the form, Click Execute . If the command is accepted, a message, "The command will be be executed in background" will display. The completion status will display in the Status Summary field at the bottom of the network map window.	
13	**Stop! End of Task.**	
	Select a What's Next option.	SE 19.1.1.G

DND GUI: Performing a T3 Port Synchronization

19.8G

When to Use

Use this General Task to compare T3 ports on DACS II AX local and facility databases, to produce a report containing parameter value differences, and to reconcile the differences by changing the slave database.

Before You Begin

Before you begin this task, be sure that the device is inserted at the DACS II AX and the device information is synchronized. Also be sure that:

- the node is provisioned
- communications is up
- the AX software release is 9.03 or greater
- the device information between the DACS and DND is synchronized.

NOTE:
Only a DND Administrator (e.g., login=*dacsadm*) may perform this procedure.

Related Information

For related information, refer to Chapter *19, DACS II AX Audit/Synchronization.*

Instructions

Task Complete the following steps to synchronize DACS II AX port information.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Database Audit/Synchronization* under DACS II AX. The DACS II AX AUDIT/SYNCHRONIZATION form appears on the screen.	
3	Select the desired **Site Name:** where the synchronization will take place.	
4	Select *T3 PORT SYNC* from the **Action:** field.	
5	Choose the **Master DB** value, *Frame* or *Local*.	
6	In the **Delete Slave DB Conflicts?:** field, choose **Yes** to delete discrepancies found on the slave database or **No** to not overwrite conflicting information.	
7	Choose one of the following options in the **Mode**: field to set the audit range: ■ *ALL PORTS* ■ *ALL PORTS ON DEVICE* ■ *SINGLE PORT*	
8	Continue with one of the following options. ■ If you chose *ALL PORTS*, proceed to Step 8 to continue. ■ If you chose *ALL PORTS ON DEVICE*, then select a map then proceed to Step 8. ■ If you chose *SINGLE PORT*: — Choose a Port Specifier (ID or Slot/Port) then enter the appropriate value.) — Enter the appropriate name in the field then proceed to Step 8.	
9	Click Continue... .	
10	In the **Execution Mode:** field, select the desired scheduling mode.	SE 8.1.4.G

Step	Action	Reference
11	Click Continue... . All fields will appear in read-only mode if *Immediate* was selected in the Execution Mode field.	
12	Verify the information on the form to ensure that it is correct.	
13	When you have approved the information on the form, Click Execute . If the command is accepted, a message, "The command will be be executed in background" will display. The completion status will display in the Status Summary field at the bottom of the network map window.	
14	**Stop! End of Task.**	

DND GUI: Performing a DAX II AX Upload

19.9G

When to Use

Use this General Task to upload DACS II AX circuit, device, T1/E1 and T3 port data into the DND database.

Before You Begin

Before you begin this task, be sure that circuits, devices, and T1/E1 or T3 ports have been created on the DACS II AX database and that ll cards are properly seated and provisioned.

NOTE:
Only a DND Administrator (e.g., login=*dacsadm*) may perform this procedure.

Related Information

For related information, refer to Chapter *19, DACS II AX Audit/Synchronization.*

Instructions

Task

Complete the following steps to perform an upload:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Database Audit/Synchronization* under DACS II AX. The DACS II AX AUDIT/SYNCHRONIZATION form appears on the screen.	
3	Select the desired **Site Name:** where the upload will take place.	
4	Select *UPLOAD* from the **Action:** field.	
5	In the **Delete Slave DB Conflicts?:** field, choose **Yes** to delete discrepancies found on the slave database or **No** to not overwrite conflicting information.	
6	Click Continue... . All fields will appear in read-only mode.	
7	Verify the information on the form to ensure that it is correct.	
8	When you have approved the information on the form, Click Execute .	
9	**Stop! End of Task.**	
	Select a What's Next option.	SE 19.1.1.G

DND GUI: Performing a DACS II AX Abort

19.10G

When to Use

Use this General Task to abort an audit or synchronization action in progress or in the job queue.

Before You Begin

Before you begin this task, you must have an active audit/synchronization action in progress or in the queue.

Related Information

For related information, refer to Chapter *19, DACS II AX Audit/Synchronization.*

Instructions

Task

Complete the following steps to abort an audit or synchronization action:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Database Audit/Synchronization* under DACS II AX. The DACS II AX AUDIT/SYNCHRONIZATION form appears on the screen.	
3	Select the desired **Site Name:** where the requested action will take place.	
4	Select *ABORT* from the **Action:** field. The *ABORT* **Action:** occurs immediately; it cannot be scheduled.	
5	Click Continue... . All fields will appear in read-only mode.	
6	Verify the information on the form to ensure that it is correct.	
7	When you have approved the information on the form, Click Execute .	
8	**Stop! End of Task.**	
	Select a What's Next option.	SE 19.1.1.G

DND GUI: Uploading DAX II AX Circuit Data

19.11G

When to Use

Use this General Task to upload DACS II AX circuit data into a clean local database.

Before You Begin

Before you begin this task, be sure that the device is inserted at the DACS II AX and the device information is synchronized. Also be sure that:

- the node is provisioned
- communications is up
- the AX software release is 9.03 or greater

NOTE:
Only a DND Administrator (e.g., login=*dacsadm*) may perform this procedure.

Related Information

For related information, refer to Chapter *19, DACS II AX Audit/Synchronization.*

Instructions

Task

Complete the following steps to perform an upload of DACS II AX Circuit data.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Database Audit/Synchronization* under DACS II AX. The DACS II AX AUDIT/SYNCHRONIZATION form appears on the screen.	
3	Select the desired **Site Name:** where the upload will take place.	
4	Select *LOAD AX CIRCUITS* from the **Action:** field.	
5	Select *Active Map* from the **Map:** field.	
6	Verify the information on the form to ensure that it is correct.	
7	When you have approved the information on the form, Click Execute .	
8	When you have approved the information on the form, Click Execute . If the command is accepted, a message, "Upload NE Circuit Data is completed for site..." will display.	
9	Check Report information by selecting Circuit or Channel Report for the DACS II AX from the Report Menu and select 'map 0'.	
10	**Stop! End of Task.**	
	Select a What's Next option.	SE 19.1.1.G

Reconfiguration Plans General Tasks

20

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DND Forms: Using Reconfiguration Plans

20.1U

Background

When to Use

Use this General Task to perform all the steps needed to create and execute a reconfiguration plan.

Before You Begin

Before you begin this task, you must have at least one NPC on a DACS in your DND network which has been created (GT 8.1U).

Related Information

For related information, refer to Chapter 20, Reconfiguration Plans.

Instructions

Task

Complete the following steps to produce and execute a reconfiguration plan:

Step	Action	Reference
1	Create a reconfiguration plan.	SE 20.1.1U
2	Insert items into reconfiguration plan from the following list: Activate and deactivate circuits. Create new circuits. Altroute circuits.	 SE 20.1.2U SE 20.1.3U SE 20.1.4U
3	Remove items from reconfiguration plan, if needed.	SE 20.1.5U
4	Check the reconfiguration plan.	SE 20.1.6U
5	Display the RECONFIGURATION PLAN RESULTS report to list plan conflicts.	SE 20.1.7U
6	Resolve conflicts in the reconfiguration plan.	SE 20.1.8U
7	Repeat Steps 5 through 7 until all conflicts are resolved.	
8	Execute reconfiguration plan.	SE 20.1.9U
9	Display the RECONFIGURATION PLAN RESULTS to determine if there were any execution conflicts. If results are acceptable, go to Step 11.	SE 20.1.7U
10	If results are unacceptable, undo the actions of the reconfiguration plan by executing an RP Action of `IDLE`.	SE 20.1.10U
11	**Stop! End of Task.**	

SE 20.1.1U: Creating a Reconfiguration Plan

Task

Complete the following steps to create a reconfiguration plan:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select RECONFIGURATION PLAN.	
2	Enter the **Site Name**.	
3	Enter *CREATE* in the **RP Action** field.	
4	Enter a name for the reconfiguration plan in the **RP ID** field.	
5	Press Execute and confirm.	
6	**Stop! End of Task.**	

SE 20.1.2U: Adding Activations and Deactivations to a Reconfiguration Plan

Task

Complete the following steps to insert items into a reconfiguration plan for activating and deactivating circuits:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select RECONFIGURATION PLAN.	
2	Enter the **Site Name**.	
3	Enter *INSERT* in the **RP Action** field.	
4	Enter the **RP ID**.	
5	Specify the sequence number in the **Sequence** field.	
6	Enter the Circuit ID in the **Ckt ID** field.	
7	Select the appropriate **Action**: *ACTIVATE* or *DEACTIVATE*.	
8	Press Execute and confirm. The Sequence automatically increments by one. In addition, a completion message displays.	
9	Repeat Steps 6 through 8 for all circuits to be activated or deactivated.	
10	**Stop! End of Task.**	

SE 20.1.3U: Adding New Circuits in a Reconfiguration Plan

Task

Complete the following steps to insert a new **Ckt ID** into the DND database:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select RECONFIGURATION PLAN.	
2	Enter the **Site Name**.	
3	Enter *INSERT* in the **RP Action** field.	
4	Enter the **RP ID**.	
5	Specify the sequence number in the **Sequence** field.	
6	Enter the new Circuit ID in the **Ckt ID** field. A pop-up menu displays: *NEW CKT! PROVISION NOW?*	
7	Select *YES*. The CIRCUIT PROVISIONING form displays. The **Site Name** will automatically be filled in and the **Action** will be *PEND*.	
8	Enter the **Ckt ID** and fill in the rest of the form.	GT 9.1U - GT 9.4U
9	Press Execute and select `IMMEDIATE`. The **Ckt Status** field changes from `NULL` to `PENDING`. In addition, the command completed successfully message is displayed.	
10	Press QUIT. The RECONFIGURATION PLAN PROVISIONING form redisplays.	
11	Select `ACTIVATE` in the **Action** field.	
12	Press Execute and confirm. The Sequence automatically increments by one. In addition, a completion message displays.	
13	**Stop! End of Task.**	

SE 20.1.4U: Adding an Altroute to a Reconfiguration Plan

Task

Complete the following steps to insert an item to altroute a circuit:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select RECONFIGURATION PLAN.	
2	Enter the **Site Name**.	
3	Enter *INSERT* in the **RP Action** field.	
4	Enter the **RP ID**.	
5	Specify the sequence number in the **Sequence** field.	
6	Enter the Circuit ID in the **Ckt ID** field.	
7	Select *ALTROUTE* in the **Action** field.	
8	Specify the Altroute From NPC and channel and the To NPC and channel.	
9	Press Execute and confirm. If any circuits will be preempted, their data appears in the Preempted fields successively. DND prompts you to approve each one: `OK TO PREEMPT CIRCUIT?`	
10	Select *YES* to preempt the circuit. The RECONFIGURATION PLAN PROVISIONING form redisplays.	
11	**Stop! End of Task.**	

SE 20.1.5U: Removing an Item from a Reconfiguration Plan

Task

Complete the following steps to remove items from a reconfiguration plan:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select RECONFIGURATION PLAN.	
2	Enter the **Site Name**.	
3	Enter *REMOVE* in the **RP Action** field.	
4	Enter the **RP ID**.	
5	Specify the sequence number in the **Sequence** field. The information for the item displays.	
6	Press Execute and confirm. The information on the form reverts to the previous item, if any.	
7	**Stop! End of Task.**	

SE 20.1.6U: Checking a Reconfiguration Plan

Task

Complete the following steps to check to see if there are inconsistencies between the DND database and the reconfiguration plan:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select RECONFIGURATION PLAN.	
2	Enter the **Site Name**.	
3	Enter *CHECK* in the **RP Action** field.	
4	Enter the **RP ID**.	
5	Press Execute and confirm. You are notified that the plan will be executed in the background and are required to confirm. A message displays on the DND status line stating the number of items attempted and the number successful.	
6	Display the RECONFIGURATION PLAN RESULTS.	SE 20.1.7

SE 20.1.7U: Displaying the RECONFIGURATION PLAN RESULTS Report

Task

Complete the following steps to generate the RECONFIGURATION PLAN RESULTS report:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select REPORT OPERATIONS, then select RECONFIGURATION SUB-MENU.	
2	Select RECONFIGURATION PLAN RESULTS.	
3	Enter the **Site Name**.	
4	Choose a sorting order for the report. You can sort the report by circuit priority (CP SORTED) or by sequence number (SEQUENCE SORTED).	
5	On the RECONFIGURATION PLAN RESULTS SEARCH CRITERIA form, enter the **Site Name** and **Reconfiguration ID**.	
6	Press Execute and confirm. The message "`report generation is completed`" appears on the DND Status line and the REPORT OPERATIONS menu displays.	
7	Select DISPLAY LAST GENERATED REPORT. For output choices, choose either SCREEN or PRINTER.	
8	Review the correctness of the plan's content.	
9	**Stop! End of Task.**	

SE 20.1.8U: Resolving Conflicts in a Reconfiguration Plan - Example

Task

You resolve conflicts in a reconfiguration plan by inserting, removing, and changing operations.

Sample Results

In this example, these conflicts were found as a result of checking the plan:

Seq. no. 1: Circuit MM07 is already ACTIVE
Seq. no. 2: Circuit MM03 is already ACTIVE
Seq. no. 3: Circuit MM06 is already DEACTIVATED

Example

In this example, the conflicts found by checking the plan are resolved by deactivating an existing circuit, then changing the plan to remove other conflicts.:

Step	Action	Reference
1	In the CIRCUIT PROVISIONING form, enter **Site Name**, an **Action** of *DEACTIVATE*, and **Ckt ID** *MM07*.	
2	Press EXECUTE and confirm.	
3	Press QUIT. Return to the PROVISIONING menu.	
4	Select RECONFIGURATION PLAN.	
5	Enter the following data: — **Site Name**: *DACS01* — **RP Action**: *CHANGE* — **RP ID**: *testplan* — **Sequence**: *3* — **Ckt ID**: *MM06* — **Action**: *ACTIVATE*.	
6	Press EXECUTE and confirm.	

Step	Action	Reference
7	Enter the following data: — **RP Action**: *CHANGE* — **Ckt ID**: *MM03* — **Action**: *DEACTIVATE* — **Sequence**: *5*	
8	Press Execute and confirm.	
9	Recheck the plan and make sure there are no execution conflicts.	SE 20.1.6U and SE 20.1.7U
10	**Stop! End of Task.**	

SE 20.1.9U: Executing a Reconfiguration Plan

Task

Complete the following steps to execute a reconfiguration plan:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select RECONFIGURATION PLAN.	
2	Enter the **Site Name**.	
3	Enter *EXECUTE* in the **RP Action** field.	
4	Enter the **RP ID**.	
5	Press Execute and confirm. The entire plan is now executed and the DND sends the appropriate commands to the specified DACS.	
6	Display the RECONFIGURATION PLAN RESULTS report.	SE 20.1.7U
7	**Stop! End of Task.**	

SE 20.1.10U: Undoing Actions in a Reconfiguration Plan

Task Complete the following steps to revert circuits to their previous state:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select RECONFIGURATION PLAN.	
2	Enter the **Site Name**.	
3	Enter *IDLE* in the **RP Action** field.	
4	Enter the **RP ID**.	
5	Press Execute and confirm. The actions in the entire plan are reversed, so that each circuit status is changed back to its original state before the plan was executed.	
6	Display the RECONFIGURATION PLAN RESULTS to determine if there were any execution conflicts.	SE 20.1.7U
7	**Stop! End of Task.**	

DND Forms: Using Automatic Reconfiguration Plans

20.2U

Background

When to Use

Use this General Task to perform all the steps needed to create and execute an automatic reconfiguration plan.

Before You Begin

Before you begin this task, you must have at least one NPC on a DACS in your DND network which has been created (GT 8.1U) and you must have at least one reconfiguration plan (GT 20.1U).

Related Information

For related information, refer to Chapter 20, Reconfiguration Plans.

Instructions

Task

Complete the following steps to produce and execute an automatic reconfiguration plan:

Step	Action	Reference
1	Select PROVISIONING from the MAIN MENU. The PROVISIONING menu appears.	
2	Select AUTOMATIC RECONFIGURATION PLAN from the PROVISIONING menu.	
3	Create an automatic reconfiguration plan.	SE 20.2.1U
4	Insert items into the automatic reconfiguration plan. There are two types of items that can be inserted into an automatic reconfiguration plan: ■ Reconfiguration plans. ■ NPC IDs.	 SE 20.2.2U
5	Check the automatic reconfiguration plan.	SE 20.2.3U
6	Display the AUTOMATIC RECONFIGURATION PLAN RESULTS report to list plan conflicts.	SE 20.2.4U
7	Resolve conflicts in the automatic reconfiguration plan.	SE 20.2.5U
8	Repeat steps 5 through 7 until all conflicts are resolved.	
9	Execute automatic reconfiguration plan.	SE 20.2.6U
10	Display the AUTOMATIC RECONFIGURATION PLAN RESULTS to determine if there were any execution conflicts. If results are acceptable, go to step 12.	SE 20.2.4U
11	If results are unacceptable, undo the actions of the reconfiguration plan by executing an **ARP Action** of `IDLE`.	SE 20.2.7U
12	**Stop! End of Task.**	

SE 20.2.1U: Creating an Automatic Reconfiguration Plan

Task

Complete the following steps to create a reconfiguration plan:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select AUTOMATIC RECONFIGURATION PLAN.	
2	Enter the **Site Name**.	
3	Enter *CREATE* in the **ARP Action** field.	
4	Enter a name for the plan in the **ARP ID** field.	
5	Press Execute and confirm.	
6	**Stop! End of Task.**	

SE 20.2.2U: Adding Items to an Automatic Reconfiguration Plan

Task

Complete the following steps to insert items into an automatic reconfiguration plan:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select AUTOMATIC RECONFIGURATION PLAN.	
2	Enter *INSERT* in the **ARP Action** field.	
3	Enter the **ARP ID**.	
4	Specify the **List Type**: *RP* or *ALARM*. The next sequence number is automatically displayed.	
5	If you specified *RP* for **List Type**, enter the **Site Name** and the **RP ID**.Press Execute and select IMMEDIATE. A completion message is displayed.	
6	If you specified *ALARM* for **List Type**, enter the **Site Name** and the **NPC ID**. Press Execute and select IMMEDIATE. A completion message is displayed.	
7	**Stop! End of Task.**	

SE 20.2.3U: Checking an Automatic Reconfiguration Plan

Task

Complete the following steps to check to see if there are inconsistencies between the DND database and the automatic reconfiguration plan:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select AUTOMATIC RECONFIGURATION PLAN.	
2	Enter *CHECK* in the **ARP Action** field.	
3	Enter the **ARP ID**.	
4	Press Execute and confirm. A message displays on the DND status line stating the number of items attempted and the number successful.	
5	Display the AUTOMATIC RECONFIGURATION PLAN RESULTS.	SE 20.2.4U
6	**Stop! End of Task.**	

SE 20.2.4U: Displaying the AUTOMATIC RECONFIGURATION PLAN RESULTS Report

Task

Complete the following steps to generate the AUTOMATIC RECONFIGURATION PLAN RESULTS report:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select REPORT OPERATIONS, then select AUTOMATIC RECONFIGURATION PLAN RESULTS.	
2	Choose a sorting order for the report. You can sort the report by RP ID (RP SORTED) or by sequence number (SEQUENCE SORTED).	
3	On the AUTOMATIC RECONFIGURATION PLAN RESULTS SEARCH CRITERIA form, enter the **ARP ID**.	
4	Press Execute and confirm. The message "`report generation is completed`" appears on the DND Status line and the REPORT OPERATIONS menu displays.	
5	Select DISPLAY LAST GENERATED REPORT. For output choices, choose either SCREEN or PRINTER.	
6	Review the correctness of the plan's content.	
7	**Stop! End of Task.**	

SE 20.2.5U: Resolving Conflicts in an Automatic Reconfiguration Plan

Task

Complete the following steps to resolve conflicts in an automatic reconfiguration plan:

Step	Action	Reference
1	To remove a conflict in an existing NPC, use the NPC PROVISIONING form to modify the NPC.	
2	To make a change in the automatic reconfiguration plan, from the AUTOMATIC RECONFIGURATION PLAN form, enter *CHANGE* in the **ARP Action** field.	
3	Enter the **ARP ID**.	
4	Enter the **Sequence** number that identifies the RP ID or NPC entry to be changed.	
5	Change the **NPC ID** or the **RP ID**.	
6	Press Execute and confirm.	
7	Repeat Steps 11 through 13 until all changes are made.	
8	**Stop! End of Task.**	

SE 20.2.6U: Executing an Automatic Reconfiguration Plan

Task

Complete the following steps to execute an automatic reconfiguration plan:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select AUTOMATIC RECONFIGURATION PLAN.	
2	Enter *EXECUTE* in the **ARP Action** field.	
3	Enter the **ARP ID**.	
4	Press Execute and confirm. The entire plan is now executed and the DND sends the appropriate commands to the specified DACS.	
5	Display the AUTOMATIC RECONFIGURATION PLAN RESULTS report.	SE 20.2.4U
6	**Stop! End of Task.**	

SE 20.2.7U: Undoing Actions in an Automatic Reconfiguration Plan

Task

Complete the following steps to revert circuits to their previous state:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select AUTOMATIC RECONFIGURATION PLAN.	
2	Enter *IDLE* in the **ARP Action** field.	
3	Enter the **ARP ID**.	
4	Press Execute and confirm. The actions in the entire plan are reversed, so that each circuit status is changed back to its original state before the plan was executed.	
5	Display the AUTOMATIC RECONFIGURATION PLAN RESULTS to determine if there were any execution conflicts.	SE 20.2.4U
6	**Stop! End of Task.**	

DND Forms: Using NPC ROLL

20.3U

Background

When to Use

Use this General Task to switch circuit connections from one facility NPC to another.

Related Information

For related information, refer to Chapter 20, Reconfiguration Plans.

Instructions

Task

Complete the following steps to transfer circuit connections from one NPC to another.

Step	Action	Reference
1	Query the NPCs. Verify that: ■ the NPCs are present on the DACS and in the DND database ■ the **Roll To NPC** is in-service (IS) ■ no channels in the **Current NPC** are assigned to a subrate or BCON circuit ■ the NPCs are not under test ■ the **Roll To NPC** does not have channels that are assigned to active, altrouted, preempted, or derouted circuits.	GT 8.8U
2	From the DND Forms MAIN MENU, select PROVISIONING, then select NPC ROLL.	
3	Enter the **Site Name**, **Current NPC ID**, and **Roll To NPC**.	
4	Press Execute and confirm. This task executes in the background only. The DND Status line displays an `IN PROGRESS` message. All references to the current NPC are replaced with the **Roll To NPC** data. When the command completes, a completion message displayed on the DND Status line.	
5	To see the results of the NPC roll, generate the NPC ROLL Report and display it.	GT 17.1U and GT 17.2U
6	**Stop! End of Task.**	

Test Ports and Test Access General Tasks

21

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DND GUI: Performing Circuit Test Access in Monitor Mode

21.1G

Background

When to Use

Use this General Task to place a circuit in test access in the *MONITOR* mode.

Before You Begin

Before you begin this task, make sure you have the following:

- A circuit established in the DND network to use to place in test access.
- An available pair of channels on an NPC or NPCs which are In-service. Performing an NPC or Channel report may help (GT *17.1G*). The DND will use these channels for the test group.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access.*

Instructions

Task

Complete the following steps to place a circuit in the *MONITOR* mode:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Test Access...* The TEST ACCESS form will appear on the screen.	
3	Select the **Site Name:** where the circuit resides.	
4	Select *MONITOR* from the **Action:** field.	
5	Click Continue... . The **Test Specifier:** field will appear on the form.	
6	Identify the **Test Specifier:**. If you are changing an existing test access from *SPLIT* to *MONITOR* mode, skip to *Step 18*.	SE 21.1.1G
7	Click Continue... . The following will appear on the form: ■ The **TEST OBJECT** fields ■ The **OBJECT UNDER TEST** fields in read-only mode ■ The **Object Type:** field indicating *TG* in read-only mode (only test groups are used in the DND system) ■ The **Initial Test State:** field indicating the circuit's test state (*IDLE* for a new test access connection) ■ The **Trunk Conditioning** and **Insertion Word** fields	
8	(Optional) Enter values into the **Trunk Conditioning:** and **Insertion Word:** fields for the circuit.	
9	Identify the **NPC Specifier:** and **NPC:** for the FROM and TO sides of the test group in the **TEST OBJECT** field box.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
10	Click Continue... . The **FROM Channel:** and **TO Channel:** fields appear on the form. The **Bandwidth:** field also appears, automatically filled in with the appropriate bandwidth value according to the **Bandwidth:** of the **OBJECT UNDER TEST**.	
11	Enter a channel number for the **FROM Channel:** and **TO Channel:** fields for the **TEST OBJECT**. **NOTE:** Channels for the TEST OBJECT will always be *Contiguous*, even if you are testing a *Random* circuit.	
12	Click Continue... . The **Control Options:** field appears on the form.	
13	Select the Reconcile **Mode:**.	SE 8.1.3G
14	Click Continue... . All fields appear in read-only mode.	
15	Verify the information on the form to ensure you have entered the test access information correctly.	
16	When you have approved the information on the form, Click Execute . Notice the following results when the action is performed successfully: ■ The DND generates a test group number in the **Number:** field. ■ The **New Test State:** field appears indicating the *MONITOR*	
17	**Stop! End of Task.**	
	Select a What's Next option.	SE 21.1.2G

SE 21.1.1G: Selecting the Test Specifier

Procedure

Perform the following steps to select the correct **Test Specifier:** for the **TEST OBJECT**:

IF you are performing...	THEN select...
A new Test Access connection	The **Circuit ID:** option and enter the circuit name in the blank field below it.
A change on an existing Test Access connection from Split to Monitor	Select ONE of the following: ■ The **Circuit ID:** option and enter the circuit name in the blank field below it ■ The **TG Number:** option and enter the test group number in the blank field below it

Stop! End of Procedure.

SE 21.1.2G: What's Next Options for Test Access

What's Next?

Perform ONE of the following options below upon completion of the task:

Options	Reference
Click New Action to perform another action on the current circuit.	GT 21.1G - GT 21.7G
Click Restart to clear and initialize the form and select an action for another circuit.	
Click Close to exit the TEST ACCESS form.	

DND GUI: Performing an Unmapped Test Access in Monitor Mode

21.2G

Background

When to Use

Use this General Task to place unmapped channels in test access in the *MONITOR* mode.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access.*

Instructions

Task

Complete the following steps to place a circuit in the *MONITOR* mode:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Test Access...* The TEST ACCESS form will appear on the screen.	
3	Select the **Site Name:** where the circuit resides.	
4	Select *MONITOR* from the **Action:** field.	
5	Click Continue... . The **Test Specifier:** field will appear on the form.	
6	Do not identify the **Test Specifier:**. Leave the field empty.	
7	Click Continue... . The following will appear on the form: ■ The **TEST OBJECT** fields ■ The **OBJECT UNDER TEST TO NPC** fields (no **FROM NPC** fields will appear for unmapped channels) ■ The **Object Type:** field indicating *TG* in read-only mode (only test groups are used in the DND system) ■ The **Initial Test State:** field indicating the circuit's test state (*IDLE* for a new test access connection) ■ The **Trunk Conditioning** and **Insertion Word** fields	
8	(Mandatory for Unmapped Test Access) Enter values into the **Trunk Conditioning:** and **Insertion Word:** fields for the circuit.	
9	Identify the **NPC Specifier:** and **NPC:** for the FROM and TO side of the **TEST OBJECT** and the TO side of the **OBJECT UNDER TEST**.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
10	Click Continue... . The following appears on the form: ■ The **Bandwidth:**, **FROM Channel:**, and **TO Channel:** fields for the **TEST OBJECT** ■ The **TO Channel:** for the **OBJECT UNDER TEST**	
11	Select the **Bandwidth:** for the **TEST OBJECT**.	
12	Enter a channel number for: ■ The **FROM Channel:** and **TO Channel:** fields for the **TEST OBJECT** ■ **TO Channel:** for the **OBJECT UNDER TEST** **NOTE:** Channels for the TEST OBJECT and OBJECT UNDER TEST will always be *Contiguous* for Unmapped Test Access.	
13	Click Continue... . The **Control Options:** field appears on the form.	
14	Select the Reconcile **Mode:**.	SE 8.1.3G
15	Click Continue... . All fields appear in read-only mode.	
16	Verify the information on the form to ensure you have entered the test access information correctly.	
17	When you have approved the information on the form, Click Execute . Notice the following results when the action is performed successfully: ■ The DND generates a test group number in the **Number:** field. ■ The **New Test State:** field appears indicating the *MONITOR*.	
18	**Stop! End of Task.**	
	Select a What's Next option.	SE 21.1.2G

DND GUI: Performing Test Access in Split Mode

21.3G

Background

When to Use

Use this General Task to place a test access connection to the *SPLIT* mode.

Before You Begin

Before you begin this task, you should have an existing test access connection in the DACS system in *MONITOR* mode.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access.*

Instructions

Task

Complete the following steps to place a test access connection in the Split mode:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Test Access...* The TEST ACCESS form will appear on the screen.	
3	Select the **Site Name:** where the test access circuit resides.	
4	Select *SPLIT* from the **Action:** field.	
5	Click Continue... . The **Test Specifier:** field will appear on the form.	
6	Identify the **Test Specifier:**.	SE 21.1.1G
7	Click Continue... . The **Control Options** box appears on the form.	
8	Select the Reconcile **Mode:**.	SE 8.1.3G
9	Click Continue... . All fields will appear in read-only mode.	
10	Verify the information on the form to ensure you have entered the test access information correctly.	
11	When you have approved the information on the form, Click Execute . Notice the following results when the action is performed successfully: ■ The **Number:** field will indicate the test group number automatically assigned by the DND ■ The **New Test State:** field will indicate that the state of the test access connection is *SPLIT*	
12	**Stop! End of Task.**	
	Select a What's Next option.	SE 21.1.2G

DND GUI: Performing a HUB Test Access Connection

21.4G

Background

When to Use

Use this General Task to create a HUB test access connection, providing a way to test circuits on remote DACS frames using a local, HUB DACS.

Before You Begin

Before you begin this task, you must have your remote DACS frames connected to a HUB DACS, i.e., through an intertie connection (GT 7.1G), and the test system used to perform the test should be connected to the Hub DACS.

Related Information

For related information, refer to *Chapter 17, Test Ports and Test Access*.

Instructions

Task

Complete the following steps to perform a HUB test access connection:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Test Access...* The TEST ACCESS form will appear on the screen.	
3	Select the **Site Name:** where the circuit resides.	
4	Select *HUB* from the **Action:** field.	
5	Click Continue... . The **TEST OBJECT** and **OBJECT UNDER TEST** boxes appear on the form.	
6	(Optional) Enter values for the TEST OBJECT's **Trunk Conditioning** and **Insertion Word** fields.	
7	Identify the **NPC Specifier:** and **NPC:** for the FROM and TO NPCs of the **TEST OBJECT** and **OBJECT UNDER TEST**.	
8	Click Continue... . The following appears on the form: ■ **Bandwidth:**, **TO Channel:**, and **FROM Channel:** fields for the **TEST OBJECT** ■ **TO Channel:** and **FROM Channel:** fields for the **OBJECT UNDER TEST**	
9	Select a **Bandwidth:** for the TEST OBJECT.	
10	Enter channel numbers for the FROM and TO channel fields of the **TEST OBJECT** and **OBJECT UNDER TEST**.	
11	Click Continue... . The **Control Options** box will appear on the form.	
12	Select the Reconcile **Mode:**.	SE 8.1.3G
13	Click Continue... . All fields will appear in read-only mode.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
14	Verify the information on the form to ensure you have entered the test access information correctly.	
15	When you have approved the information on the form, Click Execute. Notice the following results when the action is performed successfully: ■ The **Number:** field will indicate the test group number automatically assigned by the DND ■ The **New Test State:** field will indicate that the state of the test access connection is *HUB*.	
16	**Stop! End of Task.**	
	Select a What's Next option.	SE 21.1.2G

DND GUI: Terminating or Unterminating the Test Group Signal

21.5G

Background

When to Use

Use this General Task to terminate or unterminate the test group signal.

Before You Begin

Before you begin this task, you should already have a test access connection established in the DACS network.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access.*

Instructions

Task

Complete the following steps to terminate or unterminate the test group signal:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Test Access...* The TEST ACCESS form will appear on the screen.	
3	Select the **Site Name:** where the circuit resides.	
4	Select ONE of the following from the Action: field: ■ *TERMINATE* to terminate one end of the test group ■ *UNTERMINATE* to release the termination of the test group	
5	Click Continue... . The **Direction:** and **Test Specifier:** fields will appear on the form.	
6	Select the termination direction from the **Direction:** field.	
7	Select a **Test Specifier:** for the test group.	SE 21.1.1G
8	Click Continue... . The TEST GROUP AND OBJECT UNDER TEST boxes appear on the form in read-only mode. The **Control Options** box will also appear.	
9	Select the Reconcile **Mode:**.	SE 8.1.3G
10	Click Continue... . All fields will appear in read-only mode.	
11	Verify the information on the form to ensure you have entered the test access information correctly.	
12	When you have approved the information on the form, Click Execute . The **New Test State:** field will indicate the new state of the test access connection.	
13	**Stop! End of Task.**	
	Select a What's Next option.	SE 21.1.2G

DND GUI: Releasing a Test Access Connection

21.6G

Background

When to Use

Use this General Task to release a test access connection.

Before You Begin

Before you begin this task, you must have previously set up a test access connection in the DND network (GT 21.1G, GT 21.2G, GT 21.3G).

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access.*

Instructions

Task

Complete the following steps to release a test access connection:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Test Access...* The TEST ACCESS form will appear on the screen.	
3	Select the **Site Name:** where the circuit resides.	
4	Select *RELEASE* from the **Action:** field.	
5	Click Continue... . The **OOS:** and **Test Specifier:** fields will appear on the form.	
6	Select the **OOS:** checkbox if an NPC in either the TEST OBJECT or OBJECT UNDER TEST is Out-of-Service.	
7	Select a **Test Specifier:** for the test group.	SE 21.1.1G
8	Click Continue... . The fields for the test access circuit and test group appear in read-only mode. The **Control Options** box will also appear.	
9	Select the Reconcile **Mode:**.	SE 8.1.3G
10	Click Continue... . All fields will appear in read-only mode.	
11	Verify the information on the form to ensure you have entered the test access information correctly.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
12	When you have approved the information on the form, Click Execute . Notice the following results when the action is performed successfully: ■ The **Number:** field will indicate the test group number automatically assigned by the DND ■ The **New Test State:** field will indicate that the state of the test access connection is *IDLE*	
13	**Stop! End of Task.**	
	Select a What's Next option.	SE 21.1.2G

DND GUI: Looping a Test Group Signal

21.7G

Background

When to Use

Use this General Task to loop a test group signal in order to test the test group channels.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access.*

Instructions

Task

Complete the following steps to loop a test group signal:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Test Access...* The TEST ACCESS form will appear on the screen.	
3	Select the **Site Name:** where the circuit resides.	
4	Select *LOOP* from the **Action:** field.	
5	Click Continue... . The **TEST OBJECT** box will appear on the form. The DND automatically fills in *TG* for the **Object Type:**.	
6	Enter values for the **Trunk Conditioning:** and **Insertion Word:**.	
7	Identify the **NPC Specifier:** and **NPC:** for the FROM and TO sides of the test group circuit.	
8	Click Continue... . The bandwidth and channel fields appear on the form.	
9	Select the **Bandwidth:** of the test group.	
10	Enter the **FROM Channel:** and **TO Channel:** numbers of the test group. If the bandwidth is greater than 1, then these values will be the beginning of the channel range.	
11	Click Continue... . The **Control Options** box will appear on the form.	
12	Select the Reconcile **Mode:**.	SE 8.1.3G
13	Click Continue... . All fields will appear in read-only mode.	

(Continued on next page)

Instructions (Continued)

Task, Continued

Step	Action	Reference
14	Verify the information on the form to ensure you have entered the test access information correctly.	
15	When you have approved the information on the form, Click Execute. Notice the following results when the action is performed successfully: ■ The **Number:** field will indicate the test group number automatically assigned by the DND ■ The **New Test State:** field will indicate that the state of the test access connection is *LOOP*	
16	**Stop! End of Task.**	
	Select a What's Next option.	SE 21.1.2G

DND GUI: Looping a Channel or Circuit

21.8G

Background

When to Use

Use this General Task to loop a DS0 channel or circuit for remote testing purposes.

Before You Begin

The NPC must be provisioned and in service before a channel can be looped.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access.*

Instructions

Task Complete the following steps to loop a DS0 channel:

Step	Action	Reference
1	Click PROVISIONING located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *TEST ACCESS...* The TEST ACCESS form will appear on the screen.	
3	Select the **Site Name:** where the circuit resides.	
4	Select *CHLOOP* from the **Action:** field.	
5	Click Continue... .	
6	Perform ONE of the following: ■ If you are looping a channel, leave this screen blank and click Continue... . ■ If you are looping a circuit, enter the Circuit ID, then click Continue... and go to Step 9.	
7	Enter the NPC number and click Continue... .	
8	Enter the Channel Number and click Continue... .	
9	Select the Reconcile **Mode:**.	SE 8.1.3G
10	Click Continue... . All fields will appear in read-only mode.	
11	Verify the infomation on the form to ensure you have entered the channel loop information correctly.	
12	When you have verified the information on the form, click Execute .	
13	**Stop! End of Task.**	
	Select a What's Next option.	SE 21.1.1G

DND GUI: Unlooping a Channel or Circuit

21.9G

Background

When to Use

Use this General Task to unloop a DS0 channel or circuit that was previously looped for remote testing purposes.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access.*

Instructions

Task

Complete the following steps to loop a DS0 channel:

Step	Action	Reference
1	Click PROVISIONING located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *TEST ACCESS...* The TEST ACCESS form will appear on the screen.	
3	Select the **Site Name:** where the circuit resides.	
4	Select *CHUNLOOP* from the **Action:** field.	
5	Click Continue... .	
6	Perform ONE of the following: ■ If you are unlooping a channel, leave this screen blank and click Continue... . ■ If you are unlooping a circuit, enter the Circuit ID, then click Continue... and go to Step 9.	
7	Enter the NPC number and click Continue... .	
8	Enter the Channel Number and click Continue... .	
9	Select the Reconcile **Mode:**.	SE 8.1.3G
10	Click Continue... . All fields will appear in read-only mode.	
11	Verify the information on the form to ensure you have entered the channel or circuit information correctly.	
12	When you have verified the information on the form, click Execute .	
13	**Stop! End of Task.**	
	Select a What's Next option.	SE 21.1.1G

Integrated Test Set: Initiate/Stop Test Signal Generation

21.10G

When to Use

Use this procedure to turn on or turn off test signal generation on one bundle of a test access group (TG) currently in SPLIT, LOOP, or HUB test access modes.

Before You Begin

Before you begin this task, a test group must be grown using NPC test groups that are provisioned as ITS (ST-type) NPCs.

Related Information

For related information, see *Chapter 21, Test Ports and Test Access*.

Instructions

Task

Complete the following steps to start or stop Test Signal Generation:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Test Access...* The TEST ACCESS form will appear on the screen.	
3	Select the **Site Name:** where the circuit resides.	
4	Select *TEST SET* from the **Action:** field.	
5	Identify the **Test Group:** that contains the ITS (ST-type) NPC.	
6	Click Continue... .	
7	Click on Test Set . The INTEGRATED TEST SET form will appear on the screen. The DND will automatically query the DACS to get the current state of the ITS.	
8	If you are stopping signal generation, skip to Step 12.	
9	Select the **Bundle:** to generate the test signal.	
10	Select a **Pattern:** to generate. If you select **User Def**, enter the 8 bit test pattern in the **Pattern Word** field (in hexidecimal format).	
11	Enter the 4-bit **Signaling Word** (in binary format).	
12	Click on one of the following: ■ **Start Generation** to initiate signal generation ■ **Stop Generation** to end signal generation.	
13	**Stop! End of Task.**	
	Select a What's Next option.	SE 21.1.2G

Integrated Test Set: Initiate/Stop Test Signal Monitoring

21.11G

When to Use

Use this procedure to turn on or turn off test signal monitoring on one bundle of a test access group (TG) currently in test signal generation mode. Only one TG bundle per TG193B circuit pack can be in test signal monitor mode at a time. The TG must already be generating in order to start monitoring.

Before You Begin

Before you begin this task, a test group must be grown using NPC test groups that are provisioned as ITS (ST-type) NPCs.

Related Information

For related information, see *Chapter 21, Test Ports and Test Access.*

Instructions

Task

Complete the following steps to start or stop test signal monitoring:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Test Access...* The TEST ACCESS form will appear on the screen.	
3	Select the **Site Name:** where the circuit resides.	
4	Select *TEST SET* from the **Action:** field.	
5	Identify the **Test Group:** that contains the ITS (ST-type) NPC.	
6	Click Continue... .	
7	Click on Test Set . The INTEGRATED TEST SET form will appear on the screen. The DND will automatically query the DACS to get the current state of the ITS.	
8	If you are stopping signal monitoring, skip to Step 9.	
9	Click on one of the following: ■ **Start Monitoring** to initiate signal monitoring ■ **Stop Monitoring** to end signal monitoring.	
10	**Stop! End of Task.**	
	Select a What's Next option.	SE 21.1.2G

DND Forms: Creating a Test Port Group

21.1U

Background

When to Use

Use this General Task to create a test port group on the DND Forms Interface.

Before you begin

The NPC must be provisioned before you can designate it as a test port group.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access*.

Instructions

Task

Complete the following steps to create a test port group.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING.	
2	From the PROVISIONING MENU, select TEST PORT PROVISIONING.	
3	Enter the **Site Name**.	
4	Select *CREATETPG* from the **Action** field.	
5	Enter a test port group number.	
6	Identify the NPC by entering the **NPC ID** or the NPC Number in hierarchical or extended format.	
7	Press EXECUTE and confirm. The command completion message is displayed. **NOTE:** The NPC need not be in service (restored) to be designated as a test port group, but it must have been equipped.	
8	**Stop! End of Task.**	
	Select a What's Next Option.	SE 21.1.1U

SE 21.1.1U: What's Next Options for Test Ports

What's Next?

Perform one of the following options when the task is completed:

Options	Reference
Select another **Action**.	GT 21.1U - GT 21.4U
Select TOPMENU to return to the MAIN MENU.	
Select QUIT to return to the PROVISIONING MENU.	

DND Forms: Deleting a Test Port Group

21.2U

Background

When to Use

Use this General Task to remove the designation of a test port group from an NPC on the DND Forms Interface.

Before You Begin

The NPC must have been designated as a test port group.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access*.

Instructions

Task

Complete the following steps to remove the designation of a test port group from an NPC.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING.	
2	From the PROVISIONING MENU, select TEST PORT PROVISIONING.	
3	Enter the **Site Name**.	
4	Select *DELETETPG* from the **Action** field.	
5	Enter the number of the test port group to be deleted.	
6	Press EXECUTE and confirm. The command completion message is displayed. **NOTE:** If test ports are in use, *DELETETPG* first releases and de-grows the ports, then de-grows the test port group.	
7	**Stop! End of Task**	
	Select a What's Next Option.	SE 21.1.1U

DND Forms: Creating a Test Port

21.3U

Background

When to Use

Use this General Task to designate a channel pair of a test port group as a test port on the DND Forms Interface. A trunk conditioning (**TC**) code is specified, so the test port will have static trunk conditioning.

Before You Begin

An NPC must be designated as a test port group.

You can create up to 12 test ports for a test port group. Test ports must be created in sequential order starting with 1.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access*.

Instructions

Task

Complete the following steps to create a test port.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING.	
2	From the PROVISIONING MENU, select TEST PORT PROVISIONING.	
3	Enter the **Site Name**.	
4	Enter *CREATETP* in the **Action**: field.	
5	A third line appears on the screen. Enter the **Test Port No**:, **TC, and IW**.	
6	Press EXECUTE and confirm. The DND command completion message is displayed	
7	**Stop! End of Task.**	
	Select a What's Next Option.	SE 21.1.1U

DND Forms: Deleting a Test Port

21.4U

Background

When to Use

Use this General Task to remove the designation of a test port from a channel pair on the DND Forms Interface.

Before You Begin

The test port must have been created (GT 21.3U).

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access*.

Instructions

Task

Complete the following steps to delete a test port.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING.	
2	From the PROVISIONING MENU, select TEST PORT PROVISIONING.	
3	Enter the **Site Name**.	
4	Enter *DELETETP* in the **Action**: field.	
5	Enter the **Test Port No**.	
6	Press EXECUTE and confirm. A DND command completion message is displayed.	
7	**Stop! End of Task.**	
	Select a What's Next Option.	SE 21.1.1U

DND Forms: Performing Circuit Test Access in Monitor Mode

21.5U

Background

When to Use

Use this General Task to place a circuit in test access in the MONITOR state on the DND Forms Interface.

Before You Begin

Before you begin this task, make sure you have the following:

1. A circuit established to place in test access.
2. An available pair of channels on an NPC or NPCs which are in-service. DND will use these channels for the test group.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access*.

Instructions

Task

Complete the following steps to place a circuit in the MONITOR mode.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select TEST ACCESS. The TEST ACCESS form appears.	
2	Enter the **Site Name**.	
3	Enter *MONITOR* in the **Action** field.	
4	For TG test access, enter *TG* for **Object Type**. For TP test access, enter *TP* and a test port number.	
5	Specify the **Test Object FROM NPC ID**: and **Test Object FROM Ch**.	
6	Specify the **Test Object TO NPC**: and **Test Object TO Ch**.	
7	Specify the **Ckt ID**.	
8	Press EXECUTE and confirm. The DND prints a completion message at the bottom of the screen and updates fields in the form.	
9	**Stop! End of Task.**	
	Select a What's next option.	SE 21.5.1U

SE 21.5.1U: What's Next Options for Test Access

What's Next?

Perform one of the following options when the task is completed:

Options	Reference
Select another **Action**.	GT 21.5U - GT 21.11U
Select QUIT to return to the MAIN MENU.	

DND Forms: Performing an Unmapped Test Access in Monitor Mode

21.6U

Background

When to Use

Use this General Task to place unmapped channels in test access in the MONITOR mode on the DND Forms Interface.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access*.

Instructions

Task

Complete the following steps to place unmapped channels in the MONITOR mode.

Step	Action	Reference
1	From the DND MAIN MENU, select TEST ACCESS. The TEST ACCESS form appears.	
2	Enter the **Site Name** where the circuit resides.	
3	Enter *MONITOR* in the **Action** field.	
4	For TG test access, enter *TG* for **Object Type**. For TP test access, enter *TP* and a test port number.	
5	Specify values for **TC** and **IW**.	
6	For the test object, specify: ■ **Bandwidth** (for TG test access only) ■ **Test Object FROM NPC ID** ■ **Test Object FROM Ch** ■ **Test Object TO NPC** ■ **Test Object TO Ch**	
7	For the test object under test, specify: ■ **Object Under Test TO NPC** ■ **Object Under Test TO Ch** Observe that the object under test identification fields are filled in.	
8	Press EXECUTE and confirm. The DND prints a completion message at the bottom of the screen and updates fields in the form.	
9	**Stop! End of Task.**	
	Select a What's next option.	SE 21.5.1U

DND Forms: Performing Test Access in Split Mode

21.7U

Background

When to Use

Use this General Task to place a test access connection in the SPLIT mode on the DND Forms Interface.

Before You Begin

Before you begin this task, you should have an existing test access connection in MONITOR mode.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access*.

Instructions

Task

Complete the following steps to place a test access connection in the SPLIT mode.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select TEST ACCESS. The TEST ACCESS form appears.	
2	Enter the **Site Name**.	
3	Enter *SPLIT* in the **Action** field.	
4	For TG test access, enter *TG* for **Object Type**. For TP test access, enter *TP* and a test port number.	
5	Press EXECUTE and confirm. The DND prints a completion message at the bottom of the screen and updates the fields in the form.	
6	**Stop! End of Task.**	
	Select a What's next option.	SE 21.5.1U

DND Forms: Performing a HUB Test Access Connection

21.8U

Background

When to Use

Use this General Task to create a HUB test access connection on the DND Forms Interface. This type of connection provides a way to test circuits on remote DACS frames using a local HUB DACS.

Before You Begin

Before you begin this task, you must connect the following to the HUB DACS:

- Remote DACS frames
- Test system used to perform the test.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access*.

Instructions

Task

Complete the following steps to place unmapped channels in the MONITOR mode.

Step	Action	Reference
1	From the DND MAIN MENU, select TEST ACCESS. The TEST ACCESS form appears.	
2	Enter the **Site Name** where the circuit resides.	
3	Enter *HUB* in the **Action** field.	
4	For the test object, specify: ■ **Test Object FROM NPC ID** ■ **Test Object FROM Ch** ■ **Test Object TO NPC** ■ **Test Object TO Ch** ■ **Bandwidth** ■ **TC** ■ **IW**	
5	For the test object under test, specify: ■ **Object Under Test FROM NPC ID** ■ **Object Under Test FROM Ch** ■ **Object Under Test TO NPC** ■ **Object Under Test TO Ch** Observe that the object under test identification fields are filled in.	
6	Press EXECUTE and confirm. The DND prints a completion message at the bottom of the screen and updates fields in the form.	
7	**Stop! End of Task.**	
	Select a What's next option.	SE 21.5.1U

DND Forms: Terminating or Unterminating the Test Group Signal

21.9U

Background

When to Use

Use this General Task to terminate or unterminate the test group signal on the DND Forms Interface.

Before You Begin

Before you begin this task, you should already have a test access connection established.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access*.

Instructions

Task

Complete the following steps to terminate or unterminate the test group signal.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select TEST ACCESS. The TEST ACCESS form is displayed.	
2	Enter the **Site Name**.	
3	Enter *TERMINATE* or *UNTERMINATE* in the **Action** field.	
4	Enter the **Direction**.	
5	Specify the **Object Type** and **Number**.	
6	Press EXECUTE and confirm. The DND prints a completion message at the bottom of the screen.	
7	**Stop! End of Task.**	
	Select a What's Next Option.	SE 21.5.1U

DND Forms: Releasing a Test Access Connection

21.10U

Background

When to Use

Use this General Task to release a test access connection on the DND Forms Interface.

Before You Begin

Before you begin this task, you must have previously set up a test access connection (GT 21.5U, GT 21.6U, or GT 21.7U).

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access*.

Instructions

Task

Complete the following steps to release a test access connection.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select TEST ACCESS. The TEST ACCESS form appears.	
2	Enter the **Site Name**.	
3	Enter *RELEASE* in the **Action** field.	
4	Enter *Y* or *N* for the **OOS** field.	
5	For TG test access, enter *TG* for **Object Type**. For TP test access, enter *TP* and a test port number.	
6	Press EXECUTE and confirm. The DND prints a completion message at the bottom of the screen.	
7	**Stop! End of Task.**	
	Select a What's Next Option.	SE 21.5.1U

DND Forms: Looping a Test Group Signal

21.11U

Background

When to Use

Use this General Task to loop a test group signal on the DND Forms Interface. This is performed to test the test group channels.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access*.

Instructions

Task Complete the following steps to loop a test group signal.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select TEST ACCESS. The TEST ACCESS form appears.	
2	Enter the **Site Name**.	
3	Enter *LOOP* in the **Action**: field.	
4	Enter the **Bandwidth**.	
5	Specify values for **TC** and **IW**.	
6	Specify the **TO NPC ID** and **TO Ch**.	
7	Specify the **FROM NPC ID** and **FROM Ch**.	
8	Press EXECUTE and confirm. The DND prints a completion message and updates the fields in the form. **NOTE:** Do not enter an Object Type (TG) or a TG Number. Only identify the NPC and channels.	
9	**Stop! End of Task.**	
	Select a What's Next Option.	SE 21.5.1U

DND Forms: Looping a Channel or Circuit

21.12U

Background

When to Use

Use this General Task to loop a DS0 channel or circuit for remote testing purposes.

Before You Begin

The NPC must be provisioned and in service before a channel can be looped.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access.*

Instructions

Task Complete the following steps to loop a DS0 channel:

Step	Action	Reference
1	Select TEST ACCESS from the DND Forms MAIN MENU. The TEST ACCESS form will appear on the screen.	
2	Enter the **Site Name**.	
3	Enter *CHLOOP* in the **Action:** field.	
4	Perform ONE of the following: ■ If you are looping a channel, enter the NPC number and Channel Number in the **TO:** field. ■ If you are looping a circuit, enter the Circuit ID.	
5	Press EXECUTE and confirm. The DND prints a completion message at the bottom of the screen and updates the fields in the form.	
6	**Stop! End of Task.**	
	Select a What's Next option.	SE 21.1.1U

DND Forms: Unlooping a Channel or Circuit

21.13U

Background

When to Use

Use this General Task to unloop a DS0 channel or circuit that was previously looped for remote testing purposes.

Related Information

For related information, refer to *Chapter 21, Test Ports and Test Access.*

Instructions

Task

Complete the following steps to unloop a DS0 channel:

Step	Action	Reference
1	Select TEST ACCESS from the DND Forms MAIN MENU. The TEST ACCESS form will appear on the screen.	
2	Enter the **Site Name**.	
3	Enter *CHUNLOOP* in the **Action:** field.	
4	Perform ONE of the following: ■ If you are unlooping a channel, enter the NPC number and Channel Number in the **TO:** field. ■ If you are unlooping a circuit, enter the Circuit ID.	
5	Press EXECUTE and confirm. The DND prints a completion message at the bottom of the screen and updates the fields in the form.	
6	**Stop! End of Task.**	
	Select a What's Next option.	SE 21.1.1U

Backup and Restore General Tasks

22

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  - Restore from Tape GT 22.2G
  - Schedule a Back up of the DND Databases to Tape. GT 22.3G
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DND GUI: Backing Up DND to Tape

22.1G

Background

When to Use

Use this General Task to back up DND databases to tape.

Before you begin

You must have a tape in the tape drive. Write-protect must be off.

To stop the backup, press the Stop button after you Start the action. If you press Stop while a backup is in progress, the DND waits for the current site backup to complete. The tape is also marked as having an unusable database.

Related Information

For related information, refer to Chapter 22, Backup and Restore.

Instructions

Task Complete the following steps to backup DND to tape.

Step	Action	Reference
1	Insert the tape cartridge into the drive.	
2	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
3	Select *Database Backup/Restore.* The Database Backup/Restore form appears on the screen.	
4	In the **Action**: field, select *BACKUP.*	
5	The **Current Site Choices:** lists all of the DND network elements in DND. Leave all choices selected, or select individual nodes to be backed up. This is a multi-select combo box. See Chapter 3, DND Forms and Navigation for details on using a multi-select combo box.	
6	Click Continue.	
7	Click Start.	
8	Messages are displayed on the Status Line. The **Working on:** field displays which file is currently being backed up.	
9	Remove the tape from the tape drive and label it.	
10	**Stop! End of Task.**	

DND GUI: Restoring DND from Tape

22.2G

Background

When to Use

Use this General Task to restore databases from tape.

Before you begin

You must have a tape with the DND databases in the drive.

WARNING:
Selective restore of a DACS database is discouraged.

To stop a restore, press the Stop button after you Start the action. If you press Stop while a restore is in progress, the DND waits for the current site restore to complete.

Related Tasks

If you are moving a database from one DND to another, refer to GT 22.13U.

Background (Continued)

Precautions

WARNING:
Before doing a FULL RESTORE*, it is recommended that all DACSs be removed from service. It is also recommended that all users be logged off before doing a* FULL RESTORE*.*

WARNING:
Any Resore which includes the COMMON Database will cause an automatic restart of the DND.

Related Information

For related information, refer to Chapter 22, Backup and Restore.

Instructions

Task Complete the following steps to restore all databases from tape.

Step	Action	Reference
1	Insert the tape cartridge into the drive.	
2	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
3	Select *Database Backup/Restore.* The Database Backup/Restore form appears on the screen.	
4	In the **Action**: field, select *RESTORE*.	
5	Click Get Site List From Tape.	
6	Wait while the tape is read. When the tape has been completely read, the DND name, a time stamp, and the list of sites that are on the tape appear. By default, all sites that are on the tape will be restored. Leave all choices selected, or click individual sites to be restored.	
7	Click Continue.	
8	Click Start.	
9	Messages are displayed on the Status Line for all database which are being replaced. The **Working on:** field displays which file is currently being backed up.	
	Stop! End of Task	

DND GUI: Scheduling a Backup to Tape

22.3G

Background

When to Use

Use this General Task to schedule a back up of the DND databases to tape.

Before you begin

You must have a tape in the tape drive. Write-protect must be off.

Related Information

For related information, refer to Chapter 22, Backup and Restore.

Instructions

Task

Complete the following steps to schedule a backup of the DND to tape.

Step	Action	Reference
1	Insert the tape cartridge into the drive.	
2	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
3	Select *Database Backup/Restore.* The Database Backup/Restore form appears on the screen.	
4	In the **Action**: field, select *BACKUP.*	
5	The **Current Site Choices:** lists all of the DND network elements in DND. **NOTE:** On a scheduled backup, do not unselect any sites.	
6	Select Scheduled then click Continue.	
7	Specify the date and time.	SE 22.3.1G
8	Specify the repetition.	SE 22.3.2G
9	Click Continue.	
10	Click Execute.	
11	**Stop! End of Task.**	

SE 22.3.1G: Setting the DATE and TIME for the Scheduled Backup

Procedure

Perform the steps below to set the **DATE** and **TIME** fields for the scheduled backup:

IF you want to specify the...	THEN...
DATE	Specify the **Day**, **Month**, and **Year**. Each of these 3 fields collectively specifies the **DATE**.
TIME	Select the **Hour**, **Minutes**, and **Second**. Each of these 3 fields collectively specifies the **TIME**.

Stop! End of Procedure.

SE 22.3.2G: Setting the Repetition for the Scheduled Backup

Procedure

Perform the steps below to set the **Number of Repetitions, Interval,** and **Scale** fields for the scheduled backup:

IF you want to specify the...	THEN...
Number of Repetions	Enter the number of times the backup is to be scheduled. If you enter 0, the backup will repeat forever.
Interval	Enter the interval to determine how often the backup is performed, determined by the scale.
Scale	Select time period (minutes, hours, days, weeks).

For example, if the **Interval** is 2 and the **Scale** is days, the backup will be performed every 2 days.

Stop! End of Procedure.

DND Forms: Backing Up Selected Databases to Tape

22.1U

Background

When to Use

Use this General Task to back up selected DACS databases to tape.

Before you begin

If there is any SNMP information on the DND, you cannot use this procedure.

You must have a tape in the tape drive. Write-protect must be off.

To abort the tape backup/restore process, press the DELETE key twice. The action may not stop immediately; however, the command will stop the backup/restore process after the action on the current database is complete.

Related Information

For related information, refer to Chapter 22, Backup and Restore.

Instructions

Task

Complete the following steps to backup a database to tape.

Step	Action	Reference
1	Insert the tape cartridge into the drive.	
2	From the DND Forms MAIN MENU, select DATABASE ADMINISTRATION, then select BACKUP/RESTORE.	
3	Select DATABASE BACKUP/RESTORE (TAPE).	
4	Enter or press CHOICES to select `SELECTIVE BACKUP` in the **Action** field. An insert pops up asking WHICH DATABASES? and displaying the existing database names. This is a multiselect menu. The SELECT and UNSELECT keys are enabled.	
5	From the WHICH DATABASES? insert, use the SELECT key to select the databases to backup. Selected databases remain highlighted even though the cursor is not on them. When finished, press Enter. The selected databases are listed in the form.	
6	Press EXECUTE and confirm.	

7	The following messages are displayed in this order:
	`Unloading name database into files...`
	`Copying name database files onto tape...`
	
	Messages similar to those above are repeated for as many databases as are selected.
	
	When DND successfully completes the backup, the following message is displayed:
	`The Command Completed Successfully`
	
	If the command fails, an insert appears stating the reason. To try again, reselect the databases.	

8	**Stop! End of Task.**	
	Select a What's Next Option	SE 22.1.1U

SE 22.1.1 What's Next Options

Task

Step	Action	Reference
1	Select one of the following actions: Press CHOICES to choose another **Action**. Press TOPMENU to return to the MAIN MENU. Press QUIT to return to the previous menu.	
2	**Stop! End of Task.**	

DND Forms: Restoring Selected Databases from Tape

22.2U

Background

When to Use

Use this General Task to restore selected DACS databases from a tape containing only DACS databases.

Before you begin

If there is any SNMP information on the tape, you cannot use this procedure. Refer to GT 22.2G.

To abort the tape backup/restore process, press the DELETE key twice. The action may not stop immediately; however, the command will stop the backup/restore process after the action on the current database is complete.

WARNING:
Selective restore of a DACS database is discouraged.

Background (Continued)

COMMON Database Precautions

Before restoring the COMMON database, REMOVE all frames from service (refer to Chapter 5, NE Provisioning).

WARNING:
It is recommended that you do not perform a SELECTIVE RESTORE *that includes the COMMON database unless you are certain that the FRAME PROVISIONING information on the existing COMMON database and the one on tape is the same. Restoral of the COMMON database where the current DND hardware ports configuration is not identical to that of the backup DND may cause the system to run in a degraded manner.*

NOTE:
A SELECTIVE RESTORE using a DACS database that does not already exist at the DND will fail. To copy that database to the DND, first go to FRAME PROVISIONING and CREATE a DACS of the same name, then use SELECTIVE RESTORE to restore that database from tape into the newly created DACS.

Related Information

For related information, refer to *Chapter 22, Backup and Restore*.

Instructions

Task Complete the following steps to restore selected databases from tape.

Step	Action	Reference
1	Insert the tape cartridge into the drive.	
2	From the DND Forms MAIN MENU, select DATABASE ADMINISTRATION, then select BACKUP/RESTORE.	
3	Select DATABASE BACKUP/RESTORE (TAPE).	
4	Enter or press CHOICES to select `SELECTIVE RESTORE` in the **Action** field. Wait while the tape is read. When the tape has been completely read, the DND name, a time stamp, and the list of DACS databases appears. The WHICH DATABASES? insert displays the existing database names. This is a multiselect menu. The SELECT and UNSELECT keys are enabled.	
5	From the WHICH DATABASES? insert, use the SELECT key to select the databases to restore. Selected databases remain highlighted even though the cursor is not on them. When finished, press Enter. The selected databases are listed in the form.	

Step	Action	Reference

6	Press EXECUTE and confirm. The following messages are displayed in the following order:
	
	`Copying name database files from tape...`
	
	`Loading name database files...`
	
	Messages similar to those above are repeated for as many databases as are selected.
	
	When DND successfully completes the restore, the following message is displayed:
	
	`The Command Completed Successfully`
	
	On successful completion of a `COMMON` database `RESTORE`, the DND system restarts.
	
	If the command fails,
	an insert appears stating the reason.	

7	**Stop! End of Task**	
	Select a What's Next Option	SE 22.1.1U

DND Forms: Backing Up All Databases to Tape

22.3U

Background

When to Use

Use this General Task to back up all DACS databases to tape.

Before you begin

If there is any SNMP information for DACS II AX , AAC, IMACS, or Other nodes on the DND, you cannot use this procedure. Refer to GT 22.1G.

You must have a tape in the tape drive. Write-protect must be off.

To abort the tape backup/restore process, press the DELETE key twice. The action may not stop immediately; however, the command will stop the backup/restore process after the action on the current database is complete.

Related Information

For related information, refer to *Chapter 22, Backup and Restore*.

Instructions

Task Complete the following steps to backup a database to tape.

Step	Action	Reference
1	Insert the tape cartridge into the drive.	
2	From the DND Forms MAIN MENU, select DATABASE ADMINISTRATION, then select BACKUP/RESTORE.	
3	Select DATABASE BACKUP/RESTORE (TAPE).	
4	Enter or press CHOICES to select `FULL BACKUP` in the **Action** field. The list of databases appears on the screen.	
5	Press EXECUTE and confirm.	

6	The following messages are displayed in this order:
	
	`Unloading name database into files...`
	
	`Copying name database files onto tape...`
	
	Messages similar to those above are repeated for all databases.
	
	When DND successfully completes the backup, the following message is displayed:
	
	`The Command Completed Successfully`
	
	If the command fails, an insert appears stating the reason.	

7	**Stop! End of Task.**	
	Select a What's Next Option	SE 22.1.1U

DND Forms: Restoring All Databases from Tape

22.4U

Background

When to Use

Use this General Task to restore all databases from tape.

Before you begin

If there is any SNMP information on the tape, you cannot use this procedure. Refer to GT 22.2G.

You must have a tape with the DND databases in the drive.

To abort the tape backup/restore process, press the DELETE key twice. The action may not stop immediately; however, the command will stop the backup/restore process after the action on the current database is complete.

Background (Continued)

Precautions

WARNING:
Before doing a FULL RESTORE*, it is recommended that all DACSs be removed from service. It is also recommended that all users be logged off before doing a* FULL RESTORE*.*

Related Information

For related information, refer to Chapter 22, Backup and Restore.

Instructions

Task Complete the following steps to restore all databases from tape.

Step	Action	Reference
1	Insert the tape cartridge into the drive.	
2	From the DND Forms MAIN MENU, select DATABASE ADMINISTRATION, then select BACKUP/RESTORE.	
3	Select DATABASE BACKUP/RESTORE (TAPE).	
4	Enter or press CHOICES to select `FULL RESTORE` in the **Action** field. Wait while the tape is read. When the tape has been completely read, the DND name, a time stamp, and the list of DACS databases appears.	

5	Press EXECUTE and confirm. The following messages are displayed in the following order:
	
	`Copying name database files from tape...`
	
	`Loading name database files...`
	
	When DND successfully completes the restore, the following message is displayed:
	
	`The Command Completed Successfully`
	
	On successful completion of a `COMMON` database `RESTORE`, the DND system restarts.
	
	If the command fails, an insert appears stating the reason.	

6	**Stop! End of Task**	
	Select a What's Next Option	SE 22.1.1U

DND Forms: Backing Up Selected DACS Alarm Logs to Tape

22.5U

Background

When to Use

Use this General Task to back up selected DACS Alarm Logs to tape.

Before you begin

You must have a tape in the tape drive. Write-protect must be off.

To abort the tape backup/restore process, press the DELETE key twice. The action may not stop immediately; however, the command will stop the backup/restore process after the action on the current database is complete.

Related Information

For related information, refer to Chapter 22, Backup and Restore.

Instructions

Task

Complete the following steps to backup selected Alarm Logs to tape.

Step	Action	Reference
1	Insert the tape cartridge into the drive.	
2	From the DND Forms MAIN MENU, select DATABASE ADMINISTRATION, then select BACKUP/RESTORE.	
3	Select LOG BACKUP/RESTORE (TAPE). The LOG BACKUP/RESTORE (TAPE) form displays with the **Type** set to ALARM.	
4	Enter or press CHOICES to select SELECTIVE BACKUP in the **Action** field. An insert pops up asking WHICH DATABASES? and displaying the existing database names. This is a multiselect menu. The SELECT and UNSELECT keys are enabled.	
5	From the WHICH DATABASES? insert, use the SELECT key to select the databases to backup. Selected databases remain highlighted even though the cursor is not on them. When finished, press Enter. The selected databases are listed in the form.	
6	Press EXECUTE and confirm.	

Step	Action	Reference

7	The following messages are displayed in this order:
	
	`Unloading name database into files...`
	
	`Copying name database files onto tape...`
	
	Messages similar to those above are repeated for as many databases as are selected.
	
	When DND successfully completes the backup, the following message is displayed:
	
	`The Command Completed Successfully`
	
	If the command fails, an insert appears stating the reason. To try again, reselect the databases.	

8	**Stop! End of Task.**	
	Select a What's Next Option	SE 22.1.1U

DND Forms: Restoring Selected DACS Alarm Logs from Tape

22.6U

Background

When to Use

Use this General Task to restore selected DACS Alarm Logs from tape.

Before you begin

If there is any SNMP information on the tape, you cannot use this procedure. Refer to GT 22.2G.

To abort the tape backup/restore process, press the DELETE key twice. The action may not stop immediately; however, the command will stop the backup/restore process after the action on the current database is complete.

Related Information

For related information, refer to *Chapter 22, Backup and Restore*.

Instructions

Task Complete the following steps to restore selected Alarm Logs from tape.

Step	Action	Reference
1	Insert the tape cartridge into the drive.	
2	From the DND Forms MAIN MENU, select DATABASE ADMINISTRATION, then select BACKUP/RESTORE.	
3	Select LOG BACKUP/RESTORE (TAPE). The LOG BACKUP/RESTORE (TAPE) form displays with the **Type** set to ALARM.	
4	Enter or press CHOICES to select SELECTIVE RESTORE in the **Action** field. Wait while the tape is read. When the tape has been completely read, the DND name, a time stamp, and the list of DACS databases appears. The WHICH DATABASES? insert displays the existing database names. This is a multiselect menu. The SELECT and UNSELECT keys are enabled.	
5	From the WHICH DATABASES? insert, use the SELECT key to select the databases to restore. Selected databases remain highlighted even though the cursor is not on them. When finished, press Enter. The selected databases are listed in the form.	

Step	Action	Reference

6	Press EXECUTE and confirm. The following messages are displayed in the following order:
	
	`Copying name database files from tape...`
	
	`Loading name database files...`
	
	Messages similar to those above are repeated for as many databases as are selected.
	
	When DND successfully completes the restore, the following message is displayed:
	
	`The Command Completed Successfully`
	
	If the command fails, an insert appears stating the reason.	

7	**Stop! End of Task**	
	Select a What's Next Option	SE 22.1.1U

DND Forms: Backing Up All DACS Alarm Logs

22.7U

Background

When to Use

Use this General Task to back up all DACS Alarm Logs to tape.

Before you begin

You must have a tape in the tape drive. Write-protect must be off.

To abort the tape backup/restore process, press the DELETE key twice. The action may not stop immediately; however, the command will stop the backup/restore process after the action on the current database is complete.

Related Information

For related information, refer to *Chapter 22, Backup and Restore*.

Instructions

Task

Complete the following steps to backup all Alarm Logs to tape.

Step	Action	Reference
1	Insert the tape cartridge into the drive.	
2	From the DND Forms MAIN MENU, select DATABASE ADMINISTRATION, then select BACKUP/RESTORE.	
3	Select LOG BACKUP/RESTORE (TAPE).	
4	Enter or press CHOICES to select `FULL BACKUP` in the **Action** field. The list of databases appears on the screen.	
5	Press EXECUTE and confirm.	

6	The following messages are displayed in this order:
	
	`Unloading name database into files...`
	
	`Copying name database files onto tape...`
	
	Messages similar to those above are repeated for all databases.
	
	When DND successfully completes the backup, the following message is displayed:
	
	`The Command Completed Successfully`
	
	If the command fails, an insert appears stating the reason.	

7	**Stop! End of Task.**	
	Select a What's Next Option	SE 22.1.1U

DND Forms: Restoring All DACS Alarm Logs from Tape

22.8U

Background

When to Use

Use this General Task to restore all DACS Alarm Logs from tape.

Before you begin

You must have a tape with the Alarm Logs in the tape drive.

To abort the tape backup/restore process, press the DELETE key twice. The action may not stop immediately; however, the command will stop the backup/restore process after the action on the current database is complete.

Related Information

For related information, refer to Chapter 22, Backup and Restore.

Instructions

Task

Complete the following steps to restore all Alarm Logs from tape.

Step	Action	Reference
1	Insert the tape cartridge into the drive.	
2	From the DND Forms MAIN MENU, select DATABASE ADMINISTRATION, then select BACKUP/RESTORE.	
3	Select LOG BACKUP/RESTORE (TAPE).	
4	Enter or press CHOICES to select `FULL RESTORE` in the **Action** field. Wait while the tape is read. When the tape has been completely read, the DND name, a time stamp, and the list of DACS databases appears.	

5	Press EXECUTE and confirm. The following messages are displayed in the following order:
	
	`Copying name database files from tape...`
	
	`Loading name database files...`
	
	When DND successfully completes the restore, the following message is displayed:
	
	`The Command Completed Successfully`
	
	On successful completion of a `COMMON` database `RESTORE`, the DND system restarts.
	
	If the command fails, an insert appears stating the reason.	

6	**Stop! End of Task**	
	Select a What's Next Option	SE 22.1.1U

DND Forms: Formatting a Diskette

22.9U

Background

When to Use

Use this General Task to format a diskette.

Before You Begin

You must have a writable diskette. Make sure the write-protect notch is covered.

Related Information

For related information, refer to Chapter 22, Backup and Restore.

Instructions

Task Complete the following steps to format a diskette.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select DATABASE ADMINISTRATION, then select BACKUP/RESTORE.	
2	Select FORMAT DISKETTE.	
3	Following the prompt, insert the diskette into the drive. But first, make sure the write-protect notch is covered.	

4	Press Enter. The diskette is formatted. The system will display the following message:
	
	`formatting`
	`...`
	`vvvv`
	
	where the number of dots under the word `formatting` increases as the format progresses and the `vvvv` appear when the format verify is taking place.	

5	Press any key to continue. You return to the BACKUP/RESTORE menu.	
6	Repeat the procedure for the remaining diskettes.	
7	**Stop! End of Task.**	

DND Forms: Back Up DACS Alarm Log to Diskette

22.10U

Background

When to Use

Use this General Task to backup an Alarm Log to diskette. Only DACS alarm logs can be backed up.

Before You Begin

The diskette must be formatted. See GT 22.9U.

Related Information

For related information, refer to Chapter 22, Backup and Restore.

Instructions

Task

Complete the following steps to backup an Alarm Log on diskette.

Step	Action	Reference
1	Insert the diskette into the drive.	
2	From the DND Forms MAIN MENU, select DATABASE ADMINISTRATION, then select BACKUP/RESTORE.	
3	Select LOG BACKUP/RESTORE (DISKETTE). Set the **Type** to ALARM.	
4	Enter BACKUP in the **Action** field.	
5	Enter or press CHOICES to select the name of the database in the **Database Name** field.	
6	Press EXECUTE and confirm. DND writes the log to the diskette.	
7	When DND successfully completes the backup/restore, the following message is displayed: `The Command Completed Successfully`	
8	Make sure the diskette is labeled with the number sequence and contents.	
9	**Stop! End of Task.**	
	Select a What's Next Option	SE 22.1.1U

DND Forms: Restore DACS Alarm Log from Diskette

22.11U

Background

When to Use

Use this General Task to restore a DACS Alarm Log from diskette.

Related Information

For related information, refer to Chapter 22, Backup and Restore.

Instructions

Task

Complete the following steps to restore an Alarm Log from diskette.

Step	Action	Reference
1	Insert the diskette into the drive.	
2	From the DND Forms MAIN MENU, select DATABASE ADMINISTRATION, then select BACKUP/RESTORE.	
3	Select LOG BACKUP/RESTORE (DISKETTE). Set the **Type** to ALARM.	
4	Enter RESTORE in the **Action** field.	
5	Enter or press CHOICES to select the name of the database in the **Database Name** field.	
6	Press EXECUTE and confirm.	
7	You are prompted for the diskette. Insert the diskette into the drive. Press ENTER.	
8	When DND successfully completes the backup/restore, the following message is displayed: `The Command Completed Successfully`	
9	**Stop! End of Task.**	
	Select a What's Next Option	SE 22.1.1U

DND Forms: Back Up/Restore Report Formats to Diskette

22.12U

Background

When to Use

Use this General Task to backup/restore report formats from diskette.

Before You Begin

The diskette must be formatted. See GT 22.9U.

Related Information

For related information, refer to Chapter 22, Backup and Restore.

Instructions

Task Complete the following steps to backup and restore report formats from diskette..

Step	Action	Reference
1	From the DND Forms MAIN MENU, select DATABASE ADMINISTRATION, then select BACKUP/RESTORE.	
2	Select t REPORT FORMAT BACKUP/RESTORE (DISKETTE).	
3	Insert the diskette into the drive, when prompted.	
4	Choose an action: ■ To backup the report formats, enter `BACKUP` in the **Action** field. ■ To restore the report formats, enter `RESTORE` in the **Action** field.	
5	Press EXECUTE and confirm.	
6	When DND successfully completes the backup/restore, the following message is displayed: `The Command Completed Successfully`	
7	If you have just completed a backup, make sure the diskette is labeled with the number sequence and contents.	
8	**Stop! End of Task**	
	Select a What's Next Option	SE 22.1.1U

DND Forms: Moving a Database from One DND to Another

22.13U

Background

When to Use

Use this General Task to move a database from one DND to another.

Before You Begin

WARNING:
The same version of DND software must be running at both sites.

Related Information

For related information, refer to *Chapter 22, Backup and Restore*.

Instructions

Task

Complete the following steps to move a database from one DND to another.

Step	Action	Reference
1	Do a SELECTIVE BACKUP of the DACS database on tape.	GT 22.1U or GT 22.2G
2	Bring the tape to the other DND. Provision a DACS at this DND with the same **Site Name**.	GT 5.1U or GT 5.2U
3	Insert the tape and do a SELECTIVE RESTORE.	GT 22.2U or GT 22.2G
4	Finally, delete the DACS at the old site.	GT 5.7U

24-Hour Performance Monitoring General Tasks

23

Contents

- DND GUI/Forms:
  - Configuring DACS II for 24-Hour Performance Monitoring GT 2.5U
  - Browsing 24-Hour Performance Monitoring Data GT 23.1U
  - Resetting 24-Hour Performance Monitoring Statistics GT 23.2U
  - Creating a 24-Hour Performance Monitoring Report ASCII File GT 23.3U

DND Forms: Browsing 24-Hour Performance Monitoring Data

23.1U

Background

When to Use

Use this General Task to retrieve 24-hour performance statistics for each NPC in a specified range.

This task applies only to the DND Forms Performance Monitoring feature.

Before You Begin

To display the 24-HOUR PERFORMANCE option on the PROVISIONING menu, set the environment variable `PM24HR_NONFT` to **YES**. For details, see Chapter 2: Getting Started.

At least one performance monitoring collection interval must have taken place before you can browse 24-hour performance monitoring data. Remember that at least 24 hours must elapse from a DND restart before the DND will process the PM data from the DACS.

Related Information

For related information, see Chapter 23, 24-Hour Performance Monitoring.

Instructions

Task

To browse the 24-hour performance statistics, follow these steps:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select 24-HOUR PERFORMANCE.	
2	Select *BROWSE* in the **Action**: field.	
3	Specify search criteria.	
4	Press EXECUTE. A search is conducted for the specified NPCs. Also, the data for the first NPC is displayed.	
5	To display the data for the next NPC, press NEXT.	
6	To stop the *BROWSE*, press RETURN.	
7	**Stop! End of Task.**	
	Select a What's Next Option.	SE 23.1.1U

SE 23.1.1U: What's Next Options

What's Next?

Perform one of the following options when the task is completed:

Options	Reference
Select another **Action**.	GT 23.1U - GT 23.2U
Select TOPMENU to return to the MAIN MENU.	
Select QUIT to return to the PROVISIONING MENU.	

DND Forms: Resetting 24-Hour Performance Monitoring Statistics

23.2U

Background

When to Use

Use this General Task to reset performance monitoring statistics for an NPC on a DACS. The counts are reset to zero for Number of Days Collected, Number of Days Since Reset, and Number of Errored Days.

This task applies only to the DND Forms Performance Monitoring feature.

Related Information

For related information, see Chapter 23, 24-Hour Performance Monitoring.

Instructions

Task

To reset to zero the number of days collected, the number of days since reset, and the number of errored days, follow these steps:

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PROVISIONING, then select 24-HOUR PERFORMANCE.	
2	Select *RESET* in the **Action** field.	
3	Select the NPC by specifying any of the following: **NPC ID**, **Number (Hier)**, or **Number (Ext)**. When you specify either **Number (Hier)** or **Number (Ext)** the other is automatically supplied.	
4	Press EXECUTE.	
5	**Stop! End of Task.**	
	Select a What's Next Option.	SE 23.1.1U

DND GUI: Creating a 24-Hour Performance Monitoring Report ASCII File

23.3U

Background

When to Use

Use this General Task to create an ASCII file version of the 24-HOUR PERFORMANCE MONITORING Report. The ASCII file can be used for exporting to various programs, such as a spreadsheet application, for additional data manipulation.

This task applies only to the DND GUI Performance Monitoring feature.

Before You Begin

You must have the 24-Hour Performance Monitoring set at the DACS (GT 2.5U) and you must have performance monitoring data for at least one of the DACS frames in the DND system.

Related Information

For related information, refer to:

- *Chapter 2, Getting Started*
- *Chapter 23, 24 Hour Performance Monitoring.*

Instructions

Task

Complete the following steps to create an ASCII file of the 24-HOUR PERFORMANCE MONITORING Report.

Step	Action	Reference
1	Right-click and hold in the CDE window. A pull-down menu appears on the screen.	
2	Select *TERMINAL* from the menu. A terminal window appears on the screen.	
3	At the UNIX prompt, type the following command: unix> **pmdata -d <dbname> [-f output_file]** or... unix> **pmdata -d <dbname> -t "mm/dd/yyyy"** Where: **dbname** (required) = the database name (**db01**, ..., **db60)** **output_file** (optional) = the desired name of the ASCII file. The default for **output_file** is to display to the screen. **mm/dd/yyyy** (optional) = the desired date format The **-f output_file** and **-t mm/dd/yyyy** options may be used together.	
4	**Stop! End of Task.**	

Task Administration General Tasks

24

Contents

- DND GUI
  - Displaying Scheduled Tasks GT 24.1G
  - What's Next for Options for Task Administration SE 24.1.1G
  - Deleting Scheduled Tasks GT 24.2G
- DND Forms
  - Displaying Scheduled Tasks GT 24.1U
  - What's Next for Options for Task Administration SE 24.1.1U
  - Displaying Scheduled Tasks GT 24.1U
  - Deleting a Scheduled Task GT 24.2U
  - Displaying Print Jobs GT 24.3U
  - Deleting a Print Job GT 24.4U

DND GUI: Displaying Scheduled Tasks

24.1G

Background

When to Use

Use this General Task to display a scheduled task, or tasks for a particular site or user, or all scheduled tasks.

Before You Begin

To display a scheduled task, the task must have been scheduled when an **Action** was executed on a DND form..

Related Information

For related information, refer to Chapter 24, Task Administration.

Instructions

Task Complete the following steps to display a scheduled task:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Task Administration...** The Task Administration form will appear on the screen.	
3	Select *LIST TASKS* from the **Action:** field.	
4	In the **Selection Options:** box, select Site Name and/or User ID, or leave blank.	
5	Click Continue... . If you entered **Selection Options:,** the **Selection Values:** box appears.	
6	In the **Selection Values:** box, select one Site Name and/or enter a User ID. Click Continue... .	
7	Press Execute .	
8	Use NEXT and PREVIOUS to display descriptions of the other tasks on the list.	
9	**Stop! End of Task.**	
	Select a What's Next Option.	SE 24.1.1G

SE 24.1.1G What's Next Options for Task Administration

What's Next? Perform one of the following options below upon completion of the task:

Options	Reference
Click New Action to perform a new action.	GT 24.1G - GT 24.2G
Click Restart to clear and initialize the form and select an **Action:**.	
Click Close to exit the TASK ADMINISTRATION form.	

DND GUI: Deleting a Scheduled Task

24.2G

Background

When to Use

Use this General Task to delete a scheduled task.

Before You Begin

To delete a scheduled task, the task must have been scheduled when an **Action** was executed on a DND form.

Related Information

For related information, refer to Chapter 24, Task Administration.

Instructions

Task Complete the following steps to delete a scheduled task:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **Task Administration...** The Task Administration form will appear on the screen.	
3	Select *DELETE TASKS* or *DELETE ALL TASKS* from the **Action:** field.	
4	In the **Selection Options:** box, select Site Name and/or User ID, or leave blank.	
5	Click Continue... . If you entered **Selection Options:,** the **Selection Values:** box appears.	
6	In the **Selection Values:** box, select a Site Name and/or enter a User ID. Click Continue... .	
7	Click Execute .	
8	Use NEXT and PREVIOUS to display descriptions of the tasks on the list. If you are deleting individual tasks, click on each task to be deleted.	
9	To delete the tasks, click Delete .	
10	**Stop! End of Task.**	
	Select a What's Next Option.	SE 24.1.1G

DND Forms: Displaying Scheduled Tasks

24.1U

Background

When to Use

Use this General Task to display a scheduled task, or tasks for a particular site or user, or all scheduled tasks.

Before You Begin

To display a scheduled task, the task must have been scheduled when an **Action** was executed on a DND form. See “DND Forms: The Execute Function Key” in Chapter 3 for details.

Related Information

For related information, refer to Chapter 24, Task Administration.

Instructions

Task

Complete the following steps to display a scheduled task:

Step	Action	Reference
1	From the DND MAIN MENU, select TASK ADMINISTRATION.	
2	From the TASK ADMINISTRATION MENU, select *TASK MANAGEMENT*.	
3	Select *LIST* from the **Action** field.	
4	Enter a **Type.** Enter one of the following: *TASK, SITE, USER*, or *ALL*.	
5	Enter a DACS **Site Name** or press CHOICES to select one.	
6	If *TASK* or *USER* is selected for **Type**, enter the **User ID**.	
7	Press Execute .	
8	Use NEXT and PREVIOUS to display descriptions of the other tasks on the list.	
9	**Stop! End of Task.**	
	Select a What's Next Option.	SE 24.1.1U

SE 24.1.1U What's Next Options for Task Administration

What's Next?

Perform one of the following options when the task is completed:

Options	Reference
From the TASK MANAGEMENT form, select an **Action** to perform another action on the current task.	GT 24.1U - GT 24.2U
From the PRINTER QUEUE STATUS form, select an **Action** to perform another action on the printer queue.	GT 24.3U - GT 24.4U
From any TASK ADMINISTRATION form, select TOPMENU to return to the MAIN MENU.	
From any TASK ADMINISTRATION form, select QUIT to return to the TASK ADMINISTRATION MENU.	

DND Forms: Deleting a Scheduled Task

24.2U

Background

When to Use

Use this General Task to delete a scheduled task.

Before You Begin

Before you delete specified tasks, it is a good idea to take a look at them by selecting the *LIST* from the **Action** field. A *DELETE* **Action** does not automatically list tasks.

To delete a scheduled task, the task must have been scheduled when an **Action** was executed on a DND form. See “DND Forms: The Execute Function Key” in Chapter 3 for details.

Related Information

For related information, refer to Chapter 24, Task Administration.

Instructions

Task Complete the following steps to delete a scheduled task:

Step	Action	Reference
1	From the DND MAIN MENU, select TASK ADMINISTRATION.	
2	From the TASK ADMINISTRATION MENU, select TASK MANAGEMENT.	
3	Select *DELETE* from the **Action** field.	
4	Enter a **Type.** Enter one of the following: *TASK, SITE, USER*, or *ALL*.	
5	Press Execute and confirm. ■ If the **Type** selected is *TASK*, the list of scheduled tasks is displayed. Use NEXT and PREV to locate the task to be deleted. Select the task, press Execute and confirm. Repeat for each task to be deleted. ■ If the **Type** selected is *SITE, USER,* or *ALL*, the `command completed successfully` message is displayed.	
6	**Stop! End of Task.**	
	Select a What's Next Option.	SE 24.1.1U

DND Forms: Displaying Print Jobs

24.3U

Background

When to Use

Use this General Task to list the print jobs for a particular printer.

Before You Begin

Jobs can be sent to the printer from the Reports Administration form and by using the PRINT key.

Related Information

For related information, refer to Chapter 24, Task Administration.

Instructions

Task

Complete the following steps to display the print queue:

Step	Action	Reference
1	From the DND MAIN MENU, select TASK ADMINISTRATION.	
2	From the TASK ADMINISTRATION MENU, select PRINT QUEUE STATUS.	
3	From the **Action** field, press CHOICES to select `LIST`.	
4	From the **Printer Name** field, press CHOICES to select a printer.	
5	Press Execute and confirm. The `command completed successfully` message is displayed. The print jobs queued to the specified printer are listed on the form.	
6	**Stop! End of Task.**	
	Select a What's Next Option.	SE 24.1.1U

DND Forms: Deleting a Print Job

24.4U

Background

When to Use

Use this General Task to delete a print job.

Before You Begin

Jobs can be sent to the printer from the Reports Administration form and by using the PRINT key.

Related Information

For related information, refer to Chapter 24, Task Administration.

Instructions

Task

Complete the following steps to delete a print job:

Step	Action	Reference
1	From the DND MAIN MENU, select TASK ADMINISTRATION.	
2	From the TASK ADMINISTRATION MENU, select PRINT QUEUE STATUS.	
3	From the **Action** field, press CHOICES to select *CANCEL* **.**	
4	From the **Printer Name** field, press CHOICES to select a printer.	
5	Press Execute . The jobs are listed as for the `LIST` **Action**. However, an additional field, **Cancel**, appears before **Job No.**.	
6	Using Enter, move the cursor to the beginning of the line for the job you want to cancel and type an x or X.	
7	Press CANCEL. **NOTE:** If the cursor remains on **Display Page**, you are in *LIST* rather than in *CANCEL*. Press QUIT and enter *CANCEL* as an **Action**.	
8	**Stop! End of Task.**	
	Select a What's Next Option.	SE 24.1.1U

DACS Message/Passthrough General Tasks

25

Contents

- DND GUI
  - Sending a Message to the DACS GT 25.1G
  - Creating a Telnet Link to a TCP/IP DACS GT 25.2G
- DND Forms
  - Entering Multiplexed Passthrough GT 25.1U
  - Entering Full Passthrough GT 25.2U
  - Aborting Passthrough GT 25.3U
  - Creating a Script File GT 25.4U
  - Executing a Script File GT 25.5U
  - Writing a Script File to DOS Diskette GT 25.6U
  - Reading a Script File From DOS Diskette GT 25.7U

DND GUI: Sending a Message to the DACS

25.1G

Background

When to Use

Use this General Task to send MML DACS commands to communicate directly to the DACS. The DACS response is displayed on the screen in a separate Netscape window.

Before You Begin

Before you begin this task, make sure the DACS you wish to send a message to is In-Service and communicating to the DND. Also, you cannot send a message to the DACS, in this way, if a **Full Passthrough** session is in progress at the same DACS.

Related Tasks

To abort a DACS Message or Passthrough session, refer to GT 25.3U.

Related Information

For related information, refer to Chapter 25, DACS Message/Passthrough.

Instructions

Task

Complete the following steps to send commands to a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *DACS Message...* The DACS MESSAGE form appears on the screen.	
3	Select the DACS to communicate with in the **Current Site Choices:** field.	
4	Select an output option in the **DACS Message Filtering:** field.	
5	Click Start to establish a connection to the DACS.	
6	Enter the DACS MML command. There are three ways to enter a DACS command: ■ Type in the command in the **DACS Command:** field. The **Command:** field is case insensitive and the ending semi-colon may be omitted. ■ Select a command from the scroll list available from the **Saved:** field. ■ Select a command from the **Saved:** field and edit it to make a new command.	
7	When you have approved the information on the form, click Execute. If the command completes successfully, a separate Netscape window appears with the DACS response to the command entered.	
8	(Optional) Save or delete commands from the **Saved:** box.	SE 25.1.1G
9	At this point, you can: ■ Enter another command, return to step 6. ■ Click Stop to end the connection with this DACS. Return to step 3 to connect to another site. ■ Click Close to to exit the DACS Message form.	
10	**Stop! End of Task.**	

SE 25.1.1G Saved: Commands

Using the Saved: Commands box

To avoid retyping commands, you can save DACS commands in a scroll list and recall them later for reuse in the same DACS Message session. When you exit the DACS Message form, the entries in the **Saved:** box are cleared.

To:	Action:
Save the current entry in the DACS Command: field to the **Saved:** scroll list	Click Save.
Select an entry from the **Saved:** scroll list	Click on the arrow next to the **Saved:** field and select a command. The selected command will appear in the **DACS Command:** field.
Delete an entry from the **Saved:** scroll list	Select the entry from the **Saved:** scroll list and click Delete .

DND GUI: Sending a Message to the DACS

25.2G

Background

When to Use

Use this General Task to create a Telnet session to communicate directly to a DACS.

NOTE:
The DACS II ISX does not support telnet capability.

Before You Begin

Before you begin this task, make sure the DACS II you wish to connect to has been provisioned with a TCP/IP link. Also, you must have a login name and password at the same DACS.

Related Information

For related information, refer to Chapter 25, DACS Message/Passthrough.

Instructions

Task

Complete the following steps to send commands to a DACS:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Telnet...* The DACS TELNET form appears on the screen.	
3	Select the DACS to communicate with in the **Current Site Choices:** field.	
4	Click Continue... .	
5	Click Execute to establish a connection to the DACS.	
6	If the Java Security dialog box appears, select **Remember this decision**, then click on **Grant** to all the privileges required by the DND for the telnet session.	
7	Enter the DACS user name and password at the prompts.	
8	At this point, you can enter MML commands and see the responses from the DACS II.	
9	**Stop! End of Task.**	

DND Forms: Entering Multiplexed Passthrough

25.1U

Background

When to Use

Use this General Task to enter a multiplexed passthrough.

Before You Begin

Before you establish a multiplexed passthrough session, the DACS must be in-service and communicating.

A request for a multiplexed passthrough session will be denied if a full passthrough session is already established.

Related Information

For related information, refer to Chapter 25, DACS Message/Passthrough.

Instructions

Task

Complete the following steps to enter a multiplexed passthrough.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PASSTHROUGH, then choose MULTIPLEXED PASSTHROUGH.	
2	From the *WHICH DACS* menu, select a DACS.	
3	From the *Output Choices?* menu, select the types of output to be displayed.	
4	Enter a DACS command.	
5	To execute the DACS command, press Execute.	
6	Wait for the command to complete, before entering another DACS command.	
7	When done, press EXIT. You are immediately returned to the DND Forms MAIN MENU.	
8	**Stop! End of Task.**	

DND Forms: Entering Full Passthrough

25.2U

Background

When to Use

Use this General Task to enter a full passthrough.

Before You Begin

A request for a full passthrough session will be denied if a multiplexed passthrough session is already established.

For SNIDER protocol only:

- The DACS must be in service.
- The request to enter a SNIDER full passthrough session will be queued behind any provisioning requests in progress.

Related Information

For related information, refer to Chapter 25, DACS Message/Passthrough.

Instructions

Task

Complete the following steps to enter a full passthrough..

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PASSTHROUGH, then choose FULL PASSTHROUGH.	
2	From the *WHICH DACS* menu, select a DACS.	
3	Enter the DACS commands.	
4	When done, press EXIT. You are immediately returned to the DND Forms MAIN MENU. **NOTE:** The Del key also exits full PASSTHROUGH, and is quicker when alarm responses are scrolling.	
5	**Stop! End of Task.**	

DND Forms: Aborting Passthrough

25.3U

Background

When to Use

Use this General Task to terminate another user's passthrough session.

Before You Begin

To terminate another user's passthrough session, you must use a login with system administration privileges, such as dacsadm.

Related Information

For related information, refer to Chapter 25, DACS Message/Passthrough.

Instructions

Task

Complete the following steps to terminate another user's passthrough session.

Step	Action	Reference
1	Select PASSTHROUGH ABORT from the DND Forms MAIN MENU.	
2	From the PASSTHROUGH ABORT window, move the cursor to the session to be terminated using NEXT or PREVIOUS .	
3	Press SELECT to select the session to be terminated.	
4	Repeat Steps 2 and 3 to select other passthrough sessions to be terminated.	
5	Press ENTER. The selected passthrough sessions are cancelled.	
6	When done, press QUT. You are immediately returned to the DND Forms MAIN MENU.	
7	**Stop! End of Task.**	

DND Forms: Creating a Script File

25.4U

Background

When to Use

Use this General Task to create a script file.

Before You Begin

Some line editing rules are as follows:

- The space bar and any other character push the text to the right.
- BACKSPACE moves the cursor to the left, erasing what was there.
- ← moves the cursor to the left over the text that was there, leaving it intact.
- There is room for two screen lines in the highlighted region. However, they are only one script line. One ENTER moves the cursor to the start of the second screen line. The only way back to the first screen line is by backspacing.
- To correct a line, change the **Mode** to *CHANGE* and specify the **Line** to be changed. The line is displayed and can be accessed in the highlighted area.
- To delete a line, *CHANGE* it to all blanks.

(Continued on next page)

Background (Continued)

Before you Begin (Continued)

- To insert a line, change **Mode** to *INSERT* and enter the **Line** that the new line will have when it will have been inserted. The current line of that number appears in the highlighted area. Blank it out first, and then retype. Blanking out in this case has no effect on the line. When you press ENTER twice, the typed line will be inserted at the specified location and subsequent lines, including the line formerly at **Line**, will be incremented by 1.

Related Information

For related information, refer to Chapter 25, DACS Message/Passthrough.

Instructions

Task

Complete the following steps to create a script file.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PASSTHROUGH, then choose FRAME COMMAND SCRIPT.	
2	In the **Action** field, select *EDIT.*	
3	In the **Script Name** field, enter a name for the script.	
4	For **Mode**, select *INSERT.*	
5	For **Line**, enter `001.` The cursor moves to a highlighted area, where the line is to be typed.	
6	Type the line. Note that the entire space is reserved only for the line specified by **Line**.	
7	When you have finished, press ENTER twice or press Ctrl + p. The line you have typed appear on the screen below. The cursor returns to **Action**. The **Line** is incremented by 1.	
8	Move the cursor to the highlighted area for typing the next line.	
9	Repeat Steps 5 through 7 until you have entered all lines.	

Step	Action	Reference

10	When you are ready to accept the file, press EXECUTE and confirm.
	
	DND adds the terminating `;` character, and the minimum required number of `:` characters, where needed.
	
	DND overrides the correlation tag (CTAG) number field in order to track the command line by adding `:ww` to the file.
	
	DND adds the logout DAX command at the end of the script file, if the script would end with login DAX in effect:
	
	`LGT-USER::::DAX`
	
	When the script has been stored in the DND's database, the message is displayed:
	
	`The command completed successfully`	

11	You can recall the script by entering an `EDIT` **Action** and the **Script Name**.	
	Select a What's Next Option.	SE 25.4.1U

SE 25.4.1U What's Next Options

What's Next? Perform one of the following options when the task is completed:

Options	Reference
Select another **Action**.	GT 25.4U - GT 25.7U
Select TOPMENU to return to the MAIN MENU.	

DND Forms: Executing a Script File

25.5U

Background

When to Use

Use this General Task to execute a script file.

Before You Begin

You must have edited a script file.

The DACS must be in service and communicating with DND.

Related Information

For related information, refer to Chapter 25, DACS Message/Passthrough.

Instructions

Task

Complete the following steps to execute a script file.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select PASSTHROUGH, then choose FRAME COMMAND SCRIPT.	
2	In the **Action** field, select *EXECUTE.*	
3	Enter or press CHOICES to select the **Script Name**.	
4	Enter the **Site Name** where the script is to run.	
5	Press EXECUTE and confirm. A COMMAND RESPONSE window notifies you that *The command will be executed in background.*	
6	Acknowledge the notification. The password for the login DAX command is interactive only. The execution of a script file with the login DAX command causes the **DAX Login Password** field to appear.	
7	Fill in the password. If the login succeeds, the script goes on executing. If the login fails, the script aborts. When the DND has finished running the script, it displays a **Status** message: `Script name name is completed for site site.`	
8	To view the results of the script execution, from the DND MAIN MENU, select REPORT OPERATIONS, then select SCRIPT LOG.	
	Stop! End of Task.	

DND Forms: Writing a Script File to DOS Diskette

25.6U

Background

When to Use

Use this General Task to write a file to a DOS diskette.

Before You Begin

Before you complete this procedure, you must have edited or created a script file.

Related Information

For related information, refer to Chapter 25, DACS Message/Passthrough.

Instructions

Task Complete the following steps to write a file to a DOS diskette.

Step	Action	Reference
1	Insert the formatted DOS diskette into the disk drive.	22.9U
2	From the DND Forms MAIN MENU, select PASSTHROUGH, then choose FRAME COMMAND SCRIPT.	
3	In the **Action** field, select *DOSWRITE.* A list of file names is displayed. If a file exists on both the DND and the DOS diskette, an asterisk (*) appears after the filename.	
4	Using the arrow keys, position the cursor at the name you wish to select and press SELECT. A dash appears before the name of a selected file.	
5	Repeat Step 4 to select each file to be written on the DOS diskette. Use UNSELECT to cancel a selection, and SEL_ALL to select all.	
6	When you have finished, press ENTER. The cursor returns to the original FRAME COMMAND SCRIPT screen. **NOTE:** Press ENTER only once, and wait. The system may be a little slow, depending on the level of activity. If you continue to press ENTER, you will miss some screens.	

Step	Action	Reference
7	When you are ready to start writing the files, press EXECUTE and confirm. DND displays a message, *working on:* name, while it writes the file, and *The command is finished* when all the files have been written. **NOTE:** If you have selected files that appear with a *, the DOS files will be overwritten by the files from DND.	
	Stop! End of Task.	
	Select a What's Next Option	SE 25.4.1U

DND Forms: Reading a Script File From DOS Diskette

25.7U

Background

When to Use

Use this General Task to read a script file from a DOS diskette.

Before You Begin

You must have a DOS diskette with script files on it.

Related Information

For related information, refer to Chapter 25, DACS Message/Passthrough.

Instructions

Task

Complete the following steps to read a script file from a DOS diskette.

Step	Action	Reference
1	Insert the DOS diskette into the disk drive.	
2	From the DND Forms MAIN MENU, select PASSTHROUGH, then choose FRAME COMMAND SCRIPT.	
3	In the **Action** field, select *DOSREAD.* A list of file names is displayed. If a file exists on both the DND and the DOS diskette, an asterisk (*) appears after the file name.	
4	Using the arrow keys, position the cursor at the name you wish to select and press SELECT. A dash appears before the name of a selected file.	
5	Repeat Step 4 to select each file to be read from the DOS diskette. Use UNSELECT to cancel a selection, and SEL_ALL to select all.	
6	When you have finished, press ENTER. **NOTE:** Press ENTER only once, and wait. The system may be a little slow, depending on the level of activity. If you continue to press ENTER, you will miss some screens.	
7	When you are ready, press EXECUTE and confirm. The DND displays a message, *working on:* `name`, while it reads the file, and *The command is finished* when all the files have been read.	
	Select a What's Next Option	SE 25.4.1U
	Stop! End of Task.	

Outage Logs General Tasks

26

Contents

- DND GUI
  - Maintaining Outage Log Data GT 26.1G
- DND Forms
  - Entering Outage Log Data GT 26.1U
  - Inserting a Record in the NPC Outage Log - Example GT 26.2U

Maintaining Outage Log Data

26.1G

Background

When to Use

Use this General Task to maintain Outage Logs for circuits and NPCs.

Related Tasks

You can obtain reports on the Outage Logs. For details, see Chapter 17, Report Operations.

Related Information

For related information, refer to Chapter 26, Outage Logs.

Instructions

Task

Complete the following steps to obtain the OUTAGE LOG data.

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select *Outage Log...* The OUTAGE LOG form appears on the screen.	
3	Select a DACS in the **Site Name** field.	
4	Specify an **Outage Type**. Select either `NPC` or `CIRCUIT`.	
5	Enter an ID. Specify a valid NPC ID or CIRCUIT ID.	
6	Choose an **Action**. ■ `INSERT` to add a record to the log ■ `MODIFY` to modify an existing record ■ `DELETE` to remove a record from the log ■ `DESTROY` to remove all records for an ID from the log	
7	**Click** Continue.	
8	Choose one of the following: ■ For an `INSERT` **Action,** specify the Date/Time Outage Occurred and Date/Time Outage Cleared. ■ For a `MODIFY` **Action**, modify the Date/Time Outage Occurred and Date/Time Outage Cleared. ■ For a `DELETE` **Action**, display the record to be deleted by using the NEXT and PREV buttons. ■ For a `DESTROY` **Action**, proceed to Step 133.	
9	**Click** Continue. Click Execute. The DND completion message is displayed.	

DND Forms: Entering Outage Log Data

26.1U

Background

When to Use

Use this General Task to obtain the OUTAGE LOG data.

Related Tasks

You can obtain reports on the Outage Logs. For details, see Chapter 17, Report Operations..

Related Information

For related information, refer to Chapter 26, Outage Logs.

Instructions

Task

Complete the following steps to obtain the OUTAGE LOG data.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select DATABASE ADMINISTRATION, then select ENTER OUTAGE DATA. The OUTAGE LOG form is displayed.	
2	Enter the **Site Name**.	
3	Specify an **Outage Type**. Enter either `NPC` or `CIRCUIT`.	
4	Choose an **Action**: ■ `INSERT` to add a record to the log ■ `CHANGE` to modify an existing record ■ `DELETE` to remove a record from the log ■ `DESTROY` to remove all records from the log ■ For a `DELETE` or `DESTROY`, skip to Step 6.	
5	For an `INSERT` **Action** specify the Outage ID, Date OUT, Time OUT, Date In, and Time In. The Outage ID is either an NPC ID or Circuit ID depending on the Outage Type entered. Skip to Step 9.	
6	For a `CHANGE` **Action**, specify the Record No, Outage ID, then change the date and time fields as necessary. Skip to Step 9.	

Step	Action	Reference
7	For a DELETE **Action**, specify the Record No. and Outage ID, then go to Step 9.	
8	For a DESTROY **Action**, specify the Outage ID, then go to Step 9.	
9	Press EXECUTE and confirm. The DND completion message is displayed. **NOTE:** If you get a COMMAND DENIAL WINDOW with a message: `CANNOT INSERT OR CHANGE OUTAGE LOG WHEN OUTAGE ID NOT IN SYSTEM` then your NPC has not been provisioned when the **Outage Type** is NPC or your circuit has not been provisioned when the **Outage Type** is CIRCUIT.	

DND Forms: Inserting a Record in the NPC Outage Log - Example

26.2U

Background

When to Use

Use this General Task to insert a record into the NPC outage log.

Related Information

For related information, refer to Chapter 26, Outage Logs.

Instructions

Task

The following example shows how to insert a record in the NPC outage log.

Step	Action	Reference
1	From the DND Forms MAIN MENU, select DATABASE ADMINISTRATION, then select OUTAGE LOG.	
2	On the OUTAGE LOG form, enter the following data: — **Site Name**: `DACS01` — **Outage Type**: `NPC` — **Action**: `INSERT` — **Outage ID**: `NPC01101` — **Date Out**: `01 Nov 99` — **Time Out**: `01:34:26` — **Date In**: `01 Dec 99` — **Time In**: `06 15 22` DND automatically assigns the next available **Record No.** to the entry.	
3	Press EXECUTE and confirm. **NOTE:** If you get a COMMAND DENIAL WINDOW with a message `CANNOT INSERT OR CHANGE OUTAGE LOG WHEN OUTAGE ID NOT IN SYSTEM`, then your NPC has not been provisioned when the **Outage Type** is `NPC` or your circuit has not been provisioned when the **Outage Type** is `CIRCUIT`.	
4	When DND successfully completes inserting the record, the following message is displayed: `The Command Completed Successfully`	
5	**Stop! End of Task.**	

Fault Management and Alarm Surveillance General Tasks

27

Contents

- DND GUI
  - Monitoring Alarms GT 27.1G
  - Setting Alarm Selection and Sort Criteria GT 27.2G
  - Acknowledging an Alarm GT 27.3G
  - Generating an NE Alarm Summary Report GT 27.4G
  - Adding New Sounds for Audible Alarms GT 27.5G
- DND Forms
  - Retrieving and Acknowledging Alarms GT 27.1U

DND GUI: Monitoring Alarms

27.1G

Background

When to Use

Use this General Task to monitor the active alarms in the Alarm Surveillance Form.

Related Information

For related information, refer to Chapter 27, Fault Management and Alarm Surveillance.

Instructions

Task

Complete the following steps to monitor active alarms:

Step	Action	Reference
1	Click Alarms located at the top of the DND USER INTERFACE window.	
2	Select *ALARM SURVEILLANCE...* The ALARM SURVEILLANCE window will appear on the screen.	
3	(Optional) Customize the alarm report by pressing the CHANGE SELECTION AND SORT CRITERIA and setting the selection and sort criteria to determine which alarms will be displayed in the report.	GT 27.2G
4	View the alarms.	
5	Acknowledge any alarms that you wish to record with your login and additional information.	GT 27.3G
6	Press Close to close the window when not observing alarms.	
7	**Stop! End of Task.**	

DND GUI: Setting Alarm Selection and Sort Criteria

27.2G

Background

When to Use

Use this General Task to set the selection and sort criteria in the Alarm Surveillance Form.

Related Information

For related information, refer to Chapter 27, Fault Management and Alarm Surveillance.

Instructions

Task Complete the following steps to set alarm selection and sort criteria:

Step	Action	Reference
1	Click CHANGE SELECTION AND SORT CRITERIA located on the ALARM SURVEILLANCE Form. The Alarm Surveillance Selection and Sort Control Form will appear on the screen.	
2	Customize the alarm report by setting the date and time fields and ranges.	SE 27.2.1G SE 27.2.2G
3	Select Alarm Severity or Intervention Level.	
4	If you selected Alarm Severity in Step 3, specify the Alarm Severity criteria by selecting each alarm severity that you want to appear on the alarm report. If you selected Intervention Level in Step 3, specify the Intervention Level criteria by selecting each alarm intervention level that you want to appear on the alarm report.	
5	Specify the Intervention Level criteria by selecting each intervention level that you want to appear on the alarm report.	
6	Specify the Alarm Category criteria by selecting each alarm category that you want to appear on the alarm report.	
7	Specify the NE TYPE criteria by selecting each NE Type that you want to appear on the alarm report.	
8	Select an Acknowledgement Status of either Acknowledged, Unacknowledged, or both. If you select Acknowledged, you can enter a Login Name so that only alarms that have been acknowledged by that user will be displayed. **NOTE:** If you select Unacknowledged, the DND will not let you specify a Login Name.	

Step	Action	Reference
9	Specify the Location criteria by selecting one Sitename that you want to appear on the alarm report. **NOTE:** An asterisk (*) in the Location field specifies all sites.	
10	Click on Default Selection if you want to reset all fields to the default selection criteria.	
11	Set the sort criteria by selecting the sort order for each criteria. For example, if you select 1 for the Date field, and 2 for Alarm Severity, the alarms will be sorted first by date and second by alarm severity. Specify the sort direction by selecting the appropriate radio button below the sort field. **NOTE:** Click on Default Sort if you want to reset all fields to the default sort criteria.	
12	Press Set Criteria to implement the selection and sort criteria. The alarm report in the Alarm Surveillance Form will be updated. **NOTE:** Selection and Sort criteria are not saved between login sessions. When logging in again, the default selection and sort criteria will be used.	
13	**Stop! End of Task.**	

SE 27.2.1G: Setting the DATE and TIME for the Alarm Surveillance Display

Procedure

Perform the steps below to set the **DATE** and **TIME** fields for the selection and sort criteria:

IF you want to specify the...	THEN...
DATE	Select the **Day:**, **Month:**, and **Year:** option. Each of these 3 fields collectively specifies the **DATE**.
TIME	Select the **Hour:**, **Minutes:**, and **Second:** options. Each of these 3 fields collectively specifies the **TIME**.

Stop! End of Procedure.

SE 27.2.2G: Entering the Range for the Date or Time Field

Procedure

Perform ONE of the steps below to set the **Range:** for a the date or time field:

IF you want a report on...	THEN select...
The specified field value, i.e., the date and time must match exactly.	The (**=**) option in the **Range:** field
The field values less than the specified field value	The (**<**) option in the **Range:** field
The field values greater than the specified field value	The (**>**) option in the **Range:** field

For example, if the **Year:** field indicates a value of *1998*, and the **Month:** field indicates a value of *Sep,* and the **Day:** field indicates a value of 23, selecting the (**>**) option in the **Range:** field will generate an alarm report containing alarms that occured after September 23, 1998.

Stop! End of Procedure.

DND GUI: Acknowledging an Alarm

27.3G

Background

When to Use

Use this General Task to acknowledge an alarm in the Alarm Surveillance Form.

Related Information

For related information, refer to Chapter 27, Fault Management and Alarm Surveillance.

Instructions

Task Complete the following steps to acknowledge an alarm:

Step	Action	Reference
1	Do one of the following: ■ Left-click once on an alarm entry. The alarm will be backlit. Then Click Acknowledgement . ■ Left-double-click on an alarm entry. The Alarm Surveillance Acknowledgment Control Form appears. **NOTE:** If the form is already open, the form will be pushed to the top of the other windows, but its previous contents will not be overwritten.	
2	Enter or modify the comments in the Remarks field.	
3	Do one of the following: ■ To save the acknowledgment, press Acknowledge . ■ To delete the acknowledgment, press Unacknowledge . ■ To modify the acknowledgment, press Reacknowledge . **NOTE:** You can modify or delete an acknowledgment only if you are the owner.	
4	**Stop! End of Task.**	

DND GUI: Generating an NE Alarm Summary Report

27.4G

Background

When to Use

Use this General Task to generate an NE alarm summary report when new alarms appear in the DND.

Before You Begin

Before you begin this task, you should have noticed the new alarms that have been introduced into the system indicated by the red arrow either to the left of the Alarm... button, or located to the left of the Alarm Status Indicator (ASI). The absence of this red arrow indicates no new alarms to display.

Related Information

For related information, refer to Chapter 27, Fault Management and Alarm Surveillance.

Instructions

Task

Complete the following steps to generate and display an alarm summary report:

Step	Action	Reference
1	On the DND Main window screen, Click New Alarm Summary... . The NE SUMMARY window will appear on the screen.	
2	Click the button indicating the name of the NE which has a new alarm (red arrow). The NE Alarm Summary Report will appear in a separate Netscape window.	
3	Close the Netscape report window by either: ■ Double-clicking the Window Menu icon in the upper-left corner of the window ■ Clicking the Close Window button on the report window.	
4	**Stop! End of Task.**	
	Select a What's Next option.	SE 27.4.1G

SE 27.4.1G: What's Next Options

What's Next? Perform ONE of the following options below upon completion of the task:

Options	Reference
Click another active DACS alarm summary button.	GT 27.4G
Click Close to exit the NE SUMMARY window.	

DND GUI: Adding New Sounds for Audible Alarms

27.5G

Background

When to Use

Use this General Task to add new sound files for audible alarms. These new sounds will be available as choices in addition to the sound choices provided by the DND.

Before You Begin

Before you begin this task, you should have one or more desired sound file(s) resident on your system. The sound file must be in Sun (.au) format, 8-bit μ-law, mono, 8000 Hz.

Related Information

For related information, refer to Chapter 27, Fault Management and Alarm Surveillance.

Instructions

Task

Complete the following steps to add a new sound file for audible alarms:

Step	Action	Reference
1	Right-click and hold in the CDE window. A pull-down menu appears on the screen.	
2	Select *TERMINAL* from the menu. A terminal window appears on the screen.	
3	At the UNIX prompt, type the following command: unix> **cd /usr/ns-home/docs/dnd** This will change your present directory to the one indicated above.	
4	At the UNIX prompt, type the following command: unix> **ls** A listing of all files associated with the browser will appear in the window. The three user-defined sound byte files are called **userdef1.au**, **userdef2.au**, and **userdef3.au**.	
5	Save the replacement sound byte files with the filenames **userdef1.au**, **userdef2.au**, and **userdef3.au**. At the UNIX prompt, type the following command to move these sound files into the **/usr/ns-home/docs/dnd** directory: unix> **mv userdef*.au /usr/ns-home/docs/dnd** **CAUTION:** *Before doing this, you may want to rename the original sound file or move it to another directory to avoid overwriting it.*	
6	**Stop! End of Task.**	

DND Forms: Retrieving and Acknowledging an Alarm

27.1U

Background

When to Use

Use this General Task to retrieve and acknowledge an alarm.

Related Information

For related information, refer to Chapter 27, Fault Management and Alarm Surveillance.

Instructions

Task Complete the following steps to retrieve and acknowledge an alarm

Step	Action	Reference
1	Press Ctrl + a. A pop-up window will display the available alarm reports including EQUIPMENT alarms and any customized alarm reports that have been created.	
2	Select the type of alarm. Then, you are prompted for WHICH DACS? and a list of **Site Name**s is displayed.	
3	Select the site name that is in the alarm state. The DND displays a report listing the alarms in the alarm log, one page at a time. The acknowledged site name indicator disappears from the status line until a new alarm is received.	
4	Page through the report using the function keys that are noted at the bottom of the screen **NOTE:** While you are reviewing the report, new alarms can be added to the log, and new alarm notifications are displayed, but no new alarms are added to the report being displayed.	
5	**Stop! End of Task.**	

DND Interfaces General Tasks

28

Contents

- DND GUI

  Provisioning the SNMP Northbound Interface GT 28.1G

Provisioning the SNMP Northbound Interface

28.1G

Background

When to Use

Use this General Task to provision the SNMP Northbound Interface.

Related Information

For related information, refer to *Chapter 28, DND Interfaces.*

Instructions

Task

Complete the following steps to provision the SNMP Northbound Interface:

Step	Action	Reference
1	Click Provisioning located at the top of the DND USER INTERFACE window. The PROVISIONING task menu appears.	
2	Select **SNMP NB Provisioning...** The SNMP NB PROVISIONING form will appear on the screen.	
3	Enter an Adminstrator access community string and an Operator access community string.	
4	Configure manager 1. Repeat this step for each manager to be added.	SE28.1.1
5	If you want to delete a manager, set the **IP address** for that manager to *0.0.0.0*.	
6	Click Continue... . All fields on the form become read-only.	
7	Verify the information on the form to ensure that it is correct.	
8	When you have approved the information on the form, click Execute .	
9	**Stop! End of Task.**	

SE 28.1.1G: Adding an SNMP Manager

Procedure

Perform the steps below to add an SNMP manager:

1. Enter the IP address for the manager.
2. Enter the trap community string that will be included in all traps sent to this manager.
3. Select the traps that will NOT be sent to this manager.
4. Click on **Reset logs** if you want to delete the logs for this manager. Resetting the logs will set the **Next sequence** number back to 1.

   Stop! End of Procedure.