Meridian Mail
Networking Services Administration Guide

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Standard release (1.0) of the *Networking Services Administration Guide*. This guide documents Meridian Mail Networking services (Meridian Networking, Network Message Service (NMS), and AMIS Networking) for Release 9.0 base software and renders previous releases of this guide obsolete.

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About this document

This document details the administration procedures to be performed by the Meridian Mail system administrator in order to implement, configure and maintain networking services. There are three different types of networking which are available in Release 9 of Meridian Mail: Meridian Networking, Network Message Service (NMS) and AMIS Networking. You may have one, two, or, in some configurations, all three installed on a system. This guide documents all three services.

This guide applies to all Meridian Mail hardware platforms. This guide also applies to both multicustomer Meridian Mail systems as well as non-multicustomer (or single customer) systems. (The Meridian Mail Multi-Customer feature allows a single Meridian Mail system to be divided into a number of customer groups. This allows a service provider to customize features and operating parameters for each customer on the system.) Any differences or exceptions are pointed out.

Meridian Networking

Meridian Networking allows users at one Meridian Mail site to send messages to and receive messages from users at other Meridian Mail sites.

Meridian Networking is available on all Meridian Mail hardware platforms.

On multicustomer systems, Meridian Networking can only be enabled for one Meridian Mail user interface (MMUI) customer group. The voice messaging user interface form (VMUIF) (not available on Meridian Mail systems connected to the Meridian 1/SL-1) does not support Meridian Networking.

Network Message Service (NMS)

NMS allows a number of Meridian 1/SL-1s to be serviced by a single Meridian Mail system.

NMS is not available for the Meridian Mail MSM platform, the GP platform which connects to the DMS-10, DMS-100 or SL-100 (or third-party switch such as NEC, AT&T or ROLM using VoiceBridge) using an SMDI link.

NMS is not compatible with the Meridian Mail Multi-Customer feature.

AMIS Networking

AMIS (audio messaging interface specification) Networking is an industry standard which allows different vendors' voice mail systems to exchange voice messages.

AMIS Networking is available on all Meridian Mail hardware platforms. It is compatible with the Multi-Customer feature. Unlike Meridian Networking, AMIS Networking can be made available to all customer groups on a multicustomer system.

Integrated AMIS Networking

Integrated AMIS Networking allows remote AMIS sites to be added to a Meridian network as virtual nodes. Virtual nodes can be added if AMIS Networking is installed at the local site. Table 1 shows the features that are available through Integrated AMIS Networking.

Features

The following table lists some of the basic features available on the different types of networking:

Table 1
Features of Meridian Networking, Network Message Service, and AMIS Networking

	Meridian Networking	Network Mes-sage Service	AMIS (virtual node)	AMIS (non-virtual node)
Call Sender*	X	X	X	
Name Addressing*	X	X	X	
Name Dialing*	X	X	X	
Distribution Lists	X	X	X	
Reply To	X	X	X	X

	Meridian Networking	**Network Mes- sage Service**	**AMIS (virtual node)**	**AMIS (non- virtual node)**
Reply All	X	X		
Personal Verification	X	X	X	
Message Privacy	X	X		
Acknowledgement tags***	X	X	X	X
Urgent Message tags****	X	X		

* Mailbox numbering must follow the dialing plan.
** Available if users at the remote site have been added as remote voice users.
*** Acknowledgement tags for AMIS messages function differently than for non-AMIS messages. AMIS recipients receive acknowledgement that the message was delivered to the mailbox, whereas non-AMIS recipients receive acknowledgement that the message was listened to.
****Urgent Message tags are not transported to the remote site in virtual node AMIS or non-virtual node AMIS.

Related documents

Throughout this guide you may be asked to refer to any of the following documents:

Number	Title
555-7001-301	*Meridian Mail System Administration Guide* (You will have this document if your Meridian Mail system is connected to a Meridian 1 and you do not have the Multi-Customer feature.)
555-7001-302	*Meridian Mail System Administration Guide for Multi-Customer Systems* (You will have this document and the following document, if your Meridian Mail system is connected to a Meridian 1 and the Multi-Customer feature is installed.)
555-7001-303	*Meridian Mail Customer Administration Guide for Multi-Customer Systems*
555-7001-307	*Meridian Mail System Administration Guide* (For Meridian Mail systems that are connected to a DMS family or SL-100 switch that does not have the Multi-Customer feature.)
555-7001-308	*Meridian Mail System Administration Guide for Multi-Customer Systems* (This document and the following document are for Multi-Customer Meridian Mail systems that are connected to a DMS family or SL-100 switch.)

Number	Title
555-7001-309	*Meridian Mail Customer Administration Guide for Multi-Customer Systems*
555-7001-213	*Meridian Mail Networking Installation Guide (AML)*
555-7001-214	*Meridian Mail Networking Installation Guide (SMDI)*
555-7001-305	*Meridian Mail System Administration Tools Guide*
555-7041-200	*Meridian Mail Modular Option Site and Installation Planning Guide*

Refer to the following documents if you are using Meridian Mail MSM:

Number	Title
557-7001-100	*Meridian Mail MSM Planning and Engineering*
557-7001-300	*Meridian Mail MSM System Administration Guide for Multi-Customer Systems*
557-7001-301	*Meridian Mail MSM Customer Administration Guide for Multi-Customer Systems*
557-7001-302	*Meridian Mail MSM System Administration Guide*
557-7001-310	*Meridian Mail MSM Translations Guide*
557-7001-504	*Meridian Mail MSM System Installation and Modification*

Typographic conventions

The following conventions are used throughout this guide:

- *Softkeys* These are displayed on the various administration menus and screens and indicate which keyboard function keys carry out specific Meridian Mail 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 (for example, [Exit], [OK to Delete]).

- *Keyboard keys* These are referred to by indicating the label of the key, delimited by angle brackets (for example, <1>, <2>, <Return>).

- *Text input* Where you are required to input specific text, the characters are presented in bold print (for example, **abcd**, as opposed to <a><b><c><d>).

- *Fields in a menu* When the name of a field is referred to, it is in italics and in a different typeface than the body of the document (for example, Last Name, Invalid Logon Attempts).

- *Values in Fields* Where a field displays a set of values from which you must select, these values are in quotes (for example, "Yes", "No", "Enable", "Disable").

- *Spoken words* Where you are required to speak into the telephone, such as in the recording of greetings and announcements, any suggested words appear in quoted italics (for example, Say *"Please wait on the line, an attendant will be with you shortly."*).

- *Menus* Meridian Mail administration menus display a list of options or items from which you can make a selection.

- *Screens* Meridian Mail administration screens contain fields in which you can enter information or make a choice between two or more options such as "Enabled" and "Disabled" or "Yes" and "No". They may also contain read-only fields.

References

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

- A reference to text in the same chapter appears surrounded by double quotation marks, giving the heading under which the required text is found (for example, see "Voice recordings" in this chapter).

- A reference to text in another section appears with double quotation marks, giving the name of the chapter and, where necessary, the heading under which the required text is found (for example, see "Voice recordings" in the "User administration" chapter).

- A reference to text in another manual appears in italics, giving the title of the manual in which the required text is found (for example, see *Meridian Mail Installation Procedures*).

Chapter 1:
Meridian Networking administration

Overview

This chapter provides an overview of Meridian Networking concepts and describes the procedures required to administer the networking service.

Note 1: On multicustomer systems, Meridian Networking can only be enabled for one customer group.

Note 2: The VMUIF interface does not support Meridian Networking.

Meridian Networking is an incremental service, installed after the Meridian Mail Voice Messaging service is functioning. Networking allows users at your Meridian Mail site to send and receive voice messages, reply to voice messages, and forward voice messages to users located at other Meridian Mail sites.

Meridian Networking and Network Message Service (NMS)

NMS is an optional feature that allows a single Meridian Mail system to provide voice services to multiple PBX switches (Meridian 1s/SL-1s).

On Meridian Mail systems that do not have the Multi-Customer feature and that are connected to a Meridian 1, Meridian Networking and Network Message Service (NMS) can co-exist on the same system (as long as the Meridian Mail Multi-Customer feature is not installed). If you have both Meridian Networking and NMS, also refer to the "Network Message Service" chapter and the chapter "Meridian Networking and Network Message Service" which illustrates how Meridian Mail administration screens appear when both features are installed.

Networking sites

A Meridian Mail network can have up to 50 remote sites. Sites in the network are connected to each other through the long distance network, direct distance dialing (DDD), tie lines, or digital trunks. Message delivery to remote sites in the network is determined by three things: the user-specified priority of the given message (urgent, standard, or economy), the information you specify in the Voice Messaging Options screen (see "Voice messaging options" in the "Voice administration" chapter in the *System Administration Guide* (or if Multi-Customer is installed, the *Customer Administration Guide*), and the routing information you specify in the Network Administration screens described in this chapter.

Meridian Mail uses the networking voice service to transfer voice messages to remote sites. The networking service establishes the call, and connects to the networking service on the remote system. Control information such as connection passwords, message headers, and message delivery acknowledgements are transferred as data by conferencing modems onto the voice path at the local and remote sites. See Figure 1-1.

Figure 1-1
Typical networking connection
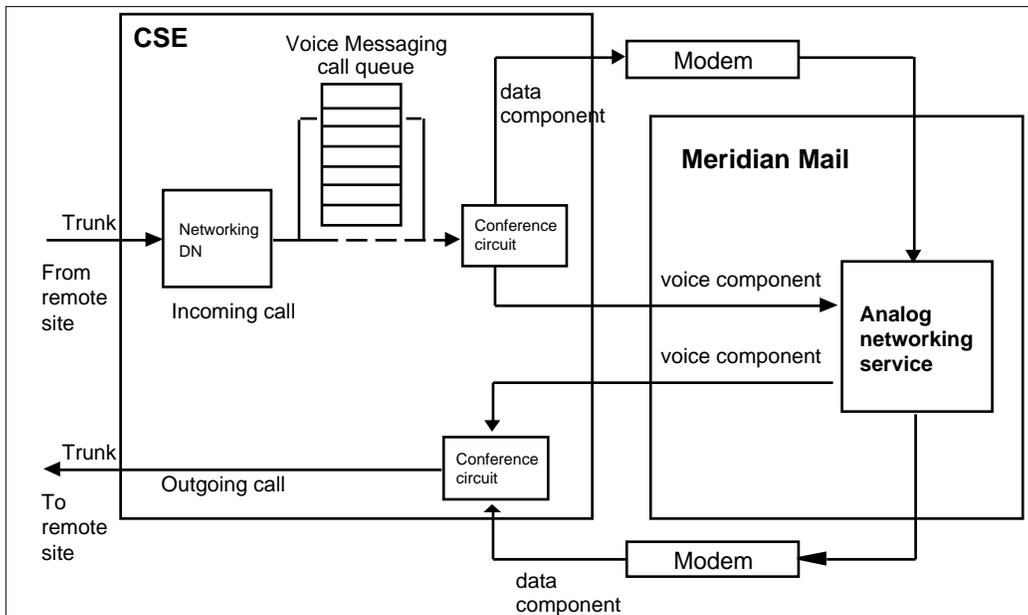
Administrator responsibility

As administrator, you are responsible for the configuration and specification of the operational characteristics of the Meridian Networking service. Make sure that you are aware of all hardware and software requirements (see the *Site and Installation Planning Guide*).

You are also responsible for the local site's view of the network. Responsibilities include local site administration, through which the basic networking parameters of the local site are specified, and remote site administration, through which the connection parameters from the local site to selected remote sites are specified. Dialing plans, location numbers, and other configured information must match for all sites in the network to ensure correct operation of the system.

In some installations, one administrator may be designated to maintain the networking parameters of more than one site using dial-up access to these sites. The details of remote access are described in the chapter "Administrator logon and the main menu" in the *System Administration Guide*.

Each site in a Meridian Mail network must be assigned a unique site ID within the range of 1 to 500. Coordinate the assignment of these site IDs with the other Meridian Mail site administrators to ensure that the IDs do not conflict with mailbox numbers within the network. These site IDs are known only to system administrators and their delegates and are used when defining local and remote sites.

Configuring the networking service

Once the hardware necessary for networking has been installed on both the switch and the Meridian Mail system (see the *Networking Installation Guide*), you must configure the networking service, and then use the Network Administration screens to specify the operational characteristics of the networking service on your system.

Procedure 1-1 illustrates the steps necessary to configure the Meridian Networking service.

Procedure 1-1
Configuring the Meridian Networking service

Step 1. Plan networking parameters.	
Make sure you have a good understanding of the configuration of your network. (the number of remote sites, the dialing plan implemented at each site, and so on). First plan out the network on paper. To gather appropriate information, consult with administrators at other Meridian Mail network sites to ensure the validity of information as well as to ensure that there is no duplication of location prefixes.	See page 1-10 for an ESN dialing plan and page 1-66 for a CDP dialing plan. Also see data forms in Appendix D of the *Site and Installation Planning Guide*.
Step 2. Check the modem DNs.	
This step is necessary for network testing. See the data port configuration screen. Also configure a 500 set in the PBX for the modem DN.	See the section "Hardware administration" in the *System Administration Guide*.
Step 3. Configure an ACD queue (or DN) on the switch.	
Ensure that there is an available ACD queue on the PBX. This queue does not require agents (that is, dummy queues) and can be night-call-forwarded to the primary Voice Messaging queue (that has ACD agents with the SCN-DN and Conference Key (A03) defined). The ACD-DN is then entered in the VSDN table as the networking service DN. The ACD-DN is then entered in the VSDN table as the networking service DN.	See the section "Configuring Meridian Mail services" in the "Voice administration" chapter in the *System Administration Guide*.
Step 4. Modify the channel allocation table if necessary.	
The channel allocation table (CAT) requires updating only if DSP ports (agents) are to be dedicated to networking.	See "The channel allocation table" in the "System status and maintenance" chapter in the *System Administration Guide.*

Step 5. On a multicustomer system, enable Meridian Networking for the customer group. (This is the only step only for multicustomer systems.)	
This step is necessary only if the Meridian Mail Multi-Customer feature is installed. If this is the case, only one customer group can have Meridian Networking enabled. Log on to that customer group. From the main menu, select General Administration, General Options. In the list of Available Features, Enable Meridian Networking.	See the chapter "General administration" in the *Customer Administration Guide*.
Step 6. Add the networking service DN in the VSDN table.	
After the queue or DN has been set up, you must enter the networking service DN in the Voice Service-DN table.	See "Adding DN information" in the "Voice administration" chapter in the *System Administration Guide* or the *Customer Administration Guide*.
Step 7. Define attributes for the local site.	
From the main menu select Network Administration, Local Site Maintenance.	See the following: For ESN, page 1-36. For CDP, page 1-78. For hybrid, page 1-99. For no dialing plan, page 1-122.
Step 8. Define attributes for remote sites.	
Each site in the Meridian network must be defined in your database as a remote site. From the main menu select Network Administration, Remote Site Maintenance.	See the following: For ESN, page 1-40. For CDP, page 1-81. For hybrid, page 1-103. For no dialing plan, page 1-124.
Step 9. Check remote sites.	
Check that all remote sites have been added by going to the Remote site maintenance - List sites screen.	See the following: For ESN, page 1-40. For CDP, page 1-81. For hybrid, page 1-103. For no dialing plan, page 1-124.
Step 10. Test the network.	
Check the network by doing a loopback networking verification test. Send a message to all sites and make sure that it is received.	See page 1-136.

Step 11. Set the network scheduling parameters.	
Set the network scheduling parameters using the Networking Scheduling Parameters screen.	See page 1-136.
Step 12. Add users as remote voice users (optional).	
Networking does not require remote mailbox users to be defined in the local directory before local users can address messages to them. However, frequently addressed remote users may be added as remote voice users to make it more convenient to address messages to them. If this is done, the user's DN and spoken name may also be included. The user's name should be recorded with an associated directory number. For example, *"Dexter Smith at 6-555-1213."* Recording the remote user's spoken name provides a personal verification that the remote mailbox number is correct when addressing or playing back a message. The remote user's directory entry is used to support the Call Sender feature in Voice Messaging. See "Directory entry users" in the "User administration" chapter of the *System Administration Guide* for details.	See "Adding remote voice users" in the "User administration" chapter in the *System Administration Guide*.
Step 13. Back up the database.	
Once you have defined the local site and added remote sites to your system, back up this new data to ensure its safety.	See the "Voice administration" chapter in the *System Administration Guide*.

Networking configuration parameters

Define the following data for the local site and remote sites. (To see the Modify screens for local and remote sites, see the appropriate section. The sections are listed in the table above in step 7.

- Site IDs for the local site and remote sites (each ID must be unique in the network)

- Site names (for the local site and remote sites)

- A dialing plan must be specified for the local site and remote sites. The selected dialing plan must reflect the dialing plan that is in use. A site can be configured with the local switch as ESN, CDP, Hybrid (both ESN and CDP) or as having no numbering plan. (See the following section, "Dialing plans and location codes" for more information.)

- Location codes are used by non-administrative users to distinguish remote mailbox numbers from local ones when composing messages. When local users compose messages to remote users, they must precede the remote user's mailbox with the location code (also referred to as the location prefix). Each site in the network has at least one

location code associated with it. Sites participating in a coordinated dialing plan (CDP) may have up to 50 location codes. The way in which you enter location codes depends on the type of dialing plan in effect:

ESN You must enter the ESN access code and the ESN prefix. (See the description of ESN dialing plans on page 1-9). An ESN site can have only one ESN prefix.

CDP You must specify the CDP steering code(s) (see the description of coordinated dialing plans on page 1-53). A CDP site can have up to 50 steering codes.

Hybrid The first location code you enter must be the ESN prefix. You may then add up to 49 CDP steering codes in the remaining fields.

None If no numbering plan is selected, or if mailbox numbering does not follow the dialing plan, you must enter the location codes as mailbox prefixes.

- A spoken name may be recorded for remote sites (if the remote site is not part of a coordinated dialing plan with the local site).

- For remote sites, you must specify up to three phone numbers by which to reach the networking service (the two extra numbers allow contingency routes to be tried if the first number is busy or out of service). See the description of "Network Connection DN1, 2, 3" on page 1-44 for more information.

Dialing plans and location codes

A dialing plan is the set of rules the switch uses to route calls through a public or private phone network.

Note: Define or review the dialing plan for the switch before entering the Meridian Networking data.

Location codes are used when composing messages to users at remote sites. Depending on the dialing plan, this prefix is either already part of the

mailbox number (coordinated dialing plan), or must be appended to the beginning of the mailbox number (uniform dialing plan).

You may enter location codes to reflect the same sequence of digits a user would enter when making a phone call to someone at a remote site. Emulation of the existing dialing plan has two advantages:

1   Meridian Mail users do not have to remember two sets of numbers.

2   Location code and local mailbox number conflicts can be avoided.

However, you may not want to emulate the dialing plan if the dialing prefixes are lengthy. In this case you may want to enter shorter location codes.

> *Note:* The following sections make references to extension DNs and placing calls, however, if mailbox numbering follows the dialing plan (that is, mailbox numbers are the same as the telephone extensions), these descriptions also apply to mailbox numbers and sending voice messages.

For a complete description and procedures for each type of dialing plan, see the following sections in this chapter:

- "Electronic switched network (ESN)" on page 1-9.

- "Coordinated dialing plan (CDP)" on page 1-53.

- "Hybrid dialing plan" on page 1-94.

- "No dialing plan set (None)" on page 1-117.

ESN dialing plan (electronic switched network)

In an ESN (electronic switched network) dialing plan, each location has an access code and a unique location code. When a user places a call to a user at another location, he or she must first dial this prefix before dialing the user's extension DN. All users in the network use the same prefix to reach a particular location. When a user calls another local user (on the same switch), he or she simply dials the local extension without the prefix.

An ESN prefix consists of two elements: an *access code,* one or two digits in length, followed by a *routing prefix* of a fixed length (usually three digits). (Meridian Mail does not require that ESN prefixes be a fixed length, and the length may vary from prefix to prefix.)

The ESN access code is used to access ESN routing in the same way that an access code (usually "9") is needed to dial out of the switch. The same access code is typically used by all switches in a network, although it may vary from switch to switch. (ESN access codes are similar to trunk access codes and are set independently in each switch.)

The routing prefix is a unique number which identifies a particular location within the network. It is usually three digits in length. These two elements together (the access code and the routing prefix) make up the ESN prefix. The ESN prefix can be up to seven digits in length.

For example, a user at Location 0 has the local extension 3000. All users at Location 0 can reach this user by dialing 3000. A user at Location 1 has to dial the ESN prefix followed by the extension DN. If the ESN prefix for Location 0 is 6655 (the "6" is the access code and the routing prefix is "655"), users at other locations must dial 66553000. This means that a particular extension DN may be repeated in locations having different ESN prefixes. For example, 66553000 and 66443000 have the same local extension DN (3000), yet are unique within the network because of the different ESN prefixes. See Figure 1-2 for an example of an ESN network.

To expand the range of DNs that are available, you can overlap the leading digit(s) of the local extension with the trailing digit(s) of the ESN prefix. Using the full DN 6644000 as an example, 4000 is the local extension DN and the full ESN prefix (the access code plus the routing prefix) is 6644. Here, the "4" is both the last digit in the ESN prefix and the first digit of the local extension. If overlap were not allowed, local extensions in the range of 4000 to 4999 would not be possible.

The location codes you configure in the administration screens must emulate the existing dialing plan. For example, in an ESN network, local users dial 6644xxx (where xxx is the local mailbox number) to call users at Location 1. You would therefore enter 6644 as the ESN prefix.

Adding Meridian Networking to an existing ESN network

When adding Meridian Networking to an existing ESN network, a printout of the existing network database must be obtained to ensure that the network is compatible with the Meridian Networking option or can be modified to meet the Meridian Networking standards as outlined earlier in this chapter. To obtain a printout of the network database perform the following steps.

1   Print the configuration record (CFN)

Load overlay 22 and respond to the following prompts:

Table 1-1xx
Overlay 22: Printing the CFN

Prompts	Responses	Description
REQ	PRT	Print.
TYPE	CFN	Configuration record.

Check the printout and take note of the following prompts:

PRI loops under the prompt DLOP
DNUM on X11 RLS 18
ADAN with MSDL assignments X11 RLS 18
ISDN prompt
DCHI prompt
RLS prompt
IFC prompt

Existing loops may be used.

2   Print customer data block (CDB)

Load overlay 21 and respond to the following prompts:

Table 1-2xx
Overlay 21: Printing the CDB

Prompts	Responses	Description
REQ	PRT	
TYPE	CDB	Customer data block.
CUST	0-99	Customer number.

Check the assignments for the following prompts:

MATT	NO
ISDN	YES
PNI	Same as the PNI in the satellite switch route data block.
AC2	If INAC in the route data block of this Meridian 1 is set to YES. The ESN access code for that incoming call type will be inserted automatically.
PFX1	Prefix for international PRA.
PFX2	Central office prefix for IPRA.
HNPA	Home number plan area code.
HNXX	Prefix for central office.
HLOC	Home location code.
LSC	Local steering code
CNTP	Default calling line ID.
RCNT	Max internode hops in a network redirection call.

HLOC   Home location code.

3   Print ESN

Load overlay 86 and print out the following features:

Table 1-3xx
Overlay 86: Print ESN data block

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	ESN	

4   Print RLB and DMI

Load overlay 86 and print out the following features:

Table 1-4xx
Overlay 86: Route list index (RLB)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	RLB	

Table 1-5xx
Overlay 86: Digit manipulation index (DMI)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	DGT	

Note: NMS does not support DMI. If DMI exists, then it must be
removed in order to support a fully featured Meridian Mail in an NMS
environment.

5   Print NCTL, FCAS and CDP

Load overlay 87 and print out the following features:

Table 1-6xx
Overlay 87: Network control (NCTL)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	NCTL	

Table 1-7xx
Overlay 87: Free calling area screening (FCAS)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	FCAS	

Table 1-8xx
Overlay 87: Coordinated dialing plan (CDP)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	CDP	
TYPE	LSC, DSC, TSC	Steering codes.

6 Print ESN translation table

Load overlay 90 and print out the following features of the ESN translation tables.

Table 1-9xx
Overlay 90: Location code (LOC)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	NET	
TRANS	AC1, AC2, SUM	
TYPE	LOC	

Table 1-10xx
Overlay 90: Home NPA translation (HNPA)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	NET	
TRANS	AC1, AC2, SUM	
TYPE	HNPA	

Table 1-11xx
Overlay 90: Numbering plan area code (NPA)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	NET	
TRANS	AC1, AC2, SUM	
TYPE	NPA	

Table 1-12xx
Overlay 90: Home location code (HLOC)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	NET	
TRANS	AC1, AC2, SUM	
TYPE	HLOC	

Table 1-13xx
Overlay 90: Central office translation (NXX)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	NET	
TRANS	AC1, AC2, SUM	
TYPE	NXX	

Table 1-14xx
Overlay 90: Special number translation (SPN)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	NET	
TRANS	AC1, AC2, SUM	
TYPE	SPN	

7 Print route data block (RDB)

Load overlay 21 and respond to the following prompts:

Table 1-15xx
Overlay 21: Printing the RDB

Prompts	Responses	Description
REQ	PRT	
TYPE	RDB	
CUST	0-99	Customer number.
ROUT	0-511	Route number.
ACOD	xxxx	Route access code.

Use the printout to determine if any modifications are necessary. If changes are necessary, you can either modify the existing RDB or create a new one specifically for Meridian Mail.

Follow steps 5 to 7 to print out your network's numbering plan. It is necessary to gather this information in order to create a diagram of your network (step 8) as well as to identify any DN conflicts.

8 Create a simplified diagram of the existing network

Figure 1-2 shows an example of a network diagram.

Figure 1-2
An ESN network with two Meridian 1/SL-1s
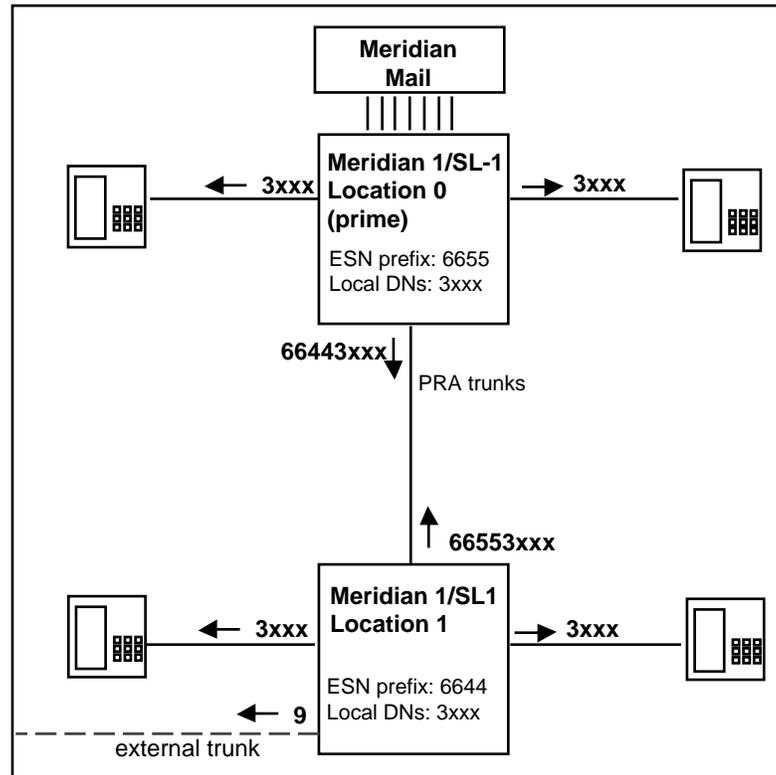
9   Plan NMS implementation

Use the printouts and the diagram to plan the implementation of NMS on
the existing network. Before proceeding, it is important that you analyze
your printouts in order to identify any conflicts and modify the Meridian 1
overlays if necessary.

ESN Implementation

Your understanding of your network will enhance your ability to administer
and maintain Meridian Networking. Knowing how the ESN processes a call
from Meridian Networking will allow you implement the compatibility of
ESN with Meridian Mail Networking in an efficient manner. The following

NTPs will provide information to enhance your understanding of ESN and are beneficial to review prior to implementing or modifying the ESN.

- 309-3001-100 *ESN Description*
- 309-3001-180 *ESN Engineering*
- 309-3001-181 *ESN Transmission*

The following procedure is a brief synopsis of the prompts and responses and the order in which the ESN database is implemented on the Meridian 1. If modification of the ESN database is necessary to be compatible with Meridian Networking you will have to make the necessary changes to the ESN database with respect to other related data blocks.

Implementing NARS

This section provides the procedures necessary to configure Network Alternate Route Selection (NARS). Only the service change information for NARS is shown here. For a complete discussion of prompts and responses see the *Xl1 input/output guide* (NTP 553-3001-400). The following procedure shows the steps that must be performed to correctly implement your NARS system:

1 Gather data for each NCOS group (LD87).

2 Gather data to define NARS feature parameters (LD86).

3 Gather data for each digit manipulation index (LD86).

4 Gather data for each free calling area screening table (LD87).

5 Gather data for each route list associated with a digit manipulation table (LD86).

6 Gather data for each incoming trunk group exclusion list (LD86).

7 Gather NARS translation data (LD90).

8 Gather data to configure a conventional main for off-net number recognition (LD16).

9 Gather data to assign a network class of service group number to a list of items (LDs 10,11, 12,14, 24,18, 88).

10 Enter data into the database.

Configuring NARS

1   Gather data for each NCOS group. Access LD87

Prompts	Responses	Description
REQ	NEW, CHG, OUT	Create, change, or remove data.
CUST	0-99	Customer number.
FEAT	NCTL	Network control.
NCOS	0-99	NCOS group to be added, changed, or removed.
FRL	(0)-7	Facility restriction level.
RWTA	Yes, (No)	Expensive route warning tone.

2   Gather data to define NARS feature parameters. Access LD86

Prompts	Responses	Description
REQ	NEW, CHG, OUT	Create, change, or remove data.
CUST	0-99	Customer number.
FEAT	ESN	Electronic switched network data block.
MXLC	0-999	Maximum number of supplemental digit restriction blocks.
MXSD	0-512	Maximum number of incoming trunk group exclusion tables that can be defined.
MXIX	0-255	Maximum number of incoming trunk group exclusion tables.
MXDM	0-256	Maximum number of digit manipulation tables.
MXRL	0-256	Maximum number of route lists.
MXFC	0-255	Maximum number of free calling area screening tables.
AC1	xx	One or two digit NARS/BARS access code one.
AC2	xx	One or two digit NARS access code two.
DLTN	No, (Yes)	NARS/BARS dial tone after dialing AC1 or AC2.

Prompts	Responses	Description
ERWT	No, (Yes)	Expensive route warning tone is not (is) provided.
ERDT	0-(6)-10	Time in seconds that a user has to accept or reject an expensive route after ERWT is given; default is six seconds: range is in two-second intervals.
TODS	x hh mm hh mm	Start and end time-of-day schedules; BARS or NARS = 0-7 x = schedule number hh = hour mm = minutes
TGAR	Yes, (No)	Check for Trunk Group Access Restrictions Yes = examine TGAR/TARG when call is placed No = ignore TGAR/TARG when call is placed

3   Gather data for each digit manipulation index (DGT). Access LD86

Prompts	Responses	Description
REQ	NEW, CHG, OUT	Create, change, or remove data.
CUST	0-99	Customer number.
FEAT	DGT	Digit manipulation index.
DMI	1-255	Digit manipulation table index*.
DEL	(0)-15	Number of leading digits to be deleted from the dialed number; default is 0.
INST	x...x	Up to 24 leading digits to be inserted.

* The maximum number of digit manipulation tables is defined by prompt MXDM.

4   Gather data for each free calling area screening (FCAS). Access LD87

Prompts	Responses	Description
REQ	NEW, CHG, PRT	Action request.
CUST	0-99	Customer number.
FEAT	FCAS	Free calling area screening.

Prompts	Responses	Description
FCI	1-255	Free calling area screening table index number.
NPA	xxx	3-digit NPA code to be screened. 15 NPA codes supported per table.
NXX	DENY, ALOW	Allow or deny NXX codes for NPA.
DENY	xxx xxx	NXX code or range of codes to be denied.
ALOW	xxxx xxxx	NXX code or range of codes to be allowed.

5 Gather data for each route list associated with a DGT. Access LD86

Prompts	Responses	Description
REQ	NEW, CHG, OUT	Create, change, or remove data.
CUST	0-99	Customer number.
FEAT	RLB	Route list data block.
RLI	0-255	Route list index number.
ENTR	0-63	Route list entry number (X11 release 15 and later).
ROUT	0-511	Route number associated with the index.
TDET	YES, (NO)	Tone detector is (is not) used.
TYPE	TIE, (CC1), CC2	TIE = tone detector for on-net calls (CC1) = tone detector for special common carrier, (SCC) Type 1 CC2 = tone detector for special common carrier, (SCC) Type 2
TONE	DIAL, (SCC)	Type of tone expected from SCC DIAL = normal dial tone SCC = SCC dial tone
TOD	0-7 X0-7	Time-of-day schedule for the entry. Turn off a time-of-day schedule.
EXP	YES, (NO)	Entry is (is not) classed as expensive.
FRL	(0)-7	Minimum facility restriction level a user must have to access the entry.

Prompts	Responses	Description
DMI	(0)-255	Index number of the digit manipulation table to be used for the entry; default is 0, no digit manipulation required.
FCI	(0)-255	Free calling area screening table index number (FCAS). (0) = no FCAS required.
OHQ	YES, (NO)	Off hook queuing is (is not) allowed on the entry.
CBQ	YES, (NO)	Call back queuing is (is not) allowed on the entry.
ISET	(0)-64	Number of entries in the initial route set.
MFRL	(MIN), 0-7	Minimum FRL used to determine auto-code prompting.

6   Gather data for each incoming trunk group exclusion index (ITGE). Access LD86

Prompts	Responses	Description
REQ	NEW, CHG, OUT	Create, change, or remove data.
CUST	0-99	Customer number.
FEAT	ITGE	Incoming trunk group exclusion data block.
ITEI	1-127	Incoming trunk group exclusion index number; if REQ was "OUT" all route entries defined for the entered index are removed.
RTNO	0-511	Route number associated with index; precede with an X to delete an existing route.

7   Gather NARS translation data. Access LD90 (Part 1 of 4)

Prompts	Responses	Description
REQ	NEW, CHG, OUT	Create, change, or remove data.
CUST	0-99	Customer number.
FEAT	NET	Network translation tables.

Prompts	Responses	Description
TRAN	AC1, AC2, SUM	Access code 1, 2, or summary tables
TYPE	LOC HNPA NPA HLOC NXX SPN NSCL <Return>	Location code Home NPA translation code Number plan area translation code Home location code Central Office translation code Special Number translation code Speed call Return to REQ

The following prompt occurs if TYPE is LOC:

Prompts	Responses	Description
LOC	x...x	Location code (3 digits) or extended LOC (3 to 7).
RLI	0-255	Route list index.
ITEI	(0)-255	Incoming trunk group exclusion index.
LDN	xx...xx	Up to ten-digit listed directory number including NPA.
DID	YES, (NO)	This location arranged for DID.
MNXX	YES, (NO)	Multiple NXX codes and ranges.
SAVE	1-4	Number of trailing digits to be saved in dialed extension number; must be 4 if MNXX = YES.
OFFC	xxx	NXX of the DID number; prompted if MNXX = YES.
RNGE	0-9999 0-9999	Bottom and top of range of DID numbers.

8   Gather NARS translation data. Access LD90 (Part 2 of 4)

The following prompt occurs if TYPE is HNPA:

Prompts	Responses	Description
HNPA	xxx	Home NPA.

The following prompts occur if TYPE is NPA:

Prompts	Responses	Description
NPA	xxx, xxx yyy	Area code translation, extended NPA code translation.
RLI	0-255	Route list index.
SDRR	aaa	Type of supplemental restriction or recognition.
DMI	1-255	Digit manipulation table index.
DENY	x...x	Number to be denied within the NPA, NXX, SPN, or SDRR.
LDID	x...x	Local DID number recognized within the NPA, NXX, or SPN. The maximum number of digits allowed is 10-m (11-m for 1 + dialing).
LDDD	x...x	Local DDD number recognized within the NPA, NXX, or SPN. The maximum number of digits allowed is 10-m (11-m for 1 + dialing).
DID	x...x	Remote DID number recognized within the NPA, NXX, or SPN. The maximum number of digits allowed is 10-m (11-m for 1 + dialing).
DDD	x...x	Remote DDD number recognized within the NPA, NXX, or SPN. The maximum number of digits allowed is 10-m (11-m for 1 + dialing).
ITED	x...x	Incoming trunk group exclusion codes for NPA, NXX, or SPN. The maximum number of digits allowed is 7-m.
ITEI	(0)-255	Incoming trunk group exclusion index.

m = number of digits entered for the prompt NPA
X = command used to clear a recognized xxx code
<Return> = Return after each subprompt takes you back to SDRR.

9   Gather NARS translation data. Access LD90 (Part 3 of 4)

The following prompt occurs if TYPE is NXX:

Prompts	Responses	Description
NXX	xxx, xxx yyy	Office code translation, extended NXX code translation.
RLI	0-255	Route list index.
SDRR	aaa	Type of supplemental restriction or recognition.
DMI	1-255	Digit manipulation table index.
DENY	x...x	Number to be denied within the NPA, NXX, SPN, or SDRR. The maximum number of digits allowed is 7-m.
LDID	x...x	Local DID number recognized within the NPA, NXX, or SPN.
LDDD	x...x	Local DDD number recognized within the NPA, NXX, or SPN.
DID	x...x	Remote DID number recognized within the NPA, NXX, or SPN.
DDD	x...x	Remote DDD number recognized within the NPA, NXX, or SPN.
ITED	x...x	Incoming trunk group exclusion codes for NPA, NXX, or SPN.
ITEI	(0)-255	Incoming trunk group exclusion index.

The following prompt occurs if TYPE is SPN:

Prompts	Responses	Description
SPN	xxxx xxxx x..	Special number translation.
RLI	0-255	Route list index.
SDRR	aaa	Type of supplemental restriction or recognition.
DMI	1-255	Digit manipulation table index.

10 Gather NARS translation data. Access LD90 (Part 4 of 4)

Prompts	Responses	Description
DENY	x...x	Number to be denied within the NPA, NXX, SPN, or SDRR.
LDID	x...x	Local DID number recognized within the NPA, NXX, or SPN.
LDDD	x...x	Local DDD number recognized within the NPA, NXX, or SPN.
DID	x...x	Remote DID number recognized within the NPA, NXX, or SPN.
DDD	x...x	Remote DDD number recognized within the NPA, NXX, or SPN.
ITED	x...x	Incoming trunk group exclusion codes for NPA, NXX, or SPN.
ITEI	(0)-255	Incoming trunk group exclusion index.

The following prompt occurs if TYPE is NSCL:

Prompts	Responses	Description
NSCC	xxx	One- to three-digit network speed call access code.
SSCL	0-4095	System speed call list number.

11 Gather data to configure a conventional main for off-net number recognition. Access LD16

Prompts	Responses	Description
REQ	NEW, CHG	Add or change a route.
TYPE	RDB	Route data block.
CUST	0-99	Customer number.
ROUTE	0-511	Route number.
TKTP	TIE	Tie trunk.
CNVT	YES, (NO)	Route to conventional switch (prompted if the response to TKTP is TIE).

Prompts	Responses	Description
DDMI	(0)-255	Digit manipulation index (prompted if the response to CNVT is YES).
ATDN	xxxx	Attendant DN of conventional main (prompted if the response to CVNT is YES).

Note: If the DN expansion package is equipped, the attendant DN can have up to 7 digits; otherwise, only 4 digits can be entered.

The following procedure involves several overlay programs. In all cases, the prompt is NCOS; the range is 0-99 (or 0-7 with X11 release 12 and earlier); the default is 0.

12 **Gather data to assign a network class of service group number to a list of items.**

Gather data to assign a network class of service group number to each of the following items:

-   500/2500 telephones (LD10)
-   SL-1 telephones, M1000 series telephones, M2000 series digital telephones, M3000 Touchphones (LD11)
-   Attendant consoles (LD12)
-   Trunks (LD14)
-   Direct inward system access directory number (LD24)
-   System speed call (LD18)
-   Authorization code (LD88)

13 **Enter data into the database.**

The final step in configuring NARS is to enter the data gathered into the database:

a. Log in.
b. Load the appropriate program.
c. Enter data requested by prompts until REQ prompt returns.
d. More data to be added/removed?
    Yes = go to step 1
    No = perform data dump.

> **Note:** A data dump takes approximately 3 minutes to complete. If large amounts of data are being added, perform a data dump periodically. This ensures that entered data is not lost should a system reload occur.

   e.   Print data (respond with PRT to prompt REQ) and verify against data forms.

   f.   Corrections required?
      Yes = go to step 1
      No = Refer to 553-2YY1-230 and perform applicable tests.

Call Processing

After installing Meridian Mail Networking services that use the ESN dialing plan, sometimes it is necessary to go back and locate installation errors that are causing legitimate calls to block. This module describes the Call Tracing requirements and process, and the data administration programs required to trace a call. Call Tracing is provisioned in overlay program 80.

Note: Unless otherwise specified, each step refers to what the Meridian 1 does (Figure 1-3).

DN translator
1   Checks to see if SPRE+6+Authcode is dialed.

- If yes, proceeds to AUB data block.

- If no, checks to see if number dialed is BARS access code (AC1).

    - If yes, proceeds to ESN data block (Step 7).

    - If no, call cannot access BARS.

TNB data block
2   Finds the following on the originating station:

- NCOS assigned.

- Class of service.

- TGAR (if applicable).

AUB data block
3   Does the following:

- Checks to see if length of Authcode entered is equal to ALEN.

    - If no, then, following interdigit time-out, line lockout treatment is provided.

- If yes, proceeds to AUT data block.
- Locates Classcode referenced in AUT data block.
- Station user dials AC1 and network proceeds to DN Translator (Step 1).

AUT Data Block

4 Checks to see if Authcode entered is valid.

- If no, the caller hears silence followed by overflow tone.
- If yes, identifies Classcode number and proceeds to AUB data block.

ESN Data Block

6 Checks DLTN to see if dial tone is to be provided (Steps 5 and 6).

7 Station user completes dialing call.

8 Checks network time and date and compares time with TOD schedules.

9 Identifies and remembers TOD schedule number that applies.

10 Checks to see if Routing Control is in effect.

- If no, accesses appropriate Translation Table (Step 13).
- If yes, checks Station data block.

Station Data Block of Meridian Mail agent

11 Identifies original NCOS of station.

ESN Data Block

12 Identifies and remembers alternate NCOS to replace original NCOS.

13 Accesses appropriate Translation Table (Steps 13 to 16).

Translation Table Data Block

17 Locates digits dialed after access code.

- If not found, call is sent to intercept as invalid BARS translation (NITR).
- If found, identifies Route List Index number.

18 Remembers RLI.

19 Checks to see if Supplemental Digit Restriction or Recognition applies.

- If part or all of remaining digits dialed are denied, call is sent to intercept as a BARS restricted call (NRES).

- If SDRR does not apply, call continues to Route List data block (Step 20).

Route List Data Block

21 Finds appropriate Route List.

22 Determines which entries are in the ISET.

23 Checks to see if entry 0 is idle.

- If no, proceeds to entry 1.

- If yes, begins checking entry 0 eligibility.

24 Checks to see if TOD Schedule allows access (Steps 24 to 27).

- If no, proceeds to entry 1.

- If yes, proceeds to Network Control data block.

Network Control Data Block

28 Identifies FRL of NCOS.

29 Remembers FRL.

Route List Data Block (30)

31 Compares Route List entry's FRL with NCOS' FRL (Steps 31 to 34).

- If Route List entry is higher than NCOS' FRL, proceeds to entry 1.

- If FRL of Route List entry is equal to or less than NCOS' FRL, it continues checking eligibility.

33 Proceeds to FCI and checks for FCI other than 0 (Steps 33 and 35).

- If FCI is 0, proceeds to DMI.

- If FCI is other than 0, proceeds to appropriate FCAS table.

FCAS Data Block

36 Looks to see if NPA dialed is in FCAS table (Steps 36 to 42).

- If no, returns to Route List entry 0 to process call.

- If yes, checks to see if NXX dialed is allowed or denied.

  - If denied, proceeds to Route List entry 1.

- If allowed, returns to Route List entry 0.

Route List Data Block

43 Checks DMI for number other than 0.

- If DMI 0, proceeds to next step.
- If DMI other than 0, proceeds to appropriate Digit Manipulation Table.

Digit Manipulation Table Data Block

44 Performs appropriate deletions and insertions (Steps 44 to 47).

48 Returns to Route List.

Route List Data Block

49 Determines whether to provide Expensive Route Warning Tone (only if entry is in Extended Set).

50 Checks route and proceeds to Route data block.

Route Data Block

51 Identifies trunk route type (Steps 51 and 52)

53 Proceeds to Station data block.

Station Data Block

54 Identifies Class of Service of this station.

- If COS deny call, proceeds to Route List entry 1.
- If COS allows call, returns to Route data block.

Route Data Block

55 Does the following:

- Identifies trunk route access code at ACOD.
- Outpulses trunk route access code thereby seizing trunk.
- Outpulses digits of call and call completes.
- If entry 0 is not idle, checks everything as shown from step 23, only on Route List entry 1.

Figure 1-3
Call Processing Chart
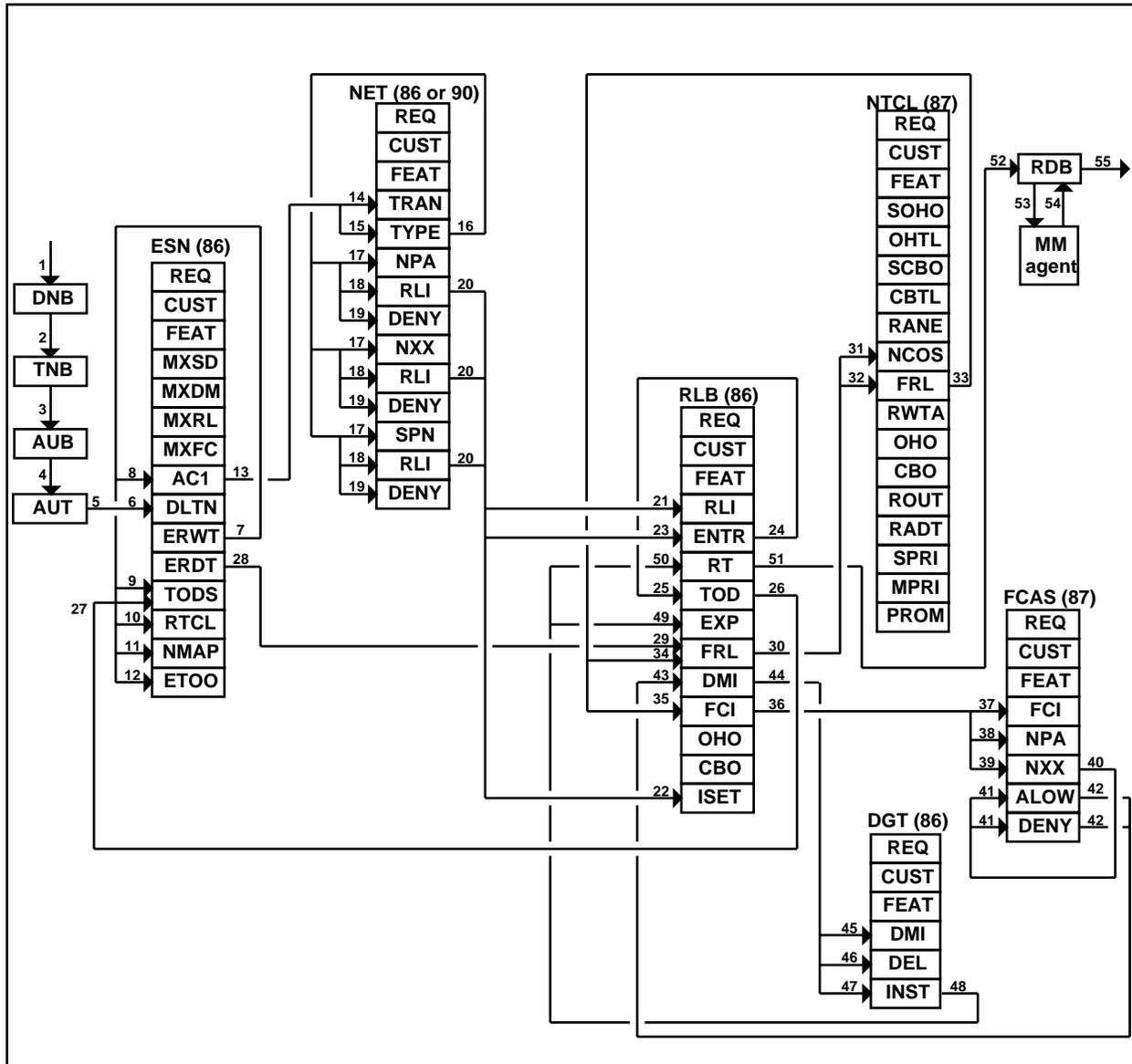
The main menu

From the main menu (Figure 1-4) select Network Administration to display the Network Administration menu. This section describes Meridian Networking with an ESN dialing plan.
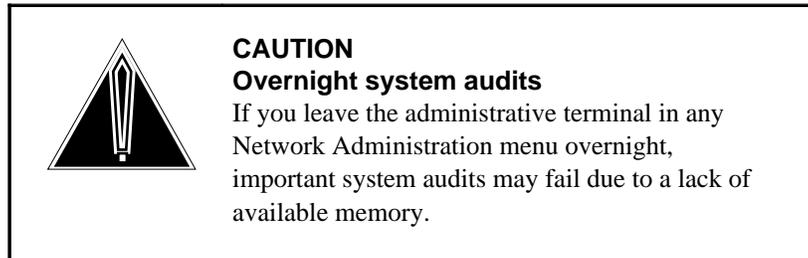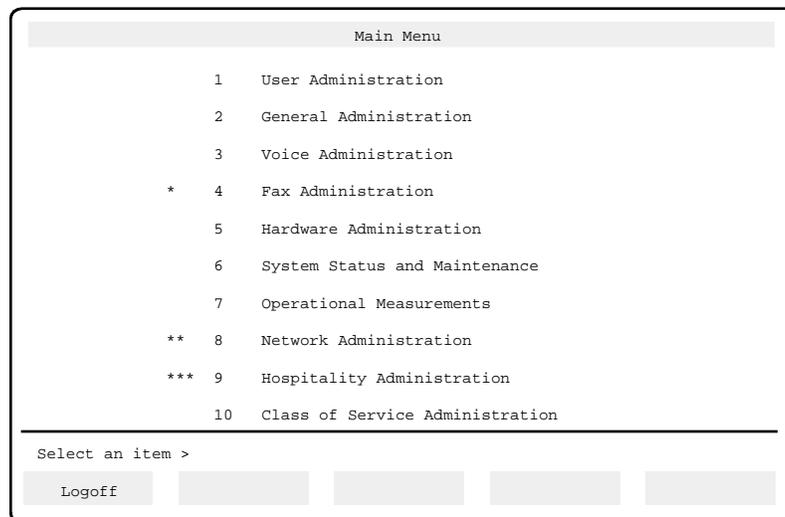
> ⚠ **CAUTION**
> **Overnight system audits**
> If you leave the administrative terminal in any Network Administration menu overnight, important system audits may fail due to a lack of available memory.

Figure 1-4
The main menu

```
                          Main Menu

                1    User Administration

                2    General Administration

                3    Voice Administration

         *      4    Fax Administration

                5    Hardware Administration

                6    System Status and Maintenance

                7    Operational Measurements

         **     8    Network Administration

         ***    9    Hospitality Administration

                10   Class of Service Administration

  Select an item >

    Logoff
```

```
*   This item is displayed only if Fax on Demand is installed.
**  This item is displayed if at least one of the following is installed:
    Meridian Networking, AMIS Networking, or Network Message Service (NMS).
***This item is displayed only if Hospitality is installed.
```

Procedure 1-2xxx
Using the Network Administration menu

Starting Point: The main menu (single-customer systems) or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

   See the next section, "The Network Administration menu".

2   To exit this menu, press [Exit].

   The main menu is displayed.

The Network Administration menu

Meridian Networking administration involves local and remote site configuration, definition of holding times and stale times for urgent, standard and economy messages, and verification of message delivery between sites. The Network Administration menu (Figure 1-5) provides you with functions for adding remote sites, modifying the local site and remote site, and verifying the operational status of connections between sites.

Figure 1-5xxx
The Network Administration menu

```
                        Network Administration


            1   Local Site Maintenance

            2   Remote Site Maintenance

            3   Networking Scheduling Parameters

            4   Networking Verification Test




      _____

      Select an item >

        Exit          Print Network      Network                  Clear Remote
                          Data            Status                   Error Sites
```

Procedure 1-3xxx
Using the Network Administration menu

Starting Point: The main menu (single-customer systems) or the
Customer Administration menu (multicustomer systems)

1   Select Network Administration.

   The Network Administration menu (Figure 1-5) is displayed.

2   To perform local site maintenance, go to step 2a.
   To perform remote site maintenance, go to step 2b.
   To view or modify networking scheduling parameters, go to step 2c.
   To perform a networking verification test, go to step 2d.
   To print network data, go to step 2e.
   To view the network status, go to step 2f.
   To clear error conditions in remote sites, go to step 2g.
   To exit the Network Administration menu, go to step 2h.

   a.   Select Local Site Maintenance.

      *The Local site maintenance - Modify site screen is displayed (see
      Figure 1-6).*

   b.   Select Remote Site Maintenance.

      *The Remote site maintenance - List sites screen is displayed (see
      Figure 1-7). From this screen you can add, modify or delete remote
      sites.*

   c.   Select Networking Scheduling Parameters.

      *The Networking Scheduling Parameters screen is displayed (see
      Figure 1-44) in which you can configure holding times and stale
      times for messages of different priorities.*

   d.   Select Networking Verification Test.

      *The Networking Verification Test screen is displayed (see Figure
      1-45). This test allows you to ensure network operation before
      adding a new site.*

   e.   Press [Print Network Data].

      *This action prints local and remote site information from the
      network data base. Ensure that the printer is on-line before making
      this selection. See page 1-150 for details.*

   f.   Press [Network Status].

      *The number of messages queued for transmission are displayed in
      the Network Status screen. See Figure 1-46.*

   g.   Press [Clear Remote Error Sites].

Any remote site status that shows error conditions is cleared. View the Network Status screen to verify the status of the network. See the section "Error conditions" on page 1-141.

h. Press [Exit].

The main menu is displayed.

Local site maintenance (ESN)

When you select Local Site Maintenance from the Network Administration menu, you are prompted for the site number at the bottom of the screen (if you have not yet configured the local site). You will not be able to enter the Local site maintenance - Modify site screen until you enter a number.

Note: You cannot delete the local site.

Figure 1-6xxx
The Local site maintenance - Modify site screen

```
┌──────────────────────────────────────────────────────────────────────┐
│ ABC Company                        Network Administration              │
│                                                                        │
│  Local site maintenance - Modify site                                  │
│                                                                        │
│  Site number: _____                  │
│  Site Name:   _____                  │
│                                                                        │
│  Message Transfer:   [Enabled]    Disabled                             │
│  Site is network message center?     [No]    Yes                       │
│                                                                        │
│  Dialing plan:     [ESN]    CDP      Hybrid    None                    │
│  Max number of digits in local mailbox:         _____               │
│ * ESN access codes:            _____      _____                  │
│ * Number of digits in common between ESN prefix and local ext:  _____│
│                                                                        │
│  ESN/CDP ( The ESN code must begin with the first access code above ): │
│                                                                        │
│  1:_____     2:_____                                     │
│  3:_____     4:_____                                     │
│  5:_____     6:_____                                     │
│  7:_____     8:_____                                     │
│  9:_____    10:_____                                     │
│  .                   .                                                 │
│  .                   .                                                 │
│  49:_____    50:_____                                    │
│                                                                        │
│                                                                        │
│  Mailbox numbering follows dialing plan:    Yes    [No]                │
│ **Mailbox prefixes:    _____                                        │
│ ─────────────────────────────────────────────────────────────         │
│ ┌──────────┐  ┌──────────┐  ┌─────────┐  ┌─────────┐  ┌──────────┐     │
│ │  Save    │  │  Cancel  │  │         │  │         │  │          │     │
│ └──────────┘  └──────────┘  └─────────┘  └─────────┘  └──────────┘     │
└──────────────────────────────────────────────────────────────────────┘
    * Only appears if dialing plan is ESN or Hybrid
   ** Only appears if mailbox numbering does not follow dialing plan.
```

The following fields are displayed:

- *Site number* The site number uniquely identifies the local site in the Meridian Mail network. It is entered when you select Local Site Maintenance for the first time. This number (as well as remote site numbers) should be obtained from the network administrator to ensure the number is not already in use. The valid range is from 1 to 500.

    Note: Once you enter the site number, it can only be changed by using the "Change Local Site ID" utility. (See *System Administration Tools*.) Before using this utility, you will have to create a dummy remote site as this utility only accepts an existing remote ID as the new local site ID. If you change the local site ID after users have been set up, the system will not recognize their mailbox numbers due to invalid site IDs.

- *Site Name* This field is mandatory. The field can contain up to 32 alphanumeric characters. There is no default.

- *Message Transfer* This field allows you to enable or disable networking at the local site. This field must be enabled for users at the local site to send messages to remote sites. The default is "Enabled".

- *Site is network message center?* Does this remote site have the Network Message Services feature installed? This field change will only go into effect when the form is saved.

- *Dialing plan* The selection you make must reflect the dialing plan that is in place. The default is "Hybrid". (See "Dialing plans and location codes" earlier in this chapter.) If the remote site is using either the CDP or ESN dialing plan, the local site must have a Hybrid, CDP, or ESN dialing plan that is consistent with the remote site. The dialing plan must also be consistent with the switch.

- *Max number of digits in local mailbox* Enter the maximum number of digits allowed in mailbox numbers at the local site. This number is used by the system to check whether mailbox numbers specified in messages from remote sites are valid. For example, if this value is "4" and a message is received from a remote site containing a mailbox address that is 6 digits in length, the system will reject the message. If you are unsure, enter the maximum allowable value of "18". The default is "4".

Note: If AMIS is also installed, local mailbox numbers should not be greater than 16 digits in length. Messages sent from local mailboxes will not be successfully delivered to remote sites if this limit is exceeded. Originators of messages will receive non-delivery notifications if this is the case.

- *ESN access codes* This field is mandatory if the dialing plan is ESN. This code is used to access the ESN network from this site's switch. You may enter two different ESN access codes of one or two digits each. A typical access code is "6" or "9". Check your dialing plan for the ESN access code for the local site's switch.

  Note 1: If one of your ESN access codes is "9", this will create a conflict with the default broadcast mailbox number (999). You will have to change the broadcast mailbox number in order to avoid this conflict.

  Note 2: The ESN access code cannot match the left-most digits of any local mailbox. For example, if there is a local mailbox number 6122, the access code cannot be (or begin with) "6".

- *Number of digits in common between ESN prefix and local extension* This field appears only when the dialing plan is ESN or Hybrid. This number indicates the number of digits in the ESN prefix that overlap with local extensions. For example, your local extensions are five digits long and all begin with "8". Your ESN prefix is "338". If you enter "0" (no overlap) in this field, users at remote sites will have to enter an 8-digit DN when addressing messages to your site (such as 33883000). If you enter "1" in this field, indicating that the last digit of the prefix and the first digit of the extension overlap, remote users will specify a 7-digit address (3383000). The selection you make here must conform with your local site's dialing plan (if there are digits in common between the prefix and local extensions, they may or may not overlap.)

  Note 1: To enter a non-zero value in this field, the mailbox numbers of all users you enter for this site must begin with the overlap digit(s) of the ESN prefix. For example, if the last digit of the ESN prefix is "8" and it overlaps with the local extensions, then all mailboxes at this site must begin with "8".

Note 2: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the ESN prefix and the local extensions, use the default setting of "0".

- *ESN/CDP codes* ESN prefixes and CDP steering codes are location prefixes that identify the local site within the network and must therefore be unique within the ESN or CDP network.

  If the local site is part of an ESN network, remote users must precede the mailbox numbers of local voice users with the ESN prefix entered here. If the local site is part of a CDP network, the CDP steering code is already part of the mailbox number as far as users are concerned. (Even though this is the case, the CDP steering codes must still be defined here because the system needs to be able to distinguish the steering code from the mailbox number.)

  The first field is intended for the ESN prefix. (Only one ESN prefix can be entered.) This prefix must begin with the one- or two-digit access code that is defined in the *ESN Access Codes* field (if more than one access code has been defined, be sure to enter the one in the first field). For example, if the first ESN access code is "6" and the ESN prefix is "344", enter "6344" in this field.

- *Mailbox numbering follows dialing plan* This field allows you to select whether or not mailbox numbering will emulate the dialing plan (telephone extensions). If you answer "No", the following field, *Mailbox prefixes*, appears. The default is "Yes".

- *Mailbox prefixes* These prefixes identify the local site within the network when mailbox numbering does not follow the dialing plan. This prefix does not have any overlap with local mailbox numbers and is independent of the ESN prefix and CDP steering codes. Make sure that the numbers you enter do not conflict with other network data.

Procedure 1-4xxx
Configuring the local site

Starting Point: The main menu (single customer systems) or the
Customer Administration menu (multicustomer systems)

3 Select Network Administration.

The Network Administration menu (Figure 1-5) is displayed.

4 Select Local Site Maintenance.

*The Local site maintenance - Modify site screen is displayed (see
Figure 1-6).*

5 Fill in the fields as described in the preceding pages.

6 To save the configuration, go to step 6a. To exit the screen without
saving your changes, go to step 6b.

   a. Press [Save].

      *Any changes that you have made are saved. The Network
Administration menu is displayed.*

   b. Press [Cancel].

      *Any changes that you have made are discarded and the Network
Administration menu is displayed.*

Remote site maintenance (ESN)

When you select Remote Site Maintenance from the Network
Administration menu, the Remote site maintenance - List sites screen is
displayed. Through various screens you can add, modify and delete remote
sites.

Listing remote sites

The Remote site maintenance - List sites screen (Figure 1-7) lists all of the
remote sites that are part of the Meridian Mail network. The softkeys
displayed on this screen allow you to add new remote sites to the network
or select an existing site in order to view, modify or delete it. If NMS is
also installed, the [List Locations] softkey is also displayed, allowing you
to list the locations that are associated with a particular site.

Figure 1-7xxx
The Remote site maintenance - List sites screen

```
                        Network Administration

  Remote site maintenance - List sites


  Site              Site Name              Message Center#

    5               City1                     No
   10               City2                     No
   20               City3                     Yes
  _____



      Exit              Add          View/Modify       Delete          List
                                                                    Locations*
```

* This softkey is displayed only if NMS is installed.
# This column is displayed only if NMS is also installed.

The following read-only fields are displayed:

- *Site* The Site ID for the remote site.

- *Site Name* The name corresponding to the remote site.

- *Message Center* This field is set to "Yes" if the remote site is an NMS
  site. (If any of your remote sites are message centers, refer to Chapter 5
  which describes procedures for systems with both Meridian
  Networking and NMS installed.)

Procedure 1-5xxx
Listing remote sites

Starting Point: The main menu or the Customer Administration menu
(multicustomer systems)

1 Select Network Administration.

The Network Administration menu is displayed.

2 Select Remote Site Maintenance.

*The Remote site maintenance - List sites screen (Figure 1-7) is
displayed.*

Adding remote sites

The Remote site maintenance - Add site screen (Figure 1-8) allows you to define new remote sites in the Meridian Mail network. When you press [Add] on the Remote site maintenance - List sites screen, you are prompted for a remote site ID. After you enter an ID and press <Return>, the Remote site maintenance - Add site screen is displayed. (Remote sites may be NMS message centers even if the local site is not. Refer to Chapter 5 if you are adding a remote NMS site.)

Note: Before adding a remote site to the Meridian Mail network you should perform a verification test to ensure proper operation of the networking service between the local site and the remote site. The networking verification test is described on page 1-145.

Figure 1-8xxx
The Remote site maintenance - Add site screen

```
                       Network Administration

   Remote site maintenance - Add site

   Site number:      _____
   Site Name:        _____

   Message Transfer:              [Enabled]    Disabled
   Site is network message center?    [No]   Yes

   Networking Connection:
      DN 1:  _____
      DN 2:  _____
      DN 3:  _____

   Password
      Initiating:  _____
      Responding:  _____

   Dialing plan:      [ESN]    CDP      Hybrid    None
   Max number of digits in local mailbox:  _____

*  ESN access codes:          _____    _____
*  Number of digits in common between ESN prefix and local ext:      _____

   ESN/CDP ( The ESN code must begin with n ):

   1:_____      2:_____
   3:_____      4:_____
   5:_____      6:_____
   7:_____      8:_____
   9:_____     10:_____
   .                   .
   .                   .
   49:_____     50:_____


   Mailbox numbering follows dialing plan:    Yes    [No]
** Mailbox prefixes:      _____    _____

*  Spoken name recorded       No
   _____

        Save           Cancel                    Voice*
```

```
   *   Only appears if dialing plan is ESN or Hybrid
   **  Only appears if dialing plan is none or if mailbox numbering does not follow
       the dialing plan.
```

Note: The "n" in the *ESN/CDP codes* field represents the ESN access
code that is configured in the Local site maintenance screen. If two
access codes are defined in that screen, the one entered in the first field
is displayed here.

The following fields are displayed on the Remote site maintenance - Add site screen:

- *Site number* This field is mandatory. The site number uniquely identifies the remote site in the Meridian Mail network. Site numbers should be obtained from the network administrator to ensure the number is not already in use. The valid range is from 1 to 500.

- *Site Name* This field is mandatory. The site name should uniquely identify the remote site. The field can contain up to 32 alphanumeric characters. There is no default.

- *Message Transfer* This field must be set to "Enabled" for local users to send messages to the remote site. Select "Disabled" if you must temporarily disable message delivery to the remote site. The default is "Enabled".

- *Site is network message center?* Does this remote site have the Network Message Services feature installed? This field change will only go into effect when the form is saved.

- *Networking Connection DN 1, DN 2, DN 3* These are the telephone numbers that are used to establish a connection to the networking service at the remote site. For a remote Meridian Networking site, enter the number used to dial out of the system to reach the remote site (for example, 95552345). The DN can be up to 30 digits long and may include the digits 0 to 9 and special symbols * and #, where * inserts a 3-second pause in the sending of digits, and # indicates end-of-dialing. Because DNs are used in the given order, enter the least costly DN as DN 1, and the most costly DN as DN 3. A minimum of one DN must be defined.

- *Initiating Password* This field is mandatory. An initiating password is sent by the originating site to the remote site when initiating a message transfer session.

- *Responding Password* This field is mandatory. The responding password is the password that the site receives when a remote site initiates a message transfer call.

- *Dialing plan* The selection you make must reflect the dialing plan that is in place. The default is "Hybrid". (See "Dialing plans and location codes" earlier in this chapter.)

- *Max number of digits in local mailbox* Enter the maximum number of digits allowed in mailbox numbers at the remote site. The maximum allowable value is 18, or 16 if the AMIS protocol is selected for the site. If you are unsure, enter the maximum allowable value of 18 (or 16). The default is "4".

- *ESN access codes* This field is mandatory if the dialing plan is ESN. This code is used to access the ESN network from this site's switch. You may enter two different ESN access codes of one or two digits each. A typical access code is "6" or "9". Check your dialing plan for the ESN access code for the local site's switch.

  Note 1: If one of your ESN access codes is "9", this will create a conflict with the default broadcast mailbox number (999). You will have to change the broadcast mailbox number in order to avoid this conflict.

  Note 2: The ESN access code cannot match the left-most digits of any local mailbox. For example, if there is a local mailbox number 6122, the access code cannot be (or begin with) "6".

- *Number of digits in common between ESN prefix and local ext* This field appears only when the dialing plan is ESN or Hybrid. This number indicates the number of digits in the ESN prefix that overlap with extensions that are local to the remote site. For example, the local extensions at the remote site are five digits long and all begin with "8". The remote ESN prefix is "338". If you enter "0" (no overlap) in this field, users at other sites will have to enter an 8-digit DN when addressing messages to this site (such as 33883000). If you enter "1" in this field, indicating that the last digit of the prefix and the first digit of the extension overlap, users will specify a seven-digit address (3383000). The selection you make here must conform with the remote site's dialing plan (if there are digits in common between the prefix and local extensions, they may or may not overlap.)

  Note 1: To enter a non-zero value in this field, the mailbox numbers of all users you enter for this site must begin with the overlap digit(s) of the ESN prefix. For example, if the last digit of the ESN prefix is "8" and it overlaps with the local extensions, then all mailboxes at this site must begin with "8".

Note 2: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the ESN prefix and the local extensions, use the default setting of "0".

- *ESN/CDP codes* The ESN prefix and CDP steering codes are location prefixes that identify the remote site within the network and must therefore be unique within the ESN or CDP network. Check with the administrator at the remote site to determine the ESN prefix or CDP steering codes that apply.

  When a user at the local site sends a voice message to a user at the remote site that uses an ESN numbering plan, he or she must precede the remote mailbox number with the ESN prefix entered here.

  The first field is intended for the ESN prefix. (Only one ESN prefix can be entered.) This prefix must begin with the one- or two-digit access code that is defined in the Local Site Maintenance screen. The actual access code is displayed in the field title to remind you. For example, if the ESN access code is "6" and the ESN prefix is "344", enter "6344" in this field.

- *Mailbox numbering follows dialing plan* In this field, specify whether or not mailbox numbering emulates the dialing plan (telephone extensions) at the remote site. If it does not, the following field, *Mailbox prefixes*, is displayed and you must enter the location codes as mailbox prefixes. (This field is not displayed if the dialing plan is "None".)

- *Mailbox prefixes* These prefixes function as location codes and are used to identify the remote site within the network when there is no dialing plan or if mailbox numbering does not follow the dialing plan at the remote site. These prefixes do not have any overlap with local mailbox numbers and are independent of the ESN location prefix and CDP steering codes. Make certain that these prefixes do not conflict with other network data.

- *Spoken name recorded* This field applies only to ESN and Hybrid dialing plans. It indicates whether or not a site name has been recorded for the site. A spoken site name makes it easier for users to identify the remote site when addressing voice messages to remote voice users. The site name recording (followed by the local mailbox digits) is played to voice messaging users when addressing messages to remote voice

users. If the site name is not recorded, users hear the the ESN location prefix spoken out.

Procedure 1-6xxx
Adding remote sites

Starting Point: The main menu or the Customer Administration menu (multicustomer systems)

1 Select Network Administration.
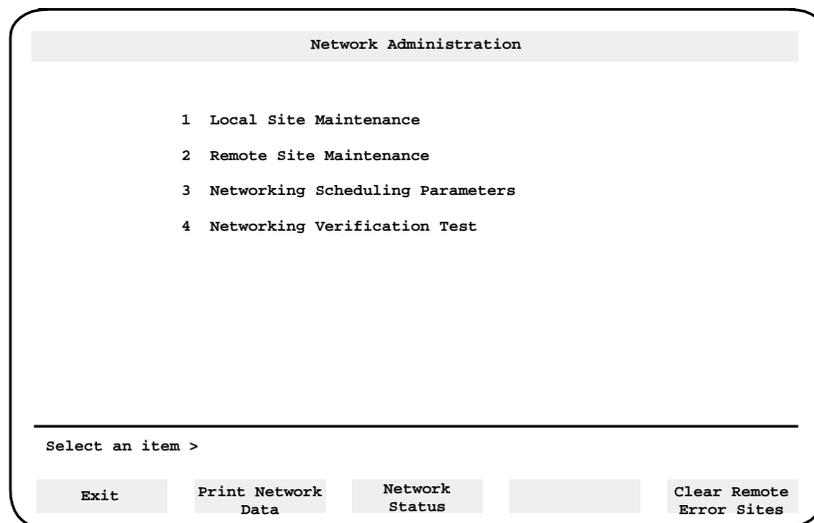
The Network Administration menu is displayed.

2 Select Remote Site Maintenance.

The Remote site maintenance - List sites screen (Figure 1-7) is displayed.

3 Press [Add].

You are prompted for the ID of the remote site to be added.

4 Enter a number for the remote site.

The Remote site maintenance - Add site screen is displayed. See Figure 1-8.

5 Fill in the fields as required. See the field descriptions on the preceding pages.

6 For ESN dialing plans, record a name for the remote site by moving the cursor to the *Site name recorded* field and pressing [Voice] while the cursor is on the field.

See the section "Recording site names using the [Voice] softkey" later in this chapter for more information.

7 To save the remote site configuration, go to step 7a. To exit the screen without saving your changes, go to step 7b.

    a. Press [Save].

Any changes that you have made are saved. You are prompted to enter the next remote site ID. If you have more sites to add, enter the ID and press <Return>. If you do not have more sites to add, press [Cancel].

    b. Press [Cancel].

Any changes that you have made are discarded and the Remote site maintenance - List sites screen is displayed.

Viewing and modifying remote sites

Once you have added remote sites to the network, you can alter their characteristics by accessing the Remote site maintenance - Modify site screen. To display the screen, access the Remote site maintenance - List sites screen, move the cursor to the site you want to modify, press the spacebar to select it, then press [View/Modify]. This screen is identical to the Remote site maintenance - Add site screen if the site you are modifying is not a message center. See the previous section, "Adding remote sites", for descriptions of the fields and the actions that are possible.

Note: If you are modifying an NMS site, the screen will be different. See Chapter 5 for information.

Procedure 1-7xxx
Viewing and modifying remote sites

Starting Point: The main menu or the Customer Administration menu (multicustomer systems)

1 Select Network Administration.

The Network Administration menu is displayed.

2 Select Remote Site Maintenance.

The Remote site maintenance - List sites screen (Figure 1-7) is displayed.

3 Move the cursor to the site you want to view or modify and press <Spacebar> to select it.

4 Press [View/Modify].

The View/Modify Remote Site screen is displayed. It is identical to the Add Remote Site screen.

5 Fill in the fields as required. See the field descriptions on the preceding pages.

6 For ESN dialing plans, record a name for the remote site by moving the cursor to the *Site name recorded* field and pressing [Voice] while the cursor is on the field.

See the section "Recording site names using the [Voice] softkey" later in this chapter for more information.

7 To save the remote site configuration, go to step 7a. To exit the screen without saving your changes, go to step 7b.

    a. Press [Save].

       Any changes that you have made are saved and the Remote site maintenance - List sites screen is displayed.

b. Press [Cancel].

Any changes that you have made are discarded and the Remote site maintenance - List sites screen is displayed.

Deleting remote sites

Remote sites are removed from the network database from the Remote site maintenance - List sites screen. When you select a site and then press the [Delete] softkey, a new set of softkeys is displayed.

Note: Messages that have been sent but not delivered to a remote site that has been deleted are returned with a non-delivery notification (NDN).

Figure 1-9xxx
The Delete Remote Site softkeys

```
┌─────────────────────────────────────────────────┐
│                                                 │
│  ───────────────────────────────────────────    │
│  OK to Delete      Cancel                        │
└─────────────────────────────────────────────────┘
```
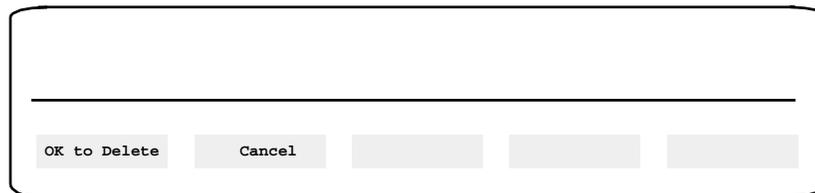
Procedure 1-8xxx
Deleting remote sites

Starting point   The main menu or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

The Network Administration menu is displayed.

2   Select Remote Site Maintenance.

The Remote site maintenance - List sites screen (Figure 1-7) is displayed.

3   Use the cursor keys to highlight the remote site you want to delete.

4   Press <Spacebar> to select the site.

5   Press [Delete].

The softkeys shown in Figure 1-9 are displayed.

6   Choose step 6a to delete the site, or 6b to cancel the delete operation and return to the Remote site maintenance - List sites screen.

   a.   Press [OK to Delete].

       The system purges the site. You are prompted for another site number.

       To delete another site, enter the site number and press <OK to Delete>.

   b.   Press [Cancel].

       The site is not deleted and the Remote site maintenance - List sites screen is re-displayed.

Recording site names using the [Voice] softkey

The [Voice] softkey is used to provide a new set of softkeys for recording, playing and deleting names for remote sites. When you record a site name, the *Spoken name recorded* field is automatically set to "Yes" in the Remote site maintenance - Modify site screen. Within Networking Administration, the [Voice] softkey is available on the Add site and Modify site screens for Remote site maintenance.

   Note 1: A telephone set is required to record the site name. Ensure that a phone set is available near the administration terminal where you are working.

Figure 1-10xxx
Recording a site name


```
Enter a phone number in Dialable format >
                    Cancel
```
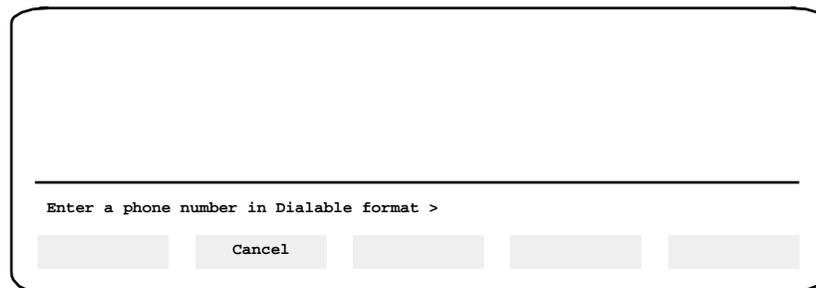
Figure 1-11xxx
Site name recording softkeys

```
┌─────────────────────────────────────────────────────────────┐
│                                                               │
│                                                               │
│                                                               │
│  ─────────────────────────────────────────────────────────   │
│  Select a softkey >                                           │
│   ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐ │
│   │  Return  │ │   Play   │ │  Record  │ │  Delete  │ │Disconnect│ │
│   └──────────┘ └──────────┘ └──────────┘ └──────────┘ └──────────┘ │
└─────────────────────────────────────────────────────────────┘
```
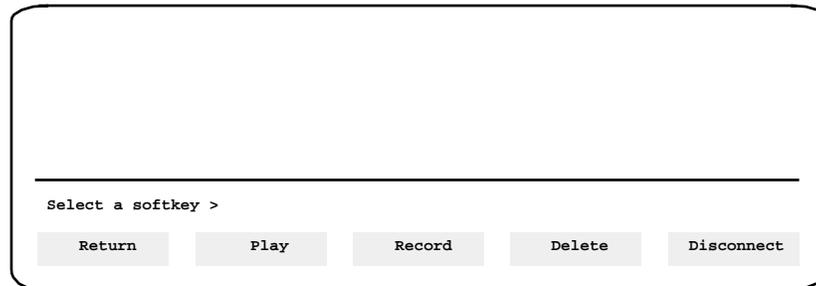
Procedure 1-9xxx
Recording site names

Starting point   The Add Remote Site or View/Modify Remote Site screen

1   Press [Voice].

You are prompted to enter a phone number (Figure 1-10).

2   Enter the number of the phone set you are going to use to record a spoken name.

The row of softkeys changes to display a set of recording softkeys (Figure 1-11).

3   Use step 3a to record a new spoken name, step 3b to play an existing verification, step 3c to delete a verification, or step 3d to return to the original set of softkeys.

   a.   Pick up the handset of the phone and then press [Record]. Wait for the beep and record the site name. When you press [Record], a new [Stop] softkey appears. Press [Stop] to stop the recording when you are done.

   b.   Pick up the handset of the phone and press [Play].

   If a verification is recorded, it will be played over the phone.

   c.   Pick up the handset of the phone and press [Delete].

   If a verification was recorded, it will be deleted and a prompt will be played advising you that the recording was deleted.

   d.   If you are satisfied with the recording, press either [Disconnect] or [Return] to display the original softkeys.

When you use [Return], the line is not disconnected (unless you hang up the receiver). This means that if you decide to re-record or listen to the recording, you do not have to re-enter the telephone extension after pressing [Voice].

When you use [Disconnect], the line is disconnected and if you press [Voice] to access the recording softkeys again, you will have to re-enter the telephone extension.

Coordinated dialing plan (CDP)

The coordinated dialing plan (CDP) feature enables a customer with a number of local Meridian 1s to coordinate the dialing plan for stations at these switches. When implemented, the CDP feature enables a station at one switch to call a station at another switch within the CDP group by dialing a unique 3 to 7 digit number, without access codes and associated pauses for dial tone. When equipped with the directory expansion (DNXP) package, this number can have up to 10 digits.

The CDP software provides the translation and digit manipulation capability required to implement CDP. Calls dialed within the CDP format can be terminated locally after digit translation or digit deletion. Alternatively calls can be routed to a remote switch in the CDP group following digit translation, route selection, and digit deletion or insertion. Figure 1-13 illustrates how a coordinated dialing plan would be implemented at two customer locations.

To enhance the testing process and ensure compatibility between CDP and Meridian Networking, you should be familiar with how a network call travels through the CDP software with Meridian Networking. Figure 1-12 shows the flow for incoming and outgoing calls through the CDP software.

Figure 1-12
CDP software flowchart
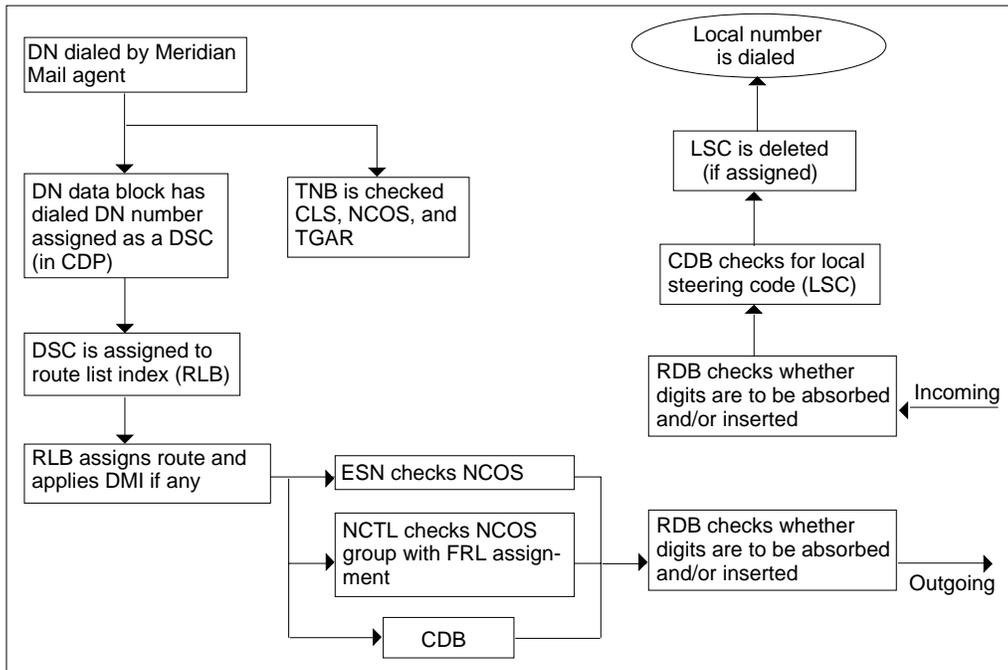
Figure 1-13 shows the CDP portion of the CDP software flow chart expanded.

Figure 1-13
Meridian Networking call setup
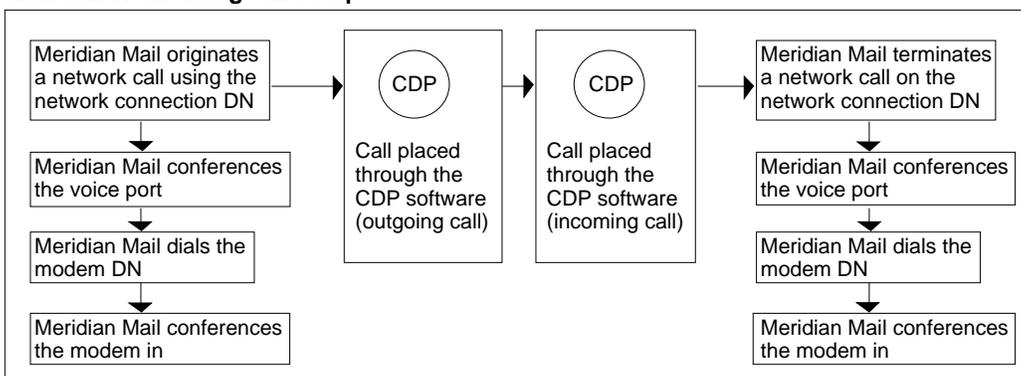
In Meridian Networking, the voice port transmits the voice body and the modem ports transfer the envelope information. The modems are conferenced into the voice connection so that only one connection is needed for each session.

Figure 1-14
Meridian Networking voice and data transfer
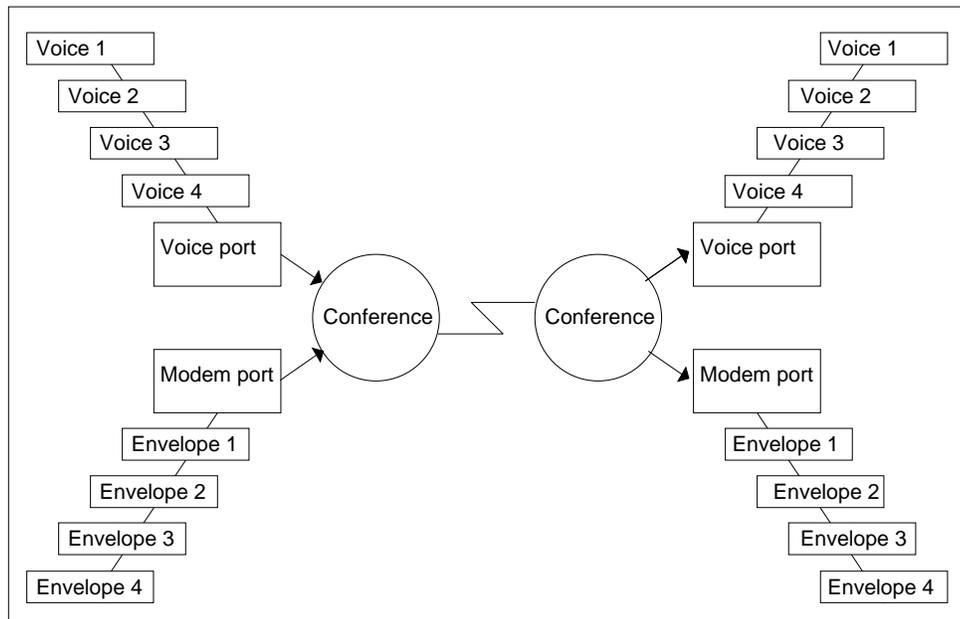
The modem waits for the carrier from the receiving end and times out if there is no carrier detected within the time limit. Once handshaking is completed, the software starts transferring the envelope information.

Steering codes

In Figure 1-15, users at Location D can call stations at Location E by dialing 43XXX or 52XXX. Similarly, users at Location E can call stations at location D by dialing 2XXXX or 3XXXX. If a user at Location D dials 43XXX or 52XXX to reach a station at Location E, Location D uses the digits "43" or "52" as a distant steering code (DSC) to select the trunk group to Location E. Similarly, if a user at Location E dials 2XXXX or 3XXXX to reach a station at Location D, Location E uses the digit 2 or 3 as a distant steering code.

The same format is used for calling local stations. For example, users at Location E dial 43XXX or 52XXX to reach local stations at Location E. In this case, the Meridian 1 interprets the digits 43 or 52 as a local steering code (LSC) and deletes them from the dialed number in order to terminate the call locally.

Figure 1-15
Example of a coordinated dialing plan

Location D   Location E

```
┌──────────────┐              ┌──────────────┐
│              │              │              │
│  0           │              │  0           │
│  1           │              │  1           │
│  2xxxx       │              │  2           │
│  3xxxx       │  ◄────────►  │  3           │
│  4           │              │  43xxx       │
│  5           │              │  52xxx       │
│  6           │              │  6           │
│  7           │              │  7           │
│  8           │              │  8           │
│  9           │              │  9           │
│              │              │              │
└──────────────┘              └──────────────┘
```

0 = Attendant
1 = Special service prefix (SPRE)
7 = SL-1 trunk access code
8 = NARS/BARS access code
9 = Public exchange network
      access code
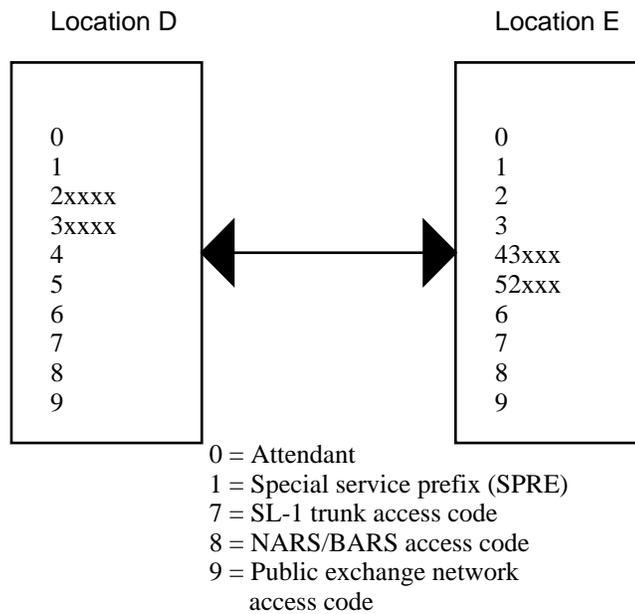
The maximum number of leading digits that can be deleted from a local steering code is 4. However, if the DNXP package (150) is equipped, up to 7 digits can be deleted from the local steering code special service prefix (SPRE).

If the Meridian 1 at Location E is arranged to provide centralized access to the public exchange network, the digit 9 at Location E is a trunk access code for public exchange access. At Location D, the digit 9 is a trunk steering code (TSC) which uses digit manipulation to insert the required digits to route the call through Location E to the public exchange network.

The CDP feature supports up to 5000 steering codes. Steering codes can b composed of one, two, three or four digits. At each switch in the CDP group, the steering codes must be distinct from any other assigned DN codes. As Figure 1-15 shows, 0 is reserved as the attendant access code, 1 is reserved as the special service prefix, 7 is reserved as a Meridian 1 trunk access code, 8 is reserved as a Basic Alternate Route Selection/Network Alternate Route Selection (BARS/NARS) access code, and 9 is reserved as the public exchange network access code. This means there are five digits remaining that can be used as the leading digits of steering codes: 2, 3, 4, 5, and 6. Switch D chooses 2 and 3; switch E uses 4 and 5.

With Release 13 and later, the CDP feature can support up to 10,000 steering codes. If the DNXP package is equipped, these steering codes can be up to seven digits.

A CDP directory number (DN) consists of an internal DN prefixed with the appropriate steering code. The CDP DN is allowed up to seven digits maximum; but, if the DNXP package is equipped, this number can he increased to ten digits maximum. A typical CDP configuration is shown in Figure 1-16.

Conventional Switch Access

If a conventional (CONV) switch without the CDP software is integrated as part of a CDP group (Figure 1-16), the steering codes defined at a CDP switch to access the conventional switch can be inserted or deleted by the CDP switch. The steering codes are inserted if the conventional switch is identified by more than one steering code; they are deleted if all the station numbers at the conventional switch begin with the same steering code.

Figure 1-16
A typical CDP configuration
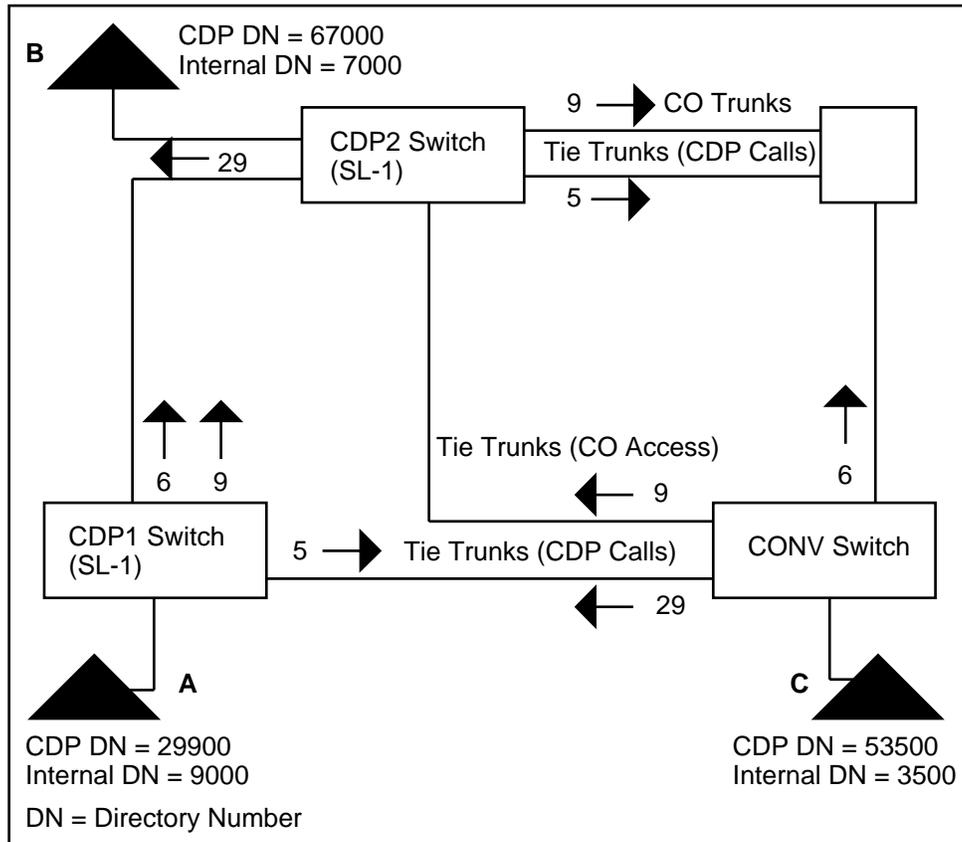
Calls to a CDP switch from the conventional switch are made by dialing the desired CDP DN. The CONV switch uses the digit 6 as a trunk access code for the Tie trunk route to switch CDP2. After tie trunk seizure, the CONV switch outpulses the remaining digits (7000) to CDP2 At CDP2, the digit 6 is inserted on the incoming tie trunk from the CONV switch, prior to receipt of any digits from the CONV switch, and the call is completed to station B.

Local calls at the CONV switch are made by dialing only the internal DN (3500), rather than the CDP DN (53500), unless the CONV switch can be arranged to absorb the digit 5 or is based on a five digit numbering plan

As shown in Figure 1-16, switch CDP2 is arranged to provide centralized access to the public exchange network. For users at the CONV switch to access this capability, a separate tie trunk route must be provided to switch CDP2. This is because switch CDP2 is arranged to insert the digit "6" on The incoming tie trunk route from the CONV switch used for CDP calls. For public exchange network calls, the digit 9 must be inserted on the incoming tie trunk route from the CONV switch. Similarly, if users at the CONV switch are to be allowed access to the ESN capabilities (BARS/NARS) at switch CDP2, another tie trunk route must be provided for this purpose.

Network class of service

Network class of service (NCOS) is an integral part of the CDP feature. NCOS provides the means to control the following.

- which trunk routes are eligible to be accessed for completion of a CDP call

- whether or not queuing is offered to the call originator

- whether or not the originator of a CDP call receives an expensive route warning tone (ERWT) when an expensive trunk route is selected to complete the call

A CDP equipped switch can accommodate four NCOS groups (0-3), each group with different route-access characteristics. Once each NCOS group is defined through service change; then line, trunk, and attendant groups are assigned to the NCOS group which best serves their requirements. The NCOS group to which each line, trunk or attendant group is assigned is independent of the regular class of service assigned to them.

With Release 13 and later, a CDP equipped switch can accommodate 100 NCOS groups (0-99) whether it is with BARS/NARS, or the new flexible code restriction (NFCR).

Compatibility with ETN switches

The traveling class of service (TCOS) is equivalent to the traveling class mark (TCM) used at electronic tandem network (ETN) switches. It provides a mechanism for the system to control route access (FRL) and offhook queuing (OHQ) eligibility for calls placed to or through another node or ESN Main, and enables the switch to interface with ETN switches.

When a distant steering code call is made from an electronically switched network (ESN) node to an ETN switch, the dialed digits, together with the

TCOS number (0-7), are sent to the connected ETN switch. Similarly, when a DSC call is made from an ETN switch to an ESN node, the dialed digits, together with the TCM number (0-7), are sent to the connected ESN node. On a tandem connection to the ESN node interprets the received TCM as a TCOS number The received TCM replaces the FRI of the NCOS assigned to the incoming trunk group from the ETN switch.

Assumptions

The assumptions are as follows:

- Only DSC, not TSC, calls are supported with this capability.

- When a DSC call is terminated on a switch as a local steering code call, the transmitted TCOS/TCM number from the connected ETN switch is not collected and saved by the terminating switch.

Facility restriction level

Included as part of each NCOS group is a facility restriction level (FRL) number which ranges from 0 (low-privilege) to 7 (high-privilege). The FRL is used by the CDP software to determine the alternate route selection choices available for CDP call attempts by users within an NCOS group.

Example

A station user assigned in an NCOS group having an FRL of 3 would be allowed access only to alternate route selection choices assigned an FRL of 3 or less; access to trunks with an FRL greater than 3 would be denied

Routing

Thirty-two route lists (0-31) can be defined at a switch equipped with CDP. See Figure 1-16 for other parameters if CDP is equipped with Basic Alternate Route Selection or Network Alternate Route Selection. A route list is used to define the alternate route choices for CDP calls to a particular destination. Route choices in a route list are called route list entries. There can be up to three (0-2) route list entries associated with each route list, or seven (0-6) in Release 13 and later.

Route lists are associated with each distant steering code and trunk steering code that can be dialed at a CDP switch. Local steering codes (LSC) are not associated with route lists. Each code is defined to the CDP software, together with the number of the route list that must be accessed for call completion to the destination indicated by the steering code. The entries in the specified route list are than searched sequentially for an available and eligible trunk route.

Release 15 and later software allows CDP to route direct inward dialed (DID) calls over CO and WATS trunks using a distant steering code. The feature is controlled by an option defined in the customer data block (LD 15) found in the *X/11 input/output guide* (NTP 553-3001-400). This enhancement applies to CO, WATS, DTI and ISDN type trunks.

Digit manipulation

Route list entries can be associated with digit manipulation tables. There can be 32 (0-31) digit manipulation tables defined at a CDP switch. See Figure 1-16 if BARS/NARS is also equipped. Every digit manipulation table except 0 can be defined to delete up to 15 digits from a dialed CDP number, and to insert up to 24 leading digits, including the asterisk Digit manipulation table 0 is used as an indication to the CDP software that no digit manipulation is required.

Time-of-day schedules

Two (0-1) time-of-day (TOD) schedules can be defined at a CDP switch. See Figure 1-16 if BARS/NARS is also equipped. Each route list entry is associated with a TOD schedule. When a route list entry is selected for a CDP call, the CDP software compares the current time with the TOD schedule assigned to the route list entry. If the current time is within the schedule, the route list entry is used for the call. If the current time is not in the schedule or, if the TOD schedule is turned OFF, the route list entry is not used for the call. Each TOD schedule can be turned ON or OFF by the customer through service change.

Queuing

Queuing against local stations is provided by the standard Ring Again (RGA) feature. Please refer to the *X11 Features and services description* (NTP 553-3001-305). For calls directed to a remote CDP switch, Ring Again can be applied if all local outgoing trunk routes to the remote CDP switch are busy or blocked. Ring Again cannot be applied against busy or blocked telephones, or consoles at the remote CDP switch. Trunks can only be rung again if CCBQ or CBQM are equipped. Intercept Treatment is not provided until the full CDP number (or trunk; steering code) is dialed.

For local and network queuing descriptions, refer to *Basic and Network Alternate Route Selection* (NTP 553-2751-100). For ESN operations in an ISDN environment, consult the *ISDN Primary Rate Access description and administration* guide (NTP 553-290-100)

CDP traffic measurements

Traffic measurement data related to CDP feature usage is available at an Meridian 1 equipped with the Network Traffic (NTRF) feature. The user should refer to *Traffic Measurement* (NTP 553-2001-450).

Table 1-16
Summary of CDP parameters

Parameter	CDP stand-alone	CDP with BARS	CDP with NARS
Network class of service groups (Note 2)	0-3	0-7	0-15
	0-(99)	0-(99)	0-(99)
Facility restriction levels	0-7	0-7	0-7
Time-of-day schedules	0-1	0-7	0-7
Digit manipulation tables	1-31	1-25	1-255
Route lists	0-31 0 127	0-127	0-255
Route list entries	0-2 0 (6)	0-7 0-31* 0-63**	0-7 0-31* 0-63**
Supplemental digit restriction tables	---	0-215	0-512
Steering codes	1-5000 1-(10000)	1-5000 1-(10000)	1-5000 1-(10000)

* applies to X11 releases 13 and 14
** applies to X11 release 15 and later.

Note: The BARS/NARS features are described in detail in the *Basic and Network Alternate Route Selection general description* (NTP 553-2751-100).

If New Flexible Code Restriction (NFCR) is equipped in conjunction with CDP, the number of available NCOS groups is 8: with Release 13 and later, this number is increased to 100.

Feature interactions

BARS/NARS

The CDP feature can be implemented at a switch equipped with the BARS/NARS software features. If such is the case, the following considerations apply:

- Steering codes for CDP calls must be distinct from the assigned BARS/NARS access codes.

- CDP numbers can be integrated with the NARS uniform dialing plan (UDP). For example, a five-digit CDP number can be the same as the last five digits of a seven-digit UDP number.

- BARS/NARS route lists, digit manipulation tables and TOD schedules can be shared by CDP calls.

- Users eligible for the off-hook queuing (OHQ) and call-back queuing (CBQ) features can use them when placing CDP calls.

- Free calling area screening (FCAS) does not apply to CDP calls.

- Routing control can be applied to CDP calls. Please refer to *Basic and Network Alternate Route Selection general description* (NTP 553-2751-100)

AIOD and ANI

Calls made to the public exchange network when the Automatic Identification of Outward Dialing (AIOD) or Automatic Number Identification (ANI) feature is equipped will have either the internal DN recorded if the call originates at the CDP switch interfacing to the public network, or the trunk access node if the call originates at another CDP switch.

Attendant features

If a user at a local CDP switch calls the local attendant, the local user's internal DN (not the full CDP DN) is displayed. If a user at a CDP switch calls an attendant at another CDP switch, the trunk access code and member number of the incoming trunk are displayed.

The following attendant features are supported at a local CDP switch but are not supported between CDP switches.

- automatic timed recall

- barge-in, busy verify

- camp-on

- interposition calling

COS/TGAR treatment
For CDP calls, all class of service (COS) treatment remains the same as standard treatment with the exception of conditionally toll-denied (CTD) and conditionally unrestricted (CUN) COS, which are treated as unrestricted (UNR). Users with an FR2 class of service can originate local CDP calls but cannot originate CDP calls to distant switches trunk group access restrictions (TGAR) arc ignored for the purpose of routing CDP calls.

Code restriction
Code restriction is applied to calls made only from stations with a toll-denied (TLD) class of service. Standard or flexible code restriction can be applied on a trunk route basis to public exchange network trunk calls.

Call detail recording
The local internal DN (not the complete CDP DN) is recorded in the normal CDR manner. The full CDP DN is shown in the dialed number field. The maximum internal DN length remains at four digits.

Common control switching arrangement
A CDP number can be part of a CCSA dialing plan. Digit absorption and manipulation for CCSA calls is handled as usual by the switch. A CCSA call can terminate at a switch in a CDP group other than the switch which hosts the CCSA network. This operation is transparent to the originator of the CCSA call.

Direct inward dialing
Because a CDP DN can be up to ten digits long, the capability of inserting up to 8 leading digits on a DID trunk is supported.

End-to-end signaling
End-to-end signaling is allowed for CDP calls.

Call modification

Call modification (call transfer, call forward, conference) is allowed for CDP calls. When using these features, the user dials within the CDP format.

Hunting

Hunting across different switches in a CDP group is not supported. Standard Hunting can he applied to local CDP calls.

Message center

The message center capability is not supported across CDP switches. However it operates as normal locally.

Display

The following lists how a digit display set handles CDP calls.

Outgoing CDP call	The complete dialed CDP DN is displayed at the originating set.
Incoming CDP call	The trunk access code and member number of the incoming trunk route is displayed.
Internal CDP call	At the originating set, the complete dialed CDP DN is displayed. If the call hunts or is picked up by another station. the internal DN of the answering station is displayed. At the terminating set, the internal DN of the originating set is displayed.
Network call transfer	NXFER interacts with CDP calls in the same manner as ESN network calls. See *Basic and Network Alternate Route Selection* (NTP 553-2751-100) for a full dcscription of NXFER.

Adding Meridian Networking to an existing CDP network

When adding Meridian Networking to an existing CDP network, a printout of the existing network database must be obtained to ensure that the network is compatible with the Meridian Networking option or can be modified to meet the Meridian Networking standards as outlined earlier in this chapter. To obtain a printout of the network database perform the following steps.

1   **Print CDP**

Load overlay 87 and respond to the following prompts:

Table 1-17xx
Overlay 87: Coordinated dialing plan (CDP)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	CDP	
TYPE	LSC, DSC, TSC	Steering codes.

Use this printout to determine the route list index block (RLB).

2   **Print route list index block (RLB) and digit manipulation index (DMI)**

Load overlay 86 and respond to the following prompts:

Table 1-18xx
Overlay 86: Route list index (RLB)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	RLB	

Use this printout to determine the route data block (RDB) and digit manipulation index (DMI). If there is no DMI, proceed to step 3.

Table 1-19xx
Overlay 86: Digit manipulation index (DMI)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	DGT	

3   Print route data block (RDB)

Load overlay 21 and respond to the following prompts:

Table 1-20xx
Overlay 21: Route data block (RDB)

Prompts	Responses	Description
REQ	PRT	
TYPE	RDB	
CUST	0-99	Customer number.
ROUT	0-511	Route number.
ACOD	xxxx	Route access code.

Use this printout to determine the type of facilities used (for example, COT, DID, and so on) and any insertions or deletions.

Take note of the facilities used. If changes are necessary, you can either modify the existing RDB or create a new one specifically for Meridian Mail.

4   Print ESN

Load overlay 86 and print out the following features:

Table 1-21xx
Overlay 86: Print ESN data block

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	ESN	
NCPD	3-7	Number of digits in CDP DN.

5 Print NCTL

Load overlay 87 and print out the following features:

Table 1-22xx
Overlay 87: Network control (NCTL)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	NCTL	

6 Obtain a printout of the network numbering plan

Obtain a printout of your network's numbering plan from the system administrator. It is necessary to gather this information in order to create a diagram of your network as well as to identify any DN conflicts.

7 Create a simplified diagram of the existing network

In Figure 1-17, the extensions at Site 1 are numbered 6000 to 6999 (the steering code is 6); the extensions at Site 2 are numbered 2700 to 2899 (the steering codes are 27 and 28); the extensions at Site 3 are numbered 5000 to 5999 (the steering code is 5). Regardless of the site at which the user placing the call is, the same extension DN (for example, 2734) is dialed to reach the user at Site 2. Therefore, users do not need to prefix remote mailbox numbers with additional codes because the first digit (or first two digits) in the DN is the steering code which identifies the site within the network.

Figure 1-17xxx
Typical CDP network
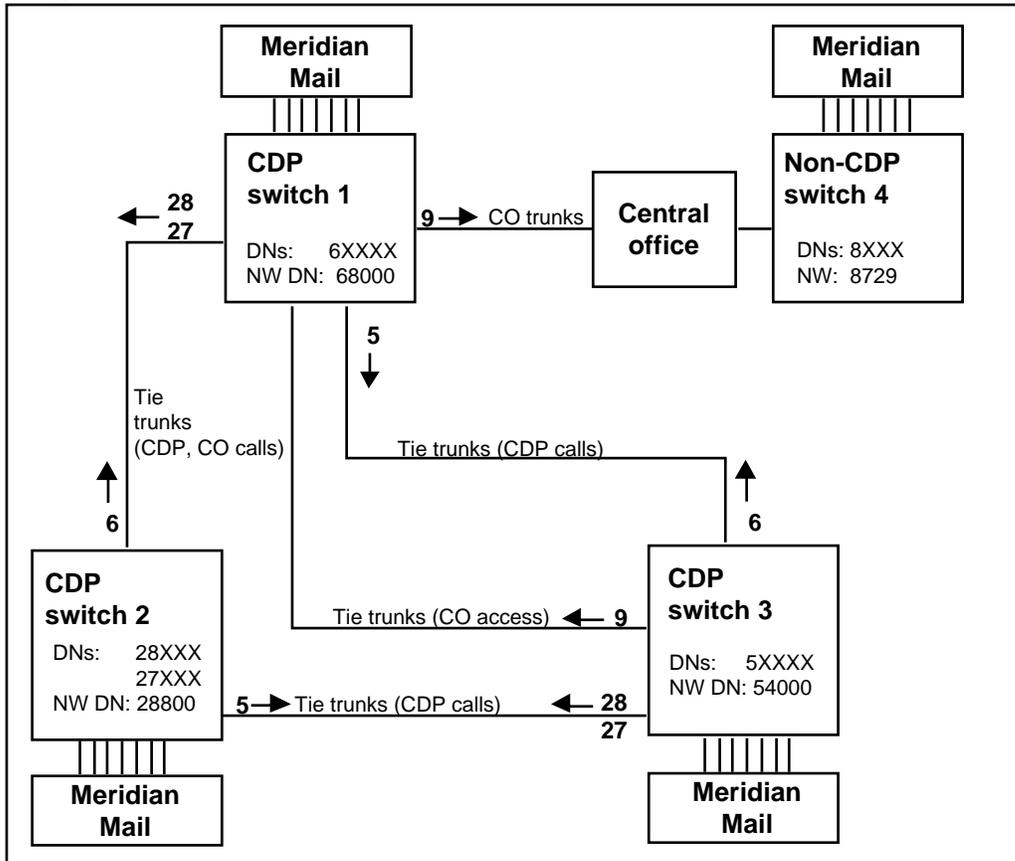
8   Plan NMS implementation

Use the printouts and the diagram to plan the implementation of NMS on
the existing network. Before proceeding, it is important that you analyze
your printouts in order to identify any conflicts and modify the Meridian 1
overlays if necessary.

Coordinated Dialing Plan Implementation

Your understanding of your network will enhance your ability to administer and maintain Meridian Networking. Knowing how the CDP processes a call from Meridian Networking will allow you implement the compatibility of CDP with Meridian Mail Networking in an efficient manner. The *X11 input/output guide* (NTP 553-3001-400) will provide information to enhance your understanding of CDP and is beneficial to review prior to implementing or modifying the CDP.

The following procedure is a brief synopsis of the prompts and responses and the order in which the CDP database is implemented on the Meridian 1. If modification of the CDP database is necessary to be compatible with Meridian Networking, you will have to make the necessary changes to the CDP database with respect to other related data blocks.

1   Configure network control data block

Gather data for each network class of service (NCOS) group to be added changed or removed. Response to the following prompts in overlay 87 is required.

Table 1-23xx
Overlay 87: Network control

Prompts	Responses	Description
REQ	NEW, CHG, OUT	Add, change, or remove data.
CUST	0-31	Customer number.
FEAT	NCTL	Network control data block.
NCOS	0-3 0-99[13+]	NCOS group number.
FRL	0-7	Facility Restriction Level of the NCOS group.

2   **Define CDP feature parameters**

Gather data to define ESN feature parameters. Response to the
following prompts in overlay 86 is required.

Table 1-24xx
Overlay 86: ESN

Prompts	Responses	Description
REQ	NEW, CHG, OUT	Add, change, or remote data.
CUST	0-31	Customer number.
FEAT	ESN	Electronic switched network data block.
MXDM	0-32	Maximum number of digit manipulation tables that can be defined.
MXRL	0-32 0-127[13+]	Maximum number of route lists that can be defined.
CDP	(YES) NO	CDP parameters (are) are not to be defined for this customer. NO is allowed only if no CDP parameters currently exist for this customer.
MXSC	0-5000 0-10000[13+]	Maximum number of steering codes that can be defined.
NCDP	3-7	Number of digits in CDP directory numbers.
TODS	S SH SM EH EM	Time-of-day schedules: S = schedule number (0-1) SH = start hour (00-23) SM = start minute (00-59) EH = end hour (00-23) EM = end minute (GO-59) Default is 0 00 00 23 59.

3   Configure digit manipulation

Gather data for each digit manipulation table to be added, changed or removed. Response to the following prompts in overlay 86 is required.

Table 1-25xx
Overlay 86: Digit manipulation

Prompts	Responses	Description
REQ	NEW, CHG, OUT	Add, change or remove data.
CUST	0-31	Customer number.
FEAT	DGT	Digit manipulation data block.
DMI	0-31	Number of the digit manipulation table to be added, changed, or removed.
DEL	(0)-15	Number of leading digits to be deleted from the dialed number.
INST	XX...XX	Maximum of 20 leading digits to be inserted to the dialed number.
	(X)	No leading digits to be inserted.

4   Configure route list index

Gather data for each route list to be associated with a digit manipulation table. Response to the following prompts in overlay 86 is required.

Table 1-26xx
Overlay 86: Route list index

Prompts	Responses	Description
REQ	NEW, CHG, OUT	Add, change or remove data.
CUST	0-31	Customer number.
FEAT	RLB	Route list data block.
RLI	0-31 0-127[13+]	Number of the route list to be added, changed or removed.
ENTR	0-2 0-6[13+]	Number of the entry in the route list.
	X0-2 X0-6[13+]	Remove a route list entry.
RT	0-127	The route number associated with the entry.

Prompts	Responses	Description
TDET	YES,(NO)	Tone detector is (is not) required.
TYPE	(CC1)	Tone detector for Special Common Carrier (SCC) Type 1.
	CC2	Tone detector for SCC Type 2.
	TIE	Tone detector for on-network calls.
TONE	(SCC), DIAL	(SCC), regular dial tone.
TOD	0-1	Time-of-day schedule associated with the entry.
	XO-1	Turn off a time-of-day schedule.
DMI	(0)-31	Number of the digit manipulation table to be used for the entry. 0 = no digit manipulation required.

5   Configure CDP translations

Gather CDP translation data. Response to the following prompts in overlay 87 is required.

Table 1-27xx
Overlay 87: CDP translations

Prompts	Responses	Description
REQ	NEW, CHG, OUT	Add, change, or remove data.
CUST	0-31	Customer number.
FEAT	CDP	CDP translation data block.
TYPE	LSC	Local steering code translation data.
	DSC	Distant steering code translation data.
	TSC	Trunk steering code translation data.
LSC	XXXX	Prompted if TYPE = LSC. Specify a 1-4 digit local steering code.
DEL	0-4	Number of digits to be deleted from the local steering code.
DSC	XXXX	Prompted if TYPE = DSC. Specify a 1-4 digit distant steering code.
RLI	0-31 0-127	Number of the route list to be used to process calls to the distant steering code.

Prompts	Responses	Description
TSC	XXXX	Prompted if TYPE = TSC. Specify a 1-4 digit trunk steering code.
RLI	0-31 0-127	Number of the route list to be used to process calls to the trunk steerining code.

6   Assign NCOS

Gather data to assign a network class of service group number to each of the following. In all cases, the prompt is NCOS; the range is 0-3 (or 0-99 with Release 13 and later) and the default is 0.

- 500/2500 set (overlay 10)

- SL-1 Telephones, M1000 series telephones, M2000 series digital telephones, M3000

- Touchphone (overlay 11)

- attendant console (overlay 15)

- trunk (overlay 14)

- Direct Inward System Access directory number (overlay 24)

- authorization code (overlay 88).

The main menu

From the main menu (Figure 1-18) select Network Administration to display the Network Administration menu. This section describes Meridian Networking with a CDP dialing plan.
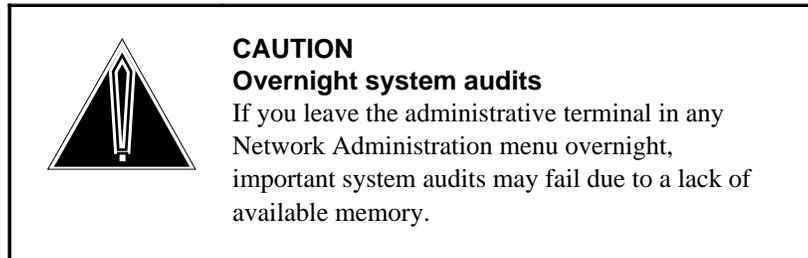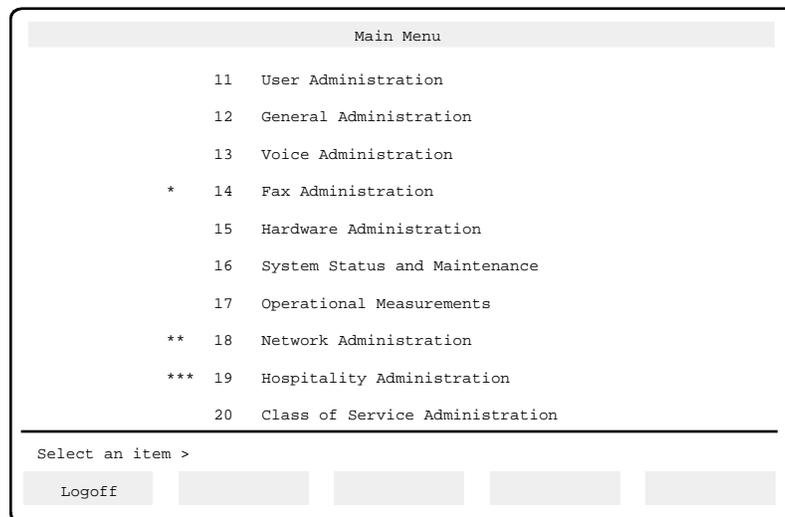
> **CAUTION**
> **Overnight system audits**
> If you leave the administrative terminal in any Network Administration menu overnight, important system audits may fail due to a lack of available memory.

Figure 1-18
The main menu

```
                         Main Menu

              11   User Administration

              12   General Administration

              13   Voice Administration

        *     14   Fax Administration

              15   Hardware Administration

              16   System Status and Maintenance

              17   Operational Measurements

       **     18   Network Administration

      ***     19   Hospitality Administration

              20   Class of Service Administration
    _____
   Select an item >

       Logoff
```

```
*   This item is displayed only if Fax on Demand is installed.
**  This item is displayed if at least one of the following is installed:
    Meridian Networking, AMIS Networking, or Network Message Service (NMS).
***This item is displayed only if Hospitality is installed.
```

Procedure 1-10xxx
Using the Network Administration menu

Starting Point: The main menu (single-customer systems) or the Customer Administration menu (multicustomer systems)

1 Select Network Administration.

See the next section, "The Network Administration menu".

2 To exit this menu, press [Exit].

The main menu is displayed.

The Network Administration menu

Meridian Networking administration involves local and remote site configuration, definition of holding times and stale times for urgent, standard and economy messages, and verification of message delivery between sites. The Network Administration menu (Figure 1-19) provides you with functions for adding remote sites, modifying the local site and remote site, and verifying the operational status of connections between sites.

Figure 1-19xxx
The Network Administration menu

```
                        Network Administration


          1   Local Site Maintenance

          2   Remote Site Maintenance

          3   Networking Scheduling Parameters

          4   Networking Verification Test




   ────────────────────────────────────────────────────────────────
   Select an item >

   ┌──────────┐  ┌──────────────┐  ┌──────────┐  ┌────┐  ┌──────────────┐
   │   Exit   │  │Print Network │  │ Network  │  │    │  │Clear Remote  │
   │          │  │    Data      │  │ Status   │  │    │  │ Error Sites  │
   └──────────┘  └──────────────┘  └──────────┘  └────┘  └──────────────┘
```

Procedure 1-11xxx
Using the Network Administration menu

Starting Point: The main menu (single-customer systems) or the
Customer Administration menu (multicustomer systems)

1   Select Network Administration.

The Network Administration menu (Figure 1-19) is displayed.

2   To perform local site maintenance, go to step 2a.
To perform remote site maintenance, go to step 2b.
To view or modify networking scheduling parameters, go to step 2c.
To perform a networking verification test, go to step 2d.
To print network data, go to step 2e.
To view the network status, go to step 2f.
To clear error conditions in remote sites, go to step 2g.
To exit the Network Administration menu, go to step 2h.

a.   Select Local Site Maintenance.

*The Local site maintenance - Modify site screen is displayed (see
Figure 1-20).*

b.   Select Remote Site Maintenance.

*The Remote site maintenance - List sites screen is displayed (see
Figure 1-21). From this screen you can add, modify or delete
remote sites.*

c.   Select Networking Scheduling Parameters.

*The Networking Scheduling Parameters screen is displayed (see
Figure 1-44) in which you can configure holding times and stale
times for messages of different priorities.*

d.   Select Networking Verification Test.

*The Networking Verification Test screen is displayed (see Figure
1-45). This test allows you to ensure network operation before
adding a new site.*

e.   Press [Print Network Data].

*This action prints local and remote site information from the
network data base. Ensure that the printer is on-line before making
this selection. See page 1-150 for details.*

f.   Press [Network Status].

*The number of messages queued for transmission are displayed in
the Network Status screen. See Figure 1-46.*

g. Press [Clear Remote Error Sites].

Any remote site status that shows error conditions is cleared. View the Network Status screen to verify the status of the network. See the section "Error conditions" on page 1-141.

h. Press [Exit].

The main menu is displayed.

Local site maintenance (CDP)

When you select Local Site Maintenance from the Network Administration menu, you are prompted for the site number at the bottom of the screen (if you have not yet configured the local site). You will not be able to enter the Local site maintenance - Modify site screen until you enter a number.

Note: You cannot delete the local site.

Figure 1-20xxx
The Local site maintenance - Modify site screen

```
                          Network Administration


    Local site maintenance - Modify site

    Site number: _____
    Site Name:   _____

    Message Transfer:   [Enabled]    Disabled

    Dialing plan:      ESN      [CDP]     Hybrid    None
    Max number of digits in local mailbox:            _____
*   Number of digits in common between CDP steering code and local ext: _____

    ESN/CDP ( The ESN code must begin with the first access code above ):

#   1:_____        2:_____
    3:_____        4:_____
    5:_____        6:_____
    7:_____        8:_____
    9:_____       10:_____
    .                     .
    .                     .
    49:_____       50:_____

    Mailbox numbering follows dialing plan:    [Yes]  No
**  Mailbox prefixes:    _____
    _____

    ┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐
    │   Save   │  │  Cancel  │  │          │  │          │  │          │
    └──────────┘  └──────────┘  └──────────┘  └──────────┘  └──────────┘
```

     * Only appears if dialing plan is CDP or Hybrid
    ** Only appears if mailbox numbering does not follow dialing plan.
     # For a CDP dialing plan, up to 50 CDP steering codes can be defined.

The following fields are displayed:

- *Site number* The site number uniquely identifies the local site in the Meridian Mail network. It is entered when you select Local Site Maintenance for the first time. This number (as well as remote site numbers) should be obtained from the network administrator to ensure the number is not already in use. The valid range is from 1 to 500.

  Note: Once you enter the site number, it can only be changed by using the "Change Local Site ID" utility. (See *System Administration Tools*.) Before using this utility, you will have to create a dummy remote site as this utility only accepts an existing remote ID as the new local site ID. If you change the local site ID after users have been set up, the system will not recognize their mailbox numbers due to invalid site IDs.

- *Site Name* This field is mandatory. The field can contain up to 32 alphanumeric characters. There is no default.

- *Message Transfer* This field allows you to enable or disable networking at the local site. This field must be enabled for users at the local site to send messages to remote sites. The default is "Enabled".

- *Dialing plan* The selection you make must reflect the dialing plan that is in place. The default is "Hybrid". (See "Dialing plans and location codes" earlier in this chapter.) If the remote site is using either the CDP or ESN dialing plan, the local site must have a Hybrid, CDP, or ESN dialing plan that is consistent with the remote site. The dialing plan must also be consistent with the switch.

- *Max number of digits in local mailbox* Enter the maximum number of digits allowed in mailbox numbers at the local site. This number is used by the system to check whether mailbox numbers specified in messages from remote sites are valid. For example, if this value is "4" and a message is received from a remote site containing a mailbox address that is six digits in length, the system will reject the message. If you are unsure, enter the maximum allowable value of "18". The default is "4".

  Messages sent from local mailboxes will not be successfully delivered to remote sites if this limit is exceeded. Originators of messages will receive non-delivery notifications if this is the case.

- *Number of digits in common between CDP steering code and local extension*
  This field only appears if the dialing plan is CDP or Hybrid. This number indicates the number of digits in the CDP steering code that overlap with the local extension. These codes need not overlap. Specify the length of the CDP code in this field. Refer to your dialing plan.

  Note: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the CDP code and the local extensions, enter a value of "0".

- *ESN/CDP codes* CDP steering codes are location prefixes that identify the local site within the network and must therefore be unique within the CDP network.

  The CDP steering code is already part of the mailbox number as far as users are concerned. (Even though this is the case, the CDP steering codes must still be defined here because the system needs to be able to distinguish the steering code from the mailbox number.)

  In a CDP-only dialing plan up to 50 steering codes may be entered for a site. For example, if either 35xxx or 36xxx can be used to reach extension xxx at the local site, enter 35 and 36 as the steering codes.

- *Mailbox numbering follows dialing plan* This field allows you to select whether or not mailbox numbering will emulate the dialing plan (telephone extensions). If you answer "No", the following field, *Mailbox prefixes*, appears. The default is "Yes".

- *Mailbox prefixes* These prefixes identify the local site within the network when mailbox numbering does not follow the dialing plan. This prefix does not have any overlap with local mailbox numbers and is independent of the CDP steering codes. Make sure that the numbers you enter do not conflict with other network data.

Procedure 1-12xxx
Configuring the local site

Starting Point: The main menu (single-customer systems) or the
Customer Administration menu (multicustomer systems)

1   Select Network Administration.

   The Network Administration menu (Figure 1-19) is displayed.

2   Select Local Site Maintenance.

   *The Local site maintenance - Modify site screen is displayed (see
   Figure 1-20).*

3   Fill in the fields as described in the preceding pages.

4   To save the configuration, go to step 4a.
   To exit the screen without saving your changes, go to step 4b.

   a.   Press [Save].

      *Any changes that you have made are saved. The Network
      Administration menu is displayed.*

   b.   Press [Cancel].

      *Any changes that you have made are discarded and the Network
      Administration menu is displayed.*

Remote site maintenance (CDP)

When you select Remote Site Maintenance from the Network
Administration menu, the Remote site maintenance - List sites screen is
displayed. Through various screens you can add, modify and delete remote
sites.

Listing remote sites

The Remote site maintenance - List sites screen (Figure 1-21) lists all of the
remote sites that are part of the Meridian Mail network. The softkeys
displayed on this screen allow you to add new remote sites to the network
or select an existing site in order to view, modify or delete it.

Figure 1-21xxx
The Remote site maintenance - List sites screen

```
                        Network Administration

   Remote site maintenance - List sites


   Site              Site Name            Message Center#

    5                City1                   No
   10                City2                   No
   20                City3                   Yes




   ─────────────────────────────────────────────────────

                                                              List
        Exit           Add        View/Modify     Delete     Locations
```

The following read-only fields are displayed:

- *Site* The Site ID for the remote site.

- *Site Name* The name corresponding to the remote site.

- *Message Center* This field is set to "Yes" if the remote site is an NMS site. (If any of your remote sites are message centers, refer to Chapter 5 which describes procedures for systems with both networking and NMS installed.)

Procedure 1-13xxx
Listing remote sites

Starting Point: The main menu or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

    The Network Administration menu is displayed.

2   Select Remote Site Maintenance.

    The Remote site maintenance - List sites screen (Figure 1-21) is displayed.

Adding remote sites

The Remote site maintenance - Add site screen (Figure 1-22) allows you to define new remote sites in the Meridian Mail network. When you press [Add] on the Remote site maintenance - List sites screen, you are prompted for a remote site ID. After you enter an ID and press <Return>, the Remote site maintenance - Add site screen is displayed. (Remote sites may be NMS message centers even if the local site is not. Refer to Chapter 5 if you are adding a remote NMS site.)

If AMIS is installed at the local site, remote AMIS sites can also be added to the Meridian Mail network from the Add Remote Site form. Certain fields need to be configured somewhat differently than for normal remote sites: these are the *Message Transfer Protocol* field and the *Networking Connection* fields. See the descriptions of these fields for more details.

> *Note:* Before adding a remote site to the Meridian Mail network you should perform a verification test to ensure proper operation of the networking service between the local site and the remote site. The networking verification test is described on page 1-145.

Figure 1-22xxx
The Remote site maintenance - Add site screen

```
                        Network Administration

   Remote site maintenance - Add site

   Site number:      _____
   Site Name:        _____

   Message Transfer:              [Enabled]   Disabled
   Site is network message center?  [No]   Yes

   Networking Connection:
       DN 1:  _____
       DN 2:  _____
       DN 3:  _____

   Password
       Initiating:  _____
       Responding:  _____

   Dialing plan:      ESN      [CDP]    Hybrid    None
   Max number of digits in local mailbox:  _____
*  Number of digits in common between CDP steering code and local ext:  _____

   ESN/CDP ( The ESN code must begin with n):

#  1:_____       2:_____
   3:_____       4:_____
   5:_____       6:_____
   7:_____       8:_____
   9:_____      10:_____
   .                    .
   .                    .
   49:_____     50:_____

   Mailbox numbering follows dialing plan:     Yes    [No]
** Mailbox Prefixes:  _____   _____

** Spoken name recorded    No
   _____

      Save            Cancel                       Voice***
```

```
  *   Only appears if dialing plan is CDP or Hybrid
  **  Only appears if dialing plan is none or if mailbox numbering does not follow
      the dialing plan.
  *** Only appears if Mailbox numbering follows dialing plan is set to No.
   #  For a CDP dialing plan, up to 50 CDP steering codes can be defined.
```

Note: The *n* in the *ESN/CDP codes* field represents the ESN access code that is configured in the Local site maintenance screen. If two access codes are defined in that screen, the one entered in the first field is displayed here.

The following fields are displayed on the Remote site maintenance - Add site screen:

- *Site number* This field is mandatory. The site number uniquely identifies the remote site in the Meridian Mail network. Site numbers should be obtained from the network administrator to ensure the number is not already in use. The valid range is from 1 to 500.

- *Site Name* This field is mandatory. The site name should uniquely identify the remote site. The field can contain up to 32 alphanumeric characters. There is no default.

- *Message Transfer* This field must be set to "Enabled" for local users to send messages to the remote site. Select "Disabled" if you must temporarily disable message delivery to the remote site. The default is "Enabled".

- *Site is network message center?* Does this remote site have the Network Message Services feature installed? This field change will only go into effect when the form is saved.

- *Networking Connection DN 1, DN 2, DN 3* These are the telephone numbers that are used to establish a connection to the networking service at the remote site. For a remote Meridian Networking site, enter the number used to dial out of the system to reach the remote site (for example, 95552345). The DN can be up to 30 digits long and may include the digits 0 to 9 and special symbols * and #, where * inserts a three-second pause in the sending of digits, and # indicates end-of-dialing. Because DNs are used in the given order, enter the least costly DN as DN 1, and the most costly DN as DN 3. A minimum of one DN must be defined.

- *Initiating Password* This field is mandatory. The initiating password is the password that the originating site sends to the remote site when initiating a message transfer session.

- *Responding Password* This field is mandatory. The responding password is the password that the site receives when a remote site initiates a message transfer call.

- *Dialing plan* The selection you make must reflect the dialing plan that is in place. The default is "Hybrid". (See "Dialing plans and location codes" earlier in this chapter.) Note that in a CDP dialing plan, remote sites are transparent to voice messaging users because no special prefixes are required to dial out to them (because the steering code is already part of the mailbox number). Therefore if this site is part of a CDP dialing plan only, the [Voice] key is not displayed as a recorded site name is not required.

  If you select "None", the *Mailbox numbering follows dialing plan* field is not displayed. Instead, the *Mailbox number equals local extension* field is displayed.

  Note 1: If you change a site from Hybrid to CDP, the spoken site name is removed. If you change the site back to Hybrid, you will have to re-record the verification.

- *Max number of digits in local mailbox* Enter the maximum number of digits allowed in mailbox numbers at the remote site. The maximum allowable value is 18, or 16 if the AMIS protocol is selected for the site. If you are unsure, enter the maximum allowable value of 18 (or 16). The default is "4".

- *Number of digits in common between CDP steering code and local ext* This field only appears if the dialing plan is CDP or Hybrid. This number indicates the number of digits in the CDP steering code that overlap with the extensions that are local to the remote site. These codes need not overlap. Specify the length of the CDP code in this field. Refer to your dialing plan.

  Note: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the CDP code and the local extensions, enter a value of "0".

- *ESN/CDP codes* The ESN prefix and CDP steering codes are location prefixes that identify the remote site within the network and must therefore be unique within the ESN or CDP network. Check with the administrator at the remote site to determine the ESN prefix or CDP steering codes that apply.

  In a CDP-only dialing plan up to 50 steering codes may be entered for a site. For example, if either 35xxx or 36xxx can be used to reach extension xxx at the remote site, enter 35 and 36 as the steering codes.

Note: CDP codes cannot match the leading digits of a local mailbox number. If this occurs and a local user addresses a message to another local user whose mailbox begins with a CDP steering code, Meridian Mail will attempt to send the voice message to the remote site rather than to the local mailbox.

- *Mailbox numbering follows dialing plan* In this field, specify whether or not mailbox numbering emulates the dialing plan (telephone extensions) at the remote site. If it does not, the following field, *Mailbox prefixes*, is displayed and you must enter the location codes as mailbox prefixes. (This field is not displayed if the dialing plan is "None".)

- *Mailbox prefixes* These prefixes function as location codes and are used to identify the remote site within the network when there is no dialing plan or if mailbox numbering does not follow the dialing plan at the remote site. These prefixes do not have any overlap with local mailbox numbers and are independent of the CDP steering codes. Make certain that these prefixes do not conflict with other network data.

- *Spoken name recorded* This field applies if the *Mailbox numbering follows dialing plan* field is set to No. It indicates whether or not a site name has been recorded for the site. A spoken site name makes it easier for users to identify the remote site when addressing voice messages to remote voice users. The site name recording (followed by the local mailbox digits) is played to voice messaging users when addressing messages to remote voice users. If the site name is not recorded, users hear the location prefix spoken out.

Procedure 1-14xxx
Adding remote sites

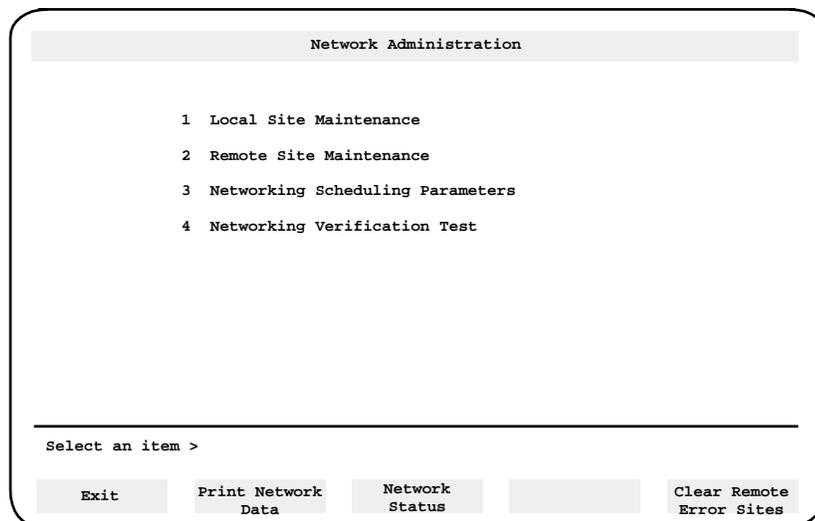**Starting Point:** The main menu or the Customer Administration menu
(multicustomer systems)

1   Select Network Administration.

     The Network Administration menu is displayed.

2   Select Remote Site Maintenance.

     The Remote site maintenance - List sites screen (Figure 1-21) is
     displayed.

3   Press [Add].

     You are prompted for the ID of the remote site to be added.

4   Enter a number for the remote site.

     The Remote site maintenance - Add site screen is displayed. See
     Figure 1-22.

5   Fill in the fields as required. See the field descriptions on the preceding
     pages.

6   To save the remote site configuration, go to step 7a.
     To exit the screen without saving your changes, go to step 7b.

     a.   Press [Save].

          Any changes that you have made are saved. You are prompted to
          enter the next remote site ID. If you have more sites to add, enter
          the ID and press <Return>. If you do not have more sites to add,
          press [Cancel].

     b.   Press [Cancel].

          Any changes that you have made are discarded and the Remote
          site maintenance - List sites screen is displayed.

Viewing and modifying remote sites

Once you have added remote sites to the network, you can alter their characteristics by accessing the Remote site maintenance - Modify site screen. To display the screen, access the Remote site maintenance - List sites screen, move the cursor to the site you want to modify, press the spacebar to select it, then press [View/Modify]. This screen is identical to the Remote site maintenance - Add site screen if the site you are modifying is not a message center. See the previous section, "Adding remote sites", for descriptions of the fields and the actions that are possible.

> *Note:* If you are modifying an NMS site, the screen will be different. See Chapter 5 for information.

Procedure 1-15xxx
Viewing and modifying remote sites

Starting Point: The main menu or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

The Network Administration menu is displayed.

2   Select Remote Site Maintenance.

The Remote site maintenance - List sites screen (Figure 1-21) is displayed.

3   Move the cursor to the site you want to view or modify and press <Spacebar> to select it.

4   Press [View/Modify].

The Remote site maintenance - Modify site screen is displayed. It is identical to the Remote site maintenance - Add site screen.

5   Fill in the fields as required. See the field descriptions on the preceding pages.

6   To save the remote site configuration, go to step 7a.
To exit the screen without saving your changes, go to step 7b.

   a.   Press [Save].

   Any changes that you have made are saved and the Remote site maintenance - List sites screen is displayed.

   b.   Press [Cancel].

   Any changes that you have made are discarded and the Remote site maintenance - List sites screen is displayed.

Deleting remote sites

Remote sites are removed from the network database from the Remote site maintenance - List sites screen. When you select a site and then press [Delete], a new set of softkeys is displayed.

Note: Messages that have been sent but not delivered to a remote site that has been deleted are returned with a non-delivery notification (NDN).

Figure 1-23xxx
The Delete Remote Site softkeys

OK to Delete	Cancel			
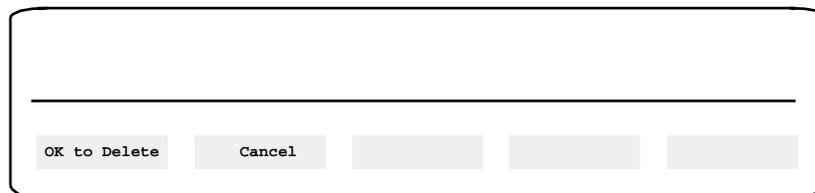
Procedure 1-16xxx
Deleting remote sites

Starting point   The main menu or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

     The Network Administration menu is displayed.

2   Select Remote Site Maintenance.

     The Remote site maintenance - List sites screen (Figure 1-21) is displayed.

3   Use the cursor keys to highlight the remote site you want to delete.

4   Press <Spacebar> to select the site.

5   Press [Delete].

     The softkeys shown in Figure 1-23 are displayed.

6   To delete the site, go to step 6a.
     To cancel the delete operation and return to the Remote site maintenance - List sites screen, go to step 6b.

     a.   Press [OK to Delete].

           The system purges the site. You are prompted for another site number.

To delete another site, enter the site number and press [OK to Delete].

b. Press [Cancel].

The site is not deleted and the Remote site maintenance - List sites screen is re-displayed.

Recording site names using the [Voice] softkey

The [Voice] softkey is used to provide a new set of softkeys for recording, playing and deleting names for remote sites. When you record a site name, the *Spoken name recorded* field is automatically set to "Yes" in the Remote site maintenance - Modify site screen. Within Networking Administration, the [Voice] softkey is available on the Add site and Modify site screens for Remote site maintenance.

Note 1: If a site is part of a CDP dialing plan only, the [Voice] softkey is not displayed and you cannot record a site name unless the *Mailbox numbering follows dialing plan* prompt is set to "No".

Note 2: A telephone set is required to record the site name. Ensure that a phone set is available near the administration terminal where you are working.

Figure 1-24xxx
Recording a site name

```
┌─────────────────────────────────────────────────────────────┐
│                                                              │
│                                                              │
│                                                              │
│                                                              │
│   ─────────────────────────────────────────────────────     │
│   Enter a phone number in Dialable format >                  │
│   ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐  │
│   │        │  │ Cancel │  │        │  │        │  │        │  │
│   └────────┘  └────────┘  └────────┘  └────────┘  └────────┘  │
└─────────────────────────────────────────────────────────────┘
```
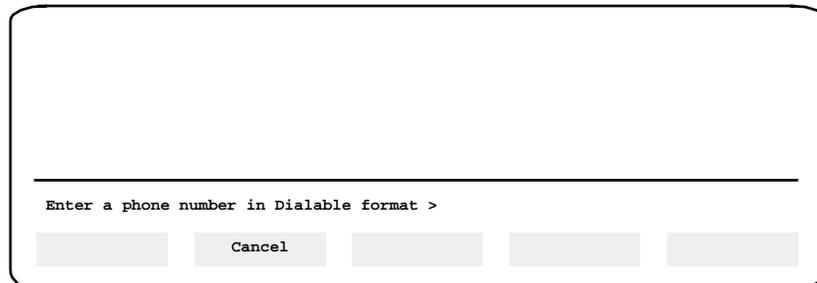
Figure 1-25xxx
Site name recording softkeys

```
 _____
|                                                      |
|                                                      |
|                                                      |
|                                                      |
|   _____|
|                                                      |
|  Select a softkey >                                  |
|   _____      _____      _____      _____      _____
|  | Return |   |  Play  |   | Record |   | Delete |   |Disconnect|
|   ‾‾‾‾‾‾‾      ‾‾‾‾‾‾‾      ‾‾‾‾‾‾‾      ‾‾‾‾‾‾‾      ‾‾‾‾‾‾‾‾
 ‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾
```
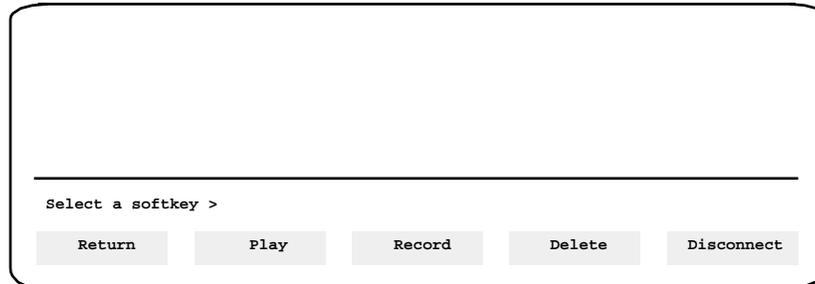
Procedure 1-17xxx
Recording site names

Starting point   The Add or Modify screens for Remote site maintenance

1   Press [Voice].

You are prompted to enter a phone number (Figure 1-24).

2   Enter the number of the phone set you are going to use to record a spoken name.

The row of softkeys changes to display a set of recording softkeys (Figure 1-25).

3   To record a new spoken name, go to step 3a.
To play an existing verification, go to step 3b.
To go step 3d delete a verification, go to step 3c.
To return to the original set of softkeys, go to step 3d.

   a.   Pick up the handset of the phone and then press [Record]. Wait for the beep and record the site name. When you press [Record], a new [Stop] softkey appears. Press [Stop] to stop the recording when you are done.

   b.   Pick up the handset of the phone and press [Play].

   If a verification is recorded, it will be played over the phone.

   c.   Pick up the handset of the phone and press [Delete].

   If a verification was recorded, it will be deleted and a prompt will be played advising you that the recording was deleted.

   d.   If you are satisfied with the recording, press either [Disconnect] or [Return] to display the original softkeys.

When you use [Return], the line is not disconnected (unless you hang up the receiver). This means that if you decide to re-record or listen to the recording, you do not have to re-enter the telephone extension after pressing the [Voice] softkey.

When you use [Disconnect], the line is disconnected and if you press [Voice] to access the recording softkeys again, you will have to re-enter the telephone extension.

Hybrid dialing plan

The hybrid network combines the ESN dialing plan and the CDP dialing plan. The network location may support one or both of the dialing plans. Figure 1-26 is an example of a hybrid network. Locations 0, 1, and 2 support ESN and CDP, and location 3 is CDP only. For simplicity, the most direct dialing between each location is described below. There are alternate routes using tandems. With tandems configured, routing restriction needs to be provisioned to prevent distant steering codes from looping back to the originating switch on facilities other than ISDN. The dialing between each location is as follows:

Location 0

- Dials location 1 with 6581XXXXX using ESN and 79XXX, 81XXX, and 8XXXX when using CDP. The distant steering codes are 79, 81, and 8, respectively. The ESN location code is 581.

- Dials location 2 with 6599XXXXX using ESN and 5XXXX when using CDP. The distant steering code is 5 and the ESN location code is 599.

- Dials location 3 with 41XXX using CDP.

Location 1

- Dials location 0 with 6572XXXXX with ESN and 88XXX and 74XXX when using CDP. The distant steering codes are 88 and 74. The ESN location code is 572.

- Dials location 2 with 6599XXXXX using ESN and 5XXXX when using CDP. The distant steering code is 5 and the ESN location code is 599.

- Dials location 3 with 41XXX using CDP.

Location 2

- Dials location 0 with 6572XXXXX with ESN and 88XXX and 74XXX when using CDP. The distant steering codes are 88 and 74. The ESN location code is 572.

- Dials location 1 with 6581XXXXX using ESN and 79XXX, 81XXX, and 8XXXX when using CDP. The distant steering codes are 79, 81, and 8, respectively. The ESN location code is 581.

- Dials location 3 with 41XXX using CDP.

Location 3

- Dials location 0 with 88XXX and 74XXX using CDP. The distant steering codes are 88 and 74, respectively.

- Dials location 1 with 79XXX, 81XXX, and 8XXXX using CDP. The distant steering codes are 79, 81, and 8, respectively.

- Dials location 2 with 5XXXX using CDP. The distant steering code is 5.

Figure 1-26xxx
Hybrid network with three Meridian 1/SL-1s
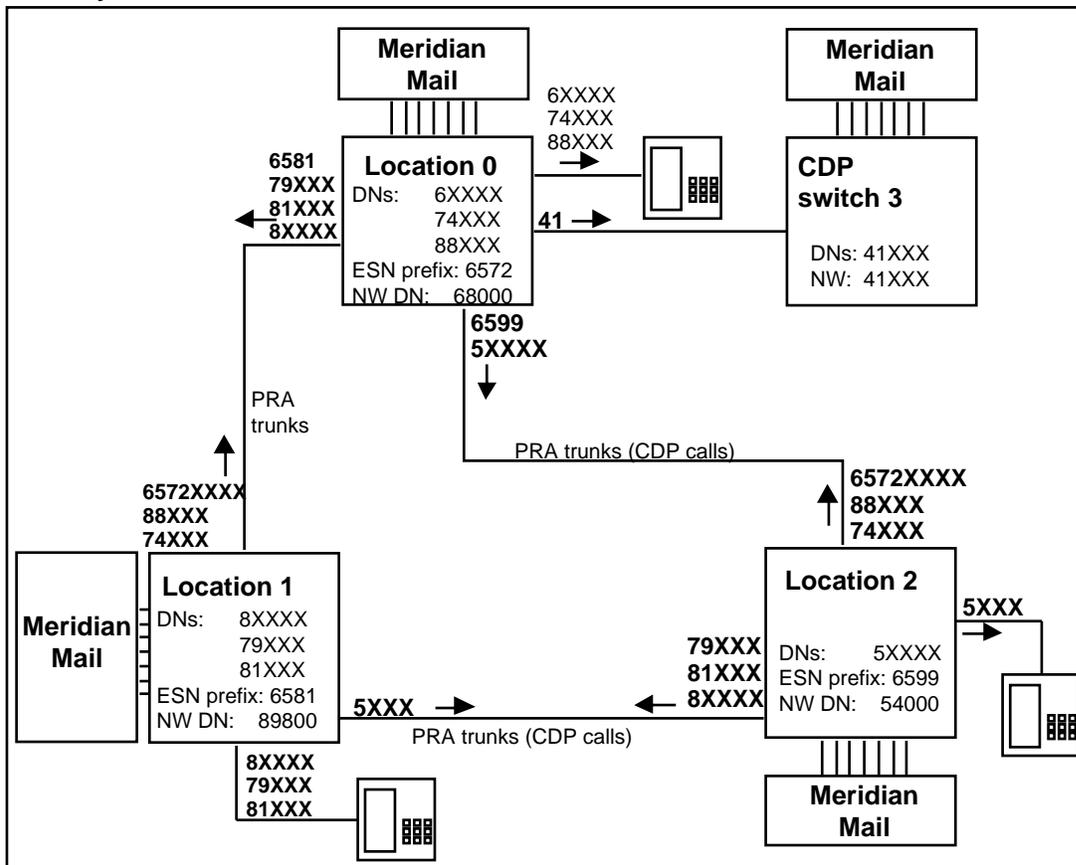
The main menu

This section shows the Network Administration screens used to configure Meridian Networking with a hybrid dialing plan only. For information on planning and configuring the Meridian 1, refer to the sections "Electronic switched network (ESN)" and "Coordinated dialing plan (CDP)" in this chapter.

From the main menu (Figure 1-27) select Network Administration to display the Network Administration menu.
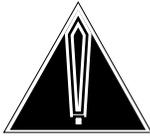
> **CAUTION**
> **Overnight system audits**
> If you leave the administrative terminal in any Network Administration menu overnight, important system audits may fail due to a lack of available memory.

Figure 1-27
The main menu

```
                        Main Menu

              21   User Administration

              22   General Administration

              23   Voice Administration

         *    24   Fax Administration

              25   Hardware Administration

              26   System Status and Maintenance

              27   Operational Measurements

        **    28   Network Administration

        ***   29   Hospitality Administration

              30   Class of Service Administration

 Select an item >

    Logoff
```

```
 *   This item is displayed only if Fax on Demand is installed.
 **  This item is displayed if at least one of the following is installed:
     Meridian Networking, AMIS Networking, or Network Message Service (NMS).
 ***This item is displayed only if Hospitality is installed.
```

Procedure 1-18xxx
Using the Network Administration menu

Starting Point: The main menu (single-customer systems) or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

See the next section, "The Network Administration menu".

2   To exit this menu, press [Exit].

The main menu is displayed.

The Network Administration menu

Meridian Networking administration involves local and remote site configuration, definition of holding times and stale times for urgent, standard and economy messages, and verification of message delivery between sites. The Network Administration menu (Figure 1-28) provides you with functions for adding remote sites, modifying the local site and remote site, and verifying the operational status of connections between sites.

Figure 1-28xxx
The Network Administration menu

```
                          Network Administration


              1   Local Site Maintenance

              2   Remote Site Maintenance

              3   Networking Scheduling Parameters

              4   Networking Verification Test




    _____

    Select an item >

     _____      _____      _____      _____      _____
        Exit        Print Network         Network                        Clear Remote
                        Data               Status                         Error Sites
```

Procedure 1-19xxx
Using the Network Administration menu

Starting Point: The main menu (single customer systems) or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

The Network Administration menu (Figure 1-28) is displayed.

2   To perform local site maintenance, go to step 2a.
To perform remote site maintenance, go to step 2b.
To view or modify networking scheduling parameters, go to step 2c.
To perform a networking verification test, go to step 2d.
To print network data, go to step 2e.
To view the network status, go to step 2f.
To clear error conditions in remote sites, go to step 2g.
To exit the Network Administration menu, go to step 2h.

a.   Select Local Site Maintenance.

The Local site maintenance - Modify site screen is displayed (see Figure 1-29).

b.   Select Remote Site Maintenance.

The Remote site maintenance - List sites screen is displayed (see Figure 1-30). From this screen you can add, modify or delete remote sites.

c.   Select Networking Scheduling Parameters.

The Networking Scheduling Parameters screen is displayed (see Figure 1-44) in which you can configure holding times and stale times for messages of different priorities.

d.   Select Networking Verification Test.

The Networking Verification Test screen is displayed (see Figure 1-45). This test allows you to ensure network operation before adding a new site.

e.   Press [Print Network Data].

This action prints local and remote site information from the network data base. Ensure that the printer is on-line before making this selection. See page 1-150 for details.

f.   Press [Network Status].

The number of messages queued for transmission are displayed in the Network Status screen. See Figure 1-46.

g.   Press [Clear Remote Error Sites].

Any remote site status that shows error conditions is cleared. View the Network Status screen to verify the status of the network. See the section "Error conditions" on page 1-141.

h. Press [Exit].

The main menu is displayed.

Local site maintenance (Hybrid)

When you select Local Site Maintenance from the Network Administration menu, you are prompted for the site number at the bottom of the screen (if you have not yet configured the local site). You will not be able to enter the Local site maintenance - Modify site screen until you enter a number.

Note: You cannot delete the local site.

Figure 1-29xxx
The Local site maintenance - Modify site screen

```
                           Network Administration

      Local site maintenance - Modify site

      Site number: 1_____
      Site Name:    Location 0_____

      Message Transfer:   [Enabled]    Disabled

      Dialing plan:      ESN      CDP    [Hybrid]     None
      Max number of digits in local mailbox:            _____

  *  ESN access codes:     6_____   _____
  *  Number of digits in common between ESN prefix and local ext:    0____
  ** Number of digits in common between CDP steering code and local ext: 2_____

      ESN/CDP ( The ESN code must begin with the first access code above ):

  #  1:6572_____     2:74_____
     3:88_____     4:_____
     5:_____     6:_____
     7:_____     8:_____
     .                 .
     .                 .
    49:_____    50:_____

     Mailbox numbering follows dialing plan:    [Yes]  No
  ***Mailbox prefixes:     _____

         Save            Cancel
```

```
     *   Only appears if dialing plan is ESN or Hybrid
     **  Only appears if dialing plan is CDP or Hybrid
     *** Only appears if mailbox numbering does not follow dialing plan.
     #   In a hybrid dialing plan, 1 ESN code and up to 49 CDP codes can be defined.
```

The following fields are displayed:

- *Site Number* The site number uniquely identifies the local site in the Meridian Mail network. It is entered when you select Local Site Maintenance for the first time. This number (as well as remote site numbers) should be obtained from the network administrator to ensure the number is not already in use. The valid range is from 1 to 500.

  Note: Once you enter the site number, it can only be changed by using the "Change Local Site ID" utility. (See *System Administration Tools*.) Before using this utility, you will have to create a dummy remote site as this utility only accepts an existing remote ID as the new local site ID. If you change the local site ID after users have been set up, the system will not recognize their mailbox numbers due to invalid site IDs.

- *Site name* This field is mandatory. The field can contain up to 32 alphanumeric characters. There is no default.

- *Message Transfer* This field allows you to enable or disable networking at the local site. This field must be enabled for users at the local site to send messages to remote sites. The default is "Enabled".

- *Dialing plan* The selection you make must reflect the dialing plan that is in place. The default is "Hybrid". (See "Dialing plans and location codes" earlier in this chapter.)

- *Max number of digits in local mailbox* Enter the maximum number of digits allowed in mailbox numbers at the local site. This number is used by the system to check whether mailbox numbers specified in messages from remote sites are valid. For example, if this value is "4" and a message is received from a remote site containing a mailbox address that is six digits in length, the system will reject the message. If you are unsure, enter the maximum allowable value of "18". The default is "4".

- *ESN access codes* This field is mandatory if the dialing plan is ESN. This code is used to access the ESN network from this site's switch. You may enter two different ESN access codes of one or two digits each. A typical access code is "6" or "9". Check your dialing plan for the ESN access code for the local site's switch.

  Note 1: If one of your ESN access codes is "9", this will create a conflict with the default broadcast mailbox number (999). You will

have to change the broadcast mailbox number in order to avoid this conflict.

Note 2: The ESN access code cannot match the left-most digits of any local mailbox. For example, if there is a local mailbox number 6122, the access code cannot be (or begin with) "6".

- *Number of digits in common between ESN prefix and local ext* This field appears only when the dialing plan is ESN or Hybrid. This number indicates the number of digits in the ESN prefix that overlap with local extensions. For example, your local extensions are five digits long and all begin with "8". Your ESN prefix is "338". If you enter "0" (no overlap) in this field, users at remote sites will have to enter an eight-digit DN when addressing messages to your site (such as 33883000). If you enter "1" in this field, indicating that the last digit of the prefix and the first digit of the extension overlap, remote users will specify a seven-digit address (3383000). The selection you make here must conform with your local site's dialing plan (if there are digits in common between the prefix and local extensions, they may or may not overlap.)

Note 1: To enter a non-zero value in this field, the mailbox numbers of all users you enter for this site must begin with the overlap digit(s) of the ESN prefix. For example, if the last digit of the ESN prefix is "8" and it overlaps with the local extensions, then all mailboxes at this site must begin with "8".

Note 2: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the ESN prefix and the local extensions, use the default setting of "0".

- *Number of digits in common between CDP steering code and local ext* This field only appears if the dialing plan is CDP or Hybrid. This number indicates the number of digits in the CDP steering code that overlap with the local extension. These codes need not overlap. Specify the length of the CDP code in this field. Refer to your dialing plan.

Note: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the CDP code and the local extensions, enter a value of "0".

- *ESN/CDP codes* ESN prefixes and CDP steering codes are location prefixes that identify the local site within the network and must therefore be unique within the ESN or CDP network.

  If the local site is part of an ESN network, remote users must precede the mailbox numbers of local voice users with the ESN prefix entered here. If the local site is part of a CDP network, the CDP steering code is already part of the mailbox number as far as users are concerned. (Even though this is the case, the CDP steering codes must still be defined here because the system needs to be able to distinguish the steering code from the mailbox number.)

  The first field is intended for the ESN prefix. (Only one ESN prefix can be entered.) This prefix must begin with the one- or two-digit access code that is defined in the *ESN Access Codes* field (if more than one access code has been defined, be sure to enter the one in the first field). For example, if the first ESN access code is "6" and the ESN prefix is "344", enter "6344" in this field.

  If the dialing plan for the local site is "Hybrid", enter the ESN prefix in the first field and up to nine CDP steering codes.

  In a CDP-only dialing plan up to 50 steering codes may be entered for a site. For example, if either 35xxx or 36xxx can be used to reach extension xxx at the local site, enter 35 and 36 as the steering codes.

  Note: These fields are not displayed if there is no dialing plan at the local site.

- *Mailbox numbering follows dialing plan* This field allows you to select whether or not mailbox numbering will emulate the dialing plan (telephone extensions). If you answer "No", the following field, *Mailbox prefixes*, appears. The default is "Yes".

  Note: This field is not displayed if the dialing plan is set to "None". Instead, the *Mailbox number equals local extension* field is displayed.

- *Mailbox prefixes* These prefixes identify the local site within the network when mailbox numbering does not follow the dialing plan. This prefix does not have any overlap with local mailbox numbers and is independent of the CDP steering codes. Make sure that the numbers you enter do not conflict with other network data.

Procedure 1-20xxx
Configuring the local site

Starting Point: The main menu (single customer systems) or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

The Network Administration menu (Figure 1-28) is displayed.

2   Select Local Site Maintenance.

The Local site maintenance - Modify site screen is displayed (see Figure 1-29).

3   Fill in the fields as described in the preceding pages.

4   To save the configuration, go to step 4a.
To exit the screen without saving your changes, go to step 4b.

   a.   Press [Save].

      Any changes that you have made are saved. The Network Administration menu is displayed.

   b.   Press [Cancel].

      Any changes that you have made are discarded and the Network Administration menu is displayed.

Remote site maintenance (Hybrid)

When you select Remote Site Maintenance from the Network Administration menu, the Remote site maintenance - List sites screen is displayed. Through various screens you can add, modify and delete remote sites.

Listing remote sites

The Remote site maintenance - List sites screen (Figure 1-30) lists all of the remote sites that are part of the Meridian Mail network. The softkeys displayed on this screen allow you to add new remote sites to the network or select an existing site in order to view, modify or delete it.

Figure 1-30xxx
The Remote site maintenance - List sites screen

```
                        Network Administration

Remote site maintenance - List sites


Site            Site Name            Message Center#

  5             City1                   No
 10             City2                   No
 20             City3                   Yes
```

| Exit | Add | View/Modify | Delete | List Locations |

The following read-only fields are displayed:

- *Site* The Site ID for the remote site.

- *Site Name* The name corresponding to the remote site.

- *Message Center* This field is set to "Yes" if the remote site is an NMS site. (If any of your remote sites are message centers, refer to Chapter 5 which describes procedures for systems with both networking and NMS installed.)

Procedure 1-21xxx
Listing remote sites

Starting Point: The main menu or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

The Network Administration menu is displayed.

2   Select Remote Site Maintenance.

The Remote site maintenance - List sites screen (Figure 1-30) is displayed.

Adding remote sites
The Remote site maintenance - Add site screen (Figure 1-31) allows you to
define new remote sites in the Meridian Mail network. When you press
[Add] on the Remote site maintenance - List sites screen, you are prompted
for a remote site ID. After you enter an ID and press <Return>, the Remote
site maintenance - Add site screen is displayed. (Remote sites may be NMS
message centers even if the local site is not. Refer to Chapter 5 if you are
adding a remote NMS site.)

If AMIS is installed at the local site, remote AMIS sites can also be added
to the Meridian Mail network from the Add Remote Site form. Certain
fields need to be configured somewhat differently than for normal remote
sites: these are the *Message Transfer Protocol* field and the *Networking
Connection* fields. See the descriptions of these fields for more details.

> *Note:* Before adding a remote site to the Meridian Mail network you
> should perform a verification test to ensure proper operation of the
> networking service between the local site and the remote site. The
> networking verification test is described on page 1-145.

Figure 1-31xxx
The Remote site maintenance - Add site screen

```
                    Network Administration

   Remote site maintenance - Add site

   Site number:     1_____
   Site Name:       Location 1_____

   Message Transfer:              [Enabled]   Disabled
   Site is network message center? [No]   Yes

   Networking Connection:
      DN 1:  6581_____
      DN 2:  8900_____
      DN 3:  89800_____

   Password
      Initiating:  _____
      Responding:  _____

   Dialing plan:      ESN      CDP      [Hybrid]     None
   Max number of digits in local mailbox:  _____

 * ESN access codes:    6_____
 * Number of Digits in common between ESN prefix and local ext:    0_
** Number of digits in common between CDP steering code and local ext:  2_____

   ESN/CDP ( The ESN code must begin with n):

 # 1:6581_____       2:8_____
   3:79_____         4:81_____
   5:_____         6:_____
   7:_____         8:_____
   9:_____        10:_____
   .                     .
   .                     .
   49:_____        50:_____

   Mailbox numbering follows dialing plan:     Yes    [No]

***Spoken name recorded    No

     Save            Cancel                     Voice***
```

```
 *    Only appears if dialing plan is ESN or Hybrid.
 **   Only appears if dialing plan is CDP or Hybrid.
 ***  Only appears if Mailbox numbering follows dialing plan is set to No.
 #    In a hybrid dialing plan, 1 ESN code and up to 49 CDP codes can be defined.
```

Note: The *n* in the *ESN/CDP codes* field represents the ESN access code that is configured in the Local site maintenance screen. If two access codes are defined in that screen, the one entered in the first field is displayed here.

The following fields are displayed on the Remote site maintenance - Add site screen:

- *Site number* This field is mandatory. The site number uniquely identifies the remote site in the Meridian Mail network. Site numbers should be obtained from the network administrator to ensure the number is not already in use. The valid range is from 1 to 500.

- *Site Name* This field is mandatory. The site name should uniquely identify the remote site. The field can contain up to 32 alphanumeric characters. There is no default.

- *Message Transfer* This field must be set to "Enabled" for local users to send messages to the remote site. Select "Disabled" if you must temporarily disable message delivery to the remote site. The default is "Enabled".

- *Site is network message center?* Does this remote site have the Network Message Services feature installed? This field change will only go into effect when the form is saved.

- *Networking Connection DN 1, DN 2, DN 3* These are the telephone numbers that are used to establish a connection to the networking service at the remote site. For a remote Meridian Networking site, enter the number used to dial out of the system to reach the remote site (for example, 95552345). The DN can be up to 30 digits long and may include the digits 0 to 9 and special symbols * and #, where * inserts a 3-second pause in the sending of digits, and # indicates end-of-dialing. Because DNs are used in the given order, enter the least costly DN as DN 1, and the most costly DN as DN 3. A minimum of one DN must be defined.

- *Initiating Password* This field is mandatory. The initiating password is the password that the originating site sends to the remote site when initiating a message transfer session.

- *Responding Password* This field is mandatory. The responding password is the password that the site receives when a remote site initiates a message transfer call.

- *Dialing plan* The selection you make must reflect the dialing plan that is in place. The default is "Hybrid". (See "Dialing plans and location codes" earlier in this chapter.) Note that in a CDP dialing plan, remote sites are transparent to voice messaging users because no special

prefixes are required to dial out to them (because the steering code is already part of the mailbox number). Therefore if this site is part of a CDP dialing plan only, the [Voice] key is not displayed as a recorded site name is not required.

If you select "None", the *Mailbox numbering follows dialing plan* field is not displayed. Instead, the *Mailbox number equals local extension* field is displayed.

Note: If you change a site from Hybrid to CDP, the spoken site name is removed. If you change the site back to Hybrid, you will have to re-record the verification.

- *Max number of digits in local mailbox* Enter the maximum number of digits allowed in mailbox numbers at the remote site. The maximum allowable value is 18, or 16 if the AMIS protocol is selected for the site. If you are unsure, enter the maximum allowable value of 18 (or 16). The default is "4".

- *ESN access codes* This field is mandatory if the dialing plan is ESN. This code is used to access the ESN network from this site's switch. You may enter two different ESN access codes of one or two digits each. A typical access code is "6" or "9". Check your dialing plan for the ESN access code for the local site's switch.

  Note 1: If one of your ESN access codes is "9", this will create a conflict with the default broadcast mailbox number (999). You will have to change the broadcast mailbox number in order to avoid this conflict.

  Note 2: The ESN access code cannot match the left-most digits of any local mailbox. For example, if there is a local mailbox number 6122, the access code cannot be (or begin with) "6".

- *Number of digits in common between ESN prefix and local ext* This field appears only when the dialing plan is ESN or Hybrid. This number indicates the number of digits in the ESN prefix that overlap with extensions that are local to the remote site. For example, the local extensions at the remote site are five digits long and all begin with "8". The remote ESN prefix is "338". If you enter "0" (no overlap) in this field, users at other sites will have to enter an eight-digit DN when addressing messages to this site (such as 33883000). If you enter "1" in this field, indicating that the last digit of the prefix and the first digit of

the extension overlap, users will specify a seven-digit address (3383000). The selection you make here must conform with the remote site's dialing plan (if there are digits in common between the prefix and local extensions, they may or may not overlap.)

Note 1: To enter a non-zero value in this field, the mailbox numbers of all users you enter for this site must begin with the overlap digit(s) of the ESN prefix. For example, if the last digit of the ESN prefix is "8" and it overlaps with the local extensions, then all mailboxes at this site must begin with "8".

Note 2: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the ESN prefix and the local extensions, use the default setting of "0".

- *Number of digits in common between CDP steering code and local ext* This field only appears if the dialing plan is CDP or Hybrid. This number indicates the number of digits in the CDP steering code that overlap with the extensions that are local to the remote site. These codes need not overlap. Specify the length of the CDP code in this field. Refer to your dialing plan.

  Note: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the CDP code and the local extensions, enter a value of "0".

- *ESN/CDP codes* The ESN prefix and CDP steering codes are location prefixes that identify the remote site within the network and must therefore be unique within the ESN or CDP network. Check with the administrator at the remote site to determine the ESN prefix or CDP steering codes that apply.

  When a user at the local site sends a voice message to a user at the remote site that uses an ESN numbering plan, he or she must precede the remote mailbox number with the ESN prefix entered here. If the remote site is part of a CDP network, the CDP steering code is already part of the mailbox number as far as users are concerned. (Even though this is the case, the CDP steering codes must still be defined here because the system needs to be able to distinguish the steering code from the mailbox number.)

  The first field is intended for the ESN prefix. (Only one ESN prefix can be entered.) This prefix must begin with the one- or two-digit

access code that is defined in the Local Site Maintenance screen. The actual access code is displayed in the field title to remind you. For example, if the ESN access code is "6" and the ESN prefix is "344", enter "6344" in this field.

If the dialing plan for the remote site is "Hybrid", enter the ESN prefix in the first field and up to nine CDP steering codes.

In a CDP-only dialing plan up to ten steering codes may be entered for a site. For example, if either 35xxx or 36xxx can be used to reach extension xxx at the remote site, enter 35 and 36 as the steering codes.

Note: CDP codes cannot match the leading digits of a local mailbox number. If this occurs and a local user addresses a message to another local user whose mailbox begins with a CDP steering code, Meridian Mail will attempt to send the voice message to the remote site rather than to the local mailbox.

- *Mailbox numbering follows dialing plan* In this field, specify whether or not mailbox numbering emulates the dialing plan (telephone extensions) at the remote site. If it does not, the following field, *Mailbox prefixes*, is displayed and you must enter the location codes as mailbox prefixes. (This field is not displayed if the dialing plan is "None".)

- *Mailbox prefixes* These prefixes function as location codes and are used to identify the remote site within the network when there is no dialing plan or if mailbox numbering does not follow the dialing plan at the remote site. These prefixes do not have any overlap with local mailbox numbers and are independent of the CDP steering codes. Make certain that these prefixes do not conflict with other network data.

- *Spoken name recorded* This field applies if the *Mailbox numbering follows dialing plan* field is set to No. It indicates whether or not a site name has been recorded for the site. A spoken site name makes it easier for users to identify the remote site when addressing voice messages to remote voice users. The site name recording (followed by the local mailbox digits) is played to voice messaging users when addressing messages to remote voice users. If the site name is not recorded, users hear the location prefix spoken out.

Procedure 1-22xxx
Adding remote sites

Starting Point: The main menu or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

     The Network Administration menu is displayed.

2   Select Remote Site Maintenance.

     The Remote site maintenance - List sites screen (Figure 1-30) is displayed.

3   Press [Add].

     You are prompted for the ID of the remote site to be added.

4   Enter a number for the remote site.

     The Remote site maintenance - Add site screen is displayed. See Figure 1-31.

5   Fill in the fields as required. See the field descriptions on the preceding pages.

6   To save the remote site configuration, go to step 7a.
     To exit the screen without saving your changes, go to step 7b.

     a.   Press [Save].

           Any changes that you have made are saved. You are prompted to enter the next remote site ID. If you have more sites to add, enter the ID and press <Return>. If you do not have more sites to add, press [Cancel].

     b.   Press [Cancel].

           Any changes that you have made are discarded and the Remote site maintenance - List sites screen is displayed.

Viewing and modifying remote sites

Once you have added remote sites to the network, you can alter their characteristics by accessing the Remote site maintenance - Modify site screen. To display the screen, access the Remote site maintenance - List sites screen, move the cursor to the site you want to modify, press <Spacebar> to select it, then press [View/Modify]. This screen is identical to the Remote site maintenance - Add site screen if the site you are modifying is not a message center. See the previous section, "Adding remote sites", for descriptions of the fields and the actions that are possible.

Note: If you are modifying an NMS site, the screen will be different. See Chapter 5 for information.

Procedure 1-23xxx
Viewing and modifying remote sites

Starting Point: The main menu or the Customer Administration menu (multicustomer systems)

1 Select Network Administration.

The Network Administration menu is displayed.

2 Select Remote Site Maintenance.

The Remote site maintenance - List sites screen (Figure 1-30) is displayed.

3 Move the cursor to the site you want to view or modify and press <Spacebar> to select it.

4 Press [View/Modify].

The Remote site maintenance - Modify site screen is displayed. It is identical to the Remote site maintenance - Add site screen.

5 Fill in the fields as required. See the field descriptions on the preceding pages.

6 To save the remote site configuration, go to step 7a.
To exit the screen without saving your changes, go to step 7b.

   a.   Press [Save].

      Any changes that you have made are saved and the Remote site maintenance - List sites screen is displayed.

   b.   Press [Cancel].

      Any changes that you have made are discarded and the Remote site maintenance - List sites screen is displayed.

Deleting remote sites

Remote sites are removed from the network database from the Remote site maintenance - List sites screen. When you select a site and then press the [Delete] softkey, a new set of softkeys is displayed.

> *Note:* Messages that have been sent but not delivered to a remote site that has been deleted are returned with a nondelivery notification (NDN).

Figure 1-32xxx
The Delete Remote Site softkeys

```
 _____
|                                                                  |
|                                                                  |
|   _____   |
|                                                                  |
|                                                                  |
|   OK to Delete        Cancel                                     |
|_____|
```

Procedure 1-24xxx
Deleting remote sites

Starting point   The main menu or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

   The Network Administration menu is displayed.

2   Select Remote Site Maintenance.

   The Remote site maintenance - List sites screen (Figure 1-30) is displayed.

3   Use the cursor keys to highlight the remote site you want to delete.

4   Press <Spacebar> to select the site.

5   Press [Delete].

   The softkeys shown in Figure 1-32 are displayed.

6 Choose step 6a to delete the site, or 6b to cancel the delete operation and return to the Remote site maintenance - List sites screen.

    a. Press [OK to Delete].

       The system purges the site. You are prompted for another site number.

       To delete another site, enter the site number and press <OK to Delete>.

    b. Press [Cancel].

       The site is not deleted and the Remote site maintenance - List sites screen is re-displayed.

Recording site names using the [Voice] softkey

The [Voice] softkey is used to provide a new set of softkeys for recording, playing and deleting names for remote sites. When you record a site name, the *Spoken name recorded* field is automatically set to "Yes" in the Remote site maintenance - Modify site screen. Within Networking Administration, the [Voice] softkey is available on the Add site and Modify site screens for Remote site maintenance.

Note 1: If a site is part of a CDP dialing plan only, the [Voice] softkey is not displayed and you cannot record a site name unless the *Mailbox numbering follows dialing plan* prompt is set to "No".

Note 2: A telephone set is required to record the site name. Ensure that a phone set is available near the administration terminal where you are working.

Figure 1-33xxx
Recording a site name

```
Enter a phone number in Dialable format >
                         Cancel
```
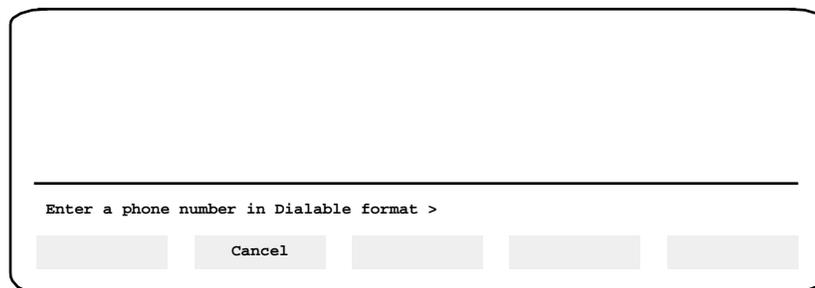
Figure 1-34xxx
Site name recording softkeys

```
Select a softkey >
    Return          Play          Record          Delete          Disconnect
```
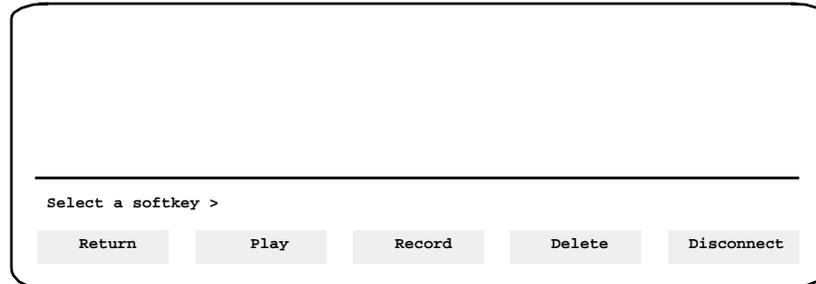
Procedure 1-25xxx
Recording site names

Starting point   The Add or Modify screens for Remote site maintenance

1   Press [Voice].

You are prompted to enter a phone number (Figure 1-33).

2   Enter the number of the phone set you are going to use to record a spoken name.

The row of softkeys changes to display a set of recording softkeys (Figure 1-34).

3   To record a new spoken name, go to step 3a.
To play an existing verification, go to step 3b.
To delete a verification, go to step 3c.
To return to the original set of softkeys, go to step 3d.

a.   Pick up the handset of the phone and then press [Record]. Wait for the beep and record the site name. When you press [Record], a new [Stop] softkey appears. Press [Stop] to stop the recording when you are done.

b.   Pick up the handset of the phone and press [Play].

If a verification is recorded, it will be played over the phone.

c.   Pick up the handset of the phone and press [Delete].

If a verification was recorded, it will be deleted and a prompt will be played advising you that the recording was deleted.

d.   If you are satisfied with the recording, press either [Disconnect] or [Return] to display the original softkeys.

When you use [Return], the line is not disconnected (unless you hang up the receiver). This means that if you decide to re-record or listen to the recording, you do not have to re-enter the telephone extension after pressing [Voice].

When you use [Disconnect], the line is disconnected and if you press [Voice] to access the recording softkeys again, you will have to re-enter the telephone extension.

No dialing plan set (None)

When the dialing plan is set to "None", sites may be configured to use different dialing prefixes to reach a specific remote site, however, Meridian Mail will not be able to represent the numbering plan. A tie-line is an example of a network with no coordinated dialing plan. In this case a mailbox prefix should be entered to allow users to compose to mailboxes at this remote site, as the mailbox numbering plan will be independent of the dialing plan.

When there is no specified dialing plan, Meridian Mail is required to enter the trunk access code, followed by

- NPA + Nxx + xxxx (for long distance)

- Nxx + xxxx (for local)

- xxxx (across tie line)

A provision must be made for this format when entering network connection DNs for remote sites. Figure 1-35 shows a network set up with the dialing plan set to "None".

Figure 1-35
Meridian Network set up with no dialing plan
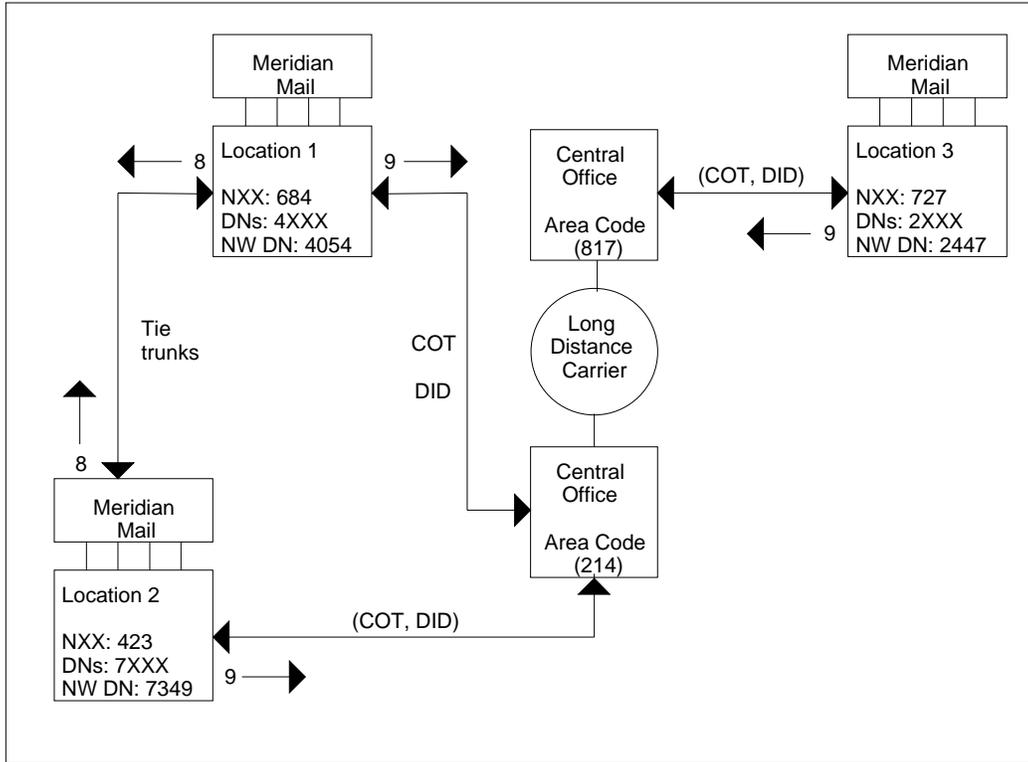
The main menu

From the main menu (Figure 1-36) select Network Administration to
display the Network Administration menu. This section describes Meridian
Networking with no dialing plan set.
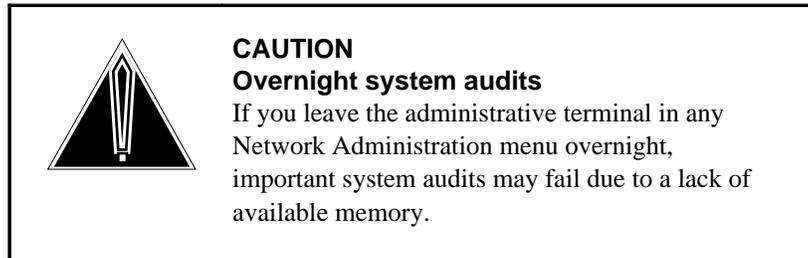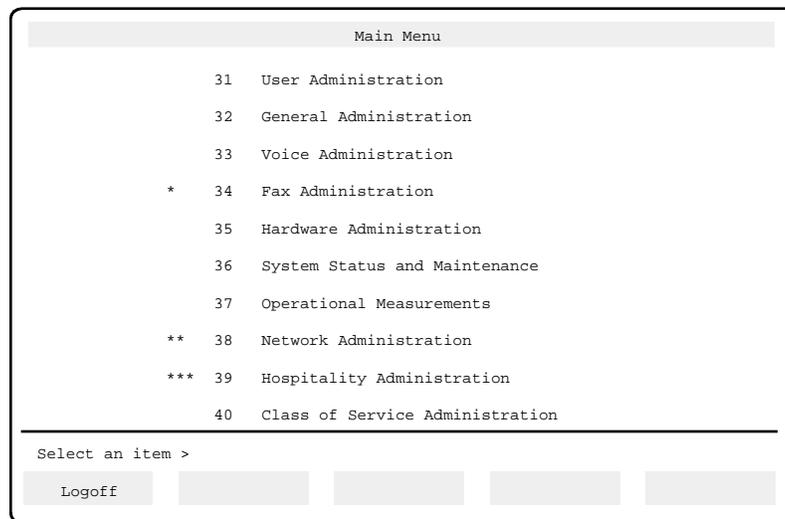
⚠ **CAUTION**
Overnight system audits
If you leave the administrative terminal in any
Network Administration menu overnight,
important system audits may fail due to a lack of
available memory.

Figure 1-36
The main menu

```
                             Main Menu

                    31   User Administration

                    32   General Administration

                    33   Voice Administration

              *     34   Fax Administration

                    35   Hardware Administration

                    36   System Status and Maintenance

                    37   Operational Measurements

              **    38   Network Administration

              ***   39   Hospitality Administration

                    40   Class of Service Administration

 Select an item >

    Logoff
```

```
 *   This item is displayed only if Fax on Demand is installed.
 **  This item is displayed if at least one of the following is installed:
     Meridian Networking, AMIS Networking, or Network Message Service (NMS).
 ***This item is displayed only if Hospitality is installed.
```

Procedure 1-26xxx
Using the Network Administration menu

Starting Point: The main menu (single-customer systems) or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

See the next section, "The Network Administration menu".

2   To exit this menu, press [Exit].

The main menu is displayed.

The Network Administration menu

Meridian Networking administration involves local and remote site configuration, definition of holding times and stale times for urgent, standard and economy messages, and verification of message delivery between sites. The Network Administration menu (Figure 1-37) provides you with functions for adding remote sites, modifying the local site and remote site, and verifying the operational status of connections between sites.

Figure 1-37xxx
The Network Administration menu

```
                        Network Administration


        1   Local Site Maintenance

        2   Remote Site Maintenance

        3   Networking Scheduling Parameters

        4   Networking Verification Test




   _____
   Select an item >

   ┌──────────┐  ┌──────────────┐  ┌──────────┐  ┌───┐  ┌──────────────┐
   │   Exit   │  │Print Network │  │ Network  │  │   │  │Clear Remote  │
   │          │  │    Data      │  │  Status  │  │   │  │ Error Sites  │
   └──────────┘  └──────────────┘  └──────────┘  └───┘  └──────────────┘
```
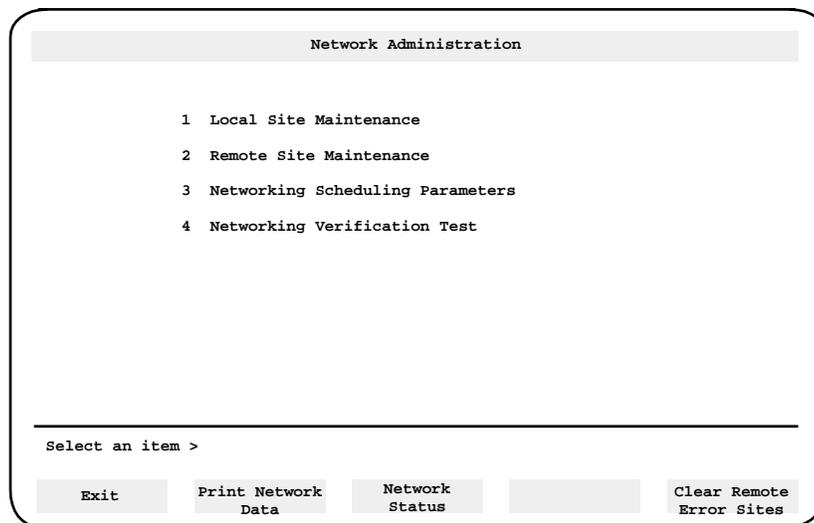
Procedure 1-27xxx
Using the Network Administration menu

Starting Point: The main menu (single customer systems) or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

The Network Administration menu (Figure 1-37) is displayed.

2   To perform local site maintenance, go to step 2a.
To perform remote site maintenance, go to step 2b.
To view or modify networking scheduling parameters, go to step 2c.
To perform a networking verification test, go to step 2d.
To print network data, go to step 2e.
To view the network status, go to step 2f.
To clear error conditions in remote sites, go to step 2g.
To exit the Network Administration menu, go to step 2h.

a.   Select Local Site Maintenance.

The Local site maintenance - Modify site screen is displayed (see Figure 1-38).

b.   Select Remote Site Maintenance.

The Remote site maintenance - List sites screen is displayed (see Figure 1-39). From this screen you can add, modify or delete remote sites.

c.   Select Networking Scheduling Parameters.

The Networking Scheduling Parameters screen is displayed (see Figure 1-44) in which you can configure holding times and stale times for messages of different priorities.

d.   Select Networking Verification Test.

The Networking Verification Test screen is displayed (see Figure 1-45). This test allows you to ensure network operation before adding a new site.

e.   Press [Print Network Data].

This action prints local and remote site information from the network data base. Ensure that the printer is on-line before making this selection. See page 1-150 for details.

f.   Press [Network Status].

The number of messages queued for transmission are displayed in the Network Status screen. See Figure 1-46.

g.   Press [Clear Remote Error Sites].

Any remote site status that shows error conditions is cleared. View the Network Status screen to verify the status of the network. See the section "Error conditions" earlier in this chapter.

h.   Press [Exit].

The main menu is displayed.

Local site maintenance (No dialing plan)

When you select Local Site Maintenance from the Network Administration menu, you are prompted for the site number at the bottom of the screen (if you have not yet configured the local site). You will not be able to enter the Local site maintenance - Modify site screen until you enter a number.

Note: You cannot delete the local site.

Figure 1-38xxx
The Local site maintenance - Modify site screen

```
                        Network Administration

    Local site maintenance - Modify site

    Site number: 1_____
    Site Name:    Location 0_____

    Message Transfer:   [Enabled]    Disabled

    Dialing plan:      ESN      CDP    Hybrid    [None]
    Max Number of digits in local mailbox:      4_____


    Mailbox number equals local extension:    Yes    [No]
  * Mailbox prefixes:   _____




    _____

         Save          Cancel
```

*   Only appears if mailbox numbering does not equal the local extension.

The following fields are displayed:

- *Site number* The site number uniquely identifies the local site in the Meridian Mail network. It is entered when you select Local Site Maintenance for the first time. This number (as well as remote site numbers) should be obtained from the network administrator to ensure the number is not already in use. The valid range is from 1 to 500.

  Note: Once you enter the site number, it can only be changed by using the "Change Local Site ID" utility. (See *System Administration Tools*.) Before using this utility, you will have to create a dummy remote site as this utility only accepts an existing remote ID as the new local site ID. If you change the local site ID after users have been set up, the system will not recognize their mailbox numbers due to invalid site IDs.

- *Site Name* This field is mandatory. The field can contain up to 32 alphanumeric characters. There is no default.

- *Message Transfer* This field allows you to enable or disable networking at the local site. This field must be enabled for users at the local site to send messages to remote sites. The default is "Enabled".

- *Dialing plan* The selection you make must reflect the dialing plan that is in place. The default is "Hybrid". (See "Dialing plans and location codes" earlier in this chapter.)

- *Max number of digits in local mailbox* Enter the maximum number of digits allowed in mailbox numbers at the local site. This number is used by the system to check whether mailbox numbers specified in messages from remote sites are valid. For example, if this value is "4" and a message is received from a remote site containing a mailbox address that is six digits in length, the system will reject the message. If you are unsure, enter the maximum allowable value of "18". The default is "4".

- *Mailbox Number equals local extension* This field allows you to select whether or not mailbox numbering will equal the local extension. If you answer "No", the following field, *Mailbox prefixes*, appears. The default is "Yes".

- *Mailbox prefixes* These prefixes identify the local site within the network when mailbox numbering does not follow the dialing plan. This prefix does not have any overlap with local mailbox numbers. Make sure that the numbers you enter do not conflict with other network data.

Procedure 1-28xxx
Configuring the local site

Starting Point: The main menu (single-customer systems) or the Customer Administration menu (multicustomer systems)

1 Select Network Administration.

   The Network Administration menu (Figure 1-37) is displayed.

2 Select Local Site Maintenance.

   The Local site maintenance - Modify site screen is displayed (see Figure 1-38).

3 Fill in the fields as described in the preceding pages.

4 To save the configuration, go to step 4a.
   To exit the screen without saving your changes, go to step 4b.

   a. Press [Save].

       Any changes that you have made are saved. The Network Administration menu is displayed.

   b. Press [Cancel].

       Any changes that you have made are discarded and the Network Administration menu is displayed.

Remote site maintenance (No dialing plan)

When you select Remote Site Maintenance from the Network Administration menu, the Remote site maintenance - List sites screen is displayed. Through various screens you can add, modify and delete remote sites.

Listing remote sites

The Remote site maintenance - List sites screen (Figure 1-39) lists all of the remote sites that are part of the Meridian Mail network. The softkeys displayed on this screen allow you to add new remote sites to the network or select an existing site in order to view, modify or delete it.

Figure 1-39xxx
The Remote site maintenance - List sites screen

```
                    Network Administration

Remote site maintenance - List sites


Site           Site Name          Message Center#

  5            City1                  No
 10            City2                  No
 20            City3                  Yes




_____


                                                    List
     Exit           Add         View/Modify    Delete      Locations
```

The following read-only fields are displayed:

- *Site* The Site ID for the remote site.

- *Site Name* The name corresponding to the remote site.

- *Message Center* This field is set to "Yes" if the remote site is an NMS
  site. (If any of your remote sites are message centers, refer to Chapter 5
  which describes procedures for systems with both networking and
  NMS installed.)

Procedure 1-29xxx
Listing remote sites

Starting Point: The main menu or the Customer Administration menu
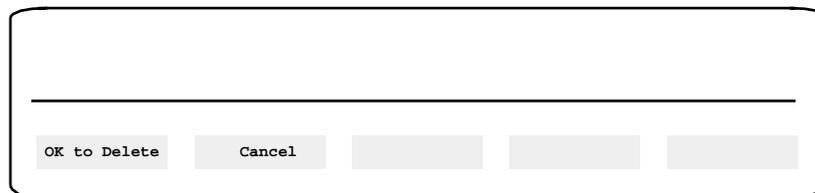(multicustomer systems)

1   Select Network Administration.

The Network Administration menu is displayed.

2   Select Remote Site Maintenance.

*The Remote site maintenance - List sites screen (Figure 1-39) is
displayed.*

Adding remote sites

The Remote site maintenance - Add site screen (Figure 1-40) allows you to define new remote sites in the Meridian Mail network. When you press [Add] on the Remote site maintenance - List sites screen, you are prompted for a remote site ID. After you enter an ID and press <Return>, the Remote site maintenance - Add site screen is displayed. (Remote sites may be NMS message centers even if the local site is not. Refer to Chapter 5 if you are adding a remote NMS site.)

If AMIS is installed at the local site, remote AMIS sites can also be added to the Meridian Mail network from the Remote site maintenance - Add site screen. Certain fields need to be configured somewhat differently than for normal remote sites: these are the *Message Transfer Protocol* field and the *Networking Connection* fields. See the descriptions of these fields for more details.

> *Note:* Before adding a remote site to the Meridian Mail network you should perform a verification test to ensure proper operation of the networking service between the local site and the remote site. The networking verification test is described on page 1-145.

Figure 1-40xxx
The Add Remote Site screen

```
                        Network Administration

 Remote site maintenance - Add site

 Site number:      2
 Site Name:        Location 2

 Message Transfer:                  [Enabled]   Disabled
 Site is network message center?  [No]   Yes

 Networking Connection:
    DN 1:  87349
    DN 2:  94237349
    DN 3:

 Password
    Initiating:
    Responding:

 Dialing plan:      ESN      CDP      Hybrid    [None]
 Max number of digits in local mailbox:
 Mailbox number equals local extension:       Yes    [No]
 *  Dial prefix:
 ** Mailbox prefixes:
    Spoken name recorded:  No




        Save             Cancel                      Voice***
```

```
 *    Only appears if dialing plan is None.
 **   Only appears if Mailbox number equals local extension is set to No.
```

The following fields are displayed on the Remote site maintenance - Add site screen:

- *Site number* This field is mandatory. The site number uniquely identifies the remote site in the Meridian Mail network. Site numbers should be obtained from the network administrator to ensure the number is not already in use. The valid range is from 1 to 500.

- *Site Name* This field is mandatory. The site name should uniquely identify the remote site. The field can contain up to 32 alphanumeric characters. There is no default.

- *Message Transfer* This field must be set to "Enabled" for local users to send messages to the remote site. Select "Disabled" if you must temporarily disable message delivery to the remote site. The default is "Enabled".

- *Site is network message center?* Does this remote site have the Network Message Services feature installed? This field change will only go into effect when the form is saved.

- *Networking Connection DN 1, DN 2, DN 3* These are the telephone numbers that are used to establish a connection to the networking service at the remote site. For a remote Meridian Networking site, enter the number used to dial out of the system to reach the remote site (for example, 95552345). The DN can be up to 30 digits long and may include the digits 0 to 9 and special symbols * and #, where * inserts a three-second pause in the sending of digits, and # indicates end-of-dialing. Because DNs are used in the given order, enter the least costly DN as DN 1, and the most costly DN as DN 3. A minimum of one DN must be defined.

- *Initiating password* This field is mandatory. The initiating password is the password that the originating site sends to the remote site when initiating a message transfer session.

- *Responding password* This field is mandatory. The responding password is the password that the site receives when a remote site initiates a message transfer call.

- *Dialing plan* The selection you make must reflect the dialing plan that is in place. The default is "Hybrid". (See "Dialing plans and location codes" earlier in this chapter.) Note that in a CDP dialing plan, remote sites are transparent to voice messaging users because no special prefixes are required to dial out to them (because the steering code is already part of the mailbox number). Therefore if this site is part of a CDP dialing plan only, the [Voice] key is not displayed as a recorded site name is not required.

  If you select "None", the *Mailbox numbering follows dialing plan* field is not displayed. Instead, the *Mailbox number equals local extension* field is displayed.

  Note: If "None" is selected, you can only enter up to two prefixes. A prefix can be one-digit or multiple-digits. It must be unique to the site

and cannot conflict with local mailbox numbers. This prefix is entered by users before the remote site's mailbox number when addressing messages.

- *Max number of digits in local mailbox* Enter the maximum number of digits allowed in mailbox numbers at the remote site. The maximum allowable value is 18, or 16 if the AMIS protocol is selected for the site. If you are unsure, enter the maximum allowable value of 18 (or 16). The default is "4".

- *Mailbox numbering equals local extension* In this field, specify whether or not mailbox numbering equals the local extension at the remote site. If it does not, the following field, *Mailbox prefixes*, is displayed and you must enter the location codes as mailbox prefixes.

- *Mailbox prefixes* These prefixes function as location codes and are used to identify the remote site within the network when there is no dialing plan or if mailbox numbering does not follow the dialing plan at the remote site. These prefixes do not have any overlap with local mailbox numbers and are independent of the CDP steering codes. Make certain that these prefixes do not conflict with other network data.

- *Dial prefix* This field is displayed only if the dialing plan is "None". (However, the mailbox numbering at the remote site must follow the extension numbering.) This is an optional prefix which allows users at the local site to use the Call Sender feature to automatically dial the number of a user who has sent a message from the remote site you are defining.

- *Spoken name recorded* This field applies if the *Mailbox numbering equals local extension* field is set to No. It indicates whether or not a site name has been recorded for the site. A spoken site name makes it easier for users to identify the remote site when addressing voice messages to remote voice users. The site name recording (followed by the local mailbox digits) is played to voice messaging users when addressing messages to remote voice users. If the site name is not recorded, users hear the location prefix spoken out.

Procedure 1-30xxx
Adding remote sites

Starting Point: The main menu or the Customer Administration menu
(multicustomer systems)

1 Select Network Administration.

The Network Administration menu is displayed.

2 Select Remote Site Maintenance.

*The Remote site maintenance - List sites screen (Figure 1-39) is
displayed.*

3 Press [Add].

You are prompted for the ID of the remote site to be added.

4 Enter a number for the remote site.

*The Remote site maintenance - Add site screen is displayed. See
Figure 1-40.*

5 Fill in the fields as required. See the field descriptions on the preceding
pages.

6 To save the remote site configuration, go to step 7a.
To exit the screen without saving your changes, go to step 7b.

   a. Press [Save].

   *Any changes that you have made are saved. You are prompted to
   enter the next remote site ID. If you have more sites to add, enter
   the ID and press <Return>. If you do not have more sites to add,
   press [Cancel].*

   b. Press [Cancel].

   *Any changes that you have made are discarded and the Remote
   site maintenance - List sites screen is displayed.*

Viewing and modifying remote sites

Once you have added remote sites to the network, you can alter their characteristics by accessing the Remote site maintenance - Modify site screen. To display the screen, access the Remote site maintenance - List sites screen, move the cursor to the site you want to modify, press the spacebar to select it, then press [View/Modify]. This screen is identical to the Remote site maintenance - Add site screen if the site you are modifying is not a message center. See the previous section, "Adding remote sites", for descriptions of the fields and the actions that are possible.

> *Note:* If you are modifying an NMS site, the screen will be different. See Chapter 5 for information.

Procedure 1-31xxx
Viewing and modifying remote sites

Starting Point: The main menu or the Customer Administration menu (multicustomer systems)

1 Select Network Administration.

The Network Administration menu is displayed.

2 Select Remote Site Maintenance.

The Remote site maintenance - List sites screen (Figure 1-39) is displayed.

3 Move the cursor to the site you want to view or modify and press <Spacebar> to select it.

4 Press [View/Modify].

The Remote site maintenance - Modify site screen is displayed. It is identical to the Remote site maintenance - Add site screen.

5 Fill in the fields as required. See the field descriptions on the preceding pages.

6 To save the remote site configuration, go to step 7a.
To exit the screen without saving your changes, go to step 7b.

    a. Press [Save].

       Any changes that you have made are saved and the Remote site maintenance - List sites screen is displayed.

    b. Press [Cancel].

       Any changes that you have made are discarded and the Remote site maintenance - List sites screen is displayed.

Deleting remote sites

Remote sites are removed from the network database from the Remote site maintenance - List sites screen. When you select a site and then press [Delete], a new set of softkeys is displayed.

Note: Messages that have been sent but not delivered to a remote site that has been deleted are returned with a non-delivery notification (NDN).

Figure 1-41xxx
The Delete Remote Site softkeys

OK to Delete	Cancel			
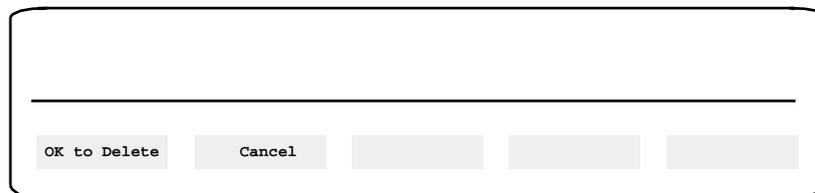
Procedure 1-32xxx
Deleting remote sites

Starting point The main menu or the Customer Administration menu (multicustomer systems)

1 Select Network Administration.

   The Network Administration menu is displayed.

2 Select Remote Site Maintenance.

   The Remote site maintenance - List sites screen (Figure 1-39) is displayed.

3 Use the cursor keys to highlight the remote site you want to delete.

4 Press <Spacebar> to select the site.

5 Press [Delete].

   The softkeys shown in Figure 1-41 are displayed.

6 To delete the site, go to step 6a.
To cancel the delete operation and return to the Remote site
maintenance - List sites screen, go to step6b.

a. Press [OK to Delete].

*The system purges the site. You are prompted for another site
number.*

To delete another site, enter the site number and press [OK to
Delete].

b. Press [Cancel].

*The site is not deleted and the Remote site maintenance - List sites
screen is re-displayed.*

Recording site names using the [Voice] softkey

The [Voice] key is used to provide a new set of softkeys for recording,
playing and deleting names for remote sites. When you record a site name,
the *Spoken name recorded* field is automatically set to "Yes" in the Remote
site maintenance - Modify site screen. Within Networking Administration,
[Voice] is available on the Add site and Modify site screens for Remote site
maintenance.

Note: A telephone set is required to record the site name. Ensure that a
phone set is available near the administration terminal where you are
working.

Figure 1-42xxx
Recording a site name
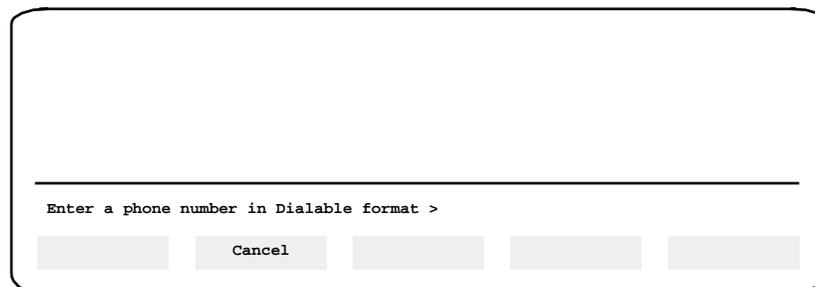
```
  Enter a phone number in Dialable format >
                    Cancel
```

Figure 1-43xxx
Site name recording softkeys

```
╭─────────────────────────────────────────────────────────╮
│                                                           │
│                                                           │
│                                                           │
│  ────────────────────────────────────────────────────    │
│                                                           │
│  Select a softkey >                                       │
│    Return        Play        Record      Delete    Disconnect │
│                                                           │
╰─────────────────────────────────────────────────────────╯
```
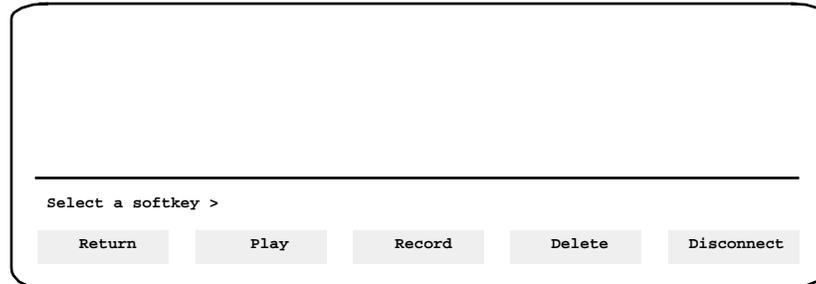
Procedure 1-33xxx
Recording site names

Starting point   The Add or Modify screens for Remote site maintenance

1   Press [Voice].

  You are prompted to enter a phone number (Figure 1-42).

2   Enter the number of the phone set you are going to use to record a spoken name.

  The row of softkeys changes to display a set of recording softkeys (Figure 1-43).

3   To record a new spoken name, go to step 3a.
  To play an existing verification, go to step 3b.
  To delete a verification, go to step 3c.
  To return to the original set of softkeys, go to step 3d.

  a.   Pick up the handset of the phone and then press [Record]. Wait for the beep and record the site name. When you press [Record], a new [Stop] key appears. Press [Stop] to stop the recording when you are done.

  b.   Pick up the handset of the phone and press [Play].

    If a verification is recorded, it will be played over the phone.

  c.   Pick up the handset of the phone and press [Delete].

    If a verification was recorded, it will be deleted and a prompt will be played advising you that the recording was deleted.

  d.   If you are satisfied with the recording, press either [Disconnect] or [Return] to display the original softkeys.

When you use [Return], the line is not disconnected (unless you hang up the receiver). This means that if you decide to re-record or listen to the recording, you do not have to re-enter the telephone extension after pressing the [Voice] softkey.

When you use [Disconnect], the line is disconnected and if you press [Voice] to access the recording softkeys again, you will have to re-enter the telephone extension.

Networking scheduling and verification

The following sections include information and procedures that you will need after your network has been configured. The following procedures are common to all dialing plans in Meridian Networking:

Networking scheduling parameters

These parameters control how long messages are kept before they are sent to remote sites, how long unsuccessfully delivered messages are kept before they are purged, and how often the system checks for queued messages and sets up connections for delivery to remote sites. The Networking Scheduling Parameters screen is accessed by pressing <3>, View/Modify Networking Scheduling Parameters, from the Network Administration menu. Thresholds (holding times and stale times) and message priorities (urgent, standard and economy) are described near the beginning of this chapter.

Message priorities

Messages can be assigned one of three priorities: economy, standard, and urgent. Economy priority messages are sent at a specified time each day. This is referred to as the *initiation time*. For standard and urgent messages, you can specify a *holding time*-the length of time that messages are retained before they are sent to remote sites. Urgent messages are assigned shorter holding times, and are therefore sent more often than standard messages. The initiation time and holding times are defined in the Network Scheduling Parameters screen (see page 1-139).

Thresholds

The timing of message delivery is determined by a series of thresholds that are assigned specific values in the Network Administration screens. The following sections describe the operation of thresholds.

Holding time threshold

Networking does not set up a delivery connection every time a message destined for a remote site is sent by a local user. Instead, to reduce costs, each message is retained for a period while awaiting the submission of more messages for delivery to the same remote site. This threshold applies only to urgent and standard priority messages, not economy messages.

When the system *wakes up* (see the description of "Wakeup interval") it checks for networking messages waiting to be sent. If there are any messages, the system then checks the batch threshold. If this threshold has been reached (that is, if this number is set to 10 and there are 11 messages) they will immediately be sent. If the batch threshold has not been reached the messages are placed in a send queue. When either the standard or urgent holding time has been reached, all standard and urgent messages are sent.

For example, a user submits a standard message at 1:00 p.m. The standard holding time is 1 hour. The message is retained until 2:00 p.m. awaiting further messages destined to the same site. At 1:15 p.m. a user sends an urgent message and the urgent holding time is 15 minutes. At 1:30 p.m. the urgent message is eligible for delivery. The next time the system wakes up, it will place both messages in a send queue (if the batch threshold has not been reached). At 1:30, the urgent holding time, a network connection is established to each site to which a message is destined. Since a connection now exists, the standard message is transferred along with the urgent message.

Messages sent from the local site can also be transferred on a connection that is initiated from a remote site. This allows messages to be transferred both ways on the same call. This activity is known as *message piggybacking*.

Economy messages, on the other hand, are always delivered at a specific time (for example, 6:00 p.m. every evening) and are therefore unaffected by the holding time threshold. Economy messages will not be delivered until the absolute time, regardless of whether or not other urgent or standard messages are ready to be delivered or a piggyback connection exists. This preserves the overnight delivery nature of economy messages.

Stale time threshold

To prevent networking from retaining messages that cannot be delivered because of local or remote site problems, a *stale time* is defined for each message priority. If a message is still undelivered after the specified stale time interval, the sender of the message receives a non-delivery notification (NDN) indicating that the message has not been transferred within the time limit specified for its priority. This is known as *stale dating* and prevents networking from becoming congested with undeliverable messages (if, for example, the site has been disabled for maintenance). Messages that are undelivered must be recomposed and the user must send them again.

Wakeup interval

The networking service wakes up at periodic intervals to check if there are messages to be sent. For lightly loaded systems with many remote sites requiring long distance calls, the intervals should be long, for example, 15 to 30 minutes. For heavy traffic systems, such as those needing only local calls to reach remote sites, the interval may be short, for example, two to ten minutes.

Batch threshold

This threshold is designed to handle burst conditions that may arise during busy hours. If a large number of standard and/or urgent messages are submitted to the networking service in a period shorter than the holding time, delivery connections are established to off-load the influx. The batch threshold specifies the maximum number of urgent and standard messages that can be in the queue to any given site before a connection to that site is attempted. Economy messages are not subject to this threshold.

Maximum number of calls

You may want to limit number of outgoing networking calls. This may be desirable when, for example, there is a busy system with three modems. Limit the outgoing networking calls to two modems, leaving the third one available for incoming calls.

Figure 1-44xxx
The Networking Scheduling Parameters screen

```
                          Network Administration

Networking Scheduling Parameters

        Economy class initiation time (hh:mm):      18:00
        Economy class stale time      (hh:mm):      06:00

        Standard class holding time   (hh:mm):      03:00
        Standard class stale time     (hh:mm):      09:00

        Urgent class holding time     (hh:mm):      00:30
        Urgent class stale time       (hh:mm):      01:30

        Batch threshold:                            20
        Wakeup interval (mins):                     5
        Networking call maximum:                    4




   Save            Cancel
```

The following fields are displayed:

- *Economy Class Initiation Time* This is the time at which delivery of economy messages begins. Economy messages, unlike urgent and standard message, are delivered only once a day at a particular time. Enter the time in hours and minutes in the range 00:00 to 23:59. The default is "18:00".

- *Economy Class Stale Time* The value entered in this field determines the maximum retention time for messages tagged as economy. When this threshold is reached, a non-delivery notice is sent to the originator and the message has to be composed and sent again. Enter the time in hours and minutes in the range 03:00 to 99:59. The default is "06:00".

- *Standard Class Holding Time* The value entered in this field determines the length of time that a standard priority message is retained before the system attempts to send it. A message may be transferred before this holding time expires if a connection is established for another reason, such as delivering urgent messages. Enter the time in hours and minutes in the range 00:00 to 33:20. The default is "03:00".

- *Standard Class Stale Time* The value entered in this field specifies the maximum retention time for messages tagged as standard. If a message is not delivered before this time, a non-delivery notice is sent to the originator. These messages have to be composed and sent again. The time is entered in hours and minutes. The minimum value you can enter is three times the standard holding time (see the note below). The maximum value you can enter is 99:59. The default is "09:00".

  Note: The standard and urgent stale times must be at least three times greater than the holding time. (Enter the holding time for each class first.) The holding time you enter affects the range of stale times that you can enter. For example, if you entered a standard holding time of 00:20, your standard stale time would have to be in the range 01:00 to 99:59. If you entered an urgent holding time of 05:00, your urgent stale time would have to be in the range 15:00 to 99:59.

- *Urgent Class Holding Time* The value entered in this field determines the length of time that an urgent priority message is retained before the system attempts to send it. A message may be transferred before this holding time expires if a connection is established for another reason. The time is entered in hours and minutes and must be in the range 00:00 to 33:20. The default is "00:30".

- *Urgent Class Stale Time* The value entered in this field is the maximum retention time for messages tagged as urgent. If a message is not delivered before this time, a non-delivery notice is sent to the originator. These messages have to be composed and sent again. The time is entered in hours and minutes and must be at least three times the urgent class holding time. The minimum value you can enter is three times the urgent holding time. The maximum value you can enter is 99:59. The default is "01:30".

- *Batch Threshold* The value entered in this field specifies the total number of standard and urgent messages that can accumulate for a given site before delivery commences. The minimum value is "1", the maximum value is "99" and the default is "20".

- *Wakeup Interval (minutes)* This is the periodic interval at which the networking software checks for messages that are waiting to be sent and sets up the connections required to send those messages. You may enter a value in the range 1 to 99. The default is "5".

- *Networking Call Maximum* The maximum number of simultaneous outgoing networking calls permitted. If this maximum is reached, no new outgoing sessions will be attempted. This prevents Meridian Networking from using too many resources and interfering with the effective functioning of other Meridian Mail services. The valid range is from 1 to 99. The default is "4".

Procedure 1-34xxx
Setting networking scheduling parameters

Starting Point: The main menu or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

    The Network Administration menu is displayed.

2   Select View/Modify Networking Scheduling Parameters.

    The View/Modify Networking Scheduling Parameters screen (Figure 1-44) is displayed.

3   Customize the parameters as required. See the field descriptions on the preceding pages for more information.

4   To save the new parameters, go to step 4a.
     To exit the screen without saving your changes, go to step 4b.

    a.   Press [Save].

        Any changes that you have made are saved and the Network Administration menu is displayed.

    b.   Press [Cancel].

        Any changes that you have made are discarded and the Network Administration menu is displayed.

Error conditions

Networking maintains a message queue containing a list of messages destined for each remote site. Thresholds based on message priority and message volume control the triggering of connections to remote sites. When the thresholds are reached, Networking attempts to call the remote site.

Networking dials the remote site's connection DN to establish a delivery connection. If the call attempt fails (due to a busy or no answer condition, for example), networking waits for a preset time before attempting the call again. If three attempts in a row fail then Networking waits for one hour before repeating the three-call-attempt cycle. A SEER is generated

indicating that networking has gone into ERROR state against the remote site. The Network Status screen reflects this state as well; see "Viewing the network status" later in this chapter. The Clear Remote Error Sites function is used to clear error conditions for all sites and causes networking to clear its one-hour delay between the three-call-attempt cycles.

If a subsequent call attempt succeeds in connecting to the remote site, Networking will clear the one hour delay; it does not clear the error conditions for any other remote sites unless a successful connection has been established with these sites or the error condition has been cleared using the [Clear Remote Error Sites] softkey. If call attempts to a remote site fail regularly, contact the administrator at that remote site to ensure that the site is operational.
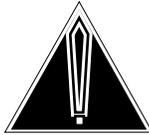
CAUTION
Changing the network data
If you plan on altering the network data fundamentally, such as by changing location codes or by adding or deleting sites, you should do so after hours when users are not logged on. Such changes affect entries in the VSDN table and user directory entries. These entries should be checked and altered accordingly. Otherwise, users may not be able to log on or to compose messages to affected mailboxes. Carefully plan network sites before installation to avoid changing the configuration.

Configuring the Meridian 1 for Meridian Networking

This section outlines the modifications needed on the Meridian 1 to accommodate the Meridian Networking service. The Meridian Networking service uses incoming and outgoing trunks on the Meridian 1 to establish connections with remote sites. The networking service also uses data pathways and conferencing circuits to communicate the voice and addressing elements of voice messages between the Meridian 1 and the Meridian Mail system.

ACD DN

Prior to configuring the trunks to be used with the Meridian Networking service, define an ACD DN for networking on the Meridian 1 and also in the VSDN table in Meridian Mail.

For instructions on configuring the ACD DN, refer to the section "Configuring Meridian Mail services" in the "Voice Administration" chapter of the *System Administration Guide*. For instructions on defining the ACD DN in the VSDN table, refer to the section "The Voice Services-DN Table" in the "Voice Administration" chapter of the *System Administration Guide*. If you require an overview of these steps and the concepts behind them, refer to the "Overview" section earlier in this chapter.

Trunks

Trunks used by the Meridian Networking service may be attached to a public (central office) or to a private (TIE) network. Use existing trunks if the anticipated networking traffic will not increase call blocking to an unacceptable level. If additional trunks need to be installed, see the *X11 input/output guide* (NTP 553-3001-400).

For all trunks used by the Meridian Networking service, set the disconnect supervision options NEDC (NearEnd) and FEDC (FarEnd) to ETH (either) for the trunk route (Overlay 16).

Respond with "YES" to the SUPN prompt to enable answer and disconnect supervision for all trunks. Central office trunks automatically get supervision enabled. TIE trunks must have this option enabled when defining the trunk (field SUPN in Overlay 14).

Incoming access

Route incoming calls from remote sites to the Meridian Networking ACD DN without attendant intervention. You can also use Direct Inward System Access (DISA) to access the networking ACD DN.

If central office trunks are used, they can be auto-terminated on the Networking ACD DN, or terminated on a Direct Inward System Access (DISA) DN (Overlay 14).

Outgoing access

The number of outgoing trunks required by the Meridian Networking service is based on the anticipated outbound message traffic. If these trunks are also used for inbound calls, expected inbound traffic must also be considered.

These trunks must have Trunk Group Access Restriction (TGAR) and network class of service (NCOS) codes that support the TGAR and NCOS codes of the ACD agents where outbound calls originate.

The outgoing calls can go on the public network, if required. However, if the Networking calls are only used within an ESN network and the Meridian 1 is a main ESN site, then you can set the NCOS of the ACD agent so that the outgoing trunk call will not be routed off ESN to the public network.

> *Note:* Select an NCOS that will not use a call path with voice compression to preclude the call going over any trunk route that might have voice compression. Voice compression will cause Meridian Mail to fail because Meridian Networking needs 56K or better clear channel to work properly.

If the Meridian 1 is a satellite ESN site (that is, it has access to ESN, but does not run ESN software) and you wish to set up your networking service so that the outgoing trunk call will not be routed off ESN to the public network, define the trunks in one of two ways:

1   Define a new trunk route to the main ESN site. If Networking calls are only used within the ESN network, set NCOS at the main ESN site so that calls will not be routed off the ESN network to the public network.

2   Define the trunk as a CO trunk connected directly to the satellite ESN site, with auto-terminate specified so that calls go directly to the Networking ACD DN.

Networking verification test

Before adding a remote site to the Meridian Mail network you should perform a verification test to ensure proper operation of the networking service between the local site and the remote site. This is a loopback test which verifies network message delivery between systems. Instead of delivering a voice message to a remote system, this test delivers the message back to your system.

Note 1: This test requires one outbound trunk, one inbound trunk, and two 2500 set lines-one for outgoing and one for the incoming networking call. Sites with only one modem cannot perform the test.

Note 2: The loopback test only applies for Meridian Networking with modems. It will not work if no modems are available (that is, in AMIS-only systems).

Figure 1-45xxx
The Networking Verification Test screen
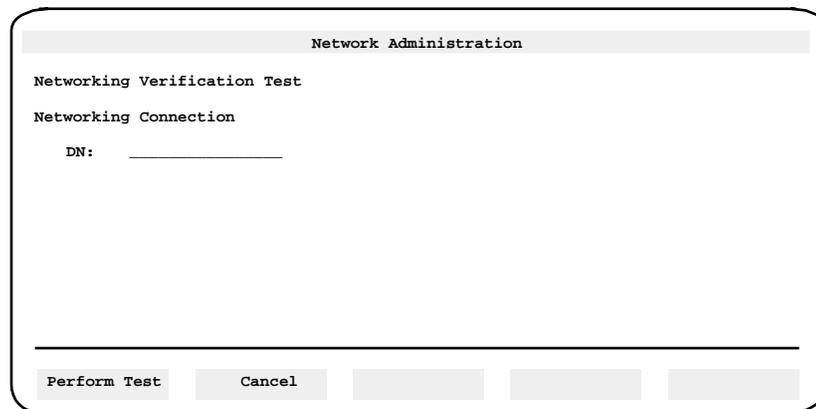
```
                          Network Administration

  Networking Verification Test

  Networking Connection

     DN:       _____




  _____

    Perform Test        Cancel
```

Before running the networking verification test, also test the following:

1   Call the networking DN (that is defined in the VSDN table). You should receive the modem tone.

2   Call the modem DN. You should get Ring No Answer.

Procedure 1-35xxx
Running the networking verification test

Starting point The main menu or the Customer Administration menu
(multicustomer systems)

> *Note: The verification feature ensures that at least two data lines are
> configured. If not, an error message appears and you are returned to
> the Network Administration menu. If the lines are configured the
> Networking Verification Test screen is displayed (Figure 1-45).*

1 Select Network Administration.

The Network Administration menu is displayed.

2 Select Networking Verification Test.

The Networking Verification Test screen is displayed.

3 Enter the DN of the loopback connection.

*The directory number cannot be a local extension number. It must be
external to the switch. The loopback DN must dial out of the switch and
re-enter it. It should therefore include the outbound trunk access code
(such as "9"), and a number that accesses an incoming trunk and
terminates on the networking service. Typically the loopback DN is the
phone number that other sites dial to reach the local site.*

4 To carry out the test, go to step 4a.
To to exit, go to step 4b.

    a.   Press [Perform Test].

> *A message is automatically created and submitted to the
> networking service for delivery. The networking call is placed and
> the networking service accepts the incoming call.*

> *If the connection fails, the loopback feature retries the number. If
> failure persists the loopback feature abandons the test after 10
> minutes and informs you of this.*

> *If the call is successfully made, the message is transferred over the
> connection. Upon transfer completion the loopback feature verifies
> that the message has been received and is valid. You are informed
> of the test results. If the loopback fails, consult the SEER log for
> the specific reason.*

> **CAUTION**
> **Loopback Test**
> The loopback test causes any active transfers with other sites to be terminated. This is normally not a problem because the site verification test is run before the site joins the live network. However, this will delay message delivery if you use loopback to perform diagnostics on a live site that is experiencing problems (normal operation resumes once the tests are completed).

Use [Cancel] at any time to stop the test. To restart the test, go to step 4a. To exit, go to 4b.

b. Press [Cancel].

You are returned to the Network Administration menu.

Viewing the networking status

The [Network Status] softkey on the Network Administration menu allows you to view the Network Status screen which lists the activity status of the networking service at each site in the network and the number of economy, standard and urgent messages that are queued for transmission to remote sites. This screen is not dynamic (that is, it does not automatically update while it is displayed). You can, however, use [Update] to refresh the screen and update the status while you are viewing it.

Figure 1-46xxx
The Network Status screen

```
                        Network Administration


Network Status

Total Number of Remote Sites:    nnn

Site       Site Name      Status       #Economy      #Standard    #Urgent

nnn        xxxxxxxxx      Ready        3             11           1
nnn        xxxxxxxxx      Error        0             1            0
nnn        xxxxxxxxx      Disabled     13            5            1
nnn        xxxxxxxxx      Idle         0             0            0
nnn        xxxxxxxxx      Active       15            6            0




    _____


        Exit                                                    Update
```

The following read-only fields are displayed:

- *Total Number of Remote Sites* This field displays the number of remote sites that are currently configured in the Meridian Mail network database.

- *Site* The remote site number. The number of each configured remote site is listed in this field.

- *Site Name* The site name corresponding to the site number.

- *Status* The current status of the networking service at the specified remote site. The status may be one of the following

  - *Active -* indicates that the networking service is operational and is currently sending or receiving messages.

  - *Idle -* indicates that the networking service is operational but that there are no networking messages waiting to be delivered.

  - *Ready -* indicates that networking messages are queued and are ready to be transmitted.

  - *Error -* indicates that the networking service failed to deliver a message to the specified remote site (after three attempts).

- *Disabled -* indicates that message transfer has been disabled for the site. This usually indicates that a site has been taken down for maintenance.

For each site, the number of messages (economy, standard and urgent) are displayed. If the status is idle, the following three fields will display 0 (zero) since no messages are in the queue. For all other states, the following fields will show the number of messages that are currently in the queue.

- *#Economy* The number of economy messages that are queued at the specified site for transmission to other sites.

- *#Standard* The number of standard messages that are queued at the specified site for transmission to other sites.

- *#Urgent* The number of urgent messages that are queued at the specified site for transmission to other sites.

Procedure 1-36xxx
Viewing the network status

Starting Point: The main menu or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

The Network Administration menu is displayed.

2   Press [Network Status].

3   To update the status, go to step 3a.
   To exit the screen, go to step 3b.

   a.   Press [Update].

   The screen is updated to show the current status.

   b.   Press [Exit].

   The Network Administration menu is displayed.

Printing network data

The [Print Network Data] softkey on the Network Administration menu allows you to print the local and remote site information in the database.

Procedure 1-37xxx
Printing local and remote site information

Starting point   The main menu or the Customer Administration menu

1   Ensure that the printer is on-line.

2   Select Network Administration.

3   Use [Print Network Data]

The network data (local and remote site information) is printed. The menu prompt reappears when the printing is completed.

4   Press [Cancel] to abort printing at any time. The printing will stop at the end of the current site entry.

Clearing errors at remote sites

The [Clear Remote Error Sites] softkey on the Network Administration menu can be used to reset error conditions on the network.

Procedure 1-38xxx
Resetting error conditions

Starting Point: The main menu or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

2   Press [Clear Remote Error Sites].

Any remote site status that shows error conditions is cleared. Use the Network Status screen (Figure 1-46) to verify the status of the network.

End-to-end testing

Having proved that the local site is operational, the final test is to compose a message and send it to a remote site.

1   Compose a message addressed to a mailbox at the remote site and tag it with the acknowledgement message option.

  a.   After sending the message the composer receives either an acknowledgement or a nondelivery notification.

  b.   If you receive an acknowledgement, the message was successfully delivered and read by the remote site recipient.

    c.   To verify the delivery of the remote message, either log on to the remote mailbox or ask the administrator at the remote site to read the message.

    d.   If you receive a non-delivery notification, the message could not be delivered within the time specified in the Networking Administration menus (see "Thresholds", in the "Meridian Networking Administration" chapter, in the *System Administration Guide*).

2   Consult the SEER log for descriptions of nondelivery reasons. Since all the previous tests have succeeded, the likeliest cause of error lies in the networking service's information for the remote site. Examples of errors are as follows:

    a.   Incorrect password pairs were assigned between the sites.

    b.   Connection DNs do not terminate on the networking DN.

    c.   A remote site that is not yet operational was specified.

Chapter 2: AMIS Networking

Overview

The AMIS (audio messaging interchange specification) Networking protocol is an industry standard which allows users of different vendors' voice messaging systems to exchange voice messages. Meridian Mail users can send voice messages to users of other voice messaging systems (as long as the AMIS protocol is supported), receive messages from other AMIS sites and reply to these messages using standard Meridian Mail functionality. The AMIS open access design allows anyone who has access to AMIS to send messages without the need for pre-arranged passwords, site definitions or specialized hardware.

In multicustomer systems, most AMIS parameters are configured at the system administration level. The only parameters configured at the customer level are

- the AMIS compose prefix

- enable/disable AMIS receive and send

- the local number in the system access number

These parameters are configured in the View/Modify AMIS Networking Information screen at the customer administration level.

Differences between AMIS and Meridian Networking

In multicustomer systems, AMIS can be enabled for all of the customer groups that exist on your system. However, Meridian Mail networking can only be enabled for one of the customer groups. Meridian Mail Networking is described in the preceding chapter, "Meridian Networking administration".

Because the AMIS protocol supports a wide variety of architectures, from the simplest systems to high-end multi-function systems, only the most basic or commonly used features are supported. Therefore, many of the more advanced and sophisticated Meridian Mail features cannot be used when communicating AMIS messages.

The following Meridian Mail functions are supported by AMIS:

- Meridian Mail users can compose voice messages to AMIS recipients. This requires a system access DN (described later).

- Users can receive messages from other AMIS sites and can use the Reply feature to respond to these messages immediately.

- Users can forward AMIS messages to other Meridian Mail or AMIS users. When a forwarded message is received, the message is preceded with the spoken announcement "attached message". If the message was forwarded several times, this announcement will be played before each attachment.

- Users can tag messages going to AMIS recipients as urgent, standard or economy. However, the destination site can not distinguish message tags.

- Acknowledgment tags are supported for AMIS messages but function differently than for non-AMIS messages. For non-AMIS recipients, an acknowledgement indicates that the message has been listened to whereas for AMIS recipients, it indicates that the message was delivered to the mailbox.

- Timed delivery is supported.

- AMIS recipients can be mixed with other recipients (local voice users, private network users, distribution lists, nonusers) during message composition.

- When messages are not successfully delivered to AMIS recipients, Meridian Mail users will receive a nondelivery notification (NDN).

- Retry scenarios (holding times and stale times) for urgent, standard, and economy messages can be defined.

- Billing records, indicating call length, originator, recipient, and message length will be generated after each AMIS message session. A set of Operational Measurement reports will be provided, similar to those used for Meridian Networking. These reports can be downloaded for further processing through AdminPlus.

The following Meridian Mail features are not supported by the AMIS protocol:

- Private message tags have no effect on AMIS messages. Messages tagged as private are not sent to any AMIS address in the message envelope, but will be returned to the originator with an NDN. (The message will be delivered as a private message to all other recipients in the envelope.) This is done because there is no way to prevent private messages from being forwarded and therefore violating the originator's intent. Users familiar with Meridian Networking should be informed that they cannot tag AMIS messages as private.

- The Reply All feature does not work since AMIS messages will only contain information about the originator only, not all the other recipients of the message.

When Meridian Networking is used, then a single message is transmitted to a remote site, containing the addresses of all recipients. When AMIS Networking is used, individual messages are transmitted for each recipient.

The features listed below are not typically supported by the AMIS protocol. However, they can be made available if Meridian Networking is also installed. This is achieved by adding AMIS sites as remote sites in the Meridian network, thus creating a *virtual node* for each remote AMIS site. This is described in the section "Integrated AMIS" on page 2-4. When AMIS sites are configured as virtual nodes (and when the users at those sites are added as remote voice users), the following features become available:

- personal and system distribution lists

- name addressing

- personal verification and call sender for call answering messages

- personal verification, call sender and reply for voice messages

Note: Some of the above features have additional requirements which are detailed on page 2-4.

Users familiar with Meridian Networking should be informed of features (used to compose messages) that are not supported by the AMIS protocol. This is especially recommended for features such as message privacy where messages will not be delivered.

Integrated AMIS

If Meridian Networking is installed, a remote AMIS site can be added to your Meridian network as a *virtual node*. This makes AMIS Networking transparent to local users when they address messages to users at remote AMIS sites. Normally, when addressing a message to an AMIS site, a local user enters an AMIS prefix followed by a full dialing code which can include a country code and area code and always includes a local number and mailbox number (see the next section). By configuring an AMIS site as a virtual node, local users enter the address in the same format they use to address a message to a user at a remote Meridian Networking site. Figure 2-1 shows a network set up with integrated AMIS.

Figure 2-1xxx
Network with remote Meridian Mail sites and virtual nodes
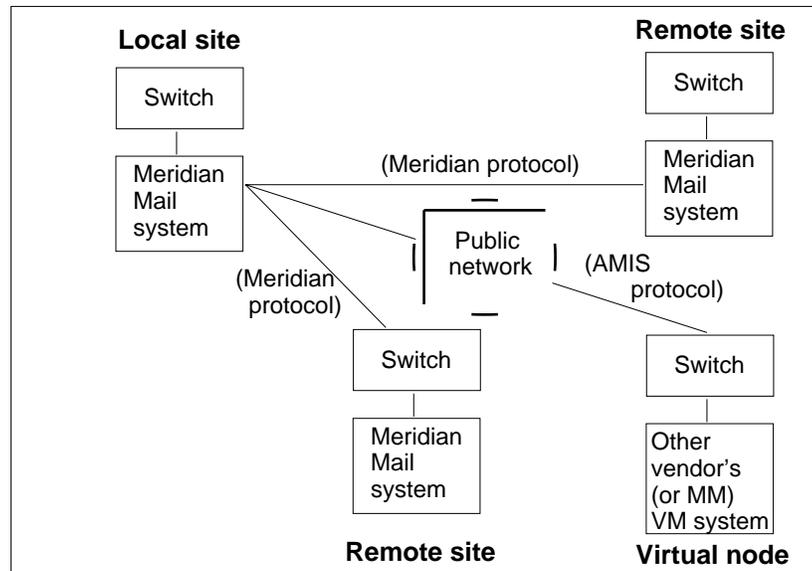
The following features are available to local users only if the remote AMIS site they are addressing the message to is configured as a virtual node. Most of these features also require that the remote users be added to your system as remote voice users (through User Administration).

Personal distribution lists and system distribution lists

The following requirements must be met if you want local users to be able to add AMIS recipients to personal distribution lists and if you (the administrator) want to be able to add them to system distribution lists.

- The AMIS site is configured as a virtual node.

- The remote users at that site have been added as remote voice users through User Administration.

Name dialing and name addressing

Local users can use name dialing and name addressing when calling/sending messages to remote AMIS users if the following requirements are met:

- The AMIS site is configured as a virtual node.

- The remote users at that site have been added as remote voice users through User Administration.

Personal verification and call sender for voice messages

Local voice users will

- hear a personal verification when a remote AMIS user leaves voice message in the local user's mailbox, and

- be able to use call sender to reply to the voice message,

if the following requirements are met

- The AMIS site is configured as a virtual node.

- A call sender prefix has been configured (for the call sender feature).

- The remote users at that site have been added as remote voice users through User Administration.

- The remote voice users' mailbox numbers must be the same as their extensions at the remote site. (This requirement is for only call sender.)

Personal verification, call sender and reply-to-sender for call answering messages

Local voice users will

- hear a personal verification when a remote AMIS user leaves a message during a call answering session,

- be able to use reply to sender in response to the message, and

- be able to use call sender,

if the following requirements are met

- The AMIS site is configured as a virtual node.

- A call sender prefix has been configured (for the call sender feature).

- The remote users at that site have been added as remote voice users through User Administration.

- The calling line ID (CLID) must be present.

Configuring integrated AMIS sites

The following sections describe how to set up an AMIS site as a virtual node. The procedures detail listing, adding, and modifying remote sites only. For information on deleting sites or recording site names, refer to "Deleting remote sites" and "Recording site names using the [Voice] softkey" in Chapter 1.

Before configuring integrated AMIS sites, check your local site information. With AMIS installed, local mailbox numbers should not be greater than 16 digits in length. Messages sent from local mailboxes will not be successfully delivered to remote sites if this limit is exceeded. Originators of messages will receive non-delivery notifications if this is the case. Check your local site by following the procedures under "Local site maintenance" in Chapter 1.

Remote site maintenance

When you select Remote Site Maintenance from the Network Administration menu, the Remote site maintenance - List sites screen is displayed. Through various screens you can add, modify and delete remote sites.

Listing remote sites

The Remote site maintenance - List sites screen (Figure 2-2) lists all of the remote sites that are part of the Meridian Mail network. The softkeys displayed on this screen allow you to add new remote sites to the network or select an existing site in order to view, modify or delete it. If NMS is also installed, the [List Locations] softkey is also displayed, allowing you to list the locations that are associated with a particular site.

Figure 2-2xxx
The Remote site maintenance - List sites screen

```
                        Network Administration

   Remote site maintenance - List sites


   Site              Site Name            Message Center#

    5                City1                   No
   10                City2                   No
   20                City3                   Yes




   _____


     Exit            Add         View/Modify       Delete         List
                                                                Locations*
```

* This softkey is displayed only if NMS is installed.
\# This column is displayed only if NMS is also installed.

The following read-only fields are displayed:

- *Site* The Site ID for the remote site.

- *Site Name* The name corresponding to the remote site.

- *Message Center* This field is set to "Yes" if the remote site is an NMS site. (If any of your remote sites are message centers, refer to Chapter 5 which describes procedures for systems with both Meridian Networking and NMS installed.)

Procedure 2-1xxx
Listing remote sites

Starting Point: The main menu or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

2   Select Meridian Networking Administration.

The Network Administration menu is displayed.

3   Select Remote Site Maintenance.

The Remote site maintenance - List sites screen (Figure 2-2) is displayed.

Adding remote sites
The Remote site maintenance - Add site screen (Figure 2-3) allows you to define new remote sites in the Meridian Mail network. When you press [Add] on the Remote site maintenance - List sites screen, you are prompted for a remote site ID. After you enter an ID and press <Return>, the Remote site maintenance - Add site screen is displayed. (Remote sites may be NMS message centers even if the local site is not. Refer to Chapter 5 if you are adding a remote NMS site.)

Note: Before adding a remote site to the Meridian Mail network you should perform a verification test to ensure proper operation of the networking service between the local site and the remote site. The networking verification test is described on page 1-145.

Figure 2-3xxx
The Remote site maintenance - Add site screen

```
                      Network Administration
     Remote site maintenance - Add site

     Site number:        _____
     Site Name:          _____

     Message Transfer Protocol      Meridian    [AMIS]
     Message Transfer:              [Enabled]   Disabled
     Site is network message center?   [No]   Yes

     Networking Connection:
        DN 1:  _____
        DN 2:  _____
        DN 3:  _____

     Password
        Initiating:  _____
        Responding:  _____

     Dialing plan:     [ESN]   CDP      Hybrid    None
     Max number of digits in local mailbox:  _____
 *   ESN access codes:              _____    _____
 *   Number of digits in common between ESN prefix and local ext:   _____
 **  Number of digits in common between CDP steering code and local ext:  _____

     ESN/CDP ( The ESN code must begin with n ):

 # 1:_____      2:_____
   3:_____      4:_____
   5:_____      6:_____
   7:_____      8:_____
   9:_____     10:_____
   .                   .
   49:_____     50:_____


## Dial prefix:
    Mailbox numbering follows dialing plan:    Yes    [No]
***Mailbox prefixes:     _____    _____

 *  Spoken name recorded      No
_____
      Save            Cancel                    Voice*
```

```
  *   Only appears if dialing plan is ESN or Hybrid.
 **   Only appears if dialing plan is CDP or Hybrid.
***   Only appears if dialing plan is none or if mailbox numbering does not follow
      the dialing plan.
  #   For a CDP dialing plan, up to 50 CDP steering codes can be defined.
      In a hybrid dialing plan, 1 ESN code and up to 49 CDP codes can be defined.
 ##   Only appears if dialing plan is none.
```

Note: The "n" in the *ESN/CDP codes* field represents the ESN access code that is configured in the Local site maintenance screen. If two access codes are defined in that screen, the one entered in the first field is displayed here.

The following fields are displayed on the Remote site maintenance - Add site screen:

- *Site number* This field is mandatory. The site number uniquely identifies the remote site in the Meridian Mail network. Site numbers should be obtained from the network administrator to ensure the number is not already in use. The valid range is from 1 to 500.

- *Site Name* This field is mandatory. The site name should uniquely identify the remote site. The field can contain up to 32 alphanumeric characters. There is no default.

- *Message Transfer Protocol* This field is displayed when AMIS Networking is installed at the local site. The default is "Meridian".

  For an AMIS site that is using a voice messaging system other than Meridian Mail, select "AMIS". This allows you to create a virtual node for the AMIS site. When a local user sends messages to users at this site, they will address them as if they were sending messages to a Meridian Mail remote site (access code + location prefix + mailbox). They will not have to enter the address in the format: AMIS prefix + country and/or area code + local number + mailbox number.

  If the remote site is a Meridian Mail site, you can choose to send messages using the AMIS protocol. This protocol does not require a modem because it uses DTMF tones to transfer message header information. This option is less expensive than using the Meridian protocol which requires a modem. However, AMIS Networking restrictions are applicable and local users will not be able to use certain features (such as private message tags) that are available when the Meridian protocol is used.

- *Message Transfer* This field must be set to "Enabled" for local users to send messages to the remote site. Select "Disabled" if you must temporarily disable message delivery to the remote site. The default is "Enabled".

- *Site is network message center?* Does this remote site have the Network Message Services feature installed? This field change will only go into effect when the form is saved.

- *Networking Connection DN 1, DN 2, DN 3* These are the telephone numbers that are used to establish a connection to the networking service at the remote site. For a remote Meridian Networking site, enter the number used to dial out of the system to reach the remote site (for example, 95552345). The DN can be up to 30 digits long and may include the digits 0 to 9 and special symbols * and #, where * inserts a 3-second pause in the sending of digits, and # indicates end-of-dialing. Because DNs are used in the given order, enter the least costly DN as DN 1, and the most costly DN as DN 3. A minimum of one DN must be defined.

  For an integrated AMIS site, enter either a private or public system access number as DN1. A private system access number is entered in the format

      0##n#

  where n is a number up to 30 digits in length (the initial 0 indicates a private network and must be followed by two pound signs).

  Public system access numbers are entered in the format

      ccc#aaa#nnnnnnn#

  where ccc is the country code, aaa is the area code, and nnnnnnn is the local number. Use # to separate the codes and terminate the number. (You do not have to enter the network access code, such as "9".

  If you enter a private access number as DN1, you must enter a public access number as DN2.

  If you are configuring a virtual node (a remote site that is using another vendor's voice messaging system), you typically only need to enter a public system access number for DN1.

- *Initiating Password* This field is mandatory. An initiating password is sent by the originating site to the remote site when initiating a message transfer session.

- *Responding Password* This field is mandatory. The responding password is the password that the site receives when a remote site initiates a message transfer call.

- *Dialing plan* The selection you make must reflect the dialing plan that is in place. The default is "Hybrid". (See "Dialing plans and location codes" earlier in this chapter.) Note that in a CDP dialing plan, remote sites are transparent to voice messaging users because no special prefixes are required to dial out to them (because the steering code is already part of the mailbox number). Therefore if this site is part of a CDP dialing plan only, the [Voice] key is not displayed as a recorded site name is not required.

  If you select "None", the *Mailbox numbering follows dialing plan* field is not displayed. Instead, the *Mailbox number equals local extension* field is displayed.

  Note 1: For integrated AMIS, select "None".

  Note 2: If "None" is selected, you can only enter up to two prefixes. A prefix can be one-digit or multiple-digits. It must be unique to the site and cannot conflict with local mailbox numbers. This prefix is entered by users before the remote site's mailbox number when addressing messages.

  Note 3: If you change a site from Hybrid to CDP, the spoken site name is removed. If you change the site back to Hybrid, you will have to re-record the verification.

- *Max number of digits in local mailbox* Enter the maximum number of digits allowed in mailbox numbers at the remote site. The maximum allowable value is 16 when the AMIS protocol is selected for the site. If you are unsure, enter the maximum allowable value of 16. The default is "4".

- *ESN access codes* This field is mandatory if the dialing plan is ESN. This code is used to access the ESN network from this site's switch. You may enter two different ESN access codes of one or two digits each. A typical access code is "6" or "9". Check your dialing plan for the ESN access code for the local site's switch.

  Note 1: If one of your ESN access codes is "9", this will create a conflict with the default broadcast mailbox number (999). You will have to change the broadcast mailbox number in order to avoid this conflict.

Note 2: The ESN access code cannot match the left-most digits of any local mailbox. For example, if there is a local mailbox number 6122, the access code cannot be (or begin with) "6".

- *Number of digits in common between ESN prefix and local ext* This field appears only when the dialing plan is ESN or Hybrid. This number indicates the number of digits in the ESN prefix that overlap with extensions that are local to the remote site. For example, the local extensions at the remote site are five digits long and all begin with "8". The remote ESN prefix is "338". If you enter "0" (no overlap) in this field, users at other sites will have to enter an 8-digit DN when addressing messages to this site (such as 33883000). If you enter "1" in this field, indicating that the last digit of the prefix and the first digit of the extension overlap, users will specify a seven-digit address (3383000). The selection you make here must conform with the remote site's dialing plan (if there are digits in common between the prefix and local extensions, they may or may not overlap.)

Note 1: To enter a non-zero value in this field, the mailbox numbers of all users you enter for this site must begin with the overlap digit(s) of the ESN prefix. For example, if the last digit of the ESN prefix is "8" and it overlaps with the local extensions, then all mailboxes at this site must begin with "8".

Note 2: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the ESN prefix and the local extensions, use the default setting of "0".

- *Number of digits in common between CDP steering code and local ext* This field only appears if the dialing plan is CDP or Hybrid. This number indicates the number of digits in the CDP steering code that overlap with the extensions that are local to the remote site. These codes need not overlap. Specify the length of the CDP code in this field. Refer to your dialing plan.

Note: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the CDP code and the local extensions, enter a value of "0".

- *ESN/CDP codes* The ESN prefix and CDP steering codes are location prefixes that identify the remote site within the network and must therefore be unique within the ESN or CDP network. Check with the administrator at the remote site to determine the ESN prefix or CDP steering codes that apply.

  When a user at the local site sends a voice message to a user at the remote site that uses an ESN numbering plan, he or she must precede the remote mailbox number with the ESN prefix entered here.

  The first field is intended for the ESN prefix. (Only one ESN prefix can be entered.) This prefix must begin with the one- or two-digit access code that is defined in the Local Site Maintenance screen. The actual access code is displayed in the field title to remind you. For example, if the ESN access code is "6" and the ESN prefix is "344", enter "6344" in this field.

  If the dialing plan for the remote site is "Hybrid", enter the ESN prefix in the first field and up to 49 CDP steering codes.

  In a CDP-only dialing plan, up to 50 steering codes may be entered for a site. For example, if either 35xxx or 36xxx can be used to reach extension xxx at the remote site, enter 35 and 36 as the steering codes.

  Note: CDP codes cannot match the leading digits of a local mailbox number. If this occurs and a local user addresses a message to another local user whose mailbox begins with a CDP steering code, Meridian Mail will attempt to send the voice message to the remote site rather than to the local mailbox.

- *Mailbox numbering follows dialing plan* In this field, specify whether or not mailbox numbering emulates the dialing plan (telephone extensions) at the remote site. If it does not, the following field, *Mailbox prefixes*, is displayed and you must enter the location codes as mailbox prefixes. (This field is not displayed if the dialing plan is "None".)

- *Mailbox prefixes* These prefixes function as location codes and are used to identify the remote site within the network when there is no dialing plan or if mailbox numbering does not follow the dialing plan at the remote site. These prefixes do not have any overlap with local mailbox numbers and are independent of the ESN location prefix and CDP steering codes. Make certain that these prefixes do not conflict with other network data.

- *Dial prefix* This field is displayed only if the dialing plan is "None". (However, the mailbox numbering at the remote site must follow the extension numbering.) This is an optional prefix which allows users at the local site to use the Call Sender feature to automatically dial the number of a user who has sent a message from the remote site you are defining.

  If an ESN or CDP numbering plan is present, the system figures out the call sender number using the specified dialing plan and the mailbox number and there is no need for a dial prefix. Note that if mailbox numbering at the remote site does not follow local extension numbering, you will not be able to specify a dial prefix, and therefore, users at the local site will not be able to use the Call Sender feature to that particular remote site.

- *Spoken name recorded* This field applies only to ESN and Hybrid dialing plans. It indicates whether or not a site name has been recorded for the site. A spoken site name makes it easier for users to identify the remote site when addressing voice messages to remote voice users. The site name recording (followed by the local mailbox digits) is played to voice messaging users when addressing messages to remote voice users. If the site name is not recorded, users hear the the ESN location prefix spoken out.

Procedure 2-2xxx
Adding remote sites

Starting Point: The main menu or the Customer Administration menu
(multicustomer systems)

1   Select Network Administration.

2   Select Meridian Networking Administration.

The Network Administration menu is displayed.

3   Select Remote Site Maintenance.

*The Remote site maintenance - List sites screen (Figure 2-2) is
displayed.*

4   Press [Add].

You are prompted for the ID of the remote site to be added.

5   Enter a number for the remote site.

*The Remote site maintenance - Add site screen is displayed. See
Figure 2-3.*

6   Fill in the fields as required. See the field descriptions on the preceding
pages.

7   For ESN dialing plans, record a name for the remote site by moving the
cursor to the *Site name recorded* field and pressing [Voice] while the
cursor is on the field.

*See the section "Recording site names using the [Voice] softkey" later
in this chapter for more information.*

8   To save the remote site configuration, go to step 7a. To exit the screen
without saving your changes, go to step 7b.

    a.   Press [Save].

        *Any changes that you have made are saved. You are prompted to
enter the next remote site ID. If you have more sites to add, enter
the ID and press <Return>. If you do not have more sites to add,
press [Cancel].*

    b.   Press [Cancel].

        *Any changes that you have made are discarded and the Remote
site maintenance - List sites screen is displayed.*

Viewing and modifying remote sites

Once you have added remote sites to the network, you can alter their characteristics by accessing the Remote site maintenance - Modify site screen. To display the screen, access the Remote site maintenance - List sites screen, move the cursor to the site you want to modify, press the spacebar to select it, then press [View/Modify]. This screen is identical to the Remote site maintenance - Add site screen if the site you are modifying is not a message center. See the previous section, "Adding remote sites", for descriptions of the fields and the actions that are possible.

Note: If you are modifying an NMS site, the screen will be different. See Chapter 5 for information.

Procedure 2-3xxx
Viewing and modifying remote sites

Starting Point: The main menu or the Customer Administration menu (multicustomer systems)

1   Select Network Administration.

2   Select Meridian Networking Administration.

The Network Administration menu is displayed.

3   Select Remote Site Maintenance.

The Remote site maintenance - List sites screen (Figure 2-2) is displayed.

4   Move the cursor to the site you want to view or modify and press <Spacebar> to select it.

5   Press [View/Modify].

The View/Modify Remote Site screen is displayed. It is identical to the Add Remote Site screen.

6   Fill in the fields as required. See the field descriptions on the preceding pages.

7   For ESN dialing plans, record a name for the remote site by moving the cursor to the *Site name recorded* field and pressing [Voice] while the cursor is on the field.

See the section "Recording site names using the [Voice] softkey" later in this chapter for more information.

8   To save the remote site configuration, go to step 7a. To exit the screen without saving your changes, go to step 7b.

       a.   Press [Save].

           Any changes that you have made are saved and the Remote site maintenance - List sites screen is displayed.

       b.   Press [Cancel].

           Any changes that you have made are discarded and the Remote site maintenance - List sites screen is displayed.

Addressing AMIS messages (to nonvirtual nodes)

When a user composes a message that is destined for an AMIS site that is not defined as a virtual node, he or she begins by entering the AMIS compose prefix. This informs the system that the address that is about to be entered is that of an AMIS site.

The prefix is followed by the access code that is required to dial out of the Meridian Mail system. This will either be an international access code (if the recipient is in another country), a long distance access code such as "91" (if the recipient is in the same country but a different area code), or a local access code such as "9" (if the recipient is in the same country and area code).

The user then enters the system access DN. This DN identifies the AMIS site to which the message will be delivered. This number includes the following elements:

- the country code of the remote site, up to 4 digits in length (optional if identical to the country code of the sending system);

- the area code of the remote site, up to 4 digits in length (may be optional if it is identical to the area code of the sending system);

- the local number of the remote site

After entering the local number, the user presses <#> (number sign). In summary, the number needed to address an AMIS site is entered in the following format:

<AMIS compose prefix><access code><system access DN><#>

After pressing <#> the user is prompted to enter the mailbox number. The following recording is played: *"Enter the mailbox number for this Open Network user followed by number sign".*

Note: Before an AMIS message is played to a recipient, the sending system plays the following prompt: *"Open Access computer message, press 1 to cancel"*. This enables someone who has answered a call to a wrong number to disable further calls. If a recipient cancels message delivery in this manner, all messages currently queued to that number will be returned to their respective senders and further deliveries to the same access DN will be prevented.

Meridian 1 configuration

Note: This section is not applicable to Meridian Mail systems connected to a DMS family or SL-100 switch using SMDI.

Before you begin configuring the AMIS Networking service in Meridian Mail, ensure that the Meridian 1/SL-1 is appropriately provisioned.

Meridian 1/SL-1 configuration involves the following steps:

1   Check the trunk data block. To do this, load overlay 14. Specifically, ensure that both the NEDC and FEDC parameters are set to ETH.

2   Check the NCOS level for ACD agents (in overlay 11). If the NCOS level is too low, agents will not be able to dial out of the switch. With NMS, agents must be able to dial within the network. Therefore, when considering an NCOS level, you need to select a value that supports a fully-featured Meridian Mail (allows agents to out of the switch for call sender and thru-dial), but that does not create possible security breaches. See the *SL-1 Network Features Guides* for more information.

3   Configure an ACD queue for the service that will be accepting incoming AMIS calls. See the section "Identify which service will accept AMIS calls" on the following page for more information.

Enabling AMIS in classes of service and configuring the AMIS VSDN

Apart from configuring the AMIS Networking information, you must also make AMIS available to users by

- enabling AMIS Networking in classes of service (and then assigning users to these classes of service)

- assigning classes of service to the system (single customer) or to customer groups (multicustomer)

- configuring the VSDN which will serve as the AMIS access number (this is the number you will publish as the AMIS access number to the general public)

Enable AMIS Networking in classes of service

Even though AMIS Networking is installed on the system, you must enable it in classes of service. On a newly installed system, you must set up at least some of your classes of service so that AMIS Networking is enabled before adding any users. (AMIS is disabled by default in classes of service.) Any user who requires AMIS Networking capabilities will have to be assigned to one of these classes of service. Classes of service are described in the "Class of service administration" chapter in the *System Administration Guide*.

Choosing a restriction/permission set

Restriction and permission codes are applied to the AMIS messages that local users send to remote sites to protect against system abuse. The actual restriction permission codes are defined in the Voice Security Options screen (at the system administration level in multicustomer systems). If necessary, review this screen to determine which of the four restriction/permission sets is most suitable. By default, the "Local" set of restriction/permission codes are applied to AMIS Networking messages.

If you want users to be able to send AMIS messages to sites that are long distance, verify that the long distance dialing prefix ("91" for example) is not defined as a restriction code. Remember also that these codes are intended to prevent abuse of the system. The restriction codes should specify the numbers to which users are not qualified to send AMIS messages.

Procedure 2-4xxx
Enabling AMIS Networking in classes of service

Starting Point: The main menu

1   Select Class of Service Administration.

     The [Add], [View/Modify], [Delete], and [Find] softkeys are displayed.

2   Press [Add] to add a new class of service or press [View/Modify] to
     modify an existing class of service.

     You are prompted for the class of service number.

3   For multicustomer systems, enter a number between 1 and 127. For
     single customer systems (that is, the Meridian Mail Multi-Customer
     feature is not installed), enter a number between 1 and 15.

     The Add Class of Service screen is displayed.

4   If you are adding a new class of service, give the class of service a
     name. Then press [Change Defaults].

     *The Add or View/Modify Class of Service screen is displayed. Figure
     2-4 shows the AMIS Networking fields.*

Figure 2-4xxx
AMIS Networking fields

```
┌─────────────────────────────────────────────────────────────────────────┐
│                                                                           │
│  ABC Company#                 Class of Service Administration    MORE ABOVE│
│                                                                           │
│                                                                           │
│    Add Class of Service                                                   │
│    .                                                                      │
│    .                                                                      │
│    .                                                                      │
│                                                                           │
│  Receive Open Network Messages:                   [No]    Yes             │
│                                                                           │
│  Compose/Send Open Network Messages:              [No]    Yes             │
│                                                                           │
│  Open Network Restriction/Permission Codes:       None On_Switch  [Local]  Long_Distance_1 │
│                                                   Long_Distance_2         │
│  ─────────────────────────────────────────────────────────────────────  │
│                                                                           │
│    Save                 Cancel                                            │
│                                                                           │
└─────────────────────────────────────────────────────────────────────────┘
```

In multicustomer systems, the customer group's name is displayed in the upper left-hand corner.

5   Set *Receive Open Network Messages* to "Yes".

    Any users assigned to this class of service will be allowed to receive open network messages. Note that to set this field to "Yes", the Receive Composed Messages field in the class of service must be set to "Yes".

6   Set *Compose/send Open Network Messages* to "Yes".

    Any users assigned to this class of service will be allowed to compose and send open network messages to remote sites. Note that to set this field to "Yes", the Compose Capability field in the class of service must be set to "Yes".

7   Select a restriction/permission code set for outgoing AMIS Networking calls.

8   Press [Save].

Assign classes of service

Once AMIS Networking has been enabled in the necessary classes of service (COSs), these COSs must be assigned to the system (in the case of single customer systems) or customer groups (in the case of multicustomer systems). This is done in the General Options screen (at the customer administration level in a multicustomer system).

Procedure 2-5xxx
Assigning classes of service

Starting Point: The main menu or the Customer Administration menu (multicustomer systems)

1   Select General Administration.

2   Select General Options from the General Administration menu.

3   In the *Class of Service Selection* field, you can assign up to 15 COSs. Make sure that some of these have AMIS Networking enabled if users require AMIS Networking capabilities.

Identify which service will accept AMIS calls

Incoming AMIS Networking calls must terminate on one of the following types of service DNs:

•   a special DN defined for AMIS in the VSDN table,

•   a voice menu DN that is defined in the VSDN table, or

•   a thru-dialer DN that is defined in the VSDN table.

A dummy ACD queue (Meridian 1/SL-1) or, in the case of DMS family, SL-100 or third-party switches (NEC, AT&T, ROLM), a line DN can be created for the AMIS service on the switch although this is not necessary. This is because both voice menus and thru-dial services can accept inbound AMIS Networking calls. The only requirement is that the voice menu or thru-dial service be provisioned with DID access (that is, must be directly dialable). Otherwise, you will have to create a dummy ACD queue or line DN (that night call forwards to the voice messaging queue) specifically for the AMIS service. When an inbound AMIS call terminates on a voice menu or thru-dial service, it is recognized as an AMIS call and an AMIS Networking session is initiated. (Note that for this to work, the field *Act on AMIS Initiation Tone* in the Voice Services Profile screen must be set to "Yes".) This is described in the following sections.

Using a voice menu to accept inbound AMIS calls

If you are going to use a voice menu to accept AMIS calls, carry out the following steps. (If the voice menu application already exists, begin at step 9.)

On the switch

1   If there are no available ACD queues or line DNs on the switch, create one for the voice menu application you are about to create. See the section "Configuring Meridian Mail services" in the "Voice administration" chapter in the *System Administration Guide* for details.

In Meridian Mail

1   Log on as system administrator.

   For multicustomer systems, go to step 2. For single customer systems, go to step 4.

2   Select Customer Administration.

3   Select the customer group for which you need to create a voice menu.

4   Select Voice Administration.

5   Select Voice Services Administration.

6   Select Voice Menu Definitions.

7   Press [Add].

8   Build the voice menu application. In multicustomer systems, voice menus can only be created at the customer administration level since they are associated with a particular customer group. For information about creating voice menus, see the *Voice Menus Application Guide*.

9 In the Voice Menu Definition, set the *Initial No Response* action as RP (for Repeat Menu Choices). This is necessary to ensure that a call will remain connected to the voice menu for at least ten seconds, otherwise the call may be prematurely disconnected. It takes about ten seconds for the voice menu to get a signal from AMIS and then transfer the call to the AMIS service. By the time the menu choices are repeated a second time, ten seconds will have passed and the call will have been transferred.

10 Save the Voice Menu definition.

11 Return to the Voice Services Administration menu.

12 Select Voice Services Profile.

13 In the Voice Services Profile (at the customer administration level in a multicustomer system), set the field *Act on AMIS Initiator Tone* to "Yes", otherwise AMIS calls that are placed to the voice menu will not be transferred to the AMIS service.

14 Set the *Command Entry* field (a time-out) to the maximum value of 5 seconds. If this field is set to less than five seconds, an AMIS call may be prematurely disconnected.

15 Return to the Voice Services Administration menu.

16 Select Voice-Services DN Table.

The Voice Services-DN Table is displayed.

17 Press [Add].

The Add DN Information screen is displayed. See Figure 2-5.

Figure 2-5xxx
The Add DN Information screen (voice menu datafill)

```
ABC Company#                      Voice Services Administration

Add DN Information

*Choice of Services:

AN  AMIS Networking          AS   Announcement Service      EM Express Messaging
FI  Fax Info Service         FIM  Fax Item Maintenance      ACCMeridian Access
NW  Meridian Networking      PM   Prompt Maintenance        RA Remote Activation
TS  Thru-Dial Service        TD   Time-of-Day Controls      TR Transcription Service
VF  Voice Forms Service      MS   Voice Menu Service        VM Voice Messaging

        Access DN:        7009

        Service:          MS    Voice Menu ID:      701

        Session Profile:  Custom  Full-Multimedia  [Full_Voice]  Basic

        Comment:          _____



Select a Softkey >

    Save              Cancel           Session
                                     Profile Detail
```

* All possible services are listed in this screen for illustration purposes.
\# On multicustomer systems, the customer group's name is displayed on the upper left-hand corner.

18 Enter the access DN.

This is the number that users at remote AMIS sites will use when sending messages to the local site.

19 Enter "MS" in the *Service* field.

Two additional fields, Voice Menu ID and Session Profile, are displayed. The [Session Profile Detail] softkey is also displayed.

20 Enter the ID of the voice menu that will be retrieved when callers dial the access DN.

21 Select the Session Profile.

For more information about session profiles, see the chapter "Planning and configuring voice menus" in the Voice Menus Application Guide or the "Voice administration" chapter in the System Administration Guide (or Customer Administration Guide if you are configuring a multicustomer system).

22 Press [Save] to save the VSDN.

Using a thru-dial service to accept inbound AMIS calls

If you are going to use a thru-dial service to accept AMIS calls, carry out the following steps. (If the thru-dial service already exists, begin at step 11.)

On the switch

1 If there are no available ACD queues or line DNs on the switch, create one for the thru-dial service you are about to create. See the section "Configuring Meridian Mail services" in the "Voice administration" chapter in the *System Administration Guide* for details.

In Meridian Mail

1 Log on to Meridian Mail as system administrator.

   For multicustomer systems, go to step 2. For single customer systems, go to step 4.

2 Select Customer Administration.

3 Select the customer group for which you need to create a thru-dial service.

4 Select Voice Administration.

5 Select Voice Services Administration.

6 Select Thru-Dial Definitions.

7 Press [Add].

8 Build the thru-dial service. For information about creating thru-dial services, see the *Voice Menus Application Guide*.

9 Save the thru-dial definition.

10 Return to the Voice Services Administration menu.

11 Select Voice Services Profile.

12 In the Voice Services Profile (at the customer administration level in multicustomer systems), set the field *Act on AMIS Initiator Tone* to "Yes", otherwise AMIS calls that are placed to the thru-dial service will not be transferred to the AMIS service.

13 Set the *Command Entry* field (a time-out) to the maximum value of five seconds. If this field is set to less than five seconds, an AMIS call may be prematurely disconnected.

14 Return to the Voice Services Administration menu.

15 Select Voice-Services DN Table.

   The Voice Services-DN Table is displayed.

16 Press [Add].

The Add DN Information screen is displayed. See Figure 2-6.

Figure 2-6xxx
The Add DN Information screen (thru-dial service datafill)

```
   ABC Company#                    Voice Services Administration

Add DN Information

*Choice of Services:

AN  AMIS Networking          AS   Announcement Service     EM Express Messaging
FI  Fax Info Service         FIM  Fax Item Maintenance     ACCMeridian Access
NW  Meridian Networking      PM   Prompt Maintenance       RA Remote Activation
TS  Thru-Dial Service        TD   Time-of-Day Controls     TR Transcription Service
VF  Voice Forms Service      MS   Voice Menu Service       VM Voice Messaging

        Access DN:        3009

        Service:          TS    Thru-Dial ID:    399

        Comment:


 _____

 Select a Softkey >
      Save                Cancel
```

* All possible services are listed in this screen for illustration purposes.
# On multicustomer systems, the customer group's name is displayed in the upper left-hand corner.

17 Enter the access DN.

This is the number that users at remote AMIS sites will use when sending messages to the local site.

18 Enter "TS" in the *Service* field.

An additional field, Thru-Dial ID, is displayed.

19 Enter the ID of the thru-dial service that will be retrieved when callers dial the access DN.

20 Press [Save] to save the VSDN.

Creating a special AMIS service DN

If you will not be using a voice menu or thru-dial service to accept AMIS calls, you will have to create a special DN for the AMIS service.

On the switch

1   If there are no available ACD queues or line DNs on the switch, create one for the AMIS service. See the section "Configuring Meridian Mail services" in the "Voice administration" chapter in the *System Administration Guide* for details.

In Meridian Mail

1   Log on as system administrator.

    For multicustomer systems, go to step 2. For single customer systems, go to step 4.

2   Select Customer Administration.

3   Select the customer group for which you need to modify the VSDN table.

4   Select Voice Administration.

5   Select Voice Services Administration.

6   Select Voice-Services DN Table.

    The Voice Services-DN Table is displayed.

7   Press [Add].

    The Add DN Information screen is displayed. See Figure 2-7.

Figure 2-7xxx
The Add DN Information screen

```
   ABC Company#                    Voice Services Administration

Add DN Information

*Choice of Services:

AN  AMIS Networking        AS   Announcement Service      EM Express Messaging
FI  Fax Info Service       FIM  Fax Item Maintenance      ACCMeridian Access
NW  Meridian Networking    PM   Prompt Maintenance        RA Remote Activation
TS  Thru-Dial Service      TD   Time-of-Day Controls      TR Transcription Service
VF  Voice Forms Service    MS   Voice Menu Service        VM Voice Messaging

       Access DN:      3011_____

       Service:        AN_

       Comment:        _____



Select a Softkey >
    Save              Cancel
```

* All possible services are listed in this screen for illustration purposes.
\# On multicustomer systems, the customer group's name is displayed in the upper left-hand corner.

8   Enter the access DN.

This is the number that users at remote AMIS sites will use when sending messages to the local site.

9   Enter "AN" in the *Service* field.

10   Press [Save] to save the VSDN.

Setting up dialing translations

Network dialing prefixes must be configured for AMIS Networking. You may also have to set up dialing translation tables. For detailed information about the Network Dialing Prefixes screen and translation tables, see the chapter "Setting up dialing translations".

At the very least you will have to define the network dialing prefixes which include

- the network dialing prefix

- the long distance dialing prefix

- the international dialing prefix

- the local site's country code

- the local site's area/city code

Note that the local site's local number is defined in the View/Modify AMIS Networking screen. This number along with the country code and area code make up the system access code for the local site. This access number is included in messages that are originated from the local site and is needed so that users at remote sites can use features like Reply in order to respond to messages. For multicustomer systems, a unique local number must be defined for each customer group.

In multicustomer systems, Dialing Translation administration screens are accessible only at the system administration level.

Defining AMIS Networking information

You are now ready to define the system-wide parameters specific to the AMIS Networking service. As you identify this information, fill in the worksheet on page 2-36. When you are ready to configure this information in Meridian Mail, simply copy the information from the worksheet into the system.

A number of these parameters set up the holding times and stale times for messages of different priorities.

A user can assign one of three priorities to an AMIS message: Economy, Standard, and Urgent. Economy priority messages are sent at a specified time each day. This is referred to as the *initiation time*. For Standard and Urgent messages, you can specify a *holding time*-the length of time that messages are retained before they are sent to remote sites. Urgent messages

are assigned shorter holding times, and are therefore sent more often than Standard messages. The timing of message delivery is determined by a series of thresholds that are assigned specific values.

Stale times are applied to all three types of messages. Stale time thresholds prevent the AMIS Networking service from retaining messages that cannot be delivered because of local or remote problems.

Note for administrators of multicustomer systems: The first two parameters, AMIS compose prefix and system access number are defined at the customer administration level. Each customer group must have a unique local number (part of the system number). However, the AMIS compose prefix can be the same for all or a number of customers. The remainder of the parameters described below are configured at the system administration level and apply to all customer groups. Define and configure the system-wide parameters first and then define and configure the customer-specific parameters. Skip these two parameters when filling in your AMIS Networking System Information Worksheet (page 2-36). You will fill out a separate AMIS Customer Information Worksheet (page 2-38) after you define the system information.

Identify the AMIS compose prefix

This is the number that is used by users at the local site to send AMIS messages to remote sites. It is entered during message composition to indicate that the address the user is entering is an AMIS address. You will have to inform the users at the local site of this prefix.

If this prefix conflicts with other network data, such as ESN or CDP dialing codes, you will receive an error message. (There is a conflict if the first two digits of a DN match this prefix.)

Identify the system access number

This number identifies your system to other AMIS sites. It is sent along with outgoing messages that originate from your site. This number is used by other remote systems when replying to messages originating from the local site (with an equivalent of the Meridian Mail Reply feature). The system access number includes the following elements:

- the country code of the local site, up to 4 digits in length;

- the area code of the local site, up to 4 digits in length;

- the local number of the local site.

The first two items are configured in the Network Dialing Prefixes screen, which is accessed by selecting Dialing Translations from the General Administration menu. See the chapter "Setting up dialing translations" for details. Only the local number is defined under Network Administration.

Note: If you publish this number as the AMIS access number (that is, the number that remote users enter when addressing messages to the local site), the local number must terminate on the DN that has been defined in the VSDN table-the DN of the voice menu, thru-dial service or AMIS service that will be used to accept incoming AMIS calls.

Identify when AMIS messages are allowed to be delivered on weekdays and weekends

In most geographical areas, electronic delivery of phone messages is restricted by law to certain time periods during the day. Confirm and implement the restrictions that apply to your region.

Use the 24-hour clock format to specify from (hh:mm) and to (hh:mm) times. Remember that you are defining the *allowed* times, not the restricted times.

You may enter a value from 00:00 to 23:59. (Be sure not to enter the same value for both the start and end time. This will prohibit messages from being sent altogether.) Users should be notified of restricted hours.

Identify the wakeup interval

The wakeup interval determines how often the system checks for queued messages and sets up the connections required to send those messages. You can set this interval according to the system's specific needs. For lightly loaded systems with many remote sites requiring long distance calls, the intervals should be longer, for example, 15 to 30 minutes. For heavy traffic systems, such as those needing only local calls to reach remote sites, the interval may be shorter, for example, 2 to 10 minutes.

This value must be in the format mm. The default is 5 minutes. You may choose a value in the range 1 to 99.

Identify the batch threshold

The batch threshold determines the total number of standard and urgent messages that can accumulate before delivery commences.

When the system *wakes up* (see the preceding section), it checks for AMIS messages waiting to be sent. If there are any AMIS messages, the system

then checks the batch threshold. If this threshold has been reached, the messages will immediately be sent. For example, if the batch threshold is set to 10 and there are 11 messages, they will immediately be sent. If the batch threshold has not been reached, the messages are placed in a send queue. When either the standard or urgent holding time has been reached, all standard and urgent messages are sent.

The maximum allowable value is 99 and the default is "9".

Identify the networking call maximum

Determine the maximum number of outgoing networking calls that can be made simultaneously. If this maximum is reached, no new outgoing sessions will be attempted. This prevents AMIS from using too many resources and interfering with the effective functioning of other Meridian Mail services.

The default is "4". The maximum allowable value is "999".

Identify the economy class initiation time

Identify the time at which AMIS messages tagged as economy are delivered. Enter the time in hours and minutes in the range 00:00 to 23:59. Every day at the time specified, all economy messages originated at the local site will be sent to remote sites.

Identify holding times

The AMIS Networking service does not set up a delivery connection every time a message destined for a remote site is sent by a local user. Instead, to reduce costs, each message is placed in a queue to await the submission of more messages for delivery. This threshold applies only to Urgent and Standard priority messages, not Economy messages which are sent only once a day (see the preceding section).

For example, a user submits a standard message at 1:00 p.m. The standard holding time is 1 hour. The message is retained until 2:00 p.m. awaiting further messages destined to the same site. At 1:15 p.m. a user sends an urgent message and the urgent holding time is 15 minutes. At 1:30 p.m. the urgent message is eligible for delivery. The next time the system wakes up, it will place both messages in a send queue (if the batch threshold has not been reached). At 1:30, the urgent holding time, a network connection is established to each site to which a message is destined. Since a connection now exists, the standard message is transferred along with the urgent message.

Economy messages, on the other hand, are always delivered at a specific time (for example, 6:00 p.m. every evening) and are therefore unaffected by the holding time threshold. Economy messages will not be delivered until the absolute time, regardless of whether or not other urgent or standard messages are ready to be delivered. This preserves the overnight delivery nature of economy messages.

Standard class holding time

Identify the minimum retention time for AMIS messages tagged as standard. This is the length of time that a standard message is retained before the system attempts to send it. A message may be transferred before this holding time expires if a connection is established for another reason, such as delivering urgent messages.

The time must be in hours and minutes and in the range 00:00 to 33:20. The default is "03:00".

Urgent class holding time

Identify the minimum retention time for AMIS messages tagged as urgent. This is the length of time that an urgent message is retained before the system attempts to send it.

The time must be in hours and minutes and in the range 00:00 to 33:20. The default is "00:30".

Identify stale times

To prevent the AMIS Networking service from retaining messages that cannot be delivered because of local or remote site problems, a *stale time* is defined for each message priority. If a message is still undelivered after the specified stale time interval, the sender of the message receives a nondelivery notification (NDN) indicating that the message has not been transferred within the time limit specified for its priority. This is known as *stale dating* and prevents the AMIS Networking service from becoming congested with undeliverable messages (if, for example, the site has been disabled for maintenance). Messages that are undelivered must be recomposed and the user must send them again.

Economy class stale time

Identify the maximum retention time for AMIS messages tagged as economy. When this threshold is reached, a non-delivery notice is sent to the originator and the message has to be composed and sent again.

The time must be in hours and minutes and in the range 03:00 to 99:59. The default is "06:00".

Standard class stale time
Identify the maximum retention time for AMIS messages tagged as standard. If a message is not delivered before this time, a non-delivery notice is sent to the originator. These messages have to be composed and sent again.

The time must be entered in hours and minutes and in the range 00:00 to 99:59. This value must be at least three times the standard class holding time. The default is "09:00".

Urgent class stale time
Identify the maximum retention time for AMIS messages tagged as urgent. If an urgent message is not delivered before this time, a non-delivery notice is sent to the originator. These messages have to be composed and sent again.

The time must be entered in hours and minutes and in the range 00:00 to 99:59. This value must be at least three times the standard class holding time. The default is "09:00".

AMIS Networking System Information Worksheet

Page 1 of 1

AMIS compose prefix: _____
The prefix local users enter when composing messages to users at remote AMIS sites.

Local number: _____
The access number of the local site. This number is used so that remote AMIS sites can use features similar to Reply to reply to messages originated from the local site.

Outgoing messages allowed on weekdays from _____ to _____ (hh:mm)
Enter a value between 00:00 and 23:59.

Outgoing messages allowed on weekends from _____ to _____ (hh:mm)
Enter a value between 00:00 and 23:59.

Wakeup interval: _____
Enter a value between 1 and 99 (minutes). The default is 3 minutes.

Batch threshold: _____
Enter a value between 1 and 99. The default is 20.

Networking call maximum: _____
Enter a value between 1 and 999. The default is 4.

Economy class initiation time: _____ (hh:mm)
Enter a value between 00:00 and 23:59.

Economy class stale time: _____ (hh:mm)
Enter a value between 03:00 and 99:59. The default is 06:00.

Standard class holding time: _____ (hh:mm)
Enter a value between 00:00 and 33:20. The default is 03:00.

Standard class stale time: _____ (hh:mm)
Enter a value between 00:00 and 99:59. The default is 09:00.

Urgent class holding time: _____ (hh:mm)
Enter a value between 00:00 and 33:20. The default is 00:30.

Urgent class stale time: _____ (hh:mm)
Enter a value between 00:00 and 99:59. The default is 09:00.

Defining customer-specific AMIS Networking information

Note: This section only applies to administrators of multicustomer systems.

An AMIS compose prefix and local number must be defined for each customer group on the system. Enter these numbers in the worksheet on page 2-38. When you are ready to configure this information in Meridian Mail, simply copy the information from the worksheet into the system.

Identify the AMIS compose prefix

This is the number that is required by users within a customer group at the local site to send AMIS messages to remote sites. It is entered during message composition to indicate that the address the user is entering is an AMIS address. You will have to inform the users in the customer group of this prefix.

If this prefix conflicts with other network data, such as ESN or CDP dialing codes, you will receive and error message. (There is a conflict if the first two digits of a DN match this prefix.)

Identify the system access number (local number)

This number is unique to each customer group. It identifies the customer group at the local site to other AMIS sites. It is sent along with outgoing messages that originate from your site. This number is used by other remote systems when replying to messages originating from the local site (with an equivalent of the Meridian Mail Reply feature). The system access number includes the following elements:

- the country code of the local site, up to four digits in length;

- the area code of the local site, up to four digits in length;

- the local number of the local site.

The first two items are configured in the Network Dialing Prefixes screen, which is accessed by selecting Dialing Translations from the General Administration menu. See the chapter "Setting up dialing translations" for details. Only the local number is defined under Network administration.

Note: If you publish this number as the AMIS access number (that is, the number that remote users enter when addressing messages to the local site), the local number must terminate on the DN that has been defined in the VSDN table—the DN of the voice menu, thru-dial service or AMIS service that will be used to accept incoming AMIS calls.

AMIS Networking Customer Information Worksheet

Customer #	Customer name	Compose prefix	Local number
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Configuring AMIS Networking system information

For single customer systems, all AMIS Networking information is configured in one place: the View/Modify AMIS Networking Information screen. In multicustomer systems, this screen exists at both the system and customer administration levels.

If you are configuring a multicustomer system, start by configuring system-wide parameters and then, for each customer group that requires AMIS Networking, configure the customer-specific parameters. This section describes how to configure the system-wide information. The following section describes how to configure customer-specific information.

CAUTION
Overnight system audits
You should not leave the administrative terminal in any Network Administration menu overnight or important system audits may fail due to a lack of available memory.

Procedure 2-6xxx
Configuring system-wide AMIS Networking information

Starting Point: The main menu

1   Select Network Administration.

The Network Administration menu is displayed. If both Meridian Networking and AMIS Networking are installed, it appears as shown in Figure 2-8. If only AMIS Networking is installed, see Figure 2-9.

Figure 2-8xxx
The Network Administration menu (both AMIS and Meridian Networking are installed)

```
                          Network Administration


         1   Meridian Mail Networking Administration

         2   AMIS Networking Administration








  Select an item >

     Exit
```
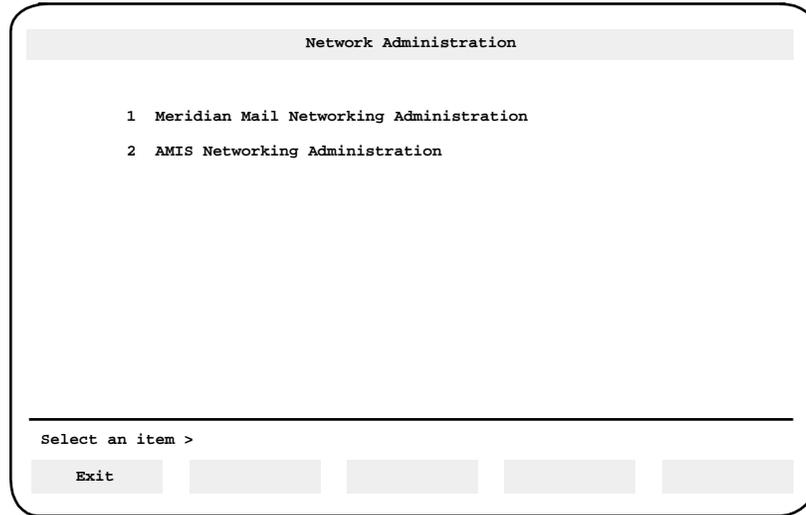
Figure 2-9x
The Network Administration menu (AMIS Networking only)

```
                          Network Administration


         1   View Modify AMIS Networking









  Select an item >

     Exit                          Networking
                                    Status#
```
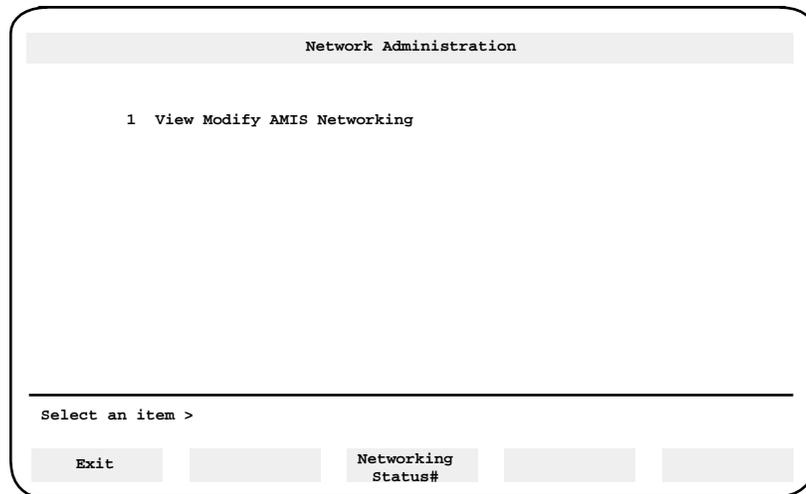
\# This softkey is displayed only if Meridian Networking is not installed
   and if you are at the system administration level. If Meridian Networking
   is also installed, this softkey is displayed after you select Meridian Mail
   Networking Administration.

2   If Meridian Networking is also installed, select AMIS Networking
Administration, View/Modify AMIS Networking. If Meridian Networking is
not installed, select View/Modify AMIS Networking.

*The View/Modify AMIS Networking Information screen is displayed
(Figure 2-10).*

Figure 2-10xxx
The View/Modify AMIS Networking Information screen

```
                           Network Administration

      View/Modify AMIS Networking Information

 *  AMIS Compose Prefix:          ____

     Outgoing Messages          Disabled     [Enabled]
     Incoming Messages          Disabled     [Enabled]

 *  System Access Number
     Local Number                        _____

     Outgoing Messages allowed on weekdays from (hh:mm) _____ to (hh:mm) _____
     Outgoing Messages allowed on weekends from (hh:mm) _____ to (hh:mm) _____
     Wakeup Interval (minutes)    _____
     Batch Threshold              _____
     Networking Call Maximum:              _____
     Economy Class Initiation Time (hh:mm)  _____
     Economy Class Stale Time (hh:mm)       _____
     Standard Class Holding Time (hh:mm)    _____
     Standard Class Stale Time (hh:mm)      _____
     Urgent Class Holding Time (hh:mm)      _____
     Urgent Class Stale Time (hh:mm)        _____



     _____

      Select an item >

     ┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐
        Save          Cancel
```

*   If the Meridian Mail Multi-Customer feature is installed, these fields are
    not displayed at the system administration level.

3   If you are configuring a single customer system, enter the AMIS
compose prefix.

4   If you are configuring a single customer system, enter the local number.

5   Enter the allowed delivery times for weekdays and weekends.

6   Modify the default settings for *Wakeup Interval*, *Batch Threshold* and
Networking Call Maximum if necessary.

7   Modify the default holding times, stale times and standard initiation
time, if necessary.

8   Press [Save] to save the AMIS Networking information.

Configuring customer-specific parameters

Note: This section applies to administrators of multicustomer systems only.

Once system parameters have been configured for AMIS, you are ready to configure the customer-specific parameters shown in Figure 2-11.

Procedure 2-7xxx
Configuring customer-specific AMIS Networking information

Starting point: The main menu

1 Select Customer Administration.

2 Select a customer group.

3 Select Network Administration from the Customer Administration menu.

   The Network Administration menu is displayed.

4 If Meridian Networking is also installed, select AMIS Networking Administration, View/Modify AMIS Networking. If Meridian Networking is not installed, select View/Modify AMIS Networking.

   The View/Modify AMIS Networking Information screen is displayed (Figure 2-10).

5 Return to step 2 and repeat this procedure for each customer group.

Figure 2-11xxx
The View/Modify AMIS Networking Information screen (customer administration)

```
ABC Company                    Network Administration

View/Modify AMIS Networking Information

AMIS Compose Prefix:      ____

Outgoing Messages         Disabled    [Enabled]
Incoming Messages         Disabled    [Enabled]

System Access Number
Local Number:     _____




Select an item >

    Save           Cancel
```

1 Enter the AMIS compose prefix.

2 Enter the local number.

3 To save the configuration, go to step 3a.
   To exit the screen without saving your changes, go to step 3b.

   a. Press [Save].

       The data entered in the screen is saved. The Network Administration menu is displayed.

   b. Press [Cancel].

       Any changes that you have made are not saved and the Network Administration menu is displayed.

Enabling AMIS for users

Your classes of service (COSs) should already be set up at this point (see page 2-20). This must be done before you add any new users to the system.

If you are adding new users, simply assign them to the appropriate classes of service when adding local voice users.

If you have upgraded your system from a previous release, check user mailboxes to make sure that users are assigned to an appropriate class of service. When you upgrade to Meridian Mail Release 9 from a prior release, all existing users are assigned to a personal class of service. This means that each user has a "unique" class of service which is not connected to any of the system classes of service. Therefore, users must be reassigned to system classes of service after an upgrade.

There is a class of service conversion utility ("COS conversion") that is documented in the *System Administration Tools Guide*. It checks each user's personal class of service and if it matches an existing system class of service, the user is assigned to that class of service. User mailboxes that do not match a system class of service remain with personal COSs. You can use this utility to view these unassigned mailboxes and then use the utility to either create a system class of service based on the personal COS or assign the unassigned mailbox to a defined system class of service.

Procedure 2-8xxx
Enabling AMIS for users

1   Log on as system administrator.

   To configure a multicustomer system, go to step 2.
   To configure a single-customer system, go to step 4.

2   Select Customer Administration.

3   Select a customer group.

4   Select User Administration to add new users or modify existing users.

5   Select Local Voice User.

6   Press [Add] to add new users or [View/Modify] to modify existing users.

   The Add (or View/Modify) Local Voice User screen is displayed. See Figure 2-12 on the next page.

Figure 2-12xxx
The Add Local Voice User screen

```
  ABC Company#                    User Administration

   Add Local Voice User
*  Location prefix:6338_____          Location Name:Toronto_____

   Mailbox Number: 8765_____    Volume ID: 2__

   Storage Used:    0

   Last Name:        _____

   First Name:        _____    Initials: _____

   Department:        _____

   Class of Service:    Personal        [001_Standard] 002_Executive003_Secretary
   (More Detail)        004_Outcalling 005_DNUonly    006_AMIS/OC
   .
   .
   .
                                                            ┌─────────────┐
  ─────────────────────────────────────────────────────────│ MORE BELOW  │
                                                            └─────────────┘

   ┌──────────┐  ┌──────────┐  ┌─────────────┐  ┌──────────┐  ┌──────────┐
   │   Save   │  │  Cancel  │  │ More Detail │  │  Change  │  │  Voice   │
   │          │  │          │  │             │  │ Password │  │          │
   └──────────┘  └──────────┘  └─────────────┘  └──────────┘  └──────────┘
```

* This row is displayed only if NMS is installed.
# The customer group's name is displayed in the left hand corner on multicustomer
  systems.

7   Go to the *Class of Service* field and select a COS in which AMIS
        Networking is enabled.

8   Press [Save] to save the local voice user profile.

Viewing the networking status

Note: This section is not applicable if Meridian Networking is also installed. If this is the case, see the chapter "Meridian Networking Administration" for information about the networking status.

The [Networking Status] softkey allows you to view the AMIS Networking Status screen (Figure 2-13). This screen displays the activity status for AMIS Networking and the number of economy, standard and urgent messages that are currently queued for transmission. To update the screen while viewing it, press [Update].

Figure 2-13xxx
The AMIS Networking Status screen

```
                        Network Administration

AMIS Networking Status

        Message Type        Status      #Economy        #Standard        #Urgent

        AMIS                Idle           0                0                0




        _____

        Exit                                                            Update
```

The following fields are displayed:

- *Message Type* This column specifies the type of networking message.

- *Status* The activity status may be one of the following:

  - *Idle -* indicates that there are no messages in the send queue. The system is in this state before it wakes up to check for AMIS messages. If the system is idle and there is a large number of messages indicated, the system is having problems sending messages due to either a local or remote problem.

-   *Ready* - indicates that there are messages in the send queue that are waiting to be transferred. The system is in this state after it has woken up and discovered that there are AMIS messages to be sent. These messages are placed in the send queue until the holding time is been reached.

-   *Active* - indicates that the transferring of AMIS messages is in progress. The system is in this state once the holding time or batch threshold has been reached and it begins to send messages.

-   *#Economy* The number of economy messages that are queued for transmission to other sites.

-   *#Standard* The number of standard messages that are queued for transmission to other sites.

-   *#Urgent* The number of urgent messages that are queued for transmission to other sites.

Procedure 2-9xxx
Viewing the networking status

Starting point: The main menu

1   Select Network Administration.

The Network Administration menu is displayed.

2   Select [Networking Status] to view the number of AMIS messages that are queued for transmission.

The AMIS Networking Status screen is displayed (Figure 2-13).

3   To update the screen, go to step 3a.
To exit the screen, go to step 3b.

a.   Press [Update].

The screen is updated with the current networking status.

b.   Press [Exit].

The Network Administration menu is displayed.

Disabling AMIS receive and/or send

You can temporarily restrict users from accessing the AMIS Networking service. This may be necessary to prevent system abuse or to clear the system of messages that cannot be delivered and are tying up resources. Check the Networking Status screen to see if a large number of AMIS messages remain queued for an extended period of time. This indicates that Meridian Mail is unable to send messages due to a local or remote problem. If this is the case, you may have to disable AMIS until the problem has been resolved.

In multicustomer systems, AMIS can be disabled at both the system administration level and the customer administration level. If AMIS is enabled for a particular customer, yet disabled at the system level, the system setting will override the customer setting.

Procedure 2-10xxx
Disabling AMIS compose and/or send

Starting Point: The main menu

1   To disable AMIS compose and/or send for a customer group, go to step 2.
    To disable AMIS compose and/or send for the entire system, go to step 4.

2   Select Customer Administration.

3   Select a customer group.

4   Select Network Administration.

5   Select View/Modify AMIS Networking.

    The View/Modify AMIS Networking Information screen is displayed.

6   To disable outgoing messages, set the *Outgoing Messages* field to "Disabled".

    All users (on the system or in the customer group) are prohibited from sending AMIS messages. Users who originate messages while transmission is disabled will receive non-delivery notifications.

7   To disable incoming messages, set the *Incoming Messages* field to "Disabled".

    All users (on the system or in the customer group) are prohibited from receiving AMIS messages from remote sites.

Chapter 3:
Setting up dialing translations

Who needs to read this chapter

The configuration procedures described in this chapter are applicable only if one (or both) of the following features is installed:

- AMIS networking

- Fax on Demand (using callback delivery)

Overview

This chapter describes how the information entered in the following screens is used by Meridian Mail to generate dialable DNs for AMIS networking.

- Network Dialing Prefixes

- View/Modify Translation Table

The first screen must be configured for all systems using AMIS networking. Translation tables, however, may not be necessary for all systems, since they are intended to deal with exceptions to normal dialing procedures. These exceptions are described in detail later in this chapter.

Note: Network dialing translations are not required for outcalling (remote notification and delivery to nonuser). The numbers entered are already in a dialable format and do not require translation.

The datafill of these screens will vary from one system to the next since they reflect the particular system's exchange codes, surrounding area codes and network dialing access codes.

Translations for AMIS networking

In AMIS networking, these prefixes and translation tables are used when a local user uses the Reply feature to respond to an AMIS message that he or she has received. The phone number of the originator of the AMIS message is contained in the header. However, to be able to send a message (the reply) to this number, Meridian Mail must translate it into a number that is dialable from the local system.

Network dialing prefixes

The Network Dialing Prefixes screen must be filled in if AMIS networking is installed. The Network Dialing Prefixes screen is divided into two areas:

- Default Prefixes for Network Dialing

  This is where you specify the network access codes that are used by your system for placing local calls, long distance calls and international calls. These prefixes are needed to generate dialable DNs from numbers that are entered by users sending AMIS messages.

- Codes to Access Local Site

  This is where you enter the country code and area/city code of your Meridian Mail site. These codes are used to determine if the country and/or area/city code entered by a caller needs to be stripped out.

  For example, users must specify their country code and area/city code when entering an AMIS number. Meridian Mail checks this screen to see if the country and area/city codes specified in the AMIS number match the codes of the Meridian Mail system. If there is a match, the country and area/city codes are not required for dialing purposes and are stripped out.

  For example, a caller enters 214-555-1212 as an AMIS number. The area/city code ("214") is the same as the Meridian Mail system's. This code is, therefore, not needed to dial the number. Meridian Mail strips out the "214", gets the network dialing prefix for local dialing ("9") and generates the following dialable DN: 9-555-1212.

Translation tables

Translation tables will not be required by all systems. These tables are intended to handle certain dialing exceptions. For example, in a normal local dialing scenario, the NPA (area/city code) of the calling site is the same as the called site. An exception to this rule is that the NPAs are different but the call is still considered local.

If any of the following four exceptions apply to your system, you will have to define a translation table for every type of exception:

- local dialing to a different NPA (NPA required in DN)

- local dialing to a different NPA (NPA *not* required in DN)

- long distance dialing to the same NPA (NPA required in DN)

- long distance dialing to the same NPA (NPA *not* required in DN)

In all other dialing scenarios (such as long distance dialing to a different NPA and local dialing to the same NPA), the network dialing prefixes are used instead.

Meridian Mail applies these translation tables before checking restriction/permission lists. For example, a call to another NPA is considered local, and the restriction/permission list applied to an AMIS site only allows local calls. If a translation table is not set up for this exceptional dialing scenario, the system will assume that the AMIS number is long distance (because the NPA is different from the local site) and Meridian Mail will not deliver the message (since the restriction/permission list does not allow delivery to long distance numbers).

Detailed descriptions and sample translation tables are provided for each of these exceptions beginning on page 3-23.

Maximum networking combinations
If you are planning to install Meridian Networking or Network Message Service (NMS), you should be aware of the number sites and/or locations you can set up, and how that number affects the total number of dialing translation tables and exchange codes possible. For more details, refer to *Dialing Translations* administration NTP and *Networking Installation Guide*.

Table 3-1 shows the maximum combinations of sites, locations, dialing translation tables and exchange codes possible. Note that not all combinations are covered but tradeoffs are possible at approximate ratios of:

    1 site to 1 location to 3 translation tables to 10 exchange codes

The sites or locations defined in the Meridian Networking may be communicated with by either the AMIS (that is, virtual node) or Meridian protocol (using modems).

Translation tables and Exchange codes are present if the local site requires any special dialing translations for the AMIS or Fax on Demand features. Please refer to the Dialing Translations administration NTP for further details.

Note: The maximum number of steering codes (for ESN, CDP, or Hybrid dialing plans) is assumed in the tables (that is, up to 50 steering codes for each site or location).

The table limits are enforced during addition or modification of networking or dialing translation tables.

Table 3-1
Maximum networking combinations

Sites	Locations	Translation tables	Exchange codes
Dialing translations			
0	0	15	930
0	0	8	960
Networking/dialing translation			
2	0	15	530
5	0	15	770
10	0	15	670
20	0	15	470
30	0	5	340
40	0	5	140
48	0	0	0
NMS			
1	2	15	820
1	30	5	420
1	57	0	0
Networking/NMS			
2	56	0	0
5	53	0	0
10	47	0	0
20	35	0	0

Sites	Locations	Translation tables	Exchange codes
30	22	0	0
40	10	0	0
47	2	0	0
Networking/NMS/Dialing translation			
2	2	15	800
2	36	5	300
3	2	15	780
3	35	5	300
5	2	15	740
5	32	5	300
10	2	15	640
10	26	5	300
20	2	5	520
20	14	5	300
30	2	5	310
40	2	5	110
47	2	5	50

Sites: are the networking sites defined in the network database. Sites are present if the Meridian Networking feature is used.

Locations: are the total number of networking locations defined in the network database, both local and remote. Locations are present if the NMS feature is supported on the local site, or on any remote site in a network (that is, if the Meridian Networking feature is used).

Translation tables: are the number of dialing translation tables defined.

Exchange codes: are the total number of exchange (office) codes defined in the dialing translation tables.

Restrictions

To prevent AMIS networking messages from being sent to unauthorized numbers, you will have to be sure to set up restrictions in the Meridian 1 and in Meridian Mail.

CAUTION
Placing restrictions on calls
These network prefixes, access codes and translation tables are not used for restricting calls to certain area/city codes or numbers. Restrictions must be set up in the Meridian 1 and/or in the Voice Security Options screen in Meridian Mail.

In the Meridian 1

To restrict agents from dialing certain numbers, you must set up an NCOS and an FCAS table. This is done in LD87. Then, in LD90, you can restrict specific NPAs and special numbers. For more information about setting up restrictions in the Meridian 1, see the *X11 input/out guide* (NTP 553-3001-400).

> *Note:* If certain prefixes are allowed in Meridian Mail, but not allowed by the Meridian 1, the Meridian 1 setting will override the Meridian Mail setting and the call will be blocked.

In Meridian Mail

Restriction/permission codes are defined in the Voice Security Options screen. Up to four restriction/permission sets or tables can be created in this screen and then applied to different features, including AMIS networking and Fax on Demand. This means that you can apply one restriction/permission set to AMIS networking and another set to Fax on Demand. Or, you can apply the same set to both features.

Procedure 3-1 outlines the steps involved in assigning restriction/permission codes to AMIS networking. This procedure is by no means complete. You should refer to the appropriate sections for detailed instructions and additional information. For AMIS networking, see the section "Selecting restriction/permission codes" in the chapter "Class of Service administration" in the *System Administration Guide* for details.

Note: If certain prefixes are allowed in Meridian Mail, but not allowed by the switch (DMS/SL-100), the switch setting will override the Meridian Mail setting and the call will be blocked.

Procedure 3-1xxx
Setting up restrictions in Meridian Mail

Starting point: The Main Menu

1 Select Voice Administration.

2 Select Voice Security Options.

3 Check the defined restriction/permission sets and determine which set is applicable to AMIS.

4 Return to the Main Menu.

5 To apply a restriction/permission set to AMIS networking

    a. Select Class of Service Administration.

    b. Press [Add] to add a new Class of Service, or press [View/Modify] to modify an existing Class of Service.

    c. Move the cursor to the *AMIS Restriction/Permission Codes* field.

    d. Select one of the four available restriction/permission sets.

Identify network dialing prefixes

You will need to identify the following prefixes and access codes for your Meridian Mail site. This must be done for all Meridian Mail systems supporting AMIS networking.

As you identify these prefixes and access codes, enter them in the worksheet shown on page 3-13.

There are a number of sample datafills provided beginning on page 3-10 to show a number of possibilities. If your system uses ESN dialing, be sure to look at these examples.

Default prefixes for network dialing

There are three network dialing prefixes that must be defined. These are the dialing digits that are used to dial out of the switch to place local, long distance and international calls using either the public network, the ESN network, or a combination of both. These prefixes are used by Meridian Mail to generate a DN that is understandable to the switch.

For example, a caller enters 1-214-555-2131 as an AMIS number. The country code is the same as that of the Meridian Mail site but the area/city

code is different (as defined in *Codes to Access Local Site*). This indicates a long distance call. To complete the call, Meridian Mail looks up the long distance dialing prefix ("91" in this example) and generates the DN 91-214-555-2131.

> *Note:* If you have defined translation tables for exceptions (such as local dialing to a different NPA), the translation tables will be consulted for dialing prefixes, not the dialing prefixes identified here. The prefixes you define in the Network Dialing Prefixes screen are defaults which are used only under normal dialing conditions.

Network dialing prefix

This is the prefix that is used by the system to dial out of the switch and access the public network or a private network in order to place a local call.

The prefix you enter will depend on whether you use a private network or a public network to place local calls. Typical examples of network dialing prefixes are "9" or "8" to access the public network, or "6" to access a private ESN network.

If your switch is part of a CDP network, users who want to dial another user on the private network enter a CDP number which already includes a steering code. This means that you do not have to enter a network dialing prefix for dialing on the CDP network. You will, however, have to enter a prefix for off-net local dialing. Enter whatever prefix is used to get NARS service for local numbers (often "9" or "8").

Long distance dialing prefix

This is the prefix that is used by the system to dial out of the switch and access the public network or a private network in order to place a long distance call.

The prefix you enter will depend on whether you use a private network or a public network to place long distance calls. Typical examples of long distance dialing prefixes are "91" or "81" to access the public network, or "6" to access a private ESN network.

If your switch is part of a CDP network, users who want to dial another user on the private network enter a CDP number which already includes a steering code. This means that you do not have to enter a network dialing prefix for dialing on the CDP network. You will, however, have to enter a prefix for off-net long distance dialing. Enter whatever prefix is used to get NARS service for long distance numbers (often "91" or "81").

International dialing prefix

This is the prefix that is used by the system to dial out of the switch and access the public network or a private network in order to place an international call.

The prefix you enter will depend on whether you use a private network or a public network to place international calls. Typical examples of international dialing prefixes are "9011" or "8011" to access the public network, or "6011" to access a private ESN network.

If your switch is part of a CDP network, users who want to dial another user on the private network enter a CDP number which already includes a steering code. This means that you do not have to enter a network dialing prefix for dialing on the CDP network. You will, however, have to enter a prefix for off-net international dialing. Enter whatever prefix is used to get NARS service for international numbers (often "9011" or "8011").

Codes to access the local site

There are two access codes that you must define: the country code and the area/city code of the local Meridian Mail system. These fields are used to determine whether or not area/city codes and country codes need to be stripped out when a user enters an AMIS number.

Country code

Identify the country code for your system. It is "1" for the U.S.A. and Canada. When a number that includes a country code is provided by a user when addressing an AMIS message, the country code will be stripped out if it matches the code entered in this field. When the called system and the calling system share the same country code, it is not included in the dialable DN.

For example, a user that is located in the U.S.A. wishes to send an AMIS message to a user in Canada. He includes the country code "1" in the address. Since the country code for Canada and the U.S.A. is the same, the system will strip out the country code before dialing the number.

Area/city code

Identify the area/city code (NPA) for the local system. When a number that includes an NPA is provided by a user when addressing an AMIS message, it will be stripped out if it matches the code entered in this field.

For example, a user sends a message to the DN 416-555-9911. The local system's area/city code is also 416. Therefore, the area code will be

stripped out and the dialable DN will be 9-555-9911, where "9" is the
network dialing prefix (for local calls).

Sample datafills

The following screens are examples of how the Network Dialing Prefixes
screen might be filled out based on different methods of dialing (public
versus private network).

Dialing on the public network

Figure 3-1 shows a datafill for a system in Toronto (with a country code of
"1" and an area/city code of "416") in which all dialing takes place on the
public network. Note that these are just examples. Other common dialing
prefixes for public networks are "8", "81" and "8011".

Figure 3-1xxx
The Network Dialing Prefixes screen for public network dialing

```
                          Dialing Translation


   Network Dialing Prefixes

   Default Prefixes for Network Dialing
       Network Dialing:               9
       Long Distance Dialing:         91
       International Dialing:         9011

   Codes to Access the Local Site
       Country Code:                  1
       Area/city Code:                416




   _____

   Select a softkey>

      Save           Cancel
```

All dialing is on the ESN network

Figure 3-2 illustrates a datafill for a system in Dallas (with a country code of "1" and an area/city code of "214") in which all dialing (local, local distance and international) takes place on the ESN network .

Note: Also see the section "Setting up dialing translations for ESN dialing" on page 3-36 for special configuration information.

Figure 3-2xxx
The Network Dialing Prefixes screen (all dialing is on ESN)

```
                        Dialing Translation


  Network Dialing Prefixes

  Default Prefixes for Network Dialing
       Network Dialing:                  6_____
       Long Distance Dialing:            6_____
       International Dialing:            6011_____

  Codes to Access the Local Site
       Country Code:                     1___
       Area/city Code:                   214_




  _____

  Select a softkey>

      Save            Cancel
```

ESN dialing for long distance calls only

Figure 3-3 illustrates a datafill for a system in London (the country code is "44" and the area/city code is "71") in which local calls are dialed on the public network but long distance and international calls are dialed on the ESN network.

Figure 3-3xxx
The Network Dialing Prefixes screen (ESN for long distance only)

```
                         Dialing Translation


    Network Dialing Prefixes

    Default Prefixes for Network Dialing
        Network Dialing:                    9
        Long Distance Dialing:              6
        International Dialing:               6011

    Codes to Access the Local Site
        Country Code:                       44
        Area/city Code:                     71




    _____

    Select a softkey>

       Save            Cancel
```

Network dialing prefixes worksheet

Default prefixes for network dialing

    Network dialing (local calls):   _____

    Long distance dialing: _____

    International dialing: _____

Codes to access local site

    Country code: _____

    Area/city code: _____

Configuring network dialing prefixes

Make sure you have identified your dialing prefixes and access codes as outlined in the preceding pages before beginning Procedure 3-2.

Procedure 3-2xxx
Configuring network dialing prefixes

Starting point: The Main Menu

1 Select General Administration.

The General Administration menu is displayed. See Figure 3-4.

Figure 3-4xxx
The General Administration menu

```
                        General Administration


        1  General Options

        2  Volume Administration

        3  Change System Administration Password

        4  Change Customer Administration Password

        5  Change System Time

        6  Dialing Translation



  _____
Select an item >

    Exit
```
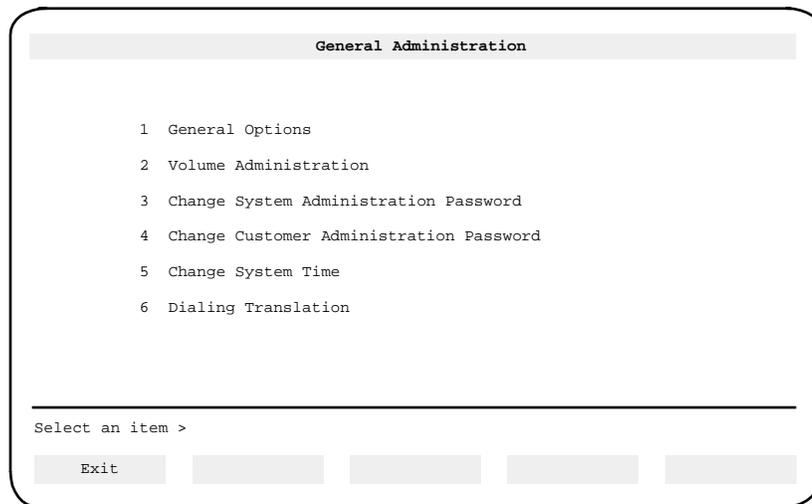
2 Select Dialing Translation.

The Dialing Translation menu is displayed. See Figure 3-5.

Figure 3-5xxx
The Dialing Translation menu

```
                          Dialing Translation


        1   Network Dialing Prefixes

        2   Translation Tables






  _____

  Select an item >

      Exit
```
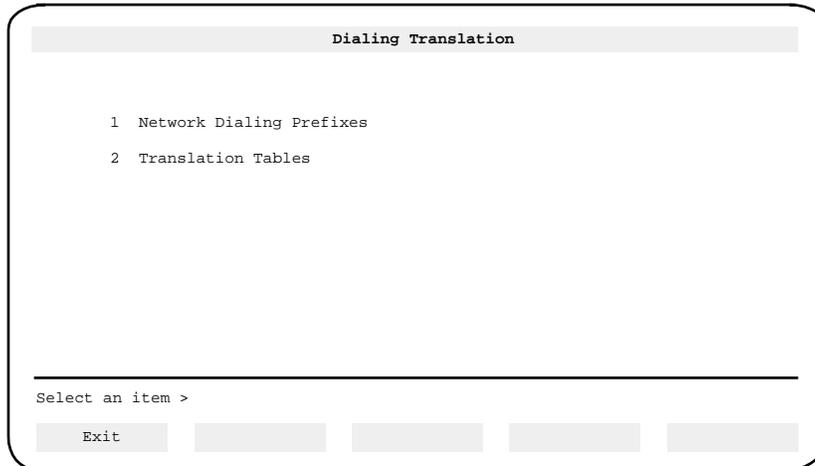
3   Select Network Dialing Prefixes.

The Network Dialing Prefixes screen (Figure 3-6) is displayed.

Figure 3-6xxx
The Network Dialing Prefixes screen

```
                          Dialing Translation

   Network Dialing Prefixes *

   Default Prefixes for Network Dialing
       Network Dialing:                  9_____
       Long Distance Dialing:            91_____
       International Dialing:            9011_____

   Codes to Access the Local Site
       Country Code:                     1___
       Area/city Code:                   416_



  _____

  Select a softkey>

      Save            Cancel
```
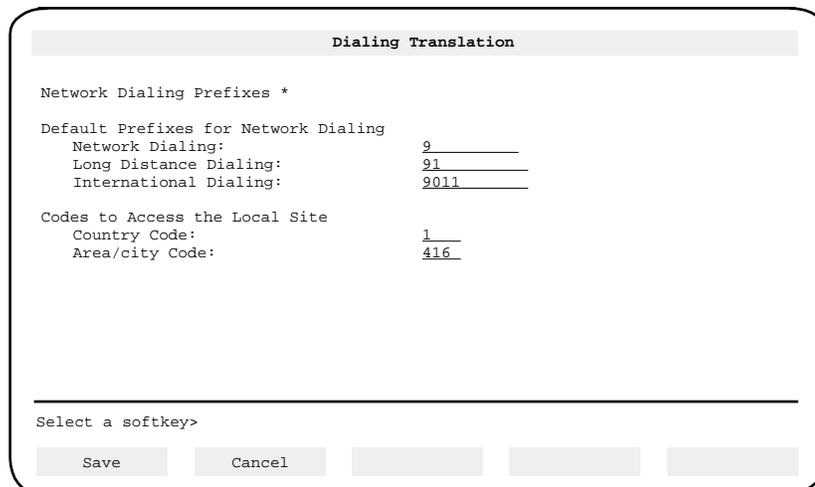
* Note that the prefixes shown in this screen are for illustration purposes only.

Note: Field descriptions are provided beginning on page 3-8.

4 Enter the default prefixes for network dialing.

a.   Enter the network dialing prefix. This prefix is for placing local calls.

b.   Enter the long distance dialing prefix.

c.   Enter the international dialing prefix.

5 Enter the codes used to access the local site.

a.   Enter the country code.

b.   Enter the area/city code (also known as the NPA).

6 To save the configuration, go to step 6a. To discard your changes, go to step 6b.

a.   Press [Save].

The prefixes and access codes are saved. You are returned to the Dialing Translation menu.

b.   Press [Cancel].

The prefixes and access codes are not saved. You are returned to the Dialing Translation menu.

Identifying the need for translation tables

Not all systems will require translation tables. Table 3-2 shows normal dialing scenarios which do not require translation tables.

Table 3-2xxx
Typical dialing scenarios that do not require translation tables

Case	Called Area is	Is NPA in called DN same as or different than the local site's NPA?	Not including network local dialing prefix (Y) translated DN length will be	DN Format needs to be
1	Long Distance	Different	11	Y-P-NPA-NXX-XXXX
2	Local	Same	7	Y-NXX-XXXX
Where: Y is the network dialing prefix (such as "9", "8" or "6") that is used for local calls P is the long distance dialing prefix ("1") NPA is the Numbering Plan Area (area/city code) NXX is the exchange code				

If these are the only local and long distance dialing scenarios that take place, you will not have to create any translation tables. Meridian Mail will use the default prefixes that are defined in the Network Dialing Prefixes screen.

If all dialing (local, long distance and international) is done on the ESN network, you will only have to create one translation table. See page 3-37 for more information.

If local dialing is carried out on the public network, but long distance dialing is carried out on the ESN network, see the section "Mixture of public network dialing and ESN network dialing" on page 3-38.

The scenarios outlined in Table 3-3 are exceptions. If any of these scenarios occur in your system, you will need to create translation tables. Up to 15 translation tables can be defined. A translation table is created for a particular area/city code. If a caller enters an area/city code for an AMIS networking address, and no translation table has been created for that area/city code, Meridian Mail uses the default prefixes defined in the Network Dialing Prefixes screen.

Table 3-3xxx
Exceptional dialing scenarios that require translation tables

Case	Called Area is	Is NPA in called DN same as or different than the local site's NPA?	Not includ-ing net-work local dialing pre-fix (Y) translated DN length will be	DN Format needs to be
1	Local	Different	10	Y-NPA-NXX-XXXX
2	Local	Different	7	Y-NXX-XXXX
3	Long Distance	Same	11	Y-P-NPA-NXX-XXXX
4	Long Distance	Same	8	Y-P-NXX-XXXX
Where: Y is the network dialing prefix (such as "9", "8" or "6") that is used for local calls P is the long distance dialing prefix ("1") NPA is the Numbering Plan Area (area code) NXX is the exchange code				

Cases 1 and 2 in Table 3-3 require a translation table for each NPA (other than the local site's NPA) to which local dialing occurs. For example, the

Meridian Mail system is in area/city code "416". Certain exchanges in area/city code "905" are considered local when dialed from the "416" area. You will, therefore, have to define a translation table for area/city code "905". Depending on whether or not the NPA is required as part of the dialable number the DN format will be Y-NPA-NXX-XXXX (9-905-555-2121 for example) or Y-NXX-XXXX (9-655-3131 for example).

Cases 3 and 4 in Table 3-3 require a translation table for the local site's NPA. For example, the Meridian Mail system is in area code "214". Some exchanges in this area code are considered local and others are considered long distance.

In the translation table, you will either specify the exchanges that are considered local or those that are considered long distance (whichever case has the smaller number of exchanges).

For example if 9 exchanges in the area code "214" are considered local to the Meridian Mail system and 100 are considered long distance, you would enter the 9 local exchanges in the table, since this makes it easier to define.

Identifying prefixes and exchange codes

Translation tables are created in the View/Modify Translation Table screen. The following are general descriptions of the fields in this screen. As you identify these parameters, fill out the worksheet that is shown on page 3-22. Beginning on page 3-23 are examples of the four types of exceptions and sample translation tables to help you fill out your worksheet.

Note: Also see the section "Setting up dialing translations for ESN dialing" on page 3-36 for special configuration information.

Area/city code

Identify the area/city code to which the translation table applies. Use Table 3-3 to determine where there are dialing exceptions in your system. An area code can be up to 4 digits in length. Only numeric characters (0-9) are accepted by this field.

Note: More than one table can be created for the same area/city code. This may be necessary if more exchanges are required than can fit in one table. (Up to 120 exchanges can be entered in a single table.)

Exchange codes

Identify the exchange codes which you need to enter in the translation table. This step should be done before you identify the prefix for exchange codes in the table and the prefix for exchange codes not in the table. This is because depending on which exchange codes you define in the table (they may be considered local or long distance), these prefixes will change.

An exchange code can be up to 4-digits in length. Only numeric characters (0-9) are accepted by this field. This field accepts codes that are less than three digits in length. This means that if you have a number of exchanges that begin with the same digit(s), you do not have to enter every code. For example, if you enter "52" as an exchange code, all exchanges beginning with 52 are implicitly included (520, 521, 522, and so on to 529).

Note: Exchange codes entered in tables must be unique for a particular area code.

Local dialing to another area/city code (NPA)

For cases 1 and 2 (from Table 3-3), you are defining those instances in which a call to certain exchanges in *another* NPA are considered local. In the translation table, you can either enter the exchange codes to which a call is considered local or you can enter the exchange codes to which a call is considered long distance. It is recommended that you use the method that results in entering the smaller number of exchange codes. For example, if 200 exchange codes in the NPA are considered local and 12 are long distance, enter the the exchange codes to which dialing is considered long distance.

Long distance dialing to the same area/city code (NPA)

For cases 3 and 4 (from Table 3-3), you are defining those instances in which a call to certain exchanges in the *same* NPA are considered long distance. In the translation table, you can either enter the exchange codes to which calls are considered long distance or local (depending on which method results in entering the lesser number of exchange codes).

Creating multiple tables for one area/city code

If more than 120 exchange codes are required, another table will have to be created for this area/city code. A number of tables that are created for the same area/city code can be considered as a "joint" table. If this is the case, the *Prefix for exchange codes NOT in this table* field must be identical for all tables that are created for the same area/city code.

Prefix for exchange codes in the table

For those exchange codes that are defined in the table, this prefix will be used by the system to dial out of the switch and place the call. Therefore, depending on the scenario, this prefix will either be for local dialing or long distance dialing. This prefix is needed to generate a dialable DN that is understood by the switch.

The prefix can be up to ten digits in length. This field accepts numeric characters (0-9) and the asterisk (*). (The asterisk indicates a pause for systems that have to wait for dial tone.)

> *Note:* More than one table might be necessary if different prefixes are required for different exchanges.

Prefix for exchange codes NOT in the table

For those exchange codes that are NOT defined in the table or any other table for this area/city code, and that belong to the area code to which the table applies, this prefix will be used by the system to dial out of the switch and place the call. Therefore, depending on the scenario, this prefix will either be for local dialing or long distance dialing. This prefix is needed to generate a dialable DN that is understood by the switch.

> *Note:* If more than one translation table needs to be defined for a particular area/city code, the value in the *Prefix for exchange codes NOT in the table* field must be identical in all tables that apply to that area/city code.

Table 3-4 indicates how to define prefixes for exchange codes that are defined in the translation table and those that are not in the table based on the type of dialing exception. The dialing digits that are in brackets are just examples and will vary from system to system. Here it is assumed that the network dialing prefix for local calls is "9". The section "Setting up translation tables for dialing exceptions" beginning on page 3-23 provides more concrete examples of each of the four exceptions.

Table 3-4xxx
Prefixes for exchange codes

Dialing scenario	Prefix for exchange codes in table	Prefix for Exchange codes NOT in table
1: Local dialing to a different NPA (NPA required in DN)		
Exchange codes defined in table are considered local	Y-NPA (9-905)	Y-P-NPA (9-1-905)
Exchange codes defined in table are considered long distance	Y-P-NPA (9-1-905)	Y-NPA (9-905)
2: Local dialing to a different NPA (*no* NPA in DN)		
Exchange codes defined in table are considered local	Y (9)	Y-P (9-1)
Exchange codes defined in table are considered long distance	Y-P (9-1)	Y (9)
3: Long distance dialing to same NPA (NPA required in DN)		
Exchange codes defined in table are considered long distance	Y-P-NPA (9-1-214)	Y (9)
Exchange codes defined in table are considered local	Y (9)	Y-P-NPA (9-1-214)
4: Long distance dialing to same NPA (*no* NPA in DN)		
Exchange codes defined in table are considered long distance	Y-P (9-1)	Y (9)
Exchange codes defined in table are considered local	Y (9)	Y-P (9-1)

Translation table worksheet

Table ID: _____   **Area/City Code:** _____

Prefix for exchange codes in the table: _____

Prefix for exchange codes NOT in the table: _____

Exchange codes

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

Setting up translation tables for dialing exceptions

The following sections provide examples of when certain exceptions may occur and the resulting translation tables that need to be created.

Note: Also see the section "Setting up dialing translations for ESN dialing" on page 3-36 for special configuration information.

Local dialing to a different NPA (NPA required)

In this case, the NPA of the dialed DN is different from the calling site's NPA, but no long distance charges apply and no long distance prefix is required. The NPA is required as part of the dialable DN.

This scenario may occur in larger metropolitan areas that are serviced by a number of area codes. For example, a large city may have two or three area codes (for example, 416 and 905) to cover the entire metropolitan area.

When a call is placed from the 416 area code to the 905 area code, the NPAs are different, however, the call is local for certain exchanges. However, for other exchanges, the call may be considered long distance. For those exchanges that are considered local, the long distance dialing prefix must *not* be inserted in the dialed DN.

Figure 3-7xxx
Local dialing to a different NPA
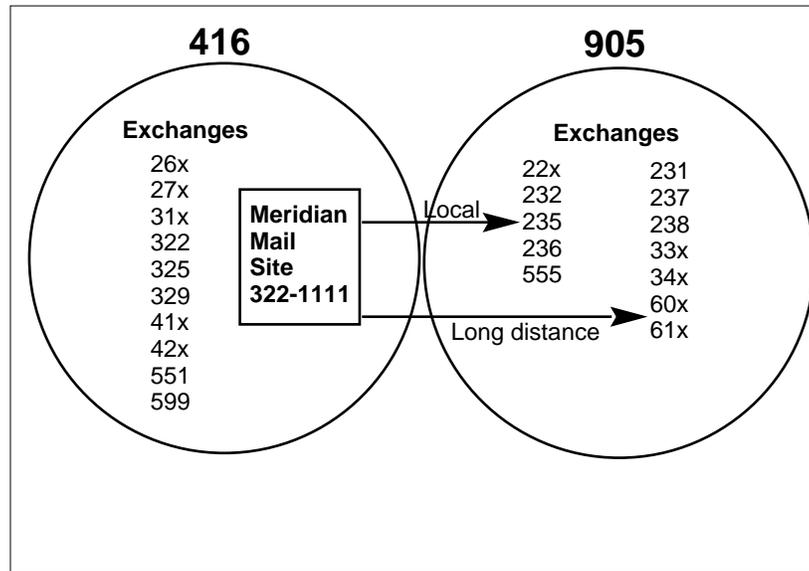
In this scenario a translation table is required for each NPA (other than the local site's NPA) that has exchange codes, which when dialed from the local site, are considered local calls. The scenario shown in Figure 3-7 requires a translation table for area code 905.

Example
Your Meridian Mail system is serviced by the 416 NPA. The network dialing prefix is "9" and the long distance dialing prefix is "91". A user wishes to send a message and enters the number "1-905-555-2121" (the "1" is the country code).

If you look at Figure 3-7 you will notice that calls to the "555" exchange are considered local. The dialable DN is therefore "9-905-555-2121", not "91-905-555-2121".

Translation table
Figure 3-8 shows the translation table that you would have to create to handle the scenario shown in Figure 3-7. This example assumes that the network dialing prefix (for local calls) is "9" and the long distance dialing prefix is "91".

Figure 3-8xxx
Translation table for local calling to different NPA (NPA required):
method 1

```
                          Dialing Translation

 View/Modify Translation Table

                              Prefix for exchange      Prefix for exchange
 Table ID  Area/City Code  codes in the table        codes NOT in the table

    1         905             9905                        91905

 The following exchange codes are defined:

 22    232    235    236    555    ____   ____   ____   ____   ____




 Select a softkey>

    Exit           Cancel                                    More Fields
```

Because "555" is defined in the translation table for area/city code 905, the *Prefix for exchange codes in this table* is used to generate the dialable DN. Because "9905" and not "91905" is entered, the call will be local. However, any exchange in the 905 area/city code that is not entered in this table will be considered long distance and the prefix "91" will be used to generate dialable DNs.

You could also define the translation table in the following manner.

Figure 3-9xxx
Translation table for local calling to different NPA (NPA required): method 2

```
                          Dialing Translation

   View/Modify Translation Table

                             Prefix for exchange        Prefix for exchange
   Table ID  Area/City Code  codes in the table         codes NOT in the table

      1         905           91905                         9905

   The following exchange codes are defined:

   231   237    238    33     34      60     61    ____   ____   ____




   _____

   Select a softkey>

       Exit            Cancel                                    More Fields
```

In Figure 3-9, the exchange codes which are long distance within the 905 area/city code are explicitly defined in the table instead of the local codes. Note that the two prefixes (prefix for exchange codes in the table and prefix for exchange codes note in this table are reversed compared to Table 3-8).

The way in which you define the table will depend on how many exchange codes within the area/city code are considered local and how many are considered long distance. If for example, 100 exchange codes in the 905 NPA are long distance and 10 are local, the translation table in Figure 3-8 would be easier to create since you would only have to define ten codes. However, if there were more local exchange codes than long distance codes, you would create a table similar to the one shown in Figure 3-9.

Local dialing to a different NPA (no NPA required)

This scenario is almost identical to the first scenario because there is local dialing from one NPA to a different NPA. However, the difference is that no NPA is required in the dialable DN. Using the example on page 3-24, the dialable DN in this case would be "9-555-2121" instead of "9-905-555-2121".

Example

This situation may occur if, for example, a metropolitan area is in the process of adopting a new area code in which certain exchanges will be considered local (as described for Scenario 1). Therefore, in Figure 3-10 the first column of exchanges for the "905" area code are local if dialed from the "416" area code. In order to make the transition easier for people in the area, the service provider will allow calls to the local exchanges in the "905" area code to be placed without the NPA since this is what people are used to dialing. However, after a certain specified date, the new area code will have to be entered and the translation table prefixes must be updated (Scenario 1).

Figure 3-10xxx
Local dialing to a different NPA (no NPA required)
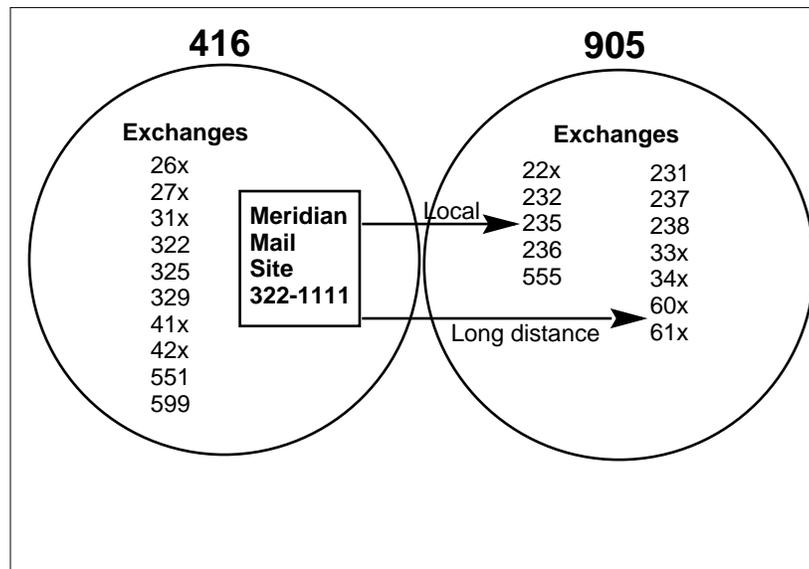
Translation table

Figure 3-11 shows the translation table that you would have to create to
handle the scenario shown in Figure 3-7 when no NPA is required in the
dialable DN. This example assumes that the network dialing prefix (for
local calls) is "9" and the long distance dialing prefix is "91".

Figure 3-11xxx
Translation table for local calling to different NPA (no NPA required)

```
                           Dialing Translation

  View/Modify Translation Table

                            Prefix for exchange       Prefix for exchange
  Table ID  Area/City Code  codes in the table        codes NOT in the table

     1          905              9                          91

  The following exchange codes are defined:

  22    231    235    236    555    ____    ____    ____    ____    ____




  _____

  Select a softkey>

     Exit            Cancel                                   More Fields
```

Long distance dialing to the same NPA (NPA required)

This scenario describes toll call (long distance) dialing within the same area
code. Calls involve the long distance dialing prefix even though both the
calling party and the called party are under the same area code. In this
scenario, the NPA is also required as part of the dialable DN.

This sort of dialing scenario may occur when a number of smaller rural
areas or towns share an NPA, yet calls from one town to another are
considered long distance.

Figure 3-12xxx
Long distance dialing to the same NPA
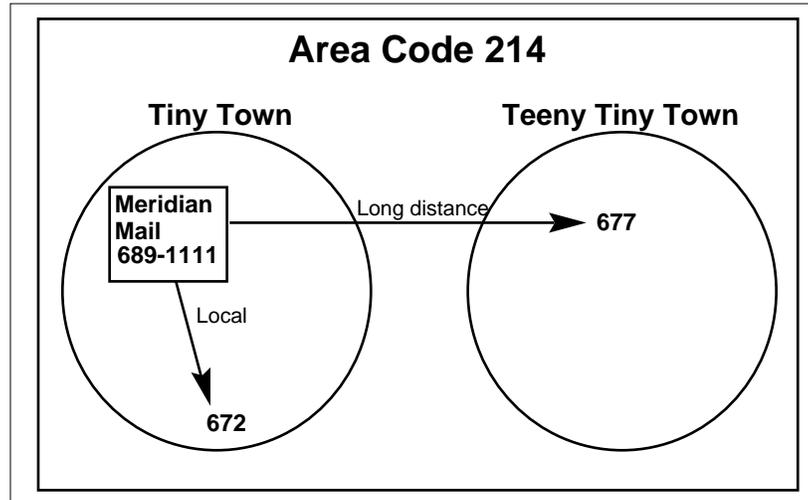
Example

A user from Tiny Town wishes to send a message to the Meridian Mail system located in Teeny Tiny Town, and enters the DN 214-677-1133. Exchange 677 is in the 214 area code, however, is considered long distance because it is in a different town.

Meridian Mail must convert this DN to the dialable DN 91-214-677-1133 ("91" is the long distance dialing prefix).

Translation table

Figure 3-13 shows the translation table that you would have to create to handle the scenario shown in Figure 3-12. This example assumes that the network dialing prefix (for local calls) is "9" and the long distance dialing prefix is "91".

Figure 3-13xxx
Translation table for long distance calling to the same NPA
(NPA required)

```
                          Dialing Translation

View/Modify Translation Table

                          Prefix for exchange      Prefix for exchange
Table ID  Area/City Code  codes in the table       codes NOT in the table

   1          214             91214                    9

The following exchange codes are defined:

677    ___   ___   ___   ___   ___   ___   ___   ___   ___




_____
Select a softkey>

    Exit          Cancel                                      More Fields
```

Long distance dialing to the same NPA (NPA not required)

This scenario is almost identical to the preceding scenario (Figure 3-12)
because there is long distance dialing from one NPA to the same NPA. The
only difference is that no NPA is required in the dialable DN. Using the
example above, the dialable DN in this case would be "91-677-1133"
instead of "91-214-677-1133".

Translation table

Figure 3-14 shows the translation table that you would have to create to
handle the scenario shown in Figure 3-12 in which the NPA is not required
as part of the dialable DN. This example assumes that the network dialing
prefix (for local calls) is "9" and the long distance dialing prefix is "91".

Figure 3-14xxx
Translation table for long distance calling to the same NPA
(no NPA required)

```
┌──────────────────────────────────────────────────────────────────┐
│                          Dialing Translation                       │
│                                                                    │
│  View/Modify Translation Tables                                    │
│                                                                    │
│                            Prefix for exchange    Prefix for exchange│
│  Table ID  Area/City Code  codes in this table    codes NOT in this table│
│                                                                    │
│     1         214_            91____                   9_____      │
│                                                                    │
│  The following exchange codes are defined:                         │
│                                                                    │
│  677_   ___   ___   ___   ___   ___   ___   ___   ___   ___        │
│                                                                    │
│                                                                    │
│                                                                    │
│  ────────────────────────────────────────────────────────         │
│                                                                    │
│  Select a softkey>                                                 │
│                                                                    │
│     Exit          Cancel                                More Fields │
└──────────────────────────────────────────────────────────────────┘
```

Creating translation tables in Meridian Mail

Once you have determined which area codes require translation tables, the
exchange codes that need to be defined in the table, and the two prefixes
(one for exchange codes in the table and the other for exchange codes not
in the table), follow Procedure 3-3 to configure a translation table in
Meridian Mail.

Procedure 3-3xxx
Creating a translation table

Starting point: The Main Menu

1   Select General Administration.

   The General Administration menu is displayed.

2   Select Dialing Translation.

   The Dialing Translation menu is displayed (Figure 3-15).

Figure 3-15xxx
The Dialing Translation menu

```
┌─────────────────────────────────────────────────────────────┐
│                                                               │
│                    Dialing Translation                        │
│                                                               │
│                                                               │
│                                                               │
│         1   Network Dialing Prefixes                          │
│                                                               │
│         2   Translation Tables                                │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│  ───────────────────────────────────────────────────         │
│                                                               │
│  Select an item >                                             │
│  ┌──────────┐ ┌─────────┐ ┌─────────┐ ┌─────────┐ ┌─────────┐ │
│  │   Exit   │ │         │ │         │ │         │ │         │ │
│  └──────────┘ └─────────┘ └─────────┘ └─────────┘ └─────────┘ │
└─────────────────────────────────────────────────────────────┘
```
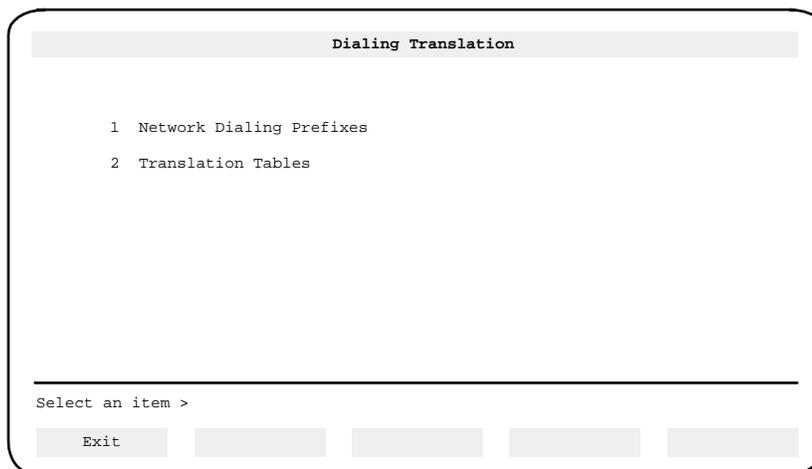
3   Select Translation Tables.

The Translation Tables screen is displayed (Figure 3-16).

Figure 3-16xxx
The Translation Tables screen

```
                            Dialing Translation


   Translation Tables

                                Prefix for exchange       Prefix for exchange
   Table ID  Area/City Code   codes in this table       codes NOT in this table

      1         416           91416                     9
      2         416           91                        9
      3         905           9905                      91905
      4         906           9                         91906
      5         Empty
      6         Empty
      7         Empty
      8         Empty
      9         Empty
     10         Empty
     11         Empty
     12         Empty
     13         Empty
     14         Empty
     15         Empty
   ─────────────────────────────────────────────────────────────────────────
   Move the cursor to the item and press the spacebar to select.


       Exit                        View/Modify        Delete
```

Note: The prefixes shown in this screen are for illustration purposes only.

This is a summary screen which lists all of the defined and empty translation tables that currently exist on the system. All of the fields in this screen are read-only.

4 Move the cursor to an empty table.

5 Press <Space bar> to select it.

6 Press [View/Modify].

You are prompted for an area/city code.

7 Enter the area/city code to which the table you are creating applies and press <Return>.

The View/Modify Translation Table screen is displayed (Figure 3-17).

Figure 3-17xxx
The View/Modify Translation Table screen

```
┌─────────────────────────────────────────────────────────────────┐
│                        Dialing Translation                       │
│                                                                   │
│  View/Modify Translation Table                                    │
│                                                                   │
│                            Prefix for exchange   Prefix for exchange │
│  Table ID  Area/City Code  codes in the table    codes NOT in the table │
│                                                                   │
│     1          905         _____              _____         │
│  The following exchange codes are defined:                        │
│                                                                   │
│  ____   ____  ____   ____  ____    ____  ____   ____  ____   ____  │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│  ───────────────────────────────────────────────────             │
│                                                                   │
│  Select a softkey>                                                │
│  ┌────────┐    ┌────────┐    ┌────────┐    ┌────────┐  ┌──────────┐│
│  │  Exit  │    │ Cancel │    │        │    │        │  │More Fields││
│  └────────┘    └────────┘    └────────┘    └────────┘  └──────────┘│
└─────────────────────────────────────────────────────────────────┘
```

Note 1: *For field descriptions, go to page 3-18.*

Note 2: *The Table ID field cannot be modified. These numbers are automatically assigned by the system.*

8 Specify the prefix for exchange codes that are defined in the table. This prefix is applied to DNs entered by callers/users in order to generate the appropriate dialable DN.

9 Specify the prefix for exchange codes that are not defined in the table. This prefix is applied to DNs entered by callers/users in order to generate the appropriate dialable DN.

10 Enter the appropriate exchange codes.

To display more fields, press the [More Fields] softkey. Up to 120 exchange codes can be defined for a table.

Note: *All entries will be validated to avoid duplication.*

11 Press [Save] to save the table.

The Translation Tables screen is displayed.

If you run out of fields for exchange codes, create another table. Return to step 4. The Area/City Code and the Prefix for exchange codes NOT in this table fields in the second table must match the first table.

Viewing/modifying a defined translation table

Follow Procedure 3-4 to modify an already defined translation table. If you are modifying a table, it is assumed that it is to add exchange codes to or delete exchange codes from the existing list. Once exchange codes are defined in a table, you *cannot* modify the *Area/City Code* field or the *Prefix for exchange codes in this table* field. To modify these fields, you would have to delete all of the exchange codes first. For instructions on deleting the contents of a translation table, see Procedure 3-5 on the next page.

Procedure 3-4xxx
Viewing/modifying a translation table

Starting point: The Main Menu

1 Select General Administration.

   The General Administration menu is displayed.

2 Select Dialing Translation.

   The Dialing Translation menu is displayed.

3 Select Translation Tables.

   The Dialing Translations screen is displayed.

4 Move the cursor to the table you want to view or modify.

5 Press <Space bar> to select it.

6 Press [View/Modify].

   The View/Modify Translation Table screen is displayed (Figure 3-17).

   Note: *The Area/City Code field cannot be modified if any exchange codes are currently defined in the table.*

7 Change the prefix for exchange codes that are not explicitly defined in this table if necessary. (You cannot change the prefix for exchange codes in the table.)

8 Add or delete exchange codes if necessary.

9 To save your changes, press [Save]. If you are only viewing the table, press [Cancel].

   The updated Translation Tables screen is displayed.

   If you were adding exchange codes and you ran out of fields, create another table. Return to step 4. The Area/City Code and the Prefix for exchange codes NOT in this table fields in the second table must match the first table.

Deleting a translation table

To delete the data in a defined translation table, follow Procedure 3-5.

Note: If you press [Delete] when an empty table is selected, an error message will be generated indicating that an empty table cannot be deleted. If the cursor is on a defined table when you press [Delete], the datafill will be deleted and the table will be reset to Empty.

Figure 3-18xxx
The Delete Translation Tables screen

```
                         Dialing Translation


  Delete Translation Table

                              Prefix for exchange        Prefix for exchange
  Table ID  Area/City Code  codes in this table       codes NOT in this table

    1          416              91416                         9

  The following exchange codes are defined:

  592







  ─────────────────────────────────────────────────────────────

  Select a softkey>


  OK To Delete       Cancel
```

Procedure 3-5xxx
Deleting a translation table

Starting point: The Main Menu

1 Select General Administration.

   The General Administration menu is displayed.

2 Select Dialing Translation.

   The Dialing Translation menu is displayed.

3 Select Translation Tables.

   The Dialing Translations screen is displayed.

4 Move the cursor to the (defined) table that you want to delete.

5 Press <Space bar> to select it.

6 Press [Delete].

The Delete Translation Table screen is displayed. The fields in this screen are read-only.

7 To delete the information in the table, go to step 7a. To cancel the deletion, go to step 7b.

    a. Press [OK to Delete].

    The contents of the translation table are deleted and the table is reset to empty.

    b. Press [Cancel].

    The contents of the translation table are not deleted.

Setting up dialing translations for ESN dialing

This section describes how network dialing prefixes and translation tables should be datafilled for ESN network dialing. This section describes configurations for systems in which all dialing is done on the ESN network, as well as those systems in which certain types of dialing are done on the ESN network and other types are done on the public network (for example, local calling and international calling are done on the public network, but long distance calling is done on the ESN network).

All dialing is on the ESN network

If all dialing is on the ESN network, you will have to configure the Network Dialing Prefixes screen so that the ESN prefix is entered as the network dialing prefix, long distance dialing prefix and international dialing prefix.

You will have to configure only one translation table.

This configuration applies to both North American sites and sites outside of North America.

Network dialing prefixes

Figure 3-19 illustrates the Network Dialing Prefixes screen for a system in which all dialing is done on the ESN network. In this example, the ESN access code is "6" and the local site's area/city code is "416".

Figure 3-19xxx
The Network Dialing Prefixes screen (all dialing is on ESN)

```
                          Dialing Translation

  Network Dialing Prefixes

  Default Prefixes for Network Dialing
      Network Dialing:                    6_____
      Long Distance Dialing:              6_____
      International Dialing:              6011_____

  Codes to Access the Local Site
      Country Code:                       1___
      Area/city Code:                     416_



  _____

  Select a softkey>

     Save            Cancel
```

Translation table

If all dialing (local, long distance and international) is carried out on the ESN network, only one translation table needs to be created. The ESN network is assumed to handle all the dialing exceptions including local inter-NPA dialing and long distance dialing within the same area/city code. Figure 3-20 illustrates the datafill for this table. (Note that the area code used in this figure is for illustration purposes only.)

Figure 3-20xxx
The View/Modify Translation Tables screen (ESN configuration)

```
┌─────────────────────────────────────────────────────────────────┐
│                                                                   │
│                    Dialing Translation                            │
│                                                                   │
│    View/Modify Translation Tables                                 │
│                                                                   │
│                            Prefix for exchange    Prefix for exchange │
│    Table ID  Area/City Code  codes in this table   codes NOT in this table │
│                                                                   │
│      1         416              6416                  6416         │
│                                                                   │
│    The following exchange codes are defined:                      │
│                                                                   │
│    ____   _____   _____   _____   _____   _____   _____   _____   _____   _____ │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│   ─────────────────────────────────────────────────────────      │
│                                                                   │
│    Select a softkey>                                              │
│    ┌─────────┐  ┌─────────┐  ┌─────────┐  ┌─────────┐  ┌─────────┐ │
│    │  Exit   │  │ Cancel  │  │         │  │         │  │More Fields│ │
│    └─────────┘  └─────────┘  └─────────┘  └─────────┘  └─────────┘ │
└─────────────────────────────────────────────────────────────────┘
```

It is not necessary to define any exchange codes in the table. The area code
in the table must be the same as the local site's area/city code that is
configured in the Network Dialing Prefixes screen.

Mixture of public network dialing and ESN network dialing

Certain systems may use a mixture of public network dialing and ESN
network dialing. For example, long distance and international calls are
dialed on the ESN network and local calls are dialed on the public network.

In this scenario, Both the Network Dialing Prefixes screen and the
Translation Tables screen need to be configured properly.

Figure 3-21 shows the Network Dialing Prefixes screen and Figure 3-22
illustrates a translation table to handle this scenario.

Note: If both public network dialing and ESN network dialing can be
used for certain types of calls (such as local or long distance), you must
choose one type of dialing. You cannot use both. If, for example, "9" is
the public network dialing prefix and "6" is the ESN network dialing
prefix and both can be used to place local calls, you will have to enter
either "9" or "6" in the Network Dialing Prefixes screen.

Figure 3-21xxx
The Network Dialing Prefixes screen (ESN for long distance only)

```
                        Dialing Translation

Network Dialing Prefixes

Default Prefixes for Network Dialing
    Network Dialing:                    9_____
    Long Distance Dialing:              6_____
    International Dialing:              6011_____

Codes to Access the Local Site
    Country Code:                       1___
    Area/city Code:                     416_



_____

Select a softkey>
```

Save	Cancel			

Figure 3-22xxx
The View/Modify Translation Tables screen (ESN for long distance dialing only)

```
                        Dialing Translation

View/Modify Translation Tables

                              Prefix for exchange      Prefix for exchange
Table ID  Area/City Code     codes in this table      codes NOT in this table

   3          905_               9905____                  6905_____

The following exchange codes are defined:

890_   279_   479_   ____   ____   ____   ____   ____   ____   ____



_____

Select a softkey>
```

Exit	Cancel			More Fields

In the above translation table for area code "905", any AMIS numbers with
exchange codes "890", "279", or "479" are considered local and are

prefixed with "9905". All other exchanges in this area code are considered long distance and are prefixed with "6905" and the call is made on the ESN network. This same methodology can also be applied to long distance dialing within the same NPA.

Allowing fax delivery to internal extensions

The configuration described in this section can be used for one of two reasons:

- to allow fax callback delivery to internal extensions

- to allow callers to enter standard ESN callback numbers in North America

  Note: For sites in North America, you may want to create two VSDNs for Fax on Demand applications. You can publish one number to internal users and/or to external callers who dial your site using ESN (the one served by the VSDN with *Call Back Number Area Code Translation* set to "None") and the other one to external callers (the one served by the VSDN with *Call Back Number Area Code Translation* set to "North American Plan"). See the "Voice administration" chapter for more information about the session profile and VSDNs.

If you want internal users to be able to dial up a fax application and have a fax delivered to an internal fax machine, the Network Dialing Prefixes screen must be configured as shown in Figure 3-23. In this example, the Meridian Mail site is in area code "416". Local dialing is on the public network, as shown in Figure 3-24, and long distance dialing is on the ESN network as shown in Figure 3-21.

Figure 3-23xxx
The Network Dialing Prefixes screen (fax delivery to internal extensions)

```
                          Dialing Translation


Network Dialing Prefixes

Default Prefixes for Network Dialing
    Network Dialing:
    Long Distance Dialing:              6
    International Dialing:              6011

Codes to Access Local Site
    Country Code:                       1
    Area/City Code:                    416




_____

Select a softkey>

  ┌─────────┐  ┌─────────┐  ┌─────────┐  ┌─────────┐  ┌─────────┐
  │  Save   │  │ Cancel  │  │         │  │         │  │         │
  └─────────┘  └─────────┘  └─────────┘  └─────────┘  └─────────┘
```

In this configuration, the Network Dialing prefix *must* be blank. This allows callers to enter callback numbers that will not be translated (by having a network dialing prefix added to it). For example, if a caller wants a fax sent to a fax machine at extension 2431, the callers enter 2431 as the fax callback number. If a network dialing prefix is configured ("9" for example), the system would append it to the extension number, and generate an invalid DN ("92431" for example).

By setting the *Call Back Number Area Code Translation* to "None" and filling the Network Dialing Prefixes screen as shown above, sites in North America can allow remote callers from other sites to enter ESN numbers in the format they are used to entering (6-ESN-XXXX). Whereas if *Call Back Number Area Code Translation* is set to "North American Plan", callers cannot enter their ESN number, but instead must enter a 10-digit callback number in the format NPA-NXX-XXXX.

At least one translation table (for the local site's area code) needs to be configured for this application (as shown in Figure 3-24) to handle local calls since the *Network Dialing Prefix* field is blank. Local calls are, therefore, handled in the following way. If a callback number in the 416 area is entered by an external caller, it will be prefixed with "9" to generate

a dialable DN. No exchange codes need to be defined in this translation table unless there are exceptional dialing scenarios within that area code.

Figure 3-24xxx
The View/Modify Translation Tables screen (public network dialing)

```
                              Dialing Translation


  View/Modify Translation Tables

                            Prefix for exchange      Prefix for exchange
  Table ID  Area/City Code  codes in the table       codes NOT in the table

     3         416               9                        9
  The following exchange codes are defined:

  ___    ___    ___    ___    ___    ___    ___    ___    ___    ___






  _____

  Select a softkey>
     Exit           Cancel                                  More Fields
```

AMIS networking is not impacted by this configuration. For example, a user at a remote AMIS site that is in the 416 area code sends a message to a local user. The local user uses the reply feature to respond. The number in the original message header (267-5555 for example) is translated to "9-267-5555" according to the translation table.

Chapter 4: Network Message Service

Overview

Network Message Service (NMS) uses the signaling capabilities inherent in ISDN primary rate access (ISDN PRA) and ISDN signaling link (ISL) to provide customers with messaging services on a network rather than on a strictly local basis. Customers whose networks employ ISDN PRA or ISL will be able to extend the existing messaging services to any and all users served by that customer's network. Access to the Network Message Service, as well as feature activation from the messaging system, will be transparent to the end user.

Network Message Service comprises two distinct applications: Network Message Service-Message Center (NMS-MC) and Network Message Service-Meridian Mail (NMS-MM). NMS-MC, which supports manual message centers such as attendant console and ACD sets, was developed in Xl1 Release l5. NMS-MM enhances the Network Message Service-Message Center capability by providing the end-user with transparent access to Meridian Mail across the network in Xll Release 16.

The objective of NMS-MM is to provide a centralized Meridian Mail system for all switches on the customer's ISDN PRA/ISL network.

> *Note:* In this context, an ISDN network is a network containing a number of Meridian 1/SL-1 switches served by a single Meridian Mail server.

With this capability, customers will be able to increase the value of their investment in Meridian Mail services by applying spare capacity to more end-users. End-users at locations previously considered too small for dedicated messaging support will now gain access to these messaging services, better integrating these users into the corporation's communications network.

Terminology

Before proceeding with a description of the Network Message Service, it is important to make the terms that will be used throughout this chapter clear at the outset.

The *prime switch* is the Meridian 1/SL-1 to which the Meridian Mail server (with the NMS feature installed) is connected.

A *satellite switch* is any Meridian 1/SL-1 in the NMS network other than the prime switch. In other words, it is a Meridian 1/SL-1 that is not connected to its own Meridian Mail server, but rather is serviced by the prime switch.

A *location* is a logical representation of mailbox numbers that may reside on a single switch or that may be spread out across a number of switches.

The *prime location* is the location representing the prime switch. Users that reside on the prime switch are added to the prime location.

A *satellite location* represents one of the satellite switches. Users that reside on a satellite switch are added to the corresponding satellite location.

A *site* refers to a Meridian Mail server and all of the switches that it supports.

The *local site* refers to all of the locations served by the Meridian Mail server.

Network format indicates that any necessary location codes, such as a CDP steering code or ESN prefix, must be included when entering a user's address or a VSDN. In the case of ESN, the prefix includes the access code of the *prime* switch and the routing prefix of the satellite location.

A *remote site* indicates all of the locations served by another Meridian Mail server (Meridian Networking).

The *local mailbox number* is the same as the Meridian 1/SL-1 local directory number (if mailbox numbering follows the dialing plan in the Meridian 1/SL-1).

The *full mailbox number* is a user's local mailbox number prefixed by all necessary location identification digits.

General description
System composition

A Network Message Service-Meridian Mail network consists of four components:

- ISDN network

- ISDN network transaction signaling (TS)

- AML/CSL (ISDN/AP) application protocol

- Meridian Mail server

The following sections address each component respectively.

ISDN network

In an lSDN network, a single Meridian Mail (MM) server is attached to a Meridian 1/SL-1 (the prime switch) to support a number of satellite Meridian/SL-1 switches. These Meridian 1/SL-1s are interconnected by ISDN PRA or ISL trunks on which the network-wide call information is transported.

NMS-MM network definitions and requirements

In a network environment, user stations no longer reside in the Meridian Mail's prime switch. Therefore, there can be four network switches involved in a NMS-MM call in the ISDN network. The four types of switches are as follows:

- *Originating switch* For a direct NMS-MM call, this is the switch where the calling party resides. For an indirect NMS-MM call, the originating switch is where the original called party resides.

- *Tandem switch* This is the switch that tandems the NMS-MM transaction signaling messages to the next switch.

- *Prime switch* This is the switch to which the NMS-MM server is physically connected.

- *Satellite switch* This is a switch that is networked to the prime switch by ISDN/PRA or ISDN/ISL.

Throughout this document these definitions for originating, tandem and prime switches (nodes) are used as well as a satellite switch (node) defined as any switch other than the prime switch.

NMS network numbering plans

NMS-MM supports the following private numbering plans:

- Uniform dialing plan (UDP) - for example, ESN or hybrid (ESN and CDP)

  An NMS-MM UDP numbering plan requires that all of the switches in the network conform *uniformly*. This means that all users must be dialed in the same way (that is, using the same DN) from all locations.

- Coordinated dialing plan (CDP)

The following are not supported by NMS-MM numbering plans:

- Mixed numbering plans and tandem tie networks using trunk access codes

- CDP transferable DNs

- Trunk steering codes

- Digit manipulation (DMI) to insert ESN access code ESN dialing in the sending switch. Instead, ESN access code insertion is provisioned in the receiving switch in overlay 16 with the INAC option.

In the network environment, only distance steering codes (DSC) are supported for the CDP network numbering plan.

Public networks versus private networks

A *private network* refers to the privately owned switches that make up a corporation's or organization's network. An NMS network is a private network. A *public network* refers to the switches (operated by a central office) which provide services to the general public (such as residences and small businesses who do not own a switch).

Any call that comes from outside the private network is tagged with a public information element (PIE) and is considered an external call even though it has entered into the private network. These calls are treated as external calls by the Meridian Mail server unless they have been specifically identified as valid NMS calls by Meridian Mail.

ISDN network transaction signaling

In an NMS-MM environment, the prime switch and satellite switches communicate through virtual signaling to turn on/off the message waiting indication (MWI) at a user set or to transport necessary call information for a networked voice messaging feature such as Call Sender. These capabilities are supported by using ISDN non-call associated transaction signaling messages. In the Meridian 1/SL-1, networking applications that require the transportation of virtual signaling information use the FACILITY message with the TCAP protocol to transport this information across the ISDN network.

AML/CSL application protocol

Communication between Meridian Mail and the prime switch uses the AML/CSL (ISDN/AP) serial data link protocol.

Meridian Mail server

The Merdian Mail server is an automated voice messaging processor that provides users with the ability to receive and send voice messages.

Figure 4-1 illustrates an example of an NMS-MM network configuration.

Figure 4-1xxx
NMS-MM network
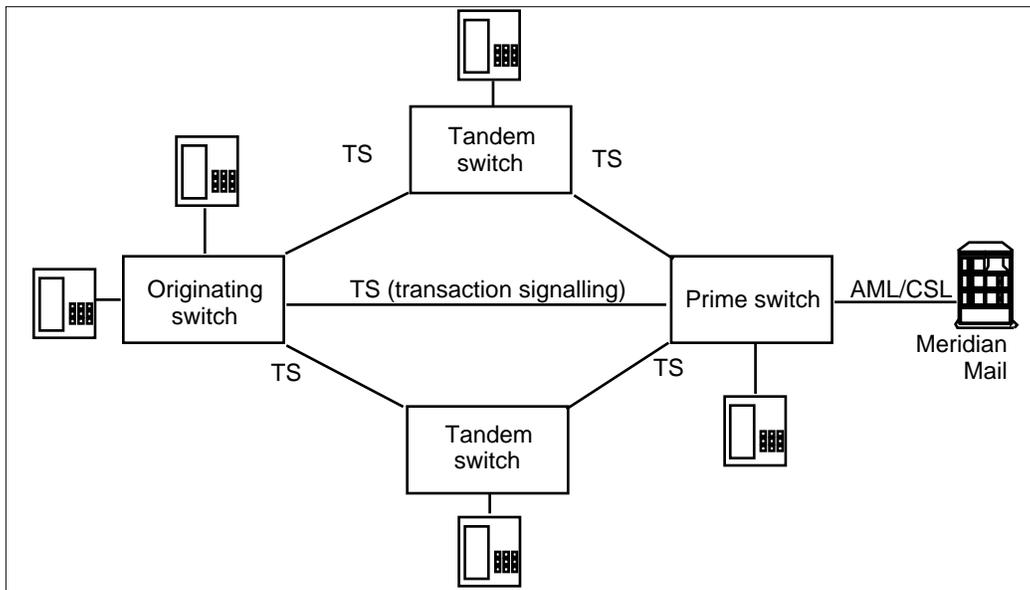
Requirements

This section addresses the requirements for Network Message Service-Meridian Mail provided in Meridian 1/SL-1 (Meridian 1/SL-1) Xll generic, Release 16. The requirements can be categorized as follows:

Configuration support

In Meridian 1/SL-1 Xll generic Release 16, Network Message Service-Meridian Mail only supports end-to-end connections among Meridian 1/SL-1 switches. These include point-to-point Meridian 1/SL-1 to Meridian 1/SL-1 connections as well as tandem Meridian 1/SL-1 connections.

NMS-MM access

To access the NMS-MM services, the following three types of accessing mechanism are supported across the ISDN network:

Direct access

Direct access is initiated by a user dialing an NMS-MM DN, either on a per switch or a network basis, or by depressing the message waiting key (MWK) on the user's set to access the Meridian Mail system. Auto-logon to the NMS-MM is supported if the call is initiated from the respective user's station.

This functionality mirrors existing local MM operation.

For a direct NMS-MM call initiated by user A, the call can be presented to Meridian Mail at the prime switch through direct Meridian 1/SL-1 to Meridian 1/SL-1 connection or tandeming through Meridian 1/SL-1, DMS100/250, Meridian 100 or AT&T. This is a basic ISDN call which only requires call-associated ISDN Q.931 messages. However, in order to support NMS-MM which requires transaction signaling to transport the non-call associated information such as MWl notification, and the Call Sender feature, the network configuration between the originating and prime switches requires the support of transporting NMS-MM transaction signaling. If the path used to transport the non-call associated messages tandems through a switch that does not support NMS transaction signaling, NMS cannot be supported. (The path tandem through AT&T, DMS and SL-100 cannot be supported.) Demonstration of the direct NMS-MM call scenario in an ISDN network is depicted in Figure 4-2.

Figure 4-2xxx
Direct NMS-MM access scenario

Originating switch   Tandem switch   Prime switch

AT&T

MSL-1   TS (transaction signalling)   MSL-1   Meridian Mail

TS   TS

MSL-1

Station A

DMS/SL100
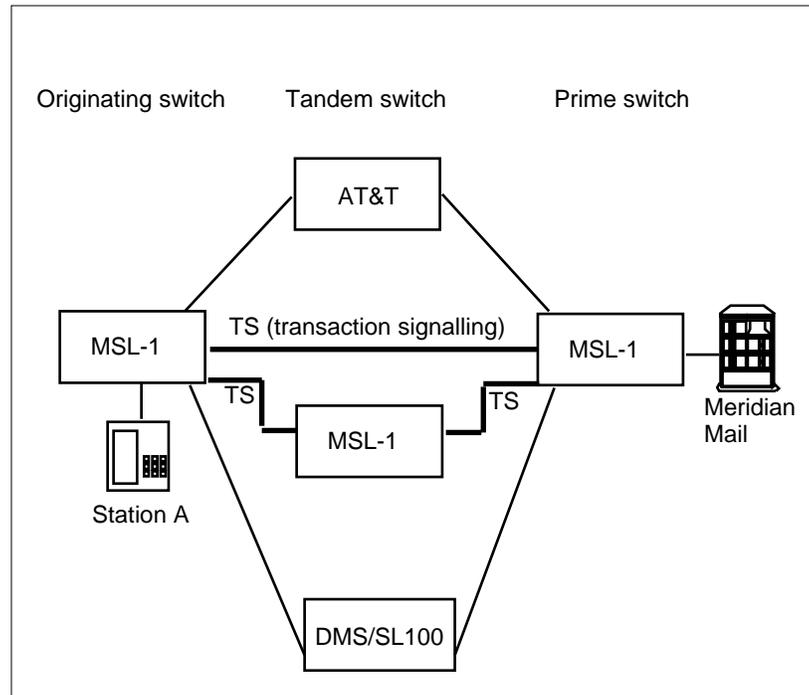
Indirect access

Indirect access occurs when a call is presented to the NMS-MM through
call redirection. For any call redirected to NMS-MM, once a call has been
forwarded to the prime switch to which Meridian Mail is physically
connected, the original called number from the ISDN Q.931 SETUP
message will be extracted and passed onto the Meridian Mail server. This
convention will allow the MM server to distinguish the address of the
original called party. Meridian Mail then can deposit the message in the
original called party's mailbox. For a redirected network call, NMS relies
upon the Network Call Redirection (NCRD) features developed in Release
14 and 16 to provide the correct original called number. The types of
Network Call Redirection supported in Release 16 are as follows:

- Network call forward all calls (NCFAC)

- Network call forward no answer (NCFNA)

- Network call forward busy (NCFB)

- Network hunting (NHUNT)

For an indirect NMS-MM call, user A calls user B and B redirects the call to Meridian Mail by using ISDN Network call redirection features. These features do not support tandem through AT&T switches, therefore, the call can only be presented to Meridian Mail as shown in the following diagram. The requirement for NMS transaction signaling message is the same as direct NMS-MM call as previously mentioned. Figure 4-3 depicts an indirect NMS-MM call scenario.

Figure 4-3xxx
Indirect NMS-MM access scenario
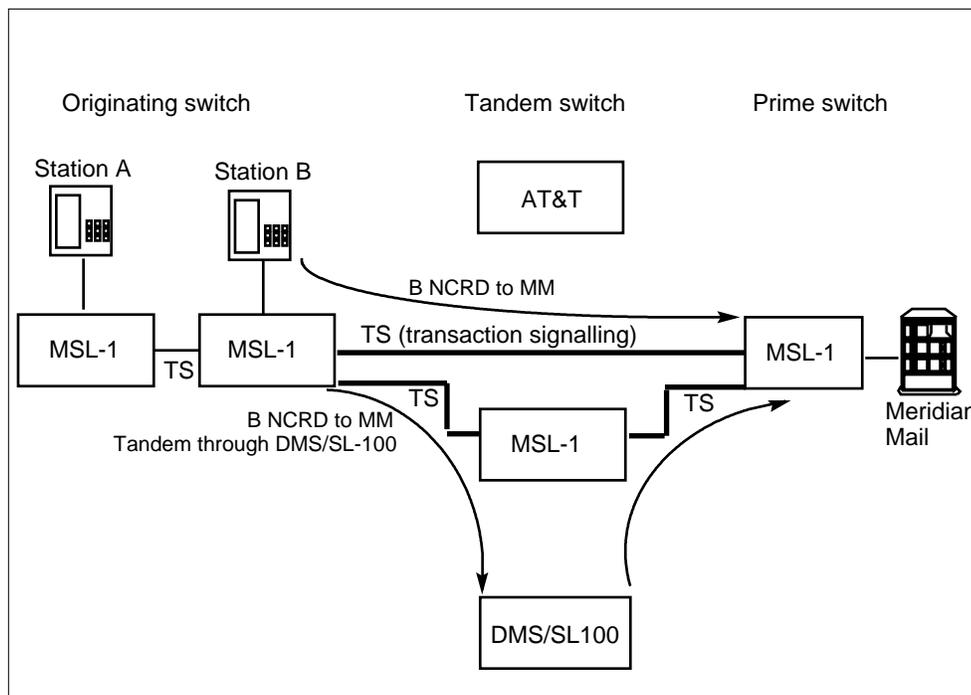
Offnet access

NMS-MM will support off-net access through either of the following scenarios:

- Directly dialing into the switch where the user's Meridian Mail server physically resides;

- Dialing into the user's own switch to access a remote Meridian Mail server. Note that this scenario may require the user's switch to support direct inward system access (DISA) or direct inward dialing (DID) to allow the user to dial another network location once he or she has dialed into his or her own switch.

MWI notification

At a user station, two types of message waiting indication exist:

- Visual indication through an LED or LCD lamp on the set.

- Audible indication for sets not equipped with LED or LCD lamp.

NMS-MM will notify a user (regardless of his or her location) that one or more messages have been received. Notification is by means of a flashing message waiting (MWK) LED or LCD lamp or (for a set without MWK support) an audible tone once the handset has been lifted. NMS-MM is capable of turning on or off MWK or the audio tone according to whether there are messages waiting for a user or not respectively.

Implementation considerations

The following assumptions are made:

1 The implementation of NMS-MM is built upon Meridian 1/SL-1 Release 15 ISDN PRA capability. It is, therefore subject to the assumptions and limitations of ISDN Network Numbering Plan Enhancement feature in Release 15.

2 The user network is assumed to be equipped with either a uniform dialing plan (UDP) or a coordinated dialing plan (CDP) as the network numbering plan.

3 NMS-MM accessing is based on the Network Call Redirection (NCRD) features and is, therefore, subject to the assumptions and limitations of NCRD features.

4 Every station's CDP DN in the network is assumed to be uniquely defined.

5 The local Meridian Mail DN defined in each switch must also be configured in the Meridian Mail server database.

6 Trunk optimization which drops excessive trunks in order to avoid "tromboning" (extending trunks out from and back to the same switch) is not supported.

Engineering guidelines

Packaging

The packaging requirement for the Meridian 1/SL-1 is described below:

Originating switch

- NMS package 175

- AML/CSL (ISDN/AP) package 77

- BACD package 40

- ACDA package 45

The following are the prerequisite packages required in this switch:

- ISDN network service package 148 for supporting the backbone ISDN capabilities. (Note that package 148 has its own prerequisite package requirements that need to be fulfilled.)

- Current message center MWC package 46.

- End-to-end signaling EES package 10.

Release 16 or up software load is required.

Tandem switch

- ISDN network service package 148 as prerequisite

- Release 16 or greater software is required.

Prime switch

- NMS package 175

- IMS package 35

- AML/CSL (ISDN/AP) package 77

- BACD package 40

- ACDA package 45

The following are the prerequisite packages required in this switch:

- ISDN network service package 148

- MWC package 46

- EES package 10

Release 16 or greater software is required.

AUX processors and servers

Meridian Mail equipped with MM7 or greater software release is required to connect to a Meridian 1/SL-1 switch.

Network configuration requirements

In order to support the basic functionality of NMS-Meridian Mail such as MWI notification, Call Sender service, and so on, the network configuration between the satellite and prime switches requires the support of transporting NMS-MM non-call associated transaction signaling. Currently, NMS-MM only supports connections among Meridian 1/SL-1 switches. It is recommended that this route choice be configured as the initial route choice. D channels with an interface other than SL-1 will not be allowed to transport the transaction signaling for NMS-MM.

Limitations

1   End-to-end in-band signaling (EES) is required for accessing NMS-MM features from a satellite switch.

2   If a non-PRA/ISL trunk is involved in a NMS-MM call, NMS-MM will not be supported since the original called number and calling party number are not passed on.

3   NMS-MM does not support international dialing in Release 16.

4   Any MM feature involving a call establishment to an off-net location, including a public network, is not supported in this release. Therefore, Call Sender and Thru-Dial to the off-net will not be supported in this release.

5   NMS-MM will support DMS and SL-100 as tandem switches only when TCAP/ PRA networking for NMS-MM is available on DMS and SL-100.

6   NMS-MM cannot support any non-Northern Telecom switch such as an AT&T switch as a tandem switch.

7   Only distance steering codes (DSC) are supported for the CDP dialing plan in an ISDN network.

8   Trunk steering codes (TSCs) are not supported.

9   Multiple message center types per station are not supported in this release. Therefore, only a single message center DN can be defined per station.

10 The Network Call Redirection DN and ACD night call forward DN defined for the Meridian Mail network DN must be compatible with the network numbering plans.

11 Only Meridian Mail servers are supported. No other voice messaging server is supported.

12 Do not use digit manipulation (DMI) to insert ESN access code ESN dialing in the sending switch. ESN access code insertion is provisioned in the receiving switch in overlay 16 with the INAC option.

Dependencies

This feature is dependent on the Network Call Forward No Answer feature and Network Call Redirection to correctly transport the original called number.

This feature depends upon the Meridian 1/Sl-1 Hospitality Voice Services feature to provide AML/CSL link recovery enhancement capability.

Feature interactions

This section describes the existing Meridian 1/SL-1 features that interact with Network Message Service-Meridian Mail.

Set Types Addressed

This feature does not support data sets, but the following voice sets are supported:

- 500/2500 sets

- SL-1 sets

- Digital sets: 2009, 2018, 2112, 2317, 2112C, 2012, 3000

- Meridian modular telephone sets: 2008, 2016, 2006, 2X16, 2216 5. Attendant set (QCW4, M1250, M2250)

ISDN Network Call Redirection

The interaction with ISDN NCRD is broken down into the following areas:

Call Forward Unconditional, Call Forward No Answer, and Call Forward Busy

Call Forward Unconditional, Call Forward No Answer and Call Forward Busy are supported by Release 14 and 16 ISDN Network Call Redirection features. These provide the base for NMS indirect access. In the case of an indirect NMS access call, the original called number and redirecting reason will be extracted from the original called number information element (IE)

in the PRA SETUP message and put into the AML/CSL PCI message when presenting a call to the Meridian Mail server. If original called number IE is not present, the redirecting IE will be used instead. Similarly, the redirecting number and reason will be extracted and transported to Meridian Mail server through a PCI message.

Network Call Transfer

Network Call Transfer is supported in release 16 by the ISDN Network Call Redirection feature. If the NMS-MM is involved in a Network Call Transfer call scenario, the connected party number will be extracted from the PRA NOTIFY message and put into the AML/CSL DNP message once the transfer is completed. The DN update message is to inform Meridian Mail that a call transfer has taken place.

Network Hunting

Network Hunting is supported in release 16 by the ISDN Network Call Redirection II feature. Indirect NMS access can be presented to Meridian Mail through network hunting. The messaging is the same as the one for Call Forward Busy. Therefore, the original called number IE in the PRA SETUP message will be used to construct the ISDN/ AP PCI message.

Call Forward by Call Type to a Network DN

The definition of the Call Forward by Call Type Allowed (CFTA) class of service is changed by the ISDN Network Call Redirection feature developed in Release 16, such that private network calls are treated as internal calls and will be forwarded (through the Call Forward No Answer or Hunting) to the Flexible Directory Number (FDN) or HUNT DN rather than the External Flexible Directory Number (EFD) or External Hunt (EHT) DN. This feature is implemented in release 16 by the ISDN Network Call Redirection feature. With this feature, the Meridian 1/SL-1 will be able to provide different messaging treatments for different types of calls, such as off-net versus on-net calls. A customer could designate that all off-net calls be handled by a centralized attendant, while internal calls might be handled by Meridian Mail. You are however, limited to having one message center DN defined per station. This means a user can be served by two message centers (one for internal, one for external) but only one can control MWI activation.

Attendant Extended Call

Attendant extended call has a similar impact as network call transfer except that the DN update message is sent to Meridian Mail when the attendant releases from the call. Therefore, the connected party number is updated only when the attendant is released.

Call from CO loop start

The existing restriction is that calls coming into the switch from the CO loop start trunk cannot be redirected to another trunk through attendant extension or call redirection. These calls should be blocked when redirection is activated. Release 14 ISDN NCRD does not redirect calls from CO loop start. Therefore, NMS will not be supported in these calls.

Conference Call

When another party is conferenced to Meridian Mail, a DN update message will be sent indicating a call type of conference. The connected party DN will be that of the station initiating the conference call which will always be the same as the DN in the PCI message. If additional parties are added to the conference, no additional DNP messages need to be sent. Once a conference call drops back to a simple call, a DNP message will be sent indicating a simple call as call type and showing the remaining party as the connected DN. In both cases where the conference is established or dropped in a satellite switch, a FACILITY message with TCAP protocol will be transported to notify the prime switch of the events that have occurred. The DNP message will then be triggered and sent to the Meridian Mail server.

Barge-in Attendant feature

The attendant can barge-in a NMS-MM call at the prime switch. During barge-in, users cannot use features that require switch effort, such as Call Sender.

Tandem Switching

In order to support NMS-MM, the tandem switch needs to support NMS transaction signaling messages, and FACILITY message with TCAP protocol.

Trunks

When a call is presented to Meridian Mail through a non-PRA or ISL trunk, the call will be treated as an external call even if it is an on-net call. The external greeting will be applied. The message is announced as if from an external number.

Digital Sets with Feature Softkeys

Currently, a screen containing voice messaging feature softkeys (for example M2317 set) or command soft-window (for example M3000 set) are displayed when the Meridian Mail server is accessed from these digital sets. In the network environment this operation should be transparent to the end-user at a satellite switch as well. Therefore, a FACILITY message with TCAP protocol will be transmitted to the satellite switch to indicate that Meridian Mail has been accessed.

Meridian Hospitality Voice Services

This feature depends on the AML/CSL (ISDN/AP) link recovery enhancement of the Meridian Hospitality Voice Services feature to provide the AML/CSL link recovery treatment. All calls to the Meridian Mail server will be redirected to the ACD Night Call Forward DN for the ACD queue involved. The treatment of calls will be identical to that of existing Night Call Forward operation for ACD queues.

Network Numbering Plan Enhancement

The NMS-MM networking feature is built upon Release 15 ISDN PRA capabilities. Therefore, it is subject to the limitations and assumptions of the ISDN Network Numbering Plan Enhancement feature developed in Release 15 which was to remove the ISDN numbering plan restrictions on the networking applications.

Network Message Service-Message Center

This feature makes use of the NMS-MC message waiting indication capability to turn on/off the MWI in satellite switches.

Network Messaging Service implementation

This section provides instructions for configuring the Meridian 1/SL-1 on a newly installed network. For information about programming the network, refer to the *SL-1 Network Features Guides*. If you are adding NMS to an existing network, refer instead to the section "Adding NMS to an existing network", beginning on page 4-27.
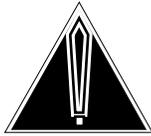
> **CAUTION**
> **Setting an adequate NCOS level**
> For both new networks and existing networks, it is important that you check the NCOS level for ACD agents (in overlay 11). If the NCOS level is too low, agents will not be able to dial out of the switch. With NMS, agents must be able to dial within the network. Therefore, when considering an NCOS level, you need to select a value that supports a fully-featured Meridian Mail (allowing agents to dial out of the switch for Call Sender and Thru-Dial), but that does not create possible security breaches. See the *SL-1 Network Features Guides* for more information.

Meridian 1 configuration

The following tables indicate how to datafill certain Meridian 1/SL-1
overlays as required by the Network Message Service.

1. Configure PRI

This step is required only when configuring PRI (primary rate interface) for
the first time. Load overlay 73 and respond to the following prompts as
shown in Table 4-1.

Table 4-1xx
Overlay 73: Configuring PRI

Prompts	Responses	Description
REQ	NEW	
TYPE	DDB	Route data block
PREF	xxx	Enter the primary loop reference for the clock controller (0-511).
SREF	xxx	Enter the secondary loop reference for the clock controller (0-511).
TRSH	xx	The PRI threshold set (0-15).
RALM	1-(3)-128	Remote alarm 24-hour threshold
BIPC	0-(2)-128	24-hour bit rate violation
LFAC	0-(3)-128	24-hour loss of frame alignment
BIPV	1-(3)-4 1-(2)-4	Bipolar violation maintenance Bipolar violation out-of-service
SRTK	1-(5)-24 1-(3)-3600	Frame slip maintenance Frame slip out-of-service
SRNT	1-(15)-1024 1-(3)-1024	Frame slip free run maintenance Frame slip free run out-of-service
LFAL	1-(17)-10240 1-(511)-10240	Loss of frame maintenance Loss of frame out-of-service
SRGT	1-(15)-127	Slip rate guard time
SRIM	(1)-27	Slip rate improvement time
SRMM	1-(27)-127	Slip rate exceed maintenance limit

2. Add a PRI loop

Load overlay 17 and respond to the following prompts for X11 release 17 and earlier. For X11 release 18 and later, use Table 4-3.

Table 4-2xx
Overlay 17: Add a PRI loop (X11 release 17 and earlier)

Prompts	Responses	Description
REQ	CHG	
TYPE	CFN	
CEQU	YES	Change to common equipment.
DLOP	loop dd ff	PRI loop parameters loop = network loop number (1-159) dd = number of data calls (0-24) ff = frame format (D2, D3, D4 (ESF)) ff must be the same for the prime switch and all satellite switches.
MODE	PRI	Primary rate interface.
LCMT	(B8S), AMI	Line coding method. The prime switch and all satellite switches must be configured with the same value. B8S is the default.
YALM	(FDL), DGS	Yellow alarm. The prime switch and all satellite switches must be configured with the same value. FDL is the default.
TRSH	xx	Maintenance and performance threshold as defined in LD 73 (0-15).
DTIC	xxx	Starting network loop slot for the PRI card (0-159).

Load overlay 17 and respond to the following prompts for X11 release 17 and earlier. For X11 release 18 and later, refer to Table 4-3.

Table 4-3xx
Overlay 17: Add a PRI loop (X11 release 18 and later)

Prompts	Responses	Description
REQ	CHG	
TYPE	CFN	
ADAN	NEW CCH xx	Primary D-channel on logical port (0-63).
CTYP	DCHI, MSDL	Card type.
DNUM	xx	Device number of the physical port (0-15).
_PORT	0-3	Port number on the MSDL card (0-3).
USR	PRI, ISDL, SHA	D-channel mode.
_ISLM	xxx	Number of ISL trunks controller by D-channel (1-382).
CDHL	xxx	PRI loop number for DCHI (0, 2, 4, ...158).
OTBF	1-(32)-127	Number of output request buffers.
_BPS	xxxxx	Baud rate for ISL D-channel on the MSDL port. The default is 64000.
_PARM	RS232, (R422) DCE, (DTE)	ISL D-channel interface and transmission mode (MSDL only).
PRI	xxx xx	Additional PRI loops using the same D-channel interface ID (0-158 2-15).
DRAT	(56K), 64KC, 64KI	D-channel transmission.
IFC	SL1	This must be set to SL-1 for Meridian Mail release 8.
SIDE	NET, (USR)	Meridian 1 node type.
RLS	xx	Release ID of the far end switch of the D-channel.
RCAP	MSL, NCT, ND1	Remote channel capabilities
_CLOCK	INT, (EXT)	Internal or external clock on ISL D-channels

Prompts	Responses	Description
LAPD	YES, (NO)	Change LAPD parameters. You may choose NO since the default parameters are sufficient.
_T23	1-(20)-31	Interface guard timer (DCHI) only.
_T200	2-(3)-40	Retransmission timer.
_N200	1-(30)-8	Maximum number of retransmissions.
_N201	4-(260)	Maximum number of octets in the information field.
_T203	2-(10)-40	Maximum time (seconds) without frames being exchanged.
_K	1-(7)	Maximum number of outstanding frames.
ADAN		

3. Add the D-channel card

Load overlay 17 and respond tot he following prompts for X11 release 17 and earlier.

Table 4-4xx
Overlay 17: Add D-channel card (X11 release 17 and earlier)

Prompts	Responses	Description
REQ	CHG	
TYPE	CFN	
ISDN	YES	
DCHI	xx	D-channel port number.
USR	PRA ISDL SHA	D-channel for ISDN/PRA. D-channel for ISL dedicated. D-channel for ISL shared.
IFC	SL1	Interface type is SL-1. ISDN NMS messages will not be sent if IFC is not SL-1.
DCHL	xxx	PRI loop number for DCHI (0, 2, 4, ...158).
OTBF	1-(32)-127	Number of output request buffers.

Prompts	Responses	Description
DRAT	(56K), 64KC, 64KI	D-channel transmission.
PRI	0-158 2-15	Additional PRI loops using same D-channel interface ID.
SIDE	NET (USR)	Meridian 1 node type.
RLS	xx	Release ID of the far end switch of the D-channel. 16 is the minimum SL-1 software release for NMS.
RCAP	MSL, NCT, ND1, ND2, RVQ	Remote channel capabilities.
_CLOCK	INT, (EXT)	Internal or external clock on ISL D-channels.
LAPD	YES, (NO)	Change LAPD parameters.
_T23	1-(20)-31	Interface guard timer (DCHI).
_T200	2-(30)-40	Retransmission timer.
_N200	1-(30)-8	Maximum number of retransmissions.
_N201	4-(260)	Maximum number of octets in the information field.
_T203	2-(10)-40	Maximum time (seconds) without frames being exchanged.
_K	1-(7)	Maximum number of outstanding frames.

4. Define PRI customer
Load overlay 15 and respond to the following prompts.

Table 4-5xx
Overlay 15: Define PRI customer

Prompts	Responses	Description
REQ	CHG	
TYPE	CDB	Customer data block.
CUST	xx	SL-1 customer number.
MATT	NO	Set to NO for the prime switch and all satellite switches.

Prompts	Responses	Description
ISDN	YES	
PNI	_____	Private network identifier. Within an NMS network, use the same PNI value in overlays 15 and 16. When interworking with different networks, enter the PNI of this M1SL-1 in overlay 15, and the remote switch PNI in overlay 16. (This must be a non-zero number in the range 1 to 32700).
AC2	NPA, NXX, INTL, SPN, LOC	If INAC in the route data block of this Meridian 1 is set to YES, the ESN access code for that incoming call type will be inserted automatically.
PFX1	xxxx	Prefix for international PRA.
PFX2	xxxx	Central office prefix for IPRA.
HNPA	100-999	Home number plan area code.
HNXX	100-999	Prefix for central office.
HLOC	100-999	For ESN dialing plans only. Home location code.
LSC	xxxx	For CDP dialing plans only. This is the local steering code of the MSL-1. This prompt only appears for five or six-digit dialing plans. It is used to construct the calling number that is sent across the network.
CNTP	LDN, (PDN)	Default calling line ID.
RCNT	0-(5)	Maximum internode hops in a network redirection call.
HLOC	xxx	For ESN dialing plans only. This is the home location code of the prime switch (100-999).

5. Add PRI route

Load overlay 16 and respond to the following prompts.

Table 4-6xx
Overlay 16: Add PRI route

Prompts	Responses	Description
REQ	CHG	
TYPE	RDB	Route data block.
CUST	xx	SL-1 customer number.
ROUT	xxx	Route number (0-511).
TKTB	TIE	Trunk type.
PRIV	YES, (NO)	Private route.
ESN	YES, (NO)	ESN signalling.
CNVT	YES, (NO)	Route to conventional switch.
ATDN	(0)-xxxxx	Attendant DN of the ESN main switch.
SAT	YES, (NO)	Trunk route by satellite.
RCLS	INT, (EXT)	Route classmark.
DTRK	YES, (NO)	Digital Trunk.
BRIP	YES, (NO)	ISDN BRI bracket handler route.
ISDN	YES, (NO)	ISN PRI option.
_MODE	PRA, ISDL	Mode of D-channel.
_DCHI	xx	DCHI port number (1-15). Prompted if MODE = ISDL.
_PNI	xxxxx	Customer private ID. This must match the PNI of the far end Customer Data Block, as configured in overlay 15 (1-32700).
_IFC	SL1	Interface type. This must be set to SL1 for Meridian Mail release 8.
_NCNA	YES, (NO)	Network call name allowed.
_NCRD	YES	Network call redirection. This must be set to YES to provide the correct information display for the calling number.
_TRO	YES, (NO)	Trunk optimization.

Prompts	Responses	Description
_CTYP	UNKN, INTL, MPA, NXX, LOC, CDP, SPN	Call type for outgoing tie route. The call type is used by the receiving switch so it can associate a call with a call type and perform ESN insertion. This applies to direct dialing using trunk access codes.
_INAC	YES, (NO)	For ESN dialing plans only. Set this to YES if ESN access code insertion is required. This permits an ESN access code to be automatically added to an incoming ESN call from a private network and is used instead of DMI on the switch, which is not supported. If INAC is YES, the digit insertion (INST) for NARS or BARS calls is bypassed. This prompt appears only if route type is TIE.
_TGAR	xx	Trunk group access restriction (0-31).
PTYP	PRI	Port type at far end.
ICOG	IAO, ICT, OGT	Incoming and/or outgoing trunk.
SRCH	RRB, (LIN)	Hunting for outgoing trunk.
ACOD	xxxx	Route access code.
SIGO	STD ESN2 ESN3 ESN5 ETN	Signalling arrangement.

6. Define trunks

Load overlay 14 and respond to the following prompts.

Table 4-7xx
Overlay 14: Define trunks

Prompts	Responses	Description
REQ	CHG	
TYPE	TIE	Trunk type.
TN	lll cc	PRI loop. PRI channel.
CUST	0-31	Customer number.
RTMB	0-127 1-254	Route and member number.
CLS	DTN	Class of service.

Note: If you want to autobuild the trunks at the REQ prompt enter NEW 23.

Adding NMS to an existing network

When adding NMS to an existing network, a printout of the existing
network database must be obtained to ensure that the network is compatible
with the NMS option or can be modified to meet the NMS standards as
outlined earlier in this chapter. To obtain a printout of the network database
perform the following steps.

1. Print the digital data block (DDB)

Determine if there a digital data block has already been configured. Load
overlay 73 and respond to the following prompts:

Table 4-8xx
Overlay 73: Print the DDB

Prompts	Responses	Description
REQ	PRT	
TYPE	DDB	

If there is no DDB, then go to step 1 of "Meridian 1 configuration" in this
chapter. If there is a DDB, compare it to Table 4-1 to see if it is compatible
with NMS. If it is not, you will have to make modifications to the existing
DDB or create another one.

2. Print the configuration record (CFN)

Load overlay 22 and respond to the following prompts:

Table 4-9xx
Overlay 22: Printing the CFN

Prompts	Responses	Description
REQ	PRT	
TYPE	CFN	

Check printout and take note of the following prompts:

PRI loops under the prompt DLOP
DNUM on X11 RLS 18
ADAN with MSDL assignments X11 RLS 18
ISDN prompt
DCHI prompt
RLS prompt
IFC prompt

Existing loops may be used. For prompts that do not have assignments, refer to Steps 1-3 under the section "Meridian 1 configuration" earlier in this chapter.

3. Print customer data block (CDB)

Load overlay 21 and respond to the following prompts:

Table 4-10xx
Overlay 21: Printing the CDB

Prompts	Responses	Description
REQ	PRT	
TYPE	CDB	Customer data block.
CUST	0-99	Customer number.

Check the assignments for the following prompts. If any of the prompts are unassigned or if modification is required, refer to step 4 of "Meridian 1 configuration" earlier in this chapter.

MATT	NO
ISDN	YES
PNI	Same as the PNI in the satellite switch route data block.
AC2	If INAC in the route data block of this Meridian 1 is set to YES. The ESN access code for that incoming call type will be inserted automatically.
PFX1	Prefix for international PRA.
PFX2	Central office prefix for IPRA.
HNPA	Home number plan area code.
HNXX	Prefix for central office.
HLOC	Home location code.
LSC	Local steering code

CNTP   Default calling line ID.

RCNT   Max internode hops in a network redirection call.

HLOC   Home location code.

4. Print route data block (RDB)

Load overlay 21 and respond to the following prompts:

Table 4-11xx
Overlay 21: Printing the RDB

Prompts	Responses	Description
REQ	PRT	
TYPE	RDB	
CUST	0-99	Customer number.
ROUT	0-511	Route number.
ACOD	xxxx	Route access code.

Compare the printout to Table 4-6 on page 4-24 to determine if any modifications are necessary. If changes are necessary, you can either modify the existing RDB or create a new one specifically for Meridian Mail.

Follow steps 5 to 7 to print out your network's numbering plan. It is necessary to gather this information in order to create a diagram of your network (step 8) as well as to identify any DN conflicts.

5. Print ESN, DMI and RLB

Load overlay 86 and print out the following features:

Table 4-12xx
Overlay 86: Print ESN data block

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	ESN	

Table 4-13xx
Overlay 86: Digit manipulation index (DMI)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	DGT	

Note: NMS does not support DMI. If DMI exists, then it must be removed in order to support a fully featured Meridian Mail in an NMS environment.

Table 4-14xx
Overlay 86: Route list index (RLB)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	RLB	

6. Print NCTL, FCAS and CDP
Load overlay 87 and print out the following features:

Table 4-15xx
Overlay 87: Network control (NCTL)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	NCTL	

Table 4-16xx
Overlay 87: Free calling area screening (FCAS)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	FCAS	

Table 4-17xx
Overlay 87: Coordinated dialing plan (CDP)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	CDP	
TYPE	LSC, DSC, TSC	Steering codes.

7. Print ESN translation table

Load overlay 90 and print out the following features of the ESN translation tables.

Table 4-18xx
Overlay 90: Location code (LOC)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	NET	
TRANS	AC1, AC2, SUM	
TYPE	LOC	

Table 4-19xx
Overlay 90: Home NPA translation (HNPA)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	NET	
TRANS	AC1, AC2, SUM	
TYPE	HNPA	

Table 4-20xx
Overlay 90: Numbering plan area code (NPA)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	NET	
TRANS	AC1, AC2, SUM	
TYPE	NPA	

Table 4-21xx
Overlay 90: Home location code (HLOC)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	NET	
TRANS	AC1, AC2, SUM	
TYPE	HLOC	

Table 4-22xx
Overlay 90: Central office translation (NXX)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	NET	
TRANS	AC1, AC2, SUM	
TYPE	NXX	

Table 4-23xx
Overlay 90: Special number translation (SPN)

Prompts	Responses	Description
REQ	PRT	
CUST	0-99	Customer number.
FEAT	NET	
TRANS	AC1, AC2, SUM	
TYPE	SPN	

8. Create a simplified diagram of the existing network

Figure 4-4 shows an example of a network diagram.

Figure 4-4xxx
Simplified network diagram
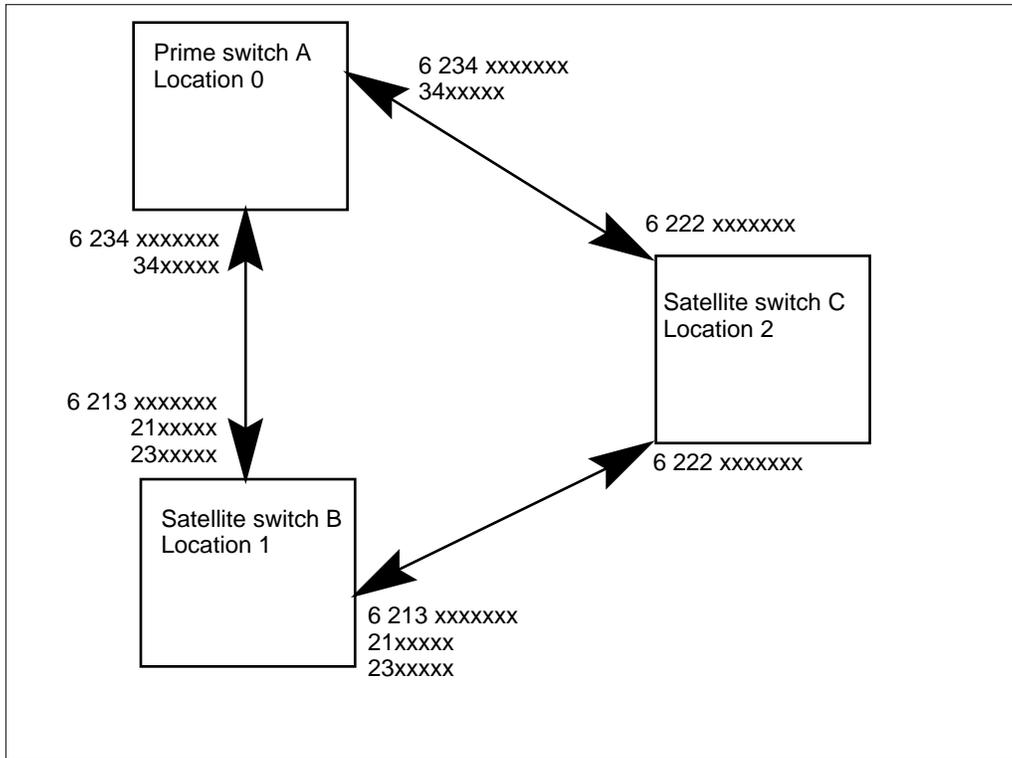
9. Plan NMS implementation

Use the printouts and the diagram to plan the implementation of NMS on the existing network. Before proceeding, it is important that you analyze your printouts in order to identify any conflicts and modify the Meridian 1 overlays if necessary.

Identifying how your network is set up

Before you configure NMS, you should have a clear picture of what your network looks like. It is recommended that you create a diagram which represents your network configuration. This involves the following steps:

1   Identify the dialing plan for each switch.

2   Identify the location code(s) for each switch.

3   Identify how the switches in your network will be represented by NMS locations.

For ESN networks

If all switches are part of an ESN network, there must be a one-to-one correspondence between switches and locations because you can only define one ESN prefix for a location that belongs to an ESN network.

For CDP networks

It is recommended that you create one NMS location to represent all of the switches in the NMS network. This is advantageous for the following reasons:

-   There is less programming involved.

-   You do not have to change the administration context when adding, viewing, modifying or deleting users, thus saving time and reducing the risk of making a mistake.

-   You do not have to configure ACD queues for services at all locations. You need only create a voice messaging queue once (as well as one dummy queue for each additional voice service that is needed) on the prime switch.

Note: This configuration requires that you use CDP to redirect calls from satellite switches to the prime switch.

If, by combining all switches into one large location, you end up with more than 50 steering codes, you will either have to create satellite locations to represent all steering codes, or modify your network (so that certain steering codes are no longer used). This is because each

NMS location supports a maximum of 50 steering codes. Other limitations are described in the section "Coordinated dialing plan (CDP)" on page 4-63.

If you do choose to represent each switch with an NMS location, ensure that there are no conflicts (that is, make sure that the same extension does not exist in two different switches). If you create one large location to represent all switches, you do not have to worry about such conflicts.

For Hybrid (ESN and CDP) networks
If both an ESN and CDP dialing plan are implemented in your network, all switches must support ESN (that is, they must have ESN prefixes). Not all switches have to support CDP. However, the prime switch must support both numbering plans.

If all CDP switches share the same ESN prefix, configure the prime switch to represent all of the switches that are part of the CDP.

If each CDP switch has its own ESN prefix, create a prime location and a satellite location for each ESN prefix in the network.

4   Identify the voice services that are required (at each location).

Use the forms in the following section to collect all of the information that you will need to successfully configure each location in your network.

Collecting information about your network

Use the first form to collect information about the prime location. Use the second form to collect information about each each satellite location in your network.

Prime Location Page 1 of 2

Location number: _____

Location name: _____

Dialing plan (circle one):   ESN   CDP   Hybrid

Maximum number of digits in local mailbox: _____
_____

If an ESN dialing plan is used:

ESN access codes: _____   _____

Number of digits in common between ESN prefix and local extension: _____

ESN prefix: _____   (include access code)
_____

If a CDP dialing plan is used:

Number of digits in common between CDP code and local extension: _____

CDP steering codes: _____ _____ _____ _____ _____

                        _____ _____ _____ _____ _____

                        _____ _____ _____ _____ _____

                        _____ _____ _____ _____ _____

                        _____ _____ _____ _____ _____

                        _____ _____ _____ _____ _____

                        _____ _____ _____ _____ _____

                        _____ _____ _____ _____ _____

                        _____ _____ _____ _____ _____

                        _____ _____ _____ _____ _____

Prime Location   Page 2 of 2

If a Hybrid dialing plan is used:

ESN access codes: _____   _____

Number of digits in common between ESN prefix and local extension: _____

Number of digits in common between CDP code and local extension: _____

ESN prefix: _____   (include access code)

CDP steering codes: _____ _____ _____ _____ _____

 (up to 49 allowed)   _____ _____ _____ _____ _____

                          _____ _____ _____ _____ _____

                          _____ _____ _____ _____ _____

                          _____ _____ _____ _____ _____

                          _____ _____ _____ _____ _____

                          _____ _____ _____ _____ _____

                          _____ _____ _____ _____ _____

                          _____ _____ _____ _____ _____

                          _____ _____ _____ _____

Satellite Location   Page 1 of 2

Location number: _____

Location name: _____

Dialing plan (circle one):   ESN   CDP   Hybrid

Maximum number of digits in local mailbox: _____
_____

If an ESN dialing plan is used:

ESN access codes: _____   _____

Number of digits in common between ESN prefix and local extension: _____

ESN Prefix: _____   (ESN prefix must begin with access code of prime
                                     location)
_____

If a CDP dialing plan is used:

Number of digits in common between CDP code and local extension: _____

CDP steering codes: _____ _____ _____ _____ _____

                              _____ _____ _____ _____ _____

                              _____ _____ _____ _____ _____

                              _____ _____ _____ _____ _____

                              _____ _____ _____ _____ _____

                              _____ _____ _____ _____ _____

                              _____ _____ _____ _____ _____

                              _____ _____ _____ _____ _____

                              _____ _____ _____ _____ _____

                              _____ _____ _____ _____ _____

Satellite Location   Page 2 of 2

If a Hybrid dialing plan is used:

ESN access codes: _____   _____

Number of digits in common between ESN prefix and local extension: _____

Number of digits in common between CDP code and local extension: _____

ESN prefix: _____   (ESN prefix must begin with access code of prime
                                                  location)

CDP steering codes: _____ _____ _____ _____ _____

                                             _____ _____ _____ _____ _____

                                             _____ _____ _____ _____ _____

                                             _____ _____ _____ _____ _____

                                             _____ _____ _____ _____ _____

                                             _____ _____ _____ _____ _____

                                             _____ _____ _____ _____ _____

                                             _____ _____ _____ _____ _____

                                             _____ _____ _____ _____ _____

                                             _____ _____ _____ _____

Configuring ACD queues on the Meridian 1

The final step in preparing the Meridian 1/SL-1 is configuring ACD queues for the voice services that are required. Examples of voice services are Voice Messaging, Express Messaging, Voice Menus, Remote Activation, Voice Forms, and the Transcription Service. Voice service configuration requires work on both the Meridian 1/SL-1 (where ACD queues are created) and in Meridian Mail (where voice service DNs are defined for each voice service).

In cooperation with the Meridian 1/SL-1 administrators of the satellite switches, identify the services that are required at each location. For each switch in the network, you will have to configure an ACD queue for each voice service that is required by the users serviced by that switch. At the very least, each location will require Voice Messaging. The SL-1 administrators at the other locations may be responsible for configuring the ACD queues for their locations. You will simply have to get a list of ACD DNs from them so that you can configure the VSDN table.

Note: Configuration of voice services is described in detail in the section "Configuring Meridian Mail services" in the "Voice administration" chapter in the *System Administration Guide*. Read this section and the section about the VSDN table before configuring any voice services.

For example, in your NMS network, you have two locations: a prime location and a satellite location. Users at both locations require Voice Messaging and Express Messaging. Figure 4-5 shows an ESN network with two Meridian 1/SL-1s. Figure 4-6 shows a CDP network with two Meridian 1/SL-1s. Each switch has two ACD queues: one for Voice Messaging and one for Express Messaging. This would result in four entries in the VSDN table on the prime switch.

Since Meridian Mail is connected to the prime switch, you will have to enter the VSDNs for the satellite switches in their network format (that is, include the appropriate location code). In the case of ESN, enter the access code of the *prime* switch, not the satellite switch (this is important if the access codes are different between the two switches).
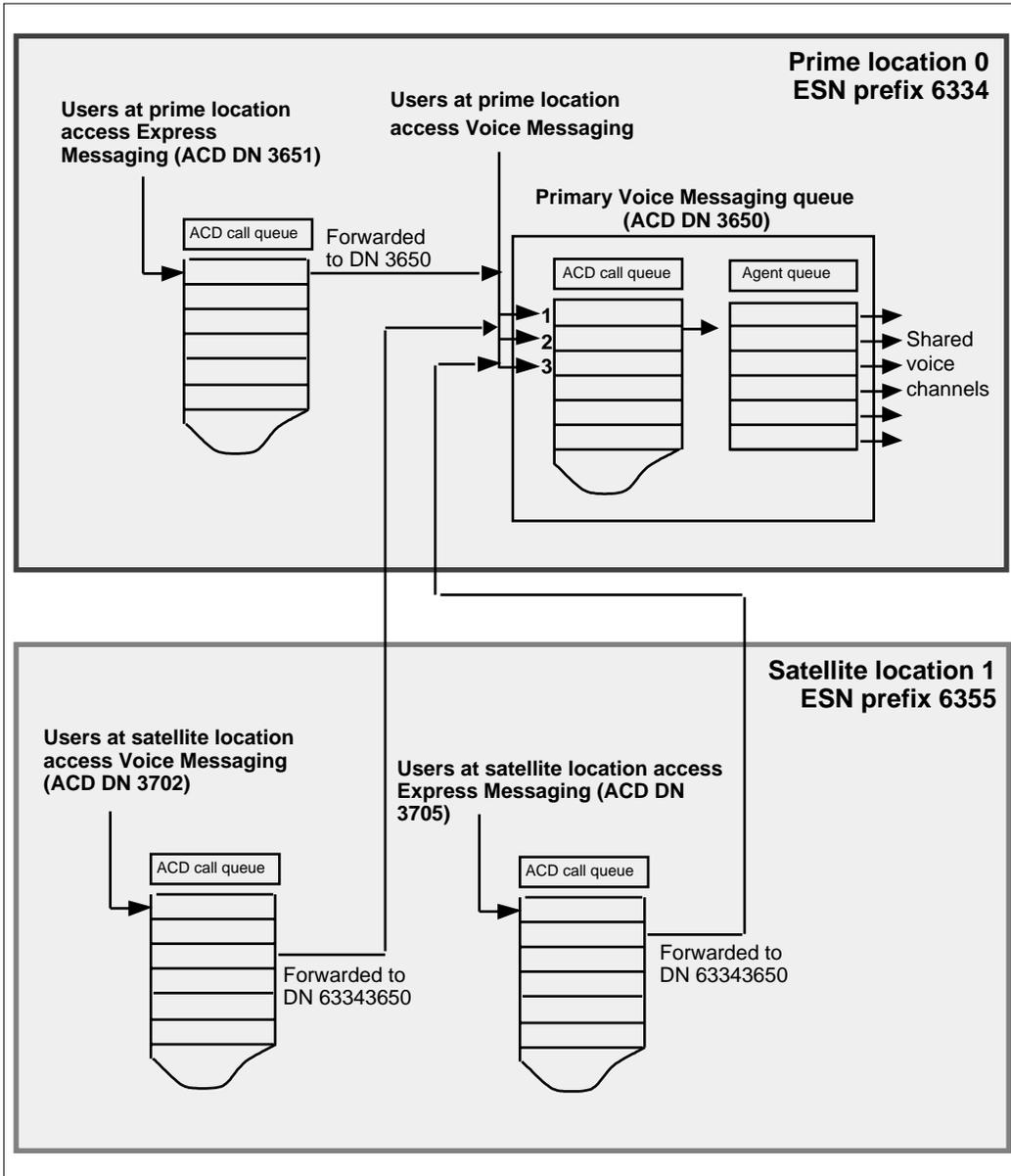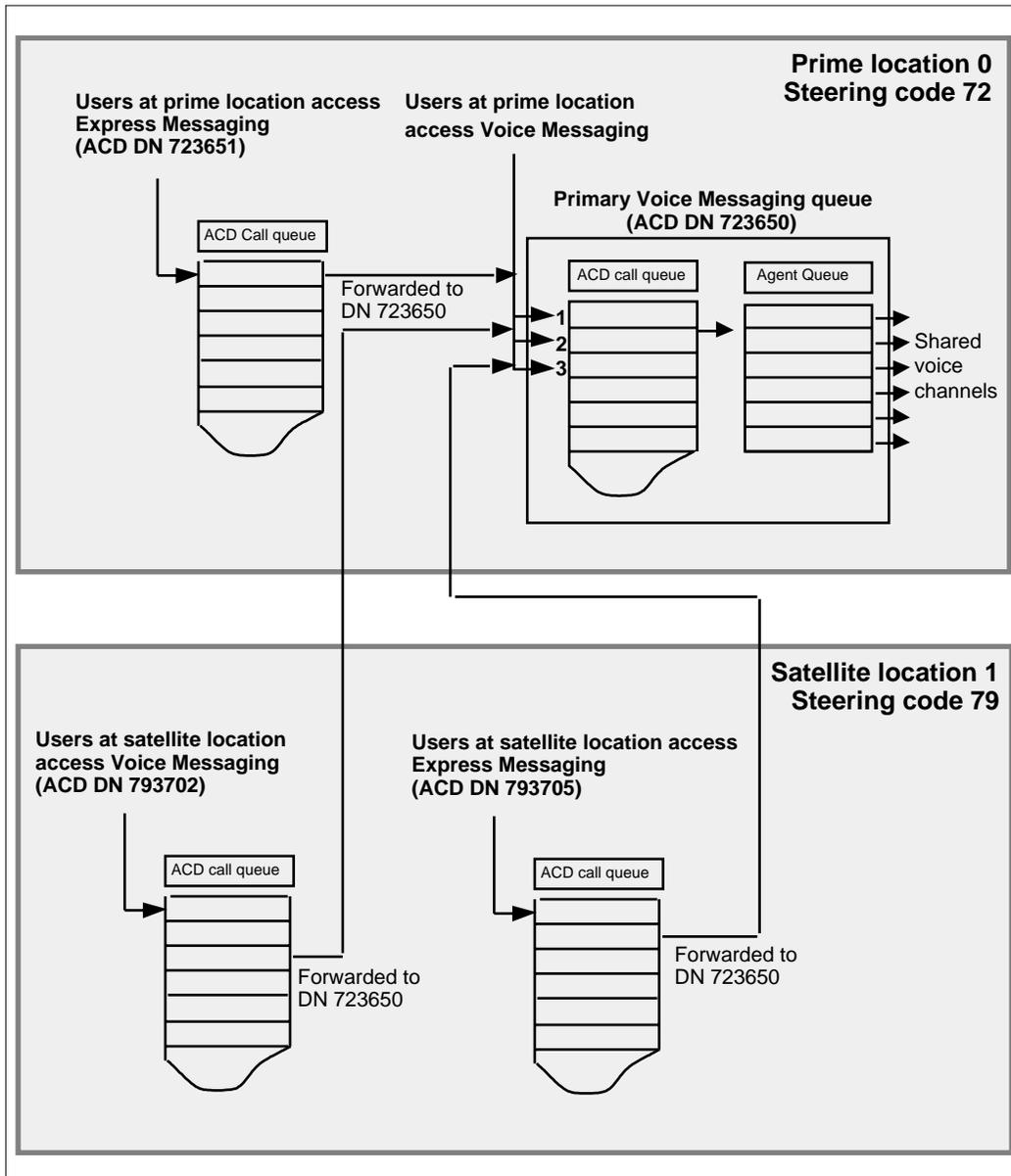
Figure 4-5xxx
DNs in an ESN network

Prime location 0
ESN prefix 6334

Users at prime location access Express Messaging (ACD DN 3651)

Users at prime location access Voice Messaging

Primary Voice Messaging queue (ACD DN 3650)

ACD call queue

Forwarded to DN 3650

ACD call queue

Agent queue

1
2
3

Shared voice channels

Satellite location 1
ESN prefix 6355

Users at satellite location access Voice Messaging (ACD DN 3702)

Users at satellite location access Express Messaging (ACD DN 3705)

ACD call queue

ACD call queue

Forwarded to DN 63343650

Forwarded to DN 63343650

Figure 4-6xxx
DNs in a CDP network

Prime location 0
Steering code 72

Users at prime location access
Express Messaging
(ACD DN 723651)

Users at prime location
access Voice Messaging

Primary Voice Messaging queue
(ACD DN 723650)

ACD Call queue

ACD call queue

Agent Queue

Forwarded to
DN 723650

1
2
3

Shared
voice
channels

Satellite location 1
Steering code 79

Users at satellite location
access Voice Messaging
(ACD DN 793702)

Users at satellite location access
Express Messaging
(ACD DN 793705)

ACD call queue

ACD call queue

Forwarded to
DN 723650

Forwarded to
DN 723650

It is recommended that you proceed in the following manner. Detailed procedures are provided on the following pages.

1   For each switch in the network, determine how many ACD queues you will require to provide users with the necessary services. You can also account for additional queues to accommodate any services that you plan on implementing in the future.

2   At the prime switch

   a.   Configure the primary voice messaging ACD queue that contains the agents. This is the voice messaging queue for the prime location. See Procedure 4-1.

   b.   Configure an ACD queue for each additional voice service that is required at the prime location. These queues do not have agents, but forward to the primary voice messaging queue. See Procedure 4-2.

     Note: If a service requires dedicated agents, see the section "Configuring Meridian Mail services" in the "Voice administration" chapter in the *System Administration Guide* for details. The procedures in this chapter assume that voice services will be sharing the agents in the primary voice messaging queue.

3   At each satellite switch

   a.   Configure an ACD queue for the voice messaging service. This queue does not contain agents, but forwards to the primary voice messaging queue at the prime location. See Procedure 4-3.

   b.   Configure an ACD queue for each additional voice service that is required at the satellite location. These queues do not have agents, but forward to the primary voice messaging queue. See Procedure 4-4.

4   Log on to Meridian Mail to define service DNs for the prime location and the satellite locations in the VSDN table. See Procedure 4-5.

Configuring the voice messaging queue for the prime location

Procedure 4-1 explains how to configure an ACD queue for the primary voice messaging queue. This ACD queue will be the voice messaging queue for the prime location. This queue contains all of the agents. All other voice services will share the agents in this queue.

Procedure 4-1xxx
Configuring the primary voice messaging queue for the prime location

Meridian 1/SL-1 configuration

1   At the prime switch, load overlay 23 to define the primary voice messaging ACD queue.

    A series of prompts are displayed in turn.

2   Respond to the prompts as indicated in Table 4-24.

Table 4-24xxx
Overlay 23 for the primary voice messaging ACD queue

Prompts	Responses	Description
REQ	NEW	
TYPE	ACD	ACD data block.
CUST	xx	SL-1 customer number.
ACDN	xxxxxxx	Enter the voice messaging DN for the prime location. This is the number users at the prime location use to access the Voice Messaging service.
MWC	YES	This is a Message Center DN. YES indicates that the queue has agents.
IMS	YES	This is an Integrated Messaging Service.
CMS	YES	Use the Command and Status Link Applications Protocol.
IMA	YES	Enable IMS attendant.
IVMS	YES	Integrated Voice Messaging. This creates a message center from which messages can be retrieved.
VSID	xx	Enter the VAS ID (0-15) from LD 17.

Prompts	Responses	Description
MAXP	xx	Maximum number of ACD agents. This should be equal to the number of DSP ports in the installed voice processor cards.
ALOG	YES	ACD agents associated with this queue are automatically logged on (made available) when Meridian Mail is powered up.
NCFW	0	The DN to which callers are forwarded if the Meridian Mail system fails. If NCFW = 0, callers are forwarded to the attendant. This number is also the DN to which callers are reverted when they press 0, unless otherwise specified in a mailbox user's profile.

The ACD-DN becomes the directory number of the voice messaging service.

3 To configure another ACD queue at the prime switch, enter NEW in response to the REQ prompt. If you do not want to configure more ACD queues at this time, enter END in response to the REQ prompt to exit overlay 23.

At this point you can either

a. Configure ACD queues for other voice services at the prime location. See Procedure 4-2.

b. Log on to Meridian Mail to define VSDNs. See Procedure 4-5.

Configuring queues for other services at the prime location

Procedure 4-2 explains how to configure an ACD queue for a voice service. These service queues do not contain agents, but forward to the primary voice messaging queue at the prime location.

Procedure 4-2xxx
Configuring voice service queues

Meridian 1/SL-1 configuration

1 Load overlay 23 at the prime switch.

A series of prompts are displayed in turn.

2 Respond to the prompts as shown in Table 4-25.

Table 4-25xxx
Overlay 23 for voice service queues at the prime location

Prompts	Responses	Description
REQ	NEW	
TYPE	ACD	ACD data block.
CUST	xx	SL-1 customer number.
ACDN	xxxxxxx	Enter the DN of the voice service.
MWC	NO	This field should be set to NO for voice service queues that forward to the primary queue.
MAXP	1	Maximum number of positions. ***Note:*** Even though no agents are assigned to this queue, this parameter must be set to 1.
NCFW	xxxxxxx	Enter the DN of the primary voice messaging queue that has the agents.

The ACD-DN becomes the directory number of the new service.

3 To add another queue, enter NEW in response to the REQ prompt.

4 When you have added an ACD queue for each voice service that is required at the prime location, enter END in response to the REQ prompt to exit overlay 23.

5 At this point you can either

a. Configure ACD queues at the satellite locations. See Procedure 4-3 to configure the voice messaging ACD queue. See Procedure 4-4 to configure other service ACD queues.

b. Define VSDNs in Meridian Mail. See Procedure 4-5.

Configuring the voice messaging queue for satellite locations

Procedure 4-3 explains how to configure a voice messaging queue on a satellite switch. This queue does not contain agents but forwards to the primary voice messaging queue.

Procedure 4-3xxx
Configuring the voice messaging service for satellite locations

Meridian 1/SL-1 configuration

1   At the satellite switch, load overlay 23 to define the voice messaging ACD queue.

A series of prompts are displayed in turn.

2   Respond to the prompts as indicated in Table 4-26.

Table 4-26xxx
Overlay 23 for the voice messaging service at a satellite location

Prompts	Responses	Description
REQ	NEW	
TYPE	ACD	ACD data block.
CUST	xx	SL-1 customer number.
ACDN	xxxxxxx	Enter the DN of the voice messaging service. This is the number that users at the satellite location use to access the Voice Messaging service. Ensure that this DN is unique across the NMS network.
MWC	YES	This field should be set to NO for voice service queues that forward to the primary queue. However, you must temporarily set MWC to YES so that you can FDN the telephone sets at the satellite location to this queue.*

Prompts	Responses	Description
MAXP	1	Maximum number of positions. **Note:** Even though no agents are assigned to this queue, this parameter must be set to 1.
NCFW	xxxxxxx	Enter the DN of the primary voice messaging queue at the prime location. Enter the DN in network format. If the dialing plan for the prime switch is ESN or Hybrid, include the ESN prefix of the prime switch. If the dialing plan is CDP, include the CDP steering code of the prime switch.

*When you have finished programming your telephone sets, return to overlay 23 and set MWC to NO.

The ACD-DN becomes the directory number of the voice messaging service.

3 To configure another ACD queue, enter NEW in response to the REQ prompt. If you do not want to configure more ACD queues at this time, enter END in response to the REQ prompt to exit overlay 23.

At this point you can either

c. Configure ACD queues for other voice services. See Procedure 4-4.

d. Log on to Meridian Mail to define VSDNs. See Procedure 4-5.

Configuring queues for other services at the satellite locations

Procedure 4-4 explains how to configure an ACD queue for a voice service. These service queues do not contain agents, but forward to the primary voice messaging queue at the prime location.

Procedure 4-4xxx
Configuring voice service queues at satellite locations

Meridian 1/SL-1 configuration

1 Load overlay 23 at the satellite switch.

A series of prompts are displayed in turn.

2 Respond to the prompts as shown in Table 4-27.

Table 4-27xxx
Overlay 23 for voice service queues at satellite locations

Prompts	Responses	Description
REQ	NEW	
TYPE	ACD	ACD data block.
CUST	xx	SL-1 customer number.
ACDN	xxxxxxx	Enter the DN of the voice service. Ensure that this DN is unique across the NMS network.
MWC	NO	This field should be set to NO for voice service queues that forward to the primary queue.
MAXP	1	Maximum number of positions. ***Note:*** Even though no agents are assigned to this queue, this parameter must be set to 1.
NCFW	xxxxxxx	Enter the DN of the primary voice messaging queue at the prime location. Enter the DN in network format. If the dialing plan for the prime switch is ESN or Hybrid, include the ESN prefix of the prime switch. If the dialing plan is CDP, include the CDP steering code of the prime switch.

The ACD-DN becomes the directory number of the new service.

3 To add another queue, enter NEW in response to the REQ prompt.

4 When you have added an ACD queue for each required voice service, enter END in response to the REQ prompt to exit overlay 23.

5 When all necessary ACD queues have been configured at all satellite switches, configure the VSDNs in Meridian Mail. See Procedure 4-5.

Meridian Mail configuration

You are now ready to configure NMS in Meridian Mail. This involves the following steps.

1   Configure a service DN (in the VSDN table) for each service for which you created an ACD queue. This includes the ACD queues on the prime switch and all satellite switches. See the following section "Configuring VSDNs".

2   Add the prime location. For ESN networks, see page 4-55. For CDP networks, see page 4-66. For Hybrid networks, see page 4-75.

3   Add the satellite locations. For ESN networks, see page 4-62. For CDP networks, see page 4-72. For Hybrid networks, see page 4-82.

4   Test the NMS network. See page 4-87.

5   Add users to the locations.

   a.   Add users to the prime location.

   b.   Change the default administration context.

   c.   Add users to the first satellite location.

   d.   Change the default administration context.

   e.   Add users to the next satellite location. Continue until users have been added to all locations in the NMS network.

   See "Adding local voice users" in the "User administration" chapter in the *System Administration Guide*.

6   Back up the network.

Configuring VSDNs

Once ACD queues have been created on the prime switch and satellite switches, you are ready to define VSDNs in Meridian Mail.

Procedure 4-5xxx
Configuring VSDNs in Meridian Mail

1   Log on to Meridian Mail at the main administration terminal.

2   Select Voice Administration from the main menu.

3   Select Voice Services Administration.

4   Select Voice Services-DN Table.

5 Add a DN to the VSDN table tor each ACD DN that was configured at the prime location and all satellite locations. Enter the appropriate ACD DN in the *Access DN* field in the Add DN Information screen. For services at satellite locations, enter the DN in network format. (For CDP, include the steering code. For ESN, include the access code of the prime switch and the routing prefix of the satellite location.) For more information about adding DNs, see the section "Adding DN information" in the "Voice administration" chapter in the *System Administration Guide*.

Dialing plans and location codes

A *dialing plan* is the set of rules the network uses to route calls through the private phone network.

A location code is a unique identifier that indicates a particular location within a network. This is a generic term. In a CDP (coordinated dialing plan) network the *CDP steering code* is the location code. In an ESN network, this is the *ESN prefix*. These location codes are required when a local user composes and sends a message to a user at a satellite location. (These codes are typically the same as the dialing codes used to call the user at the remote satellite location.)

A CDP network is transparent to users because the CDP steering code is part of the local mailbox number. This means that the dialing codes of users at other locations look the same (that is, are of the same length) as those of local users. In an ESN network, the prefix is not part of the local mailbox number but must be prepended when dialing a user at another location. Therefore when a user composes a message to a user at another location, the address will be longer than when he or she composes a message to a local user. See the following sections on CDP and ESN dialing plans for more information and examples.

In an ESN network, a location can only have one ESN prefix associated with it. In a CDP network, a location can have up to 50 steering codes.

Note: Verify that the name dialing prefix configured in the Voice Messaging Options screen (the "Voice administration" chapter in the *System Administration Guide*), does not conflict with any ESN or CDP dialing codes. (There is a conflict if the first two digits of a DN match the name dialing prefix.) If there is a conflict, you will have to change the name dialing prefix.

ESN dialing plan (electronic switched network)

In an ESN (electronic switched network) dialing plan, each location has an access code and a unique location code. When a user places a call to a user at another location, he or she must first dial this prefix before dialing the user's extension DN. All users in the NMS network use the same prefix to reach a particular location. When a user calls another local user (on the same switch), he or she simply dials the local extension without the prefix.

An ESN prefix consists of two elements: an *access code,* one or two digits in length, followed by a *routing prefix* of a fixed length (usually 3 digits). (Meridian Mail does not require that ESN prefixes be a fixed length, and the length may vary from prefix to prefix.)

The ESN access code is used to access ESN routing in the same way that an access code (usually "9") is needed to dial out of the switch. The same access code is typically used by all switches in a network, although it may vary from switch to switch. (ESN access codes are similar to trunk access codes and are set independently in each switch.)

The routing prefix is a unique number which identifies a particular location within the network. It is usually 3 digits in length. These two elements together (the access code and the routing prefix) make up the ESN prefix. The ESN prefix can be up to 7 digits in length.

For example, a user at Location 0 has the local extension 3000. All users at Location 0 can reach this user by dialing 3000. A user at Location 1 has to dial the ESN prefix followed by the extension DN. If the ESN prefix for Location 0 is 6655 (the "6" is the access code and the routing prefix is "655"), users at other locations must dial 66553000. This means that a particular extension DN may be repeated in locations having different ESN prefixes. For example, 66553000 and 66443000 have the same local extension DN (3000), yet are unique within the network because of the different ESN prefixes. See Figure 4-7 for an example of an ESN network.

To expand the range of DNs that are available, you can overlap the leading digit(s) of the local extension with the trailing digit(s) of the ESN prefix. Using the full DN 6644000 as an example, 4000 is the local extension DN and the full ESN prefix (the access code plus the routing prefix) is 6644. Here, the "4" is both the last digit in the ESN prefix and the first digit of the local extension. If overlap were not allowed, local extensions in the range of 4000 to 4999 would not be possible.

The location codes you configure in the NMS administration screens must emulate the existing dialing plan. For example, in an ESN network, local users dial 6644xxxx (where xxxx is the local mailbox number) to call users at Location 1. You would therefore enter 6644 as the ESN prefix.

Figure 4-7xxx
An ESN network with two Meridian 1/SL-1s
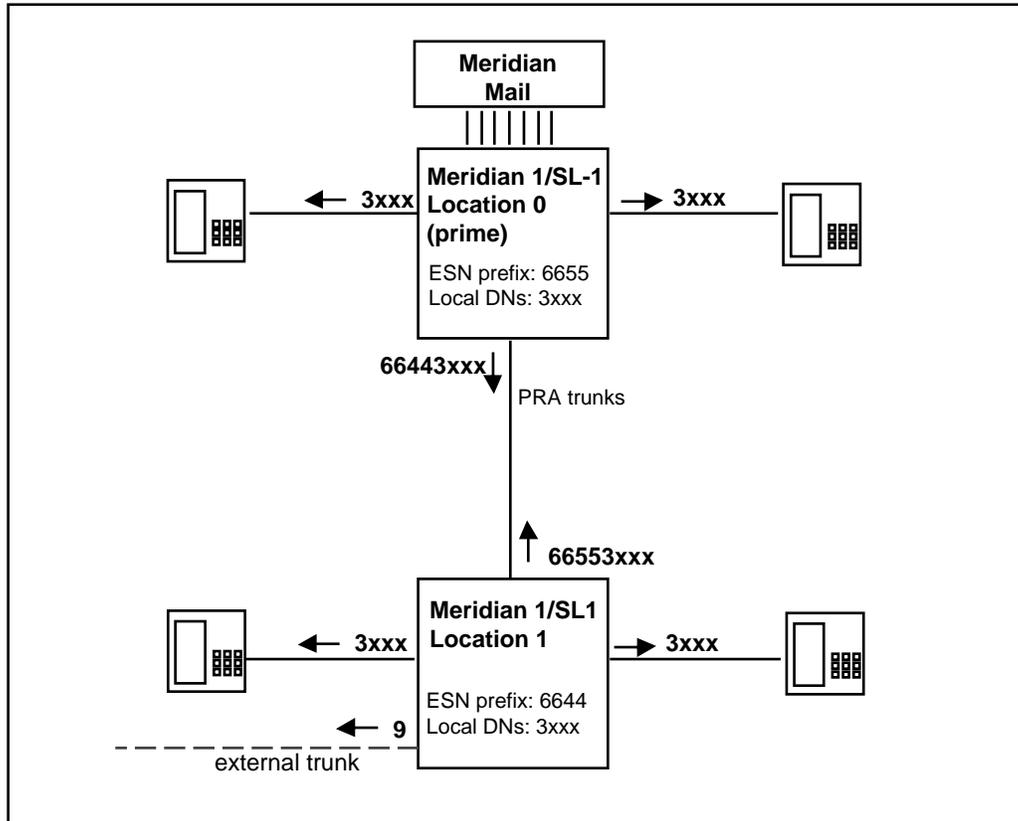
Figure 4-8 on page 4-55 shows the corresponding Meridian Mail configuration for the prime location and Figure 4-10 on page 4-62 shows the corresponding Meridian Mail configuration for satellite location 1.

Entering data in an ESN only network

Follow these guidelines if your network uses an ESN only dialing plan.

1 Define the prime location (the switch to which the Meridian Mail server is attached). See "Adding the prime location". (If the Networking feature is also installed, access the list of locations from the Local Site Maintenance option in the Network Administration menu.)

2 Create a satellite location for each ESN prefix in the NMS network. See "Adding satellite locations".

For each location

3 Enter the location name and select "ESN" as the dialing plan.

4 Enter the maximum number of digits in the local mailbox numbers. The maximum value is 8.

5 Enter the ESN access code for the location you are defining. If there is a public network access code, you may enter this in the second field.

6 Enter the number of digits in the ESN prefix that overlap with the local extension. (If there is no overlap, enter "0".)

7 Enter the ESN prefix (access code + routing prefix) of the location. For satellite locations, the access code must be the access code of the prime location. (If two access codes are defined for the prime location, use the one in the first field.)

8 Record a spoken name for the location, if desired.

9 Specify whether or not mailbox numbers are the same as the extension DNs. If mailbox numbering does not follow the dialing plan, perform step 10.

10 Enter a mailbox prefix if mailbox numbering does not follow the dialing plan.

Adding the prime location to an ESN network

The first time you select Network Administration from the main menu after NMS has been installed, the Add Location screen automatically appears. This is where you add the prime location. The prime location is where the Meridian Mail system actually resides. This location must be configured before any satellite locations. The *Location Number* field will already be filled in as "0". This is the default location ID for the prime location. You can modify the prime location, but you cannot delete it.

Figure 4-8 shows a sample datafill for the prime location in an ESN network.

Figure 4-8xxx
The Add Location screen for the prime location in an ESN network

```
                        Network Administration


    Add Location

    Location Number:        0
    Location Name:          Prime Location

    Dialing plan:              [ESN] CDP Hybrid
    Maximum Number of Digits in Local Mailbox:  4

    ESN Access Codes:  6      2
    Number of digits in common between ESN Prefix and Local Extension: 0

    ESN/CDP  codes (The ESN code must begin with 6):

#   1: 6655      2:_____
    3: _____  4:_____
    5: _____  6:_____
    7: _____  8:_____
    9: _____  10:_____
    .            .
    .            .

    Mailbox Numbering follows Dialing Plan:    [Yes]  No
*   Mailbox Prefixes:_____

    Location Name Recorded (Voice):        No
    _____

       Save          Cancel                     Voice
```

* Appears when mailbox numbering does not follow a dialing plan.

\# If the dialing plan is CDP, up to 50 steering codes can be defined. For hybrid
   dialing plans, one ESN code and up to 49 CDP codes can be defined.

The same fields are displayed for the prime locations as well as for satellite locations. Therefore, the following descriptions also apply to satellite locations.

- *Location Number* This number uniquely identifies the location within the NMS site.

  For the prime location, the default is 0. This value cannot be changed.

  For satellite locations, this field cannot be modified from within this screen. To change the Location Number for a satellite location, delete the location and re-add it. When you press [Add] you are prompted for a new ID. The valid range is from 1 to 59.

  Note: The location number must correspond between sites. For example, local site A, location 2, should also be defined as a remote site, location 2, in site B.

- *Location Name* This field must be filled in. The name should be unique and easily identify the location within the network. You may enter up to 32 alphanumeric characters. There is no default.

- *Dialing Plan* The selection you make depends on your organization's dialing plan. The default is "Hybrid". Select "ESN" for an ESN network.

- *Maximum Number of digits in Local Mailbox* The maximum number of digits used in mailbox numbers at this location. If you are unsure, enter 18, the maximum allowable value (or 16 for AMIS virtual nodes).

- *ESN Access Codes* This code is used to access the ESN network. Each switch in the network may have a different access code. Enter the access code for this location's switch.

  You may enter two different ESN access codes of one or two digits each. Typical codes are "6" or "9". In the second *ESN Access Code* field, enter the public network access code, if there is one. Check your dialing plan for the correct code(s).

- *Number of digits in common between ESN prefix and Local Extension* This field appears only when the dialing plan is ESN or Hybrid. This number indicates the number of digits in the ESN location prefix that overlap with the local extension. Meridian Mail uses this value to convert between local and network formats of the mailbox numbers. For example, a five-digit local extension may overlap with the last digit of a three-digit ESN prefix (for example, ESN DN 338 3000 may refer to the local DN 83000). Refer to your organization's dialing plan.

  Note 1: You must enter a value in this field. If you leave it blank, it will revert to the previous value. If there are no numbers in common between the ESN prefix and the local extensions, enter a value of "0".

  Note 2: If you enter a non-zero value in this field, the mailbox numbers of all users you enter for this location must begin with the overlap digit(s) of the ESN prefix. For example, if the last digit (3) of the ESN prefix overlaps into the local extension, then all mailbox numbers entered for this location must begin with "3".

- *ESN/CDP Codes* Enter the ESN prefix (access code + routing prefix). For example, if the access code is 6 and the routing prefix is 655, enter "6655". Only one ESN prefix per location is supported.

  If you defined one or two access codes (ESN), the screen displays a message to remind you of which access code to use as part of the ESN prefix.

  This codes must not conflict with other network codes. There is a conflict if there is overlap between two location codes. For example, there is a conflict between the ESN prefixes 665 and 6651. If a message is addressed to 6651224, the system cannot tell if this means ESN prefix 665 mailbox 1224 or ESN prefix 6651 mailbox 224.

  Note: For satellite locations, enter the access code of the prime location. If two access codes were defined for the prime location, use the one that was entered in the first field.

- *Mailbox Numbering follows Dialing Plan* Answer "Yes" if the local mailbox numbers at this location are the same as local extensions on the switch. If you answer "No", the following field, *Mailbox Prefixes*, appears and you must enter the location codes as mailbox prefixes.

- *Mailbox Prefixes* This field is applicable only if mailbox numbering at the location does not following the dialing plan (and therefore ESN prefixes or CDP steering codes do not apply). Enter a unique identifier as the mailbox prefix. This prefix is used to identify the location within the network and must be unique across the network. Ensure that it does not conflict with other network data or mailbox numbers. This prefix does not have any overlap with local mailbox numbers and is independent of the ESN prefix and CDP steering codes.

- *Location Name Recorded (Voice)* This field only applies if an ESN or Hybrid dialing plan is in place. It indicates whether or not a spoken location name has been recorded for this site. If a spoken name is recorded, voice mail users hear the location name followed by the local mailbox digits. For example, *"Murray Road, Mailbox 2346"*. If a name is not recorded for the location, users hear the ESN location prefix followed by the mailbox number. For example, *"6655 Mailbox 2346"*. A name can be recorded from this screen by using the voice key (see the following section.) The default is "No".

The following actions are possible from this screen:

[Voice]	This softkey is displayed only if the dialing plan is ESN or Hybrid. Use this softkey to record a spoken name for the location. This voice recording will identify the location to users when sending messages to, or receiving messages from the location.
[Save]	This action saves the location in the network database. The List Locations screen is re-displayed.
[Cancel]	Entries made in this screen are discarded and you are returned to the List Locations screen.

Procedure 4-6xxx
Adding the prime location to an ESN network

Starting point: The main menu

1   Select Network Administration.

   The Add Location screen is displayed.

2   Set Dialing Plan to ESN.

3   Fill in the fields. See the field descriptions on the previous pages.

4 Use [Save] to save the configuration and exit the screen.

The List Locations screen is displayed, with one location, the prime location, listed.

5 To exit the screen, go to step 5a.
To add a satellite location, go to step 5b.

   a. Press [Exit].

   You are returned to the Network Administration menu.

   b. Press [Add].

   See "Adding satellite locations to an ESN network" on page 4-62.

Listing locations

Once data has been entered for the prime location, the List Locations (Figure 4-9) screen will appear whenever you select Network Administration from the main menu. The List Locations screen displays all of the locations in your NMS Network and provides the softkeys required to add, view, modify and delete them.

Note: If Meridian Mail Networking is also installed on your system, refer to the following chapter, "Network Message Service and Meridian Mail Networking", for instructions on adding and modifying local and remote sites and NMS locations.

Figure 4-9xxx
The List Locations screen

```
┌─────────────────────────────────────────────────────────────────┐
│                                                                   │
│  ┌───────────────────────────────────────────────────────────┐   │
│  │                    Network Administration                 │   │
│  └───────────────────────────────────────────────────────────┘   │
│                                                                   │
│   List Locations                                                  │
│                                                                   │
│      Location           Location Name                             │
│                                                                   │
│          0              Primelocation                             │
│          5              downtown                                  │
│          10             smithstreet                               │
│          20             jonesavenue                               │
│          nnn            xxxxxxxxxx                                 │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│  ─────────────────────────────────────────────────────────────   │
│                                                                   │
│   Select an item >                                                │
│                                                                   │
│  ┌──────────┐ ┌──────────┐ ┌─────────────┐ ┌──────────┐ ┌──────┐ │
│  │   Exit   │ │   Add    │ │ View/Modify │ │  Delete  │ │Print │ │
│  │          │ │          │ │             │ │          │ │Network│ │
│  │          │ │          │ │             │ │          │ │ Data │ │
│  └──────────┘ └──────────┘ └─────────────┘ └──────────┘ └──────┘ │
└─────────────────────────────────────────────────────────────────┘
```

The following fields are displayed:

- *Location* This is the ID that uniquely identifies the location within the NMS site. You can enter an integer between 0 and 59. The prime location is always 0.

- *Location Name* This should be a unique name corresponding to the location (such as a street name, city name, and so on).

The following actions are possible from this screen:

[Add]	The Add Location screen is displayed.
[View/Modify]	Use the cursor keys to highlight the location you want to view or modify. Press <Spacebar> to select the location. Press [View/Modify] to display the View/Modify Location screen.
[Delete]	Select the location you want to delete with the cursor keys. A new set of softkeys are displayed. See page 4-86.

| [Print Network Data] | This action prints location site information from the network data base. Ensure that the printer is on-line before making this selection. See page 4-87 for details. |
| [Exit] | The Network Administration menu is displayed. |

CAUTION
Changing the network data
If you plan on altering the network data fundamentally, such as by changing location codes or by adding or deleting locations, you should do so after hours when users are not logged on. Otherwise, users may may not be able to log on or will not be able to compose messages to affected mailboxes. It is recommended that you carefully plan network sites and locations before installation to avoid changing the configuration.

Adding satellite locations to an ESN network

The same Add Location screen that is used to add the prime location is also used to add satellite locations to your NMS network.

To access the screen, press [Add] on the List Locations screen. You are first prompted to enter a location number (in the range 1 to 59). It is recommended that location numbers be assigned in ascending numerical sequence. The Add Location screen is displayed when you have entered a number and pressed <Return>.

Figure 4-10 shows a sample datafill for a satellite location in an ESN network. Refer to the section "Adding the prime location to an ESN network" for field descriptions.

Figure 4-10xxx
The Add Location screen for a satellite location in an ESN network

```
┌──────────────────────────────────────────────────────────────┐
│ ┌──────────────────────────────────────────────────────────┐ │
│ │                  Network Administration                  │ │
│ └──────────────────────────────────────────────────────────┘ │
│                                                                │
│    Add Location                                                │
│                                                                │
│    Location Number:        1                                   │
│    Location Name:          First Satellite Location            │
│                                                                │
│    Dialing plan:          [ESN] CDP Hybrid                     │
│    Maximum Number of Digits in Local Mailbox:  4               │
│                                                                │
│    ESN Access Codes: 6          2                              │
│    Number of digits in common between ESN Prefix and Local Extension:   0 │
│                                                                │
│    ESN/CDP  codes (The ESN code must begin with 6): *          │
│  #   1: 6644     2:                                            │
│      3:          4:                                            │
│      5:          6:                                            │
│      7:          8:                                            │
│      9:         10:                                            │
│      .           .                                             │
│      .           .                                             │
│                                                                │
│    Mailbox Numbering follows Dialing Plan:    [Yes]  No        │
│ **  Mailbox Prefixes:                                          │
│                                                                │
│    Location Name Recorded (Voice):         No                  │
│   ─────────────────────────────────────────────────────────   │
│                                                                │
│  ┌────────┐   ┌────────┐   ┌────────┐   ┌────────┐   ┌──────┐ │
│  │  Save  │   │ Cancel │   │        │   │ Voice  │   │      │ │
│  └────────┘   └────────┘   └────────┘   └────────┘   └──────┘ │
└──────────────────────────────────────────────────────────────┘
```

  * The number that is displayed here is the first ESN Access Code that was defined
      for the prime switch.
  ** Appears when mailbox numbering does not follow a dialing plan.

  # If the dialing plan is CDP, up to 50 steering codes can be defined. For hybrid
     dialing plans, one ESN code and up to 49 CDP codes can be defined.

Coordinated dialing plan (CDP)

In a true coordinated dialing plan (CDP) between two or more switches, a unique dialing number exists for each extension in the network. Unlike ESN, there can be no duplication of extension DNs on different switches. This is due to the fact that the location code (the CDP steering code) is part of the local extension DN.

For example, a user on switch 2 has the extension 52339. The steering code is 5 and the local extension DN is 2339. Both local users and users at other locations dial 52339 to reach this user. This extension DN cannot exist on any of the other switches. A CDP network is transparent to users because calling a user at another location is as easy as dialing a user at your own location - no prefixes or access codes need to be remembered.

For example, in Figure 4-11, the extensions on the prime switch (Switch 0) are numbered 72000 to 74999 and 81000 to 81999 (the steering codes are 72, 73, 74 and 81). The extensions on Switch 1 are numbered 27000 to 28999, 39000 to 39999 and 40000 to 41999 (the steering codes are 27, 28, 39, 40 and 41). The extensions on Switch 2 are numbered 50000 to 59999 and 70000 to 79999 (the steering codes are 5 and 7). Regardless of which switch a user is service by (Switch 0, Switch 1, or Switch 2), all users dial the same number when calling a user on Switch 2 (for example, 54000).

Location 0 represents switch 0 and switches 1 and 2 are represented by Location 1. More than one location is defined for illustration purposes.

CDP requirements

To use NMS in a CDP network, the following requirements must be met:

1   All mailbox numbers across the network must have the same digit length. The mailbox number includes the CDP steering code and the local mailbox number. If the length of the full mailbox DN varies across the network, NMS will not work.

For example, NMS supports the following mailbox configurations:

-   The length of the CDP steering code is the same for all locations (for example, two digits) and the local mailbox numbers are the same length (three digits). The total mailbox DN length is five.

-   The length of the steering code and local mailbox numbers varies across the network, but the length of the full mailbox number (steering code + local mailbox number) is the same across all locations. For example, at Location 2 the steering codes are 5 and 7 and local mailbox numbers are four digits in length. The full mailbox DN length is five (5xxxx). At Location 1, the steering codes are 27, 28, 30, 40 and 41 and the local mailbox numbers are three digits in length. The full mailbox DN length is five (27xxx).

2   The CDP steering code must completely overlap with the local mailbox number. This is described in greater detail in the section "Adding the prime location to a CDP network" on page 4-66.

Figure 4-11xxx
CDP network with three Meridian 1/SL-1s
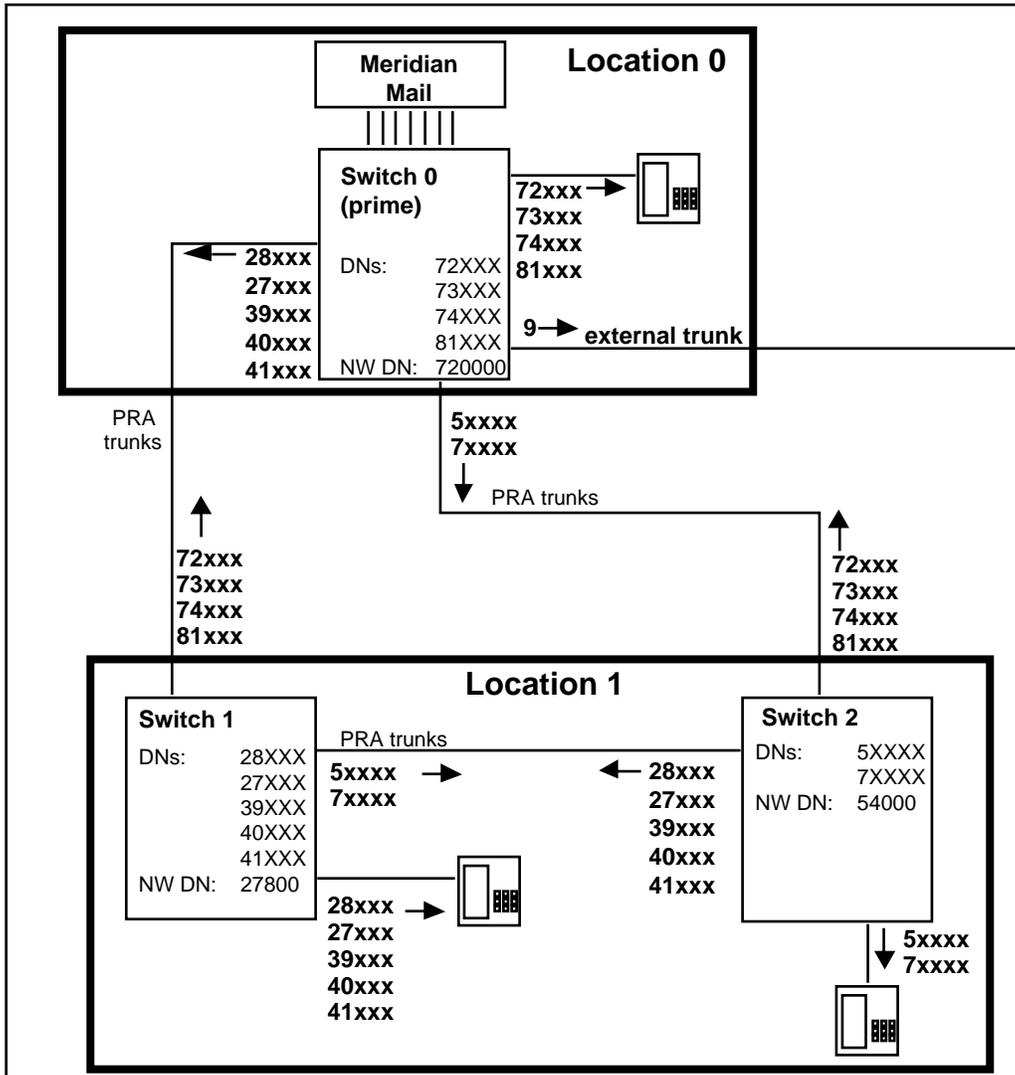
Figure 4-12 on page 4-67 shows the corresponding Meridian Mail configuration for the prime location. Figure 4-14 on page 4-72 shows the corresponding Meridian Mail configuration for satellite location 1.

Entering network data in a CDP network

Follow the procedure below if you are going to configure one large location to represent all switches in the network. If you need to configure a number of locations, use the procedure on the next page. (If the networking feature is also installed, access the list of locations from the Local Site Maintenance option in the Network Administration menu.)

For the prime location

1   Enter the location name and select "CDP" as the dialing plan.

2   Enter the maximum number of digits in the local mailbox numbers. The maximum allowable value is 8.

3   Enter "7" as the number of digits in the CDP code that overlap with the local extension.

4   Enter the digit "1" in the first field provided for CDP steering codes. It is not really necessary to enter any CDP steering codes, however, the system demands at least one entry.

5   From the User Administration screens, enter user mailbox information as if all the users belonged on the same switch (the physical location of the user does not really matter). See the "User Administration" chapter in the *System Administration Guide*, for more information.

6   From the Voice Administration screens, enter the service DNs in the VSDN table as you would for a non-NMS system. See the "Voice Administration" chapter in the *System Administration Guide*.

Follow the procedure below if you need to configure a number of locations. This may be the case if the number of steering codes is greater than 10 if you were to have only one location.

Important: The full mailbox DN length (steering code + local mailbox number) must be the same across all locations in the network.

1   Define the prime location (the switch to which the Meridian Mail server is attached). See "Adding the prime location to a CDP network". (If the Networking feature is also installed, access the list of locations from the Local Site Maintenance option in the Network Administration menu.)

2   Create the number of required satellite locations.

For each location (prime and satellite):

3   Enter the location name and select "CDP" as the dialing plan.

4 Enter the maximum number of digits in the local mailbox numbers. The maximum allowable value is 18 (or 16 for AMIS virtual nodes).

5 Enter the number of digits in the CDP steering code that overlap with the local extension.

Important: The CDP steering code must completely overlap with the local extension. For example, if the steering code is two digits in length, enter "2" in this field.

6 Enter all of the CDP steering codes for the location.

7 Specify whether or not mailbox numbers are the same as the extension DNs. If mailbox numbering does not follow the dialing plan, perform step 8.

8 Enter a mailbox prefix if mailbox numbering does not follow the dialing plan.

Adding the prime location to a CDP network

The first time you select Network Administration from the main menu after NMS has been installed, the Add Location screen automatically appears. This is where you add the prime location. The prime location is where the Meridian Mail system actually resides. This location must be configured before any satellite locations. The *Location Number* field will already be filled in as "0". This is the default location ID for the prime location. You can modify the prime location, but you cannot delete it.

Figure 4-12 shows a sample datafill for the prime location in a CDP network.

Figure 4-12xxx
The Add Location screen for the prime location in a CDP network

```
                          Network Administration

    Add Location

    Location Number:          0
    Location Name:            Prime Location

    Dialing plan:             ESN    [CDP]   Hybrid
    Maximum Number of Digits in Local Mailbox: 5___

    Number of digits in common between CDP code and Local Extension:   2__

    ESN/CDP   codes (The ESN code must begin with n) *:

 #   1: 72_____     2:73_____
     3: 74_____     4:81_____
     5: _____     6:_____
     7: _____     8:_____
     9: _____  10:_____
     .              .
     .              .

    Mailbox Numbering follows Dialing Plan:    [Yes]  No
 **  Mailbox Prefixes:_____


        Save              Cancel
```

```
 *  Ignore the message in brackets. It only applies to ESN or Hybrid dialing plans.

 ** Appears when mailbox numbering does not follow a dialing plan.

 #   If the dialing plan is CDP, up to 50 steering codes can be defined. For hybrid
     dialing plans, one ESN code and up to 49 CDP codes can be defined.
```

The same fields are displayed for the prime locations as well as for satellite locations. Therefore, the following descriptions also apply to satellite locations.

- *Location Number*   This number uniquely identifies the location within the NMS site.

  For the prime location, the default is 0. This value cannot be changed.

  For satellite locations, this field cannot be modified from within this screen. To change the Location Number for a satellite location, delete the location and re-add it. When you press [Add] you are prompted for a new ID. The valid range is from 1 to 59.

- *Location Name*   This field must be filled in. The name should be unique and easily identify the location within the network. You may enter up to 32 alphanumeric characters. There is no default.

- *Dialing Plan* The selection you make depends on your organization's dialing plan. The default is "Hybrid". Select "CDP".

  When CDP is selected, [Voice] is no longer displayed. This is because in a CDP dialing plan, other locations are transparent to voice messaging users and a recorded location name is not required.

  Note: If you change a Hybrid location to CDP-only, the location name is removed. If you change the location back to Hybrid, you will have to re-record the verification.

  See "Coordinated dialing plan (CDP)" earlier in this chapter for a description of the different types of dialing plans and important information about requirements and limitations.

- *Maximum Number of digits in Local Mailbox* The maximum number of digits used in mailbox numbers at this location. The maximum value is 18 (or 16 for AMIS virtual nodes). If you are unsure, enter the maximum allowable value.

- *Number of digits in common between CDP steering code and local ext* In a CDP network, there must be complete overlap between the CDP steering code and the local extensions. In other words, this number must equal the length of the CDP steering code. For example, if the steering code is 74 enter "2" in this field.

- *ESN/CDP Codes* Enter up to 50 CDP steering codes for the prime location. These are location codes that identify the location within the network. These codes must not conflict with other network codes. There is a conflict if there is overlap between two location codes.

- *Mailbox Numbering follows Dialing Plan* Answer "Yes" if the local mailbox numbers at this location are the same as local extensions on the switch. If you answer "No", the following field, *Mailbox Prefixes*, appears and you must enter the location codes as mailbox prefixes.

- *Mailbox Prefixes* This field is applicable only if mailbox numbering at the location does not follow the dialing plan (and therefore CDP steering codes do not apply). Enter a unique identifier as the mailbox prefix. This prefix is used to identify the location within the network and must be unique across the network. Ensure that it does not conflict with other network data or mailbox numbers. This prefix does not have any overlap with local mailbox numbers and is independent of the CDP steering codes.

The following actions are possible from this screen:

| [Save] | This action saves the location in the network database. The List Locations screen is re-displayed. |
| [Cancel] | Entries made in this screen are discarded and you are returned to the List Locations screen. |

Procedure 4-7xxx
Adding the prime location

Starting point: The main menu

1 Select Network Administration.

The Add Location screen is displayed.

2 Fill in the fields. See the field descriptions on the previous pages.

3 Press [Save] to save the configuration and exit the screen.

The List Locations screen is displayed, with one location, the prime location, listed.

4 To exit the screen, go to step 4a.
To add a satellite location, go to step 4b.

    a.   Press [Exit].

        You are returned to the Network Administration menu.

    b.   Press [Add].

        See "Adding satellite locations to a CDP network" later in this chapter for details.

Listing locations

Once data has been entered for the prime location, the List Locations (Figure 4-13) screen will appear whenever you select Network Administration from the main menu. The List Locations screen displays all of the locations in your NMS Network and provides the softkeys required to add, view, modify and delete them.

Note: If Meridian Networking is also installed on your system, refer to the following chapter, "Network Message Service and Meridian Mail Networking", for instructions on adding and modifying local and remote sites and NMS locations.

Figure 4-13xxx
The List Locations screen

```
                        Network Administration


 List Locations

    Location              Location Name

       0                  Primelocation
       5                  downtown
      10                  smithstreet
      20                  jonesavenue
     nnn                  xxxxxxxxxx






    _____

    Select an item >


      Exit          Add        View/Modify     Delete        Print
                                                             Network
                                                              Data
```

The following fields are displayed:

- *Location* This is the ID that uniquely identifies the location within the NMS site. You can enter an integer between 0 and 59. The prime location is always 0.

- *Location Name* This should be a unique name corresponding to the location (such as a street name, city name, and so on).

The following actions are possible from this screen:

[Add]	The Add Location screen is displayed.
[View/Modify]	Use the cursor keys to highlight the location you want to view or modify. Press the <Spacebar> to select the location. Press [View/Modify] to display the View/Modify Location screen.
[Delete]	Select the location you want to delete with the cursor keys. A new set of softkeys are displayed. See page 4-86.
[Print Network Data]	This action prints location site information from the network data base. Ensure that the printer is on-line before making this selection. See page 4-87 for details.
[Exit]	The Network Administration menu is displayed.

CAUTION
Changing the network data
If you plan on altering the network data fundamentally, such as by changing location codes or by adding or deleting locations, you should do so after hours when users are not logged on. Otherwise, users may may not be able to log on or will not be able to compose messages to affected mailboxes. It is recommended that you carefully plan network sites and locations before installation to avoid changing the configuration.

Adding satellite locations to a CDP network

The same Add Location screen that is used to add the prime location is also used to add satellite locations to your NMS network.

To access the screen, press [Add] on the List Locations screen. You are first prompted to enter a location number (in the range 1 to 59). It is recommended that location numbers be assigned in ascending numerical sequence. The Add Location screen is displayed when you have entered a number and pressed <Return>.

Figure 4-14 shows a sample datafill for a satellite location in a CDP network. Refer to the section "Adding the prime location to a CDP network" for field descriptions.

Figure 4-14xxx
The Add Location screen for a satellite location in a CDP network

```
                         Network Administration

      Add Location

      Location Number:          1
      Location Name:            Satellite Location

      Dialing plan:            ESN    [CDP]   Hybrid
      Maximum Number of Digits in Local Mailbox:  5

      Number of digits in common between CDP code and Local Extension:    2

      ESN/CDP  codes (The ESN code must begin with n): *

  #   1: 28        2:27
      3: 39        4:40
      5: 41        6:5
      7: 71        8:
      9:          10:
      .            .
      .            .

      Mailbox Numbering follows Dialing Plan:    [Yes]  No
  **  Mailbox Prefixes:
      _____

        Save           Cancel
```

* Ignore the message in brackets. It is only for ESN or Hybrid dialing plans.

** Appears when mailbox numbering does not follow a dialing plan.

\#   If the dialing plan is CDP, up to 50 steering codes can be defined. For hybrid
     dialing plans, one ESN code and up to 49 CDP codes can be defined.

Hybrid dialing plan

If both CDP and ESN are present, then the following restrictions apply:

- The prime switch must support both dialing plans.

- All switches must support ESN.

- Not all switches need to support CDP.

- The restrictions described above for CDP networks apply to those switches that support CDP.

Figure 4-15xxx
Hybrid network with three Meridian 1/SL-1s
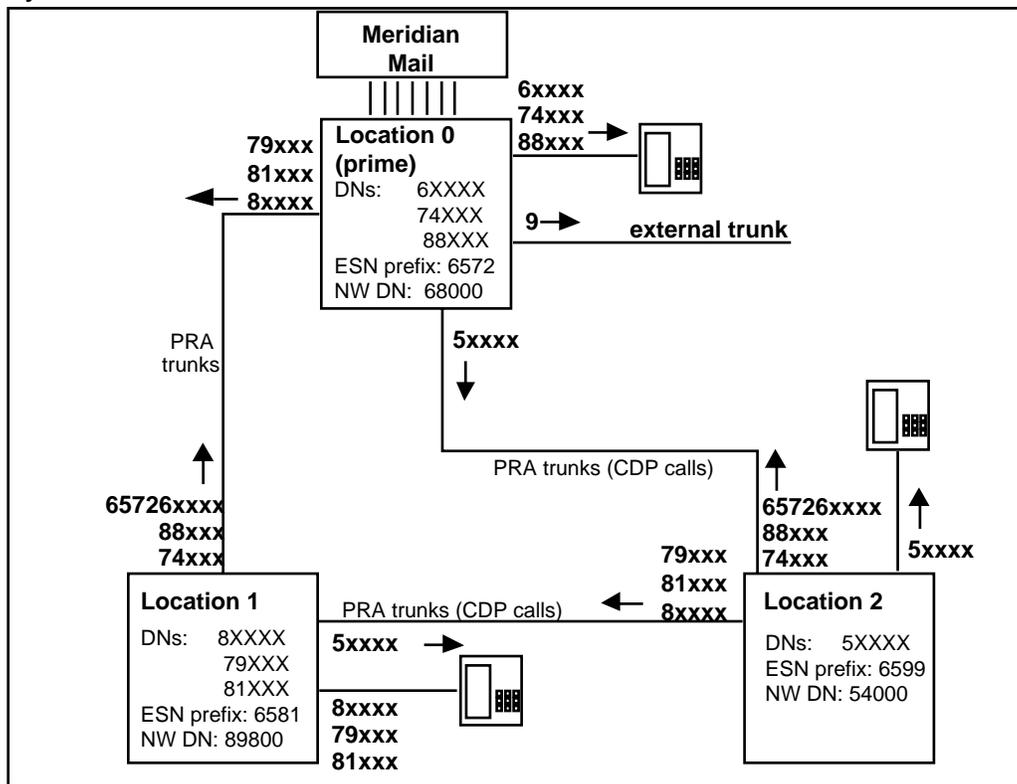
For an example of how to configure a location in a hybrid network correctly, see Figure 4-16 on page 4-76 for the prime location and Figure 4-18 on page 18 for a satellite location.

Hybrid ESN and CDP network with uniform dialing numbers

Follow these guidelines if both an ESN and CDP dialing plan are implemented in your organization's network. All switches in such a network must have ESN prefixes. It is not necessary for all switches to be part of the coordinated dialing plan (CDP). The prime switch must be part of both numbering plans. Determining the setup in the network database will depend largely on how the CDP is structured.

> *Important:* In the case of CDP, the full mailbox DN length (steering code + local mailbox number) must be the same across all CDP locations in the network.

All CDP switches share the same ESN prefix

Configure the prime switch to represent all of the switches that are part of the CDP. Select "Hybrid" as the dialing plan and enter the appropriate ESN prefix. CDP codes are not required, however the system demands that in a CDP network at least one CDP code be configured. You may enter the digit "1" as the CDP code. For those locations that are ESN-only, use the configuration guidelines outlined in "ESN network with uniform dialing numbers".

Each CDP switch has its own ESN prefix

1   Define the prime location (the switch to which the Meridian Mail server is attached). See "Adding the prime location to a hybrid network". (If the Networking feature is also installed, access the list of locations from the Local Site Maintenance option in the Network Administration menu.)

2   Create a satellite location for each ESN prefix in the NMS network. See the section "Adding satellite locations to a hybrid network".

   For each location that is ESN only, follow the instructions outlined in the section "Entering data in an ESN only network" on page 4-54.

   For each location that is also part of the CDP:

3   Enter the location name and select "Hybrid" as the dialing plan.

4   Enter the maximum number of digits in the mailbox numbers at this location.

5   Enter the ESN access code(s) for the location you are defining.

6   Enter the number of digits in the ESN prefix that overlap with the local extension DNs. (If there is no overlap, enter "0".)

7   Enter the number of digits in the CDP steering codes that overlap with the local extension DNs.

Important: The CDP steering code must completely overlap with the local extension. For example, if the steering code is two digits in length, the overlap is two.

8   Enter the ESN prefix (access code + routine prefix). For satellite locations use prime location's access code. (If two access codes are defined for the prime location, use the one that is defined in the first field.)

9   Enter the CDP steering codes. The number must be in the format in which Meridian Mail will dial the prefix if a call is to be placed from the Meridian Mail server.

10 Record a spoken name for the location, if desired.

11 Specify whether or not mailbox numbers at this location are the same as the extension DNs. If mailbox numbering does not follow the dialing plan, perform step 12.

12 Enter a mailbox prefix if mailbox numbering does not follow the dialing plan.

Adding the prime location to a hybrid network

The first time you select Network Administration from the main menu after NMS has been installed, the Add Location screen automatically appears. This is where you add the prime location. The prime location is where the Meridian Mail system actually resides. This location must be configured before any satellite locations. The *Location Number* field will already be filled in as "0". This is the default location ID for the prime location. You can modify the prime location, but you cannot delete it.

Figure 4-16 shows the Add Location screen for the prime location in a hybrid network.

Figure 4-16xxx
The Add Location screen for the prime location in a hybrid network

```
                          Network Administration


    Add Location

    Location Number:         0
    Location Name:           Prime Location

    Dialing plan:              ESN    CDP  [Hybrid]
    Maximum Number of Digits in Local Mailbox:  5

    ESN Access Codes:  6        2
    Number of digits in common between ESN Prefix and Local Extension:     0
    Number of digits in common between CDP code and Local Extension:       2

    ESN/CDP  codes (The ESN code must begin with 6):

 #  1: 6572      2:74
    3: 88        4:
    5:           6:
    7:           8:
    9:          10:
    .            .
    .            .


    Mailbox Numbering follows Dialing Plan:    [Yes]  No
 *  Mailbox Prefixes:

    Location Name Recorded (Voice):            No



      Save            Cancel                      Voice
```

*   Appears when mailbox numbering does not follow a dialing plan.

\#   If the dialing plan is CDP, up to 50 steering codes can be defined. For hybrid
     dialing plans, one ESN code and up to 49 CDP codes can be defined.

The same fields are displayed for the prime locations well as for satellite locations. Therefore, the following descriptions also apply to satellite locations.

- *Location Number* This number uniquely identifies the location within the NMS site.

  For the prime location, the default is 0. This value cannot be changed.

  For satellite locations, this field cannot be modified from within this screen. To change the Location Number for a satellite location, delete the location and re-add it. When you press [Add] you are prompted for a new ID. The valid range is from 1 to 59.

- *Location Name* This field must be filled in. The name should be unique and easily identify the location within the network. You may enter up to 32 alphanumeric characters. There is no default.

- *Dialing Plan* The selection you make depends on your organization's dialing plan. The default is "Hybrid". See "Dialing plans and location codes" earlier in this chapter for a description of the different types of dialing plans and important information about requirements and limitations.

  Note: If you change a Hybrid location to CDP-only, the location name is removed. If you change the location back to Hybrid, you will have to re-record the verification.

- *Maximum Number of digits in Local Mailbox* The maximum number of digits used in mailbox numbers at this location. If you are unsure, enter 8, the maximum allowable value.

- *ESN Access Codes* This field appears only when the dialing plan is ESN or Hybrid. This code is used to access the ESN network. Each switch in the network may have a different access code. Enter the access code for this location's switch.

  You may enter two different ESN access codes of one or two digits each. Typical codes are "6" or "9". In the second *ESN Access Code* field, enter the public network access code, if there is one. Check your dialing plan for the correct code(s).

- *Number of digits in common between ESN prefix and Local Extension* This field appears only when the dialing plan is ESN or Hybrid. This number indicates the number of digits in the ESN location prefix that overlap with the local extension. Meridian Mail uses this value to convert between local and network formats of the mailbox numbers. For example, a five-digit local extension may overlap with the last digit of a three-digit ESN prefix (for example, ESN DN 338 3000 may refer to the local DN 83000). Refer to your organization's dialing plan.

  Note 1: You must enter a value in this field. If you leave it blank, it will revert to the previous value. If there are no numbers in common between the ESN prefix and the local extensions, enter a value of "0".

  Note 2: If you enter a non-zero value in this field, the mailbox numbers of all users you enter for this location must begin with the overlap digit(s) of the ESN prefix. For example, if the last digit (3) of the ESN prefix overlaps into the local extension, then all mailbox numbers entered for this location must begin with "3".

- *Number of digits in common between CDP steering code and local extension* This field appears only when the dialing plan is CDP or Hybrid. In a CDP network, there must be complete overlap between the CDP steering code and the local extensions. In other words, this number must equal the length of the CDP steering code. For example, if the steering code is 77 enter "2" in this field.

- *ESN/CDP Codes* If the location supports both ESN and CDP, enter the ESN prefix (access code + routing prefix) in the first field, and all CDP steering codes for the location in the subsequent fields. If you defined one or two access codes (ESN), the screen displays a message to remind you of which access code to use as part of the ESN prefix. Because the first field holds the ESN prefix, you can enter up to 49 CDP steering codes per location in a hybrid configuration.

  These codes must not conflict with other network codes. There is a conflict if there is overlap between two location codes. For example, there is a conflict between the ESN prefixes 332 and 3321. If a message is addressed to 3321224, the system cannot tell if this means ESN prefix 332 mailbox 1224 or ESN prefix 3321 mailbox 224.

- *Mailbox Numbering follows Dialing Plan* Answer "Yes" if the local mailbox numbers at this location are the same as local extensions on the switch. If you answer "No", the following field, *Mailbox Prefixes*, appears and you must enter the location codes as mailbox prefixes.

- *Mailbox Prefixes* This field is applicable only if mailbox numbering at the location does not following the dialing plan (and therefore ESN prefixes or CDP steering codes do not apply). Enter a unique identifier as the mailbox prefix. This prefix is used to identify the location within the network and must be unique across the network. Ensure that it does not conflict with other network data or mailbox numbers. This prefix does not have any overlap with local mailbox numbers and is independent of the ESN prefix and CDP steering codes.

• *Location Name Recorded (Voice)* This field only applies if an ESN or Hybrid dialing plan is in place. It indicates whether or not a spoken location name has been recorded for this site. If a spoken name is recorded, voice mail users hear the location name followed by the local mailbox digits. For example, *"Murray Road, Mailbox 2346"*. If a name is not recorded for the location, users hear the ESN location prefix followed by the mailbox number. For example, *"6889 Mailbox 2346"*. A name can be recorded from this screen by using the voice key (see the following section.) The default is "No".

The following actions are possible from this screen:

[Voice]	This softkey is displayed only if the dialing plan is ESN or Hybrid. Use this softkey to record a spoken name for the location. This voice recording will identify the location to users when sending messages to, or receiving messages from the location.
[Save]	This action saves the location in the network database. The List Locations screen is re-displayed.
[Cancel]	Entries made in this screen are discarded and you are returned to the List Locations screen.

Procedure 4-8xxx
Adding the prime location to a hybrid network

Starting point: The main menu

1   Select Network Administration.

The Add Location screen is displayed.

2   Fill in the fields. See the field descriptions on the previous pages.

3   Press [Save] to save the configuration and exit the screen.

The List Locations screen is displayed, with one location, the prime location, listed.

4   To exit the screen, go to step 4a.
       To add a satellite location, go to step 4b.

    a.   Press [Exit].

       You are returned to the Network Administration menu.

    b.   Press [Add].

See "Adding satellite locations to a hybrid network" later in this chapter for details.

Listing locations

Once data has been entered for the prime location, the List Locations (Figure 4-17) screen will appear whenever you select Network Administration from the main menu. The List Locations screen displays all of the locations in your NMS network and provides the softkeys required to add, view, modify and delete them.

Note: If Meridian Mail Networking is also installed on your system, refer to the following chapter, "Network Message Service and Meridian Networking", for instructions on adding and modifying local and remote sites and NMS locations.

Figure 4-17xxx
The List Locations screen

```
                        Network Administration


   List Locations

        Location            Location Name

           0                Primelocation
           5                downtown
          10                smithstreet
          20                jonesavenue
         nnn                xxxxxxxxxx




   _____

   Select an item >

      Exit          Add        View/Modify     Delete       Print
                                                           Network Data
```

The following fields are displayed:

• **Location** This is the ID that uniquely identifies the location within the NMS site. You can enter an integer between 0 and 59. The prime location is always 0.

• **Location Name** This should be a unique name corresponding to the location (such as a street name, city name, and so on).

The following actions are possible from this screen:

[Add]	The Add Location screen is displayed.
[View/Modify]	Use the cursor keys to highlight the location you want to view or modify. Press <Spacebar> to select the location. Press [View/Modify] to display the View/Modify Location screen.
[Delete]	Select the location you want to delete with the cursor keys. A new set of softkeys are displayed. See page 4-86.
[Print Network Data]	This action prints location site information from the network data base. Ensure that the printer is on-line before making this selection. See page 4-87 for details.
[Exit]	The Network Administration menu is displayed.

CAUTION
Changing the network data
If you plan on altering the network data fundamentally, such as by changing location codes or by adding or deleting locations, you should do so after hours when users are not logged on. Otherwise, users may may not be able to log on or will not be able to compose messages to affected mailboxes. It is recommended that you carefully plan network sites and locations before installation to avoid changing the configuration.

Adding satellite locations to a hybrid network

The same Add Location screen that is used to add the prime location is also used to add satellite locations to your NMS network.

To access the screen, press [Add] on the List Locations screen. You are first prompted to enter a location number (in the range 1 to 59). It is recommended that location numbers be assigned in ascending numerical sequence. The Add Location screen is displayed when you have entered a number and pressed <Return>.

Figure 4-18 shows a sample datafill for a satellite location in a Hybrid network. Refer to the section "Adding the prime location to a hybrid location" for field descriptions.

Figure 4-18xxx
The Add Location screen for a satellite location in a hybrid network

```
                         Network Administration


     Add Location

     Location Number:        1
     Location Name:          First Satellite Location

     Dialing plan:           ESN    CDP  [Hybrid]
     Maximum Number of Digits in Local Mailbox:  5

     ESN Access Codes:  6        2
     Number of digits in common between ESN Prefix and Local Extension:     0
     Number of digits in common between CDP code and Local Extension:       2

     ESN/CDP  codes (The ESN code must begin with 6): *

 #   1: 6581      2:79
     3: 81        4:
     5:           6:
     7:           8:
     9:          10:
     .            .
     .            .

     Mailbox Numbering follows Dialing Plan:    [Yes]  No
 **  Mailbox Prefixes:_____

     Location Name Recorded (Voice):            No
   _____

        Save            Cancel                        Voice
```

```
 *  The number that is displayed here is the first ESN Access Code that was defined
    above.
 ** Appears when mailbox numbering does not follow a dialing plan.
 #  If the dialing plan is CDP, up to 50 steering codes can be defined. For hybrid
    dialing plans, one ESN code and up to 49 CDP codes can be defined.
```

Note: See the "Voice administration" chapter in the System Administration Guide for more detailed information about adding service DNs.

Recording location names using the [Voice] softkey

[Voice] is displayed on the Add Location and View/Modify Location screens, allowing you to record spoken verifications for NMS locations. The recording you make is played to identify the location when users compose messages to or receive messages from the location.

When [Voice] is pressed, a new set of softkeys is displayed. These provide recording functions such as Play and Record. You can also delete an existing verification and then disconnect when you are finished. When you record a verification, the *Location name Recorded (Voice)* field that appears on the Add Location and View/Modify Location screens is set to "Yes". When there is no recording, this field is set to "No".

Note 1: A telephone set is required to record the location name. Ensure that a phone set is available near the administration terminal where you are working.

Note 2: Location names cannot be recorded for locations that are part of a CDP dialing plan only. If you change a Hybrid location to a CDP location, the verification is removed. If you change the location back to Hybrid, you will have to re-record the verification.

Figure 4-19xxx
Location name recording softkeys

Return	Play	Record	Delete	Disconnect

Procedure 4-9xxx
Recording location names

Starting point   The Add Location or View/Modify Location screen.

1   Press [Voice].

The following softkeys appear: [Return], [Play], [Record], [Delete] and [Disconnect]. The prompt "extension number" appears

2 Enter the extension number of the phone set you are going to use to record a spoken name.

3 To record a new spoken name, go to step 3a.
To play an existing verification , go to step 3b.
To delete a verification, go to step 3c.
To return to the original set of softkeys, go to step 3d.

   a. Pick up the handset of the phone and then press [Record]. Wait for the beep and record the location name. When you press [Record] , a new [Stop] softkey appears. Press [Stop] to stop the recording when you are done.

   b. Pick up the handset of the phone and press [Play].

      If a verification is recorded, it will be played over the phone.

   c. Pick up the handset of the phone and press [Delete].

      If a verification was recorded, it will be deleted and a prompt will be played advising you that the recording was deleted.

   d. If you are satisfied with the recording, press either [Disconnect] or [Return] to display the original softkeys.

      When you use [Return], the line is not disconnected (unless you hang up the receiver). This means that if you decide to re-record or listen to the recording, you do not have to re-enter the telephone extension after pressing [Voice].

      When you use [Disconnect], the line is disconnected and if you press [Voice] to access the recording softkeys again, you will have to re-enter the telephone extension.

Viewing and modifying locations

Once you have added locations to the NMS network, they can be modified from the View/Modify Location screen. This screen is identical to the Add Location screen. It is displayed when a location is selected in the List Locations screen and [View/Modify] is pressed. Field descriptions are in the sections that describe how to add the prime location (to either an ESN network, CDP network or Hybrid network).

Procedure 4-10xxx
Viewing and modifying locations

Starting point   The List Locations screen

1   Move the cursor to the location you want to view or modify and press
    <Spacebar> to select it.

2   Press [View/Modify].

    The View/Modify Location screen appears.

3   Move the cursor to the field you wish to modify; make the required
    changes.

4   Press [Voice] to record a spoken name for the location (if required).

    *See "Recording location names using the [Voice] softkey" later in this
    chapter.*

5   To exit the screen, press [Save] to save the additions and changes you
    have made or press [Cancel] to discard any changes you have made.

    The List Locations screen is re-displayed.

Deleting locations

Locations associated with remote sites are removed from the network database from the List Locations screen. When you select a location and then press [Delete], a new set of softkeys is displayed.

Messages that have been sent but not delivered to a location that has been deleted are returned with a non-delivery notification (NDN).

Note 1: Before deleting a satellite location, you must delete all users and distribution lists associated with that location. If you do not, you will not be able to delete the location.

Note 2: You cannot delete the prime location.

Figure 4-20xxx
The Delete Location softkeys

Procedure 4-11xxx
Deleting locations

Starting point   The List Locations screen

1   Use the cursor keys to move to the location you want to delete and then press [Delete].

    The Delete Location softkeys appear.

2   To delete the location, go to step 2a.
    To cancel the delete operation, go to step 2b.

    a.   Press [OK to Delete].

         The system purges the location and you are returned to the List Locations screen.

    b.   Press [Cancel].

         The location is not purged from the network database. The List Locations screen is re-displayed.

Printing network data

[Print Network Data] on the Network Administration menu allows you to print the location information that is stored in the database.

Procedure 4-12xxx
Printing location information

Starting point   The List Locations screen

1   Ensure that the printer is on line.

2   Press [Print Network Data].

   The network data is printed. The menu prompt reappears when the printing is completed.

3   Press [Cancel] at any time to stop printing. The printing will stop at the end of the current location entry.

Testing the network

Following your initial configuration of the prime location and satellite locations, add a few users to each of the locations and then test the network to ensure that all features work. Enable autologon for some or all of the mailboxes so that you can test this feature. See the section "Adding users" in the "User administration" chapter in the *System Administration Guide* for details. Note that users at other NMS locations are considered local voice users.

To verify the set up, dial each of the Voice Messaging DNs on each of the switches in the network. This can be done from any phone set in the network by dialing the full ESN or CDP number of the Voice Messaging service. In each case the Voice Messaging service should be reached.

By using phone sets at each location, test the following:

1   Try logging on to Meridian Mail from a phone set that has autologon enabled.

2   Try logging on to Meridian Mail from a phone set that does not have autologon.

3   Log on to Meridian Mail and then try to thru-dial to an extension on another switch in the network.

4   Leave messages in a number of the mailboxes at each location.

5   Check that the MWI lamps have been activated in each case.

6   Call into the mailbox, read the messages and attempt Call Sender
     operations.

If the number presented to Meridian Mail is not in the expected format, the
SEER `Non-user forwarded to VM. MBox: nnnnnnn` is generated.
The number `nnnnnnn` represents the digits received from the Meridian
1/SL-1 (in the case of an ESN number, the ESN access code will not be
shown). In this situation, you may take one of three actions:

1   If the number is a user extension, and the user's mailbox really exists,
     check the user's profile (select User Administration from the main
     menu and view the local voice user). Verify that one of the three
     extension DNs matches the received digits. For users that belong to
     satellite locations with ESN numbering plans, ESN prefixes must begin
     with the ESN access code of the *prime* switch.

2   If the number is a service, access the VSDN table (in Voice
     Administration). Ensure that the DN configured for the service is
     correct. For services at satellite locations, the DN should be in network
     (ESN or CDP) format. If the dialing plan for the satellite location is
     hybrid, the DN should be in ESN format.

3   If the extension DN was correctly defined for the user, then check that
     the network parameters have been configured correctly. Specifically,
     check that the numbering plans selected for the prime and satellite
     locations are consistent with the numbering plan used on the Meridian
     1/SL-1. Also check that the first ESN access code in the prime location
     screen is the same as the access code prefixing an ESN extension
     number in the User directory entry.

Normal operation

NMS-MM feature operation is transparent to the network users. Therefore,
it is similar to the existing feature operation. This section only covers those
features that are impacted by the NMS-MM feature.

NMS-MM features

Users from a satellite Meridian 1/SL-1 switch which is part of the
NMS-MM network will have access to all the features available to the
prime switch. The feature operation is transparent to the users at the
satellite switch as well. Currently, MM server supports either end-to-end
signaling (EES) or AML/CSL key (digit) message for accessing MM
features. For NMS-MM, EES is required from a satellite switch; AML/CSL

KEY (Digit) message will not be supported in NMS-MM because user is at a satellite switch.

For each function, ISDN messages are being exchanged between the satellite and prime switch while AML/CSL messages between prime switch and MM server. In the following sections, the existing AML/CSL messages affected by the NMS-MM operation and the messaging exchange sequence involved in the above three functions are described in more details. AML messages can be monitored using overlay 48 in the Meridian 1/SL-1. (See NTP 553-3001-400 for more information.)

Direct NMS-MM access

1   Assume that MWI at user A station is on. User A has the following options to login the MM to retrieve his/her messages:

-   The user may dial NMS-MM network DN at the home or any of the satellite Meridian 1/SL-1 switches to connect to the MM server. In this case, the user will be required to enter his/her the location prefix and full mailbox address in order to log into MM server.

-   The user may gain access to NMS-MM by dialing his/her local MM DN to connect to the NMS-MM server, the call will be redirected to the MM server using ACD Night Call Forward DN for the ACD queue involved. User A logs on by pressing <#> (auto-logon from his/her own station) or entering mailbox number, pressing <#>, then entering password.

-   The user may press the message waiting key (MWK) at the station set, if available, to connect to the MM server. The login procedure is dependent upon the DN assigned to the MWK. If a network DN is assigned, then the network DN login procedure is required. Otherwise, the local Meridian Mail DN login procedure is requested.

2   User A presses the respective keypads in the station set to initiate the MM corresponding features.

3   User A is disconnected from NMS-MM.

4   User A returns to idle.

Direct NMS-MM access is initiated by an user dialing MM DN, either on a per switch or a network basis to retrieve messages or to compose/record

---

messages. If user chooses to dial his/her local MM DN to access the MM server, the configuration described below is required in each switch.

- Configure a "dummy" ACD group with no agents in it.

- The call will be always redirected to Night Call Forward DN which has the real network Meridian Mail's ACD DN entered. Please refer to "Configuring Meridian 1 for network messaging services" in this chapter.

Message sequence

- When NMS-MM access is attempted from a satellite switch, an AML/CSL PCI message will be sent to present the call to the MM.

- If the MM is ready to receive the call, an AML/CSL Incall KEY message will be sent from the MM to the prime switch.

- After the connection between the Meridian 1/SL-1 to the MM is made, a FACILITY message with TCAP protocol will be sent to the satellite switch to indicate the activation of the voice messaging service. This is used as an indication to display the voice messaging feature softkeys in a digital set such as M2317 or M3000 sets.

- Meanwhile an AML/CSL ANS message is sent from the prime switch to the MM to indicate the path between the Meridian 1/SL-1 and MM is successful made.

- DTMF End-to-end signaling is transmitted to MM for feature activation.

- Disconnect sequence can be initiated by either user or MM as usual.

Figure 4-21 illustrates this message sequence.

Figure 4-21xxx
Direct NMS-MM access message sequences
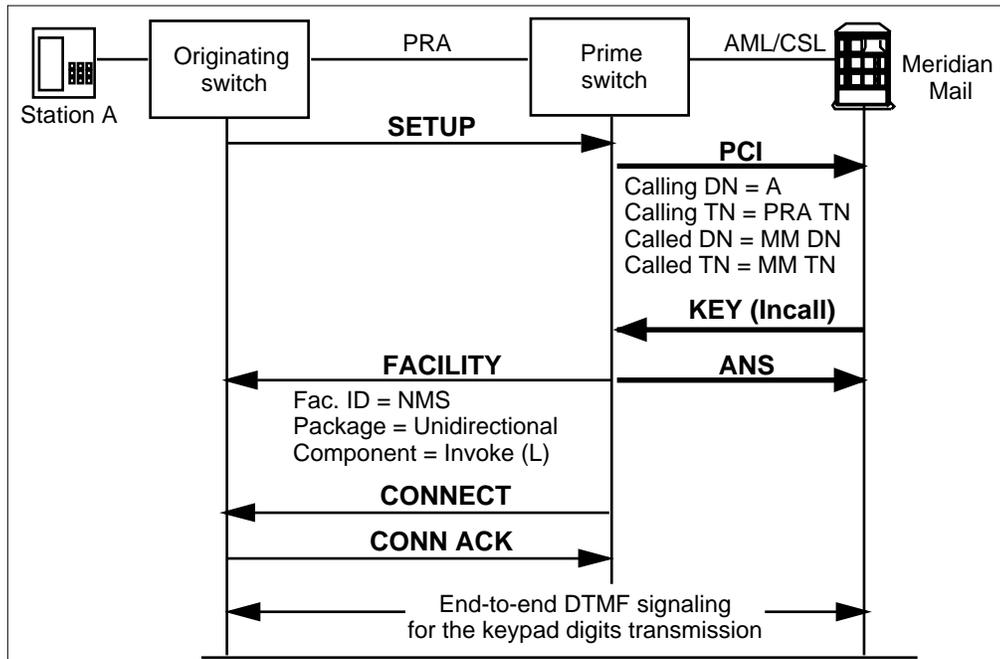
Indirect NMS-MM access

1   User A calls user B.

2   Call is redirected to MM server.

3   Call is presented to the NMS-MM. After user A leaves a message, the
    MWI is turned on at user B station.

4   User A is disconnected from NMS-MM.

5   User A returns to idle.

Indirect NMS-MM access is a call being redirected to NMS-MM for call
answering service. This service will allow users on the satellite or prime
Meridian 1's in the ISDN network to receive messages by having their calls
answered by MM. The message sequence is the same as the direct access.
Figure 4-22 shows the message sequence for indirect access testing.

Figure 4-22xxx
Indirect NMS-MM access message sequences
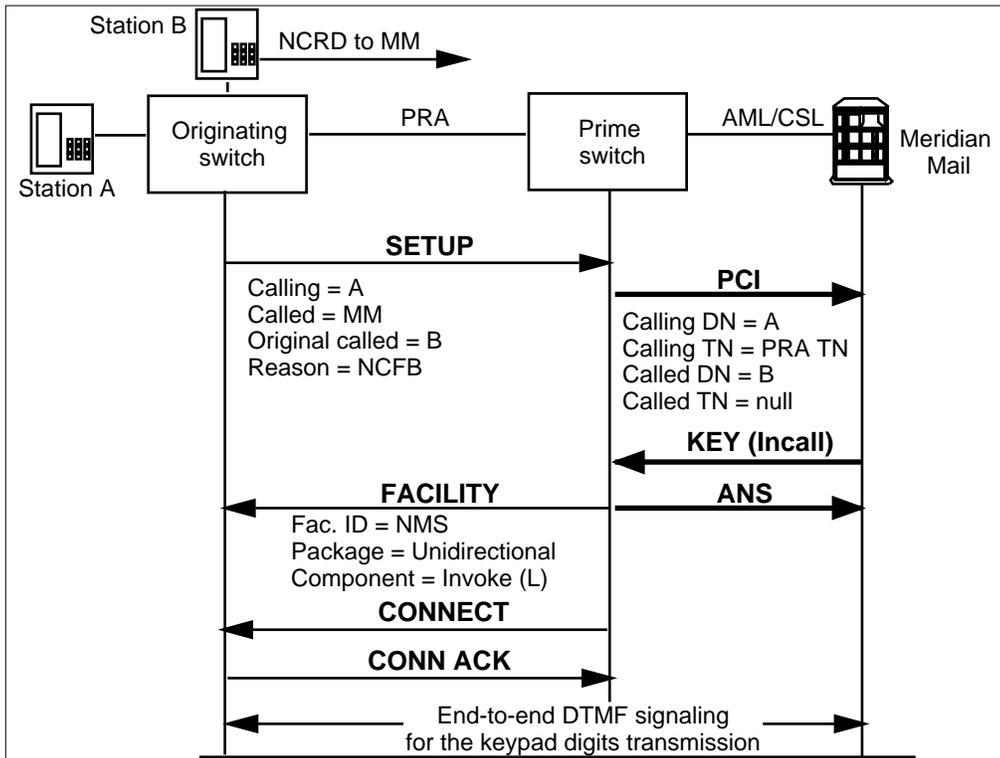
MWI notification

At the user station, there are two types of message waiting indication,
visual and audible ones, to notify the user that he/she has message(s)
waiting in the mailbox. For visual indications, the user can recognize the
message waiting status of the mailbox by the state of the LED/LCD. (For
example, when the LED/LCD is lit, this indicates that at least one message
has been deposited in the mailbox.) For audible indication, a special tone is
heard (typically a stuttered dial tone) when the user lifts the handset.

- At the time that NMS-MM wishes to cause a user's message waiting
  indication to be activated or updated, NMS-MM will send a AML/CSL
  MWI message with on/off indication to the prime switch.

- If the user is at a satellite switch, an ISDN FACILITY message with TCAP protocol will be sent to the satellite switch to turn on/off the message waiting indication at the remote user's set.

- A 4-second timer is started when the FACILITY is sent to the satellite switch.

- A FACILITY message is responded from the satellite switch before the timer expires to confirm the MWI operation is successfully completed.

- The MWI notification session is completed with success.

- If there is no confirmation FACILITY message received before the timer expires, or a FACILITY REJECT message is received due to database inconsistency, a MWI message will be sent to the NMS-MM server to indicate the failure of the MWI operation. The failure reason sent back to MM server could be one of the reasons listed below:

  - Invalid DN

  - NMS application is not supported in the satellite switch.

  - D-channel link failure

  - Verify if the MWI failure is in the Meridian 1 or Meridian Mail

    To do this

    1   Program the prime switch or assign an MIK key and an MCK key to the prime location switch phone. This is done in overlay 11. Respond to the prompts as follows:

REQ	CHG	
TYPE	xxxx	Telephone type (for example, 2317).
ECHG	YES	
ITEM	_KEY_x_MIK	Message Indication key, where x is the Key #
ITEM	_KEY_x_MCK	Message Cancellation Key, where x is the key number.

    2   Ensure that a satellite switch phone has an MWI indicator.

    3   Have the prime switch telephone activate MWI at each satellite location.

        a.   Press the MWK key.

b.   Enter the DN of the satellite phone.

4   If the MWI lights at the satellite location, the Meridian 1/SL-1 is not at fault. MWI can be extinguished using the MCK of the prime location phone.

If the MWI lights at each satellite location, check the Meridian Mail database for correct programming. (For example, check the user profile through User Administration and the satellite location configurations in Network Administration.)

5   If the MWI does not light, check the Meridian 1/SL-1 database as outlined in the section "Meridian 1 configuration" earlier in this chapter.

Figure 4-23 shows the message sequences for a successful MWI notification. Figure 4-24 shows the message sequences for an unsuccessful MWI notification.

Figure 4-23xxx
Successful MWI notification message sequences
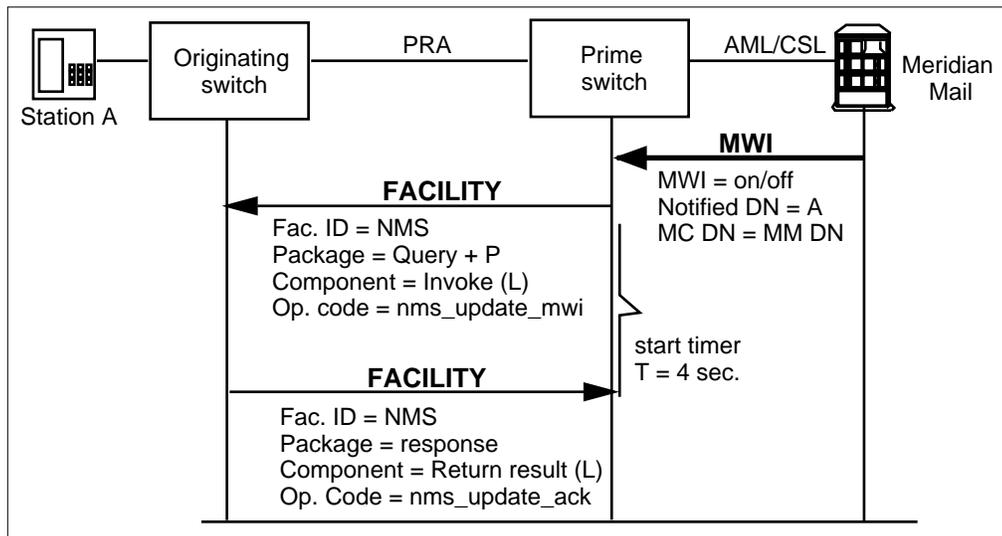
Figure 4-24xxx
Unsuccessful MWI notification message sequences
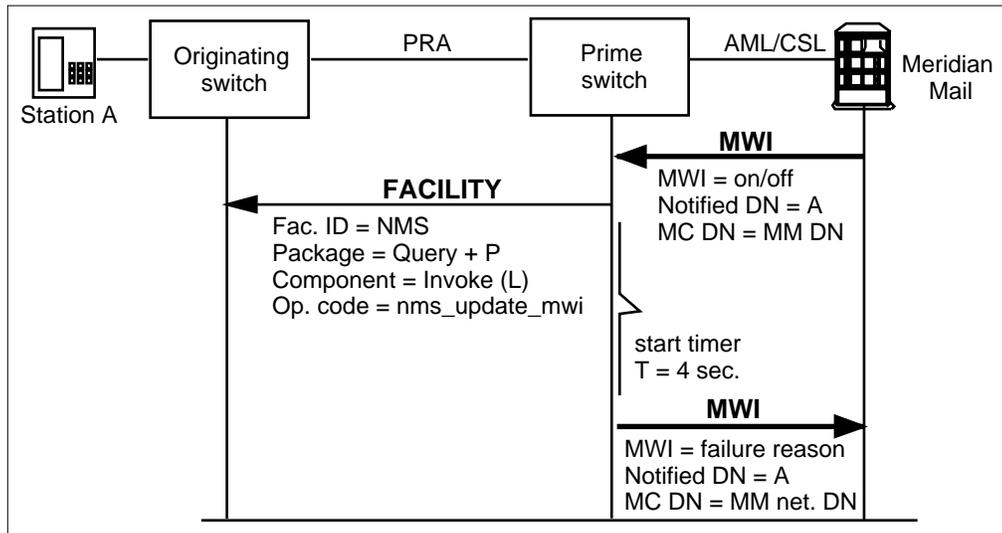
Call Sender

While reviewing mailbox messages, a user can invoke the Call Sender feature to automatically call the sender of the message he/she is reviewing. At this point, the voice connection to the NMS-MM is put on hold and the users is connected to the sender that left the message.

1   When the user is calling from an on-net extension to activate Call Sender feature, a new call will be placed from the switch where the user resides to the sender's station using the conference key feature of the user's station while put the connection between user and MM on hold. This will allow the user to revert to MM if he/she wishes.

2   After the Call Sender feature is activated, one of the following situations may occur:

-   A three-way conference is activated among user, sender and MM after the user presses the CONF key at the station set.

-   User will get back to the MM after the sender disconnects

-   The connection between MM and user A is dropped after the MM times out while the conversation between user and sender continues.

3   When the user is calling from an off-net location to retrieve his/her messages, the call will be transferred from the MM voice channel to the sender's station. This will not allow the user to revert to MM once the transfer is established.

4   For messages left by senders at off-net location, Call Sender feature will not be supported in this release. However, if a public format D is available, it will be announced to the user when the message envelope is read.

Figure 4-25 illustrates the message sequences for on-net Call Sender. Figure 4-26 illustrates the message sequences for off-net Call Sender.

Figure 4-25xxx
On-net Call Sender message sequences (an example)

Station B
(Sender)

Station A
(User)

Originating
switch

PRA

Prime
switch

AML/CSL

Meridian
Mail

User A requests
Call Sender

FACILITY

Fac. ID = NMS
Package = Query + P
Component = Invoke (L)
Op. code = nms con_request
Orig. IE = MM DN
Dest. IE = A

CON

orig.manner = Add-on
term.manner = Polite
Calling DN = A
Calling TN = PRA TN
Sender DN = B

Orig. switch initiates conference call to
sender; ringing & ring back are applied

FACILITY

Fac. ID = NMS
Package =Response
Component = Invoke (L)
Op. code = nms crs_request
Orig. IE = A
Dest. IE = MM DN
User data = Ringing

CRS

Main status = valid
Aux. status = ringing
Calling DN = A
Calling TN = PRA TN
Called DN = B
Called TN = null

Talking path established between A and B

FACILITY

Fac. ID = NMS
Package =Unidirectional
Component = Invoke (L)
Op. code = nms crs_unidirect
Orig. IE = A
Dest. IE = MM DN
User Data = Answered

CRS

Main status = progress
Aux. status = Answered
Calling DN = A
Calling TN = PRA TN
Called DN = B
Called TN = null

A presses CONF
key

FACILITY

Fac. ID = NMS
Package =Unidirectional
Component = Invoke (L)
Op. code = nms_dnp_update
Orig. IE = A
Dest. IE = MM DN

DNP

Call type = CONF
Calling TN = PRA TN
Calling DN = A

Figure 4-26xxx
Off-net Call Sender message sequences (an example)
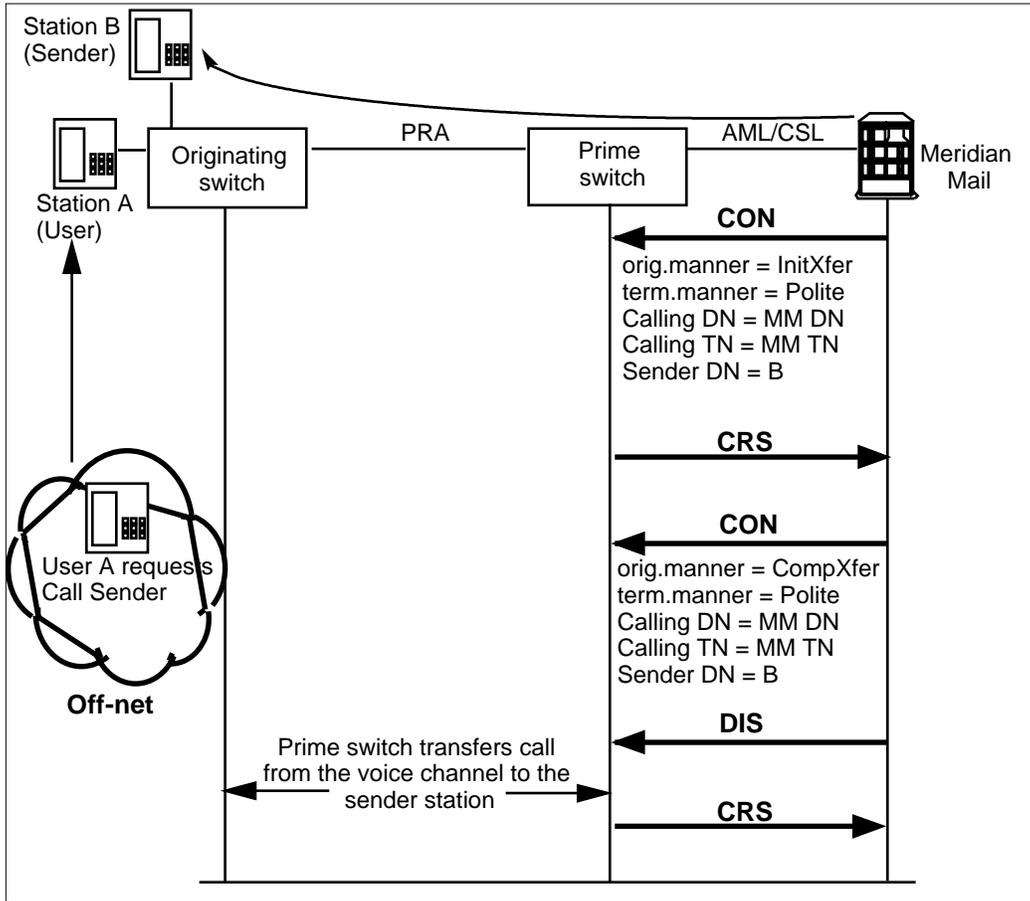
Thru-Dial

Callers into NMS-MM Call Answering or Voice Messaging who wish to dial another extension without first hanging up can use the thru-dialing feature to place a call by keying "O" followed by the desired number. The thru- dialing operation will cause a call transfer to take place from the voice channel of the MM server to the specified DN. The same scenario will apply to operator revert, Auto-Attendant and Voice Menu as well.

1   After the MM is accessed, the user who wish to dial another extension without first hanging up can use the Thru-dial feature to place a call by keying "0" followed by the desired number.

2   Thru-dial to an off-net DN will only be achieved if the DN can be dialed from the prime switch. Therefore, following options can be applied to the offnet access:

-   All off-net number entered by the administrator must be a valid DN that can be dialed from the prime switch, including public numbers. This applies to operator revert DNs, and so on

-   In general, thru-dialing DNs entered by the users to off-net destinations will not be supported in this release because the caller may not be entering the numbers with respect to the prime switch where the call is transferred from. However, the call attempt will still be made. If the number provided from the user is can be dialed from the prime switch, the call will successfully be made.

-   The off-net access can be blocked using Voice Security Options provided in the MM server.

Figure 4-27xxx
Thru-dial message sequences (an example)
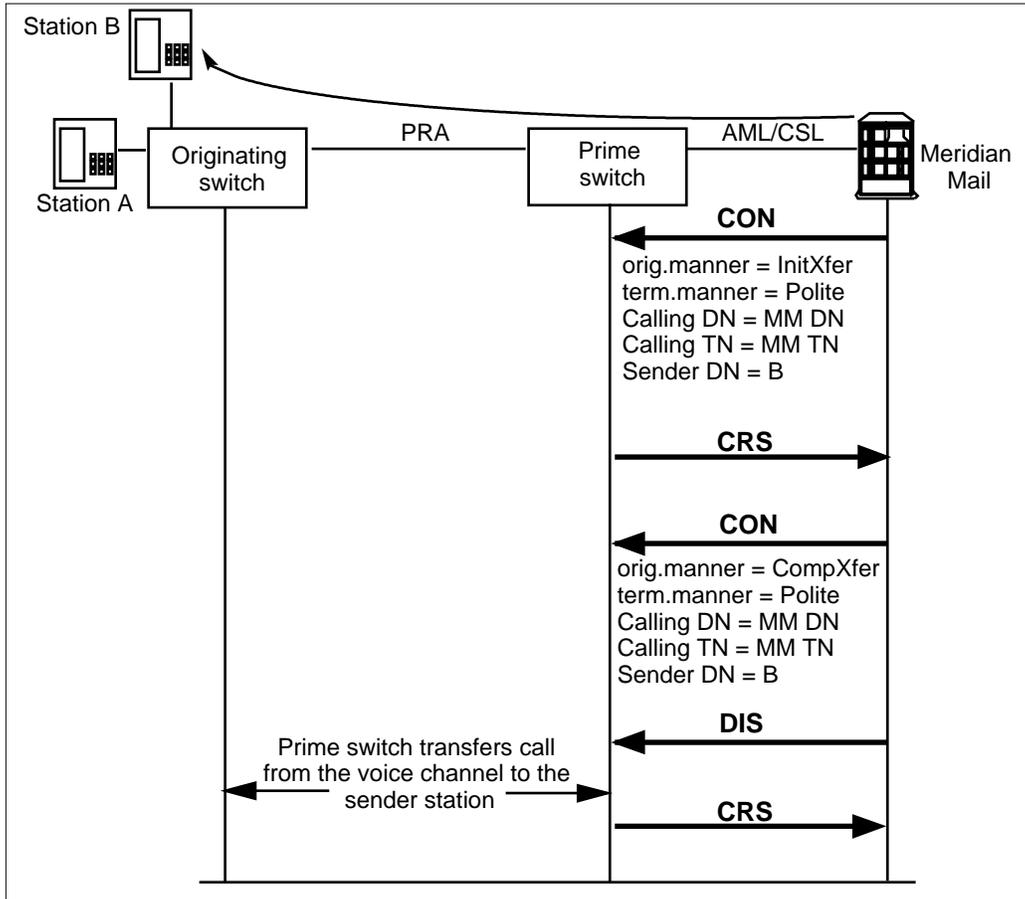
Abnormal operation

In the event that AML/CSL link between the MM and prime Meridian 1/SL-1 is failed, the call can be redirected to an alternate D. AML/CSL Recovery Enhancement developed in Release 16 ensures that callers to Value Added Servers associated with an ISDN AP are redirected to the Call Forward DN (NCFW) for the ACD queue involved.

If the MWI message is lost due to D-channel link failure or rejected by the satellite switch due to inconsistent database, a MWI message with the failure reason will be sent to MM server to inform the failure operation. MM will then notify the administrator with error through the console. An audit may be performed every nigh in MM server to synchronize user's mailbox with the MWI indication.

Network Message Service maintenance

Methods used to troubleshoot and maintain NMS are the same as those used for general Meridian Mail maintenance. System error event reports (SEERs) and Meridian 1/SL-1 error codes are the main tools used in maintaining the Network Message Service.

Operational measurements are another indication of how well the service is operating. However, there are no special NMS-based operational reports. Reports include the sum of all NMS activities, such as incoming calls. Messages composed are not separated out by location.

Meridian Mail maintenance messages

The following are NMS-related SEERs as described in NTP 555-7001-510.

SEER 2217 Call Sender call not established, Mbox:752842 RC:9

Cause: This SEER shows that Voice Messaging (VM) has encountered a problem with the Call Sender feature.

Impact: The user will hear an error prompt.

Action: Look for Return Code (RC) under "Call Progress Status" and "Supplementary Information".

RC: Call request is rejected, receiving reorder tone. Access restricted.

SEER 2217 Reason not established and DN called,Mbox:2382 RC:8

Cause: This SEER indicates the reason for call failure is not established.

Action: Look for Return Code (RC) under "Call Progress Status" and "Supplementary   Information".

RC: Call party is busy.
Blocked due to no resource.

SEER 2217 GTI login failed, Mbox:2927 RC:2811

Cause: This SEER indicates that the login was incorrect.

Impact: VM will continue to try the call but the call will be treated as if the link were not AML/CSL.

Meridian I/SL-1 messages

Meridian 1/SL-1 error messages will pop up at the prime and/or satellite sites. Here are some examples of error messages called ERR codes. When the call processing software detects information which is not in the correct format or when invalid information is detected, an ERR message is printed. See the *X11 Input/Output Guide*, NTP 553-3001 400, for details.

ISDN maintenance messages are similar to those that are generally found in the Meridian 1/SL-1 database. Details about these are given in this module, so that you will be able to easily identify an ISDN message if a problem occurs.

Error messages

ERR5015: D-Channel is interfacing with a software issue not supported by the application.

ACTION: Check the RLS and IFC prompts in LD 17 for the specified DCH (only IFC SL1 and RLS 16 are supported).

ERR5057: The D-Channel interface for routing NMS FACILlTY messages is not an SL-1 interface.

ACTION: Check the IFC prompt.

ERR4080: D-Channel was not found for sending a Facility message

ACTION: Check if Route Choice is PRA/ISL or not.

ERR4081: A FACILlTY reject message was received. Destination digits cannot be translated at the other end.

ACTION: Check the translation/routing setup at the other end.

ISDN maintenance messages

ISDN capability is maintained in the Meridian 1/SL-1 database in much the same way as the other parts of the database are maintained. Maintenance messages provide satellite and prime switch status. Three types of messages may appear:

- in-service

- maintenance

- out-of service

Maintenance messages are activated in overlay 96 on a per D-channel basis. See NTP 553-2901-500 for details.

Examples of ISDN messages are given below.

DCHI maintenance messages DCHxxx

    DCH1009: PRI reported DCHI is out of service

        ACTION: 1. Check DCHI status

                    2. Check PRI status

                    3. Check the PRI-to-DCHI cable

    DCH1013,1014: Invalid DCHI state

        ACTION: 1. Disable and re-enable DCHI card

                    2. Check DCHI status

PRI maintenance messages DTAxxx DTLxxx PRIxxx

    DTA001: Data block is not defined

        ACTION: Define data block

    PRI1004 L   PRI not ready and DCHI not ready

Clock controller messages DTCxxx

    DTC003: Clock controller cannot be accessed

Chapter 5:
Meridian Networking and Network Message Service

Your Meridian Mail system can have both the Meridian Networking and the Network Message Service (NMS) features installed. Meridian Networking allows several Meridian Mail systems to communicate with one another. NMS allows a single Meridian Mail system on an SL-1 switch (the prime switch) to provide voice services to other secondary switches that do not have Meridian Mail installed on them.

NMS sites can be part of the Meridian Mail network so that NMS users can communicate with other sites in the Meridian Mail network. This chapter describes how to configure a network that will include both Meridian Mail sites and NMS locations. The network sites and the NMS locations are added, modified and deleted using the Local and Remote Site Maintenance items that are selectable from the Network Administration menu (Figure 5-2). The Network Administration menu is displayed when you press <7>, Network Administration, from the main menu.

This chapter only shows the network administration screens that are used to configured both Meridian Networking and NMS. Meridian Networking is discussed in Chapter 1. NMS is discussed in Chapter 4. These chapters contain important information about dialing plans, networking concepts, requirements and guidelines for planning a network. Read the following sections before proceeding:

- In Chapter 4, "Meridian Networking administration", read the following sections:

  - "Overview"

  - "Administrator responsibility"

- "Dialing plans and location codes"

- "Error conditions"

• From Chapter 4, "Network Message Service", read the following sections:

- "Overview"

- "Setting up an NMS network"

- "Meridian 1/SL-1 limitations"

- "Meridian 1/SL-1 requirements"

- "Configuring ACD queues and service DNs"

- "Entering network data"

- "Adding the prime location"

Once you have read these sections, have planned your network and are ready to configure sites and locations, return to this chapter to follow the screen illustrations and field descriptions.

The Network Administration main menu

If AMIS Networking is installed on your system, the Network Administration main menu is displayed when you select Network Administration from the main menu. (If it is not installed, the Network Administration menu, Figure 5-2, is displayed.) This menu allows you to choose either AMIS Networking Administration or Meridian Mail Networking Administration. AMIS Networking is covered in another chapter.

Figure 5-1xxx
The Network Administration main menu

```
ABC Company#                    Network Administration


        1  Meridian Mail Networking Administration

    *   2  AMIS Networking Administration






    ─────────────────────────────────────────────────────────

   Select an item >

     Exit
```
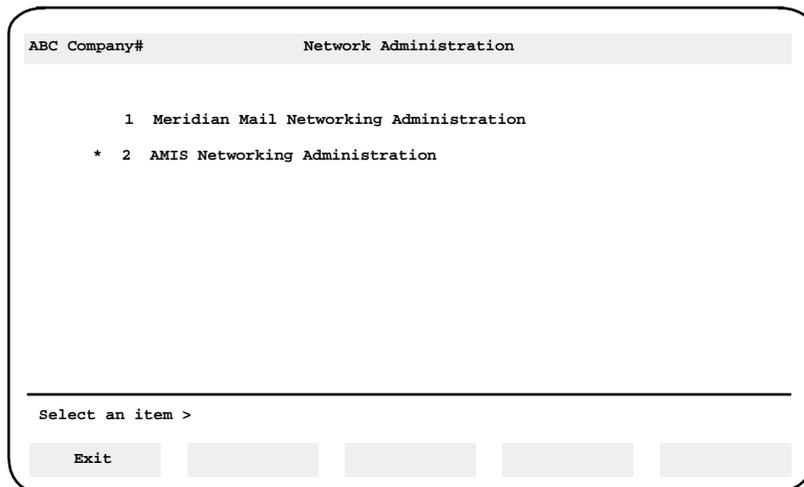
```
*  This item is displayed only if AMIS Networking is installed.
#  On multicustomer systems, the customer group's name will appear
   in the left-hand corner of all Network Administration screens.
```

The following actions are possible from this menu:

<1>	This action displays the Meridian Mail Network Administration menu. See Figure 5-2.
<2>	This action displays the View/Modify AMIS Networking Information screen.
[Exit]	This action exits the Network Administration menu and redisplays the main menu.
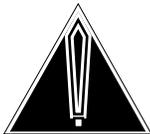
> **CAUTION**
> **Overnight system audits**
> You should not leave the administrative terminal
> in any Network Administration menu overnight or
> important system audits may fail due to lack of
> available memory.

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The Network Administration menu

The Network Administration menu is used to access and alter the local and remote sites in the Meridian Mail Network and the NMS locations associated with those sites. If AMIS is installed on your system, this menu is accessed from the Network Administration main menu when you press <1>. If AMIS is not installed on your system, this menu is accessed when you select Network Administration from the main menu by pressing <7>.

Figure 5-2xxx
The Network Administration menu screen

```
┌─────────────────────────────────────────────────────────────────┐
│                     Network Administration                       │
│                                                                  │
│           1   Local site maintenance                             │
│                                                                  │
│           2   Remote site maintenance                            │
│                                                                  │
│           3   View/Modify Networking Scheduling Parameters       │
│                                                                  │
│           4   Networking Verification Test                       │
│                                                                  │
│                                                                  │
│                                                                  │
│                                                                  │
│                                                                  │
│  ──────────────────────────────────────────────────────         │
│                                                                  │
│   Select an item >                                               │
│                                                                  │
│   ┌───────┐   ┌──────────┐  ┌──────────┐  ┌──────┐  ┌──────────┐│
│   │ Exit  │   │  Print   │  │Networking│  │      │  │Clear Remote││
│   │       │   │Network Data│ │ Status  │  │      │  │Error Sites││
│   └───────┘   └──────────┘  └──────────┘  └──────┘  └──────────┘│
└─────────────────────────────────────────────────────────────────┘
```
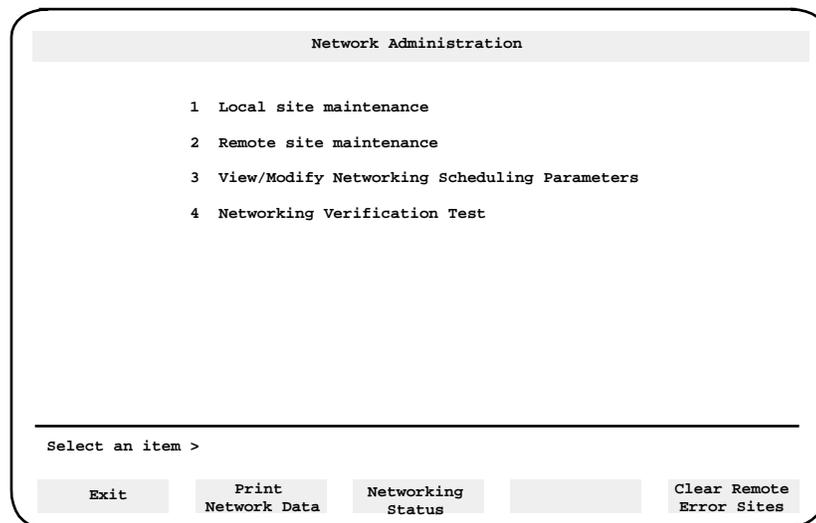
The following actions are possible from this menu:

<1>	The View/Modify Local Site screen is displayed. If the local site is not an NMS message center, see Figure 5-3. If the site is a message center, see Figure 5-4. NMS locations associated with the local site are also accessed from this screen.
<2>	The List Remote Sites screen is displayed (see Figure 5-9). From this screen you can add, modify or delete remote sites. You can also access NMS locations associated with remote sites that are message centers.

<3>	The View/Modify Networking Scheduling Parameters screen is displayed (see Figure 5-19). This action allows you to configure holding times and stale times for messages of different priorities.
<4>	The Networking Verification Test screen is displayed (see Figure 5-20). This test allows you to ensure proper network operation before adding a new site.
[Print Network Data]	This action prints local and remote site information from the network data base. Ensure that the printer is on-line before making this selection. See page 5-52 for details.
[Networking Status]	The number of messages queued for transmission are displayed in the Networking Status screen. See Figure 5-21.
[Clear Remote Error Sites]	This action clears error conditions for all remote sites. View the Networking Status screen to verify the status of the network. See the section "Error conditions" in the "Meridian Networking administration" chapter.
[Exit]	The Network Administration main menu is displayed (if AMIS is installed) or the main menu is displayed (if AMIS is not installed).

CAUTION
Changing the network data
If you plan on altering the network data fundamentally, such as by changing location codes or by adding or deleting locations, you should do so after hours when users are not logged on. Otherwise, users may may not be able to log on or will not be able to compose messages to affected mailboxes. It is recommended that you carefully plan network sites and locations before installation to avoid changing the configuration.

Local site maintenance

When you select Local Site Maintenance from the Network Administration menu, you are prompted for the site number (if the local site has not yet been configured). You will not be able to enter the View/Modify Local Site screen until you enter a number.

Once you enter a number, one of two screens is displayed, depending on whether or not the local site is a message center (that is, the prime location in an NMS site). The View/Modify Local Site screen allows you to alter the attributes of the local site. (Note that you do not have to add the local site as you do with remote sites.) If the local site is an NMS site, an additional [List Locations] softkey is displayed on the screen. The following two sections describe how to modify both non-message centers and message centers.

Viewing and modifying a local site that is not a message center

The View/Modify Local Site screen appears as shown in Figure 5-3 when the local site is not an NMS message center.

Figure 5-3xxx
The View/Modify Local Site screen (for a non-message center)

```
                           Network Administration


     Local Site Maintenance - View/Modify Site

     Site Number: _____
     Site Name:   _____

     Message Transfer:   [Enabled]    Disabled

     Dialing plan:      ESN       CDP      [Hybrid]     None
     Maximum Number of digits in Local Mailbox:          _____

  *  ESN Access Codes:          _____        _____
  *  Number of digits in common between ESN prefix and Local Extension:    _____

  ** Number of digits in common between CDP Steering Code and Local Extension: _____

     ESN/CDP codes (The ESN code must begin with the first access code above):

  #  1:_____        2:_____
  ## 3:_____        4:_____
     5:_____        6:_____
     7:_____        8:_____
     9:_____       10:_____
     .                    .
     .                    .

     Mailbox Numbering follows Dialing Plan:    [Yes]  No
  ***Mailbox Prefixes:    _____
     _____

        Save             Cancel
```

```
    *  Only appears if dialing plan is ESN or Hybrid
   ** Only appears if dialing plan is CDP or Hybrid
  ***Only appears if Mailbox Numbering does not follow dialing plan.
    #If the dialing plan is CDP, up to 50 steering codes can be defined.
      For hybrid dialing plans, one ESN code and up to 49 CDP codes can be defined.
  ##Only two fields are displayed if the dialing plan is set to "None".
```

The following fields are displayed:

- *Site Number* The site number uniquely identifies the local site in the
  Meridian Mail network. This number (as well as remote site numbers)
  should be obtained from the network administrator to ensure the
  number is not already in use. The valid range is from 1 to 500.

  Note: This value can only be changed by using the "Change Local Site
  ID" utility. (See *System Administration Tools*.) Before using this utility,
  you will have to create a dummy remote site as this utility only accepts
  an existing remote ID as the new local site ID. If you change the local
  site ID after users have been set up, the system will not recognize their
  mailbox numbers due to invalid site IDs.

- *Site name* This field must be filled in. It is usually the same as your organization's name. The field holds up to 32 alphanumeric characters.

- *Message Transfer* This field allows you to enable or disable networking at the local site. This field must be enabled for users at the local site to send messages to remote sites. The default is "Enabled".

- *Site is a Network Message Center* This field defines the site as a network message center (a prime NMS location serving other switches) or a non-NMS site. If you change the setting in this field to "Yes", the site will be defined as a message center in the network database. The next time you select Local Site Maintenance, the screen shown in Figure 5-4 (the View/Modify Local Site screen for message centers) will be displayed instead.

- *Dialing plan* The selection you make (ESN, CDP, Hybrid, or None) depends on your organization's dialing plan. The default is "Hybrid". (See "Dialing plans and location codes" in the "Meridian Networking Administration" chapter.) If the local site is part of a CDP dialing plan only, [Voice] is not displayed and you cannot record a site name.

    Note: If you change a site from Hybrid to CDP, the site name is removed. If you change the site back to Hybrid, you will have to re-record the verification.

- *Maximum Number of digits in Local Mailbox* Enter the maximum number of digits used in mailbox numbers at the local site. This number is used by the system to check whether mailbox numbers specified in messages from remote sites are valid. For example, if this value is "4" and a message is received from a remote site containing a mailbox address that is six digits in length, the system will reject the message. The maximum length is 18 (or 16 for AMIS virtual nodes). If you are unsure, enter the maximum allowable value. The default is "4".

- *ESN Access Codes* This field appears only when the dialing plan is ESN or Hybrid. This code is used to access the ESN network from the local site's switch. You may enter two different ESN access codes of one or two digits each. A typical access code is "6" or "9". Check your dialing plan for the ESN access code for the local site's switch.

    Note 1: If one of your ESN access codes is "9", this will create a conflict with the default broadcast mailbox number (999). You will

have to change the broadcast mailbox number in order to avoid this conflict.

Note 2: The ESN access code cannot match the left-most digits of any local mailbox. For example, if there is a local mailbox number 6122, the access code cannot be (or begin with) "6".

• *Number of Digits in Common between ESN Prefix and Local Extension:* This field appears only when the dialing plan is ESN or Hybrid. This number indicates the number of digits in the ESN prefix that overlap with local extensions. For example, your local extensions are five digits long and all begin with "8". Your ESN prefix is "338". If you enter "0" (no overlap) in this field, users at remote sites will have to enter an eight-digit DN when addressing messages to your site (such as 33883000). If you enter "1" in this field, indicating that the last digit of the prefix and the first digit of the extension overlap, remote users will specify a seven-digit address (3383000). The selection you make here must conform with your local site's dialing plan (if there are digits in common between the prefix and local extensions, they may or may not overlap.)

Note 1: To enter a non-zero value in this field, the mailbox numbers of all users you enter for this site must begin with the overlap digit(s) of the ESN prefix. For example, if the last digit of the ESN prefix is "8" and it overlaps with the local extensions, then all mailboxes at this site must begin with "8".

Note 2: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the ESN prefix and the local extensions, use the default setting of "0".

• *Number of Digits in common between CDP Steering Code and Local Extension* This field only appears if the dialing plan is CDP or Hybrid. This number indicates the number of digits in the CDP steering code that overlap with the local extension. Since CDP prefixes are part of the extension, there is always overlap. Specify the length of the CDP code in this field. Refer to your dialing plan.

Note: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the CDP code and the local extensions, enter a value of "0".

- *ESN/CDP Codes* ESN prefixes and CDP steering codes are location prefixes that identify the local site within the network and must therefore be unique within the ESN or CDP network.

  If the local site is part of an ESN network, remote users must precede the mailbox numbers of local voice users with the ESN prefix entered here. If the local site is part of a CDP network, the CDP steering code is already part of the mailbox number as far as users are concerned. (Even though this is the case, the CDP steering codes must still be defined here because the system needs to be able to distinguish the steering code from the mailbox number.)

  The first field is intended for the ESN prefix. (Only one ESN prefix can be entered.) This prefix must begin with the one- or two-digit access code that is defined in the *ESN Access Codes* field (if more than one code has been defined, be sure to enter the one in the first field). For example, if the first ESN access code is "6" and the ESN prefix is "344", enter "6344" in this field.

  If the dialing plan for the local site is "Hybrid", enter the ESN prefix in the first field and up to 49 CDP steering codes.

  In a CDP-only dialing plan up to 50 steering codes may be entered for a site. For example, if either 35xxx or 36xxx can be used to reach extension xxx at the local site, enter 35 and 36 as the steering codes.

  Note: These fields are not applicable if there is no dialing plan at the local site.

- *Mailbox Numbering follows Dialing Plan* This field allows you to select whether or not mailbox numbering will emulate the dialing plan (telephone extensions). If you answer "No", the following field, *Mailbox prefixes*, appears. The default is "Yes". (This field is not displayed if the dialing plan is set to "None". Instead, the *Mailbox number equals local extension* field is displayed.)

- *Mailbox Prefixes* These prefixes identify the local site within the network when mailbox numbering does not follow the dialing plan. This prefix does not have any overlap with local mailbox numbers and is independent of the ESN prefix and CDP steering codes. Make sure that the numbers you enter do not conflict with other other network data.

The following actions are possible from the View/Modify Local Site
screen:

[Save]   Any changes made to the screen are saved. The
Network Administration menu is displayed.

[Cancel]   Any changes or additions that were made in this
screen are not saved. The Network Administration
menu is displayed.

Viewing and modifying a local site that is a message center

When the local site is an NMS message center, the View/Modify Local Site
screen appears as shown in Figure 5-4. From this screen you can
temporarily disable networking for the local site or change the site to a
non-message center if NMS is being uninstalled from the site.

Figure 5-4xxx
The View/Modify Local Site screen (for a message center)

```
                       Network Administration

Local Site Maintenance: View/Modify Site

Site Number:        nnn

Message Transfer:   [Enabled]    Disabled
Site is a Network Message Center:    [Yes]    No




     Save          Cancel                                List
                                                      Locations
```

The following fields are displayed in this screen:

- *Site Number* This field is mandatory. The site number uniquely identifies the local site in the Meridian Mail network. This number (as well as remote site numbers) should be obtained from the network administrator to ensure the number is not already in use. The valid range is from 1 to 500.

   Note: The local site number can only be changed by using the "Change Local Site ID" utility. (See *System Administration Tools*.) Before using this utility, you will have to create a dummy remote site as this utility only accepts an existing remote ID as the new local site ID. If you change the local site ID after users have been set up, the system will not recognize their mailbox numbers due to invalid site IDs.

- *Message Transfer* This field allows you to enable or disable networking at the local site. This field must be enabled for users at the local site to send messages to remote sites. The default is "Enabled".

- *Site is a Network Message Center* This field defines the site as a network message center (a prime NMS location) serving other switches. If you change the setting in this field to "No", the site will no longer be defined as a message center in the network database. The next time you select Local Site Maintenance, the screen shown in Figure 5-3 (the View/Modify Local Site screen for non-message centers) will be displayed instead.

The following actions are possible from this screen:

[List Locations]	The locations associated with the local site are displayed in the List Locations screen (Figure 5-5). If you are performing Network Administration for the first time, no locations will be listed until you have added them using the Add Location screen.
[Save]	Any changes made to the screen are saved. The Network Administration menu is displayed.
[Cancel]	Any changes or additions that were made in this screen are not saved. The Network Administration menu is displayed.

Listing locations in the local site

If the local site is a message center, press [List Locations] on the
View/Modify Local Site screen to view the locations associated with it.
From the List Locations screen (Figure 5-5) you can add new locations, or
modify and delete existing locations.

Figure 5-5xxx
The List Locations screen

```
                          Network Administration

Local Site Maintenance: List Locations


            Location              Location Name
               0                  Primelocation
               5                  downtown
               10                 smithstreet
               20                 jonesavenue




    _____

Select an item >

      Exit              Add          View/Modify      Delete
```

The following read-only fields are displayed:

- *Location* The location ID which uniquely identifies the location
  within an NMS network. This ID is configured when you add a
  location to the network. It is an integer between 0 and 59. The prime
  location is always 0.

- *Location Name* The name corresponding to the location. This is also
  assigned when the location is added to the network. It can be changed
  in the View/Modify Location screen.

The following actions are possible from this screen:

[Exit]	The View/Modify Local Site screen is displayed.
[Add]	Use this softkey to add new locations to the local site. When selected, the Add Location screen is displayed. See Figure 5-6 for ESN networks, Figure 5-7 for CDP networks, Figure 5-8 for Hybrid networks.
[View/Modify]	Choose the site you want to view or modify by using the cursor keys to highlight the site and then pressing <Spacebar> to select it. The View/Modify Location screen is displayed when the softkey is pressed.
[Delete]	Choose the site you want to delete by using the cursor keys to highlight the site and then pressing <Spacebar> to select it. A new set of softkeys is displayed.

Adding a location to the local site

Locations are added to the local site by pressing [Add] on the List Locations screen. When this softkey is pressed you are prompted for the location number. Once you have entered the location number press <Return> to display the Add Location screen.

Note: Consult your network administrator to ensure that the location numbers you assign are unique and that they avoid conflicts with other data in the network database.

The first time you select Network Administration from the main menu after NMS has been installed, the Add Location screen automatically appears. This is where you add the prime location. The prime location is where the Meridian Mail system actually resides. This location must be configured before any satellite locations. The *Location Number* field will already be filled in as "0". This is the default location ID for the prime location. You can modify the prime location, but you can not delete it.

Figure 5-6xxx
The Add Location screen for the prime location in an ESN network

```
                          Network Administration


     Add Location

     Location Number:          0
     Location Name:            Prime Location

     Dialing plan:             [ESN] CDP Hybrid
     Maximum Number of Digits in Local Mailbox:         4

     ESN Access Codes:                   6          2
     Number of digits in common between ESN Prefix and Local Extension: 0

     ESN/CDP  codes (The ESN code must begin with 6):

 #   1: 6655         2:
     3:              4:
     5:              6:
     7:              8:
     9:             10:
     .               .
     .               .

     Mailbox Numbering follows Dialing Plan:    [Yes]  No
 *   Mailbox Prefixes:

     Location Name Recorded (Voice):           No
     _____


        Save              Cancel                      Voice
```

```
*   Appears when mailbox numbering does not follow a dialing plan.

#   If the dialing plan is CDP, up to 50 steering codes can be defined.
    For hybrid dialing plans, one ESN code and up to 49 CDP codes can be defined.
```

Figure 5-7xxx
The Add Location screen for the prime location in a CDP network

```
                        Network Administration

     Add Location

     Location Number:        0
     Location Name:          Prime Location

     Dialing plan:              ESN    [CDP]   Hybrid
     Maximum Number of Digits in Local Mailbox:      5

     Number of digits in common between CDP code and Local Extension:  2

     ESN/CDP  codes (The ESN code must begin with n) *:

 #   1: 72           2: 74
     3: _____      4: _____
     5: _____      6: _____
     7: _____      8: _____
     9: _____      10: _____
     .               .
     .               .

     Mailbox Numbering follows Dialing Plan:   [Yes]  No
**   Mailbox Prefixes:   _____

     Location Name Recorded (Voice):          No
     _____


        Save            Cancel
```

*   Ignore the message in brackets. It only applies to ESN or Hybrid dialing plans.

** Appears when mailbox numbering does not follow a dialing plan.

If the dialing plan is CDP, up to 50 steering codes can be defined.
    For hybrid dialing plans, one ESN code and up to 49 CDP codes can be defined.

Figure 5-8xxx
The Add Location screen for the prime location in a hybrid network

```
                        Network Administration


    Add Location

    Location Number:        0
    Location Name:          Prime Location

    Dialing plan:           ESN   CDP  [Hybrid]
    Maximum Number of Digits in Local Mailbox:      5

    ESN Access Codes:              6        2
    Number of digits in common between ESN Prefix and Local Extension:    0
    Number of digits in common between CDP code and Local Extension:      2

    ESN/CDP  codes (The ESN code must begin with 6):

 #  1: 6572        2:74
    3: 88          4:
    5:             6:
    7:             8:
    9:            10:
    .              .
    .              .

    Mailbox Numbering follows Dialing Plan:    [Yes]  No
 *  Mailbox Prefixes:

    Location Name Recorded (Voice):            No

        Save            Cancel                      Voice
```

```
*   Appears when mailbox numbering does not follow a dialing plan.
#   If the dialing plan is CDP, up to 50 steering codes can be defined.
    For hybrid dialing plans, one ESN code and up to 49 CDP codes can be defined.
```

The following fields are displayed:

- *Location Number*   The location number cannot be modified from within this screen. To change it, you must delete the location and add it again. When you press [Add] in the List Locations screen you are prompted for a new ID. The valid range is from 0 to 59.

- *Location Name*   This field must be filled in. The name should uniquely identify the location. You may enter up to 32 alphanumeric characters. There is no default.

- *Dialing Plan*   The selection you make depends on your organization's dialing plan. The default is Hybrid. (See "Dialing plans and location codes" in the chapter "Network Message Service".) You cannot select "None" for the local site when it is an NMS message center.

Note: When the dialing plan is CDP only, [Voice] is not displayed and you cannot record a location name. If you change the site from Hybrid to CDP-only, the location name is removed. If you change the site back to Hybrid, you will have to re-record the verification.

- *Maximum Number of Digits in Local Mailbox* The maximum number of digits used in mailbox numbers at this location. The maximum length is 18 (or 16 for AMIS virtual nodes). If you are unsure enter the maximum allowable value.

- *ESN Access Codes* This field appears only when the dialing plan is ESN or Hybrid. Enter the code that this switch uses to access the ESN network. You may enter two different ESN access codes of one or two digits each. Typical codes are "6" or "9". In the second *ESN Access Code* field, enter the public network access code, if there is one. Check your dialing plan for the correct code(s).

- *Number of Digits in Common between ESN Prefix and Local Extension:* This field appears only when the dialing plan is ESN or Hybrid. This number indicates the number of digits in the ESN prefix that overlap with local extensions. For example, extensions at Location A are five digits long and all begin with "8". The ESN prefix is "338". If you enter "0" (no overlap) in this field, users at other sites or locations will have to enter an eight-digit DN when addressing messages to Location A (such as 33883000). If you enter "1" in this field, indicating that the last digit of the prefix and the first digit of the extension overlap, remote users will specify a seven-digit address (3383000). The selection you make here must conform with the location's dialing plan (if there are digits in common between the prefix and local extensions, they may or may not overlap.)

Note 1: To enter a non-zero value in this field, the mailbox numbers of all users you enter for the location must begin with the overlap digit(s) of the ESN prefix. For example, if the last digit of the ESN prefix is "8" and it overlaps with the local extensions, then all mailboxes at the location must begin with "8".

Note 2: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the ESN prefix and the local extensions, use the default setting of "0".

- *Number of Digits in common between CDP Steering Code and Local Extension* This field only appears if the dialing plan is CDP or Hybrid. In a CDP network, there must be complete overlap between the CDP steering code and the local extensions. In other words, this number must equal the length of the CDP steering code. For example, if the steering code is 77 enter "2" in this field.

  Note: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the CDP code and the local extensions, enter a value of "0".

- *ESN/CDP Codes* The ESN prefix and CDP steering codes for the location you are adding. These are location codes that identify the location within the network. These codes must not conflict with other network codes. There is a conflict if there is overlap between two location codes. For example, there is a conflict between the ESN prefixes 332 and 3321. If a message is addressed to 3321224, the system cannot tell if this means ESN prefix 332 mailbox 1224 or ESN prefix 3321 mailbox 224.

  If you defined one or two access codes (ESN), the screen displays a message to remind you of which access code to use as part of the ESN prefix.

  ### For ESN dialing plans

  Enter the ESN prefix (access code + routing prefix). For example, if the access code is 6 and the routing prefix is 344, enter "6344". Only one ESN prefix per location is supported.

  ### For CDP dialing plans

  Enter all CDP steering codes for this location. You can define up to 10 CDP steering codes per location.

  ### For Hybrid dialing plans

  If the location supports both ESN and CDP, enter the ESN prefix (access code + routing prefix) in the first field, and all CDP steering codes for the location in the subsequent fields. Because the first field holds the ESN prefix, you can enter up to 49 CDP steering codes per location in a hybrid configuration.

- ***Mailbox Numbering follows Dialing Plan*** Answer "Yes" if the local mailbox numbers at this location are the same as local extensions on the switch. If you answer "No", the following field, *Mailbox prefixes*, appears and you must enter the location codes as mailbox prefixes.

- ***Mailbox Prefixes*** This field is applicable only if mailbox numbering at the location does not following the dialing plan (and therefore ESN prefixes or CDP steering codes do not apply). Enter a unique identifier as the mailbox prefix. This prefix is used to identify the location within the network and must be unique across the network. Ensure that it does not conflict with other network data or mailbox numbers. This prefix does not have any overlap with local mailbox numbers and is independent of the ESN prefix and CDP steering codes.

- ***Location Name Recorded (Voice)*** This field only applies if an ESN or Hybrid dialing plan is in place. It indicates whether or not a spoken location name has been recorded for this site. If a spoken name is recorded, voice mail users hear the location name followed by the local mailbox digits. For example, *"Murray Road, Mailbox 2346"*. If a name is not recorded for the location, users hear the ESN location prefix followed by the mailbox number. For example, *"6889 Mailbox 2346"*. A name can be recorded from this screen by using the voice key (see the following section.) The default is "No".

The following actions are possible from this screen:

[Voice]	This softkey is displayed only if the dialing plan is ESN or Hybrid. Use this softkey to record a spoken name for the location. This voice recording will identify the location to users when sending messages to, or receiving messages from the location.
[Save]	This action saves the location in the network database. The List Locations screen is re-displayed.
[Cancel]	Entries made in this screen are discarded and you are returned to the List Locations.

Procedure 5-1xxx
Adding the prime location

Starting point: The main menu

1   Select Network Administration.

    The Add Location screen is displayed.

2   Fill in the fields. See the field descriptions on the previous pages.

3   Press [Save] to save the configuration and exit the screen.

    The List Locations screen is displayed, with one location, the prime location, listed.

4   To exit the screen, go to step 4a.
    To add a satellite location, go to step 4b.

    a.   Press [Exit].

        You are returned to the Network Administration menu.

    b.   Press [Add].

        See "Adding locations" later in this chapter for details.

Modifying locations in the local site

Locations in the local site are modified in the View/Modify Location screen. This screen is identical to the Add Location screen. See the preceding section, "Adding locations to the local site", for descriptions of the fields.

Procedure 5-2xxx
Modifying locations in the local site

Starting point   The main menu

1   Select Network Administration.

2   Select Local Site Maintenance.

3   Press [List Locations].

4   Use the cursor keys to highlight the location you want to modify.

5   Press <Spacebar> to select the location.

6   Press [View/Modify].

    The View/Modify Location is displayed.

7   Complete all the fields as required, referring to the descriptions above.

8 Press [Voice] to record the spoken name of the location if desired. (This only applies to sites with ESN or Hybrid dialing plans.) This voice recording will identify the location to users when sending messages to, or receiving messages from the location.

See the section, "Recording site names and location names using the [Voice] softkey" later in this chapter.

9 To save the changes, go to step 9a.
To cancel, go to step 9b.

a. Press [Save].

The additions or changes are saved and you are returned to the List Locations screen.

b. Press [Cancel].

Any changes made to the screen are discarded and you are returned to the List Locations screen.

Deleting locations in the local site

Locations in the local site can be deleted from the List Locations screen. When you press [Delete] a new set of softkeys appears. See the procedure below.

Procedure 5-3xxx
Deleting locations from the local site

Starting point The main menu

1 Select Network Administration.

2 Select Local Site Maintenance.

3 Press [List Locations].

4 Use the cursor keys to highlight the location you want to delete.

5 Press <Spacebar> to select the location.

6 Press [Delete].

A new set of softkeys is displayed. The [OK to Delete] softkey replaces the [Save] softkey and the [Cancel] key remains.

7 To proceed with the deletion, go to step 7a.
To cancel the operation, go to step or 7b.

a. Press [OK to Delete] to delete the site from the network database.

The location is deleted and you are returned to the List Locations screen.

b. Press [Cancel] if you do not want to continue with the deletion.

The List Locations screen is displayed.

Remote site maintenance

Remote Site Maintenance is selected by pressing <2> when your are in the Network Administration menu. This allows you to add remote sites (and any associated NMS locations) to the network as well as access existing remote sites (and any associated NMS locations) so that they can be modified or deleted. When you select Remote Site Maintenance the List Remote Sites screen, showing existing remote sites, is displayed (see Figure 5-9).

Listing remote sites

The List Remote Sites screen lists all the remote sites in the Meridian Mail Network, indicates whether or not a site is an NMS message center and provides the softkeys used to add, view, modify or delete sites. It is also possible to access locations associated with NMS message centers from this screen.

Figure 5-9xxx
The List Remote Sites screen

```
                        Network Administration


   Remote Site Maintenance: List Sites


   Site            Site Name           Message Center

     5             City1               Yes
    10             City2               No
    20             City3               Yes




   _____

       Exit            Add         View/Modify      Delete         List
                                                                 Locations
```

The following read-only fields are displayed:

- *Site* The site ID for the remote site.

- *Site Name* The name corresponding to the remote site.

- *Message Center* This field indicates whether or not the remote site is an NMS message center.

The following actions are possible from this screen:

[Add]	The Add Remote Site screen is displayed. See Figure 5-10.
[View/Modify]	Use the cursor keys to highlight the site you want to view or modify. Press the <Spacebar> to select the site. Then press [View/Modify] to display the View/Modify Remote Site screen. See page 5-34.
[Delete]	Select the site you want to delete with the cursor keys. The Delete Remote Site screen is displayed when the softkey is pressed. See page 1-49.
[List Locations]	Select a message center with the cursor keys. The List Locations screen is displayed when the softkey is pressed. See the section "Listing locations in Remote Sites" later in this chapter. This softkey is displayed only if NMS is installed.
[Exit]	The Network Administration menu is displayed.

Adding remote sites

The Add Remote Site screen allows you to define new remote sites in the Meridian Mail network. When you press [Add] on the List Remote Sites screen, you are prompted for a remote site ID. After you enter an ID and press <Return>, the Add Remote Site screen (shown in Figure 5-10) is displayed. You will notice that the system assumes that the site is not a message center (this is the default). If the site you are adding is a message center and you set the field *Site is a Network Message Center?* to "Yes", you will get a reduced screen as shown in Figure 5-11.

If AMIS is installed at the local site, remote AMIS sites can also be added to the Meridian Mail network from the Add Remote Site form. Certain fields need to be configured somewhat differently than for normal remote

sites: these are the *Message Transfer Protocol* field and the *Networking Connection* fields. See the descriptions of these fields for more details. (Also see the integrated AMIS section in this chapter for more information about virtual nodes.)

Adding a remote site that is not a message center

If you leave the default setting for the *Site is a Network Message Center?* field as "No" you will fill in the screen that is illustrated in Figure 5-10.

Figure 5-10xxx
The Add Remote Site screen (for non-message centers)

```
                        Network Administration

    Remote Site Maintenance - Add Site

    Site Number:        _____
    Site Name:          _____

    Message Transfer Protocol:      [Meridian]    AMIS
    Message Transfer:               [Enabled]    Disabled

    Networking Connection:
        DN 1:  _____
        DN 2:  _____
        DN 3:  _____

    Password
        Initiating:  _____
        Responding:  _____

    Dialing plan:      ESN      CDP      [Hybrid]      None
    Maximum Number of Digits in Local Mailbox: _____

*   ESN Access Codes:              _____    _____
*   Number of Digits in common between ESN Prefix and Local Extension      _____

**  Number of Digits in common between CDP Steering Code and Local Extension:   _____

    ESN/CDP codes (The ESN code must begin with n):

#   1:_____     2:_____
##  3:_____     4:_____
    5:_____     6:_____
    7:_____     8:_____
    9:_____    10:_____


    Mailbox Numbering follows Dialing Plan:    [Yes]  No
***Dial Prefix:            _____
****Mailbox Prefixes:   _____      _____

*   Site Name recorded (voice):   No
─────────────────────────────────────────────────────────────
       Save            Cancel                      Voice*
```

```
*    Only appears if dialing plan is ESN or Hybrid
**   Only appears if dialing plan is CDP or Hybrid
***  Only appears if dialing plan is None.
****Only appears if dialing plan is none or if Mailbox Numbering does not follow
    the dialing plan.
   #If the dialing plan is CDP, up to 50 steering codes can be defined.
    For hybrid dialing plans, one ESN code and up to 49 CDP codes can be defined.
  ##Only two fields are displayed if the dialing plan is set to "None".
```

Note: The "n" in the *ESN/CDP codes* field represents the ESN access code that is configured in the Local Site Maintenance screen. If two access codes are defined in that screen, the one entered in the first field is displayed here.

The following fields are displayed on the Add Remote Site screen:

- *Site Number* This field is mandatory. The site number uniquely identifies the remote site in the Meridian Mail network. Site numbers should be obtained from the network administrator to ensure the number is not already in use. The valid range is from 1 to 500.

- *Site Name* This field is mandatory. The site name should uniquely identify the remote site. The field can contain up to 32 alphanumeric characters. There is no default.

- *Message Transfer Protocol* This field is displayed only if AMIS Networking is installed at the local site. The default is "Meridian". If the remote site you are adding is a Meridian Mail site and you want to use the full-featured Meridian Networking protocol, select "Meridian".

  If the remote site is an AMIS site that is using a voice messaging system other than Meridian Mail, select "AMIS." This allows you to create a virtual node for the AMIS site. When a local users send messages to users at this site, they will address them as if they were sending messages to a Meridian Mail remote site (access code + location prefix + mailbox). They will not have to enter the address in the format: AMIS prefix + country and/or area code + local number + mailbox number.

  If the remote site is a Meridian Mail site, you can choose to send messages using the AMIS protocol. This protocol does not require a modem because it uses DTMF tones to transfer message header information. This option is less expensive than using the Meridian protocol which requires a modem. However, AMIS Networking restrictions are applicable and local users will not be able to use certain features (such as private message tags) that are available when the Meridian protocol is used.

- *Message Transfer* This field must be set to "Enabled" for local users to send messages to the remote site. Select "Disabled" if you must temporarily disable message delivery to the remote site. The default is "Enabled".

- *Site is Network Message Center* This field should be enabled if the remote site is a Network Message Center (NMS) site. The default is "disabled". See the chapter "Network Message Service".

- *Networking Connection DN 1, DN 2, DN 3* These are the telephone numbers that are used to establish a connection to the networking service at the remote site. For a remote Meridian Networking site, enter the number used to dial out of the system to reach the remote site (for example, 95552345). The DN can be up to 30 digits long and may include the digits 0 to 9 and special symbols * and #, where * inserts a three-second pause in the sending of digits, and # indicates end-of-dialing. Because DNs are used in the given order, enter the least costly DN as DN 1, and the most costly DN as DN 3. A minimum of one DN must be defined.

  For a remote AMIS site that has been configured as a virtual node, enter either a private or public system access number as DN1. A private system access number is entered in the format

  > 0##n#

  where n is a number up to 30 digits in length (the initial 0 indicates a private network and must be followed by two pound signs).

  Public system access numbers are entered in the format

  > ccc#aaa#nnnnnnn#

  where ccc is the country code, aaa is the area code and nnnnnnn is the local number. Use # to separate the codes and terminate the number. (You do not have to enter the access code, such as "9".")

  If you enter a private access number as DN1, you must enter a public access number as DN2.

  If you are configuring a virtual node (a remote site that using another vendor's voice messaging system), you typically only need to enter a public system access number for DN1.

- *Password* The password fields are not displayed if you selected AMIS as the Message Transfer Protocol for this site. If the site is a Meridian Networking site, passwords are mandatory. (However, the default passwords are generally kept.) These passwords are passed back and forth between systems; they are not entered by users.

- *Initiating Password* This is the password this remote site sends when it initiates message delivery to another site. You may enter a password that is from four to ten alphanumeric characters in length. The field is case-sensitive. The default is "password".

- *Responding Password* This is the password this remote site sends to another site that has initiated message delivery. This is a case-sensitive field. The password must be between four and ten alphanumeric characters in length. The default is "password".

  Note: If one site in the network changes a password, all other sites will have to change passwords to reflect the new password. Otherwise message transfer can not occur.

- *Dialing Plan* The selection you make must reflect the dialing plan. The default is "Hybrid". (See "Dialing plans and location codes" earlier in this chapter.) Note that in a CDP dialing plan, remote sites are transparent to voice messaging users because no special prefixes are required to dial out to them. Therefore if this site is part of a CDP dialing plan only, the [Voice] key is not displayed as a site name is not required.

  If you select "None", the *Mailbox numbering follows dialing plan* field is not displayed. Instead, the *Mailbox number equals local extension* field is displayed.

  Note 1: If "None" is selected, you can only enter up to two prefixes. A prefix can be one-digit or multiple-digits. It must be unique to the site and cannot conflict with local mailbox numbers. This prefix is entered by users before the remote site's mailbox number when addressing messages.

  Note 2: If you change a site from Hybrid to CDP, the site name is removed. If you change the site back to Hybrid, you will have to re-record the verification.

- *Maximum Number of Digits in Local Mailbox* Enter the maximum number of digits allowed in mailbox numbers at the remote site. The maximum length is 18 (or 16 for AMIS virtual nodes). If you are unsure, enter the maximum allowable value. The default is "4".

- *ESN Access Codes* This field is mandatory if the dialing plan is ESN. This code is used to access the ESN network from this site's switch. You may enter two different ESN access codes of one or two digits each. A typical access code is "6" or "9". Check your dialing plan for the ESN access code for the local site's switch.

  Note 1: If one of your ESN access codes is "9", this will create a conflict with the default broadcast mailbox number (999). You will have to change the broadcast mailbox number in order to avoid this conflict.

  Note 2: The ESN access code cannot match the left-most digits of any local mailbox. For example, if there is a local mailbox number 6122, the access code cannot be (or begin with) "6".

- *Number of Digits in Common between ESN Prefix and Local Extension:* This field appears only when the dialing plan is ESN or Hybrid. This number indicates the number of digits in the ESN prefix that overlap with extensions that are local to the remote site. For example, your local extensions are five digits long and all begin with "8". Your ESN prefix is "338". If you enter "0" (no overlap) in this field, users at remote sites will have to enter an eight-digit DN when addressing messages to your site (such as 33883000). If you enter "1" in this field, indicating that the last digit of the prefix and the first digit of the extension overlap, remote users will specify a seven-digit address (3383000). The selection you make here must conform with your local site's dialing plan (if there are digits in common between the prefix and local extensions, they may or may not overlap.)

  Note 1: To enter a non-zero value in this field, the mailbox numbers of all users you enter for this site must begin with the overlap digit(s) of the ESN prefix. For example, if the last digit of the ESN prefix is "8" and it overlaps with the local extensions, then all mailboxes at this site must begin with "8".

  Note 2: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the ESN prefix and the local extensions, use the default setting of "0".

- *Number of Digits in common between CDP Steering Code and Local Extension* This field only appears if the dialing plan is CDP or Hybrid. This number indicates the number of digits in the CDP steering code that overlap with the extensions that are local to the remote site. Since CDP prefixes are part of the extension, there is always overlap. Specify the length of the CDP code in this field. Refer to your dialing plan.

  Note: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the CDP code and the local extensions, enter a value of "0".

- *ESN/CDP Codes* The ESN prefix and CDP steering codes are location prefixes that identify the remote site within the network and must therefore be unique within the ESN or CDP network. Check with the administrator at the remote site to determine the ESN prefix or CDP steering codes that apply.

  When a user at the local site sends a voice message to a user at the remote site that uses an ESN numbering plan, he or she must precede the remote mailbox number with the ESN prefix entered here. If the remote site is part of a CDP network, the CDP steering code is already part of the mailbox number as far as users are concerned. (Even though this is the case, the CDP steering codes must still be defined here because the system needs to be able to distinguish the steering code from the mailbox number.)

  The first field is intended for the ESN prefix. (Only one ESN prefix can be entered.) This prefix must begin with the one- or two-digit access code that is defined in the Local Site Maintenance screen. The actual access code is displayed in the field title to remind you. For example, if the ESN access code is "6" and the ESN prefix is "344", enter "6344" in this field.

  If the dialing plan for the remote site is "Hybrid", enter the ESN prefix in the first field and up to 49 CDP steering codes.

  In a CDP-only dialing plan up to 50 steering codes may be entered for a site. For example, if either 35xxx or 36xxx can be used to reach extension xxx at the remote site, enter 35 and 36 as the steering codes.

  Note: CDP codes cannot match the leading digits of a local mailbox number. If this occurs and a local user addresses a message to another

local user whose mailbox begins with a CDP steering code, Meridian Mail will attempt to send the voice message to the remote site rather than to the local mailbox.

- *Mailbox Numbering Follows Dialing Plan* In this field, specify whether or not mailbox numbering emulates the dialing plan (telephone extensions) at the remote site. If it does not, the following field, *Mailbox prefixes*, is displayed and you must enter the location codes as mailbox prefixes.

- *Mailbox Prefixes* These prefixes function as location codes and are used to identify the remote site within the network when there is no dialing plan or if mailbox numbering does not follow the dialing plan at the remote site. These prefixes do not have any overlap with local mailbox numbers and are independent of the ESN location prefix and CDP steering codes. Make certain that these prefixes do not conflict with other network data.

- *Dial Prefix* This field is displayed only if the dialing plan is "None". (However, the mailbox numbering at the remote site must follow the extension numbering.) This is an optional prefix which allows users at the local site to use the Call Sender feature to automatically dial the number of a user who has sent a message from the remote site you are defining.

  If an ESN or CDP numbering plan is present, the system figures out the Call Sender number using the specified dialing plan and the mailbox number and there is no need for a dial prefix. Note that if mailbox numbering at the remote site does not follow local extension numbering, you will *not* be able to specify a dial prefix, and therefore, users at the local site will not be able to use the Call Sender feature to that particular remote site.

- *Site Name Recorded (Voice)* This field applies only to ESN and Hybrid dialing plans. This field applies only to ESN and Hybrid dialing plans. It indicates whether or not a site name has been recorded for the site. A spoken site name makes it easier for users to identify the remote site when addressing voice messages to remove voice users. The site name recording (followed by the local mailbox digits) is played to voice messaging users when addressing messages to remote voice users. If the site name is not recorded, users hear the the ESN location prefix spoken out.

The following actions are possible from this screen:

[Voice]	This softkey is displayed if the dialing plan is ESN or Hybrid. Use this softkey when you want to record a site name for the remote site you are adding. See "Recording site names and location names using the [Voice] Softkey" later in this chapter.
[Save]	The information entered for the remote site is saved to the network database. You are prompted to enter the next remote site ID. If you have more sites to add, enter the ID and press return. Fill in the screen for this site and save it. If you do not have more sites to add, use the [Cancel] softkey.
[Cancel]	Any changes made to the screen are not saved. The List Remote Sites screen is displayed.

Adding a remote site that is a message center

If you set the *Site is a Network Message Center?* field to "Yes" in order to define an NMS site, you will fill in the screen that is illustrated in Figure 5-11. The fields that appear in this screen also appear in the screen that is used to define a non-message center. See the preceding section, "Adding a remote site that is not a message center" for a description of the fields.

Note: This screen does not have a [Voice] softkey. Location names are recorded for each location, not for the site as a whole.

Figure 5-11xxx
The Add Remote Site screen (for message centers)

```
                        Network Administration

Remote Site Maintenance - Add Site

Site Number:

Message Transfer Protocol:    [Meridian]    AMIS
Message Transfer:             Disabled    [Enabled]
Site is Network Message Center?    No     [Yes]


Networking Connection:
        DN 1:   _____
        DN 2:   _____
        DN 3:   _____

Password
        Initiating:   _____
        Responding:   _____
    _____

     Save           Cancel
```

Procedure 5-4xxx
Adding a remote site

Starting Point   The main menu

8   Select Network Administration.

9   Select Remote Site Maintenance.

10   Press [List Locations].

11   Press [Add].

   You are prompted for a location number.

12   Enter a unique number for the location you are adding.

13   Press <Return>.

   The Add Remote Site screen is displayed (see Figure 5-10).

14   Complete all fields as required.

   *If you define this location as a message center, the screen shown in
   Figure 5-11 is displayed instead.*

15 To save the changes, go to step 15a.
To cancel the changes, go to step 15b.

   a. Press [Save].

   *The additions or changes are saved and you are returned to the
   List Remote Sites screen.*

   b. Press [Cancel].

   *You are returned to the List Sites screen and any changes made to
   the screen are not saved.*

Modifying remote sites

To alter the characteristics of sites you have already added to the network,
use [View/Modify] on the List Remote Sites screen. If the site you are
modifying is not a message center, the screen will be identical to the one
shown in Figure 5-10. If you are modifying a message center, the screen
will be identical to the one shown in Figure 5-11. See the section "Adding
remote sites" for field descriptions.

Deleting remote sites

Remote sites are removed from the network database from the List Remote
Sites screen. When you select a site and then press [Delete], a new set of
softkeys is displayed.

Messages that have been sent but not delivered to a remote site that has
been deleted are returned with a non-delivery notification (NDN).

Note: If the site is an NMS message center you will have to delete all
of its associated locations first. This is described later in this chapter.

Figure 5-12xxx
The Delete Remote Site softkeys
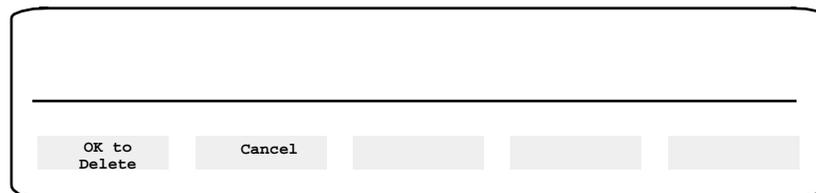
The following actions are possible:

[OK to Delete]	The site is purged from the network database. You are then prompted for another ID. If there are other sites you wish to delete, enter the next ID and press <Return>. For each ID you enter, use this softkey to proceed with the deletion. When you have no more sites to delete, use the [Cancel] softkey.
[Cancel]	The site is not deleted. The List Remote Sites screen is displayed.

Listing locations in remote sites

Locations associated with particular remote sites are accessed through the List Locations screen. This screen is displayed when you select an NMS message center in the List Remote Sites screen and press [List Locations]. You can also add new locations to a remote site from this screen.

Figure 5-13xxx
The List Locations screen (for remote sites)


```
                        Network Administration

  Remote Site Maintenance: List Locations

     Location            Location Name

        5                downtown
       10                smithstreet
       20                jonesavenue
      nnn                xxxxxxxxxx




  _____

  Select an item >

       Exit            Add         View/Modify      Delete
```

Adding locations to remote sites

The Add Location screen is used to add new locations to a particular network site. It is accessed from the List Locations screen when [Add] is pressed.

Figure 5-14xxx
The Add Location screen for a satellite location in an ESN network

```
                        Network Administration


   Add Location

   Location Number:        1
   Location Name:          First Satellite Location

   Dialing plan:              [ESN] CDP Hybrid
   Maximum Number of Digits in Local Mailbox:        4

   ESN Access Codes:                    6         2
   Number of digits in common between ESN Prefix and Local Extension:    0

   ESN/CDP  codes (The ESN code must begin with 6): *

#   1: 6644       2:_____
    3: _____   4:_____
    5: _____   6:_____
    7: _____   8:_____
    9: _____  10:_____
    .             .
    .             .

   Mailbox Numbering follows Dialing Plan:    [Yes]  No
** Mailbox Prefixes:    _____

   Location Name Recorded (Voice):          No
   _____


      Save          Cancel                    Voice
```

```
*     The number that is displayed here is the first ESN Access Code that was
      defined for the prime switch.
**    Appears when mailbox numbering does not follow a dialing plan.

#     If the dialing plan is CDP, up to 50 steering codes can be defined.
      For hybrid dialing plans, one ESN code and up to 49 CDP codes can be defined.
```

Figure 5-15xxx
The Add Location screen for a satellite location in a CDP network

```
                          Network Administration


    Add Location

    Location Number:          1
    Location Name:          First Satellite Location

    Dialing plan:             ESN    [CDP]    Hybrid
    Maximum Number of Digits in Local Mailbox:        5

    Number of digits in common between CDP code and Local Extension:    2

    ESN/CDP  codes (The ESN code must begin with n): *

#   1: 28          2:27
    3: _____     4:_____
    5: _____     6:_____
    7: _____     8:_____
    9: _____    10:_____
    .               .
    .               .

    Mailbox Numbering follows Dialing Plan:     [Yes]   No
**  Mailbox Prefixes:    _____

    Location Name Recorded (Voice):            No


       Save             Cancel
```

*   Ignore the message in brackets. It is only for ESN or Hybrid dialing plans.

**   Appears when mailbox numbering does not follow a dialing plan.

If the dialing plan is CDP, up to 50 steering codes can be defined.
     For hybrid dialing plans, one ESN code and up to 49 CDP codes can be defined.

Figure 5-16xxx
The Add Location screen for a satellite location in a hybrid network

```
                         Network Administration


     Add Location

     Location Number:        1
     Location Name:          First Satellite Location

     Dialing plan:           ESN    CDP   [Hybrid]
     Maximum Number of Digits in Local Mailbox:         5

     ESN Access Codes:                 6        2
     Number of digits in common between ESN Prefix and Local Extension:    0
     Number of digits in common between CDP code and Local Extension:      2

     ESN/CDP  codes (The ESN code must begin with 6): *

 #   1: 6581      2:79
     3: 81        4:
     5:           6:
     7:           8:
     9:          10:
     .           .
     .           .

     Mailbox Numbering follows Dialing Plan:    [Yes]  No
 **  Mailbox Prefixes:

     Location Name Recorded (Voice):            No
  _____

         Save           Cancel                    Voice
```

```
  *  The number that is displayed here is the first ESN Access Code that was defined
     above.
 **  Appears when mailbox numbering does not follow a dialing plan.

  #  If the dialing plan is CDP, up to 50 steering codes can be defined.
     For hybrid dialing plans, one ESN code and up to 49 CDP codes can be defined.
```

The following fields are displayed:

- *Site Number*   This number identifies the site with which the location is associated.

- *Location Number*   This number uniquely identifies the location within the NMS site. This field cannot be modified from within this screen. To change the location number, delete the location and re-add it. When you press [Add] you are prompted for a new ID. The valid range is from 0 to 59.

- *Location Name*   This field must be filled in. The name should be unique and easily identify the location within the network. You may enter up to 32 alphanumeric characters. There is no default.

- *Dialing Plan* The selection you make depends on your organization's dialing plan. The default is "Hybrid". (See "Dialing plans and location codes" earlier in this chapter.) In a CDP dialing plan, other locations are transparent to voice messaging users because no special prefixes are required to dial out to them. Therefore when a location is part of a CDP dialing plan, the [Voice] key is not displayed and you cannot record a location name.

  Note: If you change a Hybrid location to CDP-only, the location name is removed. If you change the location back to Hybrid, you will have to re-record the verification.

- *Maximum Number of digits in Local Mailbox* The maximum number of digits used in mailbox numbers at this location. The maximum length is 18 (or 16 for AMIS virtual nodes). If you are unsure, enter the maximum allowable value.

- *ESN Access Codes*   This field appears only when the dialing plan is ESN or Hybrid. This code is used to access the ESN network. You must enter the access code of the *prime* switch in the first field. (If two access codes are defined for the prime switch, use the one that is entered in the first field.)

  The second field is optional. You can enter the public network access code if there is one.

- *Number of Digits in Common between ESN Prefix and Local Extension:* This field appears only when the dialing plan is ESN or Hybrid. This number indicates the number of digits in the ESN prefix that overlap with extensions that are local to the location at the remote site. For example, your local extensions are five digits long and all begin with "8". Your ESN prefix is "338". If you enter "0" (no overlap) in this field, users at remote sites will have to enter an eight-digit DN when addressing messages to your site (such as 33883000). If you enter "1" in this field, indicating that the last digit of the prefix and the first digit of the extension overlap, remote users will specify a seven-digit address (3383000). The selection you make here must conform with your location's dialing plan (if there are digits in common between the prefix and local extensions, they may or may not overlap.)

  Note 1: To enter a non-zero value in this field, the mailbox numbers of all users you enter for this site must begin with the overlap digit(s) of

the ESN prefix. For example, if the last digit of the ESN prefix is "8" and it overlaps with the local extensions, then all mailboxes at this site must begin with "8".

Note 2: You must enter a value in this field. If left blank, it will revert to the previous value. If there are no numbers in common between the ESN prefix and the local extensions, use the default setting of "0".

- *Number of Digits in common between CDP Steering Code and Local Extension* This field only appears if the dialing plan is CDP or Hybrid. In a CDP network, there must be complete overlap between the CDP steering code and the local extensions. In other words, this number must equal the length of the CDP steering code. For example, if the steering code is 77 enter "2" in this field.

- *ESN/CDP Codes* The ESN prefix and CDP steering codes for the location you are adding. These are location codes that identify the location within the network. These codes must not conflict with other network codes. There is a conflict if there is overlap between two location codes. For example, there is a conflict between the ESN prefixes 332 and 3321. If a message is addressed to 3321224, the system cannot tell if this means ESN prefix 332 mailbox 1224 or ESN prefix 3321 mailbox 224.

If you defined one or two access codes (ESN), the screen displays a message to remind you of which access code to use as part of the ESN prefix.

For ESN dialing plans
Enter the ESN prefix (access code + routing prefix). For example, if the access code of the prime location is 6 and the routing prefix is 344, enter "6344". Only one ESN prefix per location is supported.

For CDP dialing plans
Enter all CDP steering codes for this location. You can define up to ten CDP steering codes per location.

For Hybrid dialing plans
If the location supports both ESN and CDP, enter the ESN prefix (access code of the prime location + routing prefix of the satellite location) in the first field, and all CDP steering codes for the location in the subsequent fields. Because the first field holds the ESN prefix,

you can enter up to 49 CDP steering codes per location in a hybrid configuration.

- *Mailbox Numbering follows Dialing Plan* Answer "Yes" if the local mailbox numbers at this location are the same as local extensions on the switch. If you answer "No", the following field, *Mailbox Prefixes*, appears and you must enter the location codes as mailbox prefixes.

- *Mailbox Prefixes* This field is applicable only if mailbox numbering at the location does not following the dialing plan (and therefore ESN prefixes or CDP steering codes do not apply). Enter a unique identifier as the mailbox prefix. This prefix is used to identify the location within the network and must be unique across the network. Ensure that it does not conflict with other network data or mailbox numbers. This prefix does not have any overlap with local mailbox numbers and is independent of the ESN prefix and CDP steering codes.

- *Location Name Recorded (Voice)* This field only applies if an ESN or Hybrid dialing plan is in place. It indicates whether or not a spoken location name has been recorded for this site. If a spoken name is recorded, voice mail users hear the location name followed by the local mailbox digits. For example, *"Murray Road, Mailbox 2346"*. If a name is not recorded for the location, users hear the ESN location prefix followed by the mailbox number. For example, *"6889 Mailbox 2346"*. A name can be recorded from this screen by using the voice key (see the following section.) The default is "No".

The following actions are possible from this screen:

[Voice]	This softkey is displayed only if the dialing plan is ESN or Hybrid. Use this softkey to record a spoken name for the location. This voice recording will identify the location to users when sending messages to, or receiving messages from the location.
[Save]	This action saves the location in the network database. The List Locations screen is re-displayed.
[Cancel]	Entries made in this screen are discarded and you are returned to the List Locations screen.

Procedure 5-5xxx
Adding a location to a remote site

Starting Point: The main menu

1   Select Network Administration.

2   Select Remote Site Maintenance.

3   Use the cursor keys to highlight the message center to which you want
    to add a location.

4   Press <Spacebar> to select the site.

5   Press [List Locations].

    The List Remote Locations screen is displayed.

6   Press [Add].

    You are prompted for the location number.

7   Enter a unique number for the new location.

8   Press <Return>.

    The Add Location screen is displayed. See Figure 5-14 for ESN
    networks. See Figure for 5-15 CDP networks. See Figure 5-16 for
    Hybrid networks.

9   Fill in the fields as required.

10 To save your changes, go to step 10a.
    To exit the screen, go to step10b.

    a.   Press [Save].

         The location is added to the network database. The List Locations
         screen is displayed.

    b.   Press [Cancel].

         The location is not added to the network database. The List
         Locations screen is displayed.

Viewing and modifying locations

Once you have added locations to the NMS network, they can be modified from the View/Modify Location screen. This screen is identical to the Add Location screen. See the preceding section, "Adding locations to remote sites", for descriptions of the fields.

Procedure 5-6xxx
Viewing and modifying locations

Starting Point: The main menu

1   Select Network Administration.

2   Select Remote Site Maintenance.

3   Use the cursor keys to highlight the message center with which the location you want to modify is associated.

4   Press <Spacebar> to select the site.

5   Press [List Locations].

   The List Remote Locations screen is displayed.

6   Use the cursor keys to highlight the location you want to view or modify.

7   Press <Spacebar> to select the location.

8   Press [View/Modify] softkey.

   The View/Modify Location screen is displayed.

9   Fill in the fields as required.

10 To save your changes, go to step 10a.
   To exit the screen, go to step 10b.

   a.   Press [Save].

       The changes you have made are saved to the network database.
       The List Locations screen is displayed.

   b.   Press [Cancel].

       Any changes you have made are discarded. The List Locations
       screen is displayed.

Deleting locations

Locations associated with remote sites are removed from the network database from the List Locations screen. When you select a location and then press [Delete], a new set of softkeys is displayed.

Messages that have been sent but not delivered to a location that has been deleted are returned with a nondelivery notification (NDN).

Note 1: Before deleting a satellite location, you must delete all users and distribution lists associated with that location. If you do not, you will not be able to delete the location.

Note 2: You cannot delete the prime location.

Figure 5-17xxx
The Delete Location softkeys

| OK to Delete | Cancel | | | |
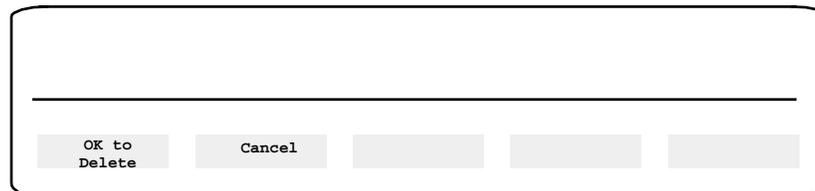
Procedure 5-7xxx
Deleting locations

Starting point   The main menu

1   Select Network Administration.

2   Select Remote Site Maintenance.

3   Use the cursor keys to highlight the message center with which the location you want to delete is associated.

4   Press <Spacebar> to select the site.

5   Press [List Locations].

   The List Remote Locations screen is displayed.

6   Use the cursor keys to highlight the location you want to delete.

7   Press <Spacebar> to select the location.

8   Press [Delete].

   The softkeys shown in Figure 5-17 are displayed.

9   To delete the location, go to step 9a.
To cancel the delete operation and return to the List Locations screen, go to step 9b.

  a.   Press [OK to Delete].

     The system purges the location. You are prompted for another location ID.

     To delete another location, enter the location number and press [OK to Delete].

  b.   Press [Cancel].

     The location is not deleted and the List Locations screen is re-displayed.

Recording site names and location names using the [Voice] softkey

The [Voice] softkey is used to record spoken name verifications for the sites and locations in the network. The recording you make is played to identify the site or location when users compose messages to or receive messages from the site or location.

When [Voice] is pressed, a new set of softkeys is displayed. These provide recording functions such as Play and Record. You can also delete an existing verification and then disconnect when you are finished. When you record a verification, the *Site Name Recorded* and *Location Name Recorded* fields that appear in several of the Network Administration screens are set to "Yes". When there is no recording, these fields are set to "No".

Note 1: A telephone set is required to record names for sites and locations. Ensure that a phone set is available near the administration terminal where you are working.

Note 2: If a site or location is part of a CDP dialing plan only, the [Voice] softkey is not displayed and you cannot record a recorded name. If a verification is recorded for a Hybrid site (or location) which is then changed to CDP-only, the verification is removed. If the site or location is changed back to Hybrid, the verification must be re-recorded.

Figure 5-18xxx
Site and location name recording softkeys

```
┌────────────────────────────────────────────────────┐
│  ┌──────────────────────────────────────────────┐   │
│                                                      │
│                                                      │
│                                                      │
│  ────────────────────────────────────────────       │
│                                                      │
│  extension number >                                  │
│  ┌────────┐ ┌────────┐ ┌────────┐ ┌────────┐ ┌──────────┐ │
│    Return      Play      Record     Delete    Disconnect │
│  └────────┘ └────────┘ └────────┘ └────────┘ └──────────┘ │
└────────────────────────────────────────────────────┘
```
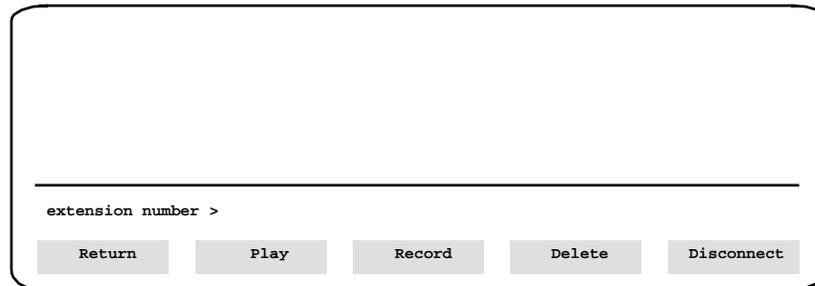
Procedure 5-8xxx
Recording spoken site and location names

Starting point   The Add and View/Modify Site and Location screens

1   Press [Voice].

    You are prompted for an extension number.

2   Enter the extension number of the phone set you will use to record a
    spoken name.

3   To record a new spoken name, go step 3a.
     To play an existing verification, go to step 3b.
     To delete a verification, go to step 3c.
     To return to the original set of softkey, go to step 3d.

    a.   Pick up the handset of the phone and then press [Record]. Wait for
         the beep and record the name for the site or location. When you
         press [Record], a new [Stop] softkey appears. You can press [Stop]
         to stop the recording when you are done.

    b.   Pick up the handset of the phone and press [Play].

         If a verification is recorded, it will be played over the phone.

    c.   Pick up the handset of the phone and press [Delete].

         *If a verification was recorded, it will be deleted and a prompt will be
         played advising you that the recording was deleted.*

    d.   If you are satisfied with the recording, press [Disconnect] or
         [Return] to display the original softkeys.

When you use [Return], the line is not disconnected (unless you hang up the receiver). This means that if you decide to re-record or listen to the recording, you do not have to re-enter the telephone extension after pressing [Voice].

When you use [Disconnect], the line is disconnected and if you press [Voice] to access the recording softkeys again, you will have to re-enter the telephone extension.

Networking scheduling parameters

These parameters control how long messages are kept before they are sent to remote sites, how long unsuccessfully delivered messages are kept before they are purged, and how often the system checks for queued messages and sets up connections for delivery to remote sites. The Networking Scheduling Parameters screen is accessed by pressing <3>, View/Modify Networking Scheduling Parameters, from the Network Administration menu (Figure 5-5). Thresholds (holding times and stale times) and message priorities (urgent, standard and economy) are described near the beginning of this chapter.

Figure 5-19xxx
The Networking Scheduling Parameters screen

```
                      Network Administration

Networking Scheduling Parameters

      Economy Class Initiation Time (hh:mm):      18:00
      Economy Class Stale Time      (hh:mm):      06:00

      Standard Class Holding Time   (hh:mm):      03:00
      Standard Class Stale Time:    (hh:mm):      09:00

      Urgent Class Holding Time     (hh:mm):      00:30
      Urgent Class Stale Time       (hh:mm):      01:30

      Batch Threshold:                              3
      Wakeup Interval (minutes):                    3
      Networking Call Maximum:                      4



      _____

      Save           Cancel
```

The following fields are displayed:

- *Economy Class Initiation Time* This is the time at which delivery of economy messages begins. Economy messages, unlike urgent and standard message, are delivered only once a day at a particular time. Enter the time in hours and minutes in the range 00:00 to 23:59. The default is "18:00".

- *Economy Class Stale Time* The value entered in this field determines the maximum retention time for messages tagged as economy. When this threshold is reached, a non-delivery notice is sent to the originator and the message has to be composed and sent again. Enter the time in hours and minutes in the range 03:00 to 99:59. The default is "06:00".

- *Standard Class Holding Time* The value entered in this field determines the length of time that a standard priority message is retained before the system attempts to send it. A message may be transferred before this holding time expires if a connection is established for another reason, such as delivering urgent messages. Enter the time in hours and minutes in the range 00:00 to 33:20. The default is "03:00".

- *Standard Class Stale Time* The value entered in this field specifies the maximum retention time for messages tagged as standard. If a message is not delivered before this time, a non-delivery notice is sent to the originator. These messages have to be composed and sent again. The time is entered in hours and minutes and must be in the range 00:00 to 99:59. This value must be at least three times the standard class holding time. The default is "09:00".

- *Urgent Class Holding Time* The value entered in this field determines the length of time that an urgent priority message is retained before the system attempts to send it. A message may be transferred before this holding time expires if a connection is established for another reason. The time is entered in hours and minutes and must be in the range 00:00 to 33:20. The default is "00:30".

- *Urgent Class Stale Time* The value entered in this field is the maximum retention time for messages tagged as urgent. If a message is not delivered before this time, a non-delivery notice is sent to the originator. These messages have to be composed and sent again. The time is entered in hours and minutes and must be at least three times the urgent class holding time. The valid range for this field is from 00:00 to 99:59. The default is "01:30".

- *Batch Threshold* The value entered in this field specifies the total number of standard and urgent messages that can accumulate for a given site before delivery commences. The minimum value you can enter in this field is "1". The maximum value is "99" and the default is "20".

- *Wakeup Interval (minutes)* This is the periodic interval at which the networking software checks for messages that are waiting to be sent and sets up the connections required to send those messages. You can enter a value in the range 1 to 99. The default is "5".

- *Networking Call Maximum* The maximum number of simultaneous outgoing networking calls permitted. If this maximum is reached, no new outgoing sessions will be attempted. This limit applies to both Meridian Networking calls and AMIS Networking calls. You can enter a value in the range 1 to 9. The default is "4".

The following actions are possible from this screen:

[Save]	Any changes you have made are saved. The Network Administration menu is displayed.
[Cancel]	Any changes you have made are not saved. The Network Administration menu is displayed.

Networking verification test

Before adding a remote site to the Meridian Mail network you should perform a verification test to ensure proper operation of the networking service between the local site and the remote site. This is a loopback test which verifies network message delivery between systems. Instead of delivering a voice message to a remote system, this test delivers the message back to your system.

Note: This test requires one outbound trunk, one inbound trunk, and two 2500 set lines - one for outgoing and one for the incoming Networking call. Sites with only one modem cannot perform the loopback test.

Figure 5-20xxx
The Networking Verification Test screen
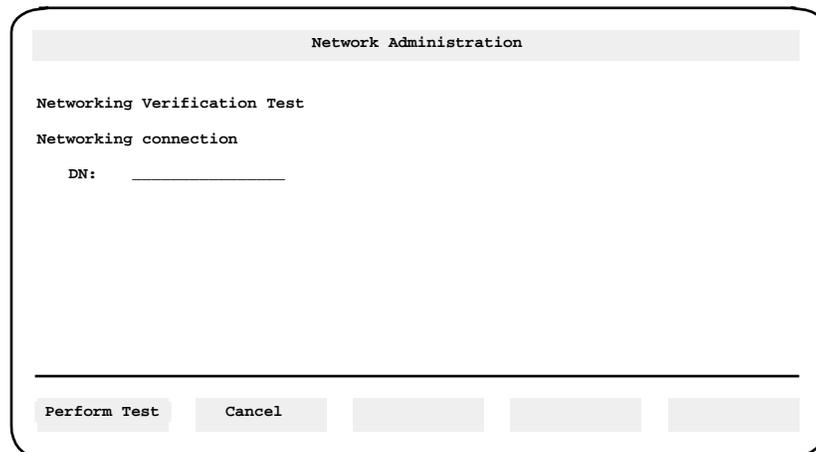
```
                          Network Administration


   Networking Verification Test

   Networking connection

      DN:         _____




   _____

      Perform Test        Cancel
```

Procedure 5-9xxx
Performing a networking verification test

Starting point The main menu

The verification feature ensures that at least two data lines are configured. If not, an error message appears and you are returned to the Network Administration menu. If the lines are configured the Networking Verification Test screen is displayed.

1 Select Network Administration.

2 Select Networking Verification Test.

3   Enter the DN of the loopback connection.

The directory number cannot be a local extension number. It must be external to the switch. The loopback DN must dial out of the switch and re-enter it. It should therefore include the outbound trunk access code (such as "9"), and a number that accesses an incoming trunk and terminates on the networking service. Typically the loopback DN is the phone number that other sites dial to reach the local site.

4   To perform the test, go to step 4a.
   To exit, go to step 4b.

   a.   Press [Perform Test].

   A message is automatically created and submitted to the networking service for delivery. The Networking call is placed and the networking service accepts the incoming call.

   If the connection fails, the loopback feature retries the number. If failure persists the loopback feature abandons the test after 10 minutes and informs you of this.

   If the call is successfully made, the message is transferred over the connection. Upon transfer completion the loopback feature verifies that the message has been received and is valid. You are informed of the test results. If the loopback fails, consult the SEER log for the specific reason.

   The loopback test causes any active transfers with other sites to be terminated. This is normally not a problem because the site verification test is run before the site joins the live network. However, this will delay message delivery if you use loopback to perform diagnostics on a live site that is experiencing problems (normal operation resumes once the tests are completed).

   Press [Cancel] at any time to stop the test.
   To restart the test, go to step 4a.
   To exit, go to step 4b.

   b.   Press [Cancel].

   You are returned to the Network Administration menu.

Printing network data

The [Print Network Data] softkey on the Network Administration menu allows you to print the local and remote site information in the database.

Procedure 5-10xxx
Printing local and remote site information

Starting point The main menu

1 Select Network Administration.

2 Ensure that the printer is on line.

3 Press [Print Network Data].

   The network data (local and remote site information) is printed. The menu prompt reappears when the printing is completed.

4 Press [Cancel] at any time to stop printing. The printing will stop at the end of the current site or location entry.

Viewing the networking status

The [Networking Status] softkey on the Network Administration menu allows you to view the Networking Status screen which lists the activity status of the networking service at each site in the network and the number of economy, standard and urgent messages that are queued for transmission to remote sites.

Figure 5-21xxx
The Networking Status screen

```
                        Network Administration


    Networking Status

    Total Number of Remote Sites:    nnn

    Site      Site Name       #Status       #Economy     #Standard     #Urgent

    nnn       xxxxxxxxx       Ready         mmm          nnn           nnn
    nnn       xxxxxxxxx       Error         nmnv         nnnn          nnn
    nnn       xxxxxxxxx       Disabled      mmmm         mmmm          mmm
    nnn       xxxxxxxxx       Idle          nnnn         nnnn          nnnn
    nnn       xxxxxxxxx       Active        nnnn         nnnn          nnnn




    _____


        Exit                                                  Update
```

The following read-only fields are displayed:

- *Total Number of Remote Sites* This field displays the number of remote sites that are currently configured in the network database.

- *Site* The remote site number. The number of each configured remote site is listed in this field.

- *Site Name* The site name corresponding to the site number.

- *Status* The current status of the networking service at that remote site. The status may be one of the following:

    - *Active -* indicates that the networking service is operational and is currently sending or receiving messages.

    - *Idle -* indicates that the networking service is operational but that there are no networking messages waiting to be delivered.

- *Ready -* indicates that networking messages are queued and are ready to be transmitted.

- *Error -* indicates that the networking service failed to deliver a message to the specified remote site (after three attempts).

- *Disabled -* indicates that message transfer has been disabled for the site. This usually indicates that a site has been taken down for maintenance.

- *#Economy* The number of economy messages that are queued at the specified site for transmission to other sites.

- *#Standard* The number of standard messages that are queued at the specified site for transmission to other sites.

- *#Urgent* The number of urgent messages that are queued at the specified site for transmission to other sites.

The following action is possible from this screen:

[Exit]	The Network Administration menu is displayed.
[Update]	Updates the status.

Clearing errors at remote sites

The [Clear Remote Error Sites] softkey on the Network Administration menu can be used to reset error conditions on the network.

Procedure 5-11xxx
Resetting error conditions

Starting point The main menu

1 Select Network Administration.

2 Press [Clear Remote Error Sites].

   Any remote site status that shows error conditions is cleared. Use the Networking Status screen to verify the status of the network.

List of terms

Full mailbox number

The *full mailbox number* is a user's local mailbox number prefixed by all necessary location identification digits.

Local mailbox number

The *local mailbox number* is the same as the Meridian 1/SL-1 directory number that is configured on the DMS/SL-100 (if mailbox numbering follows the dialing plan in the Meridian 1/SL-1).

Local site

The *local site* refers to all of the locations served by the Meridian Mail server.

The *local site* refers to your Meridian Mail system.

Location

A *location* is a logical representation of mailbox numbers that may reside on a single switch or that may be spread out across a number of switches.

Network format

Network format indicates that any necessary location codes, such as a CDP steering code or ESN prefix, must be included when entering a user's address or a VSDN. In the case of ESN, the prefix includes the access code of the *prime* switch and the routing prefix of the satellite location.

Prime location

The *prime location* is the location representing the prime switch. Users that reside on the prime switch are added to the prime location.

Prime switch

The *prime switch* is the Meridian 1/SL-1 to which the Meridian Mail server (with the NMS feature installed) is connected.

Remote site

A *remote site* indicates all of the locations served by another Meridian Mail server (Meridian Networking).

A *remote site* indicates another system served by a separate Meridian Mail server which is connected to the local site using Meridian Networking.

Satellite location

A *satellite location* represents one of the satellite switches. Users that reside on a satellite switch are added to the corresponding satellite location.

Satellite switch

A *satellite switch* is any Meridian 1/SL-1 in the NMS network other than the prime switch. In other words, it is a Meridian 1/SL-1 that is not connected to its own Meridian Mail server, but rather is serviced by the prime switch.

Site

A *site* refers to a Meridian Mail server and all of the switches that it supports.

Index

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Reader's Response Form
for

Meridian Mail
Networking Services Administration Guide, 555-7001-335,
March 1994

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.)

    _____

    _____

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

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Reader's Response Form

Meridian Mail

Networking Services Administration Guide

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