Meridian Mail

Message Services Module

System Administration Tools

Publication number: 557-7001-305
Product release: 10.0
Document release: Standard 1.0
Date: August 1995

Publication history

August 1995

This manual was released as Standard 1.0. This version documents Release 10.0 of Meridian Mail on the Message Services Module platform.

December 1994

This manual was released as Standard 1.0. This version documents Release 9.0 of Meridian Mail on the Message Services Module platform.

Contents

Figures

Tables

Procedures

About this document

This guide details the use of various tools and utilities used either by the system administrator or by customer support personnel.

How this guide is organized

Overview Chapter 1 (“Overview”) lists the tools and utilities which are available to system administrators and customer support personnel.

How to access the tools Chapter 2 (“Using the tools menu”) describes the procedure for logging on to the system and accessing the tools menu.

Tools documentation Chapters 3 to 19 describe the tools available through the TOOLS menu.

What precautionary messages mean

Danger and caution messages in this document indicate potential risks. These messages and their meanings are listed in the following chart.

Message	Significance
DANGER	Possibility of personal injury
CAUTION	Possibility of service interruption or degradation, or equipment damage.

Examples of the precautionary messages follow.

DANGER
Risk of electrocution
The inverter contains high voltage lines. Do not open the front panel of the inverter unless fuses F1, F2, and F3 have been removed first. Until these fuses are removed, the high voltage lines inside the inverter are active, and you risk being electrocuted.

CAUTION
Risk of loss of service
User service will be lost if you remove a card from the active unit of the peripheral module (PM). Before continuing, confirm that you are removing the card from the inactive unit of the MSM.

Typographic conventions

The following conventions are used throughout this guide:

- *Softkeys* are displayed on the various administration menus and screens and indicate which keyboard function keys carry out specific MSM tasks. These are referred to in the document by using the label of the softkey (as displayed in the given menu), delimited by square brackets.

  Examples: [Exit], [OK to Delete], [Save]

- *Keyboard keys* (or hardkeys) are referred to by indicating the label of the key, delimited by angle brackets.

  Examples: <1>, <2>, <Return>

- *Text input* (the text you are required to enter) is presented in bold.

  Examples: Enter **q** to quit.

- *System prompts* (prompts and messages displayed by the tool) are also presented in bold when referred to in a procedure.

  Example: **Do you want to continue?**

- *Fields in screens* appear in italics and in a different typeface from the body of the document.

  Example: Enter a unique identifier in the *Mailbox Number* field.

- *Values in fields* which are the choices presented in a selectable data field, are presented in quotes.

  Examples: The default is “Enabled”. Select “Custom” to create a set of restriction/permission codes unique to this thru-dialer.

- *Spoken words* such as the suggested wordings for prompts (such as for voice menus or voice forms), or words which you may be required to speak into the telephone receiver, are in italics and between double quotation marks.

  Example: An appropriate prompt would be *“Please wait on the line, an attendant will be with you shortly”*.

References

In this guide, where reference is made to another part of the guide, or to another document, the following conventions are used:

- References to section headings and chapter titles are surrounded by double quotation marks.

  Examples: See the section “Modify data port” later in this chapter.
  See “T1 link configuration” in the “Modify hardware” chapter.

- References to other NTPs or documents are in italics.

  Example: See the *Translations Guide* (NTP 557-7001-310) for details.

Chapter 1: Overview

Note 1: Some of the utilities (tools) described in this document are feature-dependent and may not be installed on your system.

Note 2: The Find Users function can be accessed through the User Administration screens, which are documented in the "User administration" chapter of the *System Administration Guide* (NTP 557–7001–30x).

The TOOLS level provides access to the following system management utilities:

- *Move user* allows you to move users from one volume to another, one at a time.
- *Modify hardware* is used to modify the hardware database.
- *Set silence compression* compresses out or leaves in recorded silence.
- *Control volume* all**o**ws you to control volume on MSM voice sessions.
- *Update MWI* updates Message Waiting Indicators (MWIs) on telephone sets after the serving switch is rebooted.
- *Block Meridian Mail* allows you to specify whether or not access to MSM should be blocked in the case of a serious disk failure.
- *Session trace* allows you to obtain detailed information about the activity in a user's mailbox and the state of the MWI.
- *Audit all volumes* allows you to free up data blocks on all volumes in the system.
- *Rebalance directory* rebalances the access structure for the system in order to speed up searches and updates to its entries.
- *Convert COS* assigns a Class of Service (COS) to users who currently have a personal COS if their mailbox attributes exactly match those of a COS currently associated with the user's customer group.
- *Display system record* identifies information on installed features, the number of recording (storage) hours, and disk sizes on the system.

- *Synchronize Disks* is accessible through the TOOLS menu on an MSM system only. This utility is used to synchronize shadowed disks in circumstances where the Disk Maintenance option on the System Status and Maintenance menu proves to be inadequate. For example, if you are trying to transfer valid data from a disk (which currently has a "No Access" status) to its associated disk (which is set to "Read/Write"), the normal Disk Maintenance option may be unable to completely synchronize the disks. In this case, the Synchronize Disks utility could be used.
  Refer to the "System Status and Maintenance" chapter in the *System Administration Guide* for information regarding the Disk Maintenance option.
- *Other* consists of other system/feature dependent options.

The following utilities are feature-dependent and will not be displayed if the necessary feature is not installed. (The available utilities are displayed when you select "Other" from the Tools menu.)

- *Change local site ID* is available only if Meridian Networking is installed. It allows you to change the local site ID.
- *Transfer voice prompts* is available only if Meridian ACCESS is installed. It allows you to transfer voice prompt files between Meridian Mail systems.
- *ACCESS diagnostics* is available only if Meridian ACCESS is installed. It allows you to diagnose and monitor system activity related to Meridian ACCESS.
- *Configure MATs* is available only if the Multiple Administration Terminals feature is installed. It allows you to install the Multiple Administration Terminal program on a terminal (or delete it from one that is currently equipped with it).
- *RN Administration* is available only if Outcalling is installed. It allows you to change the parameters that affect the interaction between Meridian Mail and the paging company or remote phone during remote notification (RN).

Chapter 2: Using the TOOLS menu

This chapter discusses how to log on to and use the TOOLS menu.

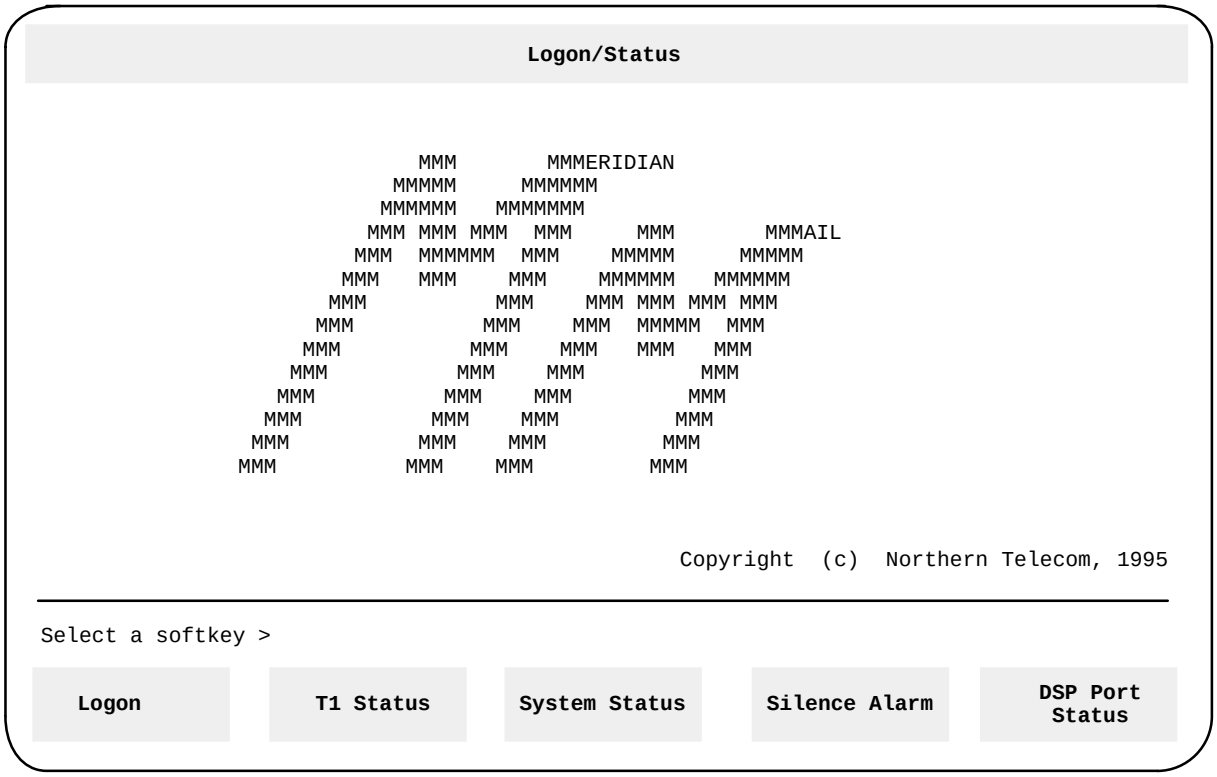
The Logon status screen

The Logon status screen (Figure 2-1) appears when the administrative console is idle. When the system is installed, the default administration password is “adminpwd” and the password used to access the TOOLS menu is “tools”. To ensure system security, change the administration password as soon as possible.

An unsuccessful logon attempt is automatically recorded in the system log file. As a security precaution, the system forces a ten minute delay after a third unsuccessful attempt to log on, before a further logon attempt will be accepted. Only your Northern Telecom representative has the required privileges to gain access to the system during the lockout period.

To log on to the system and gain access to the tools, use Procedure 2-1.

Figure 2-1
The Message Service Module Logon Status screen



Note: On the Logon screen of a MAT, only the [Logon] softkey is displayed.

Procedure 2-1
Logging on

Starting point : Logon Screen

1 Press [Logon]. Enter the TOOLS password and press <Return>.

You are prompted to enter the administrator password.

2 Enter the administrator password and press <Return>.

The TOOLS screen appears. See the section “The TOOLS menu” for details.

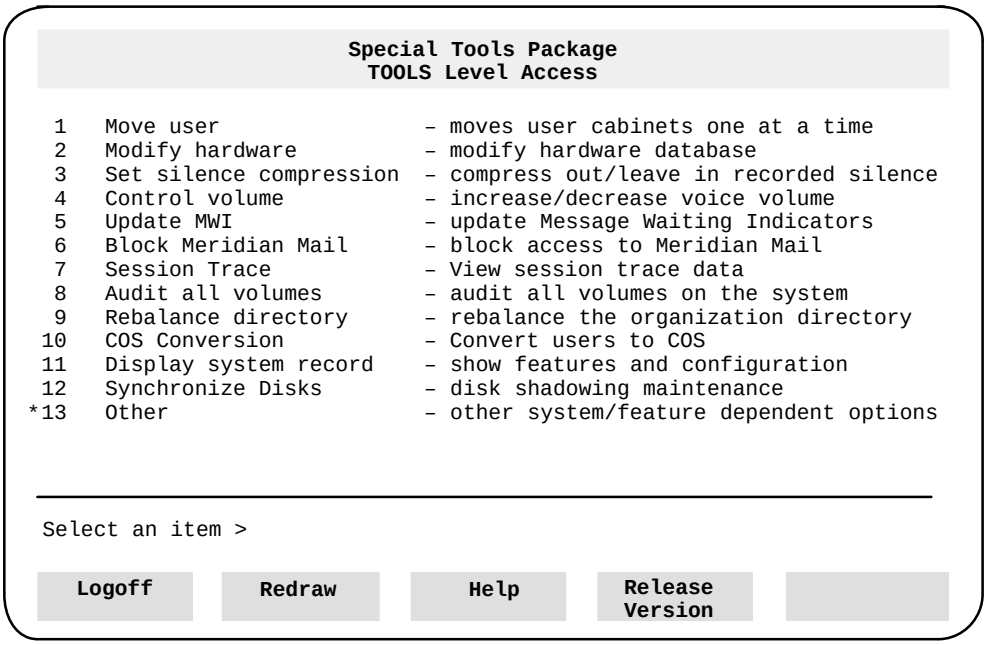
If you enter an invalid password, an error message appears; try logging on again.

The TOOLS menu

The TOOLS menu (Figure 2-2) appears after a successful logon using the TOOLS password. The menu allows you to select the tool you want.

Note: Never leave the administrative console unattended while you are logged on.

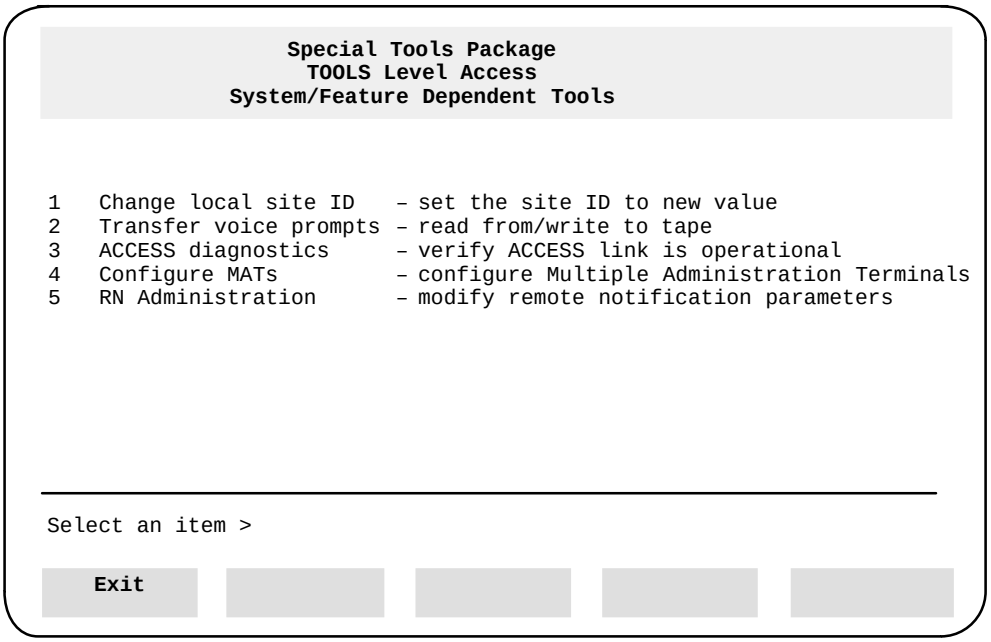
Figure 2-2
The TOOLS Level Access menu



* The “Other” option is available if other features are installed.

When you choose the “Other” option from the TOOLS menu, the menu shown in Figure 2-3 is displayed. The items that appear on this menu depend on the features installed on your system. Figure 2-3 shows all possible feature-dependent tools. Your system will most likely have only a few of them and the menu item numbers may therefore be different on your system.

Figure 2-3
Feature-dependent tools



***Note*:** The menu items listed depend on what features are installed.

Procedure 2-2
Navigating the TOOLS menu

Starting point: The TOOLS menu

1 Choose an item by entering its number and pressing <Return>. After a few moments, the first screen for the tool you have selected will appear.

The softkeys, if selected, perform the following actions:

[Logoff]	returns you to the Logon screen
[Redraw]	refreshes the menu screen
[Help]	presents general information
[Release Version]	provides a brief summary of any pertinent release information; if the screen is simply redrawn then there is no release information available

For other menu items, consult the appropriate chapter for more details (see the Table of Contents).

2 When you have finished using the tool, terminate the program in the manner described in the appropriate procedure. There are two typical methods of terminating a tool. Depending on the tool, you will either:

a. Press [Exit], if the tool displays softkeys;
or

b. Press <Return> without entering data, or when the tool prompts you to enter <Return>.

In some cases, when you toggle to a new setting and press <Return> to confirm the change, the tool will automatically return you to the TOOLS menu.

Note: You must terminate one tool before starting another.

3 To log off, press [Logoff].

The Logon screen is redisplayed.

ATTENTION

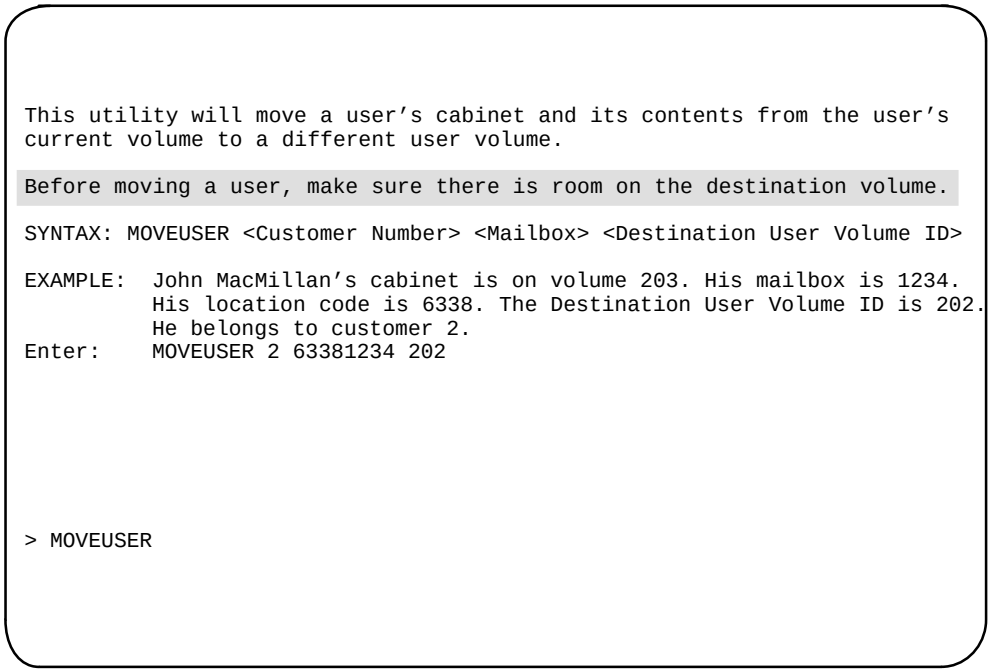
After using any of the following tools, you must reboot the system for the changes to take effect:

Modify hardware
Set silence compression
Control volume
Block Meridian Mail
Configure MATs

Chapter 3: Move user

The Move user tool moves user cabinets, profiles, and voice messages from one user volume to another. This operation is performed one user at a time. Before moving a user, make sure there is enough room on the destination volume.

Figure 3-1
Move user screen



Note: To EXIT this utility, press RETURN without entering a <Customer Number>.

Procedure 3-1
Moving users from one volume to another

Starting point: The TOOLS menu

1 Select <1>, Move user, and press <Return>.

The command line at the bottom of the screen displays the command MOVEUSER and the cursor is positioned immediately after the command. You do not have to enter "moveuser" yourself.

2 Enter the user's customer number and mailbox number followed by the destination user volume ID (see Figure 3-1.) and press <Return>.

The user's cabinet and profile will be created under the "users" directory on the specified volume. This directory must already exist. It will not automatically be created.

If the move is successful, the following prompts appear:

Moving Mailbox <mailbox ID> of Customer <customer number> to volume <volume Id>

Mailbox <mailbox ID> of Customer <customer number> moved to volume <volume Id>

The Help command provides information on the move user command.

3 Exit the utility by pressing <Return> without entering any data.

Chapter 4: Modify hardware

The Modify hardware tool allows you to modify the contents of the hardware database in your MSM system. The hardware database is a system tool which maintains a current listing and description of all nodes, cards, and ports in your system.

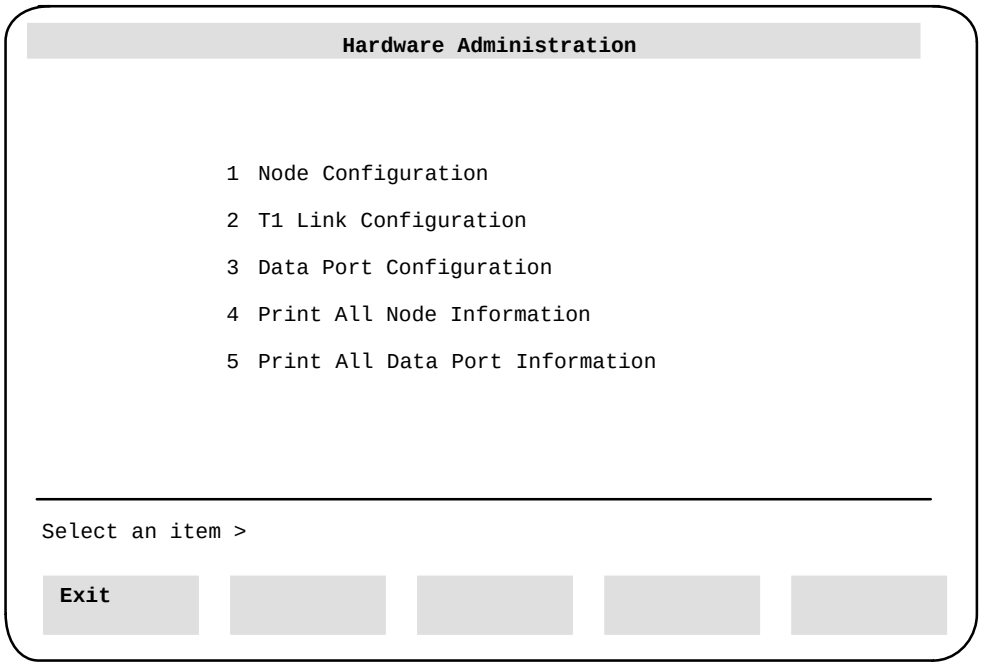
Note: For any changes made with this tool to take effect, you must reboot the system after you have made the changes.

CAUTION
Risk of system audit failure
You should not leave the administrative console in any Hardware Administration menu overnight or important system audits may fail due to lack of available memory.

The Hardware Administration menu

The Hardware Administration menu (Figure 4-1) provides five functions.

Figure 4-1
Hardware Administration menu



Procedure 4-1
Navigating the Hardware Administration menu

Starting point**:** The TOOLS menu

1 Select <2>, Modify hardware, and press <Return>.

The Hardware Administration menu appears (Figure 4-1).

2 Choose a menu item by entering its number and pressing <Return>.

The menu corresponding to your selection appears. See the following sections for details:

<1> "Node Configuration"
<2> "T1 Link Configuration"
<3> "Data Port Configuration"
<4> "Print All Node Information"
<5> "Print All Data Port Information"

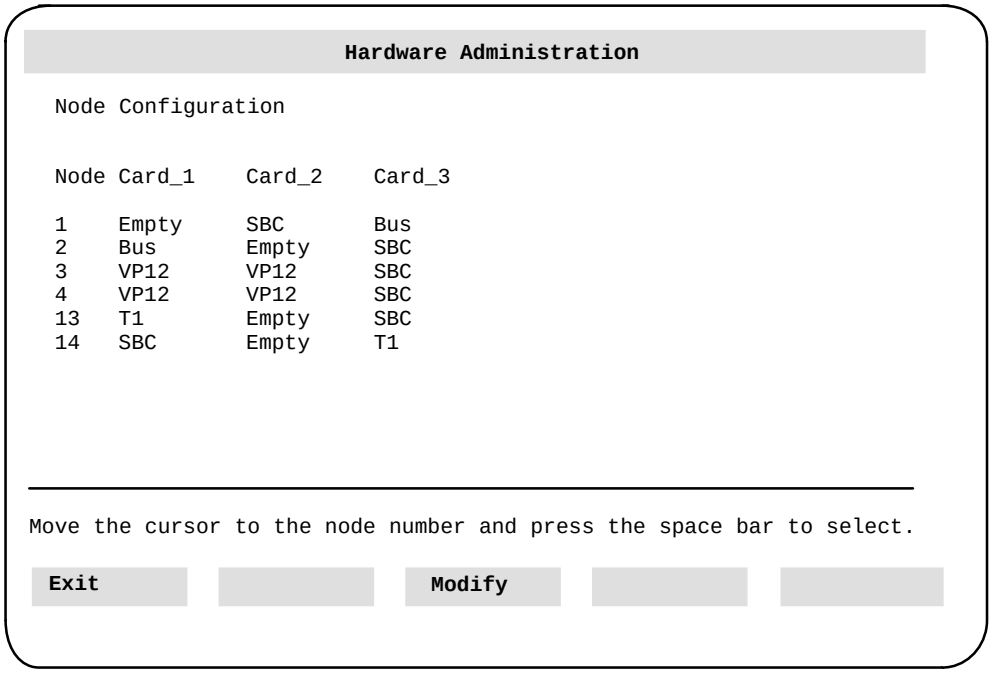
3 Press [Exit] to return to the TOOLS menu.

Node configuration

The Node Configuration screen (Figure 4-2) shows a summary listing of the cards found on all nodes in your system.

> ***Note:*** The figures in this section do not necessarily represent actual hardware configurations. They are illustrations only.

Figure 4-2
Node Configuration screen



The following information is displayed on this screen:

- ***Node*** This is the node number.
- ***Card*** These are the types of cards found on the specified node. The following abbreviations identify the following cards:
  - — ***SBC*** single board computer (68K CPU card)
  - — ***Bus*** high-speed bus
  - — ***VP12*** 12-channel voice processor
  - — ***T1*** T1 link

Procedure 4-2
Modifying node configurations

Starting point**:** The Hardware Administration menu

1 Select <1>, Node Configuration, and press <Return>.

The Node Configuration screen is displayed (Figure 4-2).

2 Move the cursor to the node you want to modify and press the <Space Bar>.

Your selection is highlighted.

3 Choose step 3a to modify the configuration information of the node or 3b to return to the Hardware Administration menu.

a. Press [Modify]

The Modify Node screen appears; see the next section, "Modify Node."

b. Press [Exit].

The Hardware Administration menu is displayed.

Modify node

The Modify Node screen (Figure 4-3) displays the cards and ports (and their attributes) for the node you have selected in the Node Configuration screen.

Note: AdminPlus and MMLink cannot be modified through the Modify Node screen. See Procedure 4-11 to modify MMLink data ports or Procedure 4-15 to modify AdminPlus data ports.

Figure 4-3
Modify Node screen

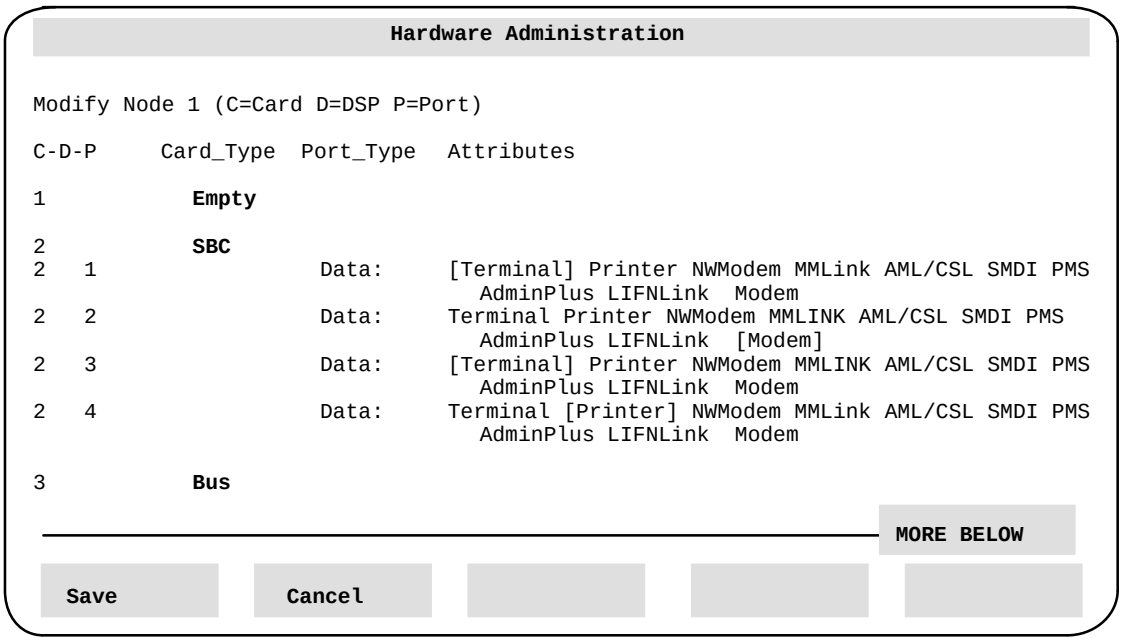


Figure 4-3
Modify Node screen (continued)

```
                              Hardware Administration                    MORE ABOVE

Modify  Node 14 (C=Card D=DSP P=Port)

C-D-P     Card_Type  Port_Type   Attributes

1         SBC
1   1                 Data       Terminal Printer NWModem  MMLink AML/CSL [SMDI] PMS
                                   AdminPlus LIFNLink  Modem
1   2                 Data       Terminal Printer NWModem  MMLink AML/CSL [SMDI] PMS
                                   AdminPlus LIFNLink  Modem
1   3                 Data       Terminal Printer NWModem  MMLink AML/CSL [SMDI] PMS
                                   AdminPlus LIFNLink  Modem
1   4                 Data       Terminal Printer NWModem  MMLink AML/CSL [SMDI] PMS
                                   AdminPlus LIFNLink  Modem

2         Empty


3         T1

3   1                 Link
3   2                 Link
```

Note: The figures in this section do not necessarily represent an actual hardware configuration. They are presented for illustration purposes only. If the node you are viewing is a system node you may have the following types of cards installed: SBC or Bus. A voice node would have the following types of cards installed: SBC and VP12A. A TIFN node would have the T1 card and SBC card installed.

The screen displays the following information about each card on the node:

- ***C-D-P*** This field represents the card, DSP, and port location as it pertains to the hardware database. For hardware components that are at levels above DSPs, or for hardware components that do not have DSPs and ports, only the card (C) identifier appears. Components that do not have DSPs, but do have ports, use the card-port (C-P) identifier.
- ***Card Type*** This is the function of the card. See “Node Configuration” on page 4-3 for a description of the abbreviations used in this field.
- ***Port Type*** This is the type of port. “Data” indicates a serial data communications port; “Device” indicates a mass storage device or tape drive; “Voice” indicates a voice processor port; “Link” indicates a T1 link; and “Multi” indicates a multimedia port.
- ***Attributes*** *(for ports with port type = Data)*
  - — ***Terminal*** Administration terminal connection
  - — ***Printer*** Printer serial connection
  - — ***NWModem*** Connection to a modem used for networking calls

- — ***MMLink*** Meridian ACCESS Link (This is the communications channel for Meridian ACCESS.)
- — ***AML/CSL or Meridian Link*** (This attribute does not apply to MSM, and cannot be selected.)
- — ***SMDI*** Simplified Message Desk Interface (This is the communications channel between MSM and the PBX switch.)
- — ***PMS*** Not applicable
- — ***AdminPlus*** Connection to a PC equipped with Meridian Reporter.
- — ***LIFNLink*** Not applicable
- — ***Modem*** Connection to a modem used for remote access

- ***Attributes*** *(for ports with port type = Device)*
  - — ***Disk*** Mass storage subsystem (hard disk)
  - — ***Tape*** Cartridge tape subsyste.

Procedure 4-3
Modifying nodes

Starting point**:** The Node Configuration screen

1 Press [Modify].

The Modify Node screen is displayed (Figure 4-3).

2 Set the parameters as required.

Note: To move around in the *Attributes (Voice)* field, press <Tab>.

3 To save the changes, go to step 3a. To cancel the changes, go to step 3b.

a. Press [Save].

The changes are saved. The Node Configuration screen appears.

b. Press [Cancel].

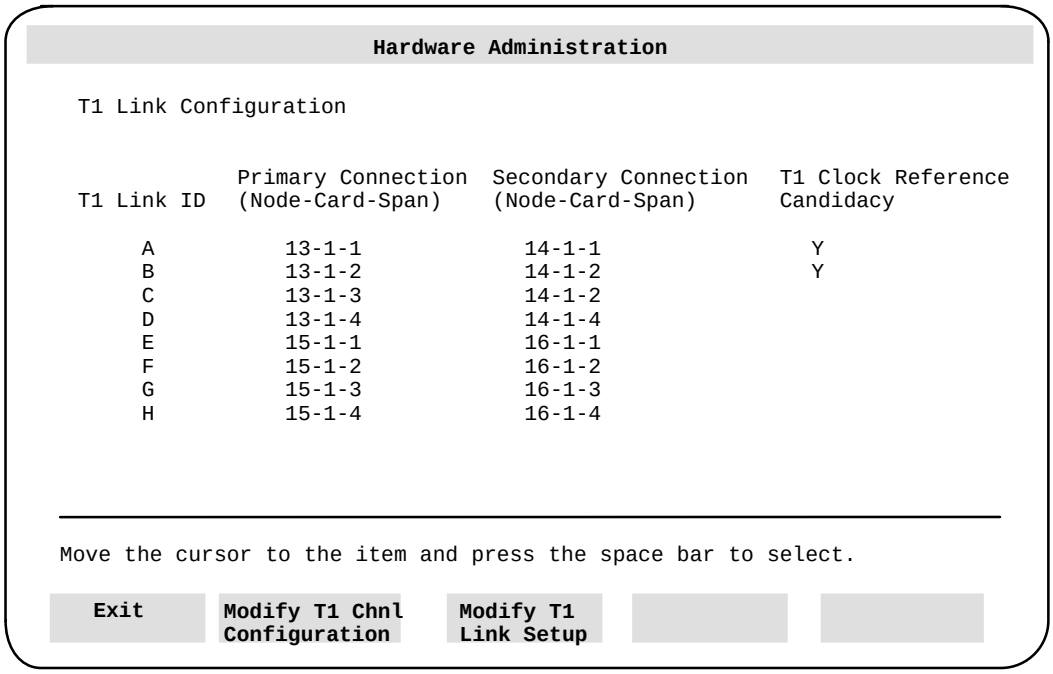
Any changes you have made are discarded. The Node Configuration screen appears.

Note: The system must be rebooted for changes to take effect.

T1 link configuration

The T1 Link Configuration screen lists the T1 links in the MSM system.

Figure 4-4
T1 Link Configuration screen



Note: The figures in this section do not necessarily represent actual hardware configurations. They are illustrations only.

The following information is displayed on this screen:

- ***T1 Link ID*** This is a unique identifier for the T1 link. Each link actually consists of two connections, a primary and secondary connection, to provide redundancy.
- ***Primary Connection*** This is the location (node-card-span) of the primary connection.
- ***Secondary Connection*** This is the location (node-card-span) of the secondary connection.
- ***T1 Clock Reference Candidacy*** This field shows whether or not the link has been configured as a candidate for clock referencing. Press [Modify T1 Link Setup] to nominate a link or to disqualify a current candidate. See the section “Modifying the T1 link setup” for more information about clock referencing.

Procedure 4-4
Modifying T1 Link configurations

Starting point**:** The Hardware Administration menu

1 Select <2>, T1 Link Configuration, and press <Return>.

The T1 Link Configuration screen appears (Figure 4-4).

2 Move the cursor to the link you want to modify and press <Space Bar>.

Your selection is highlighted.

3 To modify the T1 channel configuration information, choose step 3a. To modify the T1 link setup information, choose step 3b. To return to the Hardware Administration menu, choose step 3c.

a. Press [Modify T1 Chnl Configuration].

The Modify T1 Channel configuration screen appears; see the next section, "Modifying T1 channels."

b. Press [Modify T1 Link Setup].

The T1 Link Setup screen appears; see the section "Modifying the T1 link setup".

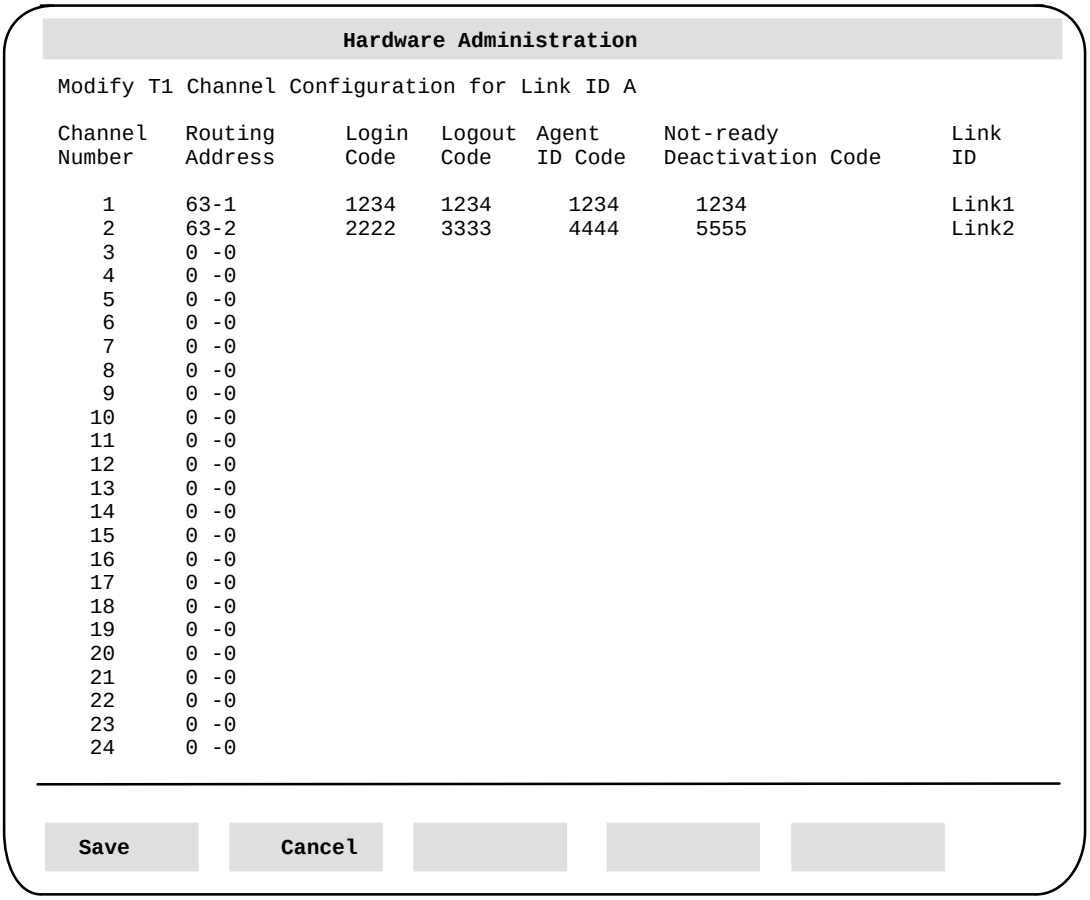
c. Press [Exit].

The Hardware Administration menu is redisplayed.

Modifying T1 channels

The Modify T1 Channel screen (Figure 4-5) displays the T1 Channel configuration for the link you have selected.

Figure 4-5
Modify T1 Channel screen



Hardware Administration

Modify T1 Channel Configuration for Link ID A

Channel Number	Routing Address	Login Code	Logout Code	Agent ID Code	Not-ready Deactivation Code	Link ID
1	63-1	1234	1234	1234	1234	Link1
2	63-2	2222	3333	4444	5555	Link2
3	0 -0					
4	0 -0					
5	0 -0					
6	0 -0					
7	0 -0					
8	0 -0					
9	0 -0					
10	0 -0					
11	0 -0					
12	0 -0					
13	0 -0					
14	0 -0					
15	0 -0					
16	0 -0					
17	0 -0					
18	0 -0					
19	0 -0					
20	0 -0					
21	0 -0					
22	0 -0					
23	0 -0					
24	0 -0					

Save Cancel

Note: The figures in this section do not necessarily represent an actual hardware configuration. They are presented for illustration purposes only.

The following information is displayed on this screen:

- ***Channel Number*** This is the number of the T1 channel.
- ***Routing Address*** This is the location of the corresponding agent in the switch. This is the message desk number and is represented in the format xx-yyyy, where xx is the message desk number and yyyy is the terminal number.

- ***Login Code*** This is the channel access code for logging in to the UCD group. This field should be blank if the SMDI_AUTOLOG option has been configured as "Y" (yes) on the switch. When this field is left blank, Meridian Mail inserts a default login code.

  If SMDI_AUTOLOG is configured as "N" on the switch, ensure that the code displayed here matches the code configured on the switch. See your administrator.

- ***Logout Code*** This is the channel access code for logging out of the UCD group. This field should be blank if the SMDI_AUTOLOG option has been configured as "Y" (yes) on the switch. When this field is left blank, Meridian Mail inserts a default login code.

  If SMDI_AUTOLOG is configured as "N" on the switch, ensure that the code displayed here matches the code configured on the switch. See your administrator.

- ***Agent ID Code*** This ID must match the line number (SMDI_LINE_NO) of the UCD agent that is configured on the switch. On the SL-100, the LINE_NO can either be configured through **so** (servord) or through Table IBNFEAT by entering the SMDI option.
- ***Not-ready Deactivation Code*** This field is not applicable to UCD environments and should be left blank. It is used in ACD environments for assigning the channel to the ACD queue after the channel has logged into the ACD group.
- ***Link ID*** . The Link ID of the SMDI link associated with the T1 channel.

For more information about these options, see the *Translations Guide* (NTP 557-7001-310).

Procedure 4-5
Modifying T1 Channel configurations

Starting point**:** The Hardware Administration menu

1 Select <2>, T1 Link Configuration, and press <Return>.

The T1 Link Configuration screen appears (Figure 4-4).

2 Move the cursor to the T1 link you want to view or modify and press <Space Bar>.

Your selection is highlighted.

3 Press [Modify T1 Chnl Configuration].

The Modify T1 Channel Configuration screen is displayed (Figure 4-5).

4 Press the arrow keys to position the cursor where you want to make changes. Press the backspace or delete keys to make changes as required. Type in new information where required.

5 Choose step 5a to save the changes or step 5b to exit the Modify T1 Channel Configuration screen.

a. Press [Save] to save the changes.

The T1 Link Configuration screen re-appears.

b. Press [Cancel] to undo the changes.

The T1 Link Configuration screen re-appears.

Applying T1 channel modifications

When you have completed T1 channel modifications and the hardware database has been updated, you can apply the changes without rebooting by following Procedure 4-6.

The modifications will affect one or both pairs of T1 nodes, depending on which channels were changed. Procedure 4-6 must be applied to one or both of the following:

- Node 13 and 14 for spans with link ID A-D
- Node 15 and 16 for spans with link ID E-H

Procedure 4-6
Disabling and reenabling T1 nodes

Starting point**:** The Main Menu

1 Select System Status and Maintenance.

2 Select T1 Link Status.

3 Switch all “InService” T1 links by pressing [Switch Links].

4 Press [Exit].

The System Status and Maintenance menu is displayed.

5 Select SMDI Link Status.

6 Switch all “InService” SMDI links by pressing [Switch Links].

7 Press [Exit].

The System Status and Maintenance menu is displayed.

8 Select Node Status.

9 Press [Disable Node].

You are prompted for the node number.

10 Enter the node number for the even T1 node and press <Return>.

The selected node will be disabled.

a. Wait 3 to 5 minutes before reenabling it.

b. When it has been successfully disabled, continue with the next step.

If the disable is not successful, refer to *Trouble-locating and Alarm-clearing procedures* (NTP 557-7001-503) for more information.

11 Press [Enable Node].

You are prompted for the node number.

12 Enter the node number of the previously disabled node and press <Return>.

The selected node will be enabled. When it has been successfully enabled, continue with the next step. If the enable is not successful, refer to Trouble locating and Alarm clearing procedure (NTP 557-7001-503) for more information.

13 Press [Exit].

The System Status and Maintenance menu is displayed.

14 Repeat steps 2 through 13 for the odd T1 node.

15 Press [Exit].

The Main Menu is displayed.

Modifying the T1 link setup

Note: In a private customer installation, the MSM typically does not use a clock. In this situation, you have to put the system in free run mode. When you put your system in free run mode, the channel banks terminating equipment must derive its timing reference from the MSM.

The modify T1 Link Setup screen (Figure 4-6) is used to modify the T1 clock reference candidacy of a T1 link, the T1 Line Code format, or the T1 debounce time. You may nominate one or more links to serve as the clock reference for the MSM. An external device in the network (such as the PBX switch, for example) can serve as the reference provider.

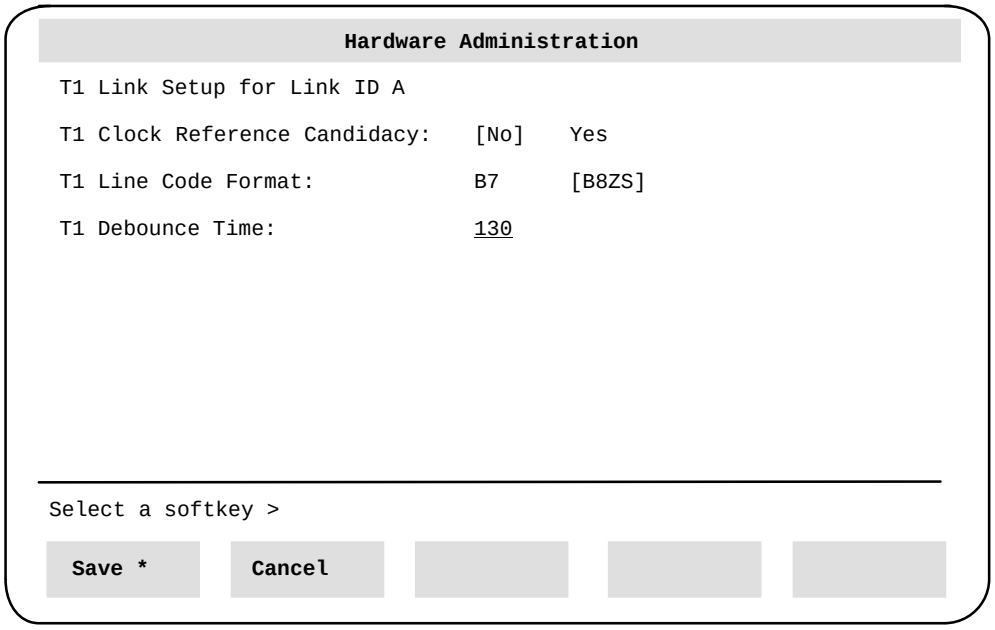
The link that is used as the reference is defined in the T1 Link Status screen. If any problems occur on the link that is the current clock reference, or if certain maintenance procedures are being carried out on the link or the card, the system will automatically select one of the other nominated links as the new reference and generate a SEER to indicate that a link has been activated as the reference provider.

The following situations will cause the system to select another reference:

- a red alarm is detected
- a yellow alarm is detected
- there is a hardware fault
- the T1 card on which the link resides is disabled
- the TIFN is disabled
- the switch T1 link command is issued
- the T1 link that is the clock reference is disabled.

In order to nominate a T1 link for clock reference candidacy, or modify the T1 Line Code format or the T1 debounce time, you must first take both the primary and secondary spans associated with the T1 link out-of-service. T1 links are enabled and disabled in the T1 Link Status screen.

Figure 4-6
Modify T1 Link Setup screen



* If you have not disabled the primary and secondary spans, only the [Exit] softkey is displayed and the screen is read-only.

The following fields are displayed on this screen:

- ***T1 Clock Reference Candidacy*** "Yes" indicates that the selected T1 link is nominated as a clock reference candidate. "No" indicates that the link has not been nominated.
- ***T1 Line Code Format*** This indicates the T1 Line Code format in the T1 link.
- ***T1 Debounce Time*** Enter a value between 0 and 512. This value is the amount of time the system will wait for a T1 span to be cleared of noise after a T1 signal is sent. The default is 130.

Procedure 4-7
Nominating/disqualifying a T1 link as a clock reference candidate

Starting point**:** The Main Menu

1 Select System Status and Maintenance.

2 Select T1 Link Status.

3 Press [Disable T1].

You are prompted for the T1 number of the link you want to disable.

4 Enter the number of the T1 link you want to disable followed by <Return>.

To disable another link, repeat steps 2 and 3.

5 Press [Exit].

The System Status and Maintenance menu is displayed.

6 Press [Exit].

The Main Menu is displayed.

7 Select Hardware Administration.

8 Select T1 Link Configuration.

9 Move the cursor to the T1 link you want to nominate/disqualify and press <Space Bar> to select it.

Your selection is highlighted.

10 Press [Modify T1 Link Setup].

The T1 Link Setup screen is displayed.

11 Select “Yes” to nominate a link or “No” to disqualify a current candidate.

12 If you want to change the T1 Line Code Format, select the format that you want for the T1 link.

13 If you want to change the T1 Debounce Time, replace the old time with the new time.

14 Press [Save].

The selected link is nominated/disqualified, the new T1 line code format is set (if you changed it), and the T1 Link Configuration screen is displayed.

15 Press [Exit] to return to the T1 Link Status screen in System Status and Maintenance and reenable the link(s).

16 If necessary, activate one of the candidates as the clock reference using [Change T1 Clocking Mode] in the T1 Link Status screen.

Data port configuration

The Data Port Configuration screen (Figure 4-7) summarizes the data ports on all nodes in your system. You can select any data port and modify its configuration. The abbreviations used in this screen are described under "Node configuration" earlier in this chapter.

With Release 10.0, the baud rate for MAT, ACCESS, and AdminPlus terminals can be changed online, through the appropriate Modify Data Port screen. No system reboot is required. If the MAT baud rate is changed, the Terminal speed must also be adjusted.

This section shows the recommended data port uses, followed by a description of the Data Port Configuration screen, and how to modify data ports for the following device types:

- Terminal
- Printer
- MMLink (Meridian Mail Link)
- NWModem (Networking Modem)
- SMDI
- Modem
- AdminPlus
- Printing node and data port information

Before continuing with the description of the Data Port Configuration screen and the Modify data port screens, the recommended data port uses are listed in Table 4-1.

Table 4-1
Recommended data port uses (for networking)

Node	Port	Port type	Allowable uses
1 (MSP 1)	1	20 ma	Console (note 1)
1 (MSP 1)	2	Modem	Remote Access
1 (MSP 1)	3	20 ma	Maintenance printer
1 (MSP 1)	4	20 ma	MAT (note 2)
2 (MSP 2)	1	20 ma	Console (note 1)
2 (MSP 2)	2	Modem	Remote Access
2 (MSP 2)	3	20 ma	
2 (MSP 2)	4	20 ma	MAT (note 2)
3 (SPN 1)	1	RS 232-C	Network, AdminPlus
3 (SPN 1)	2	RS 232-C	Network, MAT (note 2)
3 (SPN 1)	3	RS 232-C	Network
3 (SPN 1)	4	RS 232-C	Network, MAT (note 2)
4 (SPN 2)	1	RS 232-C	Network
4 (SPN 2)	2	RS 232-C	Network
4 (SPN 2)	3	RS 232-C	Network
4 (SPN 2)	4	RS 232-C	Network, ACCESS
5 (SPN 3)	1	RS 232-C	Network
5 (SPN 3)	2	RS 232-C	Network
5 (SPN 3)	3	RS 232-C	Network
5 (SPN 3)	4	RS 232-C	Network
6 (SPN 4)	1	RS 232-C	Network
6 (SPN 4)	2	RS 232-C	Network
6 (SPN 4)	3	RS 232-C	Network
6 (SPN 4)	4	RS 232-C	Network, ACCESS
7 (SPN 5)	1	RS 232-C	Network
7 (SPN 5)	2	RS 232-C	Network
7 (SPN 5)	3	RS 232-C	Network
7 (SPN 5)	4	RS 232-C	Network
8 (SPN 6)	1	RS 232-C	Network
8 (SPN 6)	2	RS 232-C	Network
8 (SPN 6)	3	RS 232-C	Network
8 (SPN 6)	4	RS 232-C	Network, ACCESS

—continued—

Table 4-1 - continued
Recommended data port uses (for networking)

Node	Port	Port type	Allowable uses
9 (SPN 7)	1	RS 232-C	Network
9 (SPN 7)	2	RS 232-C	Network
9 (SPN 7)	3	RS 232-C	Network
9 (SPN 7)	4	RS 232-C	Network
10 (SPN 8)	1	RS 232-C	Network
10 (SPN 8)	2	RS 232-C	Network
10 (SPN 8)	3	RS 232-C	Network
10 (SPN 8)	4	RS 232-C	Network, ACCESS
13 (TIFN 1)	1	Modem	SMDI
13 (TIFN 1)	2	Modem	SMDI (note 3)
13 (TIFN 1)	3	Modem	SMDI (note 3)
13 (TIFN 1)	4	Modem	SMDI (note 3)
14 (TIFN 2)	1	Modem	SMDI or standby SMDI
14 (TIFN 2)	2	Modem	SMDI or standby SMDI (note 3)
14 (TIFN 2)	3	Modem	SMDI or standby SMDI (note 3)
14 (TIFN 2)	4	Modem	SMDI or standby SMDI (note 3)
15 (TIFN 3)	1	Modem	SMDI
15 (TIFN 3)	2	Modem	SMDI (note 3)
15 (TIFN 3)	3	Modem	SMDI (note 3)
15 (TIFN 3)	4	Modem	SMDI (note 3)
16 (TIFN 4)	1	Modem	SMDI or standby SMDI
16 (TIFN 4)	2	Modem	SMDI or standby SMDI (note 3)
16 (TIFN 4)	3	Modem	SMDI or standby SMDI (note 3)
16 (TIFN 4)	4	Modem	SMDI or standby SMDI (note 3)
—end—			

Note 1: A relay on the I/O panel switches the terminal to MSP2 port 1 if MSP1 fails.

Note 2: Up to 3 MATs (Multiple Administration Terminals) may be assigned. In the case of local terminals, it is recommended that MSP1 data port 4 be assigned to the first MAT, MSP2 data port 4 be assigned to the second MAT, and SPN1 data port 4 be assigned to a third MAT. For remote user administration, MATs may instead be assigned to a modem data port on an SPN node. A MAT and ACCESS data port must not be assigned to the same node.

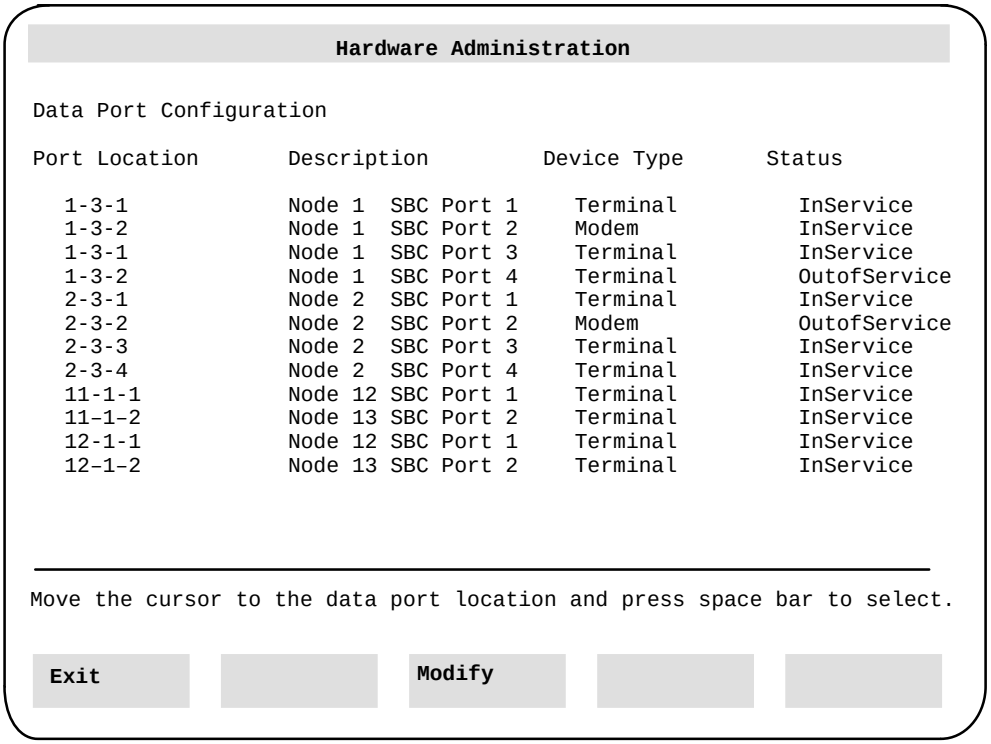
Note 3: If the Multi-SMDI feature is enabled, additional SMDI ports may be assigned. The maximum number of SMDI links that may be supported by the MSM will be determined by the number of ports provisioned and the number of SPN modem data ports not being used for other features. As an example, an MSM provisioned with 48 voice ports could support 6 SMDI links if no other feature required use of either SPN modem data port. MSMs provisioned with 48 ports will support up to 4 redundant SMDI ports (TIFN 1 and 2, ports 1 to 4) and 2 non-redundant SMDI ports (SPN 1 and 2, port 2).

The remainder of this section describes the Data Port Configuration screen and the Modify data port screens.

Modify data port

The following sections describe the different Data Port screens which can be displayed. The screen that is displayed is determined by the data port that is selected in the Data Port Configuration screen when you press [Modify].

Figure 4-7
Data Port Configuration screen



The Data Port Configuration screen displays the following information:

- ***Port Location*** This is the port's physical location (node-card-span) in the system.
- ***Description*** This field displays the node and card type on which the port resides.
- ***Device Type*** This shows the function of the port.
- ***Status*** This shows the current operational state of the port. The status can be one of the following:
  - — ***InService*** indicates that the data port is operational.
  - — ***OutofService*** indicates that the data port is no longer operational because the node has been disabled.
  - — ***Faulty*** indicates that the system has detected an error in the data port.
  - — ***UnEquipped*** indicates that the data port is not defined in the hardware database.

Procedure 4-8
Modifying data ports

Starting point**:** The Hardware Administration menu

1 Select <3>, Data Port Configuration, and press <Return>.

The Data Port Configuration screen appears (Figure 4-7).

2 Move the cursor to the port to be modified and press <Space Bar>

Your selection will be highlighted.

3 Choose step 3a to modify the configuration information, or 3b to return to the Hardware Administration menu.

a. Press [Modify].

The Modify Data Port screen appears. See the next section for details.

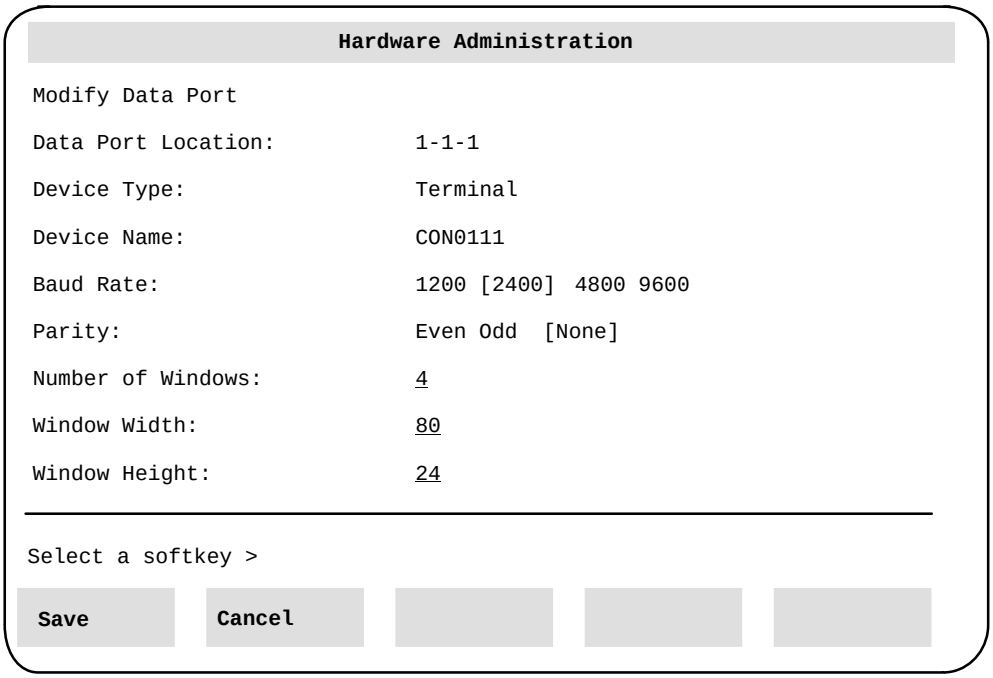
b. Press [Exit].

The Hardware Administration menu appears.

Terminal data ports

The Modify Data Port screen for terminals (Figure 4-8) allows you to modify the configuration of the selected port.

Figure 4-8
Modify Data Port screen (Terminal)



The following fields are displayed on the screen:

- ***Data Port Location*** This is the port's physical location (node-card-port) in the system. A terminal must be located on node 1, SBC port 1. Other terminals can also be in the system on other data ports.
- ***Device Type*** "Terminal" will be displayed.
- ***Device Name*** This is the name that identifies the terminal.
- ***Baud Rate*** This setting depends on the current setup of the terminal on the port.
- ***Parity*** The method by which data is communicated. This can be set to "Even," "Odd," or "None," depending on the current setup of the terminal connected to the port. It is usually set to "None".
- ***Number of Windows*** This field specifies the number of windows that can be used simultaneously. This will be "6" for the System Administration terminal.
- ***Window Width*** This field specifies the window width used.
- ***Window Height*** This field specifies the window height used.

Procedure 4-9
Modifying the terminal data port

Starting point**:** The Hardware Administration menu

1 Select <3>, Data Port Configuration, and press <Return>.

The Data Port Configuration screen is displayed (See Figure 4-7).

2 Move the cursor to the port which is to be modified and press the <Space Bar>.

Your selection is highlighted.

3 Choose step 3a to modify the configuration information, or 3b to return to the Hardware Administration menu.

a. Press [Modify].

The Modify Data Port screen appears. See the next section for details.

b. Press [Exit].

The Hardware Administration menu appears.

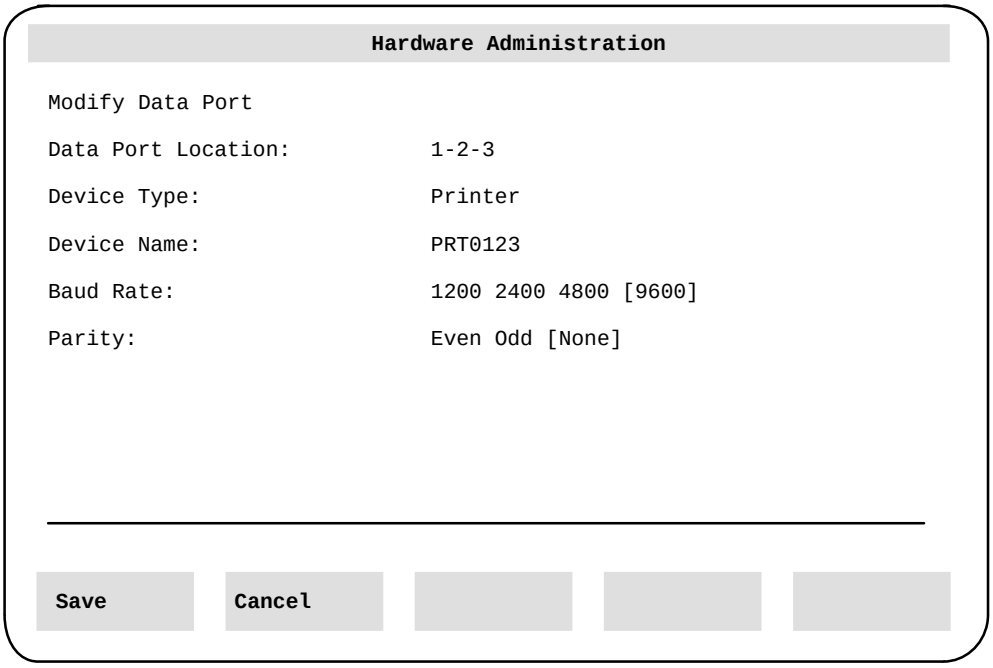
Printer data ports

The Modify Data Port screen for printers (Figure 4-9) allows you to modify the baud rate and parity of the selected printer port.

Note 1: A secondary printer can be attached directly to the administration terminal. It does not require a separate data port.

Note 2: Operational Measurement reports must be directed to a particular printer. The printer is specified in the General Options screen (see the "General Administration" chapter in NTP 555-7001-301).

Figure 4-9
Modify Data Port screen (Printer)



The following fields are displayed on this screen:

- ***Data Port Location*** This is the physical location of the port (node-card-port).
- ***Device Type*** This is the function of the port. This will be set to "Printer."
- ***Device Name*** This is the name of the device.
- ***Baud Rate*** The setting will depend on the current setup of the printer that is connected to the port.
- ***Parity*** The setting will depend on the current setup of the printer connected to the port.

Procedure 4-10
Modifying the printer data port

Starting point**:** The Data Port Configuration screen

1 Select the printer data port you want change.

The Modify Data Port (terminal) screen appears.

2 Set the parameters as required.

3 Choose step 3a to save the changes or step 3b to exit the Modify Data Port screen.

a. Press [Save] to save the changes.

The Data Port Configuration screen re-appears.

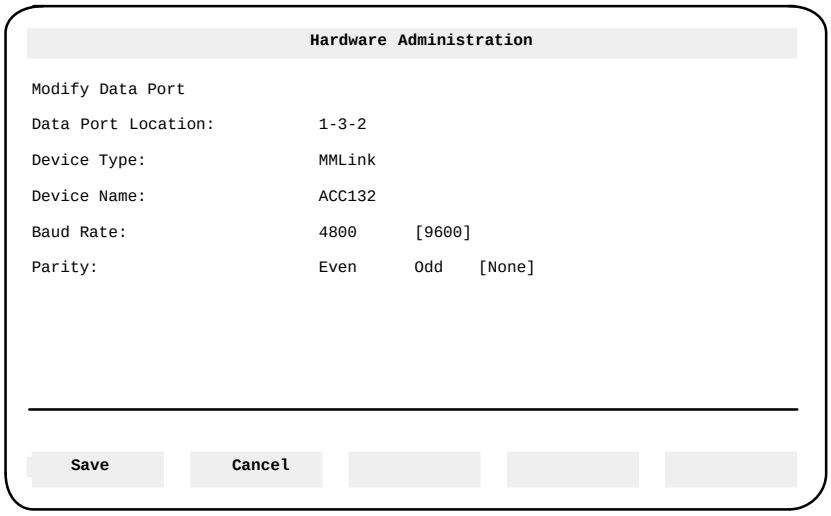
b. Press [Cancel] to undo the changes.

The Data Port Configuration screen re-appears.

MMLink Data Port

The Modify Data Port screen for Meridian ACCESS Link (Figure 4-10) allows you to modify link characteristics.

Figure 4-10
Modify Data Port screen (MMLink)



The following fields are displayed on this screen:

— ***Data Port Location*** This is the location of the port in the system (node-card-span). On node 1, this must be an RSM port.

— ***Device Type*** This is the function of the port. Set this field to "MMLink".

— ***Device Name*** This is the name of the device.

— ***Baud Rate*** This field can be set to 4800 or 9600 bps for MMLink. Note that although a system reboot is not required when the baud rate is reset, the baud rate on the ACCESS host terminal should be modified first.

Note: The cumulative baud rates for all AdminPlus and ACCESS data ports cannot exceed 9600 bps.

— ***Parity*** This field does not apply to MMLink.

Procedure 4-11
Modifying MMLink data ports

Starting point**:** The Hardware Administration screen

1 Select <3> to access the Data Port Configuration screen.

2 Move the cursor on the Data Port Configuration screen to the MMLink data port which you want to modify.

3 Select <Modify> to display the Modify Data Port screen for ACCESS.

4 Set the parameters as required. When the baud rate of the MMLink Data Port is to be changed, ensure that the application using the MMLink Data Port is shut down.

5 Choose step 5a to save the changes, or 5b to cancel.

a. Press [Save].

Changes are saved. The Data Port Configuration screen appears.

b. Press [Cancel].

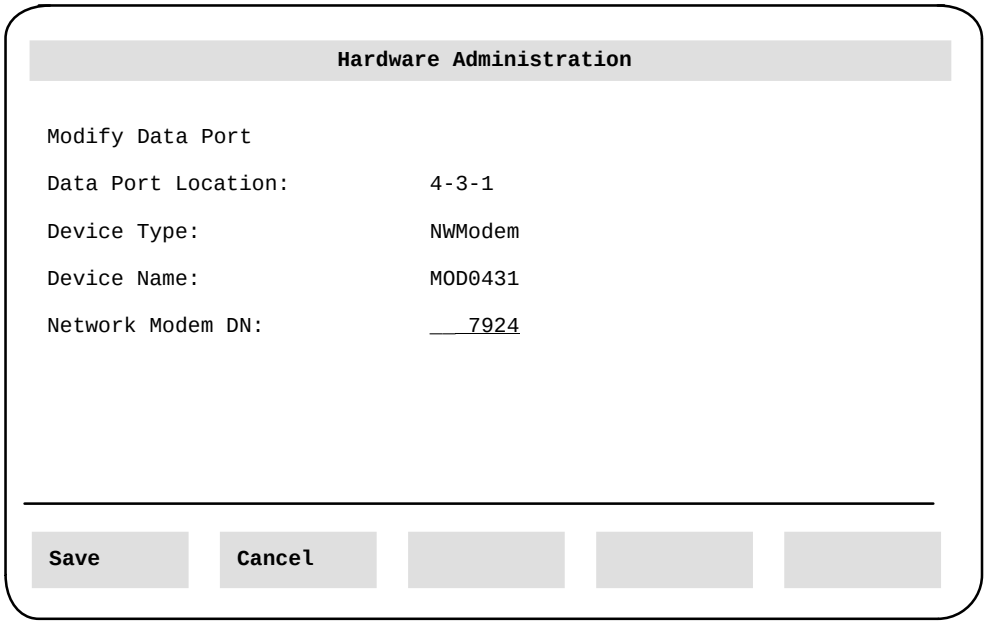
Any changes you have made are discarded. The Data Port Configuration screen appears.

6 If the baud rate has been changed, restart the application using the MMLink Data Port.

NWModem Data Port

The Modify Data Port screen for networking modems (Figure 4-11) allows you to specify the directory number (DN) of the modem connected to the selected port.

Figure 4-11
Modify Data Port screen (NWModem)



The following fields are displayed on this screen:

- ***Data Port Location*** This is the port's physical location (node-card-port) in the system.
- ***Device Type*** This is the function of the port. This will be "NWModem."
- ***Device Name*** This is the name of the device.
- ***Network Modem DN*** The directory number (up to 8 digits) is used to identify the modem connected to the port. This field can be modified.

Procedure 4-12
Modifying the NWModem data port

Starting point**:** The Data Port Configuration screen menu

1 Move the cursor to the NWModem data port you want to modify.

2 Press the <Space Bar> to select it.

3 Press [Modify].

The Modify Data Port screen (for the selected NWModem) is displayed.

4 Make changes as required.

5 Choose step 5a to save the changes or step 5b to exit the Modify Data Port screen.

a. Press [Save] to save the changes.

The Data Port Configuration screen re-appears.

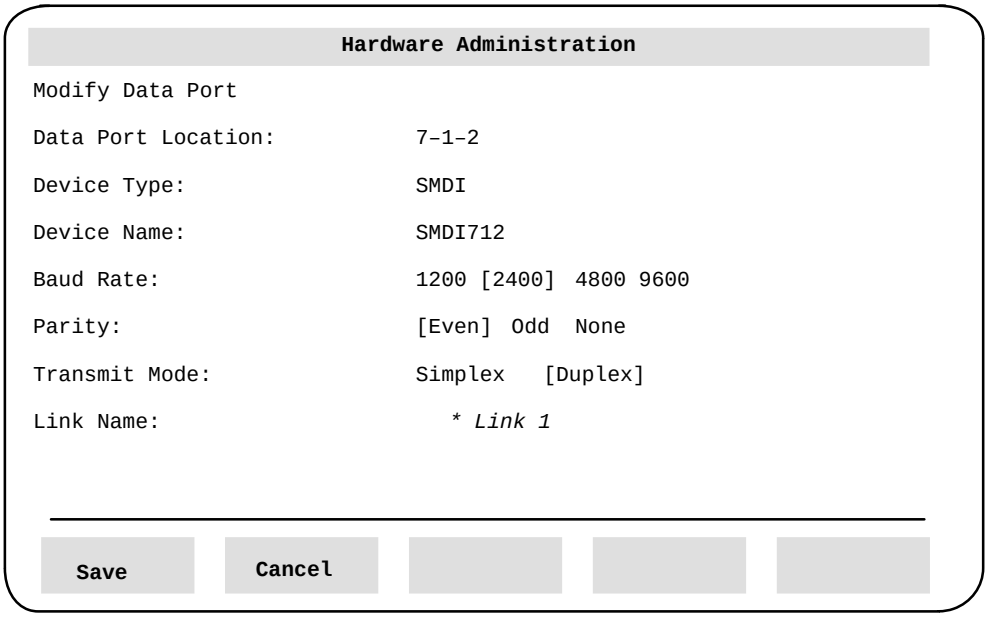
b. Press [Cancel] to undo the changes.

The Data Port Configuration screen re-appears.

SMDI data port

The Modify Data Port screen for SMDI (Figure 4-12) allows you to modify the baud rate, parity, and transmit mode of the MSM side of the serial connection between the switch and the selected port.

Figure 4-12
Modify Data Port screen (SMDI)



* The link name used here is for illustration purposes only.

The following fields are displayed in the screen:

- ***Data Port Location*** This is the physical location of the port (node-card-port).
- ***Device Type*** This is the function of the port. This will be "SMDI."
- ***Device Name*** This is the name of the device. In the above example, set to include the data port location (for exampe, SMDI183).
- ***Baud Rate*** Set this field to "2400" for the MPC card or "1200" for the 1X67FA card.
- ***Parity*** This will be "Even."
- ***Transmit Mode*** This will be "Duplex."
- ***Link Name*** This is the name of the SMDI link. You can enter numeric or alpha characters in this field. It is recommended that you enter a meaningful name so that it is easy to identify the link.

ATTENTION

Do not change the link name once it has been configured and users have been added to the system.

If you change the link name, you will have to change it in every user profile that refers to that link.

Procedure 4-13
Modifying the SMDI data port

Starting point**:** The Data Port Configuration screen menu

1 Select the SMDI data port you want to view/change.

2 Set the parameters as required.

3 Choose step 3a to save the changes or step 3b to exit the Modify Data Port screen.

a. Press [Save] to save the changes.

The Data Port Configuration screen re-appears.

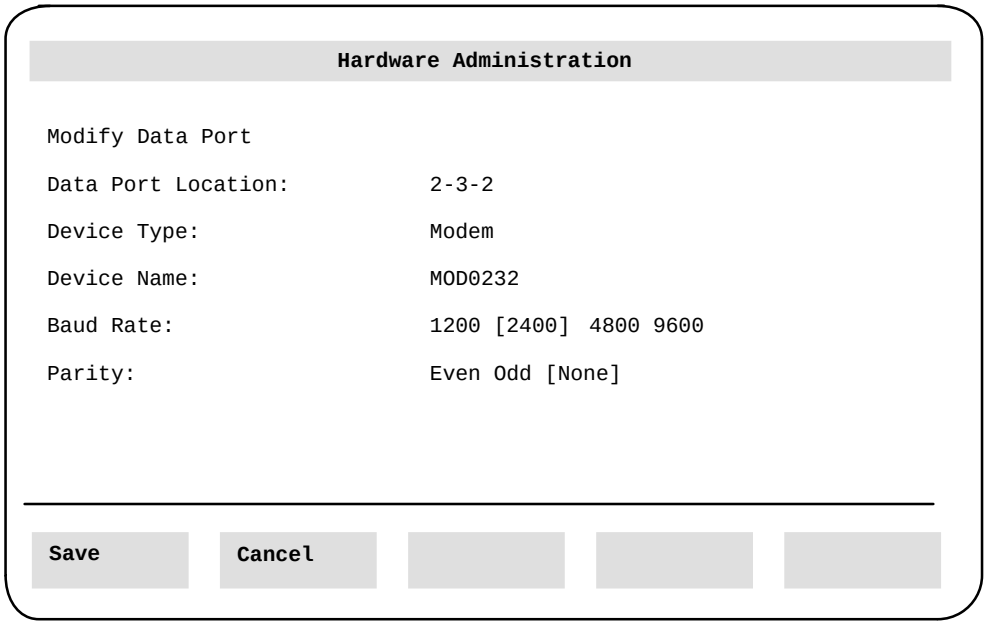
b. Press [Cancel] to undo the changes.

The Data Port Configuration screen re-appears.

Modem data port

The Modify Data Port screen for modems (Figure 4-13) allows you to modify the port characteristics.

Figure 4-13
Modify Data Port screen (modem)



The following fields are displayed on this screen:

- ***Data Port Location*** This is the port's physical location (node-card-port) in the system.
- ***Device Type*** This is the function of the port. This will be "Modem."
- ***Device Name*** This is the name of the device.
- ***Baud Rate*** The setting will depend on the current setup of the modem connected to the port.
- ***Parity*** The setting will depend on the current setup of the modem connected to the port.

Procedure 4-14
Viewing the modem data port

Starting point**:** The Data Port Configuration screen menu

1 Select the modem data point you want to change.

2 Set the parameters as required.

3 Choose step 3a to save the changes or step 3b to exit the Modify Data Port screen.

a. Press [Save] to save the changes.

The Data Port Configuration screen re-appears.

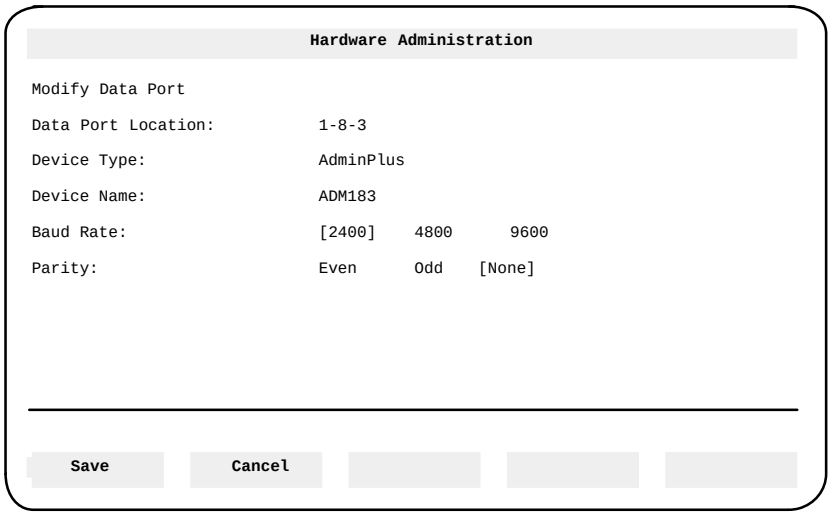
b. Press [Cancel] to undo the changes.

The Data Port Configuration screen re-appears.

Modify AdminPlus data ports

(This screen is applicable only if AdminPlus is installed.) The Modify Data Port screen for AdminPlus (Figure 4-14) allows you to modify the baud rate, and parity, of the serial connection to the Meridian 1.

Figure 4-14
Modify Data Port screen (AdminPlus)



Note: The cumulative baud rates for all AdminPlus and ACCESS data ports cannot exceed 9600 bps.

The following fields are displayed on this screen:

- ***Data Port Location*** This is the physical location of the port.
- ***Device Type*** This is the function of the port. Set it to “AdminPlus”.
- ***Device Name*** This is the name of the device.
- ***Baud Rate*** This field can be set to 2400, 4800, or 9600, subject to engineering constraints.
- ***Parity*** This field should be set to “None”.

Procedure 4-15
Modifying AdminPlus data ports

Starting point**:** The Hardware Administration screen

1 Select <3> to access the Data Port Configuration screen.

2 Move the cursor on the Data Port Configuration screen to the MMLink data port which you want to modify.

3 Select <Modify> to display the Modify Data Port screen for ACCESS.

4 Set the parameters as required. If the baud rate is changed, an appropriate warning message will be displayed to inform the administrator that the terminal baud rate should be changed to match the baud rate that was saved.

5 Choose step 5a to save the changes, or step 5b to cancel.

a. Press [Save].

Changes are saved. The Data Port Configuration screen appears.

Note: A system reboot is not required if only the baud rate of the data port is changed.

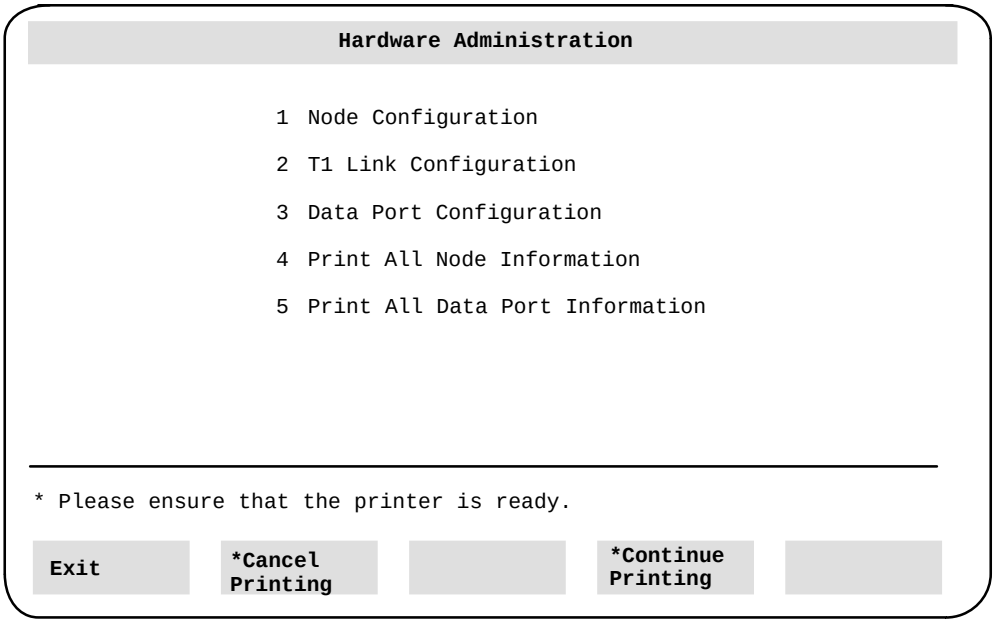
b. Press [Cancel].

Any changes you have made are discarded. The Data Port Configuration screen appears.

Printing node or data port information

The following procedure describes how to print a list of all the node or data port information contained in the hardware database.

Figure 4-15
The Hardware Administration menu



* The print message and softkeys appear after item 4 or 5 has been selected.

Procedure 4-16
Printing node and data port information

Starting point**:** The Hardware Administration menu, item <4> or <5> selected.

1 Select <4> or <5> and press <Return>.

The [Continue Printing] and [Cancel Printing] softkeys appear.

You are prompted to check that the printer is ready and on-line.

2 Choose step 2a to print the node information or 2b to cancel.

a. Press [Continue Printing].

The node or data port information begins printing. You may stop printing at any time by proceeding to 2b. Once printing is complete, the Hardware Administration menu and its softkeys are redisplayed.

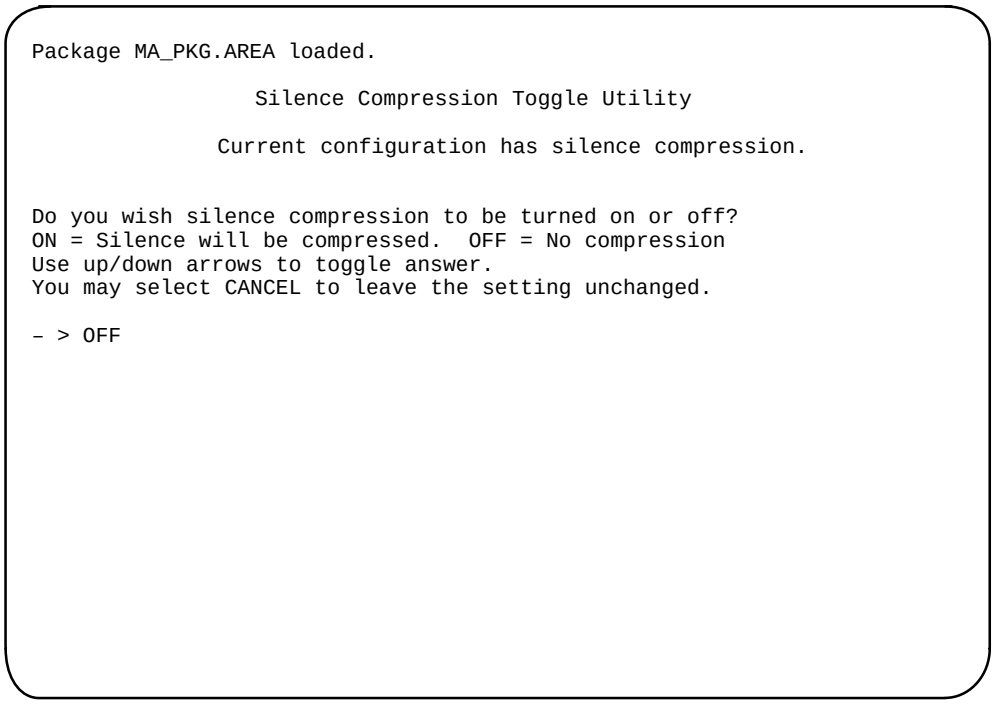
b. Press [Cancel Printing].

The print operation is cancelled and you are returned to the Hardware Administration menu.There may be some delay before control is returned to the screen while the system waits for the printer to stop printing.

Chapter 5: Set silence compression

The Set silence compression tool (Figure 5-1) allows you to activate or deactivate the silence compression feature. This feature removes (compresses) extended periods of silence from messages.

Figure 5-1
Silence compression screen



Procedure 5-1
Activating/deactivating silence compression

Starting point: The TOOLS menu

1 Select <3>, Set silence compression, and press <Return>.

The Silence Compression Toggle Utility screen appears (Figure 5-1).

Note: *The actual screen display may differ slightly from the illustration.*

2 Choose the required setting by using the up/down arrow keys. If you want to cancel, press the up/down arrow keys until CANCEL appears and press <Return>.

Note: *Be sure that the prompt line displays the correct setting before you press <Return>. If silence compression is turned on when you enter this utility, the command line does not display the current setting but displays OFF (the utility assumes you have entered the utility to make a change).*

3 Press <Return>.

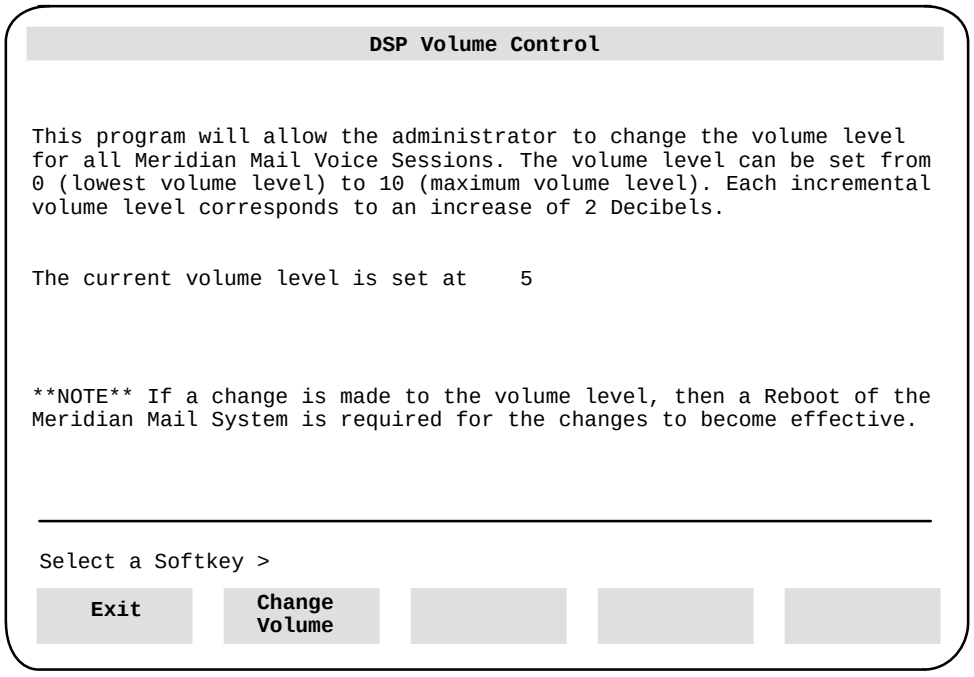
The selection is made and the utility is terminated.

4 Reboot the system to make the change effective.

Chapter 6: Control volume

The Control volume tool allows the administrator to change the volume levels on both recording and playback voice paths. Each level change of one unit, from level 0 to level 10, corresponds to an increase of two decibels.

Figure 6-1
Control volume utility screen



Procedure 6-1
Changing the volume level

Starting point: The TOOLS menu

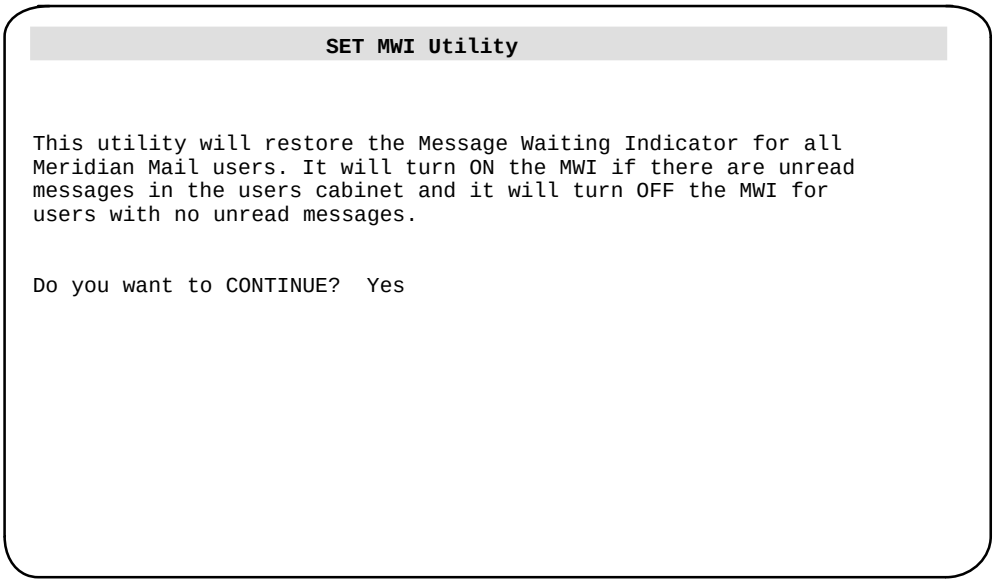
1. Select <4>, Control volume, and press <Return>.
   The current volume level is shown in the center of the screen.
2. Press [Change Volume] to change the volume level.
3. Enter the desired volume level and press <Return>.
   The screen is redrawn, showing the updated volume level.
4. Press [Exit] to return to the TOOLS menu.
5. Reboot the system for the change in volume level to take effect.

Chapter 7: Update MWI

The Update MWI tool will restore the Message Waiting Indicators (MWIs) for all MSM users. It will turn the MWI on if there are unread messages in a user's cabinet and it will turn the MWI off for users with no unread messages.

This tool should be run after the switch is rebooted, since a reboot causes all message waiting indicators to be turned off. It is also useful if the link goes down at a peak time period, because users who were connected to MSM at the time may not have updated MWIs. The update requires 0.4 seconds per user to complete.

Figure 7-1
SET MWI Utility screen



Procedure 7-1
Restoring message waiting indicators

Starting point: The TOOLS menu

1 Select <5>, Update MWI, and press <Return>.

The screen displays information about the SET MWI tool and prompts:

Do you want to continue? YES

2 Use the up/down arrow keys to toggle the response from YES to NO, or from NO to YES. Go to step 2a to reset the MWIs, or step 2b to cancel.

a. Select YES and press <Return> to reset the MWIs.

b. Select NO and press <Return> if you do not want to reset the MWIs.

3 If you choose YES, another set of prompts (shown below) is displayed. Use these **CheckTime** prompts to enter the date and time that the link to the switch went down:

CheckTime YR: 1994
CheckTime MON (1..12): 1
CheckTime DAY (1..31): 1
CheckTime HR (0..23): 0
CheckTime MIN (0..59): 0
CheckTime SEC (0..59): 0

After you respond to the CheckTime prompts, the following message is displayed:

Initiated the updating of Message Waiting Indicators.

Press <Return> to continue...

4 Press <Return> to terminate the utility and return to the TOOLS menu.

The following SEERs are produced for each node that has users:

*INF 9106 SYSTEM 04/29/94 09:52:13 *** NODE=1 HWLOC=NULL*
DES: MWIAUDIT VS2: Starting the Audit LNTC=05:7E:08833809:007B51C5

*INF 9105 SYSTEM 04/29/94 09:52:15 *** NODE=1 HWLOC=NULL*
DES: MWIAUDIT VS2: The Audit is Finished. LNTC=05:7E:08833809:007B5263

Chapter 8: Block access to Meridian Mail

The Block Meridian Mail tool allows the administrator to choose whether to deny all access to MSM voice services in the event of a serious disk failure. (Note that a serious disk failure is not likely to occur.)

When Meridian Mail is first installed, the default setting is to allow access. However, when you run this tool, the default response to the prompt is “Yes” (to deny access). Use the toggle key to change the response back to “No” (to allow access). If the setting has already been changed to deny access, a prompt appears asking you if you want to allow access. The default response is “Yes”.

If access is blocked and a disk failure occurs, MSM voice services “shut down” and calls are immediately routed to a live attendant (as configured on the switch). MSM system administration and maintenance capabilities remain operational.

> ***Note:*** When Meridian Mail is first installed, the default is set to not block access to MSM voice services in the event of a serious disk failure.

Figure 8-1
Block access tool screen (access not blocked)

Procedure 8-1
Blocking access to Meridian Mail voice services

Starting point: The TOOLS menu

1 Select <6>, Block Meridian Mail, and press <Return>.

The screen displays the setting currently in effect. If access to Meridian Mail is not blocked, the following line is displayed:

On catastrophic disk failure, access to Meridian Mail will NOT be blocked.
Do you want to block access to Meridian Mail on disk failure? Yes

2 Use the up/down arrow keys to display the desired response (Yes or No).

Select "Yes" to change the current setting.

Select "No" to leave the current setting as is.

3 Press <Return> to confirm your selection.

The following message appears if you selected "Yes":

Upon reboot, access to Meridian Mail will be blocked

The following message appears if you selected "No":

No change. Access to Meridian Mail will NOT be blocked on disk failure.

After one of these messages is displayed, the TOOLS menu is automatically redisplayed.

Note: *The system must be rebooted for the change to take effect.*

Figure 8-2
Block access tool screen (access blocked)

Procedure 8-2
Unblocking access to Meridian Mail voice services

Starting point: The TOOLS menu

1 Select <6>, Block Meridian Mail, and press <Return>.

The screen displays the setting currently in effect. If access to Meridian Mail is blocked, the following line is displayed:

On catastrophic disk failure, access to Meridian Mail will be blocked. Do you want to allow access to Meridian Mail on disk failure? Yes

2 Use the up/down arrow keys to display the desired response (Yes or No).

Select "Yes" to change the current setting.

Select "No" to leave the current setting as is.

3 Press <Return> to confirm your selection.

The following message appears if you selected "Yes":

Upon reboot, access to Meridian Mail will be allowed

The following message appears if you selected "No":

No change. Access to Meridian Mail will be blocked on disk failure.

After one of these messages is displayed, the TOOLS menu is automatically redisplayed.

Note: *The system must be rebooted for the change to take effect.*

Chapter 9: Session Trace

The Session Trace tool allows you to obtain detailed information about the activity in a user's mailbox and the state of the message waiting indicator (MWI). The session information includes voice messaging, call answering, and express messaging activity (messages composed and sent, or left in a mailbox), the number of messages played or left unplayed during a session, and the status of the message waiting indicator (turned on or off, or untouched).

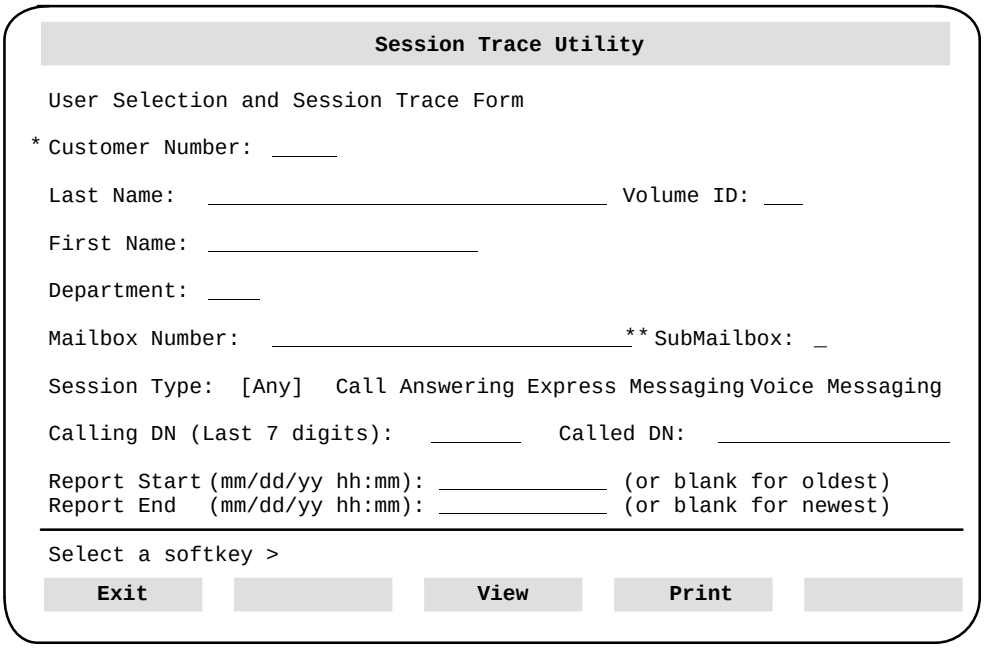
This session information allows an administrator or technician to study the state of a user's mailbox and the message waiting indicator, and use that information to follow up on any user complaints about Meridian Mail. For example, a user may complain that the MWI was on, but no voice messages were in the mailbox when the user logged in. The session information may tell the administrator why the MWI was turned on. Refer to the "Session trace report" section for more information about using session trace for diagnostics.

> ***Note:*** The session information is retrieved from the Operational Measurements billing file, and this billing data is stored only when "Collect User Usage Data" in the Operational Measurement Options screen is enabled. Session trace data is kept on the system for only two days plus the current day. Operational Measurements billing files and the Options screen are discussed in the "Operational Measurements" chapter of the *System Administration Guide*.

Find the session

When you select Session Trace from the TOOLS menu, the following screen is displayed:

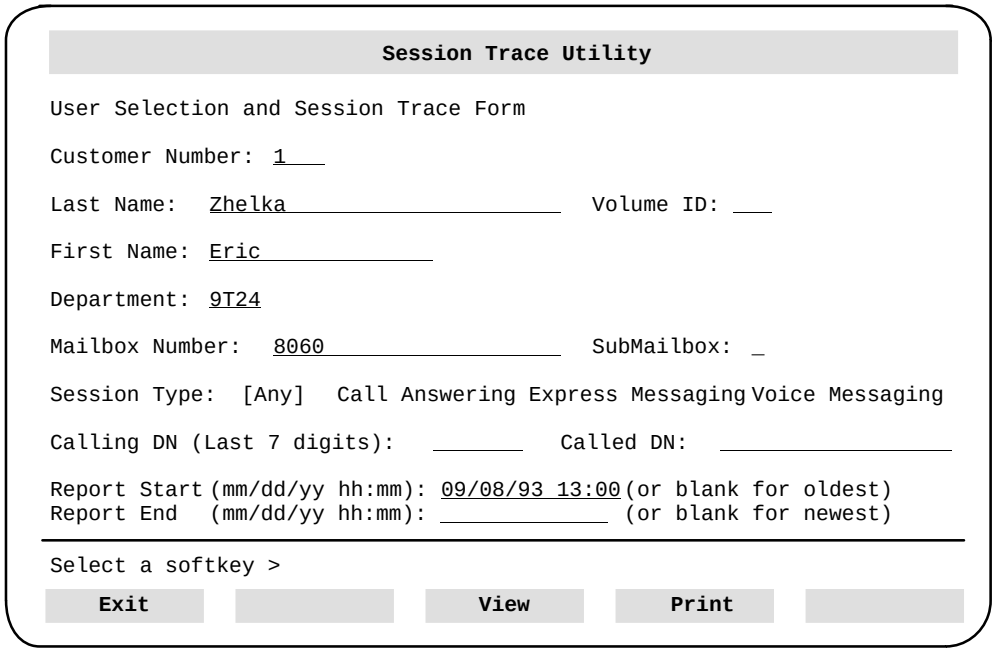
Figure 9-1
User Selection and Session Trace Form



* This field appears only on multicustomer systems.

** This field appears only on VMUIF systems.

Figure 9-2
User Selection and Session Trace Form (with search criteria filled in)



Enter as many search criteria in the "User selection" screen as you think you need to uniquely identify the session you want to view. The fields are described below.

- ***Customer Number*** This is the customer group you want to search. This field appears only on multicustomer systems.
- ***Last Name*** This is the last name of the user whose session information you want to find (max. 41 characters). To find a group of users with similar last names, use wildcard characters.
- ***Volume ID*** This is the hard disk volume to which the user is assigned. All users are assigned to a volume.
- ***First Name*** This is the first name of the user whose session information you want to find (max. 21 characters). To find a group of users with similar first names, use wildcard characters.
- ***Department*** This is the department of the user or group of users that you want to find.
- ***Mailbox Number*** If networking is installed, this field can hold up to 28 digits, otherwise, it holds up to 18 digits. Session information for mailboxes at a specific satellite location can also be retrieved by prefixing the mailbox number with the appropriate location code.
- ***SubMailbox Number*** This is a one digit number identifying a submailbox if one exists. This field appears only on VMUIF systems.
- ***Session Type*** The session type is the action that occurred on the mailbox. The session types are
  - — ***Call Answering (CA)*** This type of session is created when a message is left in a mailbox using Call Answering. This does not include sessions where a message is left in a mailbox using compose and send.
  - — ***Express Messaging (EM)*** This type of session is created when a message is received using Express Messaging.
  - — ***Voice Messaging (VM)*** This type of session is created any time a user logs in to a mailbox. This session type includes activities such as logging in to listen to messages, to compose and send messages, or to record a new greeting.

  The default is "Any", which includes all session types.
- ***Calling DN*** This is the DN of the phone that initiated the session. For example, if a user logs in to a mailbox from a remote phone, the Calling DN will be the DN of the remote phone, not the user's regular phone. Even if the user goes on to call another DN from their mailbox which results in a CA session, the calling DN for the CA session will be the DN of the remote phone.

- ***Called DN*** This is the DN that was called to initiate that session. For VM and EM sessions, the called DN is the Voice Messaging UCD DN (the main Meridian Mail UCD DN). For CA sessions, this is the DN of the mailbox that had a message left in it.
- ***Report Start*** This is the start of the time period that you wish to search for session information. If left blank, the session trace report will begin with the oldest session still recorded in the OM billing files.
- ***Report End*** This is the end of the time period that you wish to search for session information. If left blank, the session trace report will end with the most recent session recorded in the OM billing files.

When you have finished entering the search criteria, press [View] or [Print] to initiate the search.

If you have entered enough criteria to identify one user, the session information for that user's mailbox is displayed (if you pressed [View]) or printed (if you pressed [Print]). A sample report is shown later in this chapter in the section titled "Session trace report".

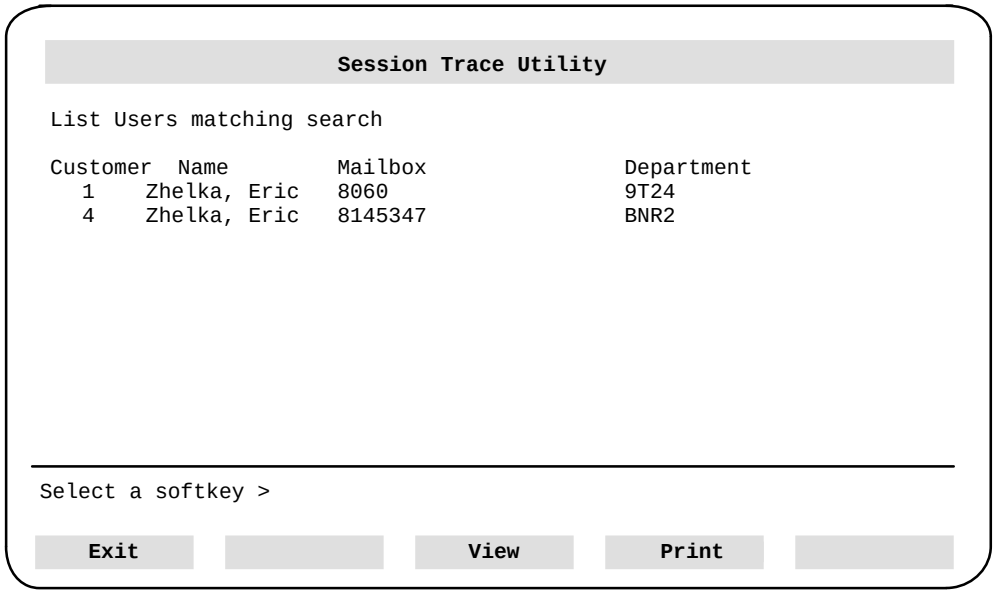
If you have not entered enough criteria to identify one user, a message on the screen informs you that multiple matches were found. The section titled "Select the user" discusses this situation.

Select the user (if multiple matches found)

If the search criteria matches more than one user, the [View] and [Print] softkeys change to [Cancel] and [List].

Press [List] to view a list of the users that match the search criteria, or press [Cancel] to return to the User Selection and Session Trace Form. If you press [List], the following screen is displayed:

Figure 9-3
List users matching search screen



Select the appropriate user (use the arrow keys to move to the appropriate line and press the space bar) and then press [View] or [Print]. A sample report is shown in the “Session trace report” section. If you do not wish to view session information for any of the matches, press [Exit] to return to the User Selection screen.

Session trace report

The session trace report is displayed or printed when you press [View] or [Print] on the User Selection and Session Trace Form or List users matching search screens. An example of the Session Trace Report is shown in Figure 9-4.

Figure 9-4
Session trace report

```
                              Session Trace Utility

Session Trace Report

Last Name    First Name   Dept    Cust#     Mailbox   * SubMailbox
Zhelka       Eric         9T24      1       8060

Type: VM Call Origination:INTERNAL      Msgs in other SubMbxs affect MWI:No
Session Start:    09/08/93 15:11:10     End: 09/08/93 15:14:22  Length: 199
Called DN:                     3650     Calling DN:                    8060
Last MWI Action:Turned On               Msg Sent/Left During Session:     1
External Msgs affect MWI:        No
Compose Messages:                 1     Call Ans/Express Msg Messages:    0
Reply Messages:                   0     Forwarded Messages:               0
Total Msg Start of Session:       2     UnPlayed Msg Start of Session:    0
Msgs Arrived During Session:      1     New Msgs Played This Session:     0
UnPlayed Msgs End of Session:     1     Timed Delivery Msgs Submitted:    0
Message Lengths – Minimum:       10     Maximum: 10  Total Msg Length:   10

  Select a softkey >
     Exit                        View           Print
```

* This field appears only on VMUIF systems.

Press [Exit] to return to the User Selection and Session Trace Form.

Many of the fields in this report also appear on the “User Selection” screen and were documented there. The remaining fields are described below.

- ***Type*** This is the session type. CA is Call Answering, EM is Express Messaging, and VM is Voice Messaging. Note that VM includes any login to the mailbox.
- ***Call Origination*** If the call originated on the local switch, or any switch in a network, this field will show “INTERNAL”. If the call came in from outside the local switch, this field will show “EXTERNAL”.
- ***Msgs in other SubMbxs affect MWI*** If the MWI has been turned on or off as a result of activity in any submailboxes to this mailbox, this field displays “Yes”. Otherwise, this field displays “No”. This field is applicable only on VMUIF systems.
- ***Session Start*** This is the date and time that the session started. This is not the same as the Report Start indicated on the “User Selection” screen since there may be several sessions retrieved within the Report Start/End range, and each with a different Session Start time.

A session starts as soon as the mailbox is accessed. For example, a VM session starts as soon as the user logs in to the mailbox. For CA or EM sessions, the session starts when the mailbox greeting is played.

- ***End*** This is the date and time that the session ended. This is not the same as the Report End indicated on the "User Selection" screen since there may be several sessions retrieved within the Report Start/End range, each with a different Session End time.
- ***Length*** This is the duration of the session in seconds.
- ***Last MWI Action*** The possibilities are "Turned On", "Turned Off", or "Untouched". These possibilities are described below:
  - — ***Turned On:*** The last action in this session was to turn on the MWI. If the MWI was on at the start of the session and remained on, this field would show "Untouched", not "Turned On".
  - — ***Turned Off*** The last action in this session was to turn off the MWI. If the MWI was off at the start of the session and remained off, this field would show "Untouched", not "Turned Off".
  - — ***Untouched:*** The state of the MWI was not changed throughout the session. It either stayed on, or stayed off, through the entire session.
- ***Msg Sent/Left During Session*** For VM sessions, this field shows the number of messages that were sent from this mailbox using compose and send, reply, reply-all, and forward. For CA or EM sessions, this field shows the number of messages left in this mailbox through call answering or express messaging, respectively, in this session (for CA or EM, this field will always show either 1 or 0, because each CA or EM message received comprises a separate session).
- ***External Msgs affect MWI*** If the user's phone is connected to other messaging systems besides Meridian Mail, then the MWI may be turned on because of messages received through the other messaging system. This can occur, for example, in hotels that use the MWI to indicate text messages left at the front desk, as well as voice mail left through Meridian Mail.
- ***Compose Messages*** The number of messages composed during the session.
- ***Call Ans/Express Msg Messages*** The number of messages left in the mailbox through call answering or express messaging during the session (always either 1 or 0).
- ***Reply Messages*** The number of messages created and sent using the reply option on Meridian Mail (reply to received message).
- ***Forwarded Messages*** This is the number of messages forwarded from this mailbox during the session.

- ***Total Msg Start of Session*** This is the total number of messages in the mailbox at the start of the session.
- ***Unplayed Msg Start of Session*** This is the number of unplayed messages in the mailbox at the start of the session. Unplayed messages are messages that have never been played. Old messages that have already been played during earlier sessions are not included.
- ***Msgs Arrived During Session*** This is the number of messages that arrived during the session.
- ***New Msgs Played This Session*** This is the number of new messages played during the session. Any messages that have not been played yet are labeled as new messages. This includes messages received during or prior to this session but never played.
- ***Unplayed Msg End of Session*** This is the number of unplayed messages in the mailbox at the end of the session.
- ***Timed Delivery Msgs Submitted*** This is the number of messages with a programmed delivery time submitted during the session. This does not include message that are immediately sent because the message is submitted after the delivery time has passed.
- ***Message Lengths*** The shortest (Minimum) message, the longest (Maximum) message, and the total length of all messages composed or created during the session. These values are listed across the report beside the headings “Minimum”, “Maximum”, and “Total Msg Length”.

Using session trace to perform diagnostics

The session trace information allows you to follow up on complaints by users regarding voice messages and the MWI. The following points describe some of the checks you can make to ensure that Meridian Mail is working properly, and some specific items to check for MWI-related complaints:

- If a user complains that a message was not delivered, the user may have forgotten to send the message after creating it. The number of unsent messages can be determined by adding the numbers recorded in the compose, reply, timed delivery submitted, and forwarded messages fields and subtracting the number of messages sent (shown in the “Msg Sent/Left” field).
- The delivery time of any CA or EM messages that were placed in a particular mailbox can be confirmed through the session data.
- For every CA or EM message left in a mailbox, there should be one new message the next time the user logs in. In other words, the first VM session that follows a CA or EM session should report new messages in the “Unplayed Msg Start of Session” field.

MWI diagnostics

- To check that the MWI is being turned on by call answering for a particular mailbox, leave a message on the mailbox using call answering. Then check the session information. Unless the MWI was already on, the last MWI action should be “Turned On”. If the session information shows that the MWI was turned on but the lamp on the phone was not lit, there may be a problem with the telephone, and not with Meridian Mail.
- If a user complains that the MWI is on, but there are no voice messages, two possible causes are:
  - — A message was left in a submailbox (VMUIF systems only) that caused the MWI to be turned on.
  - — A message was left using another messaging system, so there was no Meridian Mail voice message even though the MWI was turned on. For example, at a hotel the front desk clerk may be able to turn on the guest’s MWI to alert the guest about a message or note left at the front desk.

  To explore these possibilities, check the session information for “External messages” or “Msgs in other SubMbxs” that are affecting the MWI.
- If there are unplayed messages in the mailbox, the last MWI action should be “Turned On” or “Untouched” (if MWI was already on).

Procedure 9-1
Searching, selecting, and viewing a session trace report

Starting point: The TOOLS menu

1 Select <7>, Session Trace, and press <Return>.

The system displays a search screen titled “User Selection and Session Trace Form”.

2 Enter search criteria on the User Selection and Session Trace Form that will identify the particular session you wish to view.

3 Press [View] or [Print] to initiate the search and display or print the session trace reports.

If a single matching mailbox is found, the Session Trace Report is displayed (go to step 6)

If more than one mailbox is found that matches the search criteria, a message is displayed informing you that multiple matches were found. The softkeys then change to [Cancel] and [List].

4 Press [Cancel] to return to the “User Selection” screen, or [List] to see a list of the matching mailboxes (then go to step 5).

5. On the “List users matching search” screen, use the arrow keys to move the cursor to the line with the mailbox you want to select and press the space bar. Then use [View] or [Print] to display or print the Session Trace Report for the selected mailbox.
6. In view mode, the session trace report appears on the screen (if there is data for that mailbox). Press [Exit] to return to the previous screen, or press [Next Record] to view the next session record.
7. To exit the tool, press [Exit] repeatedly to return to the previous screen until the TOOLS menu reappears.

Chapter 10: Audit all volumes

The Audit all volumes tool frees disk space occupied by deleted voice messages. When users delete voice messages, the disk space taken up by those messages is not immediately freed up and made available until an audit takes place.

The use of this tool is normally not required because system audits are performed automatically on a daily basis (typically beginning at 2:30 a.m) to make this disk space available. However, if your system is heavily loaded and there is a lot of traffic, you may have to perform additional audits using the “Audit all volumes” tool. If SEERs with the return code 1103 are being generated, this is an indication that the server is full and that an audit is in order.

Procedure 10-1
Auditing all volumes

Starting point: The TOOLS menu

1 Select <8>, Audit all volumes, and press <Return>.

Auditing begins immediately. The system does not respond with any prompts because this is a non-destructive procedure.

Once auditing is complete, the TOOLS menu is re-displayed.

Chapter 11: Rebalance directory

This tool rebalances the access structure for the organization directory in order to speed up searches and updates to its entries.

The rebalance directory tool is run automatically every night (usually at 3:30 am). However, if many updates have been made to the directory, then it may help to run the tool during the day right after the updates are done. If many users of voice services are added during the day and system performance decreases (for example, the system is noticeably slower as you attempt to add more users), then a directory rebalance may speed up the system. During the rebalancing, updates are disabled. SEER number 3135 will indicate when the rebalancing has started and stopped.

Figure 11-1
Sample run (prompts and responses) for the Rebalance tool (after "Rebalance directory" is selected from the TOOLS menu)

```
 Organization directory rebalancing not currently running.
 You are about to rebalance the organization directory.

 Seers numbered 3135 will indicate when the
 rebalancing begins and ends.

 Do you wish to continue? Yes
 Enter time limit (hrs) 2
 Enter time limit (min) 0
 Do the rebalancing? Yes
*SEER>03/11/93 09:58:41 ...
*3135 DR Audit Begun: [ ]

*SEER>03/11/93 10:40:18 ...
*3135 DR Audit Done ...
```

* These lines include additional numbers and data not shown here. Also, SEERs are printed to the screen only if no printer is connected.

Procedure 11-1
Rebalancing the directory

Starting point: The TOOLS menu

1 Select <9>, Rebalance directory, and press <Return>.

The system displays some help text, followed by the prompt:
Do you wish to continue?

Note: *Run this tool when system performance slows down significantly while adding (or after adding) many users in one day. A rebalancing (once completed) will speed up the entry process, but you will not be able to add users while the rebalancing tool is running.*

2 If you have satisfied the required conditions for running this tool (see Step 1), then answer **Yes** and press <Return>. If you respond with "No", the rebalancing is not started and you are returned to the TOOLS menu.

If you do respond with "Yes", the system prompts you for a time limit (first hours, and then minutes):

Enter time limit (hrs)

Enter time limit (min)

3 Enter a time limit (e.g., 2 hours, 0 minutes) for the rebalancing to finish.

If the rebalancing does not finish within the enforced time limit, rerun the rebalancing tool.

If the time limit is reached, a 3135 SEER with a timeout message is printed. If the rebalancing does finish with no problems before the time limit is reached, a 3135 SEER with the message "DR audit completed" is printed.

After you set a time limit, the following prompt appears:

Do the rebalancing?

4 Enter **Yes** to begin the rebalancing. SEER 3135 will print once to indicate that the rebalancing ("DR Audit") has begun, and then once more to indicate that either the rebalancing has finished or the timeout limit has been reached.

Procedure 11-2
Stopping the rebalancing process

Starting point: The TOOLS menu

1 Select <9>, Rebalance directory, and press <Return>.

If the rebalancing tool is already running, the system informs you of this and asks you if you wish to stop the rebalancing:

The directory is currently being rebalanced.

Do you wish to stop the rebalancing?

2 Enter **Yes** to stop the rebalancing.

*The rebalancing tool will stop when it has finished the directory files it is currently rebalancing. If the rebalancing tool is not running (for example, the system prompts and messages are similar to those shown in Figure 11-1), then enter **No** to the prompt to indicate that you do not wish to continue.*

Note: *The next time you run the Rebalance directory tool, the rebalancing will continue from where it stopped the last time it was run.*

Chapter 12: COS Conversion

The COS conversion tool allows you to assign users who have a personal Class of Service (COS) to a defined COS.

Users who are not part of a defined COS are given a COS labelled “personal”. These users can be referred to as “unassigned” because they are not part of a defined COS. The mailbox attributes for users with a personal COS cannot be manipulated or revised as a group the way you can for users who are part of a defined COS. As a result, it is beneficial to assign users who have a personal COS to one of the defined COSs.

For complete details on Class of Service administration, please read the “Class of Service” chapter in the *System Administration Guide*.

Applications for the COS conversion tool

There are four basic reasons for running this tool.

1 You have defined COSs on your system that your organization has determined are required to properly manage the users on your system. Now you want to quickly assign users to a defined COS that matches the users’ mailbox attributes.

2 You have started assigning users to the defined COSs (either using this tool or using the “Class of Service” facility described in the *System Administration Guide*). Now you want to finish the process by assigning the remaining unassigned users to a defined COS.

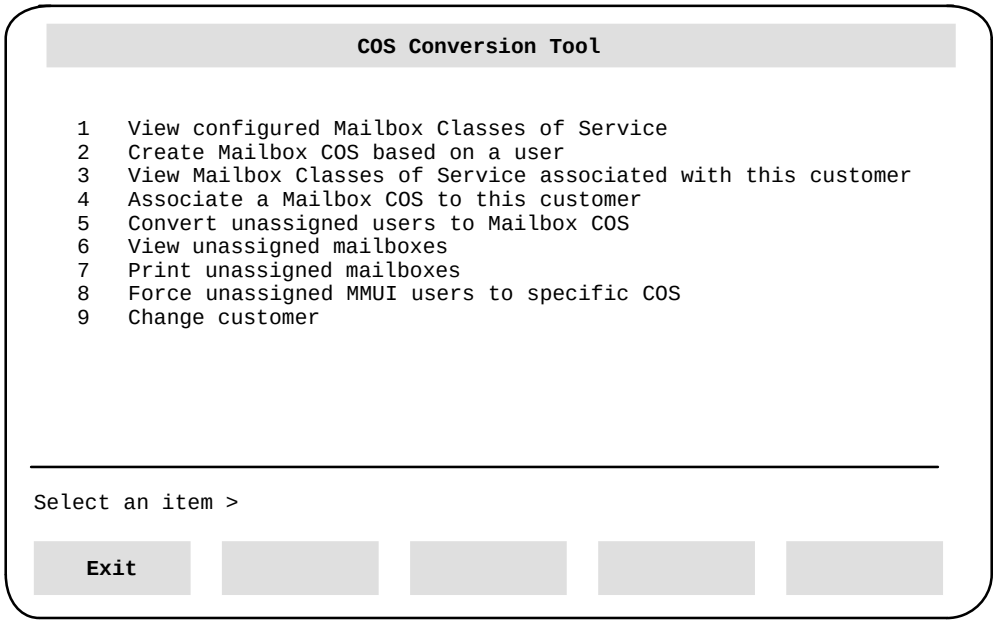
3 Your organization has no present needs for Class of Service groupings. All you want to do is create COSs that match the mailbox attributes already set up for most users so that you can group those users under a matching defined COS. As discussed, once you have your users assigned to a COS, their mailbox attributes can be modified as a group to suit the needs of your organization. This is the benefit of assigning users to a defined COS. See the “Class of Service” chapter in the *System Administration Guide* for details on modifying a COS.

4 You wish to assign all remaining personal COS users to a defined COS, whether or not they match one of the defined COSs. The “Force unassigned MMUI users to specific COS” option allows you to do this. This option is not available to VMUIF customers. This option is discussed in greater detail in the section “Force unassigned MMUI users to a specific COS” near the end of this chapter.

Accessing the tool

To access the COS conversion tool, select “COS conversion” from the TOOLS menu. On a multicustomer system, you are prompted for a customer group number. After you enter an existing customer group number, the COS conversion tool functions are listed in a menu (see Figure 12-1).

Figure 12-1
COS Conversion menu



Steps for assigning COSs

Follow Procedure 12-1 to assign a COS to currently unassigned users. If after following these steps, there are still unassigned users, you may wish to use the “Force unassigned MMUI users” option which is described in the section “Force unassigned MMUI users to a specific COS”.

Note: If you have not yet defined any COSs, start at step 2.

Procedure 12-1
Assigning COSs

Starting point: The COS Conversion Tool menu

1 Select <5>, Convert unassigned users to Mailbox COS, and press <Return>.

This function searches for unassigned users and looks for a defined COS that exactly matches the user’s mailbox attributes. If a match is found, the COS is assigned to the user. If some users are still unassigned, repeat this step.

2 Define new COSs, and assign (enable) the COSs to the appropriate customer groups. You can either use the “Class of Service” facility described in the *System Administration Guide*, or use this tool to create new COSs (see steps 3 to 5).

Note: *If the maximum number of COSs allowed for a customer group (15 COSs) have already been associated with this customer, you may want to remove one or more unused or unnecessary COSs from the customer group (see the System Administration Guide). This will allow you to add a COS that may match some of the unassigned users.*

3 Select <6>, View unassigned mailboxes, and press <Return>.

This option allows you to view unassigned users. Note the mailbox number of one or more users whose mailbox attributes you would like to use as the base for COS.

4 Select <2>, Create Mailbox COS based on a user, and press <Return>.

This option allows you to create a COS based on the unassigned users you selected in step 3.

5 Select <4>, Associate a Mailbox COS to this customer, and press <Return>.

This option allows you to associate the newly created COSs with the customer group you are working on. For single-customer systems, this would be customer 1.

6 Repeat this procedure as required.

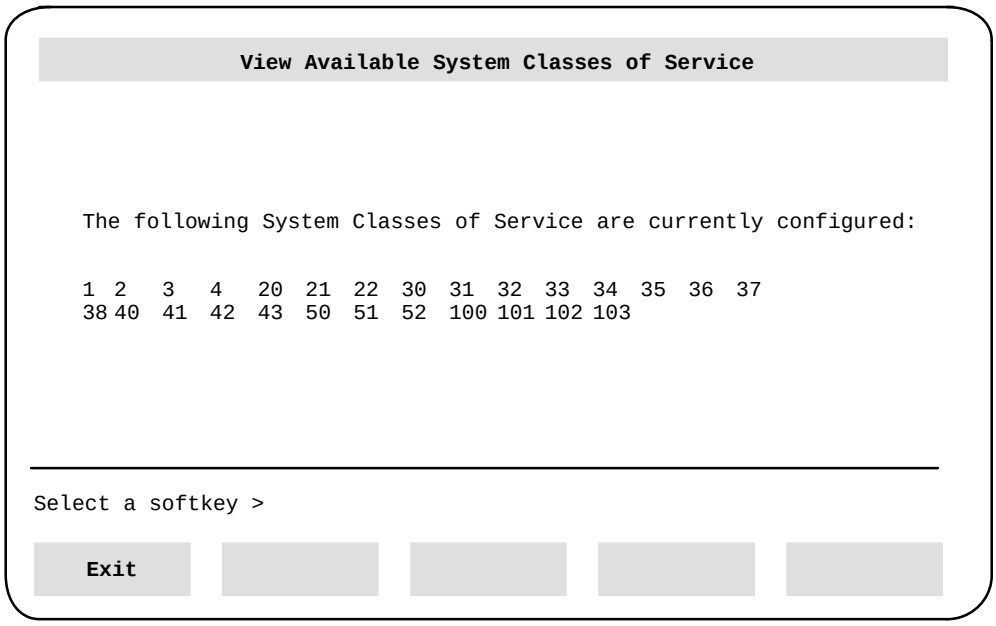
The COS conversion tool functions, including the menu items referred to in the procedure above, are described in the remainder of this chapter in the order that they appear in the COS conversion tool menu.

View configured mailbox classes of service

When you select item 1 from the COS Conversion menu, the COS numbers for all the configured classes of service on your system are listed on the screen, as shown in Figure 12-2. To see the classes that are available for a particular customer group, refer to the “View COS associated with this customer group” section.

> ***Note:*** On a single-customer system a maximum of 15 classes of services may be defined, while on a multicustomer system a maximum of 127 classes of service may be defined, but only 15 can be associated with one customer at one time.

Figure 12-2
View configured mailbox classes of service

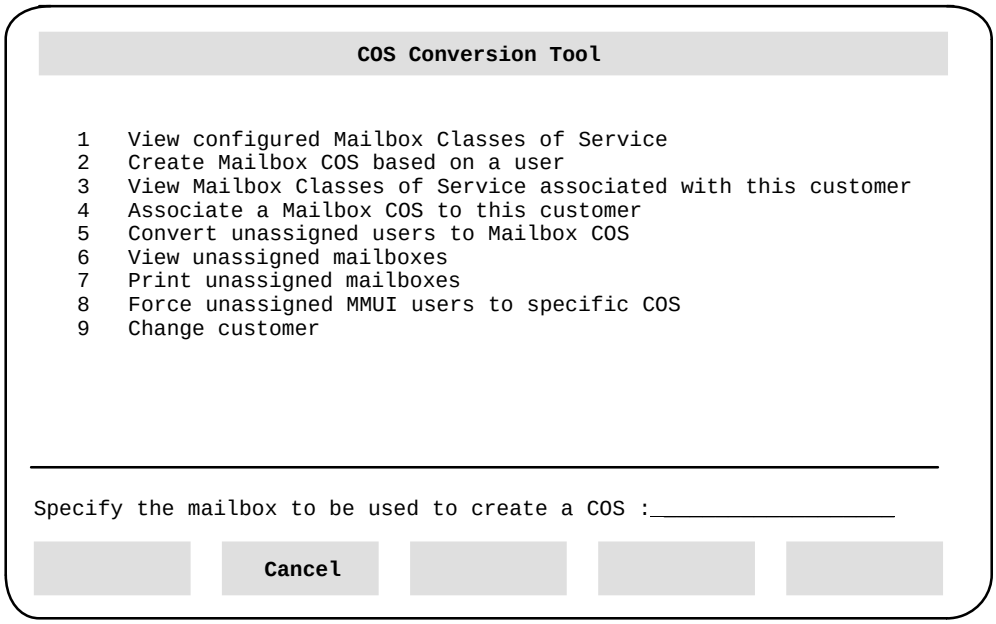


Create a COS based on one user's mailbox

This option allows you to use one user's mailbox attributes as the basis for a new COS. One situation where you might want to use this option is if you know that several mailboxes have the same attributes. Use this option to create a new COS that is based on one of these mailboxes. When you run the convert unassigned users function, all the mailboxes that match the new COS will be assigned to that COS. Another use for this option is to use existing mailboxes to quickly create a COS rather than using the Class of Service Administration screens and keying in all the required data.

An example of the COS Conversion menu with the "Specify the mailbox" prompt is shown in Figure 12-3.

Figure 12-3
Create a COS based on a user



Procedure 12-2
Creating a COS based on a user

Starting point: The COS Conversion Tool menu

1 Select <2>, Create Mailbox COS based on a user, and press <Return>.

A prompt appears at the bottom of the screen asking for the mailbox number that will be the basis for the new COS:

Specify the mailbox to be used to create a COS:

2 To specify a mailbox number, go to step 2a. To cancel, go to step 2b.

a. Enter a valid mailbox number and press <Return>.

A new COS is created. A confirmation message is displayed indicating what number has been assigned to the new COS. For example:

COS 5 has been created.

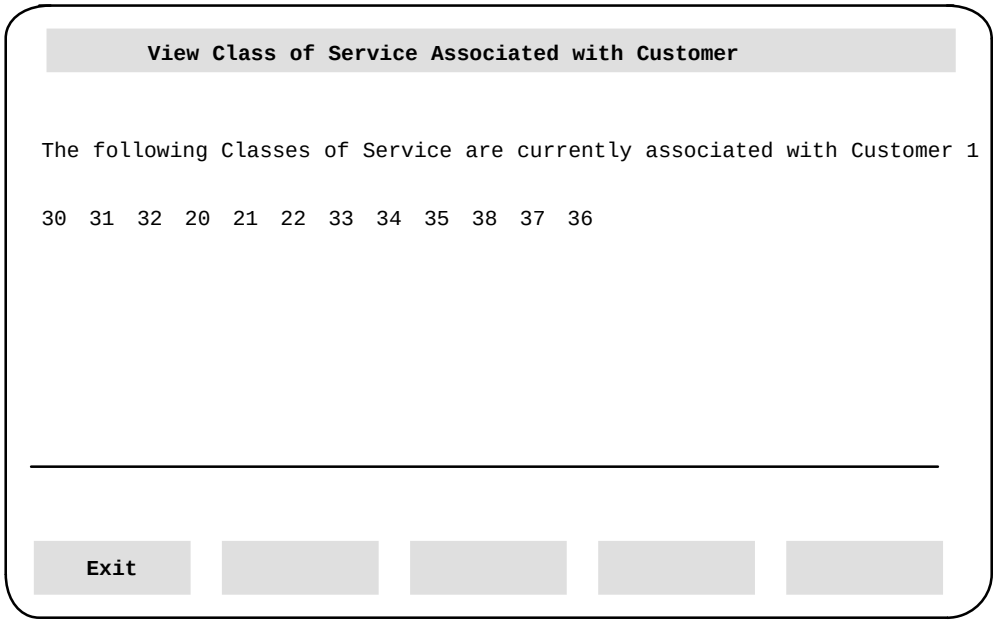
b. Press [Cancel].

The COS Conversion Tool screen is re-displayed.

View COSs associated with this customer

When you select this item from the COS Conversion menu, all the COSs that are available for this customer group are displayed, as shown in Figure 12-4.

Figure 12-4
View Mailbox Classes of Service associated with this Customer

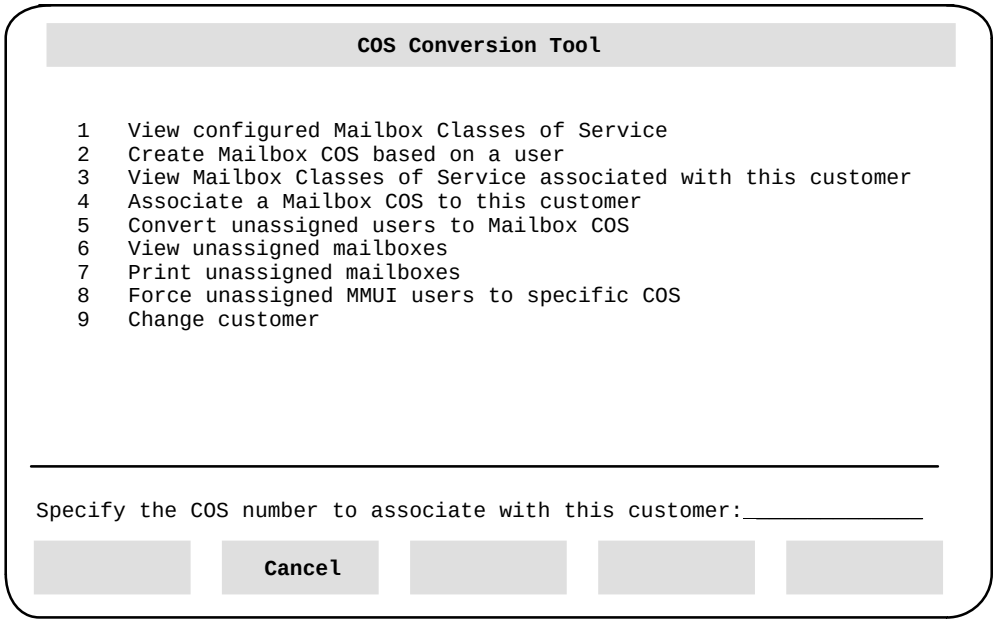


Associate a COS with this customer

A maximum of 15 COSs can be assigned to a customer group. If you do not have 15 COSs already assigned to the customer you are working on, you can add a COS to this customer's list of available COSs by selecting item 4 from the COS Conversion menu.

An example of the COS Conversion menu with the "Specify the COS number" prompt is shown in Figure 12-3.

Figure 12-5
Associate a COS with this customer



Procedure 12-3
Associating a COS with the customer

Starting point: The COS Conversion Tool menu

1 Select <4>, Associate a Mailbox COS to this customer, and press <Return>.

A prompt appears at the bottom of the screen asking for the COS number that will be associated with the customer:

Specify the COS number to associate with this customer:

2 To specify a COS number, go to step 2a. To cancel, go to step 2b.

a. Enter a valid COS number and press <Return>.

A confirmation message is displayed indicating that the COS number has been associated with the customer group that you are currently working on.

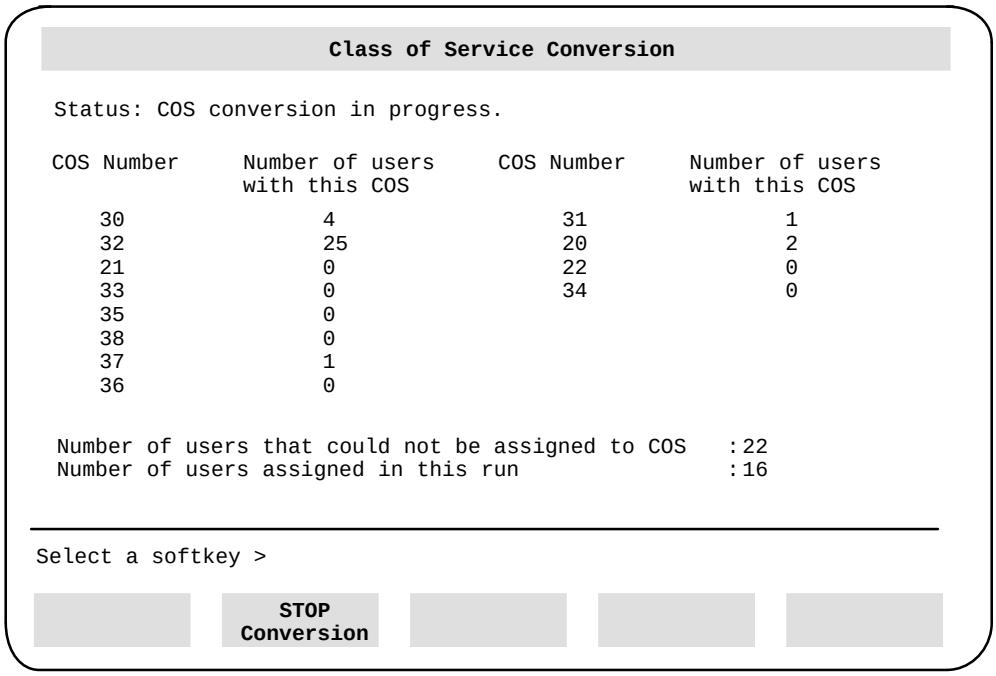
b. Press [Cancel].

The COS Conversion Tool screen is re-displayed.

Convert unassigned users to a matching COS

Item 5 from the COS Conversion menu assigns users who currently have a personal COS to one of the configured COSs that is associated with the customer group and that match the user's mailbox attributes. The user's mailbox attributes must match a COS exactly in order to be assigned to that COS. Some mailboxes will not match any of the available COSs and will not be assigned. The screen display that appears when you select this function is shown in Figure 12-6 (as it appears during the conversion process).

Figure 12-6
Convert unassigned users to a defined COS



The following information is displayed:

- ***COS Number*** The numbers for the COSs associated with this customer. These numbers do not change.
- ***Number of users with this COS*** The number of users currently assigned to the corresponding COS number to the left. The numbers in this column are updated periodically as the tool reads in users. This column essentially counts the number of users assigned to each COS.

When the tool reads in a user with a personal COS, it searches for a matching COS and, if one is found, the user is assigned to that COS. The "Number of users with this COS" column is then updated.

To stop the conversion process, use the [STOP Conversion] softkey. This stops the conversion at the last personal COS user record read. Once the conversion is completed, this softkey selection disappears and you can use the [Exit] softkey to return to the COS Conversion menu.

The result of the conversion is shown in the two lines at the bottom of the screen: namely, the number of users that could not be assigned (no matching COS found), and the number of users assigned to a COS during this run (matching COSs found for this number of users). At the end of the run, the "Number of users with this COS" column shows the total number of users within this customer group that have been assigned to a COS, including those users assigned during this conversion run.

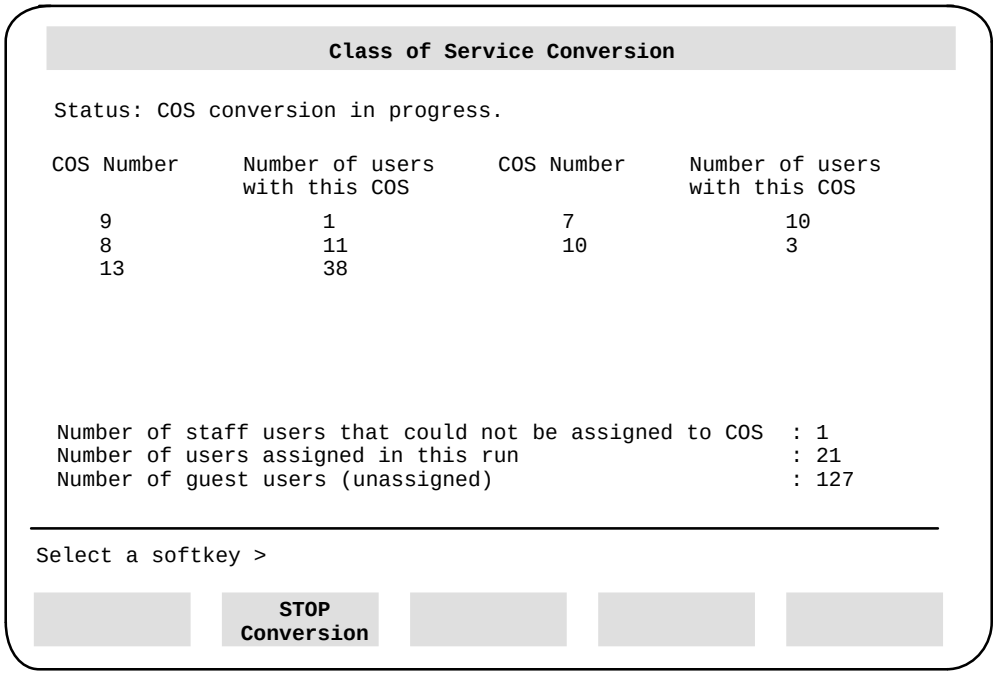
Convert unassigned users on a Hospitality system

On a Hospitality system, the "Convert users" option functions slightly differently:

- Guest users with a personal COS are not converted to a defined COS. These guest users are counted among the guest users unassigned (see last line of screen example in Figure 12-7)
- Guest users that were already assigned a COS are counted in the "Number of users" column.
- Staff users are treated the same as users on a non-Hospitality system. If they have a personal COS but their mailbox attributes match those of an available COS for the customer group, then they are assigned to the matching COS.
- The status lines at the bottom of the screen display are different.
  - — "Number of staff users that could not be assigned to COS" applies only to staff users.
  - — "Number of users assigned in this run" also applies only to staff users.
  - — "Number of guest users (unassigned)" is the number of guest users with a personal COS.

The screen display that appears on Hospitality systems is shown in Figure 12-7. As in the non-Hospitality system, the [STOP Conversion] softkey aborts the process.

Figure 12-7
Convert unassigned users to a defined COS (Hospitality system)



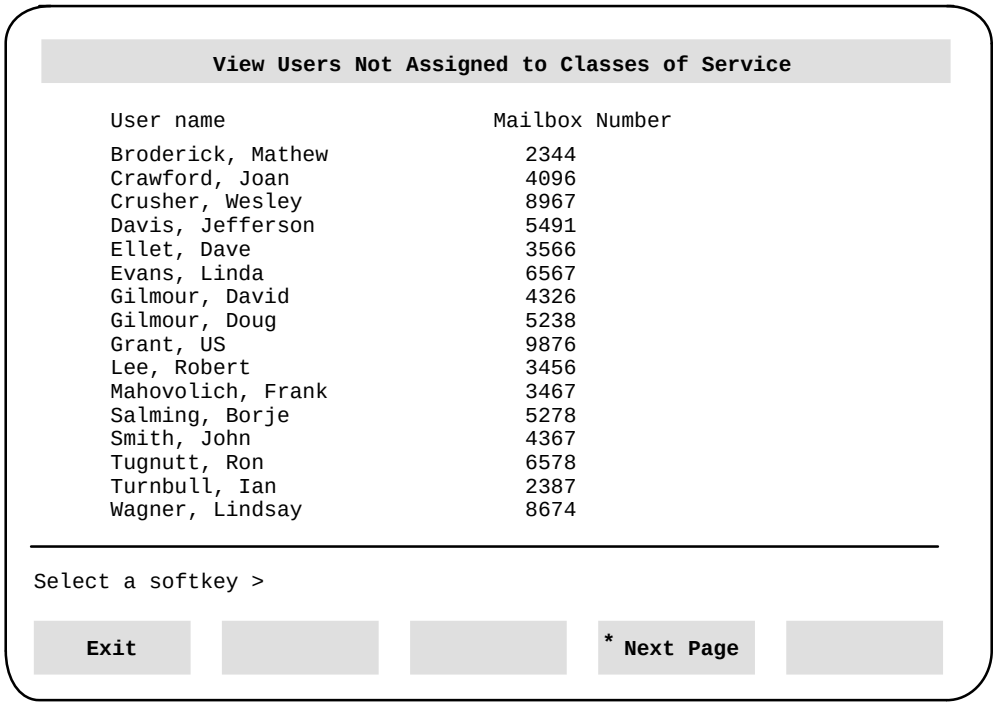
View users who are not assigned to a COS

When you select item 6 from the COS Conversion menu, all users (in the customer group you are working on) who are not assigned to a COS are listed (user's name and mailbox number). An example display is shown in Figure 12-8.

Note 1: If your system has more than one user volume, users will be sorted alphabetically by user volume instead of strictly alphabetically.

Note 2: If the customer group being searched is a Hospitality customer, guest users with nothing entered for the name fields will be listed after users with name data.

Figure 12-8
View unassigned mailboxes



* The “Next Page” softkey appears when the information fills more than one screen.

Print users who are not assigned to a COS

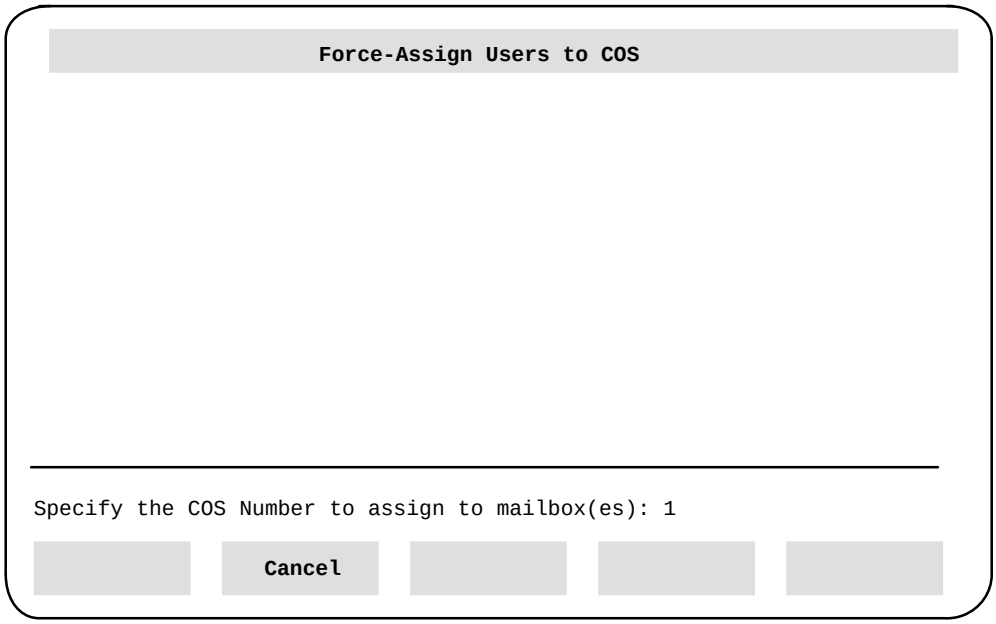
When you select item 7 from the COS Conversion menu, all users who are not assigned to a COS are printed (user’s name and mailbox number). Before the printing begins, the softkeys [Cancel Printing] and [Continue Printing] are displayed. Select [Continue Printing] to start the print job. Select [Cancel Printing] to cancel the print users request or to interrupt printing at any point.

Force unassigned MMUI users to a specific COS

Item 8 from the COS Conversion menu allows you to force the assignment of users who have a personal COS to one of the defined COSs associated with the customer group, regardless of the user’s current mailbox attributes. This allows you to clean up any personal COS users left after running the conversion (see the section entitled “Convert unassigned users to a matching COS”). This will leave the customer with no personal COS users. However, the newly-assigned users will experience mailbox attribute changes if their mailbox attributes did not already match the attributes of the selected COS. The initial screen display that appears when you select this function is shown in Figure 12-9.

Note: The Force unassigned MMUI users to a specific COS option is *not* available to customers with the VMUIF feature. All Hospitality customers have the MMUI feature by default.

Figure 12-9
Force unassigned users to a COS—initial screen



Procedure 12-4
Forcing unassigned COS users to a COS

Starting point: The COS Conversion Tool menu

1 Select <8>, Force unassigned MMUI users to specific COS, and press <Return>.

The Force–Assign Users to COS screen is displayed, and a prompt appears at the bottom of the screen asking for the COS number to assign:

Specify the COS number to assign to mailbox(es):

2 To specify a COS number, go to step 2a. To cancel, go to step 2b.

a. Enter a valid COS number and press <Return>.

A new softkey, [Continue], is displayed, along with the following message:

CAUTION: The command you have selected will force assign every Personal COS user in customer 2 to COS 1

Hit the appropriate softkey to cancel or continue.

Go to step 3.

b. Press [Cancel].

The COS Conversion Tool screen is redisplayed.

3 To confirm that you want to continue, go to step 3a. To cancel, go to step 3b.

a. Press [Continue].

The conversion process begins. See Figure 12-10 for a conversion example on a non-Hospitality system. See Figure 12-11 for a conversion example on a Hospitality system. Go to step 4.

b. Press [Cancel].

You are returned to the COS Conversion menu and no change is made.

4 Once the conversion is completed, press [Exit] to return to the COS Conversion menu. You can press [STOP Force–Assign] while the conversion is running to stop the conversion at the last personal COS user record read.

Figure 12-10
Force unassigned users to a COS—non-Hospitality system

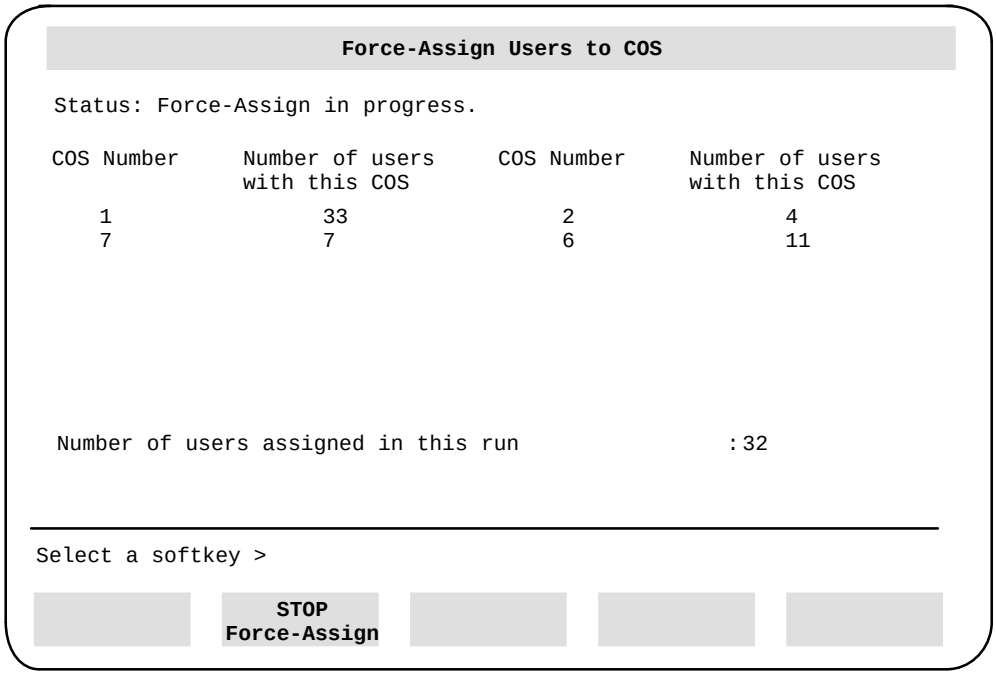
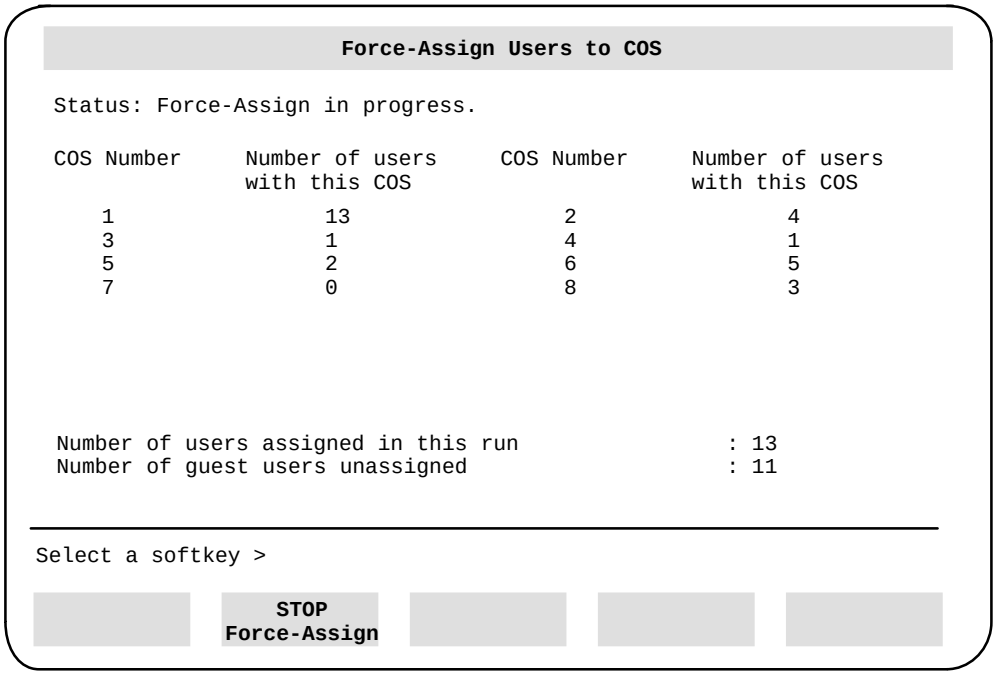


Figure 12-11
Force unassigned users to a COS—Hospitality system



The result of the forced conversion is shown on the two lines at the bottom of the screen: namely, the number of users that were forced to the COS specified at the “Force unassigned users” initial screen.

For Hospitality systems the “Number of guest users (unassigned)” field shows the number of personal COS guest users that still remain in this customer. They are exempt from from being assigned a COS using “Force unassigned users”, just as they are exempt from the normal COS Convert procedure.

Change customer

This option (item 9) only appears on multicustomer systems. This function allows you to switch to a different customer group.

Procedure 12-5
Changing customer

Starting point: The COS Conversion Tool menu

1 Select <9>, Change customer, and press <Return>.

A prompt appears at the bottom of the screen asking for the number of the new customer group:

Please specify customer:

2 To specify a customer number, go to step 2a. To cancel, go to step 2b.

a. Enter a valid customer number and press <Return>.

The customer group you are working on is switched to the customer specified by the new number.

b. Press [Cancel].

The COS Conversion Tool screen is re-displayed.

Chapter 13: Display system record

The Display system record tool identifies the installed features, number of recording (storage) hours, and disk sizes on your system, among other items. This information is required when filling out a Site Profile form.

When you select this tool from the TOOLS menu, the system record display appears (Figure 13-1). The display indicates if a feature has been purchased with a “Yes” or “No” listed beside the feature name.

Note that the customer name listed by this tool is the customer name used during installation. The customer name may have been modified since then. Also, the disk information at the bottom of the screen appears only after you press <Return>.

You will be asked if you want to view the disk information. If you select “Yes”, the sizes of all disks installed on the system will be displayed. Please note, there is a delay of approximately a minute from the time “Yes” is selected until the information is displayed.

Figure 13-1
System record display

```
 1: Customer Name           : ABC Company
 2: Serial Number           : 00000014
 3: Platform                : SPM
 4: Hours on System         : 54      5: Release Number            : 9.18.0
 6: Number Of Nodes         : 2       7: Max allowed Languages     : 4
 8: Maximum Full Service    : 18      9: Basic Service             : 2
10: Minimum MultiMedia      : 4      11: Voice Channels            : 16
12: Physical Channels       : 24     13: SMDI Link                 : No
14: Meridian ACCESS         : No     15: AdminPlus                 : Yes
16: AMIS                    : No     17: Hospitality               : No
18: Networking              : No     19: NMS                       : No
20: OutCalling              : Yes    21: Voice Forms               : Yes
22: VMUIF                   : No     23: Multi ADMIN               : Yes
24: Meridian Connections    : No     25: Multi SMDI                : No
26: Multi Customer          : Yes    27: Dual Language Prompting   : No
28: Voice Menus             : Yes    29: Fax On Demand             : Yes
30: Central Call Answer     : No     31: Integrated Mailbox Admin  : Yes
32: Keycode                 : 3a89 5dfa b778 0a8f 20cd

Would you like to display the Disk information? YES
Please wait ...

Disk Information:
          Primary Disk         Shadow Disk
Node   Size(MB) SCSI ID    Size(MB)   SCSI ID     Status
 1        639       0         ---       ---     Primary Active
 2        312       0         ---       ---     Primary Active
Press RETURN to continue:
```

Most of the fields are self explanatory. A few of the fields which may not be self explanatory are described below.

- ***2: Serial Number*** A serial number is assigned to the system which is matched to the keycode. The system software compares the parameters defined by the keycode with the new configuration and serial number during a system operation. If an exact match is not found, the keycode will be rejected.

  Note: As an option in Release 10.0, an 11-character, alphanumeric serial number can be assigned on the system which matches the 11-digit serial number for the Meridian 1 switch. This allows you to maintain only one serial number for all Northern Telecom products. Contact Northern Telecom for information on changing your serial number, if desired.

- ***8: Maximum Full Service*** This is the maximum number of full service channels allowed on your system. This number is defined in your system's keycode and reflects how many full service channels were purchased with your system.

- ***9: Basic Service*** This is the number of basic service channels initially installed on your system. You can reduce or increase the number of basic service channels using the Channel Allocation Table (see "System Status and Maintenance" chapter in the *System Administration Guide*).
- ***10: Minimum MultiMedia*** This represents the minimum number of multimedia ports that must be configured on your system. This number is defined in your system's keycode and reflects how many multimedia channels were purchased with your system.
- ***11: Voice Channels*** This is the maximum number of voice channels installed on your system. This number is defined in your system's keycode and reflects how many multimedia channels were purchased with your system. You can reduce the number of full service voice channels in order to increase the number of multimedia channels using the Port Reconfiguration Utility on the tape menu.
- ***15: AdminPlus*** This optional feature of Meridian Mail enables the Meridian Mail Reporter software package to collect OM data (operational measurements) for detailed accounting and billing for users. Refer to the *Meridian Mail General Description (NTP 555-7001-100).*
- ***32: Keycode*** This is the code used during the software installation procedure that defines your system and the purchased features (see the *System Installation and Modification Guide*, NTP 557-7001-215).

In addition, when you press <Return>, the tool displays the following information about the disks on each node:

- disk size and SCSI ID of the primary disk
- disk size and SCSI ID of the shadow disk (if this is a shadowed system)
- status of the disk can be one of the following:
  - ***Primary Active*** The primary disk is active. If this is a shadowed system, this means that there is a problem with the shadow disk, or that the shadow disk is not synchronized properly.
  - ***Shadow Active*** The shadow disk is active. This means that there is a problem with the primary disk, or that the primary disk is not synchronized properly.
  - ***Disks Shadowed*** The primary disk is shadowed and synchronized.
  - ***No Disk*** There is no physical disk in that node.

Chapter 14: Synchronize Disks

Disk shadowing is a mass storage technique in which the same data is duplicated onto a pair of disks in real time. It is used to

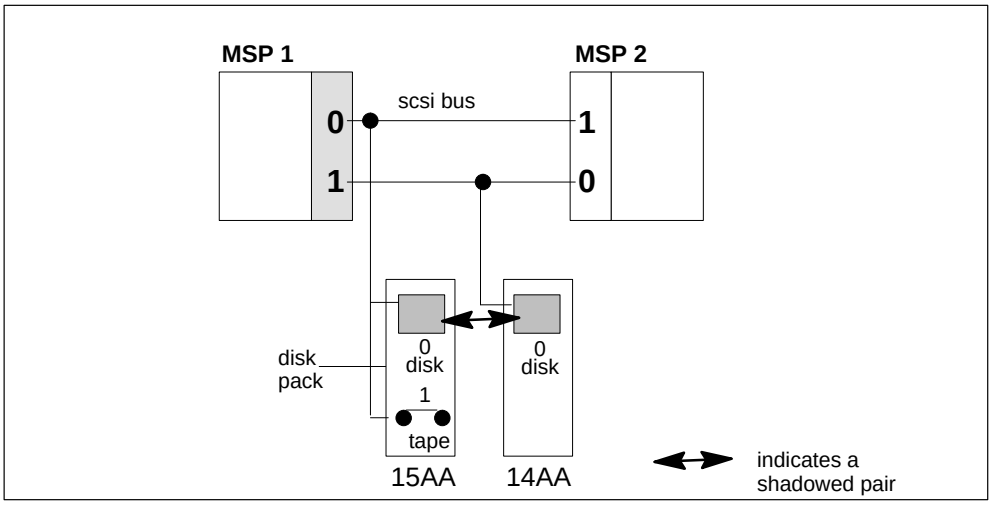
- reduce the chance of data loss and downtime due to disk failure
- double disk read throughput

Note: Most disk operations can be performed using the Disk Maintenance facility (see the "System Status and Maintenance" chapter in the *System Administration Guide*, NTP 557-7001-300).

Disk configurations

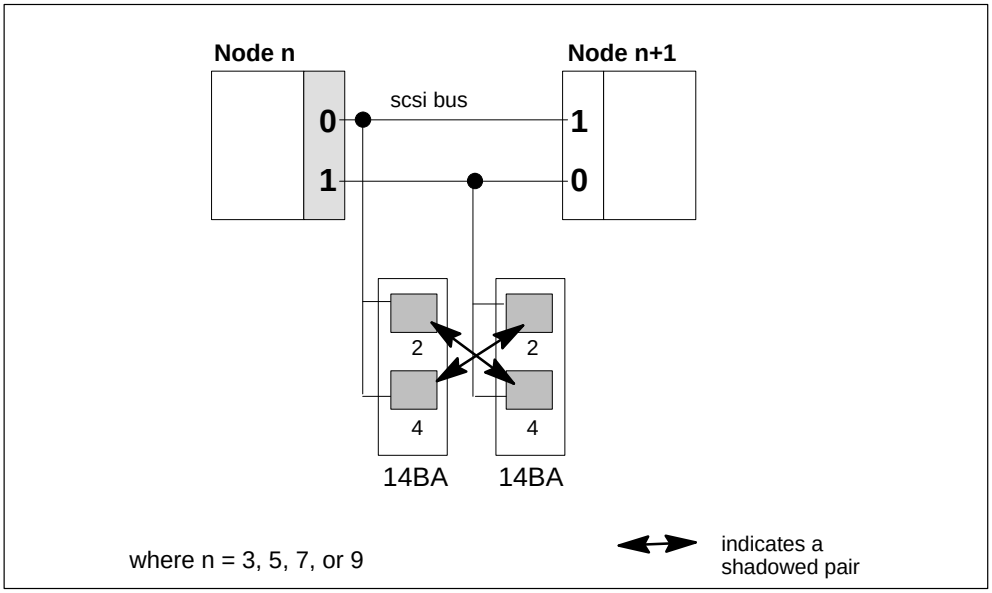
All MSMs come with disk shadowing. The configuration on nodes 1 and 2 is shown in Figure 14-1. The configuration on nodes 3 to 10 is shown in Figure 14-2.

Figure 14-1
MSM configuration on MSP 1 and MSP 2



Note: The "0"s and "1"s are SCSI IDs.

Figure 14-2
MSM configuration on nodes 3 to 10



Note the following:

- Each disk pack contributes a disk to each shadowed pair.
- Each node can access its partner's disk drives as a result of SCSI bus coupling, where node "n+1" and node "n" are partners.

The last point gives rise to the following bus and SCSI device numbering scheme:

- Bus 0 on a node is bus 1 on its partner.
- SCSI IDs normally run from 0 to 7. The device number of a device on bus 0 is simply its SCSI ID. The device number of a device on bus 1 is its SCSI ID plus 8.

Procedure 14-1
Using the Disk Sync Utility

Starting point: The Tools Menu

1. Select <12> Synchronize Disks, then press <Return>.

   The command line at the bottom of the screen shows

   Type node number

2. Enter the node number of the disk that is to be synced, then press <Return>.

   After a brief pause, the utility is loaded and the screen returns to the selection menu.

3. Press <Ctrl>-<w>.

   The CobraVT window opens.

4. Use the cursor keys to move to SYNCDISKSx, (where x is the node number originally selected) then press <Return>.

5. Execute the commands shown under the heading “Commands”, which follows.

Commands

All of the following commands print out a return code. 0 indicates normal completion; anything else indicates an error.

enable *src mem*

A shadowed pair is brought online by synchronizing the contents of the two disks that comprise it. This operation is referred to as “synching” and is started by the enable command.

src specifies the location of the disk pack containing current data. Since there is only one disk pack on a SCSI bus, *src* refers to a bus, and can be either 0 or 1.

The enable command automatically distinguishes between the single-disk AA packs and the dual-disk BA packs. In particular, the enable command will synch both shadowed pairs related to a BA pack.

mem gives the maximum amount of memory that enable is allowed to use. The default value of 64k is recommended. Do not set this value above 64k on a live system.

WARNING
Risk of data loss

1. Synching from the wrong source will result in lost data. Also, synching is usually done from disk packs with enabled disks unless you are trying to clear SEER 6608.

2. Do not set the maximum memory to a value greater than 64k on a live system.

3. Do not synch from both members of a node pair at the same time.

enable –1 *ss dd mem*

This form of the enable command synchs a given disk pair and is invoked by specifying –1 for *src*. *ss* is the device number of the disk to synch from, *dd* is the device number of the disk to sync to, and *mem* is the maximum amount of memory allowed.

disable *id*

A disk in a shadowed pair can be taken offline either by the system (automatically, in the event of a failure) or by the disable command (manually). The first method sets off a major alarm; the second does not.

find *id*

id is the number of the device to be checked. If this device is a disk, it will be spun up and its size (in 512-byte blocks) will be printed. This command may be used to verify that a node is able to communicate with all of its disks.

info *node*

This command displays a summary of a node's view of its disks. This information can be used to check if the node's disks are in synch (both disks enabled), and if a node's view of its disks is consistent with its partner's view.

For example, on node 3 of an MSM, one might get the following output:

```
node 3

disk pair 0
boot region:      32–2031
file region:      2032–2936592
disk 2:  RW
disk 12: RW

disk pair 1
boot region:      32–2031
file region:      2032–2936592
disk 10:  —
disk 4:  RW
```

The “disk *n*:” fields in the output indicate each disk’s state, and if they are enabled. If both disks are enabled, they are in synch.

The first position of a disk’s state is “R” or “–” depending on whether it is handling reads or not. Similarly, the second position is either “W” or “–”, depending on whether it is handling writes or not. When the disk’s state is “RW”, the disk is described as “enabled”.

Also, a node can access the same disks as its partner, where node “n+1” and node “n” are partners. Following our example, node 4 accesses the same disks as node 3:

```
node 4

disk pair 0
boot region:      32–2031
file region:      2032–2936592
disk 2:  —
disk 12: RW

disk pair 1
boot region:      32–2031
file region:      2032–2936592
disk 10:  RW
disk 4:  RW
```

Notice from the disk states that disk pair 0 on a node is disk pair 1 on its partner. In the example above, disk pair 0 on node 3 (disk 2 and disk 12 from the node 3 perspective) is the same as disk pair 1 on node 4 (disk 10 and disk 4 from the node 4 perspective).

init

This command should be used to put the system back into a normal state if a sync operation is interrupted.

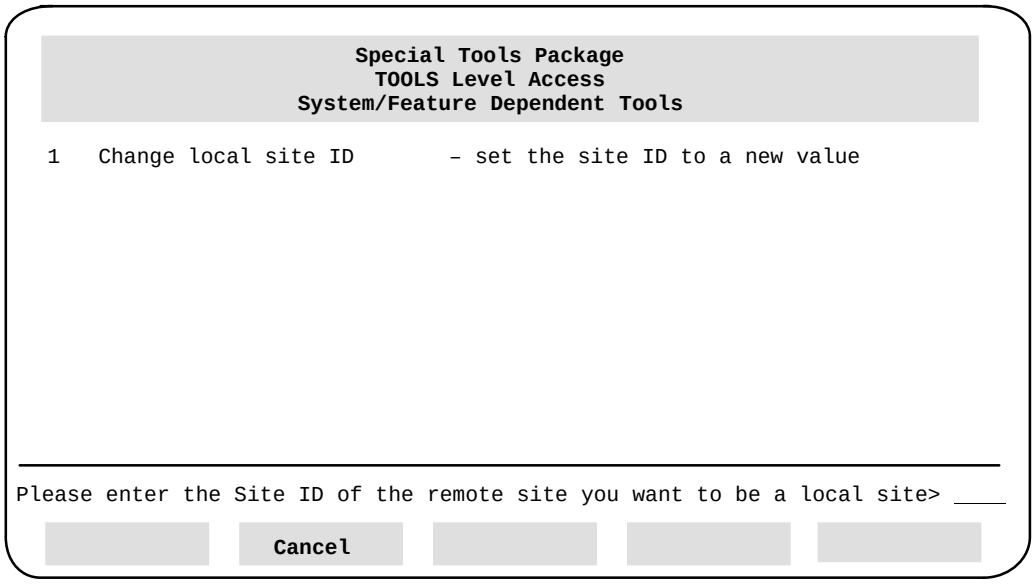
node

This command displays the ordinal number of the node that this utility is running on.

Chapter 15: Change local site ID

The Change local site ID tool can only be used if you have Networking installed on your system (although the option will show up in the TOOLS menu even if it is not installed). It allows the administrator to change the local site ID (if, for example, it was entered incorrectly when the site was defined). The site ID you specify must already be defined as a remote site. You will therefore have to create a dummy remote site using Networking Administration (described in the *System Administration Guide*) before using this tool. The current local site will be redefined as a remote site.

Figure 15-1
Change Local Site ID screen



Note: Other tools may also be listed here depending on your system type or what features are installed.

Procedure 15-1
Changing the Local Site ID

Starting point: The TOOLS menu

1. Select “Other” and press <Return>.
2. Select “Change local site ID” and press <Return>.

   You are prompted to enter the ID of the remote site that will become the new local site.
3. Enter the site ID and press <Return>, or select [Cancel] to cancel the selection.

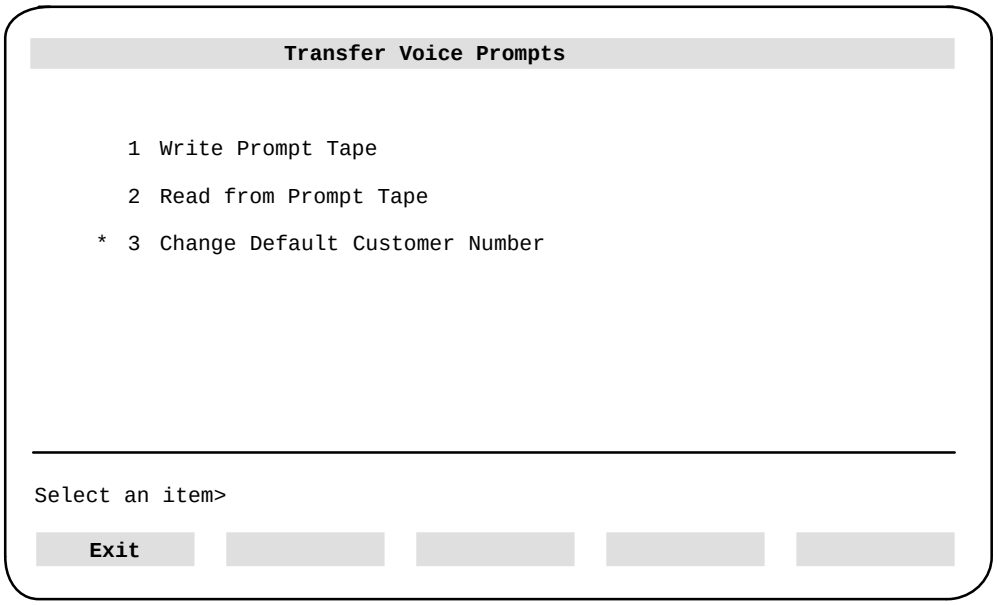
Chapter 16: Transfer voice prompts

Note: This tool is available only if the Meridian ACCESS Enable feature is installed on your system.

The Transfer voice prompts tool is designed to facilitate the transfer of voice prompt files between mailboxes or Meridian Mail systems.

When you select the “Transfer voice prompts” from the TOOLS Level menu, the Transfer Voice Prompts screen (Figure 16-1) is displayed.

Figure 16-1
The Transfer Voice Prompts screen



* This item is applicable only if the Multi-Customer feature is installed.

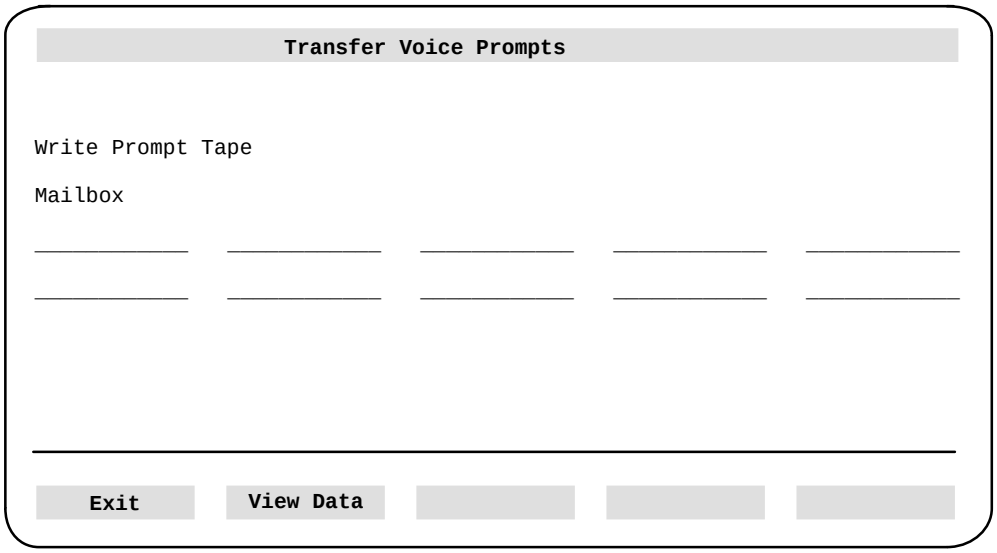
Write Prompt Tape

Only voice prompt files can be written to a prompt tape. (Files cannot be appended to the end of an existing tape.) This tool begins its write operation at the beginning of the tape. Figure 16-2 shows the Write Prompt Tape screen.

For the write operation to work properly, the system must have enough free disk space to store a copy of all the voice prompt files. One method to free up disk space is to run the "Audit all volumes" tool. For other suggestions on how to reduce the amount of disk space used, or to find out how much disk space is currently being used, consult the "Disk Usage Detail" report section in the "Operational Measurements" chapter of the *System Administration Guide.*

Note: If the Multi-Customer feature is installed, specify the appropriate customer number before using this command.

Figure 16-2
The Write Prompt Tape screen



You may specify up to 10 different mailbox numbers (identifying the mailboxes containing the voice prompt files) in the available fields. If you want to write the files of more than 10 mailboxes to tape, you will have to perform more than one tape dump operation. You are also limited to writing a maximum of 16 files onto one tape.

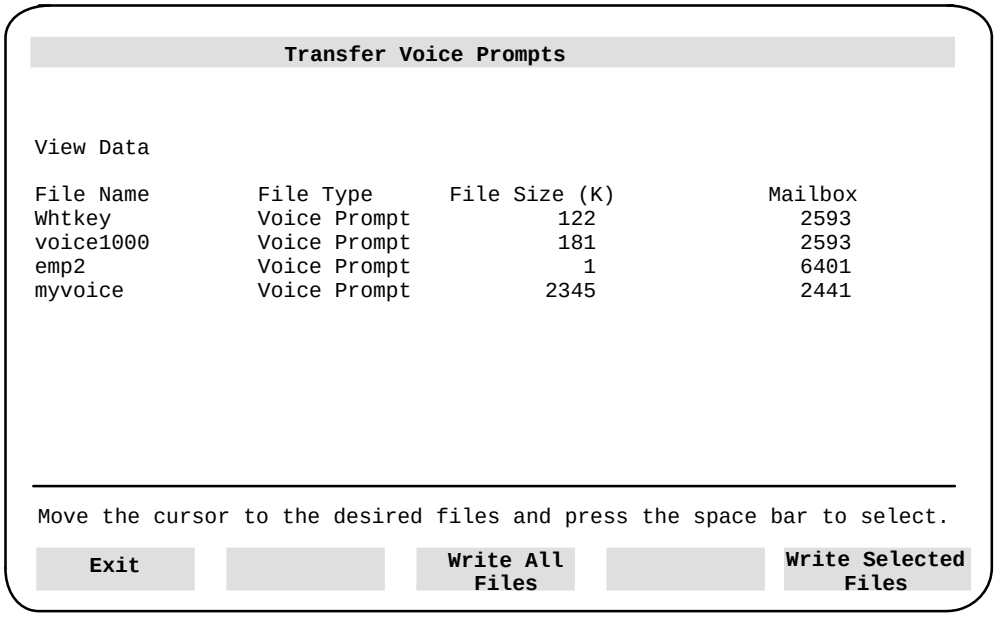
Mailbox numbers are validated as you enter them. Only valid input will be accepted. If the entry is invalid, an error message will be displayed. Mailboxes are also validated for the existence of voice prompt files.

Note: If Networking is installed on your system, only mailboxes at the local site are considered valid.

Once the mailbox numbers have been entered, press the [View Data] softkey to display a screen (Figure 16-3) listing the entered mailbox numbers and all the files associated with them.

If duplicate filenames show up on the View Data screen (more than one mailbox has the same filename associated with it), then these files must be written to tape separately. Select one of the duplicate filenames for one write operation (use the [Write Selected Files] softkey) and then select the other file for the next write operation.

Figure 16-3
The View Data screen



The following fields are displayed on this screen:

- ***File Name*** The names of the files associated with the mailbox numbers entered in the Write Prompt Tape screen. The total number of files associated with the (up to 10) mailboxes cannot exceed 16.
- ***File Type*** The type of file associated with the mailbox numbers entered in the Write Prompt Tape screen. Currently, the only valid file type is “Voice Prompt”.
- ***File Size*** The size of the files (in kilobytes) associated with the mailbox numbers entered in the Write Prompt Tape screen.
- ***Mailbox*** The mailbox number as entered in the Write Prompt Tape screen.

Procedure 16-1
Transferring files to tape

Starting point: The Transfer Voice Prompts screen

1 Select Write Prompt Tape from the Transfer Voice Prompts screen and press <Return>.

The Write Prompt Tape screen is displayed.

2 Enter the mailbox numbers of the mailboxes containing the voice prompt files you wish to transfer to tape.

If the total number of voice prompt files contained in the specified mailboxes exceeds 16, you will not be able to enter any more mailbox numbers. In this case, you will have to perform more than one tape dump operation.

3 Press [View Data].

The "View Data" screen is displayed

Note 1: *A number of error conditions may be reported during the tape dump process such as tape write errors and tape media failures. Error messages are displayed to notify you of such conditions and the [Retry] softkey is displayed so that you may try the tape dump again.*

Note 2: *If duplicate filenames show up in the View Data screen, the duplicate files must be written to tape separately. Use the [Write Selected Files] option discussed in Step 4a.*

4 To transfer all the files listed in the View Data screen to tape, go to step 4a. To transfer one or more (but not all files listed) to tape, go to step 4b.

a. Press [Write All Files].

All of the files listed on the screen are transferred to tape. The files are converted to the required format. After a short delay, a new screen is displayed, prompting you to insert the tape and press [OK] to start writing to tape.

b. Use the up or down arrow key to move the cursor to the desired file. Press the <Space Bar> to select it. Repeat this step for all files that you want to transfer to tape.

Once all of the files you want to transfer are selected, press [Write Selected Files].

The files are converted to the required format. After a short delay, a new screen is displayed, prompting you to insert the tape and press [OK] to start writing to tape.

5 Insert the tape.

6 Press [OK] to start writing to tape. The [Cancel] softkey appears. Press [Cancel] if you need to abort an active tape dump at any time during the transfer process.

The files are transferred to tape. The output from the program that transfers the files is displayed on the screen as the transfer occurs.

Note: *The active utility program looks in up to 4 text volumes for space to hold the temporary file that is created during the transfer process. This space is released as soon as the tape is made. If there is not enough temporary space available on your system, you will be notified with a message indicating the amount of space required to complete the transfer.*

When the transfer is complete, the following message is displayed:

***** MAKETAPE volume completed *****

7 To make extra copies of the tape, wait until the above message is displayed and then press [Retry/Another Copy] to make extra copies of the current tape. If you do not need more copies, go to step 8.

8 To transfer more files from the mailboxes already displayed on the View Data screen, go to step 8a. If you want to specify a new group of mailboxes from which you wish to transfer voice prompt files, or if you do not want to do another tape transfer at this point, go to step 8b.

a. Press [Cancel].

You are returned to the View Data screen (Figure 16-3).

To transfer files to another tape, go to step 4b.

b. Press [Exit].

You are returned to the Write Prompt tape screen (Figure 16-2). From this screen, you may delete the current mailboxes and enter a different set of mailboxes (go to step 2), or you may return to the Transfer Voice Prompts menu (Figure 16-1) by pressing [Exit].

Press [Exit] on the Transfer Voice Prompts menu screen to return to the TOOLS menu.

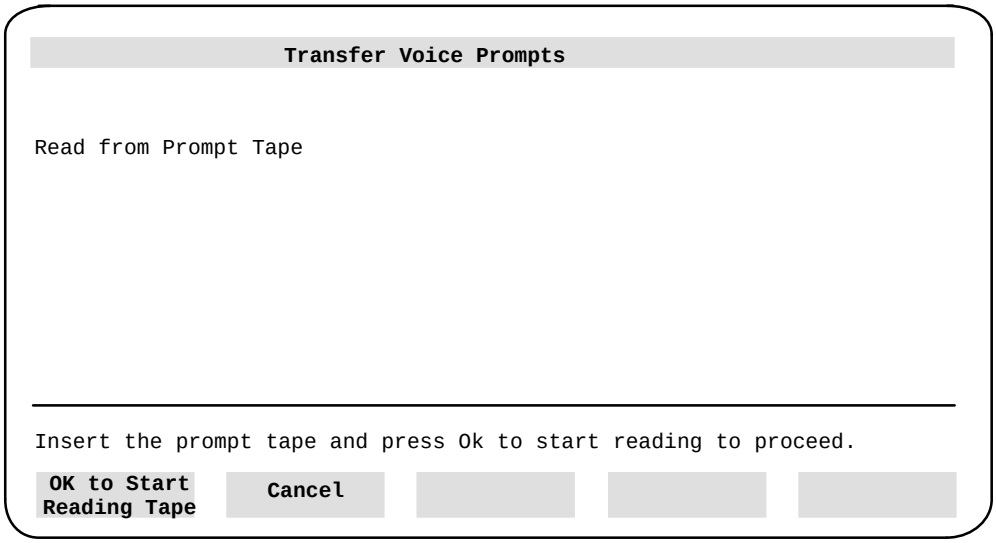
Read Prompt Tape

Read Prompt Tape scans all files on the tape and processes them according to your specifications.

When you select the Read Prompt Tape option from the Transfer Voice Prompts menu, the Read from Prompt Tape screen is displayed (Figure 16-4).

> ***Note:*** If the Multi-Customer feature is installed, specify the appropriate customer number before using this command.

Figure 16-4
The Read from Prompt Tape screen



Procedure 16-2
Reading voice prompts from tape

Starting point: The Transfer Voice Prompts screen

1. Select, Read from Prompt Tape from the Transfer Voice Prompts screen and press <Return>.

   The Read from Prompt Tape screen (Figure 16-4) appears.

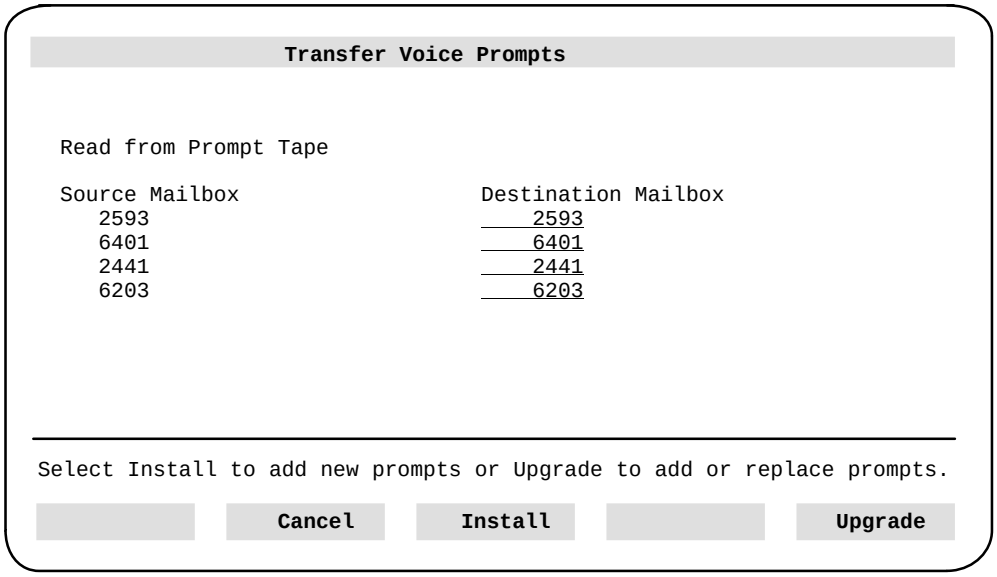
   Note: *There must be enough memory and temporary space on your system to accommodate the temporary files that are created during this process. If additional memory is required in an active system, channels can be courtesied down to get required memory. It is recommended that the higher numbered channels are courtesied down first.*

2. Insert the prompt tape.
3. Press [OK] to start reading tape.

The tape is read and verified. If an incorrect tape has been inserted, or if there are any errors during the process, you will be notified by a screen message and given the opportunity to retry the operation.

When the correct tape is inserted, the screen shown in Figure 16-5 is displayed. This mailbox information is obtained from the tape.

Figure 16-5
Source and Destination Mailboxes



The Destination Mailbox fields are prefilled with the source mailboxes as the default data. The Destination Mailbox fields can be edited to indicate the mailboxes to which prompts are to be copied. If a Destination Mailbox field is left blank, the contents of the corresponding source mailbox will not be copied to any mailbox.

4 Press [Install] or [Upgrade] to transfer the source mailboxes to the destination mailboxes.

If you use [Upgrade], any existing files with the same name will be overwritten.

If you use [Install], you will be informed that there are existing files having the same name, and they will not be overwritten.

Use [Cancel] to abort all action.

You are returned to the Transfer Voice Prompts menu.

Change default customer number

This command only applies if the Meridian Mail Multi-Customer feature is installed. When this item is selected, you are prompted to enter the customer number to be used when referencing mailboxes in the read or write commands. No validation is performed on the number you enter so be sure to enter the correct customer number.

Chapter 17: ACCESS diagnostics

The ACCESS diagnostics tool can be used to diagnose and/or monitor system activity related to Meridian ACCESS running on a UNIX processor.

> ***Note:*** This tool is available only if the Meridian ACCESS Enable feature is installed on your system.

The diagnostic tool includes a group of commands which allow you to verify

- if an ACCESS link is operational
- link stability
- the ACCESS port number and link version of the application processor (Release 2 or 3)
- the number of link outages that have occurred
- if application traffic is present
- whether the Meridian ACCESS tasks are running
- whether the applications processor link handler is running

Figure 17-1 shows the initial screen that is displayed when the diagnostic tool is loaded from the TOOLS menu. The last line on the screen displays the current command.

ACCESS components

There are three primary components on each side of the ACCESS link. They are briefly discussed in the following sections. If you require a more detailed description, refer to the Overview in the *Meridian ACCESS Configuration Guide* (NTP 557-7001-315).

Meridian Mail components

Toolkit (TK)

There is a Toolkit for each voice port on the system. The Toolkit is responsible for executing API commands received across the Meridian ACCESS link.

Toolkit Master (TKM)

The Toolkit Master acts as a resource manager for Toolkit tasks. There will be a Toolkit Master for each node configured to have an ACCESS link.

Toolkit Communications (TC)

The Toolkit Communications task is responsible for driving the Meridian ACCESS link. It implements a proprietary protocol that supports variable size packets, checksum error handling, virtual channels, and retransmission on errors. Valid command packets received are passed on to the appropriate toolkit task. There will be a TC for each node configured to have an ACCESS link.

Application processor components

ACCESS link handler

This task provides functionality equivalent to the Toolkit Communications task for the applications processor side. The link handler is split into two tasks: one receives data and the other handles the output.

ACCESS Application Programming Interface (API) library

This is the ACCESS object code library containing ACCESS API procedures that are linked in with the applications. Most procedures translate into commands that are put into a data packet and passed on to the link handler.

Application

This is the ‘C’ program written by either Northern Telecom or a VAD which uses ACCESS API procedures to answer calls when they arrive. The application controls the interactive voice response (IVR) service being provided.

Meridian ACCESS Diagnostics (MADT) screens

The Meridian ACCESS Diagnostics screens provide information concerning the stability and status of all ACCESS links. The main Meridian ACCESS Diagnostic screen which is available through the TOOLS menu provides a list of current links, while softkeys allow you to select more extensive levels of detail or to reset counters.

Procedure 17-1
Accessing the main Meridian ACCESS Diagnostics screen

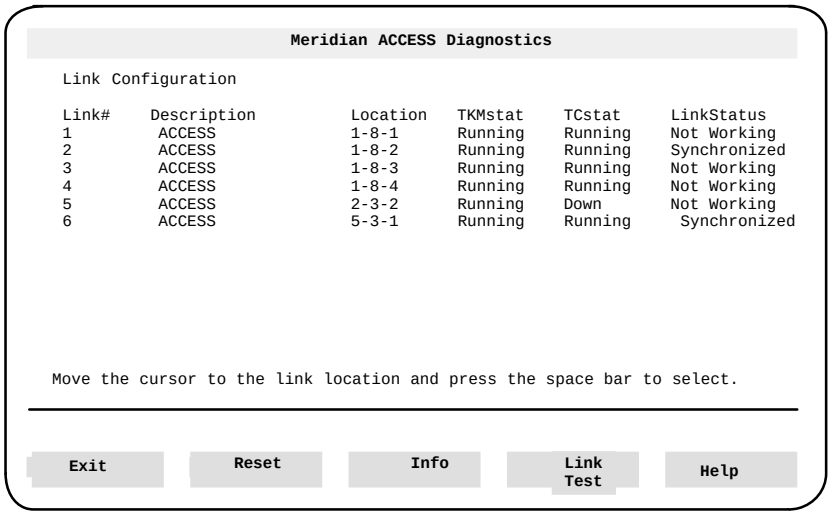
Starting point: The TOOLS menu

1 Select <Other> and press <Return>.

2 Select <ACCESS Diagnostics> and press <Return>.

The main Meridian ACCESS Diagnostics screen is displayed.

Figure 17-1
The main Meridian ACCESS Diagnostics screen



3 Use the up and down arrow keys to highlight the ACCESS link you wish to view, then press the space bar to select the link.

Each link entry provides the following information:

- *link number*
- *link type name (ACCESS)*
- *link hardware location (in the format <node#>-<card#>-<port#>)*
- *TKM status*
- *Toolkit communication status*
- *status of the link (not working, synchronized)*

4 Select one of the softkeys to perform the appropriate action. Refer to Table 17-1 for an explanation of each action.

Table 17-1
MADT softkeys

Softkey	Action
Exit	Return to the TOOLS level menu
OM Reset	Reset the packet counters of the highlighted link to zero. An informational message is displayed once the operation is complete. See Figure 17-2.
OM Info	Displays the MADT Link Information screen. See Figure 17-3.
Link Test	Determines if the link handler on the applications processor is operational for the highlighted link. A status message is displayed on the MADT Link Information screen. See Figure 17-4.
Help	Displays MADT Help screen. See Figure 17-6.

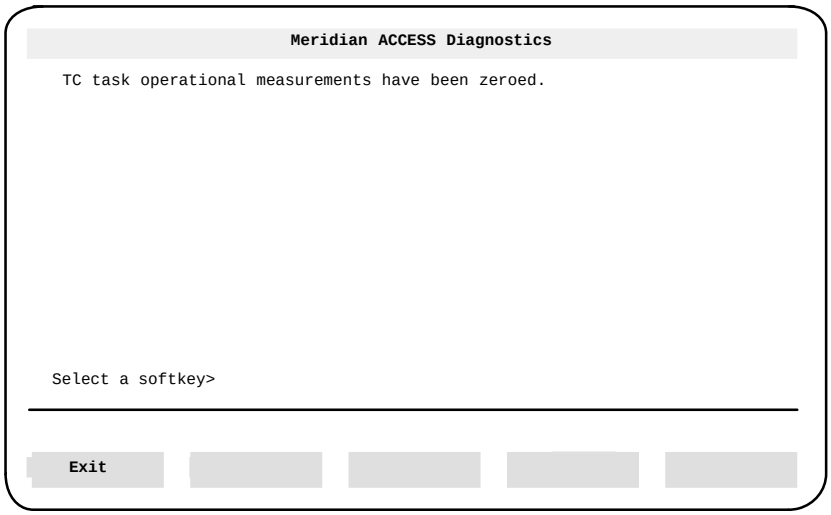
5 When you have finished running diagnostics, select the EXIT command to return to the TOOLS menu.

OM Reset

The Meridian ACCESS Diagnostics Link Reset screen is accessed by selecting <OM Reset> from the Main ACCESS Diagnostics screen. The screen indicates whether the operational measurements (OMs) have been reset. Refer to Figure 17-2.

If the reset is properly executed, the message “TC task operational measurements have been zeroed.” is displayed and the counters are reset to zero. If the reset cannot be accomplished, an appropriate message will be displayed.

Figure 17-2
OM Reset screen



OM INFO

The Meridian ACCESS Diagnostics Link Information screen is accessed by selecting <OM Info> from the Main ACCESS Diagnostics screen. The screen provides read-only access to statistics regarding the stability of the link. Refer to Figure 17-3.

There are several indicators in the OM data which can help to determine link stability, such as the number of errors detected. There are several types of errors that occur. For each type, a total is calculated. These totals are then used to calculate the link error rate. It is quite normal to have some errors. The error rate will be slightly higher for more heavily-used links.

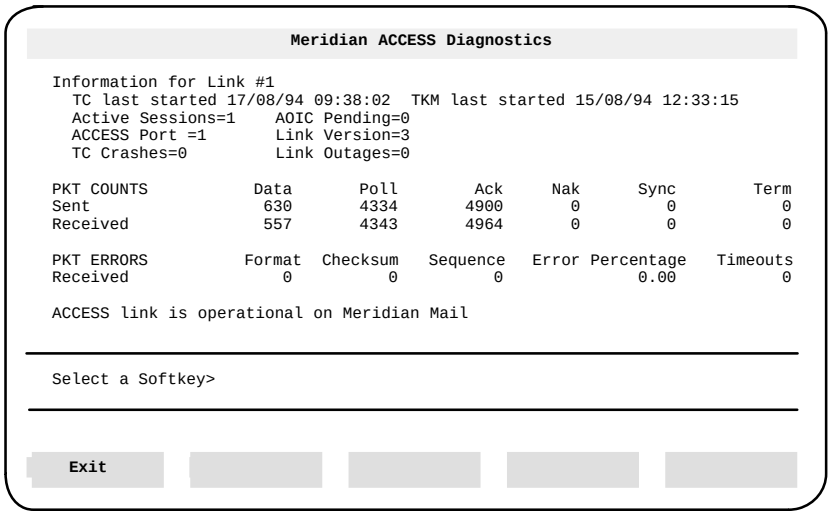
Note: If the error rate remains greater than 0.01%, action should be taken. On a system that has been up and running normally, the error rate should not fluctuate greatly. However, during installation or configuration changes, you may experience a higher error rate for any of the following reasons:

— The ACCESS RS-232 cable is too long (for example, greater than 50 feet).

— The application processor cannot cope with link traffic. This is probably the case if the majority of received errors are “Naks”.

— Application traffic needs to be reduced. This is probably the case if the majority of errors are on the receiving (Meridian Mail) side.

Figure 17-3
The Meridian ACCESS Diagnostics Link Information screen



At the top of the screen, a variety of fields display information regarding the stability and status of the link:

- ***TC last started*** This is an indication of whether the TC task is running. When the TC task is running, the link is either in operational mode or attempting to synchronize with the UNIX processor. If the link is operational, then the link handler on the UNIX processor is up and running.
- ***TKM last started*** This is an indication of whether the TKM task is running.

  Note: For the TC to be running, the TKM must be present.
- ***Active Sessions*** This is self-explanatory.
- ***AOIC Pending (Acquire on Incoming Calls)*** This field indicates whether a port has been acquired to run the application.
- ***ACCESS port*** This is the number of the data port.
- ***TC Crashes*** This is self-explanatory.
- ***Link Outages*** This is self-explanatory.

PKT COUNTS

- ***Data*** This is the total number of data packets.
- ***Poll*** This is the number of sanity poll packets (sent only when the link is idle).
- ***Ack*** This is the number of acknowledgement packets.
- ***Nak*** This is the number of negative acknowledgement packets.

- ***Sync*** This is the number of synchronization request packets.
- ***Term*** This is the number of shutdown link request packets.

PKT ERRORS

- ***Format*** This is the number of packets received in the wrong format.
- ***Checksum*** This is the number of packets received containing checksum errors.
- ***Sequence*** This is the number of packets received out of sequence.
- ***Error Percentage*** This is the link receive error rate, calculated by dividing the total number of packets received by the number of packet transmission errors.
- ***Timeouts*** These are UNIX workstation responses not received.
- ***Link status*** The report indicates whether or not the ACCESS link is operational. If the link cable is unplugged, it may take up to 30 seconds to detect this.

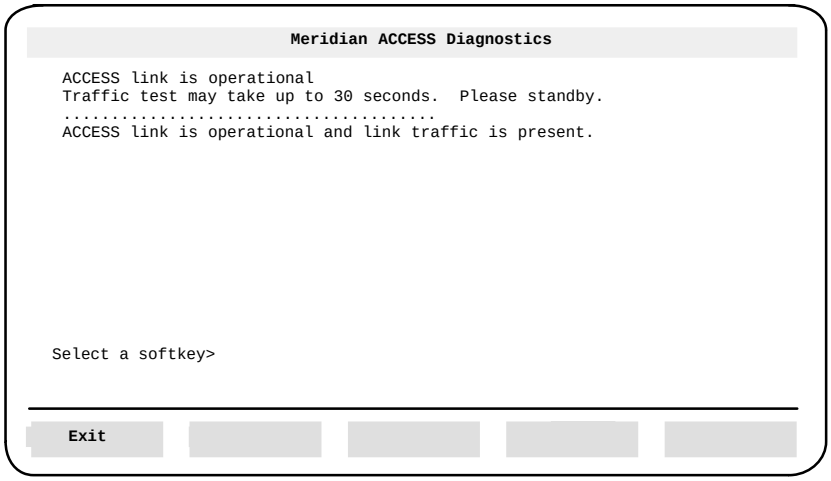
Link Test

This softkey performs the necessary checks and displays a report on the status of ACCESS software running on the applications processor.

When <Link Test> is running, it monitors the link and reports if any application traffic was detected. If the link appears operational but no link traffic is detected within 30 seconds, the link handler on the applications processor is not functioning correctly.

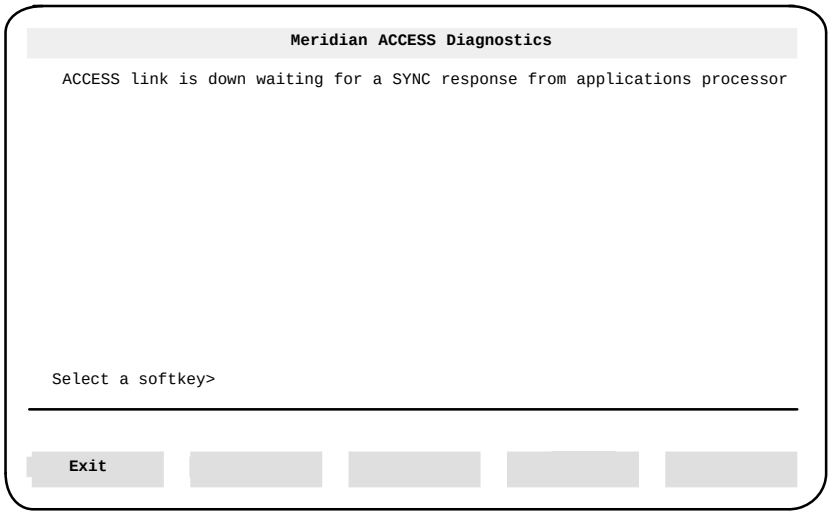
Figure 17-4 shows the output for the <Link Test> softkey when the system is operating normally and one or more applications are active.

Figure 17-4
Link Test screen



When the Link Information screen indicates that the link is not operational, selecting <Link Test> simply confirms this, as shown in Figure 17-5.

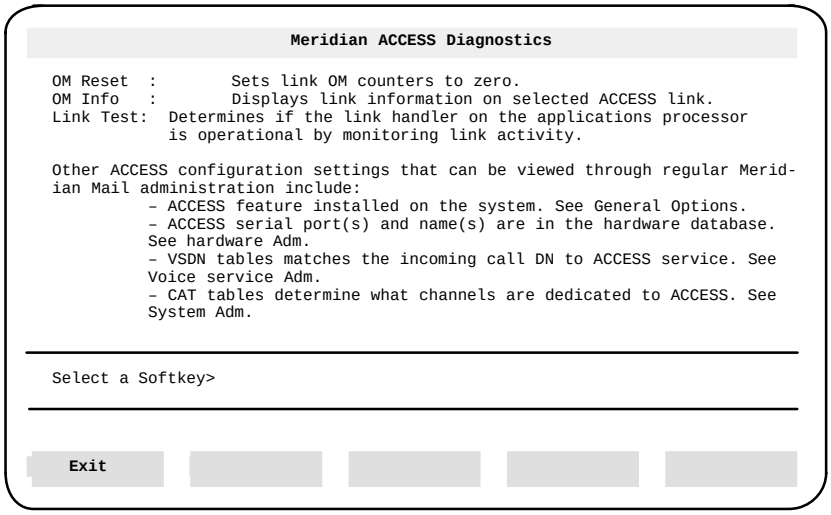
Figure 17-5
Link Test output screen (link not operational)



Help screen

This softkey displays the Meridian ACCESS Diagnostics Help screen (Figure 17-6).

Figure 17-6
The Meridian ACCESS Diagnostics Help screen



Diagnosing ACCESS configuration problems

If results indicate that there may be a configuration problem on Meridian Mail, it is useful to know the actual configuration requirements of ACCESS on Meridian Mail. The following sections discuss configuration parameters which can be checked.

Enabling ACCESS

To check if ACCESS is enabled on your Meridian Mail system, select the General Administration option from the Meridian Mail Main Menu. From the next menu displayed, select General Options. “Meridian ACCESS” will be listed under the Available Features portion of the screen.

ACCESS link cable

The ACCESS link cable should be connected to the data ports that are configured as MMLink in Meridian Mail.

Viewing hardware database settings

To view hardware database settings, select the Hardware Administration option from the Meridian Mail Main Menu. From the next menu displayed, select the Data Port Configuration option. This screen displays a list of configured system data ports only, one of which should be of device type “MMLink”. To view the port setting, select the item in the list and press the [View] softkey.

The data port that is configured for ACCESS must have the following settings:

- Device Type must be set to “MMLink.”
- Baud Rate is set to 4800 or 9600.
- Data Port Location must be specified.

Chapter 18: Configure MATs

The Configure MATs tool allows you to view or change the number of Multiple Administration Terminals (MATs). The tool lists the currently configured MATs and provides a means for adding the MAT program to a terminal or deleting it from one. Terminals are normally defined as MAT terminals during installation. Therefore, this tool is only used in the event that you need to change the configuration that was created during installation.

> ***Note:*** This tool is available only if the Multiple Administration Terminals feature is installed on your system.

The Configure MATs option is displayed when you select "Other" from the main TOOLS menu. When you select Configure MATs from this submenu, the screen shown in Figure 18-1 is displayed.

> ***Note:*** To change the MAT data port speed, refer to "Modifying the terminal data port", Procedure 4-9.

Figure 18-1
The Multiple Administration Terminal Configuration screen

```
      Multiple Administration Terminal Configuration


A Multiple Administration Terminal Program is configured on the following
Terminals:

   UAT0161

The following Terminals can be configured
with a Multiple Administration Program:

   CON0162


**NOTE** If a change to the Multiple Administration Terminals is made then
a Reboot of the system is required for the changes to become effective.

Select a softkey >
    Exit        Add MAT        Delete MAT
```

A terminal name is displayed in this screen for any data port that is defined as “Terminal” in the hardware database. The first part of the screen displays all terminals that have been configured with the Multiple Administration Terminal Program. The bottom portion of the screen displays those terminals that can be configured with the program. The following procedures describe how to add and delete the MAT program.

Procedure 18-1
Adding a MAT

Starting point: The TOOLS menu

> ***Note:*** *If there are no available terminal ports, an existing unused dataport must be configured using the Modify hardware tool. No more than three Multiple Administration Terminals can be installed on a system.*

1. Select “Other” and press <Return>.
2. Select “Configure MATs” and press <Return>.

   The Multiple Administration Configuration screen appears.
3. Press [Add MAT].

   You are prompted to specify the name of the terminal that you want to add.

   A new softkey, [Cancel], is displayed. If you do not wish to proceed, press [Cancel] to quit the operation.
4. Enter the name of one of the terminals that can be configured with a Multiple Administration Program. Press <Return>.

   You are prompted to provide a suffix for the new terminal name. All terminals configured with the Multiple Administration Terminal program begin with “UAT.”
5. Enter the suffix for the new terminal name (you do not have to enter “UAT,” but only alphanumeric input will be accepted).

   The terminal name is added to the top of the screen where the configured terminals are listed.
6. Press [Exit] to return to the “Other” submenu of the main TOOLS menu.
7. Reboot the system for the change to take effect.

Procedure 18-2
Deleting a MAT

Starting point: The TOOLS menu

1 Select “Other” and press <Return>.

2 Select “Configure MATs” and press <Return>.

The Multiple Administration Configuration screen appears.

3 Press [Delete MAT].

You are prompted to specify the name of the terminal that you want to delete.

A new softkey, [Cancel], is displayed. If you do not wish to proceed, press [Cancel] to quit the operation.

4 Enter the name of one of the terminals that is currently configured with a Multiple Administration Program and press <Return>.

The terminal name is removed from the top of the screen and moved to the list of terminals that can be configured with the Multiple Administration Program. The name is changed from UATxxx to CONxxx.

5 Press [Exit] to return to the main TOOLS menu.

6 Reboot the system for the change to take effect.

Chapter 19: Remote Notification Administration

The Remote Notification (RN) Administration tool allows you to change the parameters that control the interaction between Meridian Mail and the remote notification device selected by the user. When the user sets up RN on his or her mailbox, the user is asked to select a *"telephone type"*, which can be a remote telephone, tone–only pager, voice pager, numeric pager, or paging service.

> ***Note:*** This tool is available only if the Outcalling feature is installed on your system.

If you are unclear about how remote notification works on Meridian Mail, please read the *Voice Messaging User Guide* which describes various Meridian Mail features, including remote notification. Also refer to the *Outcalling Application Guide* (NTP 557-7001-320) which describes how the system administrator sets up outcalling features on the system.

When a user selects one of the pagers or the paging service to be the paging device, Meridian Mail must interact first with the paging company which then calls the pager. So the requirements of the paging company must be considered when defining the parameters for these paging devices. When the paging device is a phone, Meridian Mail calls the remote phone directly (no paging company is involved).

> ***Note 1:*** The parameters that you define using this tool take effect only when the system administrator sets the Numeric Pager Data Terminator field to "E" (see the *Outcalling Application Guide* for details). Otherwise, the default parameters (as shown in this chapter) are used, regardless of the last parameter values defined through this tool.
>
> ***Note 2:*** When the user sets up remote notification for his or her mailbox, the user may mistakenly indicate that the paging device being used is a tone–only pager, for example, when it is actually a remote telephone. As a result, the option to play Meridian Mail prompts is available for paging devices such as the tone only pager, numeric pager, and paging service.

The RN Administration main menu

When you select RN Administration from the TOOLS menu, the following screen appears:

Figure 19-1
Remote Notification Administration menu

```
                    Remote Notification Administration

General Information:

   All times are presented and entered in seconds.
   Instructions will be provided on the use of each screen
   prior to its presentation if HELP has been turned on.

Parameters to be modified for device:

   1– Phone
   2– Tone Only Pager
   3– Voice Pager
   4– Numeric Pager
   5– Paging Service
   6– Exit
   7– Turn on HELP
   (7 – Turn off HELP)

Select one of the above:
```

When you select one of the menu items (1 to 5), the system prompts you to fill in values for the various parameters for that device.

Selecting item 7 turns the HELP feature on. Select item 7 a second time if you wish to turn HELP off. If HELP is turned on, help text is displayed when you return to this screen and before the prompts begin when you select one of the menu items (1 to 5).

The prompts, the allowable answers, and the default answers are presented in table form in the rest of this chapter.

Note: If a parameter value has already been changed during a previous use of the RN Administration tool, then the default response shown in this document is replaced by the last value defined for that parameter.

However, if the system administrator has not set the Numeric Pager Data Terminator field to “E”, the RN parameters revert back to the original default responses shown in this document, regardless of the last parameter values defined through this tool.

Phone (item 1)

These parameters determine how the RN feature works when the selected paging device is a phone.

Prompt number	Prompt	Possible answer	Default answer
1	Silence Detection Timeout (in seconds):	1 – 30	20
2	Is this value correct? (Yes/No):	Yes, No	No

The prompts are explained in more detail below.

1 The "Silence Detection Timeout", when the paging device is a phone, is how long RN waits for the person answering the phone to finish his greeting (for example, *"Good morning. Northern Telecom ...")* before RN sends its message. The person answering the phone may not be ready to receive the RN message until he finishes speaking. The RN message, in this case, would be, *"Hello, <Custom Call Answering Greeting> has received a message for ..."*. If the timeout is reached before the person finishes his greeting, RN will continue anyway.

2 Select Yes to confirm or save any changes made to the parameters for this device. Use the cursor arrows to toggle the selection between No and Yes, and press <return> when the selection you want is displayed.

If you do not confirm that the entered values are correct by selecting Yes, the parameter values revert to their previous state.

Tone-only pager (item 2)

These parameters determine how the RN feature works when the selected paging device is a tone only pager. A tone only pager can only make an audio signal (a beep or tone) when it is reached.

Prompt number	Prompt	Possible answer	Default answer
1	Silence Detection Timeout (in seconds):	1 – 30	20
2	Delay before playing Prompts or Disconnecting (in seconds):	0 – 30	0
3	Play Prompts to the paging system? (Yes/No):	Yes, No	Yes
4	Are these values correct? (Yes/No):	Yes, No	No

The prompts are explained in more detail below.

1 The “Silence Detection Timeout” is how long RN waits for the paging company to finish its greeting (for example, *“you have reached xxx paging company ...”*) before continuing with the RN procedure. While the paging company’s greeting is playing, the paging company may not be ready to receive the RN greeting and any other data that is being sent to this paging device. If the timeout is reached before the paging company’s greeting is done, RN will continue anyway.

2 Some paging companies require a delay following the silence detection before receiving the RN/Meridian Mail prompts or disconnecting. A tone–only pager is not equipped to receive the RN/Meridian Mail prompts, so you may want to suppress the prompts (see point 3) so that the phone lines are not tied up unnecessarily while the prompts are playing.

3 Respond No if you do not want the RN/Meridian Mail prompts to play. Respond Yes if you do want the prompts to play.

Note: If a user has selected something other than a phone as the paging device, but the number provided to RN reaches a touch tone phone, the notified user is still able to log in to Meridian Mail if the prompts are allowed to play (respond Yes to this parameter prompt). As a result, you may wish to allow the prompts to play even if the selected paging device is not a phone. If your greater concern is not to tie up the line any longer than necessary, suppress the login prompts by responding No for paging devices other than a phone.

4 Select Yes to confirm or save any changes made to the parameters for this device. Use the cursor arrows to toggle the selection between No and Yes, and press <Return> when the selection you want is displayed.

If you do not confirm that the entered values are correct by selecting Yes, the parameter values revert to their previous state.

Voice Pager (item 3)

These parameters determine how the RN feature works when the selected paging device is a voice pager. A voice pager can play a voice message when the pager is reached and activated.

Prompt number	Prompt	Possible answer	Default answer
1	Silence Detection Timeout (in seconds):	1 – 30	20
2	Delay before playing Prompts (in seconds):	0 – 30	0
3	Are these values correct? (Yes/No):	Yes, No	No

The prompts are explained in more detail below.

1 The "Silence Detection Timeout" is how long RN waits for the paging company to finish its greeting (e.g., *"you have reached xxx paging company ..."*) before continuing with the RN procedure. While the paging company's greeting is playing, the paging company may not be ready to receive the RN message or data. The RN message or data would include the RN greeting (*"Hello, <Custom Call Answering Greeting> has received a message for ..."*) and any other data that is required for this paging device. If the timeout is reached before the paging company's greeting is done, RN will continue anyway.

2 Some paging companies require a delay following the silence detection before receiving the RN/Meridian Mail prompts. Although a voice pager can receive and play a voice message or prompt, it does not allow the user to log in to Meridian Mail.

Note: If a user has selected something other than a phone as the paging device (for example, a voice pager), but the number provided to RN reaches a touch tone phone, the notified user is still able to log in to Meridian Mail.

3 Select Yes to confirm or save any changes made to the parameters for this device. Use the cursor arrows to toggle the selection between No and Yes, and press <Return> when the selection you want is displayed.

If you do not confirm that the entered values are correct by selecting Yes, the parameter values revert to their previous state.

Numeric Pager (item 4)

These parameters determine how the RN feature works when the selected paging device is a numeric pager. A numeric pager can display a digital message (callback number).

Note that RN on Meridian Mail sends a predefined callback number to the numeric pager that simply alerts the user that Meridian Mail has a message waiting. The user defines this callback number when setting up remote notification for his or her mailbox.

Prompt number	Prompt	Possible answer	Default answer
1	Callback Number Prefix:	up to 2 digits, or #, or *	no prefix
2	Callback Number Terminator:	up to 2 digits, or #, or *	#
3	Silence Detection Timeout (in seconds):	1 – 30	20
4	Delay before sending Callback Number Prefix (in seconds):	0 – 30	2
–continued–			

Prompt number	Prompt	Possible answer	Default answer
5	Delay between sending Prefix and sending Data (in seconds):	0 – 30	0
6	Delay before playing Prompts or Disconnecting (in seconds):	0 – 30	3
7	Play Prompts to the paging system? (Yes/No):	Yes, No	Yes
8	Are these values correct? (Yes/No):	Yes, No	No
–end–			

The prompts are explained in more detail below:

1 The Callback Number Prefix is sent to the paging company before the callback number is sent. Valid characters are digits 0 to 9, #, * or any combination of these (or blank if the paging company does not require a callback number prefix).

2 The Callback Number Terminator is sent to the paging company after the callback number is sent. Valid characters are digits 0 to 9, #, * or any combination of these (or blank if the paging company does not require a callback number terminator).

3 The "Silence Detection Timeout" is how long RN waits for the paging company to finish its greeting (for example, *"you have reached xxx paging company ..."*) before continuing with the RN procedure. While the paging company's greeting is playing, the paging company may not be ready to receive the RN greeting and any other data that is being sent to this paging device. If the timeout is reached before the paging company's greeting is done, RN will continue anyway.

4 Some paging companies require a delay following the silence detection before receiving the callback information. The value entered for this field is the delay between the silence detection and sending the Callback Number Prefix (or the callback number if there is no prefix).

5 For some paging companies that require a Callback Number Prefix, it may be necessary for Meridian Mail to wait a short time after sending the Callback Number Prefix before sending the callback number. The Callback Number Terminator is then sent after the callback number.

6 Some paging companies require a delay before receiving the RN/Meridian Mail prompts or disconnecting. A numeric pager is not equipped to receive the RN/Meridian Mail prompts, so you may want to reduce this delay and suppress the prompts (see point 7) so that the phone lines are not tied up unnecessarily while the prompts are playing.

7 Respond No if you do not want the RN/Meridian Mail prompts to play. Respond Yes if you do want the prompts to play.

Note: If a user has selected something other than a phone as the paging device, but the number provided to RN reaches a touch tone phone, the notified user is still able to log in to Meridian Mail if the prompts are allowed to play (respond Yes to this parameter prompt). As a result, you may wish to allow the prompts to play even if the selected paging device is not a phone. If your greater concern is not to tie up the line any longer than necessary, suppress the login prompts by responding No for paging devices other than a phone.

8 Select Yes to confirm or save any changes made to the parameters for this device. Use the cursor arrows to toggle the selection between No and Yes, and press <Return> when the selection you want is displayed.

If you do not confirm that the entered values are correct by selecting Yes, the parameter values revert to their previous state.

Paging Service (item 5)

These parameters determine how the RN feature works when the selected paging device is a paging service. A paging service requires a Pager Identification Number (PIN) to identify the pager. The PIN is defined when the user sets up RN on his or her mailbox. For a paging service, the callback number is defined by the system administrator using the Outcalling Administration function.

Prompt number	Prompt	Possible answer	Default answer
1	Paging Service PIN Prefix:	up to 2 digits, or #, or *	no prefix
2	Paging Service PIN Terminator:	up to 2 digits, or #, or *	#
3	Callback Number Prefix:	up to 2 digits, or #, or *	no prefix
4	Callback Number Terminator:	up to 2 digits, or #, or *	#
5	Silence Detection Timeout (in seconds):	1 – 30	20
6	Delay before sending Prefix (in seconds):	0 – 30	2
7	Delay between sending Prefix and sending Data (in seconds):	0 – 30	0
8	Delay before playing Prompts or Disconnecting (in seconds):	0 – 30	3
9	Play Prompts to the paging system? (Yes/No):	Yes, No	Yes
10	Are these values correct? (Yes/No):	Yes, No	No

The prompts are explained in more detail below.

1 The PIN Prefix is sent to the paging company before the PIN is sent. Valid characters are digits 0 to 9, #, * or any combination of these (or blank if the paging company does not require a PIN prefix).

2 The PIN Terminator is sent to the paging company after the PIN is sent. Valid characters are digits 0 to 9, #, * or any combination of these (or blank if the paging company does not require a PIN terminator).

3 The Callback Number Prefix is sent to the paging company before the callback number is sent. Valid characters are digits 0 to 9, #, * or any combination of these (or blank if the paging company does not require a callback number prefix).

4 The Callback Number Terminator is sent to the paging company after the callback number is sent. Valid characters are digits 0 to 9, #, * or any combination of these (or blank if the paging company does not require a callback number terminator).

5 The "Silence Detection Timeout" is how long RN waits for the paging company to finish its PIN prompt or callback number prompt before continuing with the RN procedure. While the paging company's greeting or callback number prompt is playing, the paging company may not be ready to receive the next RN data that is being sent to this paging device. If the timeout is reached before the paging company's prompt is done, RN will continue anyway.

6 Some paging companies require a delay before receiving the PIN or callback information. The value entered for this field is the delay between the silence detection and sending the PIN prefix, and the delay between the callback number prompt (played by the paging service) and sending the Callback Number Prefix.

7 For some paging companies that require a PIN prefix or Callback Number Prefix, it may be necessary for Meridian Mail to wait a short time after sending the Prefix before sending the PIN or the callback number. The value entered here is the delay between sending the PIN prefix and sending the PIN, and the delay between sending the Callback Number Prefix and the callback number.

8 Some paging companies require a delay before receiving the RN/Meridian Mail prompts or disconnecting. A paging service pager is not equipped to receive the RN/Meridian Mail prompts, so you may want to reduce this delay and suppress the prompts (see point 9) so that the phone lines are not tied up unnecessarily while the prompts are playing.

9 Respond No if you do not want the RN/Meridian Mail prompts to play. Respond Yes if you do want the prompts to play.

Note: If a user has selected something other than a phone as the paging device, but the number provided to RN reaches a touch tone phone, the notified user is still able to log in to Meridian Mail if the prompts are allowed to play (respond Yes to this parameter prompt). As a result, you may wish to allow the prompts to play even if the selected paging device is not a phone. If your greater concern is not to tie up the line any longer than necessary, suppress the login prompts by responding No for paging devices other than a phone.

10 Select Yes to confirm or save any changes made to the parameters for this device. Use the cursor arrows to toggle the selection between No and Yes, and press <Return> when the selection you want is displayed.

If you do not confirm that the entered values are correct by selecting Yes, the parameter values are returned to their previous state.

List of terms

ACD

Automatic call distribution. This is an SL-1 feature for distributing incoming calls to groups of answering positions while efficiently managing system resources.

AMIS

Audio Messaging Interchange Specification. This is an analog standard for networking voice messages between systems from different vendors.

Basic Service

Basic Service ports only support Voice Menus and Access Applications. *See also* Full Service.

Call

In the MSM, any demand to set up a connection through the switch. Also used as a unit of telephone traffic. Synonymous with cue.

Call Processing

The software system that handles the processes involved in setting up connections through the Meridian Mail MSM network between calling and called party.

Card

A plug-in circuit pack containing components. In the MSM, “card” is the preferred term for a printed circuit pack or printed circuit board.

Central office (CO)

A switching office arranged for terminating subscriber lines and provided with switching equipment and trunks for establishing connections to and from other switching offices. Synonymous with class 5 office; end office; local office.

Channel capacity

A measure of the maximum possible information rate through a channel, subject to specified constraints.

CO

Central office. This is a public telephone switch.

COS

Class of Service

CPE

Customer Premises Equipment. Telephone equipment installed at the customer site and not at the Central Office.

Customer Premises Equipment (CPE)

Refers to equipment, such as the Message Services Module (MSM), that is located on the customer's premises.

Directory

In Meridian Mail, a software structure that may be used to look up, store, and delete symbols.

Directory number (DN)

The full complement of digits required to designate a subscriber's station within one NPA—usually a three-digit central office code followed by a four-digit station number.

DN

Directory number. The extension number of the phone being called.

DSP

Digital Signal Processor. A special-purpose processor chip optimized for signal processing algorithms. Meridian Mail uses the Texas Instruments TMS320 family of DSPs on its voice processor cards.

Error

In telephony, a detectable trouble condition that cannot be reproduced at will by the system or by external means; a transient or intermittent fault that does not yield consistent diagnostic test results. Compare with fault.

Error message

An indication that an error has been detected.

Full Service

Full service ports support all features available in Meridian Mail. *See also* Basic Service.

Hundred call seconds (CCS)

Calculated by multiplying the average number of calls during busy hour by the average holding time in seconds, divided by 100. (36 CCS=1 Erlang.)

HVS

Hospitality Voice Services. A Meridian Mail feature providing voice messaging services for hotel guests and staff.

Input/output (I/O)

Refers to a device or medium that is used to achieve a bi-directional exchange of data. Data exchange in the Meridian Mail MSM system is performed in accordance with the input/output message system.

Input/output device (IOD)

A hardware device that interprets input and formats output for human users or remote computes.

I/O

Input/output

IOD

Input/output device

Link

- In the MSM, a connection between any two nodes. *See* node.
- A four wire group of conductors providing transmit and receive paths for the serial speech or message data between components of MSM systems. Speech links connect peripheral modules to the network modules. Message links connect network message controllers or input/output controllers to the central message controller.

Link protocol

A set of rules for data communication over a data link. Link protocols exist for transmission codes, transmission nodes, and for data control and recovery procedures.

MAT

See Multiple Administration Terminal.

Message Waiting Indication (MWI)

A lamp or special dial tone indicating the presence of new voice mail in an associated mailbox.

Modem

Contraction of modulator/demodulator; a device that modulates and demodulates signals for transmission and reception, respectively, over communication facilities. A modem is used to permit digital signals to be sent out over analog lines. Synonymous with data set.

Module

- The basic building block of software structure. A module consists of interface and implementation sections.
- A discrete hardware package, designed for use in conjunction with other components.

MSM

Message Services Module. The name of the SPM when it is installed in a CPE environment, for example, for connection to a SL-100 PBX.

Multimedia ports

Some fax features require multimedia ports. A distinction is made between voice ports and multimedia ports, since multimedia ports require additional processing capabilities. Features using voice only are also supported on multimedia ports.

Multiple Administration Terminal (MAT)

On of the terminals supporting the Multi-admin feature. This was called a UAT in previous releases. These terminals are used to perform user administration functions, but not system administration functions.

Multi-protocol controller (MPC)

A general-purpose data communications card that allows data communications between the Meridian SL-100 switch (or a DMS-100 switch) and an external computer. The MPC provides the SMDI link between the Meridian SL-100 PBX (or DMS-100 switch) and the MSM. The MPC card resides on the input/output controller shelf.

Multi-server Processor (MSP)

A node running multi-server programs on the Message Services Module.

MWI

See Message Waiting Indication.

Network

- An organization of stations capable of intercommunication but not necessarily on the same channel.
- Two or more interrelated circuits.
- A combination of terminals and circuits in which transmission facilities interconnect user stations directly.
- A combination of circuits and terminals serviced by a single switching or processing center.
- An interconnected group of computers or terminals.
- (NET) The network module frame of the Meridian Mail system.

Network administration system

A stand-alone computer that is involved in operation, administration and maintenance of ISDN services. The NAS uses data on service and system operation to generate files that contain information on alarms, accounting, billing, and network operation.

Network module

The basic building-block of the Meridian Mail switching network. The NM accepts incoming calls and, using connection instructions from the central control complex, connects them to the appropriate outgoing channels. Activities in the NM are controlled by the network message controllers.

NM

Network module

Node

The terminating point of a link. Node is a relative term; its meaning depends entirely on the context within which it is used. For example, a circuit may be a node in the context of another circuit within a module; the module itself may be a node in the context of another component of the network, and so forth.

Northern Telecom practice (NTP)

A document that contains descriptive information about the hardware and software modules, and performance oriented practices for testing and maintaining the system. NTPs are supplied as part of the standard documentation package provided to an operating company.

NT

Northern Telecom (Also known as Nortel.)

NTP

Northern Telecom publication

PBX

Private branch exchange. A private telephone switch.

PE

Peripheral Equipment. The line and trunk interface hardware in a telephone switch.

Peripheral Module (PM)

A generic term referring to all hardware modules of the Meridian Mail systems that provide interfaces with external lines, trunk, or service facilities. PM contains peripheral processors which perform local routines, thus relieving the load on the central processor unit.

PMS

Property Management System. One of a variety of computer systems used by hotels to keep track of room status and charges. It includes an interface to the hotel PBX/Voice Mail system.

Port

In the MSM, the point at which a voice, T1, or SMDI link is connected to the system.

Private branch exchange (PBX)

A private telephone exchange, either automatic or attendant-operated, serving extensions in an organization and providing access to the public network.

RAM

Random Access Memory. Memory available for both read and write operations.

RN

Remote notification

SCSI

Small Computer System Interface. An industry standard for interfacing with tape and disk drives used in Meridian Mail.

SCSI/RAM

The disk interface card with 1 MB of RAM. This card is used in Meridian Mail Classic systems.

Signal Processing Node (SPN)

A node on the Message Services Module that is used for signal processing.

Simplified message desk interface (SMDI)

An interface feature that enables a PBX/switch switch to communicate with a message desk. It provides the directory number of the called station, the calling station number (if available), and the reason for the call being forwarded to a message desk. In addition, it provides the message desk with the ability to activate or deactivate the message waiting indication for any station able to forward calls to the desk.

SL-1

Switch Language-1 PBX

SMDI

Simplified message desk interface. A protocol interface used with Meridian Mail systems that are connected Central Office switches or non-SL-1 PBXs.

SPM

Service Peripheral Module. The Meridian Mail system for a Central Office having up to 192 ports in a single cabinet.

SPN

Signal Processing Node. A node that is used for signal processing by means of attached voice processor cards.

Subscriber

An individual user of a telephone station set that is connected to a PBX/switch switch. Also known as end user.

T1

The standard 24-channel, 1.544 Mb/s pulse code modulation system as used in North America. This digital carrier carries a signal whose designation is DS1.

Table

Two-dimensional entities in which data associated with the hardware and software systems of the MSM are stored.

Telephony Interface Node (TIFN)

A node that is used to interface between incoming telephony lines and place the communications on the MM bus of the Message Services Module.

Terminal

- The point of origination or termination in a communications network.
- Any device capable of sending and/or receiving information over a communication channel.
- Also, in MSM, the smallest unit of address space within the input/output system.

Three-Way Calling

A service-related telephony feature that permits a subscriber in the talking state to add a third party to the call without operator assistance.

TIFN

See Telephony Interface Node.

Uniform Call Distribution (UCD)

A Meridian Digital Centrex feature which allows calls to be evenly distributed to a number of pre-designated stations known as UCD stations or UCD positions. This feature is used to queue incoming calls to the message desk.

VMUIF

See Voice Messaging User Interface Forum.

Voice Messaging User Interface Forum

The interface provided by MSM that complies with the industry standard Voice Messaging User Interface Forum specification.

Voice Port

All Meridian Mail features, except for some Fax on Demand functions, use voice ports. A distinction is made between voice ports and multimedia ports since multimedia ports require additional processing capabilities.

Voice Processor card

A twelve port card that is used in the Message Services Module for voice processing.

Index

D

F

H

K

L

M

N

O

P

R

S

T

U

V

W

NORTEL

Reader's Response Form for:

Message Services Module
***System Administration Tools* (NTP 557-7001-305)**
August 1995

Tell us about yourself:

Name: _____ **Date:** _____

Company: _____

Address: _____

_____

Occupation: _____ **Phone:** _____

1. What is your level of experience with this product?

   ❑ New user ❑ Intermediate ❑ Experienced ❑ Programmer

2. How do you use this book?

   ❑ Learning ❑ Procedural ❑ Problem solving ❑ Reference

3. Did this book meet all of your needs?

   ❑ Yes ❑ No

   If you answered **No** to this question, please answer the following questions.

4. What chapters, sections, or procedures did you find hard to understand?

   _____

   _____

   _____

   _____

5. What information (if any) was missing from this book?

   _____

   _____

   _____

   _____

6. How could we improve this book? (For example, books can also be evaluated in many other ways, including: ease of information retrieval, presentation, and use of reading aids, such as diagrams.)

   _____

   _____

   _____

   _____

Please return your comments by fax to (416) 597-7104, or mail your comments to: Customer Documentation, Northern Telecom, Toronto Lab, 522 University Ave., 12th Floor Toronto, Ontario, Canada M5G 1W7

NORTEL

Reader's Response Form

Meridian Mail

Message Services Module

System Administration Tools

Customer Documentation
Northern Telecom
522 University Ave. 12th Floor
Toronto, ON, Canada
M5G 1W7

Publication number: 557-7001-305
Product release: Product release 10.0
Document release: Standard 1.0
Date: August 1995

Printed in the United States of America

NORTEL