Meridian IVR

System Administration Guide

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Publication history

February 1996

This document is the first standard issue for Meridian IVR release 2.0/I.

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About this guide

Who should use this guide

This guide is written for Meridian Interactive Voice Response (IVR) value-added developers, distributors, installers, and system administrators.

This guide assumes that you have a basic knowledge of UNIX and are familiar with Meridian Mail.

How to use this guide

This guide contains the following chapters and appendices:

Chapter 1: System configuration

Provides an overview of basic concepts that allow you to configure a Meridian IVR system.

Chapter 2: File backup and restore

Introduces the backup tool and its uses.

Chapter 3: Managing prompts

Explains how to create and modify voice prompts using the Voice Prompt Editor. As well, this chapter introduces how to transfer, back up, or restore prompts with the Voice Prompt Transfer tool.

Chapter 4: Managing applications

Explains how to load, unload, start, and stop applications along with how to assign applications to different channels.

Chapter 5: Running reports

Outlines the various reports that you can generate with the Systems Report option.

Chapter 6: Using information databases

Provides an overview of the Meridian IVR built-in database facility.

Appendix A: Standard prompts

Lists the standard English and French prompts.

Appendix B: Host error messages

Lists the host error messages, provides a summary of each message's meaning, and suggests what action you can take for each message.

Appendix C: Tools

Describes the tools available on Meridian IVR 2.0/I.

Appendix D: Error codes and severity levels

Describes how the severity file translates a log event into a severity level, text string and action.

Appendix E: Connectivity diagrams for Meridian IVR and Meridian Mail.

Illustrates various methods of connecting the Meridian IVR Application Processor to Meridian Mail, and provides guidelines for each configuration.

Additional Meridian IVR guides

You may find the following manuals useful while reading this guide.

Manual	NTP Number
Meridian IVR Product Guide	555-9001-010
Meridian IVR Planning and Engineering Guide	555-9001-200
Meridian IVR Installation Administration	555-9001-210
Meridian IVR Getting Started Guide	555-9001-301
Meridian IVR Application Development Guide	555-9001-310
Meridian IVR 3270 Gateway Development Guide	555-9001-312
Meridian IVR SQL Server Guide	555-9001-314
Meridian IVR VT100 Gateway Development Guide	555-9001-316
Meridian IVR 5250 Guide	555-9001-318
Meridian IVR Fax Application Guide	555-9001-350
Meridian IVR Maintenance and Diagnostics Guide	555-9001-500

Other documentation

The following documents are also referred to in this guide.

Manual	NTP Number
Meridian ACCESS Developer's Guide	555-7001-316
Meridian Mail Site and Installation Planning	555-70x1-200
Meridian Mail System Administration Tools	555-7001-305
Meridian Mail System Administration Guide	555-7001-300

Conventions used in this guide

Throughout this guide, several typographic conventions have been used to highlight certain types of information:

- Buffer names are shown in all upper-case characters—for example, the CURRENT MESSAGE buffer.
- Commands you must type are shown in bold—for example, type **sam** at the prompt.
- Key names you press are enclosed in angle brackets—for example, the <Enter> key.
- Softkeys shown on the screen that are mapped to function keys are enclosed in square brackets—for example, the [Save] softkey.
- Variables shown in command lines appear in italics—for example, the host_cfg*n* file, where *n* is a variable representing a board number.
- Screen output is shown in `courier`.

Chapter 1: System configuration

This chapter explains how to configure a basic Interactive Voice Response (IVR) system and covers the following topics:

- accessing the System Configuration window
- allocating sufficient disk space for the voice prompts
- defining node characteristics
- configuring voice channels
- monitoring the IVR system

Accessing the System Configuration window

Access the System Configuration window from the Application Processor console as shown in Figure 1-1. The following procedures show you how to use the console.

Figure 1-1
Meridian IVR login window

Procedure 1-1
Accessing the System Configuration window

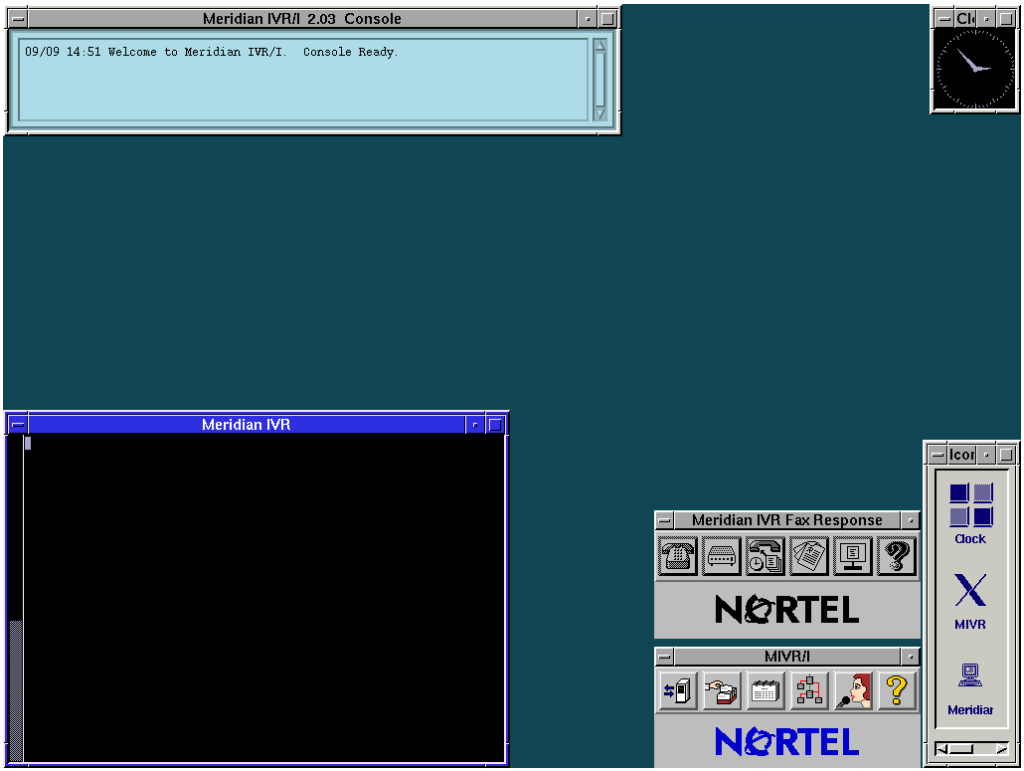
1 To log into the system, type **vad** in the console login box, and press <Enter>.

2 Type **vad1** in the password box, and press <Enter>.

Note: For system administrators, type **admin** at the console login prompt, and **admin1** in the password box.

You are now logged in to the Meridian IVR system. See Figure 1-2 for an illustration of the Meridian IVR MMI desktop.

Figure 1-2
MMI desktop for vad or root accounts



On the Meridian IVR GUI desktop, a series of smaller “windows” appear. Use the Meridian IVR main menu, shown in Figure 1-3, to create, run, and manage Meridian IVR applications.

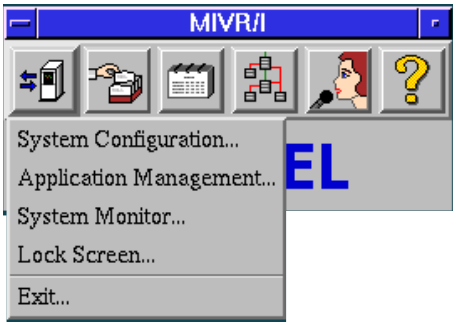
Figure 1-3
Meridian IVR main menu

3 Each menu bar option shown in Figure 1-3 displays a pull-down menu.

All the channel and system configuration is performed in windows available through the System Administration icon.

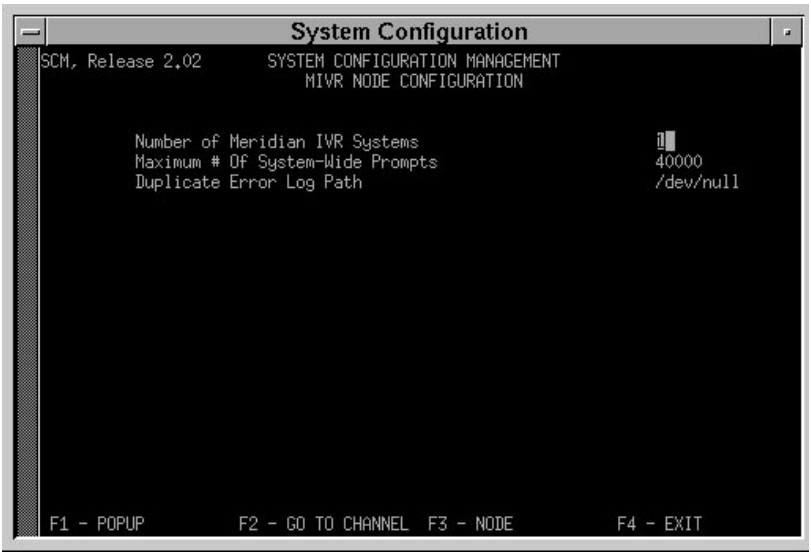
4 To set up or modify your Meridian IVR system configuration, click on the System Administration icon with the left mouse button to display the pull-down menu (see Figure 1-4).

Figure 1-4
System Administration pull-down menu



5 From the menu, select the System Configuration option to display the System Configuration window (see Figure 1-5).

Figure 1-5
System Configuration window



ATTENTION!

Choose your initial configuration settings carefully to reduce the need to make changes. If you need to change any of the configuration settings after you start Meridian IVR, you must stop all applications, unload them, then stop Meridian IVR.

Determining system resource requirements

Before you configure Meridian IVR, consider the system resources that you need such as storage space for the voice files (messages) and channel configuration requirements.

Mailboxes

Meridian IVR applications require a Meridian Mail account, or mailbox, to store voice files. More than one application or voice channel can share the same mailbox. If they use the same voice files, they *must* share the same mailbox.

Each configured IVR channel uses one mailbox determined by the administrator. All IVR channels should be configured to use the same mailbox, but this is not mandatory.

Meridian IVR voice files

Meridian IVR plays and records voice data in voice files residing in Meridian Mail. Meridian IVR has two types of voice files, described in the following paragraphs. For further information about voice files, refer to the *Meridian ACCESS Developer's Guide* (NTP 555-7001-316).

Voice message files

These files store voice messages recorded by Meridian IVR. One file stores up to 14 minutes (840 seconds) of sound. You can address and submit the file to the Meridian Mail voice messaging system for delivery.

Voice segment files

These files store all Meridian IVR text and voice prompts. One file can contain up to 1000 voice segments (prompts). Each voice segment in the file consists of a recorded voice, a descriptive name and title, and a text field that stores the script of the recorded voice prompt.

The recorded voice prompts are usually brief (from less than a minute to a maximum of five minutes). Recorded prompts, or segments, can consist of sentences, words, or syllables. Prompts are typically concatenated (chained together) during playback.

Refer to Chapter 3, “Managing prompts,” for a description of Meridian IVR prompts.

Allocating prompt and message numbers

During configuration, Meridian IVR requires that you allocate the maximum number of prompts that you plan to have on your system. You should set the maximum number of prompts to allow for the addition of other application prompts and/or languages. The default number of prompts is 2000.

Number ranges are set aside for the groups of prompts that you are going to use. The range is called a language offset. All prompts stored within the range numbered from 0 to 1999 become system-wide prompts. System prompts include numbers and dates which are used by the Meridian IVR system.

Table 1-1 shows an example of the ranges set aside for system prompts on a Meridian IVR system. If the default number of system prompts is left at 2000, the system has space for four languages.

Table 1-1
System prompt information

Language	Number of system prompts per language	Prompt maximum per language	Language offset
English	321	1000	0 - 999
French	322	1000	1000 - 1999
German	-	1000	2000 - 2999
Spanish	-	1000	3000 - 3999

Note: The value selected for the maximum number of voice segments affects storage space which is allocated through Meridian Mail.

Meridian IVR can also assign a number to each message that is left in a Meridian IVR mailbox. When assigning a number to a message, Meridian IVR uses numbers outside the range specified for the voice prompts. For example, if the number you enter for maximum prompt storage is 3500, then voice messages have an assigned number starting with 3500.

In this way, Meridian IVR differentiates between mailbox items that are messages and items that are Meridian IVR prompts.

Multilingual requirements

The multilingual capabilities of Meridian IVR significantly increase the number of prompts you must allocate. If you allocate a total of 3000 segments for prompts in one language, you need to allocate 6000 for prompts in two languages, or 9000 for three languages.

You must determine the extent to which the LANG cell is to be used in your applications before you allocate numbers for the prompts. For more information on the LANG cell, see the *Application Development Guide*, NTP (555-9001-310).

Meridian Mail disk space

Because Meridian IVR stores all voice prompts and messages on the Meridian Mail system, you should ensure that the mailboxes you build for Meridian IVR are configured with sufficient voice storage. When configuring a Meridian IVR system with a single mailbox, voice message files and voice segment files which are application dependent typically require 90 minutes of disk space on Meridian Mail.

On multi-node Meridian Mail systems, you can improve performance by setting up multiple mailboxes on different Meridian Mail nodes (preferably nodes whose voice channels are used by Meridian IVR).

> ***Note:*** Storage requirements should be discussed with the application developer. To determine the details on system sizing, refer to *Meridian Mail Site and Installation Planning* (NTP 555-70x1-200).

Identifying voice processing nodes and prompts

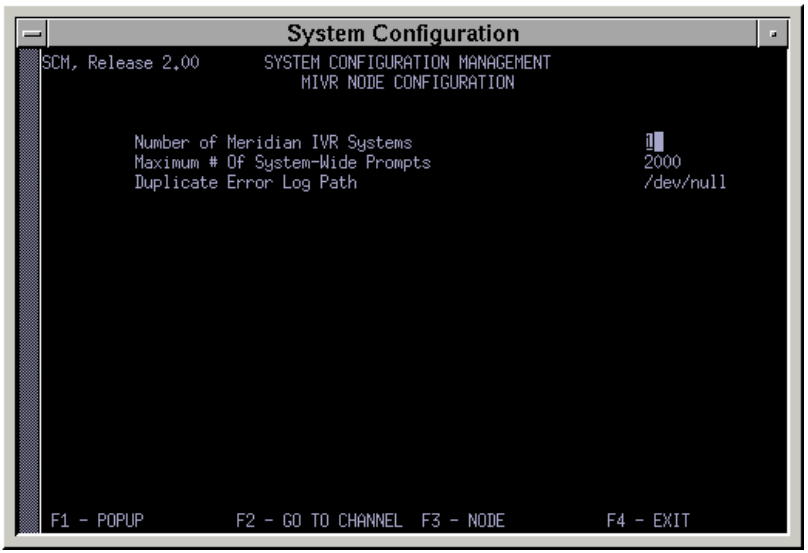
From the System Configuration window, you configure the number of voice processing systems (Meridian Mail) and the number of prompts for your Meridian IVR system.

Procedure 1-2
Setting the number of prompts

1 From the System Administration menu, select the System Configuration option.

The MIVR Node Configuration window appears, as shown in Figure 1-6.

Figure 1-6
The Node Configuration window



The following is an explanation of the fields in this window:

The Duplicate Error Log Path field allows you to designate another transaction path for log messages. This can be a printer or a com port.

The Maximum # Of System-Wide Prompts field determines the boundaries for the prompt and message numbers for all applications on the system. For more information on prompt and message management, refer to Chapter 3 “Managing prompts.”

The Number of Meridian IVR Systems field identifies the number of Meridian IVR systems.

CAUTION!
Risk of system failure

The Number of Meridian IVR Systems field is always set to the default value 1. Do not modify this value.

ATTENTION!

Once you choose values for the Maximum # Of System-Wide Prompts parameter, you determine the boundaries for the prompt and message numbers stored on the system for all applications, present and future. Prompt and message management is discussed further in Chapter 3 “Managing prompts.”

CAUTION!
Risk of system interruption

After you start using Meridian IVR, you should use caution in changing the parameters for the number of system-wide prompts. If the threshold is increased, you are not able to access some messages. If the threshold is decreased, you are not able to address some prompts.

2 To edit the Maximum # Of System-Wide Prompts field on this window, use the arrow keys, <Tab> key, or <Enter> key to move the cursor to that field, and enter the new value.

Note: The valid values for the Maximum # Of System-Wide prompts are 1 to 55 296. The default value is 2000.

3 Press <Enter> to make Meridian IVR accept the new value.

The system checks the validity of the value. If your entry is invalid, the terminal beeps and displays a message telling you so. If the entry is valid, the cursor advances to the next field.

4 To return to the configuration window without exiting, use the <Escape> key. To exit the System Configuration window, press <F4>.

The Save changes? window appears.

If you want to save the changes you have made, press <Enter>, or press <F3> to accept the Yes default. If you do not want to save the changes, use the arrow keys to highlight the No default and press <Enter>, or press <F4>.

Node characteristics

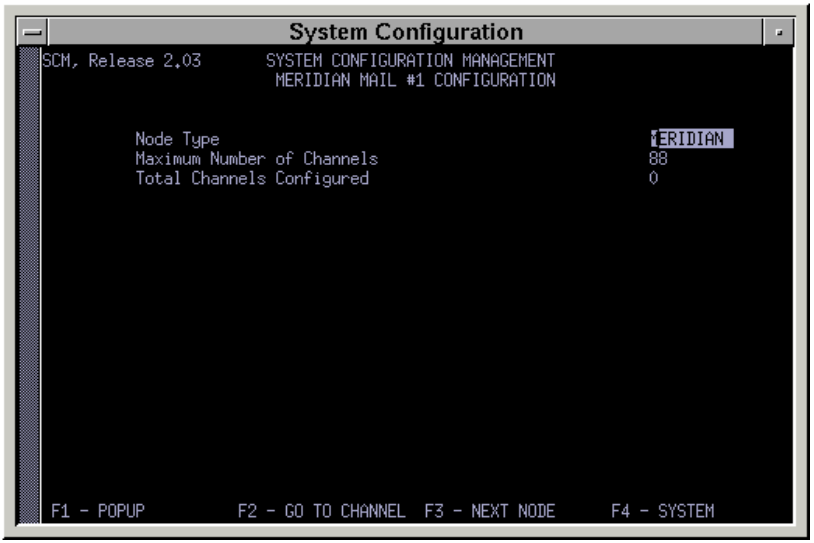
The two fields that each node must define are the Maximum Number of Channels and the Total Channels Configured.

Procedure 1-3
Defining node characteristics

1 From the System Configuration Management window (see Figure 1-6), press <F3> to move to the Node Configuration window.

The Node Configuration window appears for node 1, as shown in Figure 1-7.

Figure 1-7
Node Configuration window



Note: The Total Channels Configured field indicates the number of channels that are configured specifically for Meridian IVR. Its valid value is hardware-dependent, and its default value is 0.

CAUTION!
Risk of performance degradation

The Maximum Number of Channels field identifies the maximum number of channels that can be configured for a particular node. It is very important for this field to reflect the number of Meridian IVR channels configured from the Meridian Mail side (that is, if only four channels have been configured to run Meridian IVR on Meridian Mail, this value should be 4).

2 Once you make changes to the values, select one of the following function keys:

<F2> to go to any channel in the system

<F3> to go to the next node in the system

<F4> to return to the System Configuration window

Configuring channels

To define operational characteristics for each voice channel configured for Meridian IVR, follow these steps:

Procedure 1-4
Choosing channels for configuration

1 From either the System Configuration window or the Node Type Configuration window, press <F2>.

Meridian IVR displays the following prompt at the bottom of the window:

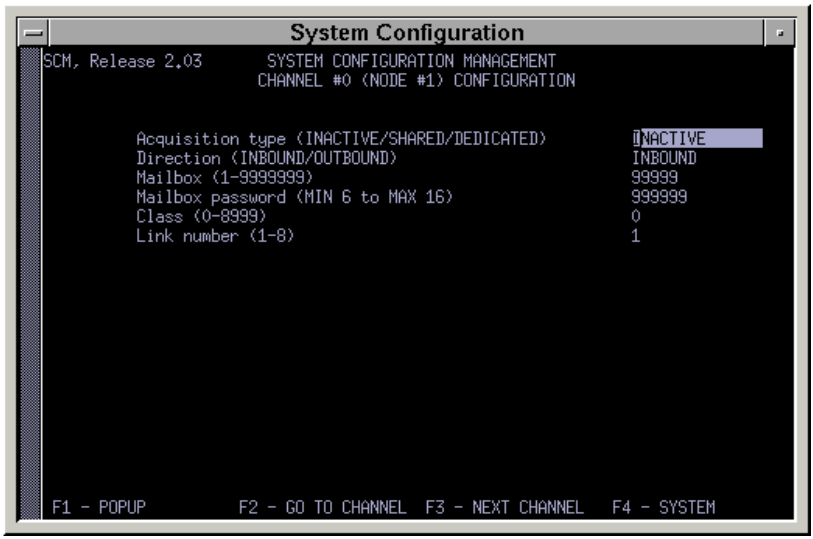
```
Enter CHANNEL Or NODE:CHANNEL
(Ranges may be used. For example, 1:16-32): 1:0
```

2 Using the format NODE:CHANNEL, enter a channel number then press <Enter>.

Note: The entry **2:3** indicates that you want to define characteristics for channel 3 on node 2. If you specify only the channel digit, Meridian IVR assumes that you want to edit that channel on node 1.

Meridian IVR displays the Channel Configuration window as shown in Figure 1-8.

Figure 1-8
Channel Configuration window



Channel configuration values

The following section explains each of the six fields displayed on the Channel Configuration window (see Figure 1-8). As well, their valid and default values are listed.

Acquisition type (INACTIVE/SHARED/DEDICATED)

Specifies if the channel is used by Meridian IVR only (dedicated), or if the channel is used with other Meridian Mail applications, such as voice mail or voice menus (shared), or if the channel is taken off line (inactive). A dedicated channel provides better system performance than a shared channel because it requires less administrative housekeeping from Meridian Mail. Up to 24 Meridian Mail channels per 9600 baud ACCESS link can be used in shared mode by Meridian IVR. In dedicated mode, 48 Meridian Mail channels per 9600 baud ACCESS link can be used.

Valid values: INACTIVE, SHARED, DEDICATED

Default value: DEDICATED

ATTENTION!

INACTIVE channels consume a Meridian Mail resource. You cannot, however, load an IVR application on a channel marked as INACTIVE.

Direction (INBOUND/OUTBOUND)

Each channel must be designated as either inbound or outbound only. Both channels permit transfer and conference features. Incoming phone calls are received on inbound channels, whereas outgoing phone calls are initiated on outbound channels. To perform outdialing, an application must have a channel configured as outbound. As well, outbound channels cannot be used in conjunction with shared port allocation.

Valid values: INBOUND, OUTBOUND

Default value: INBOUND

Mailbox

Specifies the mailbox used by the channel.

Valid values: 1–9999999

Default value: None

Mailbox password

Specifies the password that permits access to the mailbox associated with this channel. The minimum number of characters needed is 6 and the maximum number of characters is 16.

Valid values: 1–9999999

Default value: None

ATTENTION!

To help ensure that your system is secure, choose different numbers for your mailbox and your mailbox password.

Class

Identifies a group of one or more channels on Meridian Mail.

Valid values: 0–8998

Default value: same number as channel

Link number

The ACCESS link number on which the IVR channel communicates.

Valid values:1–8

ATTENTION!

Only links cabled between the IVR system and Meridian Mail accept calls. Using other link values within the valid range does not generate an error during configuration.

As shown in Figure 1-3, the Channel Configuration window displays a list of six fields.

Procedure 1-5
Configuring individual channels

1 To change either the Acquisition type or the Direction, use the arrow keys to move to that field.

2 Press <F1> to display the pop-up window that lists the available values.

Note: You can cancel the window by pressing <Esc>.

3 Using the arrow keys, select the appropriate value and then press <Enter>.

4 To enter the Mailbox, Mailbox password, Class, or Link number, use the arrow keys to move to the field, and enter the numbers by using the keypad.

5 When you have finished configuration changes for this channel, press one of the following function keys:

<F2> to go to any other channel in the system

<F3> to go to the next channel on the current node

<F4> to return to the System Configuration window

Exiting System Configuration

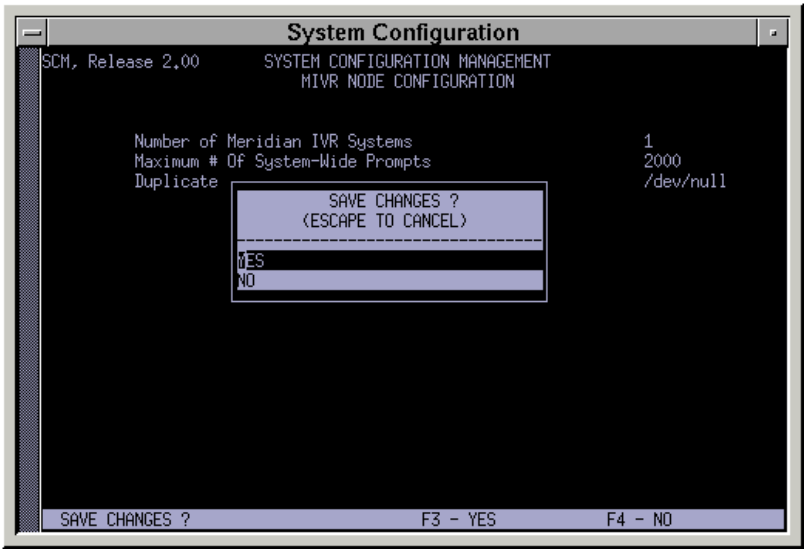
Once values for any of the channels have been changed, the changes must be saved before exiting the System Configuration option.

Procedure 1-6
Saving and exiting the System Configuration

1 From the System Configuration Management window, press <F4> to exit.

Meridian IVR displays the Save Changes? pop-up window (see Figure 1-9).

Figure 1-9
Save Changes pop-up window



2 If you want to exit System Configuration and save your configuration changes, select Yes and press <Enter>, or press <F3>.

If you want to exit System Configuration without saving your configuration changes, select No and press <Enter>, or press <F4>.

In either case, you exit System Configuration, and the Meridian IVR interface is redisplayed.

If you decide not to exit System Configuration, press <Esc> to abandon the Save Changes? pop-up window.

Establishing new configurations

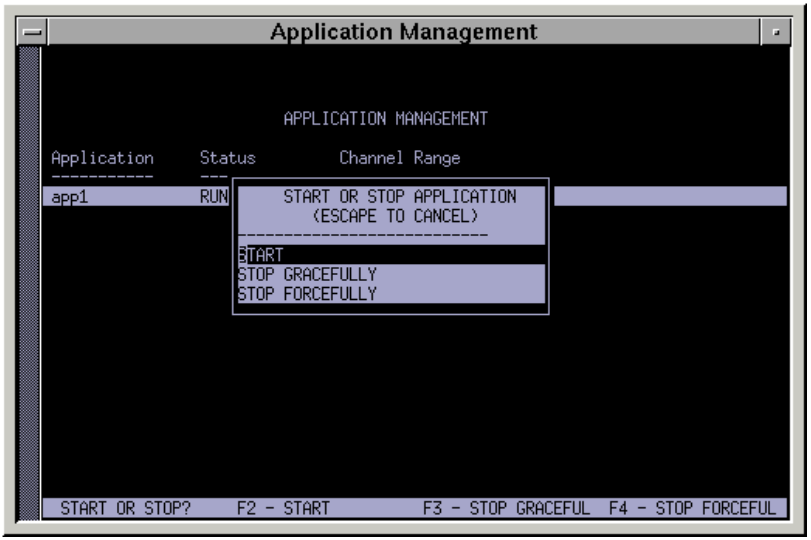
When you start the applications processor, if correctly configured, Meridian IVR is automatically started in the background. However, once you have configured the node and channels (or whenever you modify the configuration settings), you must restart Meridian IVR; otherwise, the previous settings are in effect.

Procedure 1-7
Restarting Meridian IVR

1 From the Application Management window (with at least one application running), press <F2>.

The pop-up menu as shown in Figure 1-10 appears.

Figure 1-10
Application Management pop-up menu



2 Select Stop Gracefully from the pop-up window.

3 Point to anywhere on the desktop, click on the right mouse button, then select the MIVR reset option from the root background menu.

Note: Meridian IVR stops the applications that are running with minimal effect to users on a live system. Callers are redirected to the revert directory number (DN) until the Meridian IVR core (application executing) software reset is complete.

A pop-up window appears asking you to confirm the Meridian IVR reset.

4 Click on Yes.

The Meridian IVR Console window displays a series of messages as the Meridian IVR software is stopped, restarted, and becomes fully operational again. It takes several minutes to restart the software.

5 Restart all stopped applications. Certain applications can restart automatically.

Testing the ACCESS link

When Meridian IVR starts, the ACCESS link is synchronized. You can test the communication link between the application module and Meridian Mail by using the Access Diag. option. You can view various statistics about the link, and restart the link, if necessary.

Procedure 1-8
Testing the ACCESS link

1 Access the Access Diag. option by pointing anywhere on the desktop and clicking on the left mouse button.

A root background menu appears.

2 Select the Access Diag. option.

3 Enter Link Number (1 by default). Valid link numbers are 1 to 8.

Meridian IVR displays the System Status window as shown in Figure 1-11 that indicates the current status of the ACCESS link.

Figure 1-11
System Status window

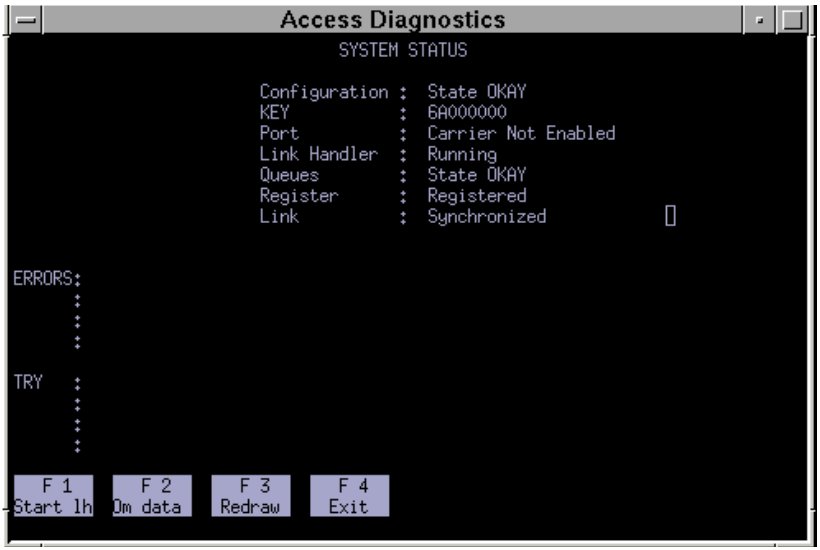


Table 1-2
ACCESS link function keys

Key	Function	Description
<F1>	Start lh	Starts the ACCESS link handler.
<F2>	Om data	Displays various operational measurements.
<F3>	Redraw	Refreshes the window.
<F4>	Exit	Returns to the Meridian IVR interface.

For further information about this tool and the Meridian ACCESS link, refer to the *Meridian IVR Installation Guide* (NTP 555-9001-210), or contact your Northern Telecom (Nortel) service representative.

The System Monitor

Meridian IVR also allows you to monitor your voice system/application processor configuration by using the graphical System Monitor. The System Monitor tracks the current channel activity and presents the current system configuration.

Procedure 1-9
Monitoring channel status

1 From the System Administration pull-down menu, select the System Monitor option.

Meridian IVR displays a main administration window, identifying your system components, as shown in Figure 1-12.

Figure 1-12
System Monitor window

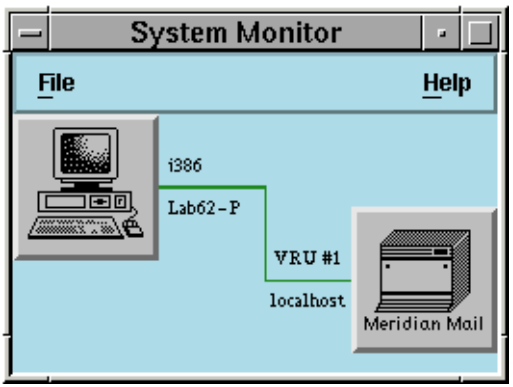


Table 1-3
Parts of the System Monitor window

Characteristic	Description
Menu bar	Contains File and Help options. Select these options to access pull-down menus of related functions.
Application processor (MIVR) icon	Represents the Meridian IVR application module.
Application processor identifier	Identifies the Meridian IVR application module, including the hardware type and system name. Figure 1-12 specifies that the Meridian IVR system, which is named “lab 62-P”, runs on an Intel 386.
Node identifier	Identifies the node by ID number and name. Figure 1-12 specifies that the Meridian IVR system includes a node designated as VRU #1 and named “localhost.”
Meridian Mail icon	Represents the Meridian Mail system.

Channel activity

Using the Meridian IVR system monitor, you can monitor the channel activity on the system.

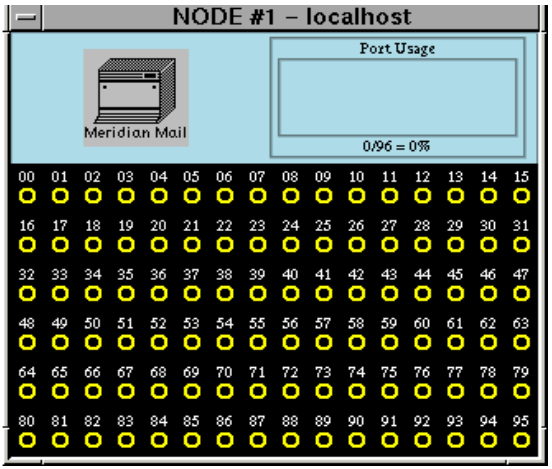
Procedure 1-10
Displaying channel activity

1 From the System Monitor window, click on the Meridian Mail icon.

The node window appears showing real time activity on the node’s voice channels. The status lights indicate whether a channel is active, idle, or unavailable for incoming calls (see Figure 1-13).

2 Click on the Meridian Mail icon to return to the System Monitor window.

Figure 1-13
Sample node window



Parts of the node window

The node window is comprised of several distinct parts which provide relative information in real time (that is, the information displayed on this window changes when the activity on the system changes).

Table 1-4
Parts of the node window

Characteristic	Description
Node icon	Identifies the node type.
Channel board	Displays a simulated board of lights for each voice channel on the node.
Filled yellow circle	Indicates that the channel is active with an inbound call.
Filled gray circle	Indicates that the channel is active with an outbound call.
Hollow yellow ring	Indicates that this channel is designated for inbound calls.
Hollow gray ring	Indicates that this channel is designated for outbound calls.
No light	Designates an unavailable channel; the channel is either reserved for outdial purposes or does not exist in the system. Either way, an inbound call can never be accepted.

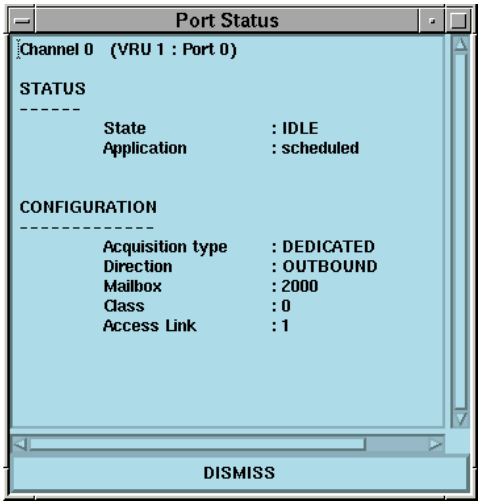
When Meridian IVR is started, the ACCESS link is synchronized automatically. When Meridian IVR is stopped, the state of the link changes to “unknown.” If you start the ACCESS link handler from the System Status window using the <F1> key, the window may be disoriented due to synchronization.

Procedure 1-11
Monitoring a specific voice channel

1 Click on the channel you want to view with the left mouse button.

The System Monitor displays the Port Status pop-up window (See Figure 1-14). This window is not in real time. This window illustrates the parameters you configured for a particular channel; in this case the channel is 0.

Figure 1-14
Port Status pop-up window



2 To close the Port Status pop-up window, click on Dismiss with the left mouse button.

3 Then, to exit the Node pop-up window and return to the System Monitor Administration window, click on the Node toggle button.

Port Status Values

This section explains each of the seven fields displayed on the Port Status pop-up window. As well, their valid values are listed.

State

This field describes channel activity. Active channels indicate that an application has been started and that it accepts inbound calls. Idle channels are either actively processing a call or have been busied out to prevent new calls from arriving.

Valid values: IDLE, ACTIVE, BUSIED OUT, NOT AVAILABLE

Application

Names the application running on the channel, the application that is currently loaded, if any, and the ID number assigned to the application.

Valid values: ACTIVE, INACTIVE, IDLE, BUSY, MAKE BUSY

Acquisition type

Identifies whether the channel is dedicated to Meridian IVR or shared with other Meridian Mail applications.

Valid values: SHARED, DEDICATED

Direction

Identifies whether the channel accepts incoming or outgoing calls.

Valid values: INBOUND, OUTBOUND

Mailbox

Specifies the mailbox number used by the channel.

Class

Identifies a group of channels on Meridian Mail.

Access link

This is the link between Meridian Mail and Meridian IVR.

Exiting the System Monitor

Procedure 1-12
Exiting the System Monitor

1 In the System Monitor window, select the Exit option from the File pull-down menu.

The System Monitor window closes.

Chapter 2: File backup and restore

You can use the Meridian IVR Backup Tool to back up and restore application-related and IVR related files by issuing UNIX commands from a shell.

This tool is not designed to backup UNIX system files. If you need to do this, use the SCO backup utility.

This chapter describes the Backup Tool and the windows associated with each of the two processes (backup and restore) available from the Backup Tool window. The backup process includes how to

- specify, modify, add, and remove backup list files
- perform immediate backups
- schedule and unschedule backups
- view the list of scheduled backups

The restore process includes how to

- view the contents of previous backups
- restore all files or only selected files

The final section describes various errors which are reported by the tar system, including

- immediate backup errors
- schedule/unschedule backup errors
- restore/view errors
- restore/restore errors

A default backup list exists which includes all the required application and environment files and directories. You should always consider backing up the user function executables (residing in the */u/ivr/exe* directory) which are not included in the backup default list.

Depending on the type of account being used, the Backup Tool displays different information. For example, a scheduled backup can be unscheduled only by the account that created it.

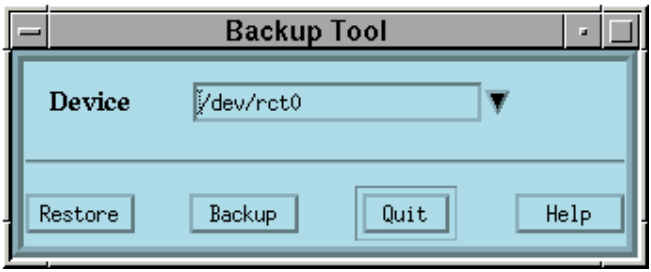
Backup Tool

Procedure 2-1
Accessing the Backup Tool

1 To access the Backup Tool, press the left mouse button on the desktop background, and select Backup Tool from the pull-down menu.

The Backup Tool window appears, as shown in Figure 2-1.

Figure 2-1
Backup Tool window



The default device is /dev/rct0. Once the backup device has been specified, various backup functions can be performed. These functions are displayed at the bottom of the Backup Tool window.

Procedure 2-2
Changing the backup device

1 Click on the text entry box, and type another device name in the Device field.

This is now the selected backup device.

2 To continue the backup process, click on Backup. To exit from this window, click on Quit.

The following function buttons are available from the Backup Tool window:

Restore
Restores files from a previous backup tape.

Backup
Schedules or unschedules backups, displays the list of scheduled backup times, or does an immediate backup. It also enables files to be added or deleted from backup lists.

Quit
Quits or exits the Backup Tool.

Help
Displays general help about the Backup Tool.

The Backup Tool includes an embedded window which displays errors related to immediate backups or restores. The errors written to this window are also written to the /tmp/backup.log file. Any errors generated by scheduled backups are only written to the /tmp/backup.log file. Only I/O errors are reported. Refer to “GUI-based Backup Tool error reporting” on page 2-15 for details and sample errors. All errors appear in the System Console window.

Backup function

A backup list file contains a list of all of the files and/or directories which are to be written onto tape during the next immediate or scheduled backup. The default backup list file is /u/ivr/backup/backup_default.bup.

On a newly installed system, the Backup Tool creates this default file the first time the tool is run. To return this file back to its standard default contents, remove or rename the backup file (this must be done through a UNIX shell using the rm or mv commands) and restart the Backup Tool.

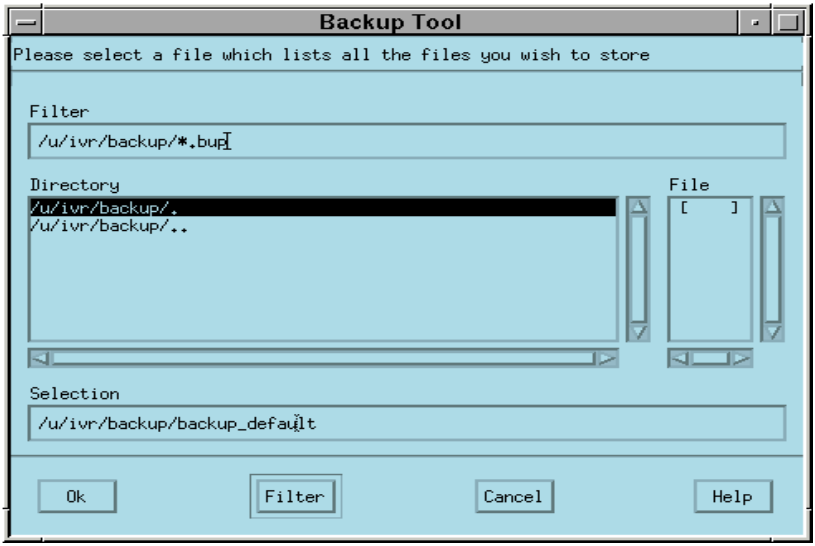
Procedure 2-3
Specifying a backup list file

1 From the Backup Tool main window, click on the Backup button.

The window as shown in Figure 2-2 appears.

2 Select either the existing backup file or explicitly name a new backup file. This specified file will contain the list of all files to be backed up.

Figure 2-2
Backup device selection window



The following function buttons are available in the backup list file window:

Ok
With a valid file name in the selection box, clicking this button displays a window with options to modify or delete the file or to schedule an immediate backup on the file.

Filter
Displays the list of files in the selected directory which match the criteria specified in the Filter box.

Cancel
Displays the main Backup Tool window.

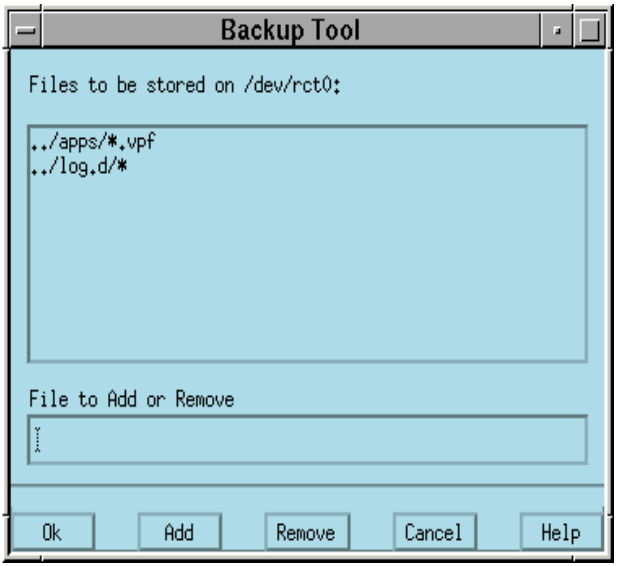
Help
Displays help text on the options available from this window.

Procedure 2-4
Modifying the Selected Backup List file

1 From the Backup list file window, click on OK.

The window in Figure 2-3 appears.

Figure 2-3
Backup file selection window



2 Edit the backup list file by selecting files that should be included in a backup.

The following is a list of optional Meridian IVR related directories you can add to your backup list files. The default contents are the */u/ivr/apps* and */u/ivr/log.d* directories. The other directories and files in you can add depend on the features installed in your system.

../apps/*.vpf
../log.d/*
/.??*
/u/ivr/backup/backup_default.bup
/u/ivr/exe/*.sai
/u/ivr/data
/u/ivr/3270
/u/ivr/usr/*.[ch]
/u/ivr/sys_files/sysgen.d
/u/ivr/sys_files/*.dbm
/u/ivr/sys_files/*.tpl
/u/ivr/sys_files/*.ext
/u/ivr/vrs/exe/lh.config
/u/ivr/vt100

The following function buttons are available from the Backup file selection window:

OK
Displays a window with backup scheduling options.

Add
Adds to the list the file specified in the File to Add or Remove box.

Remove
Removes from the list the file specified in the File to Add or Remove box .

Cancel
Displays the Backup Tool main menu.

Help
Displays help text on the options available from this window.

CAUTION!
Risk of data loss

File names are not checked or validated. If you are not careful, you can overwrite existing files.

Procedure 2-5
Adding a file to the backup list

1. From the Backup file selection window, click on the File to Add or Remove text entry box.
2. Type a valid file name.
3. Click on Add.

If the file does not exist, a message box appears. Otherwise the file appears at the bottom of the backup list.

ATTENTION!

All files can be added to the backup list. This is not recommended. The files which should not be backed up and which generate the warning are those in the following directories: /usr, /bin, /dev, /etc, /lib, /tmp, and most of the files under the / directory (for example, sysv68, and so on).

Only the source ".c" files and ".h" files for user functions from the usr directory are included in the default backup list of files. To include user functions which have been compiled and promoted to the exe directory, these names must be explicitly added to the backup list. Any user function "make" files found in the usr directory must also be added to the backup list if they are to be included in the file backup.

Procedure 2-6
Removing a file from the backup list

1 In the Backup file selection window, highlight the directory/file you want to remove or type the name into the text entry box.

The file appears in the File to Add or Remove text entry box.

2 Click on Remove.

The file is removed from the list.

If the file does not exist, a warning message appears.

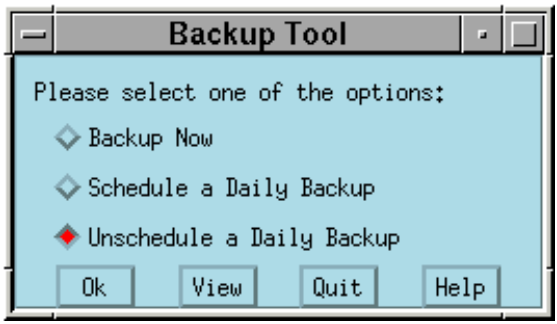
Note: If you select any files in the default file list, a warning message is generated and you cannot remove the file.

Procedure 2-7
Selecting a backup time

1 After selecting a file from the Backup file selection window, click on OK.

The Backup time window (see Figure 2-4) appears:

Figure 2-4
Backup time window



The following function buttons are available from the Backup time window:

OK
Displays a window corresponding to the option selected by the radio buttons.

View
Displays a window containing the list of currently scheduled backup times, the backup list file to be used for each scheduled backup time, and the name of the account that scheduled the backup (see Figure 2-5). This list is compiled using the files identified in this section and is sorted by time of day. If no scheduled times exist, the window is empty. Three separate crontab files contain the scheduled backup. You can run the Backup Tool from any of the following accounts:

- /usr/spool/cron/crontabs/admin
- /usr/spool/cron/crontabs/vad
- /usr/spool/cron/crontabs/root

Quit
Displays the main Backup Tool window.

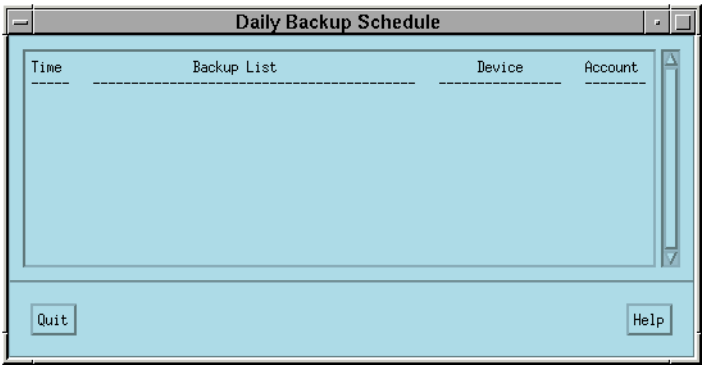
Help
Displays help text on the options available from this window.

Procedure 2-8
Viewing the list of scheduled backups

1 From the Backup time window, click on View with the left mouse button.

The window shown in Figure 2-5 appears:

Figure 2-5
Backup schedule list window



The following functions are available from the Backup schedule list window:

Quit
Returns you to the previous backup window.

Help
Displays help text on the options available from this window.

Procedure 2-9
Performing an immediate backup

1 From the Backup time window, click on the Backup Now button, then click on OK with the left mouse button.

A message window appears requesting you to insert the correct media (tape) into the backup device.

2 At this point, you can cancel the backup. To continue, insert the correct media into the backup device specified and click on OK with the left mouse button.

A message flashes that files are being backed up.

If the light on the tape drive blinks, this indicates that the tape has not been inserted correctly.

3 Make sure the tape is inserted correctly into the drive and that it is not write protected.

4 When the backup is complete, click on Cancel in the Backup window to return to the Backup Tool window.

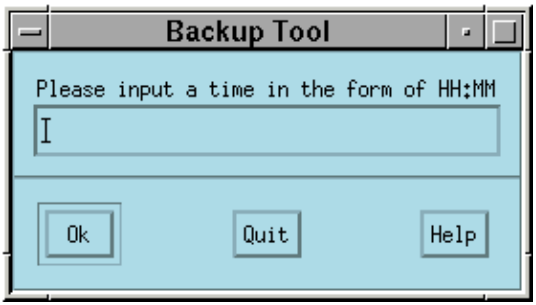
When the backup is complete, the Backup Tool automatically extracts the directory of files from the tape to verify that the backup was successful. If this operation is not successful, the backup is assumed to have failed, and relevant error messages are generated in the log file and in a message window.

Procedure 2-10
Scheduling backups

1 Click on the Schedule Daily Backup button, then click on OK with the left mouse button.

The Schedule daily backup window (see Figure 2-6) appears:

Figure 2-6
Schedule daily backup window



The last entered backup time scheduled from this account appears.

2 Enter a new time using the 24-hour clock in the format HH:MM (Hours:Minutes).

3 Click on OK.

If the time entered is valid, and the specified backup file exists, a message appears confirming that a backup of the contents of the specified file has been scheduled. If the time entered is invalid or if the specified backup file has been deleted, an error message appears.

Other function buttons in the Schedule daily backup window include:

Quit
Ignores any time entered and returns you to the previous backup window

Help
Displays help text on the options available from this window

Procedure 2-11
Unscheduling backups

1 From the Backup time window, click on the Unschedule Daily Backup button, then click on OK with the left mouse button.

The window appears as shown in Figure 2-6.

2 Enter the time using the 24-hour clock in the format HH:MM (Hours:Minutes).

3 Click on OK.

A dialog box appears indicating that the scheduled backup time has been unscheduled.

Note: If you enter an unscheduled backup time that does not match a scheduled backup time, an error message appears. You need to check the list of scheduled backups to see if the unscheduled backup time you entered matches a scheduled backup time on the list.

Procedure 2-12
Checking the list of scheduled backup times

1 Click on the OK button on the error box to return to the Restore file list window (see Figure 2-7).

2 Click on View with the left mouse button to see the list of scheduled backup times.

You will see a list of the scheduled backup times.

3 Make sure the value you enter as an unscheduled backup time matches one of the scheduled backup time values on the list.

General scheduling information for backups

- When you are performing a backup (immediate or scheduled), a pop-up window appears if the backup fails. In addition, errors are logged in the backup log file /tmp/backup.log.
- Only daily backup scheduling is permitted. A scheduled backup will be performed daily. To stop this scheduled daily backup, it must be unscheduled.
- There is no maximum number of scheduled backup times.
- An account can schedule only one backup for any particular time.
- If a backup is scheduled at a time for which a backup is already scheduled by another account, no warning is issued.
- If two scheduled backups overlap each other (that is, a backup is scheduled to run before a previous backup has finished), the second backup will fail. No warning is issued at scheduling time.
- When the backup of the backup list is completed, the Backup Tool automatically extracts the directory of files from the tape. This directory is not displayed. If this operation is successful, then it is assumed that the backup of files was successful. If not, the backup is assumed to have failed, and relevant error messages are generated in the log file.

CAUTION!
Risk of data loss

The cron file is used to schedule backups. Executing a “crontab-r” from a UNIX shell in the vad account removes any of the vad account’s scheduled backups.

Restore function

The Restore button of the Backup Tool allows you to restore all the files, only the default files, or selected files from a backup. You can check the contents of a backup to restore selected files.

Procedure 2-13
Viewing the contents of previous backups

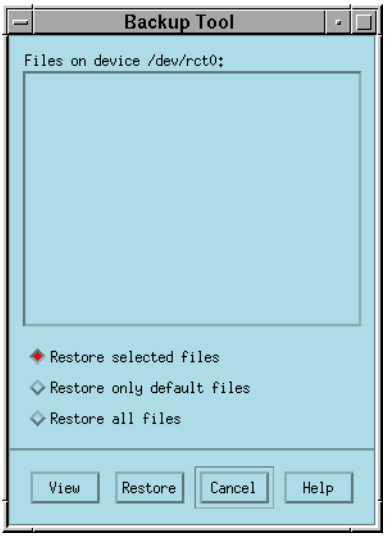
1 From the Backup Tool main window, click on View with the left mouse button.

A message box appears and tells you to insert the correct media.

2 Insert the correct media into the specified device, and click on OK with the left mouse button.

A message appears indicating that the device is being read. The list of files (if any) to be restored appears in the following window (see Figure 2-7):

Figure 2-7
Restore file list window



The following function buttons are available from the Restore file list window:

View
Displays a window containing the contents of a backup tape.

Restore
Restores either all files or only selected files from a backup tape depending on the radio button selection.

Quit
Returns you to the Backup Tool window.

Help
Displays help text on the options available from this window.

Procedure 2-14
Restoring all files

1 Click on Restore All Files with the left mouse button.

2 Click on Restore with the left mouse button.

A pop-up window appears asking you to insert the correct tape into the drive specified.

3 Click on OK to restore the files or Cancel to return to the Backup Tool window.

If you click on OK, a message appears indicating that the system is restoring files.

4 When the restore is complete, click on Cancel from the window to return to the Backup Tool window.

Note: If the restore fails, check that a drive has been specified and the correct tape has been inserted.

Procedure 2-15
Restoring selected files

1 Click on View, and wait for the list of files to appear.

2 Select a file in the list.

3 Click on Restore selected files.

4 Click on Restore.

A message appears indicating that the restore was successful.

To select multiple consecutive files, select the first file, then hold the <Shift> key, and scroll to and click on the last file in the list.

All the files between (and including) the first and last file in the list are highlighted.

To select multiple files which are not consecutive, hold the <Ctrl> key while selecting files. All files selected will be highlighted.

5 Click on [Quit] to exit from the Backup Tool.

GUI-based Backup Tool error reporting

The Backup Tool includes an imbedded window which displays any errors related to an immediate backup or restore. These errors are also written to the /u/ivr/backup/backup_default.bup.log file. Any errors generated by scheduled backups are written only to the /tmp/backup.log file.

Note: Only errors generated by the “tar” system utility are reported.

Immediate backup errors

Whenever an attempt to perform an immediate backup fails (for example, due to bad/no tape, write protect on tape, or not enough room on the tape), the pop-up window shown in Figure 2-8 appears.

Figure 2-8
Backup failure message window

In this case, both the Backup Tool Error window and the /u/ivr/backup/backup_default.bup.log file display the following entry:

```
tar: cannot open:/dev/rct0
```

or if the write protect is on the tape inserted:

```
tar: cannot create /dev/rct0
tar: tape write error
```

Schedule/unschedule backup errors

The first time that a backup is scheduled from an account, the following messages appear in both the Backup Tool Errors window and the /u/ivr/backup/backup_default.bup.log file:

```
crontab: can't open your crontab file
warning: commands will be executed using /bin/sh
```

This message should be ignored, and the backup is scheduled as entered.

Whenever a backup is scheduled (or unscheduled), an entry is written into (or removed from) the account's crontab file.

Example of /usr/spool/cron/crontabs/vad:

```
26 18***cd/u/ivr/tools;
```

Whenever a scheduled backup is run and no tape is in the drive, a message similar to the following message appears in the /u/ivr/backup/backup_default.bup.log file and in the Backup Tool Error window:

```
[Wed Oct 25 18:24:00 EDT 1995] Start of backup session on
device /dev/rct0.
tar: tape write error
[Wed Oct 25 18:24:00 EDT 1995] End of Backup session.
```

Whenever a scheduled backup is run and there is not enough room on the tape for a complete backup, a message similar to the following appears in the /u/ivr/backup/backup_default.bup.log file and in the Backup Tool Error window:

```
[Wed Oct 25 18:24:00 EDT 1995] Start of backup session on
device /dev/rct0.
tar: tape write error
[Wed Oct 25 18:24:00 EDT 1995] End of Backup session.
```

Note: Errors generated through scheduled backups overwrite the lines at the start of the /tmp/backup.log file. We recommend that you clean up the /u/ivr/backup/backup_default.bup.log file prior to scheduling backups.

Restore/view errors

Whenever an error occurs (for example, due to no/bad tape) during an attempt to view files on a backup tape (Restore/View), no error pop-up window appears.

Both the Backup Tool Errors window and the /u/ivr/backup/backup_default.bup.log file contain the following entry:

```
tar: tape write error
```

Restore/restore errors

Whenever an error occurs (for example, due to no/bad tape) during an attempt to restore files from a tape (Restore/Restore), a pop-up window appears (see Figure 2-9).

Figure 2-9
Restore failure message window

Both the Backup Tool Errors window and the /u/ivr/backup/backup_default.bup.log file contain the following entry:

```
tar: tape write error
```

Chapter 3: Managing prompts

Meridian IVR allows customers to manage prompts by using both the Voice Prompt Transfer tool and the Voice Prompt Editor (VPE). The Voice Prompt Transfer tool lets you transfer voice segment files between mailboxes and between Meridian Mail systems. To transfer, back up, or restore voice prompts, use the Voice Prompt Transfer tool. The Voice Prompt Editor modifies and creates voice segment files which are used to customize your voice prompts. If you want to create and modify voice prompts, use the VPE.

Meridian IVR stores all prompts in Meridian Mail mailboxes as voice segment files. Each voice segment file contains zero or more segments, where each segment is a previously recorded piece of voice. Meridian IVR includes many common prompts that you can use in your Meridian IVR applications. However, you can record your own.

Notes:

1 All references to the textual fields in the Voice Prompt Editor (such as prompt text, subject, name) are local to the VPE. The Application Editor correlates only with the Segment ID of the VPE masked by the voice segment filename (for example, prompt 243 in file 3000 is referred to as prompt 3243 by the Application Editor).

2 As indicated, Meridian IVR stores all prompts in Meridian Mail mailboxes. If the site is prone to heavy use of Meridian Mail broadcast messages, the impact is rapid consumption of mailbox space. In this case, frequent deletion of messages (by logging into the mailbox through the Meridian Mail's voice mail interface) is required to permit free space for the addition of further Meridian IVR voice prompts and messages. If the mailbox is currently in use by Meridian IVR, Meridian IVR must be stopped before a login is permitted from a telephone set.

Meridian IVR prompts

Typically, when Meridian IVR is installed, the person who performs the installation creates a mailbox with 90 minutes of voice storage capacity (360 minutes is the mailbox maximum), and loads the standard prompts using the Voice Prompt Transfer tool (refer to the next section).

Meridian IVR standard prompts are common prompts that you can use with your IVR applications. These are listed in Appendix A of this guide. You can rerecord these prompts with the Voice Prompt Editor or record and load new prompts. System prompts require 38 minutes of storage.

Voice Prompt Transfer tool

The Voice Prompt Transfer tool, utilized through the Meridian Mail console interface, provides you with the facilities to load Meridian IVR standard prompts, transfer prompts between mailboxes, and back up and restore prompts. The Voice Prompt Transfer tool is used, for example, to copy voice prompts from one Meridian IVR system to another.

When using the Voice Prompt Transfer tool, you can use the following commands: Write Prompt Tape, Read from Prompt Tape, and Change Customer Default Number. These commands enable you to transfer, back up, and restore voice prompts. The Write Tape command copies voice prompts onto other tapes, while the Read from Prompt Tape command scans all files on a tape and processes them according to your specifications. The Change Default Customer Number command applies only to customers who have the Meridian Mail Multi-Customer Feature installed on their system; this command references mailboxes in the write or read command.

For further information about accessing and using Voice Prompt Transfer tool, refer to *Meridian Mail System Administration Tools* (NTP 555-7001-305).

Editing prompts with the Voice Prompt Editor

Before using the Voice Prompt Editor, be sure to perform VPE configuration. You can create or edit existing prompts by using the Voice Prompt Editor. Editing features include delete, trim silence, convert sections to silence, and play selected sections of the prompt through a Meridian Mail voice channel.

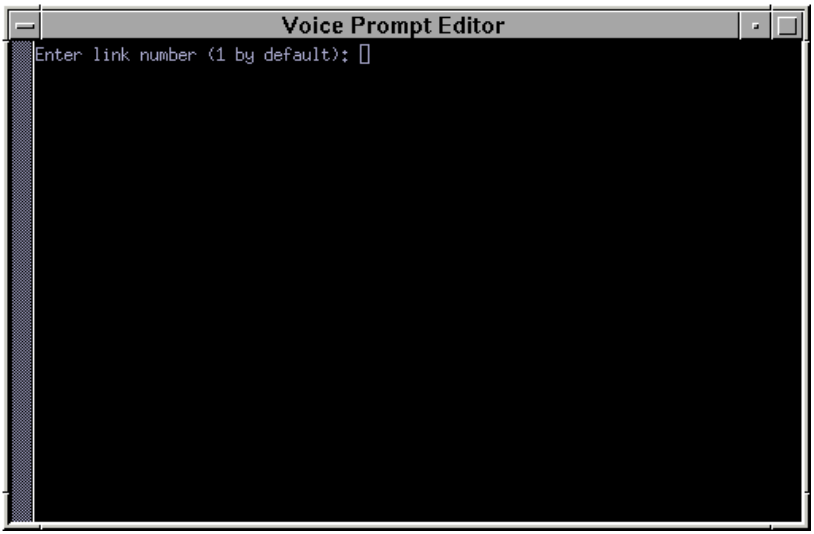
Notes:

1 The Voice Prompt Editor requires use of a shared voice channel on Meridian IVR. If no shared channels are currently available, go to the Meridian Mail console and configure one of the channels for all services. If all shared channels are in use, you must wait for one to become available. Refer to the *Meridian Mail System Administration Guide* (NTP 555-7001-300).

2 The MIVR ACCESS link should be up, running, and synchronized before accessing the Voice Prompt Editor.

Figure 3-1 shows the initial Voice Prompt Editor window when the Voice Prompt Editor is accessed.

Figure 3-1
Meridian IVR Voice Prompt Editor



Logging into the Voice Prompt Editor

1 At the Enter link number (1 by default) prompt, press <1>.

2 Enter the telephone number to be used during this VPE session and press <Enter>.

3 Enter the mailbox account number and press <Enter>.

4 Enter the password and press <Enter>.

Note: A warning message appears when you enter the mailbox password indicating that this mailbox is in use by the Meridian IVR system. This tells you that IVR channels have logged into this mailbox.

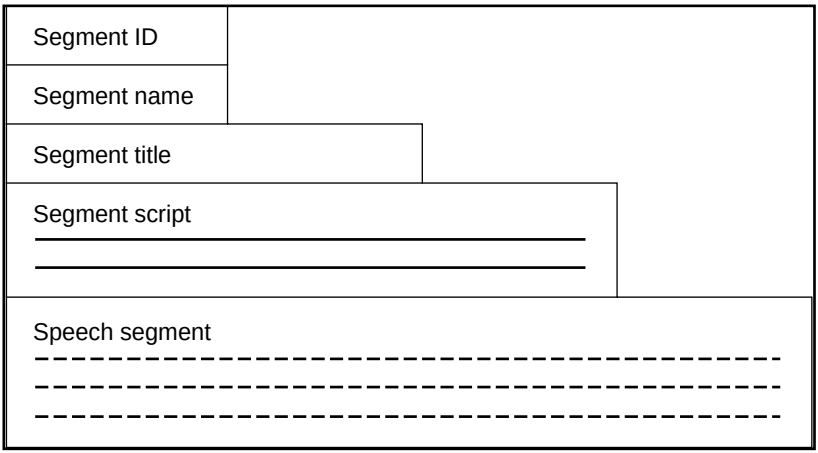
Voice segment file structure

Voice segment files store prerecorded words and sentences that are played by IVR applications developed with Meridian IVR.

A voice segment file is a list of zero or more voice segments. Each voice segment has five components.

The segment ID and speech segment are the core elements of the voice segment. The name, title, and script are optional and can be thought of as textual attributes associated with the voice segment (see Figure 3-2).

Figure 3-2
Structure of a voice segment



Segment ID

A segment ID identifies a particular voice segment listed in a voice segment file.

Segment name

A voice segment can be assigned a 16-character name. This name references the voice segment in lieu of the segment ID within the VPE.

Segment title

A voice segment can be assigned a 56-character title. The title lets you store brief descriptions of each voice segment. These titles appear whenever you edit a voice segment file. These titles facilitate the maintenance of the voice segments, as explained in the section "Developing applications that use voice segments" on page 3-23.

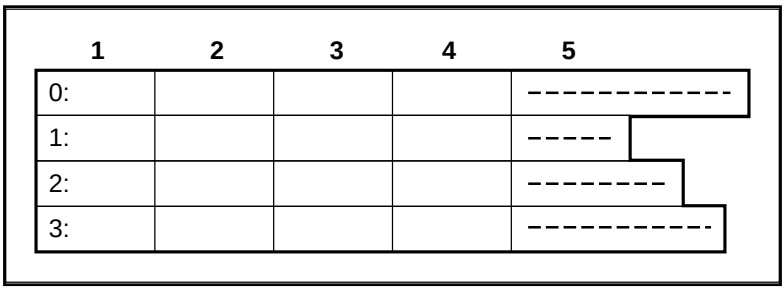
Segment script

A segment script is the recited text of the voice segment. It can contain up to 2 048 characters (including the blanks between the words) for a total of approximately 400 words. The script provides a convenient means to store and maintain the semantic content of each voice segment. The Voice Prompt Editor provides the means for an application developer to prepare the text of the scripts and for a narrator to recite and record them.

Speech segment

The speech segment is a digitally recorded segment of speech of any length. It can contain a word, phrase, or any number of complete sentences up to a total of five minutes (see Figure 3-3). The speech in a segment can be edited in a variety of ways as described in the section "Editing voice segments for concatenation" on page 3-29.

Figure 3-3
Structure of a speech segment



Locating Meridian IVR segment IDs

When using the Voice Prompt Editor, use Table 3-1 to locate a Meridian IVR segment ID.

Table 3-1
Locating Meridian IVR segment IDs

Meridian IVR segment ID	Voice segment file name
0-999	0000
1000-1999	1000
2000-2999	2000
3000-3999	3000
4000-4999	4000
5000-5999	5000
50 000-50 999	50 000
51 000-51 999	51 000

Creating and modifying segment files

This section describes the basic operation of the Voice Prompt Editor. Subsequent sections describe some of the more advanced operations.

General principles

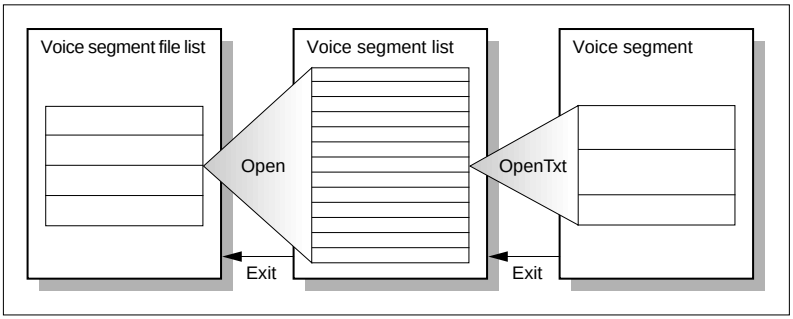
The Voice Prompt Editor provides you with three access levels to create and modify segments, as shown in Table 3-2.

Table 3-2
Access levels

Level	Description
1	A list of the voice segment files in a user's mailbox. (This list does not include any voice messages that may also be in the user's mailbox.)
2	A list of the voice segments in a specific voice segment file.
3	The textual components of a voice segment.

When the Voice Prompt Editor initially starts, the voice segment file list appears (the first level of access). You can move to the voice segment list (the second level of access) by using the arrow keys to position the highlight bar over a specific voice segment file, thus opening the selected voice segment file. Finally, you can access the textual components of a voice segment (the third level of access) by using the arrow keys to position the highlight bar over a specific voice segment, thus opening the selected voice segment. To return to a previous level of access, exit from the current level of access.

Figure 3-4
Voice Prompt Editor "levels of access"



The Voice Prompt Editor provides a consistent and easy-to-use interface. The top part of the window always contains the data being viewed, while the bottom two lines display a context-sensitive list of the available commands (only commands that are applicable to the window and the selected data). This ensures that you are allowed to issue only valid commands.

Whenever the Voice Prompt Editor displays either the voice segment file list or the voice segment list, one of the items in the list is overlaid with a highlight bar. The highlight bar selects the item upon which user commands operate. The up arrow and down arrow keys or the Previous window and Next window keys move the highlight bar (to move up or down one window at a time, respectively).

If the complete list of voice segment files or voice segments do not fit on a single window, a triplet of down arrows (or up arrows) appears at the bottom (or top) of the window. You can display the hidden items by using the appropriate arrow and paging keys.

Voice Prompt Editor commands are invoked by a function key and, whenever possible, a single-letter key. This letter is capitalized in the command name that is listed at the bottom of the window along with the associated function key. Usually, this letter is the first letter of the command. If there is no capitalized letter, only the function key issues the command.

Most commands are consistent throughout the Voice Prompt Editor. Whenever possible, a given command is assigned to the same function key. As well, when you invoke a command that requires further data, a pop-up window appears. After entering the data, you can press either the <F4> key (to execute the command) or the <Esc> key (to abort the command).

Common functions

Table 3-3 lists the common functions of particular keystrokes that are usually available throughout the Meridian IVR system.

Table 3-3
Common function keys

Key	Description
<F4>	Indicates that input to a pop-up window is complete and that the command should now be performed.
<Esc>	Exits from pop-up windows without performing the command.
≠	Moves the highlight bar up one entry in a list, or moves the cursor to the previous field on a form.
Ø	Moves the highlight bar down one entry in a list, or moves the cursor to the next field on a form.
<Pg Up>	Moves the highlight bar up one entire page of entries in a list or, if already on the first page, moves it to the first entry in the list.
<Pg Down>	Moves the highlight bar down one entire page of entries in a list, or, if already on the last page, moves to the last entry in the list.

Whenever you are prompted to enter textual information such as the name of a newly created voice segment file, you can enter any characters from the keyboard.

Table 3-4 lists the keys that can be used any time the cursor is in a text input field.

Table 3-4
Text input field keys

Key	Description
¨	Moves the cursor to the previous character.
Æ	Moves the cursor to the next character.
<Ctrl+L>	Moves the cursor to the beginning of the previous word on the same line.
<Tab>	Moves the cursor to the beginning of the next word.
<Ctrl+X>	Deletes the entire line.
<Backspace>	Deletes the character to the left of the cursor.
<Del>	Deletes the character under the cursor.
<Ins>	Toggles between insert and overwrite modes.

Creating a new voice segment file

The first time you start the Voice Prompt Editor, there are no voice segment files to display unless the Voice Prompt Transfer tool has been used to transfer Meridian IVR's system prompts to the mailbox which you are using with the Voice Prompt Editor.

When a mailbox does not contain any files, you are presented with the following commands on the command line:

Table 3-5
Commands for an empty mailbox

Key	Function	Description
<F1>	New	Creates a new, empty voice segment file.
<F3>	Logon	Logs on to a different user account (to access the voice segment files in another user mailbox).
<F4>	Quit	Quits the program.

New

Choosing the New command creates a new voice segment file. When invoked, the New command presents a pop-up window prompting you for the name and the subject of the new voice segment file (which is optional). The required setup for a voice segment file name consists of a four- or five- digit number. Since files 0000 and 1000 are shipped with the system, all subsequent file names should follow this convention. Meridian IVR voice segment file names conform to the format specified in Table 3-1 (for example, 2000, 3000, and so on). If a name is not provided, the file is not created. Once you have entered the text, you can select the <F4> key to commit the file or the <Esc> key to abort the operation.

Logon

The Logon command enables you to log off of the current account mailbox and log onto another user account for access to another user's voice segment files. When invoked, the Logon command presents a pop-up window prompting you for a new account number. As a security feature, your password is not displayed as you type it. Once the account information has been entered, you can select the <F4> key to log off of the current account and log on to the new account, or the <Esc> key to abort the operation.

Help

The Help key presents brief descriptions of the commands displayed on the command line.

Quit

The Quit command terminates the Voice Prompt Editor program, purges your mailbox of any files marked for deletion, drops the telephone connection (if one was previously established), and exits you from the VPE.

Managing voice segment files

Once you commit a file, it is added to the list of voice segment files in the user's mailbox (see Figure 3-5). Table 3-6 summarizes the information that each voice segment file in the list contains.

Table 3-6
Voice segment file information

Field	Description
Name	Name of the voice segment file.

Table 3-6
Voice segment file information (continued)

Field	Description
Date of Creation	Date and time that the voice segment file was created.
Date of Last Modification	Date and time that the voice segment file was last modified.

Figure 3-5
Voice segment file list

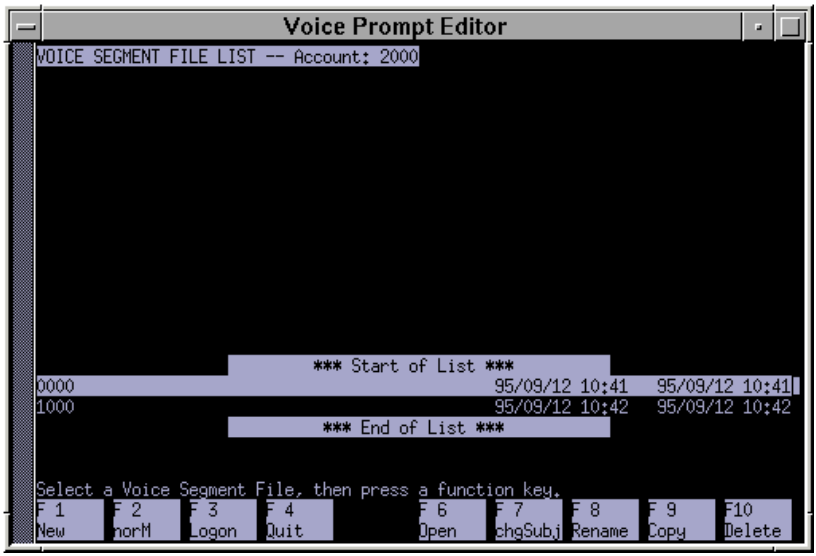


Table 3-7 lists the commands associated with a mailbox containing one or more files.

Table 3-7
Commands for a mailbox with file(s)

Key	Function	Description
<F1>	New	Creates a new, empty voice segment file.
<F2>	norM	“Normalizes” the selected voice segment file.The norM command first trims all leading and trailing silence, then pads the trailing end of each voice segment in the voice segment file with a fixed amount of silence.

Table 3-7
Commands for a mailbox with file(s) (continued)

Key	Function	Description
<F3>	Logon	Logs on to a different user account (for example, to access the voice segment files in another user mailbox).
<F4>	Quit	Quits the program.
<F6>	Open	Opens the selected voice segment file.
<F7>	chgSubj	Modifies the subject field of the selected file.
<F8>	Rename	Renames the selected file.
<F9>	Copy	Makes a copy of the selected file.
<F10>	Delete/ Undelete	Marks or unmarks the selected file for deletion.

New

The New command allows you to create a new voice segment file. When invoked, the New command presents a pop-up window prompting you for the name and the subject of the new voice segment file (which is optional). If a name is not provided, the file will not be created. Once the text has been entered, you can select the <F4> key to commit the file or the <Esc> key to abort the operation.

norM

The norM command is used to prepare a voice segment file for concatenation. This command is explained further in this chapter in the section “Normalizing a voice segment file” on page 3-29.

Logon

The Logon command enables you to log off of the current account and log onto another user account for access to another user's voice segment files. When invoked, the Logon command presents a pop-up window that prompts you for a new account number. As a security feature, your password is not displayed as you type it. Once the account information has been entered, you can select the <F4> key to log off of the current account and log on to the new account, or the <Esc> key to abort the operation.

Quit

The Quit command terminates the Voice Prompt Editor program, purges the user's mailbox of any files marked for deletion, drops the telephone connection (if one had been established), and returns you to the operating system prompt.

Open

The Open command moves you to the second level of access by opening the selected voice segment file and displaying the voice segment list. At this level, you can add new voice segments or modify existing ones.

chgSubj

The chgSubj command presents a pop-up window prompting you to modify the subject of the voice segment file.

Rename

The Rename command presents a pop-up window that prompts you to modify the name of the voice segment file.

Copy

The Copy command duplicates an existing voice segment file. When invoked, the Copy command presents a pop-up window that prompts you for the name of the duplicate voice segment file.

Delete

The Delete command marks a file for deletion by displaying the word DELETED to the right of the file's subject field. The actual deletion of the file is deferred until you log off from the current account or quit the program. At this point, all of the files that have been marked for deletion are purged from your mailbox. This feature lets you undelete (recover) a purged file prior to log off. Whenever the highlight bar is positioned on a file marked for deletion, the <F10> key becomes the Undelete command.

Help

The Help key presents you with brief descriptions of the commands displayed on the command line.

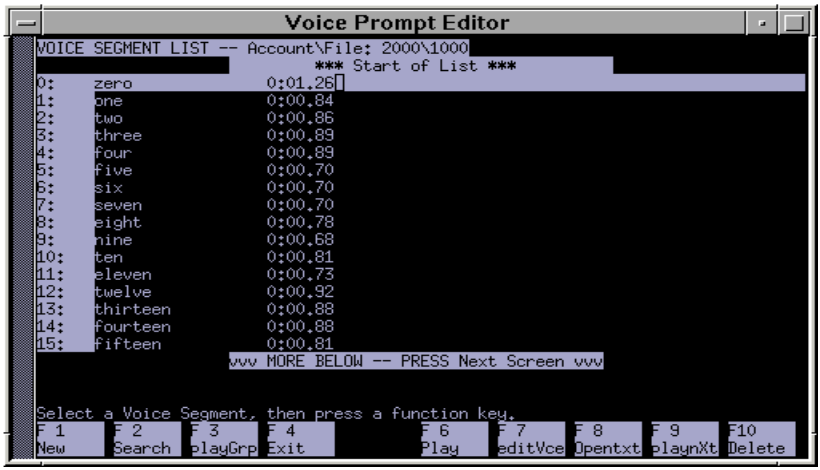
Modifying a voice segment

In order to modify a voice segment, the voice segment file must be opened to display the list of voice segments in the file. Table 3-8 summarizes the information about each voice segment in the list.

Table 3-8
Voice segment information

Field	Description
Segment ID	Index of the voice segment in the file.
Name	Name of the voice segment.
Length	Duration of the voice segment in hundredths of a second.
Title	Title of the voice segment.

Figure 3-6
Voice segment list



In addition to the common functions provided by the arrow and paging keys, the <Ctrl+T> and <Ctrl+B> keys position the highlight bar at the first and last segments on the list of voice segments, respectively.

Table 3-9 summarizes the commands available when accessing a list of voice segments.

Table 3-9
Commands for the list of voice segments

Key	Function	Description
<F1>	New	Creates a new, empty voice segment.
<F2>	Search	Searches for a voice segment.
<F3>	playGrp	Sets up a group of voice segments for concatenated playback.
<F4>	Exit	Exits from the entire voice segment file.
<F6>	Play	Plays the speech segment of the selected voice segment.
<F7>	editVce	Displays the voice editing command line.
<F8>	Opentxt	Displays the textual components associated with the voice segment.
<F9>	playnXt	Selects the “next” voice segment and play its speech segment.
<F10>	Delete	Marks the selected segment for deletion.
<F10>	Undelete	Removes the “DELETED” mark from the selected segment.

Play

The Play command establishes a telephone connection (if one does not already exist) and plays the speech segment of the selected voice segment. (If the call is forwarded to another number, a message appears on the window and the command is aborted.)

Temporary commands

Table 3-10 summarizes the commands available while the voice segment plays.

Table 3-10
Commands for voice segment playback

Key	Function	Description
<F6>	Stop	Stops the playback of the segment.
<F8>	skipBak	Skips five seconds backwards and continues playback.

Table 3-10
Commands for voice segment playback (continued)

Key	Function	Description
<F9>	skipFwd	Skips five seconds forwards and continues playback.

If you choose the Stop command or if the playback operation reaches the end of the segment, the previous set of commands reappears.

> ***Note:*** If you either hang up the associated telephone or start using the arrow or paging keys, playback stops automatically.

editVce

Table 3-11 summarizes the voice editing commands displayed when you choose the editVce command.

Table 3-11
Voice editing commands

Key	Function	Description
<F1>	play1	Concatenates voice segments, then playback.
<F2>	play2	Concatenates voice segments, then playback.
<F3>	playGrp	Sets up a group of voice segments for concatenated playback.
<F4>	Exit	Returns to the previous set of commands.
<F6>	Play	Plays the speech segment of the voice segment.
<F7>	Record	Records a speech segment into the voice segment.
<F8>	Norm	Removes all silence from beginning and end of voice segment.
<F9>	Trim	Removes defined amount of voice segment.
<F10>	Addsil	Pads silence on to beginning and/or end of voice segment.

The remaining voice editing commands provide more sophisticated capabilities and are described in the section “Playing and editing a group of concatenated voice segments” on page 3-33.

Record

The Voice Prompt Editor beeps immediately when the destination telephone is on the same Meridian 1 switch as Meridian IVR. The VPE beeps when the telephone goes idle.

The Voice Prompt Editor also beeps if the destination telephone is on a Meridian 1 switch that is accessed over trunks. Meridian IVR is signaled only when the local Meridian Mail system detects the voice of the called party which initiates a beep.

The Record command beeps to signal when the recording begins and records everything spoken into the mouthpiece of the associated telephone set or played through the audio line interface. While the system records the speech, a Stop command appears on the command line. If you choose the Stop command, the recording stops and the EditVce command line reappears. If the speech segment of the selected voice segment already exists (that is, it already contains a recording), the previously recorded speech is replaced in its entirety.

> ***Note:*** The maximum duration of an individual speech segment is determined by the "Maximum Duration" of a voice message file. This value is determined by your system administrator and set in the Organization Profile.

As with the Play command, the Voice Prompt Editor checks to see if there is an established connection with the associated telephone set before starting to record. If no connection is established, the Voice Prompt Editor calls the associated telephone set and begins to record only when the call is answered.

During recording, a counter indicates how many seconds have elapsed since the recording began. The actual duration of the recorded speech is only computed after the recording is complete, since the recording will not actually begin until the system detects sufficient voice energy and all long stretches of silence are compressed.

Opentxt

The Opentxt command moves you to the third level of access by opening the selected voice segment and displaying its textual components. At this level, you can add new voice segments or modify existing ones.

playNxt

The playNxt command provides a convenient single-key command to play each voice segment in turn. After the highlight bar is automatically repositioned on the next voice segment in the list, the selected voice segment plays.

Delete

The Delete command marks a voice segment for deletion. The actual deletion of the voice segment is deferred until you exit and save the modified voice segment file. At this point, all of the voice segments that have been marked for deletion are purged from the voice segment file. This feature enables you to undelete (recover) voice segments as long as the file has not been saved. Note that whenever the highlight bar is positioned on a voice segment marked for deletion, the <F10> key changes to the Undelete command.

New

The New command adds an empty voice segment to the end of the voice segment file, displays the associated text form for the new segment, places the cursor at the beginning of the name field, and prompts you to enter a name, title, and script for the newly created segment. To complete the creation of the voice segment, you must press the <F4> key.

The New command is intended to streamline the entry of large quantities of text (such as scripts) associated with voice segments. After entering the textual information for each voice segment, you can step through the segment scripts (using the Next command) to record them.

Search

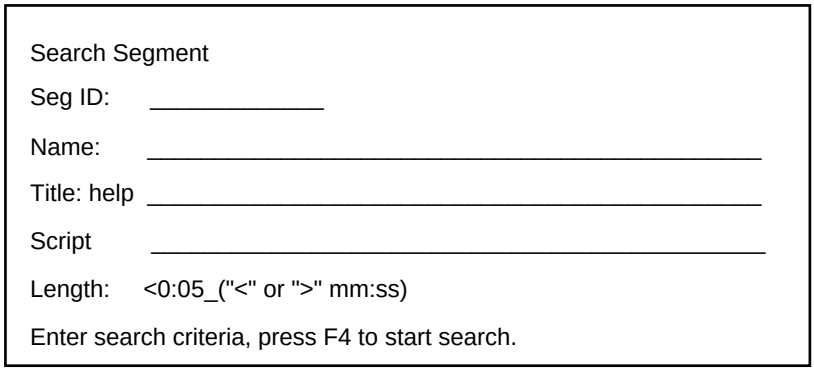
The Search command presents a pop-up window that prompts you to enter criteria for finding a particular segment within the segment file. The search criteria can be the (numeric) segment ID, substrings in the segment name, title and script, or any combination thereof. In addition, it is possible to search by the amount of voice recorded in a segment. This last criterion enables you to confirm that all of the segments have been recorded.

Each field in the pop-up window can have a value. Only a segment in which all of the criteria are met will be found. To find all of the segments which match the search criteria, repeat the search (the search fields show the values previously used). After you enter the search criteria, you can press the <F4> key to start the search, or <Esc> to abort the operation.

Searches may take a few moments depending on the criteria provided and the size of the segment file. If the segment ID is specified, the remaining fields are ignored. This is the quickest way to locate a particular segment or to move to a specific location in the file.

Figure 3-7 shows the search pop-up window. In this example, you are searching for a segment less than five seconds long, with the word “help” in its title.

Figure 3-7
Segment search window



The search locates the next matching segment in the segment file, looping around to the beginning if the end of the file is reached. If a match is not found, you remain at the location within the file where the search was initiated.

playGrp

The playGrp command displays the form and command line required for setting up a group of voice segments for concatenated playback. The section “Grouping voice segments for concatenation” on page 3-30 explains this form and its associated commands.

Exit

The Exit command initiates a two-step sequence for returning to the list of segment files. In the first step of the exit sequence, the two options listed in Table 3-12 appear on the command line.

Table 3-12
Commands available with Exit command

Key	Function	Description
<F4>	Exit	Saves the changes made to the voice segment file.
<F10>	Delete	Cancels any changes made to the voice segment file (and reverts to the file as it was before it was opened).

If the file has not been modified, the system skips the first step.

In the second step of the exit sequence, a pop-up window prompts you for a file name, directory, and identifier prefix. This information is used to store a header file of symbolic names. This file should be incorporated into the Meridian IVR application and must be updated whenever a voice segment file is modified. A detailed description of the header file and its use is provided in the section “Creating a segment index header file” on page 3-26.

If you do not want to create or update a header file, press <ESC> to return to the list of voice segment files.

If you want to create or update a header file, you must first fill out the form on the pop-up window (or use the defaults provided) and then press the <F4> key. The VPE downloads the necessary information from the Meridian Mail system and creates (or overwrites) a header file before returning to the list of voice segments.

> ***Note:*** As with many other text editors, you should periodically exit and save the voice segment file on which you are working. This minimizes the recovery effort in the event of a sudden power failure.

Modifying the textual components of a voice segment

To modify the textual components of a voice segment, the segment must be opened to display the voice segment. Table 3-13 summarizes the information associated with modifying textual components of a voice segment.

Table 3-13
Voice segment information

Field	Description
Segment ID	Index of the voice segment in the file.
Length	Duration of the voice segment in hundredths of a second.
Name	Name of the voice segment.
Title	Title of the voice segment.
Script	Script of the voice segment.

Figure 3-8
Textual components of a voice segment

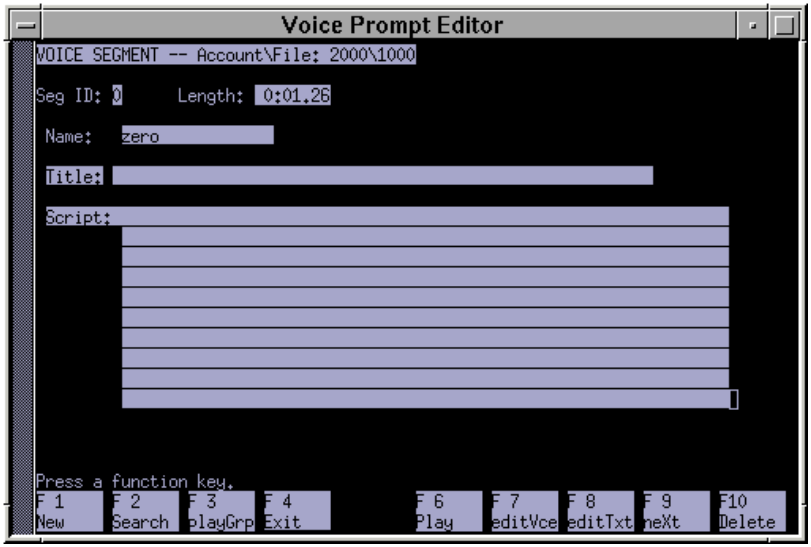


Table 3-14 summarizes the commands available when accessing the textual components of a voice segment (see Figure 3-8).

Table 3-14
Voice segment textual components commands

Key	Function	Description
<F1>	New	Creates a new, empty voice segment.
<F2>	Search	Searches for a voice segment.
<F3>	playGrp	Sets up a group of voice segments for concatenated playback.
<F4>	Exit	Exits from the current level, and returns to the previous level. The Exit command exits from the voice segment level of access and returns to the voice segment list level of access.
<F6>	Play	Plays the speech segment of the selected voice segment.
<F7>	editVce	Displays the voice editing command line.

Table 3-14
Voice segment textual components commands (continued)

Key	Function	Description
<F8>	editTxt	Modifies the textual components associated with the voice segment. The editTxt command modifies the textual components of the selected voice segment by prompting you to modify the name, title, and script of the segment.
<F9>	neXt	Selects the “next” voice segment. The neXt command provides a convenient single-key command to move to the next segment while still viewing the form containing the textual components associated with an individual voice segment.
<F10>	Delete	Marks the selected segment for deletion.
<F10>	Undelete	Removes the DELETED mark from the selected segment.

Developing applications that use voice segments

This section suggests how to use the Voice Prompt Editor in the development cycle of a Meridian IVR application.

Recording voice segments

A recording session obtains the best results if it proceeds with minimum interruptions. Recording sessions should take place after the segments have been created and the scripts for each segment have been finalized.

Procedure 3-1
Recording voice segments

1 Start the segment editor and log on to the correct account.

2 Open the segment file to be recorded.

3 Open the text of the first segment.

4 Select the editVce-Record function.

The first time this function is selected, the phone rings.

5 Answer the phone. After the beep, read the script aloud into the phone, then select Stop.

6 Select Play to verify the recording.

Note: After verifying that the first few segments are of suitable quality and volume, this step can be skipped, and all the segments can be verified once all of them are recorded.)

7 Select Exit-neXt to go directly to the text of the next segment.

8 Go to step 4.

Repeat this procedure until all segments are recorded. To verify all of the segments in the file, return to the voice segment list window. Select the first segment, play it, then select "playnXt" until you have heard all the segments.

As a rule, when recording short segments (for example, single words), we recommend that you say a phrase which uses the word in its appropriate context (for example, to record the word "o'clock," say the phrase "two o'clock"). The Voice Prompt Editor can then be used to trim the excess words from these segments as explained in the section "Editing voice segments for concatenation" on page 3-29. This technique produces more natural sounding speech segments.

Using the optional audio line interface

If you have recorded your prompts in a studio onto a cassette tape, use the audio line interface (ALI) to retrieve the prerecorded prompts from tape and transfer them to the Meridian Mail system. The ALI package includes a Multi Purpose Amplifier (MPA), an AC adapter for MPA, an ALI cable, and a stereo headset.

To transfer the prompts to Meridian Mail, you need to connect the ALI and the tape recorder to your telephone set.

Procedure 3-2
Using the optional audio line interface

1 Disconnect the handset cord from the base of the telephone.

2 Plug the RJ11 cable (the short straight cable) in the RJ11 connector on the telephone.

3 Unplug the headset cord from the bottom of the ALI.

4 Plug the ALI cable in the headset cord outlet on the bottom of the unit.

5 Connect the remaining cable ends on the ALI cable.

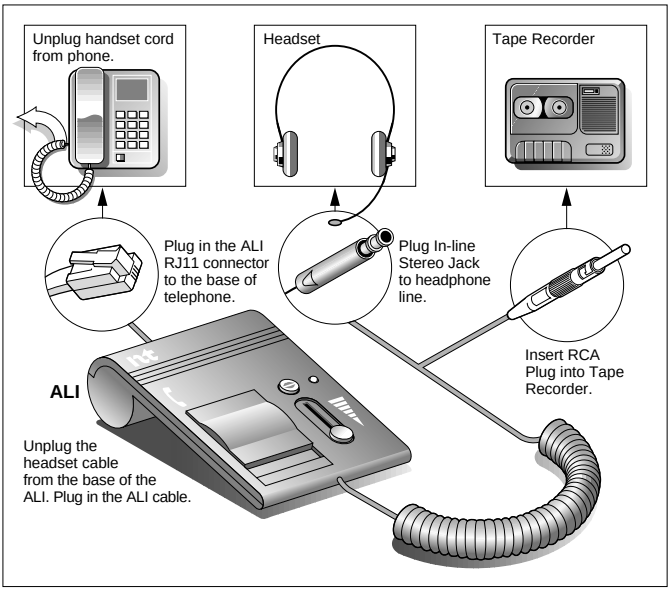
6 Insert the RCA plug (male connector) in the tape recorder.

7 Connect the other end of the cable, which is the in-line stereo jack, to the headset.

The headset is used for listening to the prompts as they are played back. It is not used for recording because it has no microphone.

Figure 3-9 shows the connections for the audio line interface.

Figure 3-9
Connecting the audio line interface



Transferring prompts to Meridian Mail

Follow the same procedure for recording voice segments. Instead of recording voice segments by reading aloud into the phone, the prerecorded segments on tape are used.

It is important to do several test recordings using the ALI to ensure that the audio settings are correct. Consult the guide entitled “Multi Purpose Amplifier”, which is shipped with the ALI, for information on how to set the volume settings on the ALI. This ensures that your prompts recorded on Meridian Mail are clear, audible, and not distorted.

To record segments from tape, use recorded segments vocally for those prerecorded on tape. To do this, follow Procedure 3-1, but instead of step 5 in this procedure, do the following:

Simultaneously, click on Record in the VPE and press Play on the tape recorder to record the first prompt. When the first prompt is recorded, click on Stop in the VPE and Pause on the tape recorder. Do this for each prompt until all have been recorded.

When you play back the prompts, use the headset to listen to them and make sure that you have recorded them properly.

Maintaining the voice segment file

Once it is created, maintaining a voice segment file is easy. You can create new segments and modify individual segments. You should update the segment scripts when necessary.

CAUTION!
Risk of data corruption

Deleting segments will cause subsequent segments to be renumbered. This can affect an already developed application.

ATTENTION!

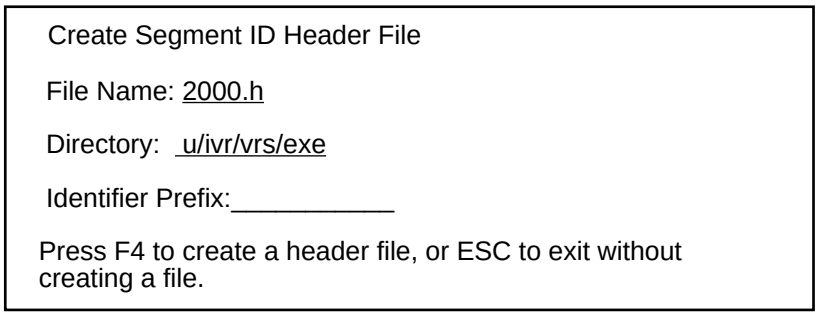
Never delete system prompts.

Creating a segment index header file

For an application program to play or record a specific voice segment, it must know the reference number or index of the segment. The Voice Prompt Editor facilitates this by automatically creating a segment index header file. The header file contains “define” statements which define each segment’s name as a symbolic name having the value of that segment’s index. Each define statement ends with a comment which contains the segment’s title. A symbolic name is also defined as the date and time that the file was last changed.

When you exit from a segment file, a pop-up window offers you the option of creating a segment index header file (see Figure 3-10). You can specify a directory (defaulting to the current directory) and a file name (defaulting to the first eight characters of the segment file name with a suffix of ".h").

Figure 3-10
Segment index header file



Note: Meridian IVR does not use these header files. They can, however, be printed to provide a reference of your recorded segments.

Suggested guidelines for prompts

While requirements for prompts vary greatly depending on the application, a few guidelines pertain to most applications. Consider the following guidelines when designing and creating prompts:

- Carefully consider the audience. For those who use the system only once or twice, prompts should be longer and more detailed than prompts for those who use a system daily.
- Use only one voice for all the prompts within a particular application. There are circumstances where many voices can be used, but these situations are rare and require special attention. (There are, for example, applications that play back status messages or advertisements that are updated regularly. It is not normally feasible to have these recorded messages use the same voice. The body of the application, however, can and should use the same voice.)
- Select a speaker with a voice considered pleasant by the audience. Choose someone who speaks clearly and articulately. Avoid unusual or pronounced accents and voices that are noticeably high or low in pitch. For the final version of prompts, we suggest that you choose someone with voice training (for example, an actor or singer).
- Attempt to regulate style, speed, volume, and pitch when recording. As voices change over time and with variations in health, prompts chosen from a single recording session are often the most consistent.
- Record prompts in a quiet, echo-free environment. Do not underestimate the noise caused by office air circulation systems. These noises are much louder when heard by someone calling from a quiet residence.

These are general guidelines. There are circumstances where some of these guidelines may not apply. Each application and audience should be carefully considered.

Editing voice segments for concatenation

The following section describes some of the considerations in using voice segments to play back such information as stock quotations and account balances. As a general rule, a single-voice segment comprising a complete sentence or lengthy phrase sounds more natural than a group of concatenated voice segments. The major reasons for this are as follows:

- segment inflections which do not sound natural in certain groups
- varying length pauses between voice segments in a group

While the Voice Prompt Editor cannot compensate for the first type of problem, it does provide a suite of tools to address the second type of problem. In particular, the voice editing commands of the Voice Prompt Editor are designed to streamline a process for preparing, verifying, and fine-tuning groups of concatenated voice segments after the entire voice segment file has been recorded.

Procedure 3-3
Editing voice segments for concatenation

1 Normalize the voice segment file.

2 Group the voice segments to be concatenated.

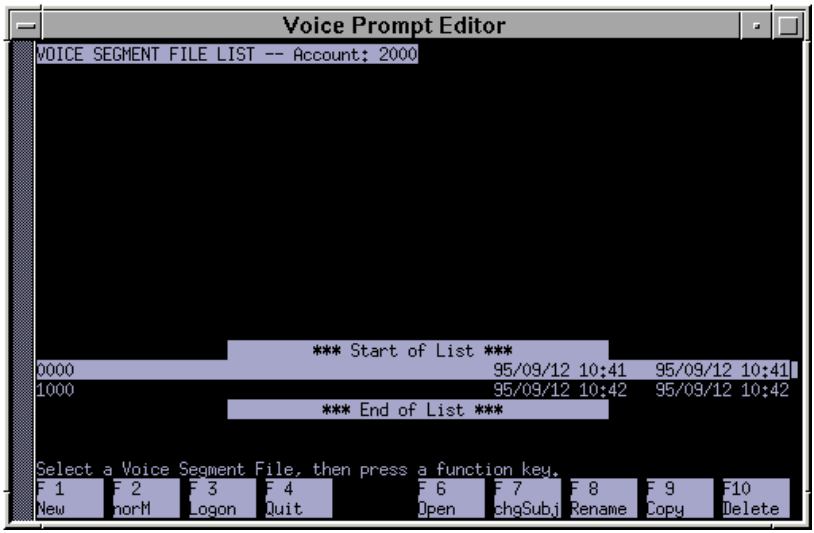
3 Play back the (concatenated) group of voice segments.

4 Trim, pad or rerecord the voice segments as required.

Normalizing a voice segment file

Whenever the list of voice segment files appears (see Figure 3-11) the command line contains a command called “norM” <F2>. The norM command first trims all leading and trailing silence, then pads the trailing end of each voice segment in the voice segment file with a fixed amount of silence. The voice segments can be padded with 0, 1/16, 1/8, 1/4, 1/2, 3/4, 1, or 1-1/2 seconds of silence. This powerful command enables you to put the voice segment file in a well-known, normalized state before proceeding with additional voice editing operations.

Figure 3-11
Voice segment file list

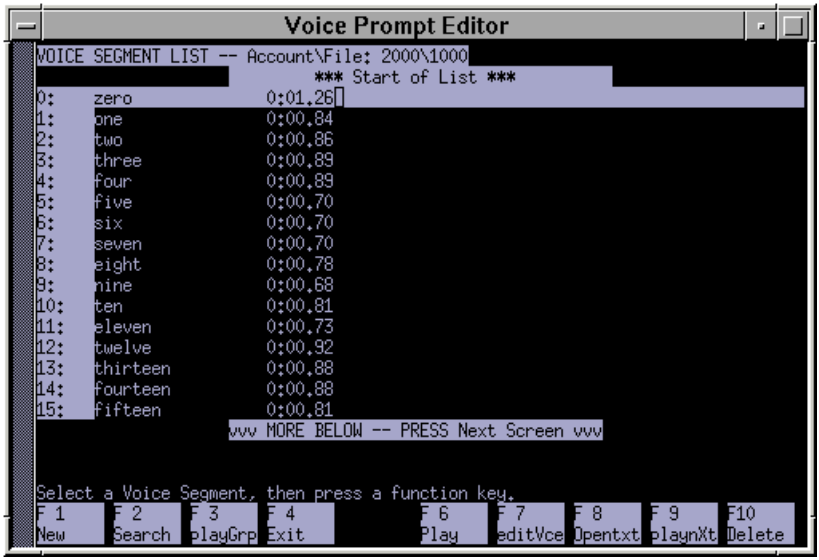


When you choose the normalize command, you must wait several moments as the file is processed. For convenience, you can press <F4> to stop the normalization process before it is complete.

Grouping voice segments for concatenation

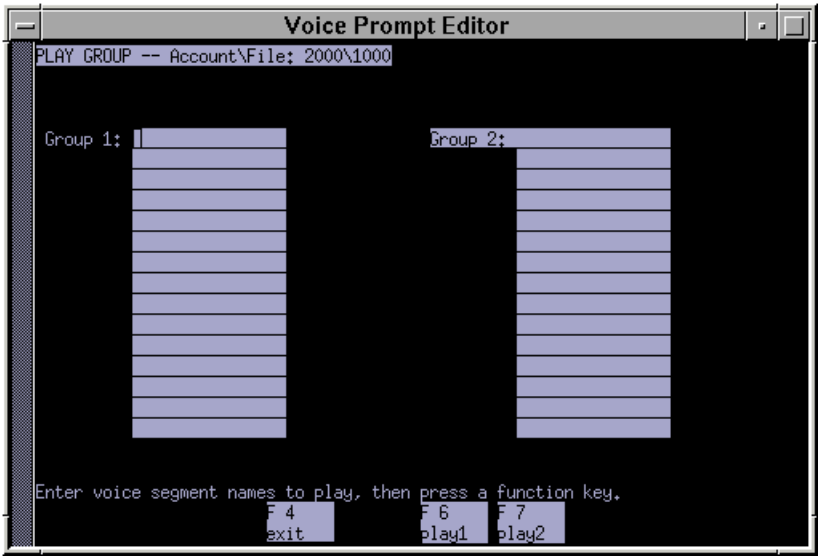
Grouping voice segments for concatenation (the second step of the process) is most easily accomplished using the list of normalized voice segments. Refer to Figure 3-12.

Figure 3-12
Voice segment list



You can select and store a voice segment in a temporary buffer by positioning the highlight bar on the voice segment and pressing the <Ctrl+G> keys simultaneously. Repeat this process, selecting and storing a group of segments in the order in which they are to be played back. When15 (at most) voice segments have been gathered, issue the playGrp <F3> command to display the form used to set up a group of voice segments for concatenated playback.

Figure 3-13
"Play Group" form



Position the cursor in the left-hand column and restore the group of voice segments by pressing <Ctrl+P>. The group of selected voice segments is then pasted into the left-hand column and is ready for concatenated playback. Then issue the Exit command to return to the list of voice segments. This entire process can be repeated to create two groups of up to 32 voice segments each.

A second group of voice segments can also be created by repeating the previous steps and positioning the cursor in the right-hand column of the "PlayGrp" form before pressing <Ctrl+P>. This second group is useful for comparing voice segments with slightly different inflections. Note that the up-arrow key moves the cursor from the top line of the right-hand column to the top line of the left-hand column and back again.

Another way to set up a group of voice segments is to type the name of each segment into the appropriate column of the "Play Group" form. This approach requires that each segment name is validated before the group of segments can be played for the first time. The validation process can take a few moments. Segment name validation is not required if the group of segments is set up using the <Ctrl+G> and <Ctrl+P> buffering technique.

The initial setup of the two groups of concatenated voice segments can be tested by issuing the play1 and play2 commands. Refer to Figure 3-13.

Playing and editing a group of concatenated voice segments

Playing a group of concatenated voice segments (the third step of the process) can usually identify a voice segment that contains too much leading or trailing silence, as well as any undesirable noise (pops or hisses) at either end of the segment. If any of these conditions are found, you can trim, pad, or rerecord individual voice segments (the fourth step of the process) by exiting to the voice segment list display. Once you return to the voice segment list display (see Figure 3-12), you can press <F7>, the “editVce” command, to activate the voice editing commands (see Figure 3-14). Table 3-15 summarizes the ten commands available when using the editVce command.

Figure 3-14
Voice editing form

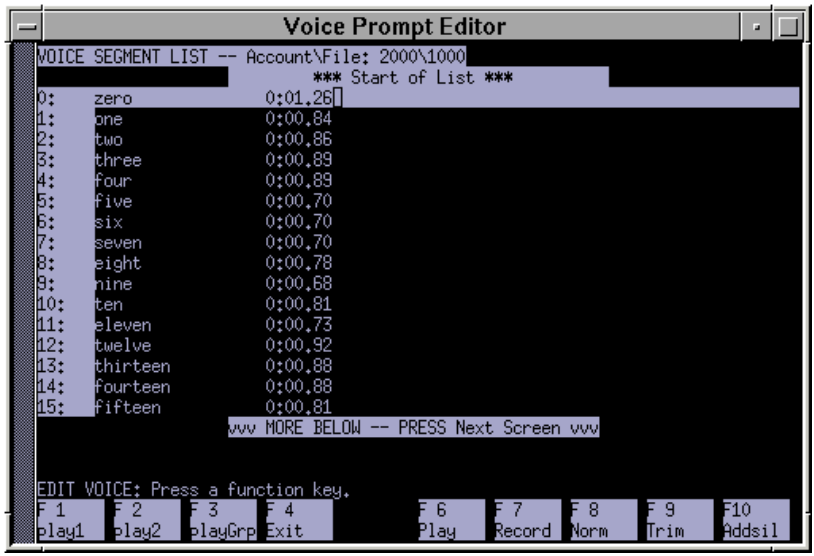


Table 3-15
Commands available with the editVce command

Key	Function	Description
<F1>	play1	Plays the first group of concatenated voice segments. The play1 and play2 commands instantly verify the effects of each voice editing operation on the two groups of concatenated voice segments (set up in the Play Group form) without having to display the Play Group form.
<F2>	play2	Plays the second group of concatenated voice segments. The play1 and play2 commands instantly verify the effects of each voice editing operation on the two groups of concatenated voice segments (set up in the Play Group form) without having to display the Play Group form.
<F3>	playGrp	Sets up one or two groups of voice segments for concatenated playback. The playGrp command enables you to return to the Play Group form in order to modify the groups of voice segments for concatenated playback.
<F4>	Exit	Returns to the previous set of commands.The Exit command redisplays the previous command line.
<F6>	Play	Plays the speech segment of the selected voice segment. The Play command functions exactly as explained in the section “Modifying a voice segment” on page 3-14.
<F7>	Record	Records a speech segment into the voice segment. The Record command functions exactly as explained in the section “Modifying a voice segment” on page 3-14.
<F8>	Norm	“Normalizes” the voice segment. The norM command first trims all leading and trailing silence, then pads the trailing end of the selected voice segment with 0, 1/16, 1/8, 1/4, 1/2, 3/4, 1, or 1-1/2 seconds of silence.

Table 3-15
Commands available with the editVce command (continued)

Key	Function	Description
<F9>	Trim	Trims either end of the voice segment. The Trim command enables you to trim 1/16, 1/4, or 1 second of recorded information off either end of the segment. Furthermore, this command enables you to trim all silence off either end of the selected voice segment.
<F10>	Addsil	Pads either end of the voice segment with silence. The Addsil command enables you to pad either end of the voice segment with an additional 1/16, 1/4, or 1 second of silence. This command edits segments that do not have sufficient leading or trailing silence.

Use the Norm, Trim, and Addsil commands repeatedly to fine-tune each voice segment. Play the concatenated group of voice segments between each voice editing operation to confirm its effect. Since the trimming operations cannot be reversed, use this command judiciously. Save the voice segment file frequently during intensive voice editing sessions by exiting to the list of voice segment files, then reopening the file.

Voice Prompt Editor command summary description

Abort
Aborts the voice segment file normalization process.

Add Silence (Addsil)
Pads either end of a voice segment with 1/16, 1/4, or 1 second of silence.

Cancel
Cancels the current operation.

Change Subject (chgSubj)
Presents a pop-up window allowing you to change the subject string associated with a segment file.

Copy
Copies a segment file including all the segments and associated text. A pop-up window appears, and you enter the name for the new file. It can take several minutes to copy large segment files.

Delete (a segment)

Marks a segment for deletion ("Deleted" appears to the right of the segment title). You can "Undelete" the segment any time before you exit from the file. The system automatically renumbers subsequent prompts. *Do not delete system prompts.*

Delete (a segment file)

Marks a segment file for deletion (the creation and last update dates are replaced with Deleted). You can Undelete a segment file any time before you exit from the Voice Prompt Editor. Once a segment has been deleted, all subsequent segments are renumbered accordingly.

Done

Indicates when you have finished entering text (for example, in a pop-up window).

Edit text (editTxt)

Puts the editor into a mode that allows you to change the name of a segment, the segment's title, or the segment's script. You are automatically put into this mode when you select the New command for creating a new segment.

Edit voice (editVce)

Puts the editor into a mode that allows you to play, record, normalize, trim, and pad voice segments. Exit (from the voice segment display) returns you to the voice segment list display.

Exit (from the voice segment list display)

Initiates a two-step sequence. First, if the segment file was modified, it offers you the option of saving or canceling the changes. Second, it prompts you to enter a filename, pathname, and prefix for a segment index header file. If you press <Esc> twice, no header file is created. If you press <F4>, the editor creates a segment index header file for the segment file from which you have just exited. Refer to the section "Creating a segment index header file" on page 3-26 for further information.

Exit (from the Play Group form)

Returns you to the voice segment list display.

Exit (from the voice editing command line)

Redisplays the previous command line.

Help
Presents a description of the commands presented in the command line.

Logon
Displays a pop-up window allowing you to enter another account number and password. Once you have successfully logged on to the new account, you no longer have access to files in the current account. You need to know the account number and password for the new account.

New (from the voice segment list display)
Creates a new segment in the current file. The segment appears at the end of the file. You are shown the segment text window and put into a mode allowing you to supply the segment's name, title, and associated script.

New (from the voice segment file list display)
Displays a pop-up window allowing you to enter a file name and subject. If the file name is unique, a new segment file is created.

Next (neXt)
Displays the text for the next segment in the file.

Normalize (Norm — from the voice editing command line)
Trims all leading and trailing silence, then pads the trailing end of a segment with 0, 1/16, 1/8, 1/4, 1/2, 3/4, 1, or 1-1/2 seconds of silence.

Normalize (norM — from the voice segment file list display)
Prepares a voice segment file for concatenation and normalizes every voice segment in a voice segment file. The operation can be aborted at any time by issuing the Abort command.

Open
Opens the selected segment file for editing. You see the list of segments. Large files may take a few moments to open.

Open text (openTxt)
Displays the text associated with a segment including its name, title, and script. This text can be changed with the editTxt command.

Play
Plays the selected segment. If necessary, a telephone connection is established to the extension specified when the Voice Prompt Editor started.

Play group (playGrp)
Displays the Play Group form. Using this form, you can set up two groups of voice segments for concatenation.

play1
Plays the group of segments stored in the Group 1 list of the playGrp display.

play2
Plays the group of segments stored in the Group 2 list of the playGrp display.

Play next (playnXt)
Selects the next segment and starts playing. Repeated use of this command allows you to listen to all of the segments in a file.

Quit
Quits the Voice Prompt Editor and returns to the operating system. Any voice segment files marked for deletion are deleted.

Record
Allows you to record voice for the current segment. Whenever Record is selected, any existing voice is erased. Recording starts after the tone. Silence during the recording is automatically compressed to 1/2 second of silence. If necessary, a telephone connection is established to the extension specified when the Voice Prompt Editor was started. To terminate recording, select Stop, or press the arrow or paging keys.

Rename
Presents a pop-up window allowing you to change the name of a selected segment file. The name you choose must be unique within that account.

Save
Saves the changes made to a voice segment file.

Search
Presents a pop-up window that prompts you to enter criteria for finding a particular segment within the segment file. The search criteria can be the (numeric) segment ID, substrings in the segment name, title, and script, or any combination thereof. In addition, it is possible to search by the amount of voice recorded in a segment. This last criterion enables you to confirm that all of the segments have been recorded.

Skip backward (skipBak)

Skips back five seconds within the currently playing segment and continues playing. This command is available only when a segment is playing.

Skip forward (skipFwd)

Skips over the next five seconds within the currently playing segment and continues playing. This command is available only when a segment is playing.

Stop

Stops the recording or playback. The Stop command is available only during recording or playback.

Trim

Trims 1/16, 1/4, or 1 second of recorded information off either end of a voice segment. This command also enables you to trim all silence off either end of a voice segment.

Undelete (from the voice segment list display)

Undeletes a segment that is marked Deleted.

Undelete (from the voice segment file list display)

Undeletes a segment file that is marked Deleted.

<Ctrl+G>

Stores a voice segment name in a temporary buffer. It is used to create groups for concatenated playback. The buffer has room for up to 15 names.

<Ctrl+P>

Restores the buffer of voice segment names into either the Group 1 or Group 2 lists in the PlayGrp display. The voice segment names are stored in the buffer with the <Ctrl+G> command.

<Ctrl+T>

Moves the highlight bar to the first position on the voice segments list.

<Ctrl+B>

Moves the highlight bar to the bottom position on the voice segments list.

Voice Prompt Editor troubleshooting

This section describes some problems you may encounter and their possible causes and solutions.

Logon problems

Unable to establish session with Meridian Mail

A temporary problem exists with Meridian Mail. Check the VPE Configuration Meridian Mail Channel Allocation Table setup to determine if the parameters have been set properly for VPE use. Use ACCESS Link Diagnostics to confirm that the ACCESS link has been synchronized. Try again later; if it still fails, contact your Northern Telecom (Nortel) service representative.

Not prompted for account number or password

An Account number or Password was supplied when the Voice Prompt Editor was first installed. Contact your Nortel service representative.

Account number or password invalid

Restart the Voice Prompt Editor, this time supplying the correct information. Contact your Nortel service representative.

Meridian Mail is currently busy

All available Meridian Mail voice channels are in use. Try again later; if it still fails, contact your Nortel service representative. You may have to revisit Meridian Mail channel configuration in the Channel Allocation Table (CAT table) and confirm that VPE configuration complies with Meridian Mail configuration.

Already logged on

You try to log into an account that is already in use (possibly because the Voice Prompt Editor session aborted, or the previous session hung). You are logged off automatically after the timeout period set by the system administrator has elapsed. In most cases, you can try again in about five minutes.

Play/record problems

After Play or Record is pressed, telephone does not ring

The wrong telephone number has been dialed.

Telephone is idle

Make sure the telephone is hung up, and let it ring before picking up the receiver.

Call was forwarded to <DN>. Connection dropped

Make sure that call forwarding at the associated telephone set is not in operation.

Editing problems

Trim command doesn't work properly

Ensure that silence compression is enabled on Meridian Mail.

> ***Note:*** For information on Voice Prompt Editor Error messages, see Appendix B in this guide.

Chapter 4: Managing applications

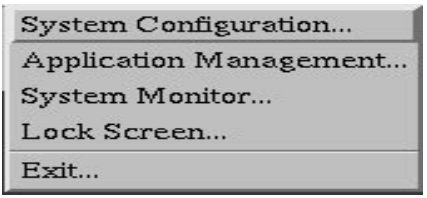
The system administration interface includes a facility for managing your Meridian IVR applications. You can load/unload applications, assign applications to different channels, and start or stop execution. You can also create scripts to automate the process of loading and running applications.

Procedure 4-1
Accessing Application Management

1 From the Meridian IVR main menu, click on the first icon.

The menu for Application Management appears, as shown in Figure 4-1.

Figure 4-1
The Application Management menu



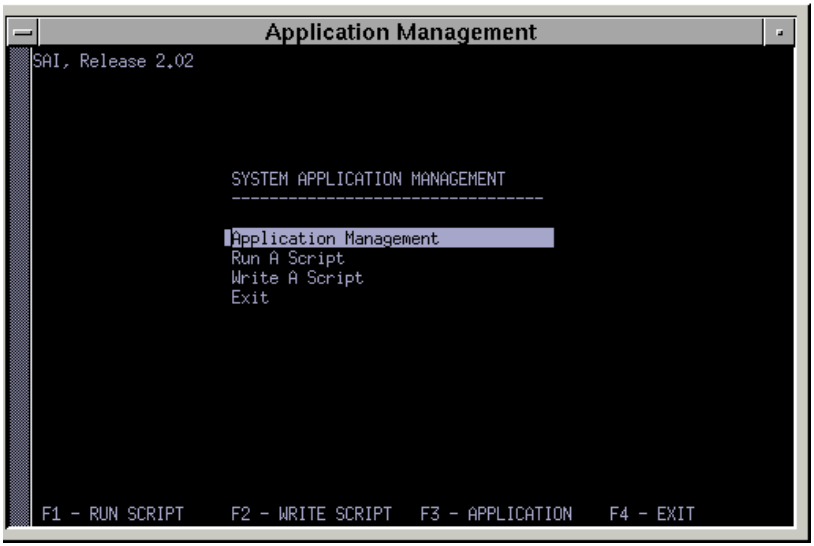
2 Drag the mouse until Application Management is highlighted and release the mouse button.

An outline for the window appears on the desktop.

3 Move the cursor to where you want to place this new window.

4 Press the left mouse button to release the window on the desktop.

Figure 4-2
Application Management window



Developing, testing, and modifying applications on a live system

Meridian IVR systems include both a development and run-time capability so that IVR applications can be developed and tested on the same system. Therefore, you can make minor modifications to an existing application while the system is running. For example, an airline that has just announced a seat sale can quickly add a new selection to a voice menu. This capability does not apply to the Run-Time system; it applies only to the Development system.

If the Meridian IVR system is being used for new application development or application modification in a "live" customer environment, sufficient caution should be used to ensure that the new application development/testing does not impact existing running applications. In particular, the following cautions and recommendations should be noted.

ATTENTION!

Never change the live application. The live application itself should not be changed. The application developer should make a copy of the application, modify the copy, test the copy on a dedicated test channel isolated from normal customer traffic, then replace the application with the new modified version.

Response times can be impacted

On-line development using the Application Editor consumes CPU cycles, which impacts the response times of running applications. To minimize the risk, such changes should be made during a relatively low traffic period.

CAUTION!

Risk of system damage

Apply extreme caution in testing custom "C" code.

Applications that use custom user functions ("C" code) should not be tested on a live system, as a poorly written, untested custom "C" program can cause the entire IVR system to stop functioning, necessitating an IVR reset.

In addition, the compilation of "C" code on a live system uses a lot of CPU cycles, which can impact the response time of live applications.

Ensure that the test environment is isolated

While testing new applications, ensure that the application test environment classes such as Meridian Mail and IVR channels, ACD routing, VSDN, and ACCESS are fully isolated from the live applications and, as such, do not impact live applications. We recommend that you follow these guidelines:

- Preliminary testing by the VAD on a captive development Meridian IVR system, including Meridian Mail and Meridian 1 PBX with trunks, is necessary but not sufficient. Controlled testing to prove the sanity of the application on a live system is still needed even after the best efforts of testing on a captive development system.
- To minimize the risk of service interruptions, new or modified call-flow applications should be tested in three phases:

  Phase 1
  Test channels in isolation from receiving customer traffic; tester-generated traffic only.

  Phase 2
  A single-monitored test channel receiving customer traffic.

  Phase 3
  A few monitored test channels receiving customer traffic.

- The tester must understand the distinctions between Meridian IVR logical channel acquisition type (dedicated versus shared), Meridian Mail voice service channel service type (ACCESS versus ALL), and Meridian 1 PBX ACD traffic routing. “Dedicated” test channels refer to channel dedication for a specific function, such as running a test application, rather than a dedicated Meridian Mail channel.
- If possible, testing of new or modified applications should be done on test channels of dedicated acquisition type so as not to impact live applications when setting up or taking down the isolated test environment.

Note: Some applications (such as those using the Prompt Update on Next Cell feature) require that Meridian IVR logical channels be configured for shared acquisition type.

- Dedicated acquisition type ties a Meridian IVR logical channel to an individual Meridian Mail voice channel. Test traffic can be routed to the application that is being proved. This can be done by assigning the ACD Agent Position for the test channel to an ACD queue that can be dedicated to routing test calls only. This is achieved most conveniently by using ACD Automatic Overflow. It changes the Overflow DNs to selectively route live customer traffic into the test channel during Phase 2 and Phase 3 testing, and whenever it is not being used for testing. During Phase 1 testing, customer traffic can be prevented from overflowing into the test channel.
- Shared acquisition type depends on the ACCESS class defined for the logical channel and for the dialed DN in the Meridian Mail VSDN table. The Meridian IVR logical channel is tied to the dialed DN (and not to any individual Meridian Mail voice channel). Establishing an isolated test environment with shared acquisition type involves configuring a Meridian IVR logical channel with an ACCESS class that is dedicated to the test application and the dialed DN.

— With shared acquisition type, it is impossible to switch a logical channel between customer traffic and tester-generated traffic without interrupting service on all channels. This is because the switch is accomplished by changing the class of the logical channel through Meridian IVR system configuration. Reconfiguring a single logical channel requires that all Meridian IVR channels be stopped and restarted, which momentarily interrupts service on all live applications.

— ACD traffic routing on the Meridian 1 PBX must be controlled so that the number of Meridian Mail voice channels that can present calls to ACCESS VSDNs of a given class do not exceed the number of active Meridian IVR logical channels configured for the given class. Otherwise, some calls will be answered, only to be transferred to the Revert DN. Again, ACD Automatic Overflow provides the most convenient means of controlling call routing in the Meridian 1 PBX. The Overflow DNs can be changed to prevent excess calls from being presented to logical channels of shared acquisition type.

- Outbound applications cannot be set to run exclusively against a particular Meridian IVR logical channel. It is therefore impossible to establish an isolated test environment for outbound applications on a live system.
- Meridian IVR Application Management provides the capability to stop an application gracefully or forcefully.

— "Stop Forcefully" idles logical channels that are hung, due either to User Function Cell failure or to other application problems. It does not recover logical channels that are out of service due to out of service Meridian Mail channels, or ACCESS Link problems.

— To minimize service interruption when using "Stop Forcefully" to recover hung Meridian IVR logical channels, load a separate instance of a given application (copied and suitably renamed) for each logical channel or small range of logical channels. Use "Stop Gracefully", monitor the channel board lights until only the hung channel is still busy, then use "Stop Forcefully" to recover the hung channel.

— Until the application for the range of channels is restarted, customer calls are routed to the stopped channels. Each call is answered and transferred back to the dialed DN which puts the caller to the back of the queue. The original CLID can be replaced by the Agent Position ID of the transferring Meridian Mail agent.

- When testing applications that use new or modified voice prompts, before making changes to the files using the VPE, it is critical that existing voice segment files are backed up. This is done by copying them to tape using the Meridian Mail ACCESS Prompt Transfer tool.
- You must create a dedicated test mailbox. The Meridian IVR test channels must be configured to use the dedicated test mailbox. If voice segments are to be added or modified, then the backup of the voice segment files currently in use must be copied into the test mailbox. All changes should be thoroughly tested before copying the modified voice segment files into the mailbox that provides the voice prompts for customer traffic.

  Note: Changing the mailbox for a single logical channel in Meridian IVR system configuration requires restarting all Meridian IVR channels in order for the reconfiguration to take effect.

Loading an application

After an application developer creates an application, you can load and assign it to a set of channels. The loading process opens the application's databases and starts any user function that may be associated with the application. Once loaded, an application cannot process telephone calls until it has been started.

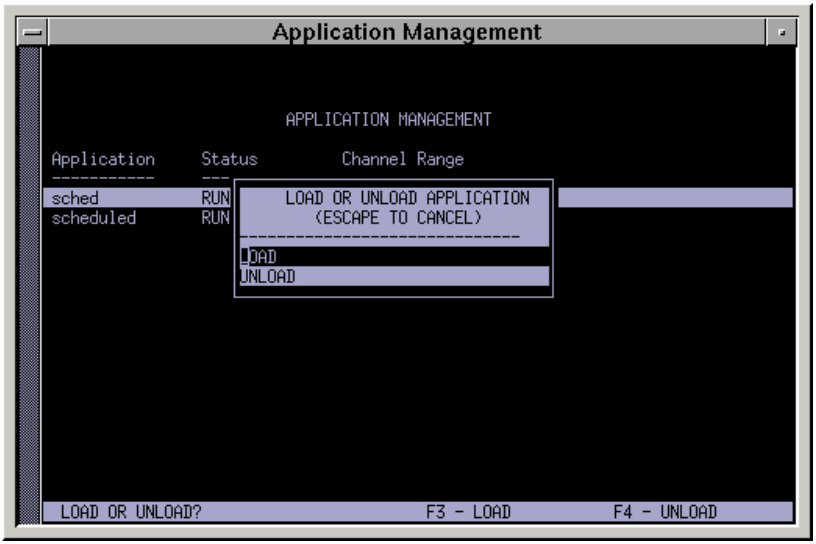
Note: You can load only applications stored in the /u/ivr/gen/apps directory located in the base directory of Meridian IVR.

Procedure 4-2
Loading an application

1 From the Application Management window, press <F1> for Load/Unload.

A pop-up menu as shown in Figure 4-3 appears.

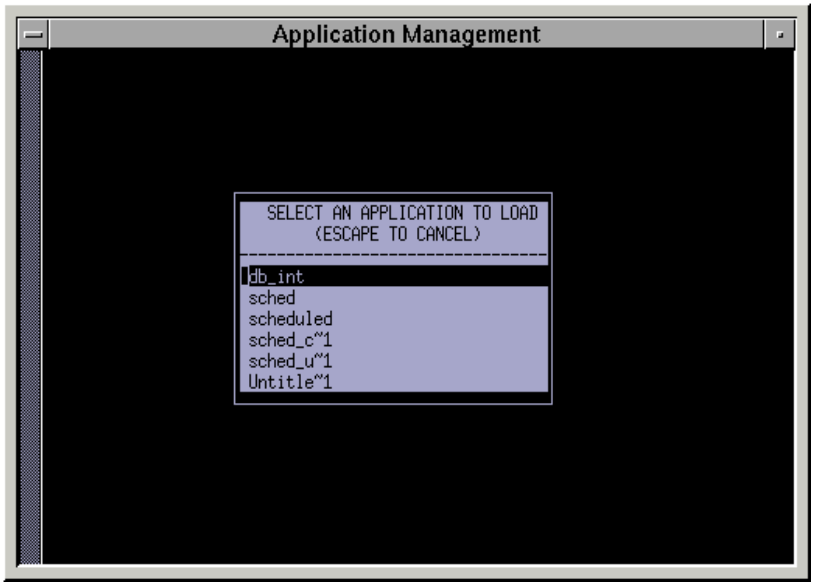
Figure 4-3
Load or unload an application pop-up window



2 Press <F3>, or move the cursor to Load, and press <Enter>.

The system displays the pop-up menu shown in Figure 4-4, revealing a list of all applications in the u/ivr/gen/apps subdirectory.

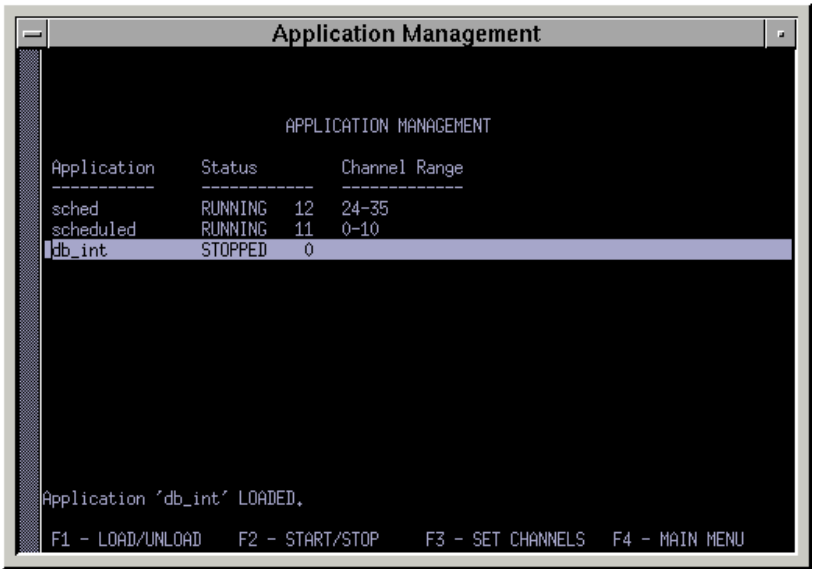
Figure 4-4
Select an Application to Load pop-up window



3 Move the cursor to highlight the name of the application that you want to load, then press <Enter>.

The Application Management window reappears and shows the loaded application (see Figure 4-5). The name of the application appears in the Application column to show that the application has been loaded. The word STOPPED appears in the Status column to signify that the application is stopped. After the word STOPPED, the number 0 appears, indicating that the application has not been loaded on any channels. If, for example, you select an application called "db_int", you see the Application Management window as shown in Figure 4-5.

Figure 4-5
Loaded application



The following message appears at the bottom of the window:

`Application'db_int' LOADED.`

Assigning channels

Once an application has been loaded, you need to assign the application to one or more channels.

Note: Do not assign an outdialing application to a channel.

Procedure 4-3
Assigning channels

1 From the Application Management window, press <F3> for Set Channels.

The system displays the following prompt:

`Enter The Channel Range (ESCAPE or CANCEL):`

2 Type a channel number or a range of channel numbers and press <Enter>.

To type a range, type the starting number, a hyphen, and the ending number. Use commas to separate ranges.

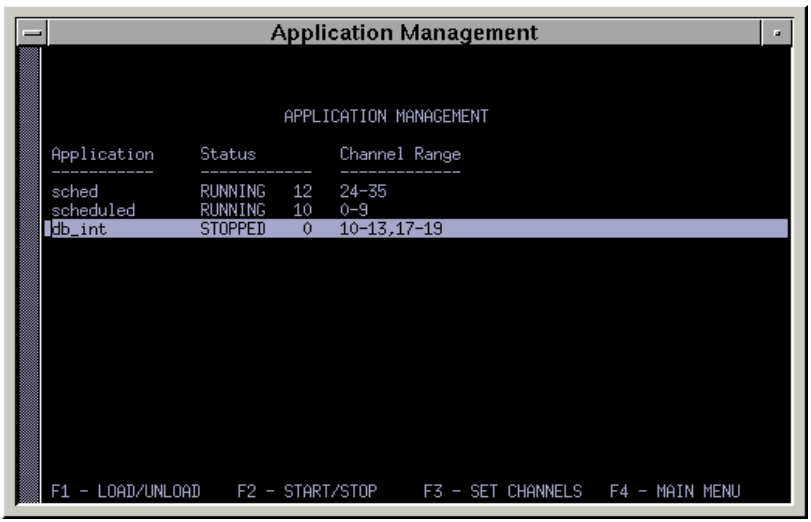
For example, to assign the application to channels 10, 11, 12, 13, 17, 18, and 19, type in the channel numbers without spaces, then press <Enter>:

```
10-13,17-19
```

The range you choose appears in the Channel Range column of the application management window (see Figure 4-6). (If you choose a channel where another application has already been loaded, you see an error message).

Notice that the Status column still displays STOPPED to indicate that the application is not running on any channels yet.

Figure 4-6
Application assigned to channels



Starting an application

After you load an application and assign channels to it, you can start it.

Note: You can design a primary application to start another secondary application using an EXEC cell, a GSUB cell, a DELV cell. All applications must first be started. These secondary applications would not be assigned any channels.

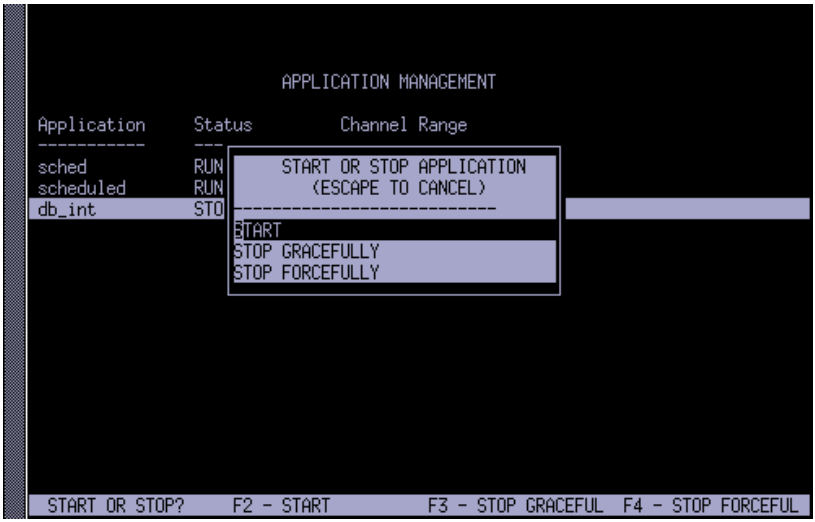
Procedure 4-4
Starting an application

1 From the Application Management window, press <F2>, then use the arrow keys to move the cursor until you highlight the name of the application that you want to start.

2 Press <Enter> or <F2> to start the application.

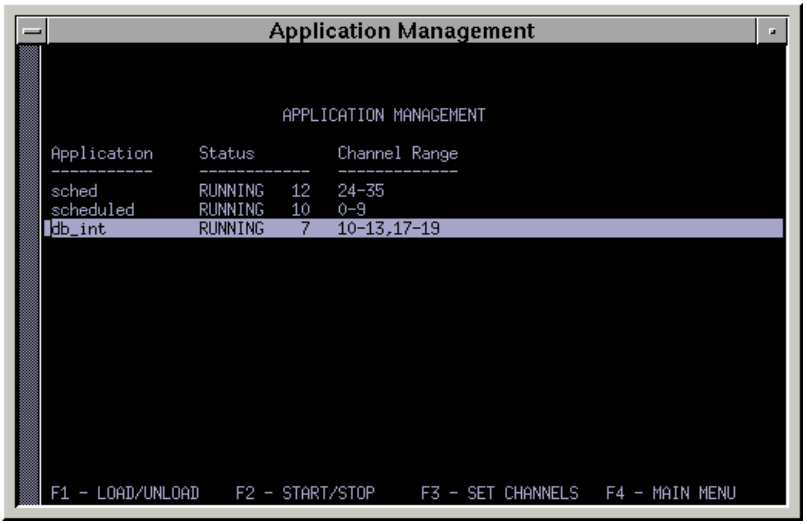
The system displays the Start or Stop Application pop-up window (see Figure 4-7).

Figure 4-7
Start or Stop Application pop-up window



The Status column for the application changes from STOPPED to RUNNING (see Figure 4-8). It also shows the number of channels on which the application is running.

Figure 4-8
An application running on seven channels

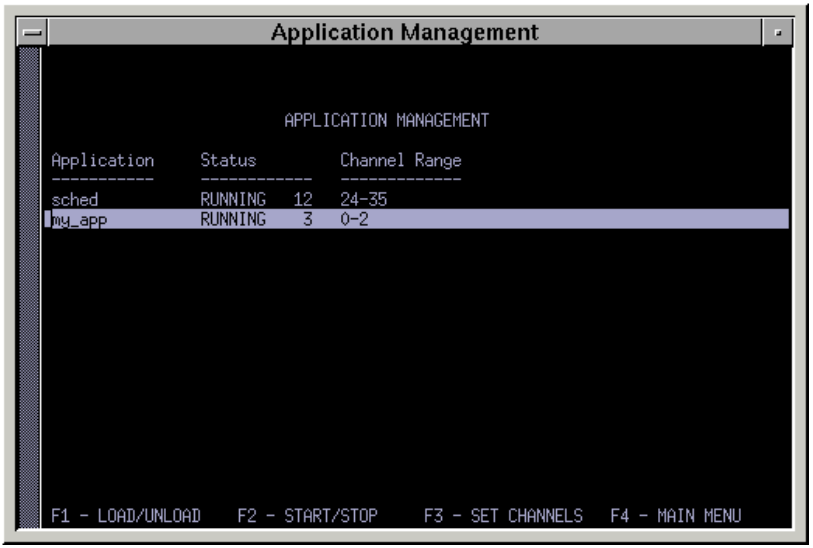


Reassigning channels

You can reassign a set of channels from one application to another without interrupting service. If you follow the procedures in this section to change applications on a set of channels, each channel can continue running the old application until it has finished processing the current call in the standard way. The channel can then automatically begin running the new application.

Consider the application displayed in Figure 4-9. Application my_app is currently running on channels 0, 1, and 2.

Figure 4-9
Sample application running on three channels



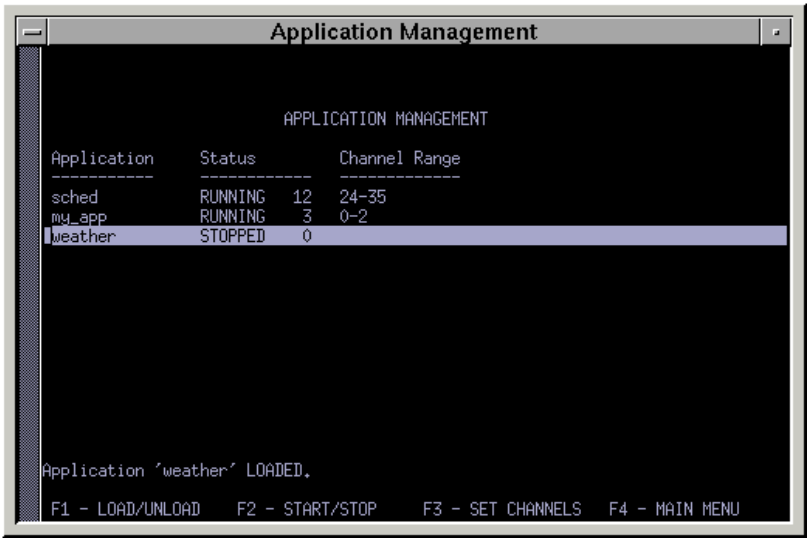
Suppose you have decided to let my_app continue running on channel 2, but you want channels 0 and 1 to begin running another application called weather.

Procedure 4-5
Reassigning channels

1 Load the weather application (see Procedure 4-2) without assigning any channels to it.

The Application Management window displays the following information, as shown in Figure 4-10.

Figure 4-10
"Weather" application is loaded



2 To assign channels 0 and 1 to weather, move the cursor until you highlight my_app, then press <F3> for Set Channels.

The system displays the following prompt:

Enter The Channel Range:

3 Type **2** and press <Enter>.

The system assigns channels 2 only to my_app (see Figure 4-11).

4 Move the cursor until you highlight weather, and press <F3>.

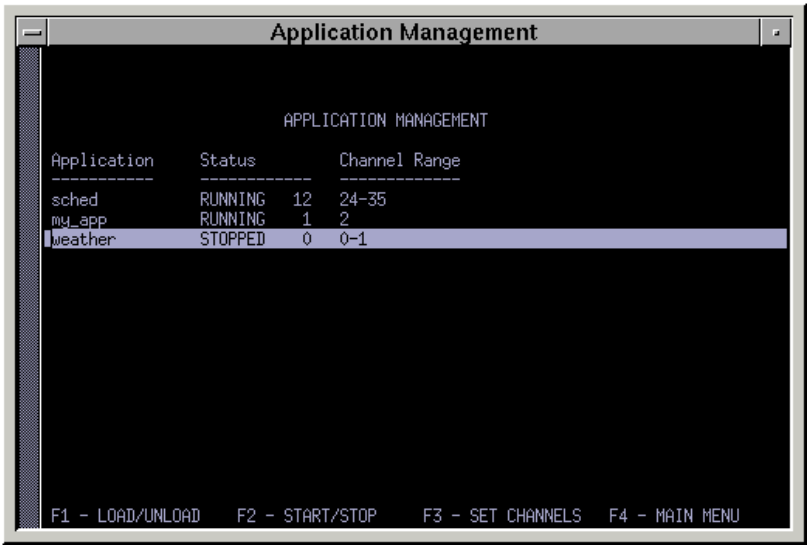
The system displays the prompt:

Enter the Channel Range:

5 Type **0-1** and press <Enter>.

The system assigns 0 and 1 to weather (see Figure 4-11).

Figure 4-11
Reassigning channels to weather application



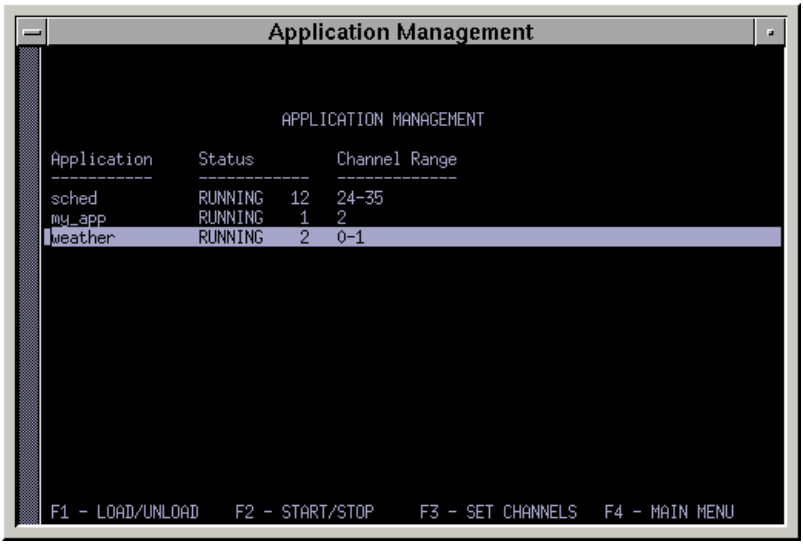
6 To start the weather application, press <F2> for Start/Stop.

The system displays the pop-up menu.

7 Press <F2> for Start.

The weather application starts on channels 0 and 1, as indicated by the Status column on the Application Management window. Figure 4-12 illustrates the weather application running on reassigned channels.

Figure 4-12
Weather application



Note: If my_app is currently processing calls on channels 0 and 1, then my_app continues handling these calls until they end in the normal way. The next time a call begins on either of these channels, the weather application processes the call, instead of my_app.

Stopping an application

An application can be stopped at any time. There are two options for stopping an application:

- **Stop gracefully** This option allows the application to complete its current calls in the usual way while preventing it from accepting any new calls.
- **Stop forcefully** This option stops the application without allowing it to complete its current calls. This option has been designed for use only during the development process.

> **ATTENTION!**
>
> Use the Stop Forcefully option carefully. It causes the application to hang up on any callers using it.

Procedure 4-6
Stopping an application

1 From the Meridian IVR Application Management menu, press <F3> for Application, or move the cursor to Application Management.

2 Press <Enter>.

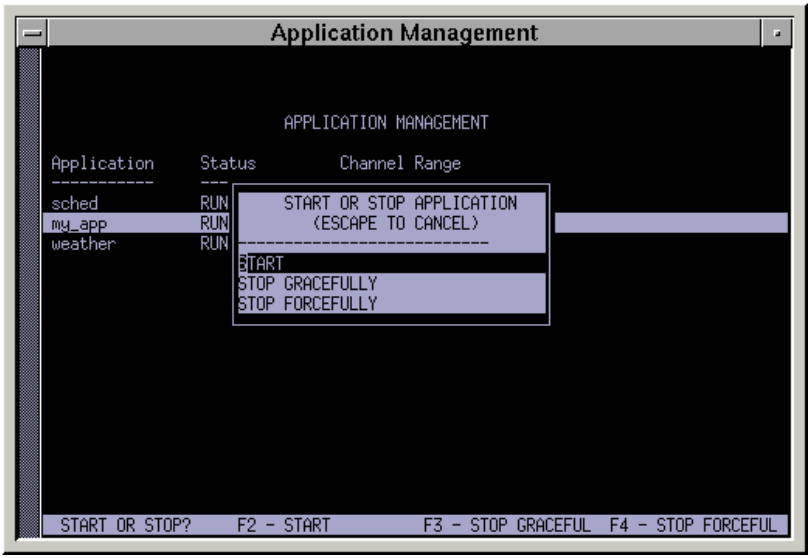
The Application Management window appears.

3 Move the cursor until you highlight the name of the application that you want to stop.

4 Press <F2>.

The Start or Stop Application pop-up window appears (see Figure 4-13).

Figure 4-13
Start or Stop Application pop-up window



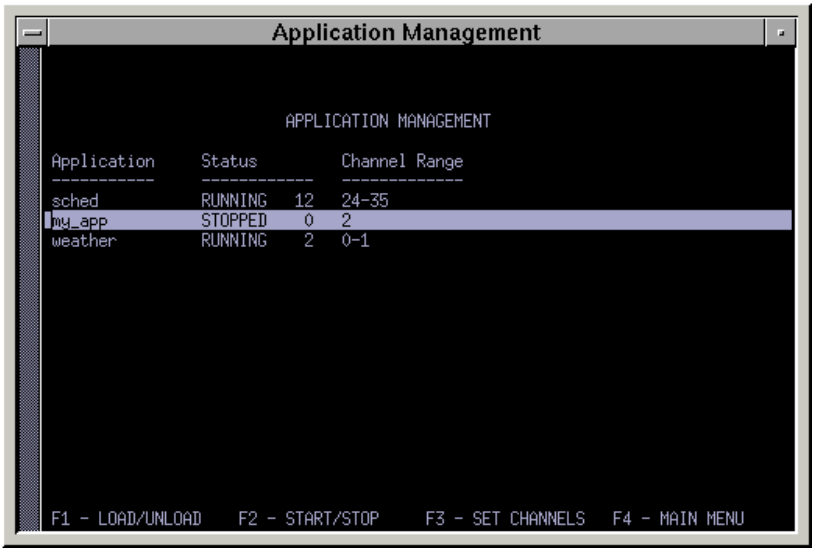
5 Move the cursor to highlight Stop Gracefully or Stop Forcefully, and press <Enter>. Alternatively, you can press <F4> or <F5> for Stop Gracefully or Stop Forcefully respectively.

For example, if you select Stop Gracefully for application my_app, the application allows its current calls to end normally and then stops.

If you choose Stop Forcefully, the application stops immediately.

In either case, the message lists the number of channels on which the application has been stopped. Also notice in Figure 4-14 that the Status column will change from RUNNING to STOPPED.

Figure 4-14
A stopped application



Unloading an application

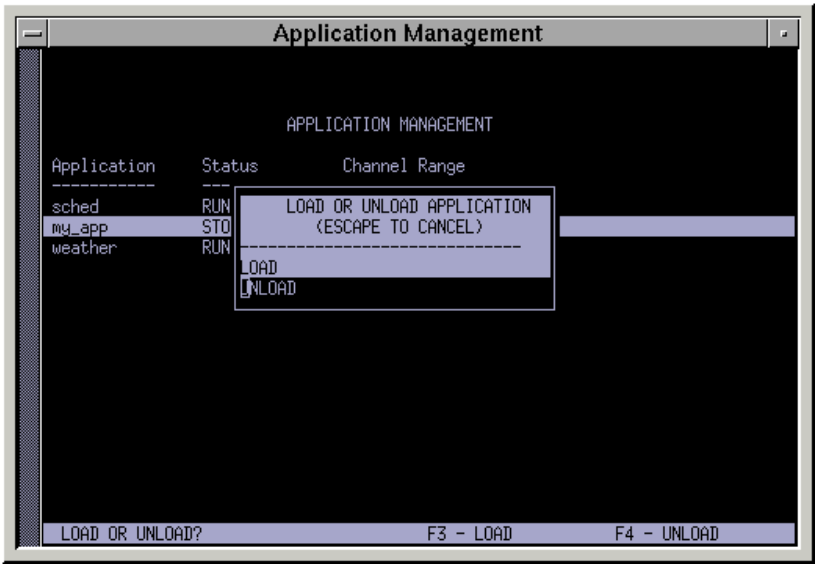
If you want to unload an application, first ensure that the application is not running.

Procedure 4-7
Unloading an application

1 Press <F1> for Load/Unload.

Meridian IVR displays the pop-up window shown in Figure 4-15.

Figure 4-15
Load/Unload Application pop-up window



2 Press <F4> for UNLOAD, or move the cursor to UNLOAD and press <Enter>.

Meridian IVR redisplays the Application Management window without the application included in the list, indicating that the application is unloaded.

Using the audit tool

The audit tool can handle a number of options, some of which set certain flags on the audited process (referred to here as the target), some that just display information, and some that require the audit to remain active and gather information from the target.

To invoke the audit tool, enter the following command:

audit [-p] <target> <[-v [on / off]]> [-f <file>] [-l]

Table 4-1 explains the parameters for this command.

Table 4-1
Parameters for the audit command

-p followed by the <target name>	Designates the target process you want to audit.
-v	Turns the target's verbose mode on or off (the default is on).
-f	Specifies the file to write verbose output. If you do not specify the file name, the audit tool displays the trace information on the window. Note that this option is valid only when -v is set to on.
-l	Lists the name of the target process.

Note: You must specify target and the switch **-v**.

If a process has been compiled to include auditing, it will keep track of all messages that are received by the process. This allows the audit tool to request history at a later time. Every message will reference a channel and the entry stored is based on the channel ID.

The space available for messages is limited. If a process stores minimal information per message, approximately 25 entries per channel are possible.

Scheduling an application

You can affect the scheduling of an application by emulating the following three cells through the command line or a shell script:

- **DELV** - Schedules an outgoing application to occur at some later time.
- **UDLV** - Unschedules a previously scheduled application event.
- **LDLV** - Gets the buffers that will be passed to a previously scheduled application event.

The sched command communicates directly with the Meridian IVR 2.0/I scheduling system, the csc, and requests the desired action. The status of the request and any output buffers are passed back as the shell command status and standard output.

Note: You must have Meridian IVR 2.0/I running to use sched.

The following section contains the command line arguments to use with sched for emulation of each specific cell.

Procedure 4-8
Scheduling applications

1 At the command line, type **sched -d** (**-d** specifies that this is the DELV request) plus one or more of the required and optional switches as shown in Table 4-2 and Table 4-3 respectively.

The command line format is:

sched -d -a <*application name*> -o <*phone #*> -t <*date-time*> -n<*interval*> -r minutes [-h <*handle*>] [-(1-5) data] [-v]

Note: You can schedule for absolute time or relative time, or you can reschedule.

If you have successfully scheduled an event, a message appears at the prompt stating that the event has been scheduled with the event ID.

If the format was not correct in the command line, the on-line help appears listing the correct usage.

If your scheduling has failed, a message appears stating that there is no communication with the csc.

Table 4-2
Required switches: scheduling applications

-a application name	The application name to schedule; do not include the application name .vpf extension in your command line.
-o phone #	Specifies the outdial number to be passed to an application when the outgoing event is serviced by Meridian IVR 2.0/I.
-t date-time	For absolute schedule requests, enter the time in this format, mmddyyyyhhmm, for the event to be serviced.
-r minutes	For relative time schedule requests, enter the time, in this format for the number of minutes: minutes from now to the actual time of the event. For example, if you wanted to start the application in 30 minutes, you would enter the number 30.
-n interval, date-time	For rescheduling time requests, enter the daily interval and the absolute time in this format: interval, for the number of days to allow between each rescheduled delivery, and mmddyyyyhhmm for the absolute time to schedule the application. For example, you would enter the command line as 1 070219951200 to reschedule to run on July 2, 1995 at 12 noon.

Table 4-3
Optional switches: scheduling applications

-h handle	The delivery handle to pass to the application when the delivery event occurs. Refer to the entry on the DELV cell in Chapter 7, “The Cell Catalog,” in the *Meridian IVR Application Guide (NTP 555-9001-310)* for more information about handles.
-v	Turns verbose mode on. Verbose mode provides the details of the communication with the csc, such as • the outdial number • the delivery interval • the event scheduling • response received message • the event scheduled message with the event ID
-(1-5) data	Optional data items, Data Exchange Buffers 1 through 5, consisting of whatever information you want to pass into the application when the delivery event occurs.

Procedure 4-9
Unscheduling events

1 Type **sched -u** (**-u** specifies that this is a UDLV request) plus one or more of the required and optional switches as shown in Table 4-4 and Table 4-5.

The correct command line format is

sched -e<event_id> -u [-v]

If you have successfully unscheduled an event, a message appears at the prompt stating that the event has been unscheduled with the event ID.

If the format was not correct in the command line, the on-line help appears listing the correct usage.

Table 4-4
Required switches: unscheduling events

-e event_id	Specifies the event ID for the UDLV request. Refer to the devnt tool in this chapter for more information.

Table 4-5
Optional switches: unscheduling events

-v	Turns verbose mode on. Verbose mode provides the details of the communication with the csc, such as • the outdial number • the delivery interval • the event scheduling • response received message • the event scheduled message with the event ID

Procedure 4-10
Listing previously scheduled events

1 Type **sched -l** (**-l** specifies that this is a LDLV request) plus one or more of the switches that follow.

The correct command line format is

sched -l -a <application name> -o <phone #> [-v]

If you have successfully got buffers from a previously scheduled application event, you get the handle (if you had entered the handle in the command line), the event ID, and the contents of all five Data Exchange buffers.

If the format was not correct in the command line, the on-line help appears listing the correct usage.

If the event does not exist, a message appears stating so.

Table 4-6 lists the required switches for listing previously scheduled events. Table 4-7 lists the optional switches for previously scheduled event.

Table 4-6
Required switches: previously scheduled events

-a application name	The application name to schedule; do not include the.vpf extension in your command line.
-o phone #	Specifies the outdial number for which the event has been scheduled.

Table 4-7
Optional switches: previously scheduled events

-v	Turns verbose mode on. Verbose mode provides the details of the communication with the csc, such as • the outdial number • the delivery interval • the event scheduling • response received message • the event scheduled message with the event ID

Examples using the sched tool

Procedure 4-11
Canceling a previously scheduled event

1 Type the sched **-u -e event number** command to unschedule an event, where **-u** specifies that this is a UDLV request and **-e** introduces the event number that you want to unschedule.

Procedure 4-12
Scheduling an outgoing application

1 To schedule the application called “outbound” to be run at 6:45 p.m. on June 9, 1995, dialed to telephone number 437-1245, enter the following command:

sched -d -a outbound -o 4371245 -t 060919951845 -h 2000 -1 25 -2 50

- **-d** specifies that this is a DELV request
- **-a** the application name
- **-o** the telephone number to be dialed
- **-t** for absolute delivery time

The handle 2000 is passed to the application and the values 25 and 50 are passed to the buffers DATA EXCHANGE #1 and DATA EXCHANGE #2 in the application.

Procedure 4-13
Listing data about a scheduled event

1 To get information about the application “outbound” where telephone number 437-1245 is dialed, enter the following command:

sched -l -a outbound -o 4371245

- **-l** specifies that this is an LDLV request
- **-a** the application name
- **-o** the telephone number to be dialed

The following information is output to standard output:

Handle = 2000, Event Id = 2

DATA EXCHANGE #1 = 25

DATA EXCHANGE #2 = 50

DATA EXCHANGE #3 =””

DATA EXCHANGE #4 =””

DATA EXCHANGE #5 =””

Creating, editing, and running scripts

You can automate the process of loading and starting applications by using a “script”. A script is a list of instructions that indicate which applications to load, start, or unload, and which channels to assign. When you run a script, Meridian IVR automatically executes the instructions listed in the script.

To create a script, you can use either the Write A Script function on the Application Management main menu or any other text editor. The Write A Script option allows you to take a snapshot of the current application configuration (that is, the one displayed on the Application Management window).

In some cases, you may not want to include the current application configuration in your script. Rather than change the current setup, you can simply define a new set of application instructions by using the text editor to create a script. Any available text editor can be used to make changes to an existing script or to create a new script without disrupting the current application configuration.

Once you have created a script, you can run it at any time.

Procedure 4-14
Creating a script

1 Load the applications you want to include in the script, and assign the channels.

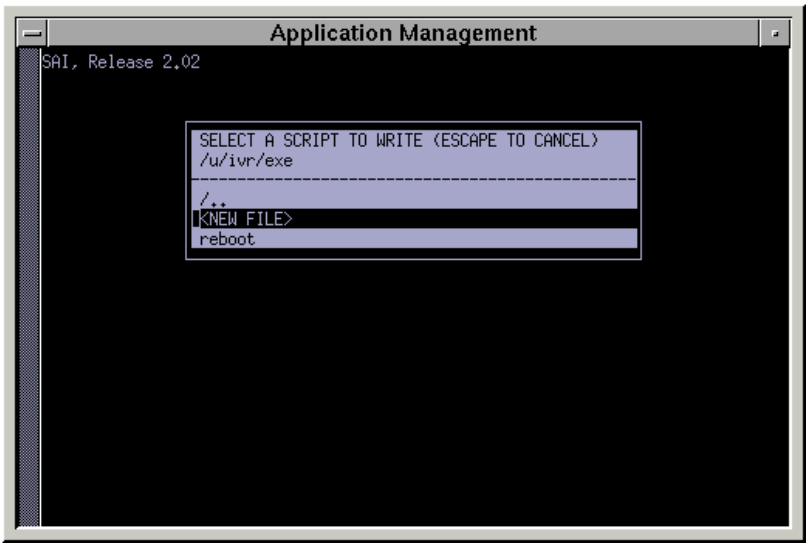
2 Start the applications.

3 Stop and unload any active applications you do not want to include in your script.

4 From the Meridian IVR Application Management Menu, select the Write a Script option.

Meridian IVR displays a menu as shown in Figure 4-16.

Figure 4-16
A sample Select a Script to Write menu



Note: The Select a Script to Write menu (as shown in Figure 4-16) lists scripts available in the current directory. In this example, the name of the current directory is u/ivr/exe. An existing script in the current directory is named reboot.

5 Select the <NEW FILE> option from the menu to create a new script in the current directory.

Note: Selecting <NEW FILE> creates a new script by taking a snapshot of the current application configuration (for example, as displayed on the Application Management window).

The SAI displays the following prompt:

```
Write Script As: Untitled
```

6 "Untitled" is the default script name. To save the script under a different name, type a name up to 10 characters long, then press <Enter>.

The SAI creates the script and redisplays the SAI Main Menu.

Note: Using the Write a Script option creates a script that reflects the current configuration. If you want your script to unload an application, you must edit the script to add an UNLOAD instruction (see the "Editing a script" section in this chapter).

Figure 4-17 illustrates a script called "news.sai" which was created using the Write a Script option. Notice that Meridian IVR automatically writes a script that includes comments and a report, along with commands for loading applications, assigning channels, and starting the applications.

Figure 4-17
The “news.sai” script

```
#       This is a script file that can be run by the SAI.
#       Lines that begin with a pound character ('#') are comments.
#       The first half of this file is a report.
#       The second half contains commands to be executed by the SAI.

#       APPLICATION         STATUS          CHANNEL RANGE
#
#       News                STARTED 1       2
#
#       Sports              STOPPED 0
#
#       Weather             STOPPED 0       0-3, 6

#       These are the SAI commands to be executed:

#       For Application 'News'

LOAD News
SET_CHANNELS News 2
START News

#       For Application 'Sports'

LOAD Sports


#       For Application 'Weather'

LOAD Weather
SET_CHANNELS Weather 0-3, 6
```

When news.sai runs, it performs the following actions:

- It loads the News application, assigns Channel 2, and starts the application.
- It loads the Sports application without assigning any channels or starting the application.
- It loads the Weather application and assigns Channels 0, 1, 2, 3, and 6, but it does not start the application.

  Note: When news.sai runs, it does not affect any other applications that are currently running.

Procedure 4-15
Editing a script

1 If necessary, change to the directory where you want to create or edit the script. You can navigate through the directories and subdirectories in two ways:

- Selecting /.. changes the directory to the parent directory.
- Selecting a name beginning with a slash mark (for example, /ivr) changes the current directory to the specified subdirectory.

2 Use the text editor of your choice to create a new file or to open an existing file for editing.

Note: All script file names are identified by the.sai extension and can be up to 10 characters long (excluding the extension).

3 You can type any of the following commands

To load an application on Meridian IVR	**LOAD *application_name***
To unload an application from Meridian IVR	**UNLOAD *application_name***
To assign one or more channels to an application	**SET_CHANNELS *application_name channel_range***
To start an application on all assigned channels	**START *application_name***
To gracefully stop an application	**STOP *application_name***
To forcefully stop an application	**FSTOP *application_name***
To execute a script named file_name	**RUN *file_name***
To save the current application configuration to a script named file_name	**WRITE *file_name***
To Add comments	**#comments**

Notes: Comment lines must begin with the # character. You can also insert blank lines wherever you want. Meridian IVR ignores blank lines and comments when running a script.

1 *application_name* is the name of an application without the.vpf extension

2 *channel_range* specifies the channel(s) to be assigned to the application.

3 A range consists of channel numbers separated by hyphens or commas, but no spaces.

4 Save the file and exit the editor.

For example, suppose you want to create a script called PriceSwap.sai to do the following:

- Unload an application called “prices”.
- Load an application called “Orders”.
- Assign channels 4, 8, 9, 10, and 22 to it.
- Start the application on those channels.

If you follow the steps listed in this section to create PriceSwap.sai, it may look like Figure 4-18. (Comments and blank lines are optional.)

Figure 4-18
PriceSwap.sai script

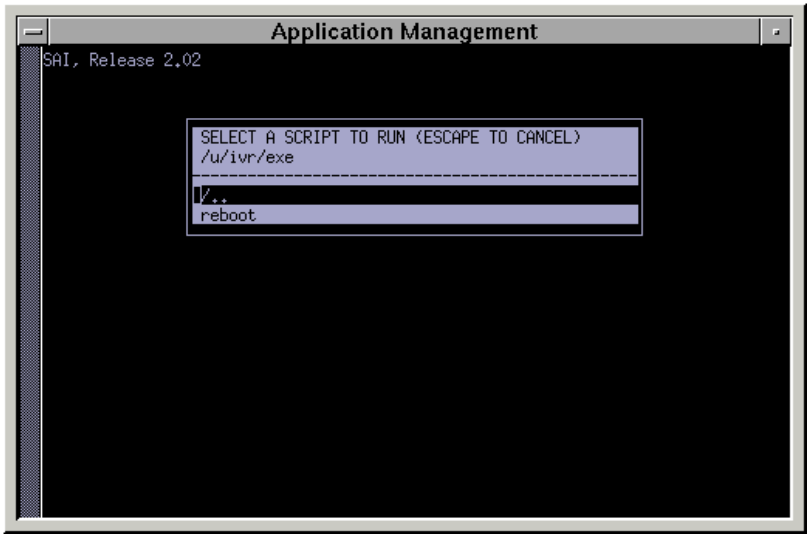
```
#    This is the PriceSwap script.

UNLOAD prices
LOAD Orders
SET_CHANNELS Orders 4,8-10,22
START Orders
```

Procedure 4-16
Running a script

1 From the Application Management main menu, select the Select a Script option.

Meridian IVR displays the pop-up menu shown in Figure 4-19.

Figure 4-19
Select a Script to run pop-up window



2 Move to the directory where your script is located, and select the file name from the menu.

Meridian IVR executes the script and returns to the Application Management main menu. If you check the Application Management window, it reflects the changes made by your script.

The “reboot.sai” script

Whenever you boot the system or reset Meridian IVR, Meridian IVR looks in the /u/ivr/exe subdirectory of the Meridian IVR base directory for a file named “reboot.sai”. Initially, there is no reboot.sai file.

The reboot.sai file is a script that you can create to automatically load applications, set channels, and start applications when Meridian IVR is started. This file is useful for initializing the application environment whenever

- the applications processor is initially booted
- the applications processor is rebooted following a power failure
- Meridian IVR recovers from a software failure

You can create this script file using a text editor or the Meridian IVR Write a Script option.

Exiting Application Management

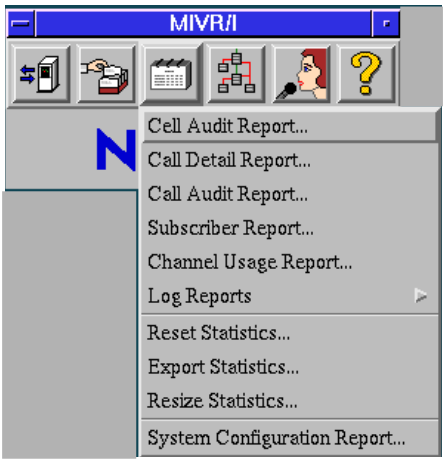
To exit Application Management from the Application Management main menu, select Exit.

Chapter 5: Running reports

The System Reports feature enables you to generate a variety of statistical reports to manage Meridian IVR activity more effectively.

You can access the reports through the System Reports window. If you need to edit or print the report, you can use the nedit tool. The commands for this tool are available from the pull-down menus (File, Edit, Search, etc.). All of the dialogs have Cancel buttons. The Undo command in the Edit menu can immediately reverse any modifications you make. The nedit tool does not change the file you are editing until you save it.

Figure 5-1
System Reports pull-down menu



You can use the nedit tool independently as a regular editor such as vi. However, you must be in the UNIX shell to run nedit.

Procedure 5-1
Running nedit

1 Click on the left mouse button, then select MIVR xterm.

A window frame appears.

2 Move the mouse to place the report in a suitable location on the desktop, then click on the left mouse button.

You are now in the UNIX shell.

3 At the # prompt, type **nedit filename** and press <Enter>.

A window frame appears.

4 Move the mouse to place the window frame in a suitable location on the desktop, then click on the left mouse button.

The system displays the report for you to edit.

Running the Cell Audit Report

The Cell Audit Report shows the number of times that each cell within each application was accessed. This helps you to analyze your applications and see how frequently the various activities within an application are used by your callers.

This report lists cell usage in groups of six-hour periods. One record is generated for each application per hour. Also, one record is generated for each cell in each application per hour. The Cell Audit Report can contain up to 146 250 of the most recent records.

This report lists statistics for all cells within the application, including Cell #0. Cell #0 is another name for the Default Cell. For more information on the Default Cell, refer to the *Meridian IVR Application Development Guide* (NTP 555-9001-310). Meridian IVR treats the information on the Default Cell window as if it were a cell. Each time an application runs, Cell #0 is used twice, once at the beginning of the call and once at the end of the call, for cleanup purposes. For this reason, Cell #0 is counted twice in the Cell Audit Report each time the application processes a telephone call.

Procedure 5-2
Generating a Cell Audit Report

1 In the Meridian IVR main menu, click on the System Reports icon with the left mouse button, then select Cell Audit Report.

A dialog box appears asking whether you want to select the Default or Custom report.

2 Click on Default with the left mouse button to use the Meridian IVR default statistics file or Custom to use a previously saved Meridian IVR statistics file from which the report is generated. (If you no longer want to generate a report, click on Cancel with the left mouse button).

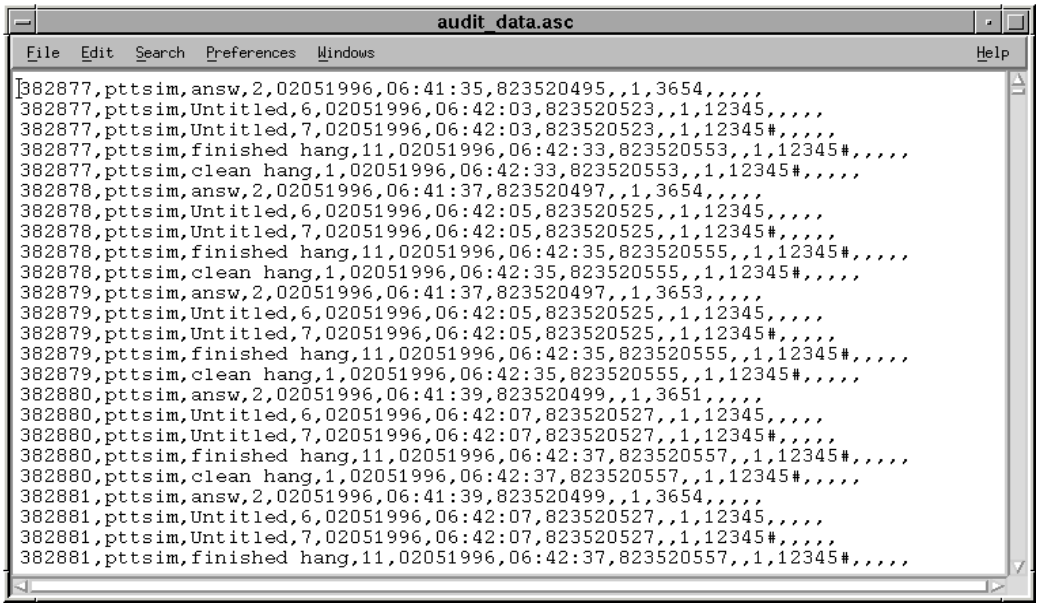
When you select Custom, a file browser appears. It allows you to select a data file to use as a source for the report. Double-click on the directory name with the left mouse button for the list of data files to appear. Select the data file you want by clicking on it with the left mouse button. When the data file appears in the selection box, click on OK.

The system displays a message box telling you that it will take a few minutes.

3 Click on OK again with the left mouse button.

The system displays the report as shown in Figure 5-2.

Figure 5-2
Cell Audit Report


audit_data.asc

File Edit Search Preferences Windows Help

```
382877,pttsim,answ,2,02051996,06:41:35,823520495,,1,3654,,,,,
382877,pttsim,Untitled,6,02051996,06:42:03,823520523,,1,12345,,,,,
382877,pttsim,Untitled,7,02051996,06:42:03,823520523,,1,12345#,,,,,
382877,pttsim,finished hang,11,02051996,06:42:33,823520553,,1,12345#,,,,,
382877,pttsim,clean hang,1,02051996,06:42:33,823520553,,1,12345#,,,,,
382878,pttsim,answ,2,02051996,06:41:37,823520497,,1,3654,,,,,
382878,pttsim,Untitled,6,02051996,06:42:05,823520525,,1,12345,,,,,
382878,pttsim,Untitled,7,02051996,06:42:05,823520525,,1,12345#,,,,,
382878,pttsim,finished hang,11,02051996,06:42:35,823520555,,1,12345#,,,,,
382878,pttsim,clean hang,1,02051996,06:42:35,823520555,,1,12345#,,,,,
382879,pttsim,answ,2,02051996,06:41:37,823520497,,1,3653,,,,,
382879,pttsim,Untitled,6,02051996,06:42:05,823520525,,1,12345,,,,,
382879,pttsim,Untitled,7,02051996,06:42:05,823520525,,1,12345#,,,,,
382879,pttsim,finished hang,11,02051996,06:42:35,823520555,,1,12345#,,,,,
382879,pttsim,clean hang,1,02051996,06:42:35,823520555,,1,12345#,,,,,
382880,pttsim,answ,2,02051996,06:41:39,823520499,,1,3651,,,,,
382880,pttsim,Untitled,6,02051996,06:42:07,823520527,,1,12345,,,,,
382880,pttsim,Untitled,7,02051996,06:42:07,823520527,,1,12345#,,,,,
382880,pttsim,finished hang,11,02051996,06:42:37,823520557,,1,12345#,,,,,
382880,pttsim,clean hang,1,02051996,06:42:37,823520557,,1,12345#,,,,,
382881,pttsim,answ,2,02051996,06:41:39,823520499,,1,3654,,,,,
382881,pttsim,Untitled,6,02051996,06:42:07,823520527,,1,12345,,,,,
382881,pttsim,Untitled,7,02051996,06:42:07,823520527,,1,12345#,,,,,
382881,pttsim,finished hang,11,02051996,06:42:37,823520557,,1,12345#,,,,,
```

Running the Call Detail Report

The Call Detail Report lists the following information on each call processed by Meridian IVR:

- how many calls were received
- the date and time of each call that was processed
- the duration of the call in seconds
- the number of the application that processed the call
- Meridian Mail
- the channel number
- the phone number or extension that was called

The Call Detail Report lists information on each call processed by Meridian IVR during the selected time period. This report can contain information on up to 15 000 calls.

Procedure 5-3
Generating a Call Detail Report

1 In the Meridian IVR main menu, click on the System Reports icon with the left mouse button then select Call Detail Report.

A dialog box appears asking whether you want to select the Default or Custom report.

2 Click on Default with the left mouse button to use the Meridian IVR default statistics file or Custom to use a previously saved Meridian IVR statistics file from which the report is generated. (If you no longer want to generate a report, click on Cancel with the left mouse button).

When you select Custom, a file browser appears. It allows you to select a data file to use as a source for the report. Double-click on the directory name with the left mouse button for the list of data files to appear. Select the data file you want by clicking on it with the left mouse button. When the data file appears in the selection box, click on OK.

The system displays a message box telling you that it will take a few minutes.

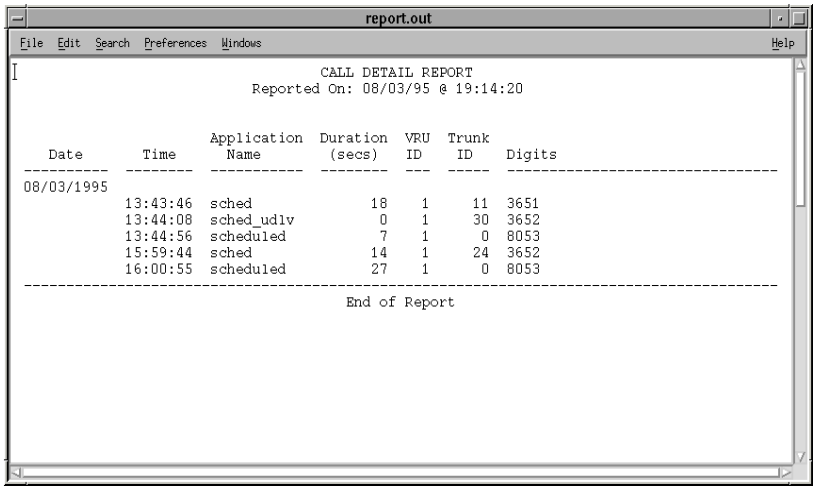
3 Click on OK with the left mouse button.

A window frame appears.

4 Move the mouse to place the window frame in a suitable location on the desktop, then click on the left mouse button.

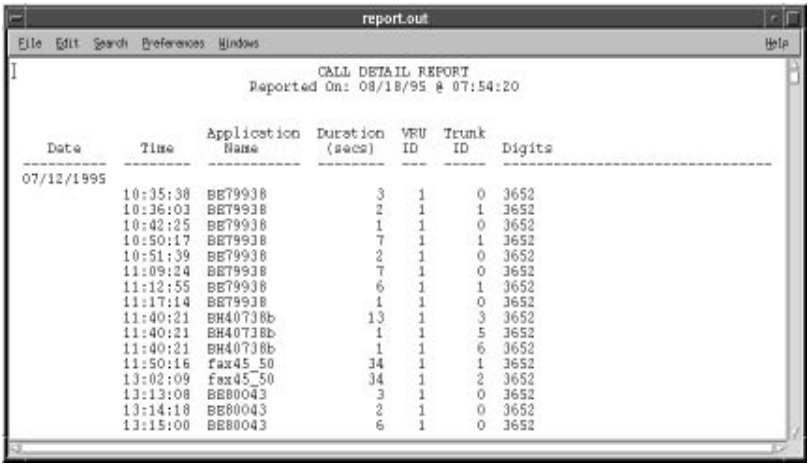
The system displays the report as shown in Figure 5-3.

Figure 5-3
Call Detail Report pop-up window



Note: The Digits field displays the number of the called party and the number of the caller. In Figure 5-4, the first four numbers in the digits buffer show the called party and the caller as internal extensions. If the call is outgoing to an external number, the external number appears, followed by the caller's number.

Figure 5-4
Call Detail Report (full report)



Running the Call Audit Report

The Call Audit Report lists statistics for the milestone cells in the application. The timestamp for each milestones is logged at the beginning of the call, and after completion of each milestone cell.

The milestone cells are

- all the cells within the application with their Call Auditing parameter enabled and configured
- all EVENT cells in the application

This report lists statistics on how frequently callers use the various sections of the application, and how much time the callers take in these sections.

The report lists the following information:

- date and hour the call started
- name of the application
- name of each milestone cell
- usage count (the number of times each milestone cell was executed)
- the average time in seconds spent between milestone cells
- the total time in seconds spent between milestone cells

Calls are listed in chronological order.

Procedure 5-4
Generating a Call Audit Report

1 In the Meridian IVR main menu, click on the System Reports icon with the left mouse button, then select Call Audit Report.

A dialog box appears asking whether you want to select the Default or Custom report.

2 Click on Default with the left mouse button to use the Meridian IVR default statistics file or Custom to use a previously saved Meridian IVR statistics file from which the report is generated. (If you no longer want to generate a report, click on Cancel with the left mouse button).

When you select Custom, a file browser appears. It allows you to select a data file to use as a source for the report. Double-click on the directory name with the left mouse button for the list of data files to appear. Select the data file you want by clicking on it with the left mouse button. When the data file appears in the selection box, click on OK.

The system displays a message box telling you that it will take a few minutes.

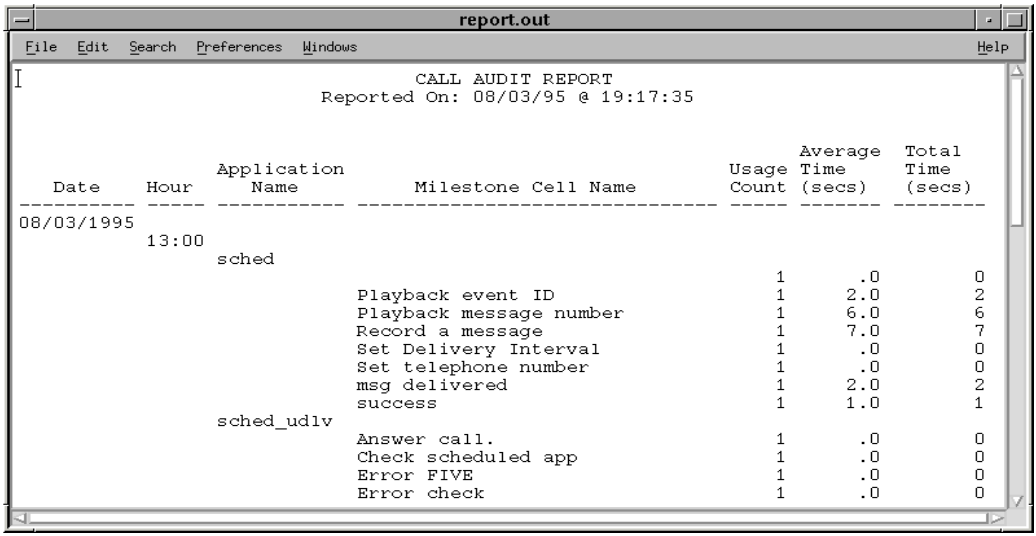
3 Click on OK with the left mouse button.

A window frame appears.

4 Move the mouse to place the window frame in a suitable location on the desktop, then click on the left mouse button.

The system displays the report as shown in Figure 5-5.

Figure 5-5
Call Audit Report



report.out

File Edit Search Preferences Windows Help

CALL AUDIT REPORT
Reported On: 08/03/95 @ 19:17:35

Date	Hour	Application Name	Milestone Cell Name	Usage Count	Average Time (secs)	Total Time (secs)
08/03/1995						
	13:00					
		sched				
				1	.0	0
			Playback event ID	1	2.0	2
			Playback message number	1	6.0	6
			Record a message	1	7.0	7
			Set Delivery Interval	1	.0	0
			Set telephone number	1	.0	0
			msg delivered	1	2.0	2
			success	1	1.0	1
		sched_udlv				
			Answer call.	1	.0	0
			Check scheduled app	1	.0	0
			Error FIVE	1	.0	0
			Error check	1	.0	0

Running the Subscriber Report

The Subscriber Report lists the following information about incoming calls:

- the date and time that each call was made
- the number that was called
- the time (in seconds) that the call lasted

The Subscriber Report can contain information on the last 15 000 calls. This report is updated on the hour; the system may not display data for the current hour.

Procedure 5-5
Generating a Subscriber Report

1 In the Meridian IVR main menu, click on the System Reports icon with the left mouse button, then select Subscriber Report.

A dialog box appears asking whether you want to select the Default or Custom report.

2 Click on Default with the left mouse button to use the Meridian IVR default statistics file or Custom to use a previously saved Meridian IVR statistics file from which the report is generated. (If you no longer want to generate a report, click on Cancel with the left mouse button).

When you select Custom, a file browser appears. It allows you to select a data file to use as a source for the report. Double-click on the directory name with the left mouse button for the list of data files to appear. Select the data file you want by clicking on it with the left mouse button. When the data file appears in the selection box, click on OK.

The system displays a message box telling you that it will take a few minutes.

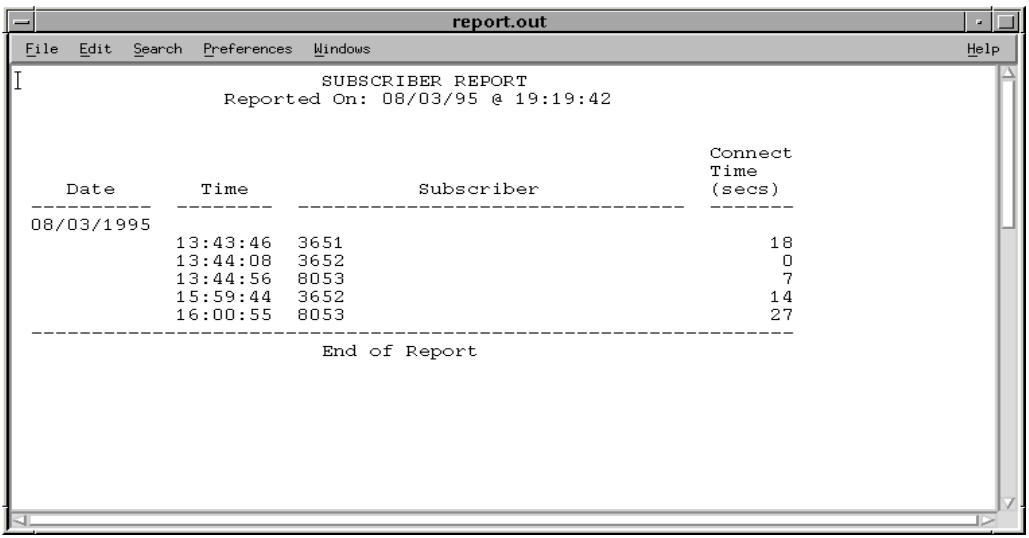
3 Click on OK with the left mouse button.

A window frame appears.

4 Move the mouse to place the window frame in a suitable location on the desktop, then click on the left mouse button.

The system displays the report as shown in Figure 5-6.

Figure 5-6
Subscriber Report



Running the Channel Usage Report

The Channel Usage or Trunk Usage Report details channel activity for each channel so that you can see which channels are handling the most calls. This report lists the number of times and the number of minutes that each channel was in use.

The report is organized by VRU number and channel number. For each channel, the report shows the number of minutes and the number of times that the channel was in use during each hour in a six-hour period.

For each hour, the report also shows the maximum number of channels that were busy simultaneously and the length of time, in minutes, that the maximum number of channels were busy simultaneously. This information is listed beside the Max Usage heading.

The report is displayed in multiples of six-hour periods.

The system generates one record for each channel that was active during the hour. It also generates one additional record containing statistics about the system as a whole each hour. The Channel Usage Report can contain up to 146 250 of the most recent records. This size should be sufficient for average use up to three months.

Procedure 5-6
Generating the Channel Usage Report

1 In the Meridian IVR main menu, click on the System Reports icon with the left mouse button, then select Channel Usage Report.

A dialog box appears asking whether you want to select the Default or Custom report.

2 Click on Default with the left mouse button to use the Meridian IVR default statistics file or Custom to use a previously saved Meridian IVR statistics file from which the report is generated. (If you no longer want to generate a report, click on Cancel with the left mouse button).

When you select Custom, a file browser appears. It allows you to select a data file to use as a source for the report. Double-click on the directory name with the left mouse button for the list of data files to appear. Select the data file you want by clicking on it with the left mouse button. When the data file appears in the selection box, click on OK.

The system displays a message box telling you that it will take a few minutes.

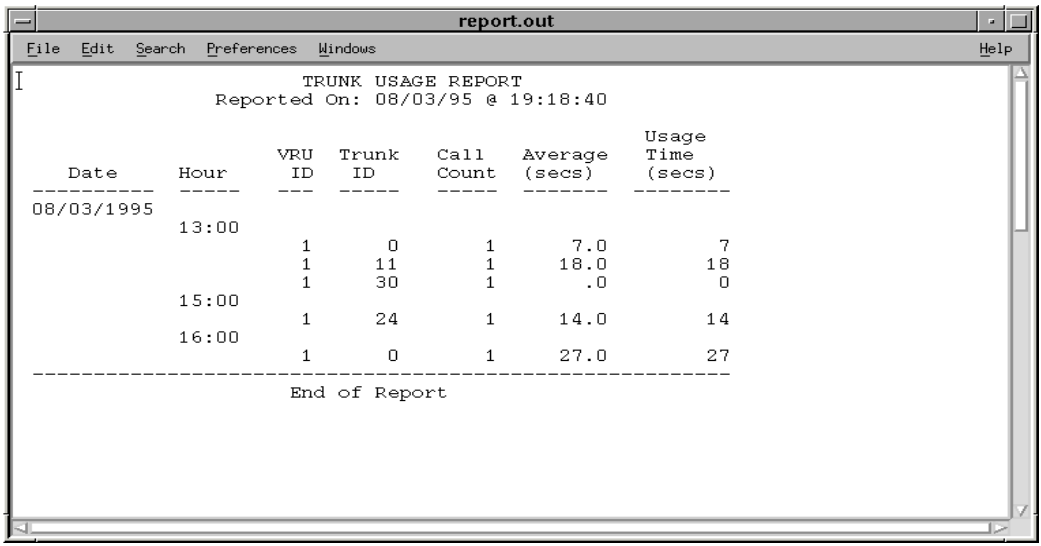
3 Click on OK with the left mouse button.

A window frame appears.

4 Move the mouse to place the window frame in a suitable location on the desktop, then click on the left mouse button.

The system displays the report as shown in Figure 5-7.

Figure 5-7
Channel Usage Report



Running Log Reports

There are three types of logs available on Meridian IVR for which you can generate a report.

Transaction Log Report

The Transaction Log Report lists system-related activities such as the startup and shutdown of applications, error messages, and resource allocations (see Figure 5-8).

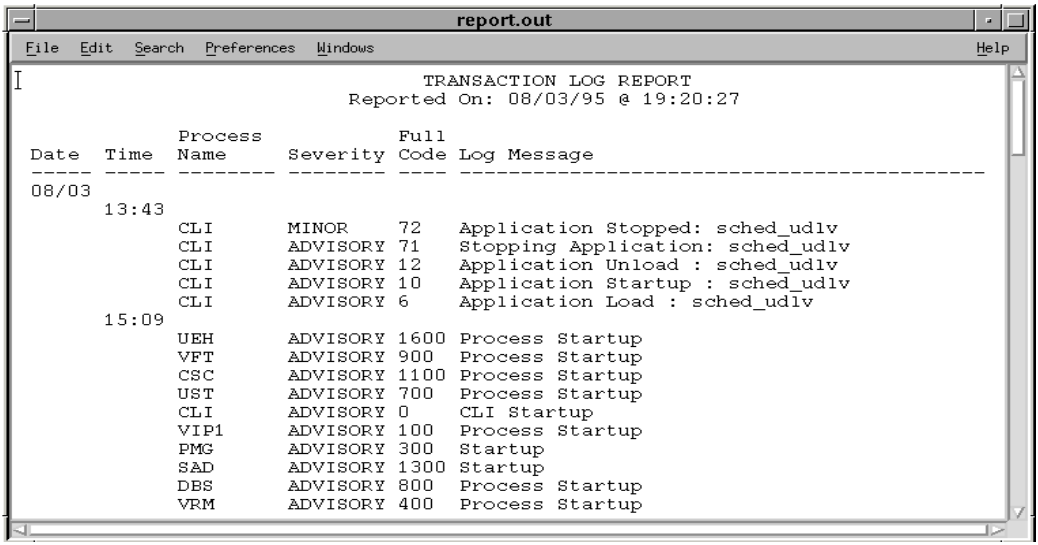
The Transaction Log Report can be used as a tool for diagnosing errors that occur while Meridian IVR is in use. Specific Transaction Log errors can be found in the *Meridian IVR Maintenance and Diagnostics Guide* (NTP 555-9001-500).

Meridian IVR processes generate system events at various times. The Transaction Log Report can record the 300 most recent events.

Each message is stamped with the date and time that it was added to the transaction log. For each message, there is the name of the Meridian IVR module (process) that generated the message, a code number, and a brief description of the event. The most recent information appears at the end of the report.

Transaction Log error messages are listed in the *Meridian IVR Maintenance and Diagnostics Guide* (NTP 555-9001-500).

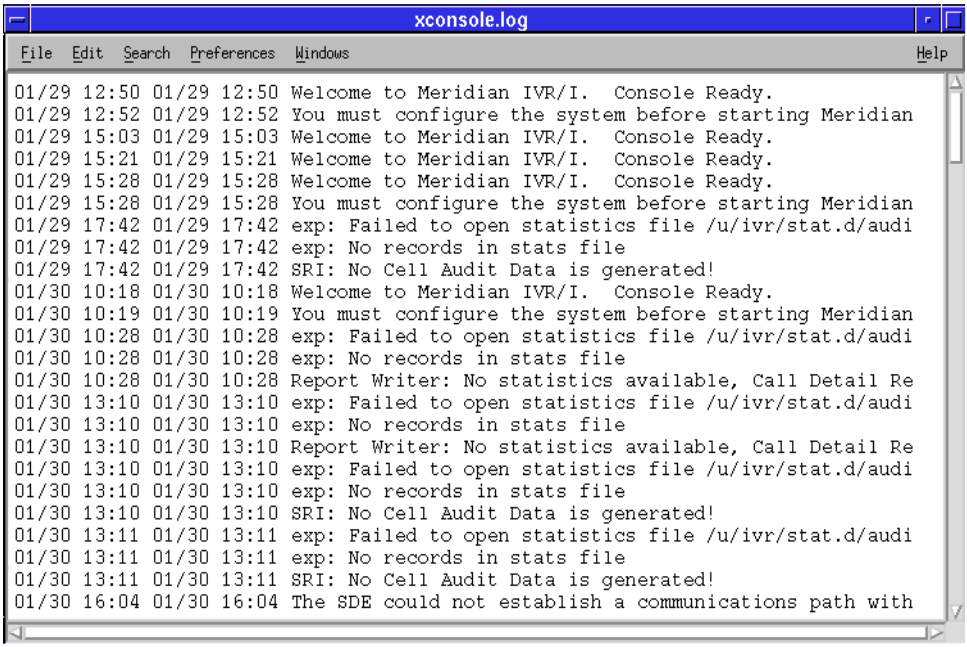
Figure 5-8
Transaction Log Report



Console Log Report

The Console Log Report, as shown in Figure 5-9, displays all of the messages in the Meridian IVR Console window. Timestamps are included with all of the messages displayed on both the Console window and in the report.

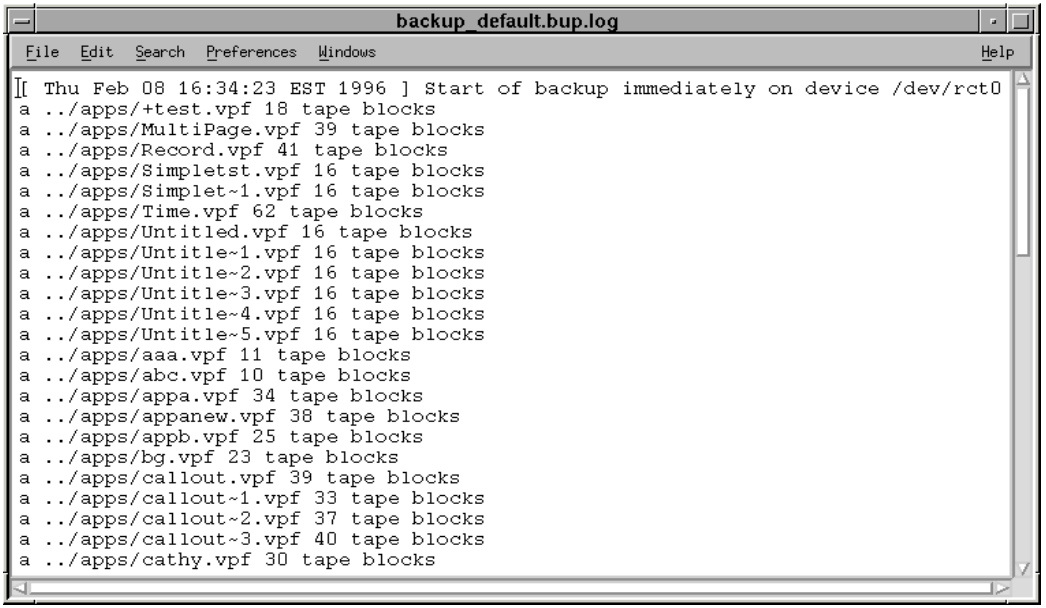
Figure 5-9
Console Log Report



Backup Tool Log Report

The Backup Tool Log Report, as shown in Figure 5-10, lists all of the information in the Backup Tool Log File.

Figure 5-10
Backup Tool Log Report



Procedure 5-7
Generating log reports

1 In the Meridian IVR main menu, click on the System Reports icon with the left mouse button, then select Log Reports.

A second pull-down menu appears listing the three types of log reports.

2 Click on the log report you want to generate with the left mouse button, then click on OK.

The system displays a message box telling you that it will take a few minutes.

3 Click on OK with the left mouse button.

A window frame appears.

4 Move the mouse to place the window frame in a suitable location on the desktop, then click on the left mouse button.

The system displays the log report you select.

System Configuration Report

System Configuration Report lists the complete system configuration as entered through the Meridian IVR system configuration interface.

Procedure 5-8
Generating the System Configuration Report

1 In the Meridian IVR main menu, click on the System Reports icon with the left mouse button then select System Configuration Report.

The system displays a message box telling you that it will take a few minutes.

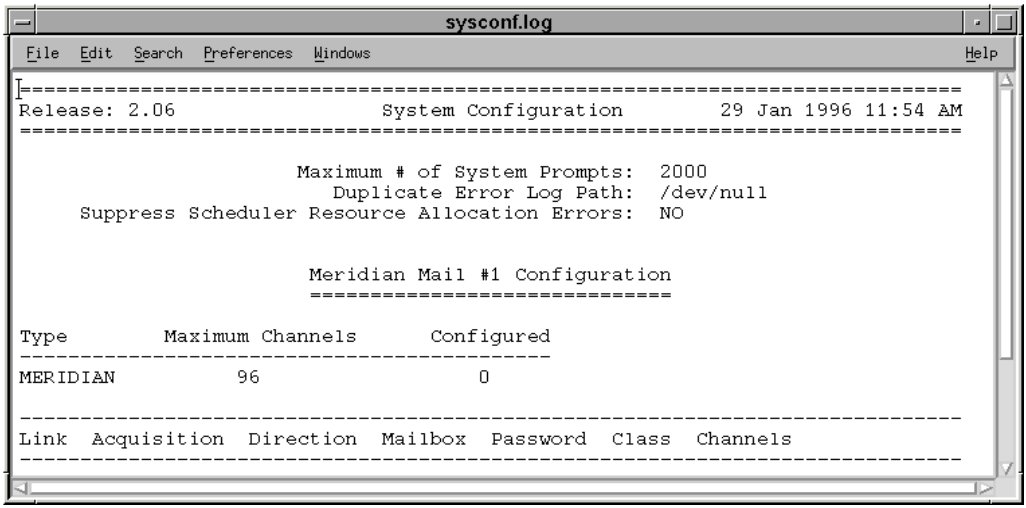
2 Click on OK with the left mouse button.

A window frame appears.

3 Move the mouse to place the window frame in a suitable location on the desktop, then click on the left mouse button.

The system displays the report. as shown in

Figure 5-11
System Configuration Report



Saving or writing a report to a file

Once you run a report and it appears on your window, you can write it to a file (that is, save it).

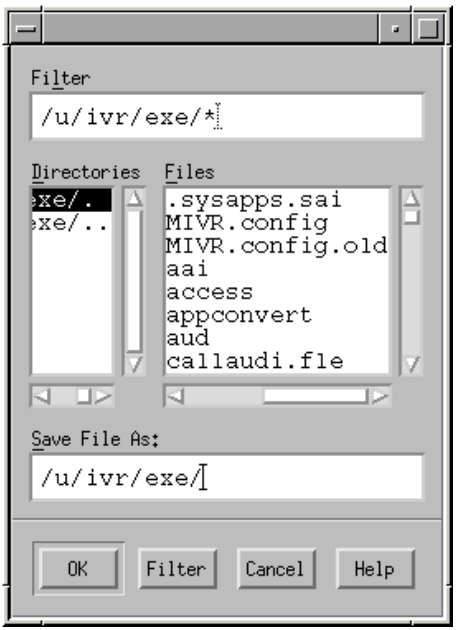
> ***Note:*** We recommend that you save a copy of the currently displayed report with another filename for future references. The default report file is overwritten each time you request a report.

Procedure 5-9
Writing a report to a file

1 With your report displayed on the window, select Save from the File pull-down menu.

The Write to File window appears as shown in Figure 5-12.

Figure 5-12
Write to File window



2 Click on the appropriate default file name on the right side of the window with the left mouse button.

3 Click on OK with the left mouse button.

Printing reports

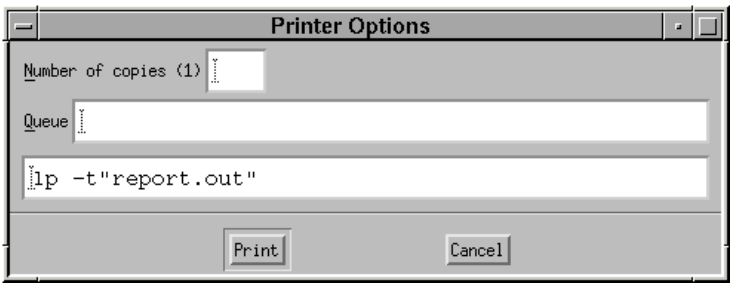
To print reports, you must have a printer already configured on your system.

Procedure 5-10
Printing a report

1 With the report displayed on your window, select Print from the File pull-down menu.

The Select Printer Device window appears, showing a list of available printers; generally, it lists only one device.

Figure 5-13
Select Printer Device window



2 Select the printer device.

3 Click on the Print button.

The system prints your report.

Exiting reports

Procedure 5-11
Exiting a report

1 Select Exit from the File pull-down menu.

You return to the Meridian IVR main window.

Report statistics

You can erase the contents of any report (except the Transaction Log Report) and start again by resetting the statistics. The system does not erase data for the current hour. Therefore, you should reset statistics immediately following the start of the hour.

Procedure 5-12
Resetting reports statistics

1 Select the Reset Statistics option from the System Reports menu.

The system resets the statistics.

Note: Meridian IVR core (application executing) software must be running in order to reset statistics.

Statistics export tool

The statistics export tool reads the statistics file and exports the data into two ASCII files in the **stat.d** directory: **audit_hdrs.asc** for call header records and **audit_data.asc** for cell data records. The data is stored in these files as comma-separated fields, suitable for importing into databases or programs.

Procedure 5-13
Exporting statistics data

1 Click on the Control Panel Reports icon.

2 Select the Export menu option.

The Default button accesses the **audit_stat.d** file.

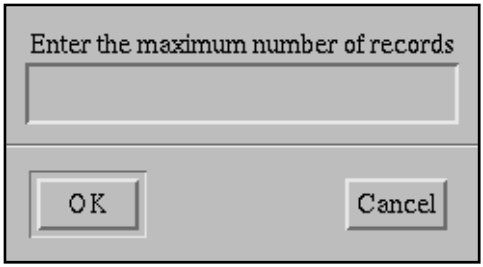
The Custom button allows you to choose the statistics file (from a backup file, for example).

You can use the statsbkup tool to back up the data before exporting it.

Resizing statistics tool

When the audit_stat.d file is full, the incoming information wraps around, overwriting earlier data. The Resizing Statistics tool allows you to change the size of the statistics file so you can increase the amount of data saved before the file wraps. Selecting Resize Statistics from the Reports Icon accesses the following window (see Figure 5-10).

Figure 5-14
Resize Statistics window



You can increase the size of the audit_stat.d file to any size you need, up to 2 147 483 648 records. Each record takes 252 bytes and the file header takes 20 bytes. Ensure that you have sufficient disk space for the number of records you want to save.

CAUTION!
Risk of losing data

Whether you increase or decrease the size of your statistics file, some data will be lost. Be sure you back up your files before resizing to avoid losing data.

Backing up your statistical information

Since files in the stat.d directory are limited in size, when a file is full, the incoming information wraps around, overwriting the original data, which is then lost. You can use the statsbkup tool to copy statistical information from the files in the stat.d directory to another file of your choice to avoid losing this information.

Incorporating -r in the command line of the statsbkup tool will delete the contents of the audit_stat.d file once the backup is complete.

Use the Backup Tool or the UNIX tool, cron, to perform backups of the audit_stat.d file automatically.

Chapter 6: Using information databases

Meridian IVR has a built-in database facility that is very useful in building applications. The Meridian IVR database stores data in the form of character strings that can be used as part of your application. Information databases are created with the Meridian IVR Database Editor. This chapter explains the following topics and procedures, explaining how to create a new information database and edit an existing information database:

- understanding information databases
- planning an information database
- using an information database
- opening the Database Editor
- creating the database
- creating the template
- importing and exporting records
- creating record locations
- adding or changing data
- formats for importing and exporting data
- exiting the database
- loading an existing database
- editing the template
- deleting record locations
- exiting the database editor
- deleting a database

Understanding information databases

Understanding the following terms will help you to understand how information is structured and stored within an information database.

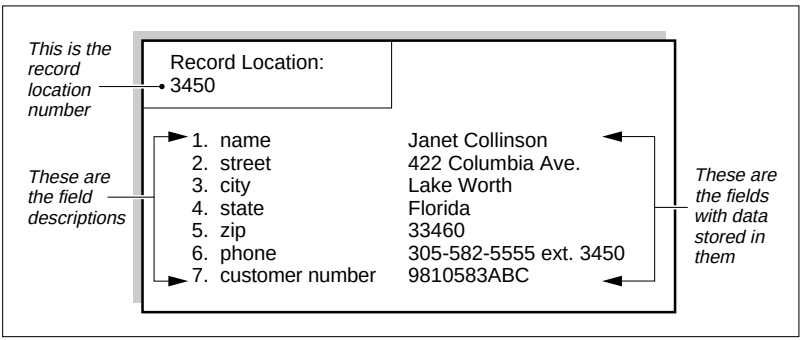
Database name

The database name identifies the overall contents of the database. It can be up to eight characters long and can include any characters except spaces, asterisks, pound signs, and question marks.

Records

Each information database consists of a set of records. A single record is shown in Figure 6-1. Each record on a database occupies 310 bytes of space.

Figure 6-1
An example of a record in a database



Field

Each record consists of up to ten fields, each storing up to 31 characters including letters, numbers, spaces, or any other keystroke, excluding commas.

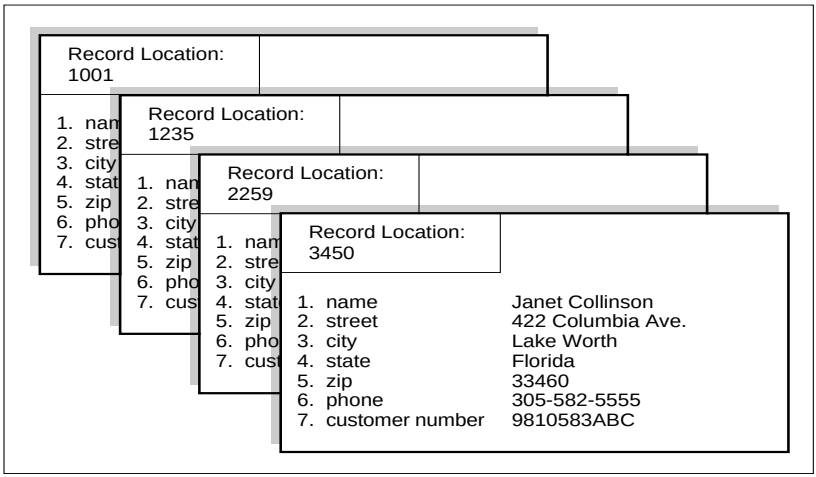
Field description

Each field can have a field description to help keep track of the kinds of data that have been stored. Every record in a particular information database has the same set of field descriptions.

Record location number

Because there can be many records in a single information database, each one has an identification number called a record location number (see Figure 6-2). The information database is designed to associate the information in a record with a number. Although any number can be used, the record location number is typically a telephone number. When creating a database, the system asks for the valid record locations, and allocates space for each record. For example, records 10 000–25 000 would allocate 15 000 records, each about 310 bytes long, for a total of about 4.65 Mbytes.

Figure 6-2
A series of records in an information database



Planning an information database

Before you begin working with the Database Editor to build an information database, you should plan the database by following the steps in this section. While you can create more than one information database, the maximum number of databases that Meridian IVR applications can use at the same time is 20.

- Decide what information you want to store in the records. Up to ten fields can be used to store information.
- Choose a set of field descriptions for the records. Field descriptions are not required, but we recommend that you use them because they act as reminders for the types of information stored in the database.
- If you want to have an application use the information stored in a database, you need to plan the application. You can build the application either before or after you create the database.
- Choose the maximum number of digits in the record location number. (To review record location numbers, see Figure 6-2).
- Choose a name for the database.

Using an information database

You can use the information that you store in an information database in the following two ways:

- You can create applications that use the CHEK (Check Database) cell type to find and extract data from an information database making the information available to other cells in the application.
- You can return to the Database Editor interface, and simply read the information from the window without formally linking any information from the database to the application.

The following paragraphs provide a detailed example of the way in which an application can use the information you store.

The CHEK (Check Database) cell type is the only cell type used in an application to extract data from an information database. When you create a CHEK cell, you identify the name of the information database that you want it to use, as well as the names of the buffers in which to place extracted information.

The CHEK cell determines whether a record exists for a specified record location number within the selected information database. If the record does not exist, CHEK branches to the “not found” next cell. If the CHEK cell successfully finds the specified record, then information from the record can be copied to buffers within the application. Once information from the record has been made available to the application, it can be used by the application.

The following example illustrates how the CHEK cell handles data in an information database. The CHEK cell type has three parameters:

- **Database name**—The name of the database that the CHEK cell will check.
- **Record location number**—The record location number of the specific record in the database.
- **Number of output buffers**—The number of buffers used to copy data from the database if the specified record is found.

The CHEK cell has one table, known as the Output Buffer Table on which you list the names of the output buffers.

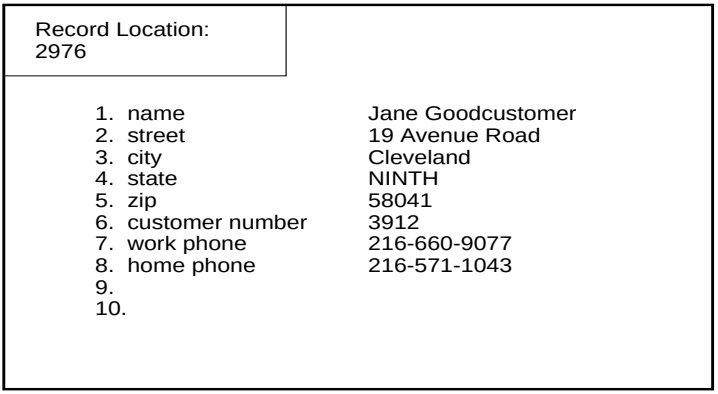
Suppose you have an application with a CHEK cell for which you have selected the following parameter values:

- **Database name**: customers
- **Customer number**: 2976
- **Number of output buffers**: 7

An automatic update occurs once the changes are applied.

For example, if you list seven buffers in the Output Buffer Table: NAME, ADDRESS, CITY, STATE, ZIP CODE, DATA1, and DATA2, and the name of the information database is Customers, and the record location number is 2976, the data will be stored as shown in Figure 6-3.

Figure 6-3
Sample database record



When you run this application, the CHEK cell checks for the existence of the customers database, looks for record number 2976, and copies data from the record into its output buffers. Copying begins with the first field and ends when all of the output buffers have been used. When CHEK finishes, the output buffers contain the following data:

Buffer Contents

- NAME Jane Goodcustomer
- ADDRESS 19 Avenue Road
- CITY Cleveland
- STATE NINTH
- ZIP CODE 58041
- DATA 1 3912
- DATA 2 216-660-9077

Since only seven output buffers have been specified, the CHEK cell copies data only from the first seven fields. The data from the "home phone" field are not copied from the record to the buffers. The copying process does not alter the information database in any way. When the data have been copied into the application buffers, the application can use that data in any of the ways that applications use buffer data. For example, there could be a PDAT (Play Prompts with Data) cell to read the phone number stored in the DATA2 buffer to the caller.

Opening the Database Editor

The Database Editor creates, names, and edits information databases.

Procedure 6-1
Opening the Database Editor

1 Click on the database icon from the IVR main menu.

The Database Editor opens, as shown in Figure 6-4.

Figure 6-4
Database Editor

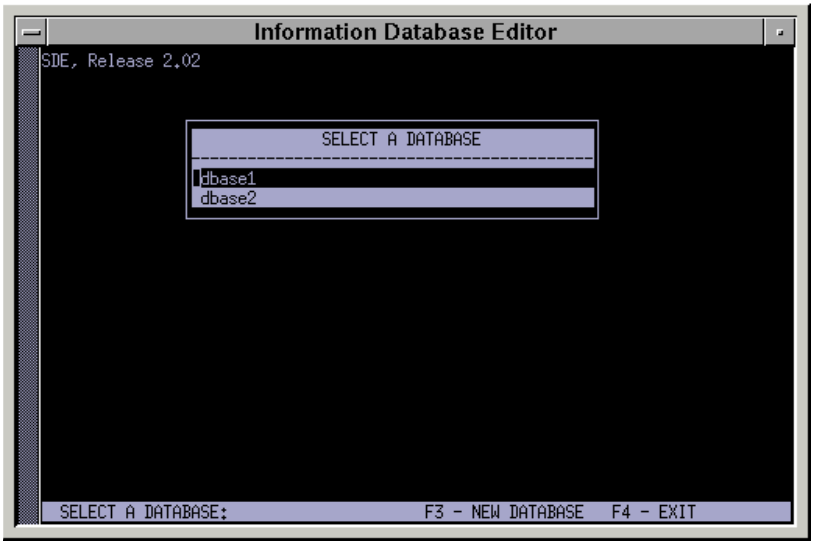


Table 6-1
Function of keys in Database Editor windows

Key	Function
<Up Arrow>	moves the cursor up one line
<Down Arrow>	moves the cursor down one line
<Left Arrow>	moves the cursor to the top of the page
<Left Arrow>	moves the cursor to the bottom of the page
<Enter>	selects the item at the cursor

Procedure 6-2
Creating the database

1 From the Database Editor main menu, press <F3> for New Database.

The following prompt appears:

```
Enter The Name Of The Database:
```

2 Type a name.

A message or information database name can be up to eight characters long and can include any characters except spaces.

3 When you have finished typing the name, press <Enter>.

The following prompt appears:

```
Enter The # Of Digits (between 4 and 11, inclusive):4
```

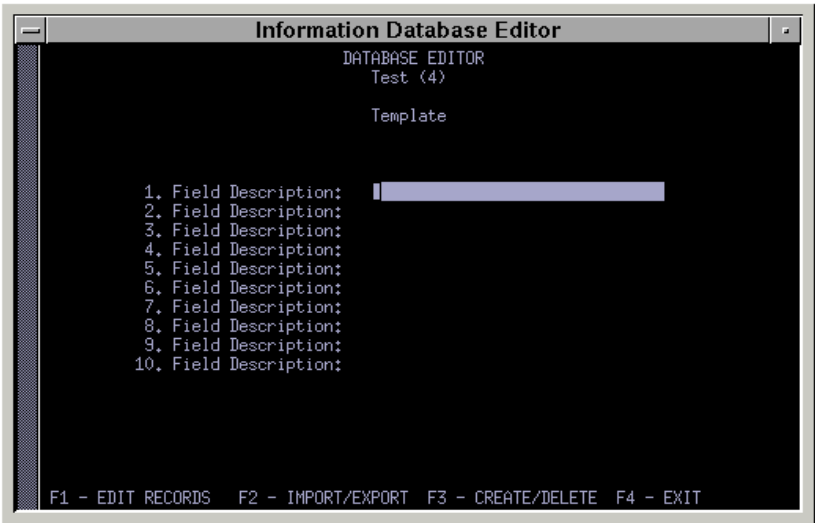
4 Type any value from 4 to 11 and press <Enter> to enter the new value, or press <Enter> to accept the default value of 4.

In this step, you select the number of significant digits for this database. For an information database, the number of significant digits is the maximum number of digits in the record location number. Usually, record locations are associated with Direct Inward Dialing (DID) digits, and DID channels are usually configured to receive 4 digits, so the number of significant digits is very often 4.

Note: Be careful when choosing the number of significant digits because once the number has been chosen, it cannot be changed.

The Database Editor displays the Template window with the name and number of significant digits as shown in Figure 6-5.

Figure 6-5
Template window



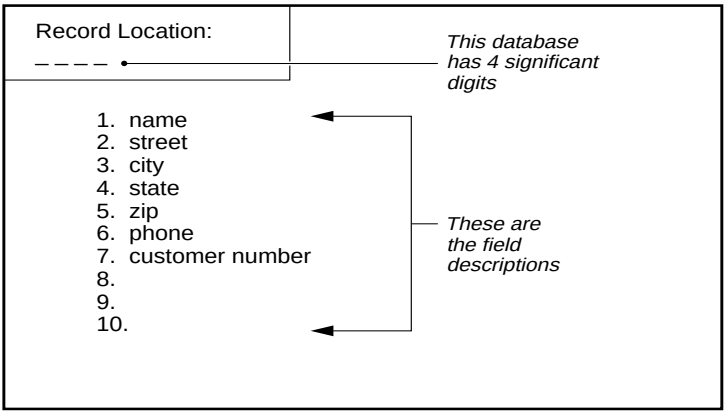
The name of the database appears on this window (for example, NAME), and the number of significant digits appears in parentheses next to the database name (for example, 4).

5 You can use this window to go to an existing record or to create a template. To go to an existing record, use the <F1> key at the bottom of the window. To create a template, refer to the next section.

Creating the template

After you have named the database and chosen the number of significant digits, you can create a template for the database, as shown in Figure 6-6. The template is simply the set of field descriptions used by every record in the database.

Figure 6-6
Example of a template for a database



Procedure 6-3
Creating the template

1 Move the cursor to a location where you want a field description, then type the description.

Field descriptions can be up to 31 characters long and can include any of the characters on the keyboard except commas.

If you begin or end a field description with blanks, those blanks are removed automatically. If you make a mistake, press <Backspace> to delete characters.

2 After you type a field description, press <Enter>, <Tab>, or the <Down> arrow key.

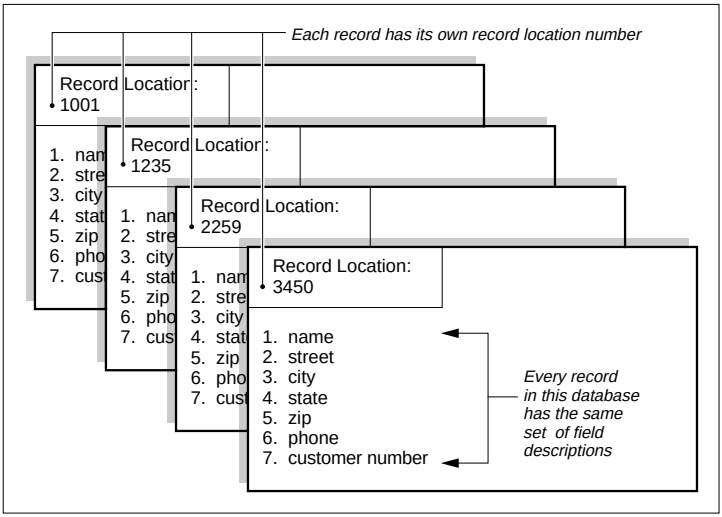
The cursor advances to the next field.

3 Repeat Steps 1 and 2 until all of your field descriptions are entered.

Creating record locations

After you have created the template, the next step is to create record locations. For each record location that you create, you have one record as shown in Figure 6-7. When you created the database, you selected a value for the number of significant digits; this determines the length of the record location number. For example, if the number of significant digits is 4, the record location numbers can be any numbers from 0–9999. For more information on record/disk space considerations, refer to the section “Planning an information database” on page 6-4.

Figure 6-7
Record location numbers



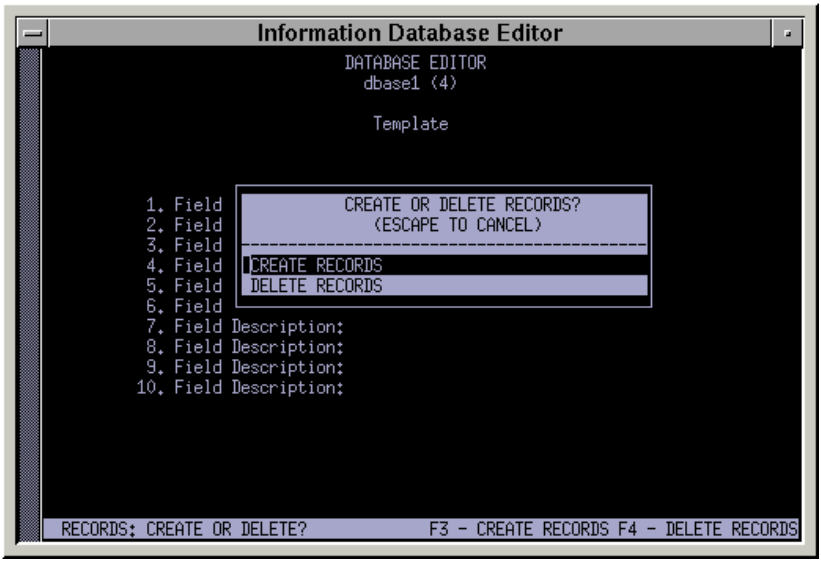
Procedure 6-4
Creating record locations

1 Press <F3> for CREATE/DELETE.

The Database Editor displays a pop-up menu.

2 Move the highlight bar to indicate whether you want to create or delete a record (see Figure 6-8).

Figure 6-8
Create/Delete Record pop-up menu



3 Select Create Records.

The following prompt appears:

```
Enter Record To Create:
```

4 Type a number for a single record location, or type a range of numbers.

To enter a range, type the beginning number, a hyphen, and an ending number. For example, to enter the numbers from 1 to 2000, type the following without spaces:

1-2000

5 Press <Enter>.

The system creates record location or locations and the message disappears.

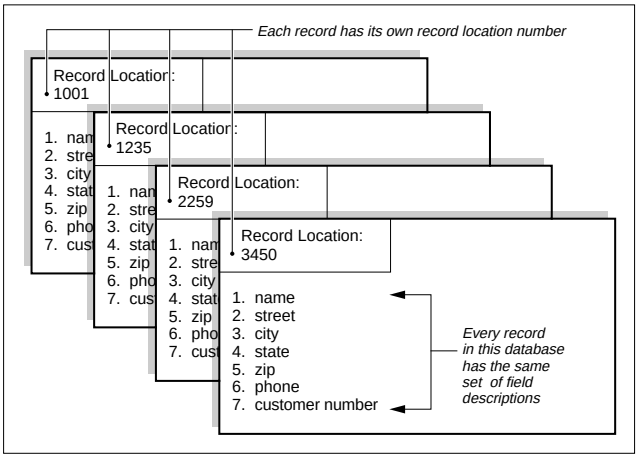
6 Repeat Steps 1, 2, and 3 to create as many record locations as you need.

After you have created record locations, you are ready to add data to the database.

Adding or changing data

Once you have created record locations, you can add data at those locations. After you have added data, you can change it at any time, even when the database is being used by applications. Figure 6-9 illustrates a series of records with stored data.

Figure 6-9
Records with stored data

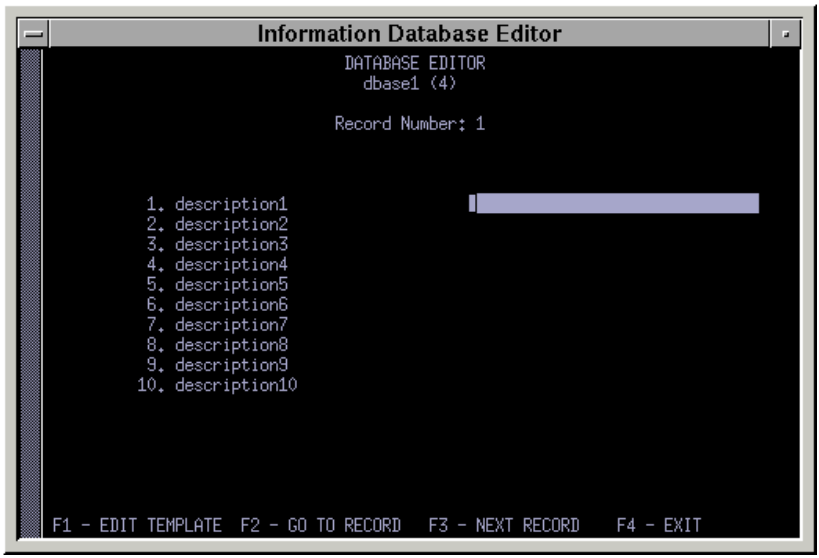


Procedure 6-5
To add or change data

1 From the Template window, press <F1> for Edit Record.

The Record Location window (Figure 6-10) appears, corresponding to the lowest existing record location number.

Figure 6-10
Record Location window



2 If necessary, press <F2> for GO TO RECORD to display the window corresponding to another record. Procedure 6-9 explains how to go to a specific record.

3 Use the arrow keys to move the cursor to any field, then type the information you want to store there.

Note: If there was already information in that field, it disappears when you begin to type.

If you make a mistake, press <Backspace> to delete characters.

4 When you have finished typing the information, press <Enter>.

Note: You cannot export a database with more significant digits to a database with less significant digits.

Formats for importing and exporting data

From the Template window you can use the function key <F2> for importing or exporting information databases. The export function writes out the contents of the information database to an ASCII file that you specify. This file resides in the sys_files directory. Meridian IVR supports two formats for exporting data, internal and CSV. The internal format is compatible with the Meridian IVR local databases. The Comma Separated Value (CSV) allows Meridian IVR local database data to be exported to other software packages.

The internal format of the export file is the following:

record.field:data

where

- **record** is the entry in the database where the data is located
- **field** is the offset in the entry where the data is located
- **data** is the information entered in the database

The record and field can be ranges that are separated with a dash (-) if the same data resides in consecutive records and/or fields

The CSV format of the export file is the following:

record#, field1,field2,field3,...,field10

where

- **record#** is the entry in the database where the data is located
- **field1–field10** are the data in these fields

Procedure 6-6
Importing data

1 Open the Database Editor.

Note: To import data, you must have already created a database for your data to populate. If you have not created a database for the data you are importing, create one now.

2 Select the database where you want the data to be imported. Press <Enter>.

The Template file appears for the database you selected.

3 Press <F2> for Import/Export.

The pop-up menu in Figure 6-11 appears.

4 Select Import Info.

5 Press <Enter>.

6 The following message appears on the window.

```
Enter format (CSV | internal):
```

Note: You can choose only one format. See the section "Formats for importing and exporting data" on page 6-16.

7 When you enter the format, the following prompt appears:

```
Enter File name:
```

8 Enter the ASCII file name of the data you want to import.

9 Press <Enter>.

Your database is imported from the ASCII file you created in the sys_files directory. The database on the window is populated with the data.

10 Press <F4> to exit.

Note: You can import databases.

Procedure 6-7
Exporting data

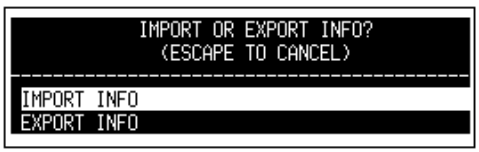
1 Open the Database Editor.

2 Select the database to export.

3 Press <F2> for IMPORT/EXPORT.

The pop-up menu as shown in Figure 6-11 appears.

Figure 6-11
Import/Export pop-up menu



4 Select Export Info.

5 Press <Enter>.

6 The following prompt appears on the window:

```
Enter format (CSV | internal):
```

Note: You can choose only one format. See the section "Formats for importing and exporting data" on page 6-16.

7 When you enter the format, the following prompt appears:

```
Enter File name:
```

8 Enter the name of the file where you want to export the data.

The database on the window is exported to the ASCII file you created in the sys_file directory.

9 Press <F4> to exit.

Changing record locations

Follow this procedure when the Record Location window appears and you want to change from the record location on the window to any other record location or locations.

There are two ways to change record locations:

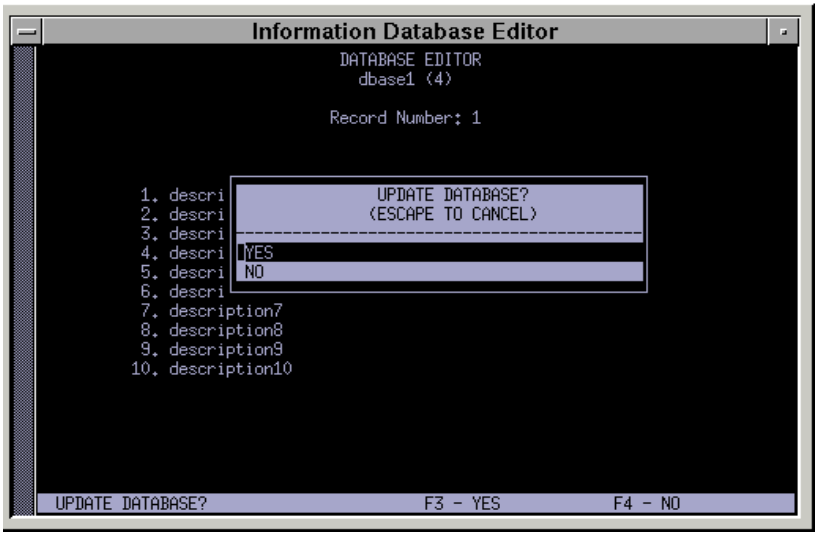
- You can go to the next consecutive location.
- You can go to any location you specify.

Procedure 6-8
Going to the next record location

1 From the Record Location window (see Figure 6-7), press <F3> for Next Record; or, if you would like to go to any other record location, press <F2> for Go to Record.

If you have made changes to the data at the current record location, the Update Database pop-up menu appears (see Figure 6-12).

Figure 6-12
The Update Database pop-up menu



2 If you want to save the changes you made, move the cursor to YES. If you do not want to save the changes you made, move the cursor to NO.

3 Press <Enter>.

You go to the next consecutive record location. The record location number appears at the top of the window.

Note: If you were on the last location, you go to the first location.

Procedure 6-9
Going to a specific record number

1 From the Record Location window, press <F2> for Go To Record.

If you have made changes to the data at the current record location, the Update Database pop-up menu appears (see Figure 6-12).

2 If you want to save the changes you made, move the cursor to YES. If you do not want to save the changes you made, move the cursor to NO.

3 Press <Enter>.

The following prompt appears:

```
Enter Record:
```

4 Type a number for a single record location, or type a range of numbers,

5 Press <Enter>.

The record location or locations appear at the top of the window.

Exiting the database

When you have finished working on the database, you can exit it by following these steps:

Procedure 6-10
Exiting the database

1 From the Record Location window, press <F4>.

If you have made changes to the data at the current record location, you see the Update Database pop-up menu again (see Figure 6-12).

2 If you want to save your most recent changes to the database, move the cursor to YES and press <Enter>.

Your changes are saved and you return to the Database Editor main menu.

If you want to exit without saving the most recent changes, move the cursor to NO and press <Enter>.

Your changes are not saved and you return to the Database Editor main menu.

Loading an existing database

Loading is the process of reopening a database so that you can work on it again. You can return to an existing database and edit it at any time, even when it is being used by an application.

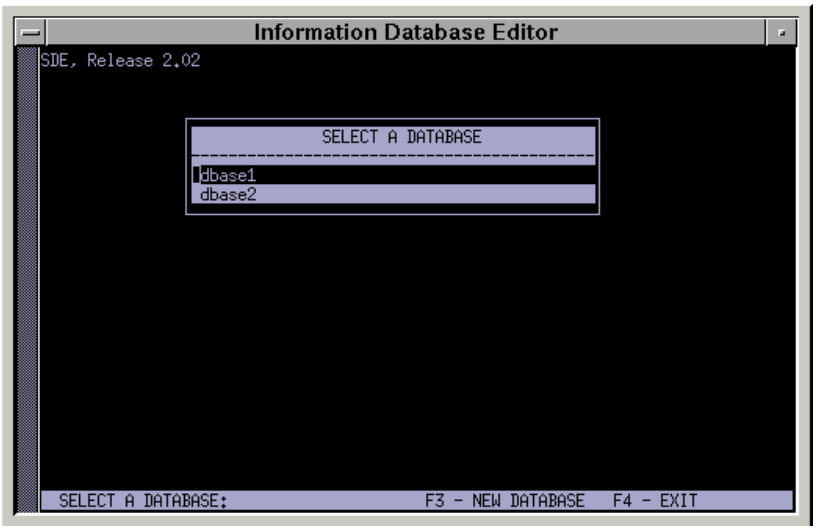
Procedure 6-11
Loading a database

1 From the Database Editor main menu (see Figure 6-13), use the arrow keys to move the cursor until it is on the name of the database you want to load.

2 Press <Enter>.

The database opens, and the Edit Record window for the lowest-numbered record location appears.

Figure 6-13
Select a Database pop-up window



Editing the template

You can edit the template by changing the field descriptions.

Procedure 6-12
Editing the template

1 From the Record Location window (see Figure 6-10), press <F1> for Edit Record.

The Template window appears (see Figure 6-5) .

2 Use the arrow keys to move the cursor to any field that you want to change, and type a new description.

The field description changes.

Deleting record locations

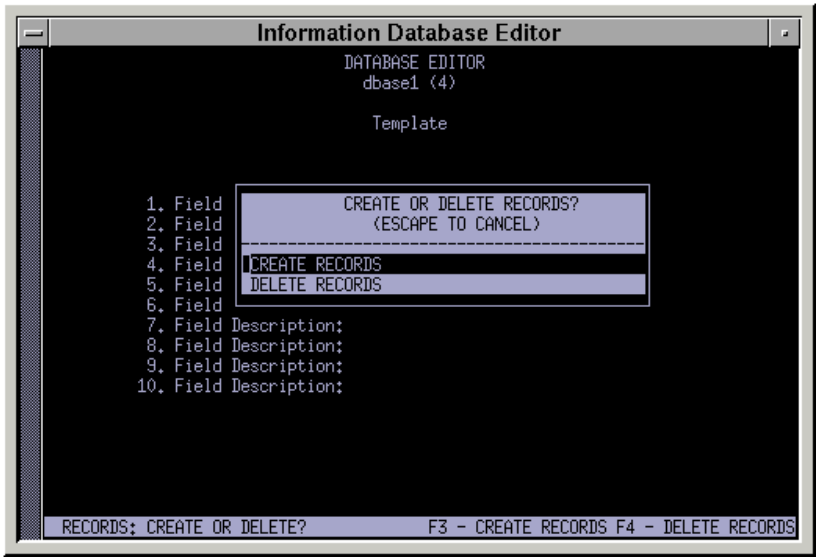
When you delete the record location, the data stored at that location is erased permanently.

Procedure 6-13
Deleting a record location

1 From the Template window, press <F3> for CREATE/DELETE.

The Create/Delete Record pop-up menu appears (see Figure 6-14).

Figure 6-14
Create/Delete Record pop-up menu



2 Select DELETE RECORDS.

The following prompt appears:

```
Enter Record to Delete:
```

3 Type a number for a single record location, or type a range of numbers.

4 Press <Enter>.

If you cannot delete the record(s) you select, an error message appears.

If you succeed in deleting the record(s) you select, the Template window for the database reappears (see Figure 6-5).

Procedure 6-14
Exiting the Database Editor

1 From the Database Editor main menu, press <F4> for Exit.

The Database Editor closes.

Deleting a database

You must be in the UNIX shell to delete a database.

Procedure 6-15
Deleting a database from the UNIX shell

1 Change to the directory */u/ivr/sys_files.*

2 Enter the following command: **rm dbname** and press <Enter>.

CAUTION!
Risk of losing system files

If you have two databases named *db* and *db1.ext*, you can type **rm db*.*** to delete both files at the same time.

The first asterisk represents any character(s) that follow the file name. The second asterisk represents the extension.

We recommend that you do not perform this procedure. However, if it is necessary, do not type a space between the database name and *.* otherwise not only will you erase the database named db, you will also erase system files that have extensions.

Appendix A: Standard prompts

The following are two lists of standard Meridian IVR prompts. These prompts are likely to be useful in any kind of application. Recordings of these prompts are included with Meridian IVR.

Table A-1
Standard English prompts

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
0	zero	0000	0	zero
1	one	0000	1	one
2	two	0000	2	two
3	three	0000	3	three
4	four	0000	4	four
5	five	0000	5	five
6	six	0000	6	six
7	seven	0000	7	seven
8	eight	0000	8	eight
9	nine	0000	9	nine
10	ten	0000	10	ten
11	eleven	0000	11	eleven
12	twelve	0000	12	twelve
13	thirteen	0000	13	thirteen

Table A-1
Standard English prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
14	fourteen	0000	14	fourteen
15	fifteen	0000	15	fifteen
16	sixteen	0000	16	sixteen
17	seventeen	0000	17	seventeen
18	eighteen	0000	18	eighteen
19	nineteen	0000	19	nineteen
20	twenty	0000	20	twenty
21	thirty	0000	21	thirty
22	forty	0000	22	forty
23	fifty	0000	23	fifty
24	sixty	0000	24	sixty
25	seventy	0000	25	seventy
26	eighty	0000	26	eighty
27	ninety	0000	27	ninety
28	hundred	0000	28	hundred
29	thousand	0000	29	thousand
30	oh	0000	30	oh
31	star	0000	31	star
32	pound	0000	32	pound
33	January	0000	33	January
34	February	0000	34	February
35	March	0000	35	March
36	April	0000	36	April

Table A-1
Standard English prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
37	May	0000	37	May
38	June	0000	38	June
39	July	0000	39	July
40	August	0000	40	August
41	September	0000	41	September
42	October	0000	42	October
43	November	0000	43	November
44	December	0000	44	December
45	on	0000	45	on
46	at	0000	46	at
47	a.m.	0000	47	a.m.
48	p.m.	0000	48	p.m.
49	The system storage is nearing capacity	0000	49	Error_1
50	The system storage is at capacity	0000	50	Error_2
51	We were unable to record this message.	0000	51	Error_3
52	You cannot record any new message at this time.	0000	52	Error_4
53	Welcome to ...	0000	53	Welcome
54	Hello	0000	54	Hello
55	Thank you. Good-bye.	0000	55	Thank_you_
56	That is an invalid response.	0000	56	Error_5
57	There are ...	0000	57	There_are
58	The number of messages waiting is ...	0000	58	Number_Msg_Wtng

Table A-1
Standard English prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
59	At the tone, leave your message. When finished, press...	0000	59	At_Tone
60	Your message has been delivered.	0000	60	Msg_Delivered
61	We were unable to deliver your message.	0000	61	Error_6
62	No new messages may be recorded at this time.	0000	62	Error_7
63	There are no more messages waiting.	0000	63	No_new_Msgs
64	The operator will be with you momentarily.	0000	64	Operator
65	You have paused recording. To resume, press...	0000	65	Pause_Recording
66	To save, press 1. To review, press 2. To delete, press 3.	0000	66	To_Save
67	To rerecord, press 1. To continue, press 2.	0000	67	To_Re-Record
68	To review, press 1. To rerecord, press 2. To continue, press 3.	0000	68	To_Review
69	Please enter the system password.	0000	69	Enter_Sys_Paswd
70	This message was sent on	0000	70	Msg_Sent
71	Please enter your password.	0000	71	Enter_Passwd
72	Please hold.	0000	72	Hold
73	That is an invalid password.	0000	73	Error_8
74	We are temporarily unable to access this message.	0000	74	Error_9
75	You have no messages waiting.	0000	75	No_Msg
76	The newly recorded prompt is...	0000	76	New_Rec_Prompt
77	The message has been deleted.	0000	77	Msg_Deleted
78	million	0000	78	million

Table A-1
Standard English prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
79	billion	0000	79	billion
80	dollar	0000	80	dollar
81	dollars	0000	81	dollars
82	cent	0000	82	cent
83	cents	0000	83	cents
84	area code	0000	84	area_code
85	and	0000	85	and
86	by	0000	86	by
87	(0.2 seconds of silence)	0000	87	.2 seconds_slnc
88	(0.4 seconds of silence)	0000	88	.4 seconds_slnc
89	(0.8 seconds of silence)	0000	89	.8 seconds_slnc
90	up	0000	90	up
91	down	0000	91	down
92	half	0000	92	half
93	third	0000	93	third
94	fourth	0000	94	fourth
95	fifth	0000	95	fifth
96	sixth	0000	96	sixth
97	seventh	0000	97	seventh
98	eighth	0000	98	eighth
99	ninth	0000	99	ninth
100	tenth	0000	100	tenth
101	point	0000	101	point

Table A-1
Standard English prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
102	points	0000	102	points
103	thirds	0000	103	thirds
104	fourths	0000	104	fourths
105	fifths	0000	105	fifths
106	sixths	0000	106	sixths
107	sevenths	0000	107	sevenths
108	eighths	0000	108	eighths
109	ninths	0000	109	ninths
110	tenths	0000	110	tenths
111	sixteenths	0000	111	sixteenths
112	thirty-seconds	0000	112	thirty-seconds
113	sixty-fourths	0000	113	sixty-fourths
114	weekdays	0000	114	weekdays
115	Resume recording at the tone.	0000	115	Resume
116	At the tone, leave your message.	0000	116	At_Tone
117	Recording has been aborted. The message will not be saved.	0000	117	Error_10
118	When finished, press...	0000	118	When_Finished
119	Your account cannot be accessed at this time.	0000	119	Error_11
120	Please call again later.	0000	120	Error_12
121	A	0000	121	A
122	B	0000	122	B
123	C	0000	123	C

Table A-1
Standard English prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
124	D	0000	124	D
125	E	0000	125	E
126	F	0000	126	F
127	G	0000	127	G
128	H	0000	128	H
129	I	0000	129	I
130	J	0000	130	J
131	K	0000	131	K
132	L	0000	132	L
133	M	0000	133	M
134	N	0000	134	N
135	O	0000	135	O
136	P	0000	136	P
137	Q	0000	137	Q
138	R	0000	138	R
139	S	0000	139	S
140	T	0000	140	T
141	U	0000	141	U
142	V	0000	142	V
143	W	0000	143	W
144	X	0000	144	X
145	Y	0000	145	Y
146	Z	0000	146	Z

Table A-1
Standard English prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
147	Sunday	0000	147	Sunday
148	Monday	0000	148	Monday
149	Tuesday	0000	149	Tuesday
150	Wednesday	0000	150	Wednesday
151	Thursday	0000	151	Thursday
152	Friday	0000	152	Friday
153	Saturday	0000	153	Saturday
154	twenty-one	0000	154	twenty-one
155	twenty-two	0000	155	twenty-two
156	twenty-three	0000	156	twenty-three
157	twenty-four	0000	157	twenty-four
158	twenty-five	0000	158	twenty-five
159	twenty-six	0000	159	twenty-six
160	twenty-seven	0000	160	twenty-seven
161	twenty-eight	0000	161	twenty-eight
162	twenty-nine	0000	162	twenty-nine
163	thirty-one	0000	163	thirty-one
164	thirty-two	0000	164	thirty-two
165	thirty-three	0000	165	thirty-three
166	thirty-four	0000	166	thirty-four
167	thirty-five	0000	167	thirty-five
168	thirty-six	0000	168	thirty-six
169	thirty-seven	0000	169	thirty-seven

Table A-1
Standard English prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
170	thirty-eight	0000	170	thirty-eight
171	thirty-nine	0000	171	thirty-nine
172	forty-one	0000	172	forty-one
173	forty-two	0000	173	forty-two
174	forty-three	0000	174	forty-three
175	forty-four	0000	175	forty-four
176	forty-five	0000	176	forty-five
177	forty-six	0000	177	forty-six
178	forty-seven	0000	178	forty-seven
179	forty-eight	0000	179	forty-eight
180	forty-nine	0000	180	forty-nine
181	fifty-one	0000	181	fifty-one
182	fifty-two	0000	182	fifty-two
183	fifty-three	0000	183	fifty-three
184	fifty-four	0000	184	fifty-four
185	fifty-five	0000	185	fifty-five
186	fifty-six	0000	186	fifty-six
187	fifty-seven	0000	187	fifty-seven
188	fifty-eight	0000	188	fifty-eight
189	fifty-nine	0000	189	fifty-nine
190	sixty-one	0000	190	sixty-one
191	sixty-two	0000	191	sixty-two
192	sixty-three	0000	192	sixty-three

Table A-1
Standard English prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
193	sixty-four	0000	193	sixty-four
194	sixty-five	0000	194	sixty-five
195	sixty-six	0000	195	sixty-six
196	sixty-seven	0000	196	sixty-seven
197	sixty-eight	0000	197	sixty-eight
198	sixty-nine	0000	198	sixty-nine
199	seventy-one	0000	199	seventy-one
200	seventy-two	0000	200	seventy-two
201	seventy-three	0000	201	seventy-three
202	seventy-four	0000	202	seventy-four
203	seventy-five	0000	203	seventy-five
204	seventy-six	0000	204	seventy-six
205	seventy-seven	0000	205	seventy-seven
206	seventy-eight	0000	206	seventy-eight
207	seventy-nine	0000	207	seventy-nine
208	eighty-one	0000	208	eighty-one
209	eighty-two	0000	209	eighty-two
210	eighty-three	0000	210	eighty-three
211	eighty-four	0000	211	eighty-four
212	eighty-five	0000	212	eighty-five
213	eighty-six	0000	213	eighty-six
214	eighty-seven	0000	214	eighty-seven
215	eighty-eight	0000	215	eighty-eight

Table A-1
Standard English prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
216	eighty-nine	0000	216	eighty-nine
217	ninety-one	0000	217	ninety-one
218	ninety-two	0000	218	ninety-two
219	ninety-three	0000	219	ninety-three
220	ninety-four	0000	220	ninety-four
221	ninety-five	0000	221	ninety-five
222	ninety-six	0000	222	ninety-six
223	ninety-seven	0000	223	ninety-seven
224	ninety-eight	0000	224	ninety-eight
225	ninety-nine	0000	225	ninety-nine
226	hundreds	0000	226	hundreds
227	five hundred	0000	227	five-hundred
228	thousands	0000	228	thousands
229	ten thousands	0000	229	ten-thousands
230	hundred thousands	0000	230	hundred-thousands
231	ones	0000	231	ones
232	year	0000	232	year
233	day	0000	233	day
234	of	0000	234	of
235	millions	0000	235	millions
236	billions	0000	236	billions
237	minus	0000	237	minus
238	negative	0000	238	negative

Table A-1
Standard English prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
239	first	0000	239	first
240	second	0000	240	second
241	eleventh	0000	241	eleventh
242	twelfth	0000	242	twelfth
243	thirteenth	0000	243	thirteenth
244	fourteenth	0000	244	fourteenth
245	fifteenth	0000	245	fifteenth
246	sixteenth	0000	246	sixteenth
247	seventeenth	0000	247	seventeenth
248	eighteenth	0000	248	eighteenth
249	nineteenth	0000	249	nineteenth
250	twentieth	0000	250	twentieth
251	thirtieth	0000	251	thirtieth
252	percent (“%”)	0000	252	percent
253	left square bracket (“[”)	0000	253	left_sqr_bracket
254	backslash (“\”)	0000	254	backslash
255	return	0000	255	return
256	enter	0000	256	enter
257	tab	0000	257	tab
258	backspace	0000	258	backspace
259	delete	0000	259	delete
260	space (“ ”)	0000	260	space
261	exclamation mark (“!”)	0000	261	exclamation_mark

Table A-1
Standard English prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
262	period (“.”)	0000	262	period
263	ampersand (“&”)	0000	263	ampersand
264	apostrophe (“ ’ ”)	0000	264	apostrophe
265	plus (“+”)	0000	265	plus
266	comma (“,”)	0000	266	comma
267	dash (“-”)	0000	267	dash
268	divide (“/”)	0000	268	divide
269	colon (“:”)	0000	269	colon
270	semi-colon (“;”)	0000	270	semi-colon
271	less than (“<”)	0000	271	less_than
272	equal (=)	0000	272	equal
273	greater than (“>”)	0000	273	greater_than
274	question mark (“?”)	0000	274	question_mark
275	open parenthesis (“(”)	0000	275	open_parenthesis
276	close parenthesis (“)”)	0000	276	close_parenthesis
277	asterisk (“*”)	0000	277	asterisk
278	caret (“^”)	0000	278	caret
279	underbar (“_”)	0000	279	underbar
280	single quote (“ ’ ”)	0000	280	single_quote
281	double quote (“ ” ”)	0000	281	double_quote
282	right square bracket (“]”)	0000	282	rght_sqr_bracket
283	tilde (“~”)	0000	283	tilde
284	pipe (“|”)	0000	284	pipe

Table A-1
Standard English prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
285	open brace (“{”)	0000	285	open_brace
286	close brace (“}”)	0000	286	close_brace
287	dollar sign (“$”)	0000	287	dollar_sign
288	at symbol (“@”)	0000	288	at_symbol
289	Celsius	0000	289	Celsius
290	Fahrenheit	0000	290	Fahrenheit
291	degrees	0000	291	degrees
292	above	0000	292	above
293	below	0000	293	below
294	centigrade	0000	294	centigrade
295	degree	0000	295	degree
296	hour	0000	296	hour
297	minute	0000	297	minute
298	one (feminine gender)	0000	298	one_fem
299	twenty-one (feminine gender)	0000	299	twentyone_fem
300	twelve-noon	0000	300	twelve-noon
301	twelve-midnight	0000	301	twelve-midnight
302	Please enter your account number.	0000	302	Plse_Enter_Acc#
303	Please enter your personal identification number.	0000	303	Plse_Enter_idnt#
304	Please enter your employee number.	0000	304	Plse_Enter_Empl#
305	The balance of your account is...	0000	305	Balance_is...
306	Please wait while we retrieve your account information.	0000	306	Plse_wait

Table A-1
Standard English prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
307	If you are calling from a touch-tone phone, press 1. Otherwise, please wait on the line and your call will be transferred.	0000	307	If_calng_touch
308	That entry could not be found.	0000	308	Error_13
309	Number-sign	0000	309	number_sign
310	Thank you.	0000	310	Thank_you
311	Good-bye.	0000	311	Good-bye
312	Thank you for calling.	0000	312	Thank_you_calling
313	Not a valid selection.	0000	313	Not_Valid_Slctn
314	Please wait for an operator to take your call.	0000	314	Please_Wait_Oprt
315	You have entered...	0000	315	You_Entered
316	Transferring to an attendant.	0000	316	Transferring_To
317	One moment please.	0000	317	One_Moment
318	If this is correct, press 1. If not, press 2.	0000	318	If_Correct_Press
319	...followed by...	0000	319	Followed_By
320	We’re sorry. Your account cannot be accessed at this time.	0000	320	We_Sorry
321	Please try again later.	0000	321	Please_Try_Later

Table A-2
Standard French prompts

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
0	zéro	1000	0	zero
1	un	1000	1	one
2	deux	1000	2	two
3	trois	1000	3	three
4	quatre	1000	4	four
5	cinq	1000	5	five
6	six	1000	6	six
7	sept	1000	7	seven
8	huit	1000	8	eight
9	neuf	1000	9	nine
10	dix	1000	10	ten
11	onze	1000	11	eleven
12	douze	1000	12	twelve
13	treize	1000	13	thirteen
14	quatorze	1000	14	fourteen
15	quinze	1000	15	fifteen
16	seize	1000	16	sixteen
17	dix-sept	1000	17	seventeen
18	dix-huit	1000	18	eighteen
19	dix-neuf	1000	19	nineteen
20	vingt	1000	20	twenty
21	trente	1000	21	thirty

Table A-2
Standard French prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
22	quarante	1000	22	forty
23	cinquante	1000	23	fifty
24	soixante	1000	24	sixty
25	soixante-dix	1000	25	seventy
26	quatre-vingt	1000	26	eighty
27	quatre-vingt-dix	1000	27	ninety
28	cent	1000	28	hundred
29	mille	1000	29	thousand
30	zéro	1000	30	oh
31	étoile	1000	31	star
32	carré	1000	32	pound
33	janvier	1000	33	January
34	février	1000	34	February
35	mars	1000	35	March
36	avril	1000	36	April
37	mai	1000	37	May
38	juin	1000	38	June
39	juillet	1000	39	July
40	août	1000	40	August
41	septembre	1000	41	September
42	octobre	1000	42	October
43	novembre	1000	43	November

Table A-2
Standard French prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
44	décembre	1000	44	December
45	le	1000	45	on
46	à	1000	46	at
47	(24-hour clock used in French)	1000	47	a.m.
48	(24-hour clock used in French)	1000	48	p.m.
49	La mémoire du système est presque saturée.	1000	49	Error_1
50	La mémoire du système est saturée.	1000	50	Error_2
51	Il a été impossible d'enregistrer ce message.	1000	51	Error_3
52	Vous ne pouvez enregistrer de nouveau message en ce moment.	1000	52	Error_4
53	Ici …	1000	53	Welcome
54	Bonjour	1000	54	Hello
55	Merci et au revoir.	1000	55	Thank_you_
56	Cette réponse n'est pas valide.	1000	56	Error_5
57	Il y a …	1000	57	There_are
58	Nombre de messages en attente :	1000	58	Number_Msg_Wtng
59	À la tonalité, dictez votre message. Lorsque vous aurez terminé, faites le …	1000	59	At_Tone
60	Votre message a été remis.	1000	60	Msg_Delivered
61	Il a été impossible de remettre ce message.	1000	61	Error_6
62	Il est impossible d'enregistrer de nouveaux messages en ce moment.	1000	62	Error_7

Table A-2
Standard French prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
63	Il n'y a plus de messages en attente.	1000	63	No_new_Msgs
64	Le téléphoniste vous répondra dans un instant.	1000	64	Operator
65	Vous avez fait une pause pendant l'enregistrement. Pour continuer, faites...	1000	65	Pause_Recording
66	Pour sauvegarder le message, faites le 1. Pour en revoir le contenu, faites le 2. Pour l'effacer, faites le 3.	1000	66	To_Save
67	Pour enregistrer le message de nouveau, faites le 1. Pour continuer, faites le 2.	1000	67	To_Re-Record
68	Pour revoir le contenu du message, faites le 1. Pour l'enregistrer de nouveau, faites le 2. Pour continuer, faites le 3.	1000	68	To_Review
69	Veuillez entrer le mot de passe du système.	1000	69	Enter_Sys_Paswd
70	Ce message a été envoyé le...	1000	70	Msg_Sent
71	Veuillez entrer votre mot de passe.	1000	71	Enter_Passwd
72	Veuillez ne pas quitter.	1000	72	Hold
73	Ce mot de passe n'est pas valide.	1000	73	Error_8
74	Il est temporairement impossible d'accéder à ce message.	1000	74	Error_9
75	Vous n'avez pas de message en attente.	1000	75	No_Msg
76	Le nouveau guide vocal enregistré est…	1000	76	New_Rec_Prompt
77	Le message est effacé.	1000	77	Msg_Deleted
78	million	1000	78	million
79	milliard	1000	79	billion
80	dollar	1000	80	dollar

Table A-2
Standard French prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
81	dollars	1000	81	dollars
82	cent	1000	82	cent
83	cents	1000	83	cents
84	indicatif régional	1000	84	area_code
85	et	1000	85	and
86	par	1000	86	by
87	(0,2 secondes de silence)	1000	87	.2 seconds_slnc
88	(0,4 secondes de silence)	1000	88	.4 seconds_slnc
89	(0,8 secondes de silence)	1000	89	.8 seconds_slnc
90	en hausse de	1000	90	up
91	en baisse de	1000	91	down
92	demi	1000	92	half
93	troisième	1000	93	third
94	quatrième	1000	94	fourth
95	cinquième	1000	95	fifth
96	sixième	1000	96	sixth
97	septième	1000	97	seventh
98	huitième	1000	98	eighth
99	neuvième	1000	99	ninth
100	dixième	1000	100	tenth
101	virgule	1000	101	point
102	virgules	1000	102	points

Table A-2
Standard French prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
103	tiers	1000	103	thirds
104	quarts	1000	104	fourths
105	cinquièmes	1000	105	fifths
106	sixièmes	1000	106	sixths
107	septièmes	1000	107	sevenths
108	huitièmes	1000	108	eighths
109	neuvièmes	1000	109	ninths
110	dixièmes	1000	110	tenths
111	seizièmes	1000	111	sixteenths
112	trente-deuxièmes	1000	112	thirty-seconds
113	soixante-quatrièmes	1000	113	sixty-fourths
114	jours ouvrables	1000	114	weekdays
115	À la tonalité, continuez l'enregistrement.	1000	115	Resume
116	À la tonalité, quittez le message.	1000	116	At_Tone
117	L'enregistrement a été abandonné. Le message ne sera pas sauvegardé.	1000	117	Error_10
118	Lorsque vous avez terminé, faites…	1000	118	When_Finished
119	Il est impossible d'accéder à votre compte pour le moment.	1000	119	Error_11
120	Veuillez rappeler plus tard.	1000	120	Error_12
121	A	1000	121	A
122	B	1000	122	B
123	C	1000	123	C

Table A-2
Standard French prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
124	D	1000	124	D
125	E	1000	125	E
126	F	1000	126	F
127	G	1000	127	G
128	H	1000	128	H
129	I	1000	129	I
130	J	1000	130	J
131	K	1000	131	K
132	L	1000	132	L
133	M	1000	133	M
134	N	1000	134	N
135	O	1000	135	O
136	P	1000	136	P
137	Q	1000	137	Q
138	R	1000	138	R
139	S	1000	139	S
140	T	1000	140	T
141	U	1000	141	U
142	V	1000	142	V
143	W	1000	143	W
144	X	1000	144	X
145	Y	1000	145	Y

Table A-2
Standard French prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
146	Z	1000	146	Z
147	dimanche	1000	147	Sunday
148	lundi	1000	148	Monday
149	mardi	1000	149	Tuesday
150	mercredi	1000	150	Wednesday
151	jeudi	1000	151	Thursday
152	vendredi	1000	152	Friday
153	samedi	1000	153	Saturday
154	vingt et un	1000	154	twenty-one
155	vingt-deux	1000	155	twenty-two
156	vingt-trois	1000	156	twenty-three
157	vingt-quatre	1000	157	twenty-four
158	vingt-cinq	1000	158	twenty-five
159	vingt-six	1000	159	twenty-six
160	vingt-sept	1000	160	twenty-seven
161	vingt-huit	1000	161	twenty-eight
162	vingt-neuf	1000	162	twenty-nine
163	trente et un	1000	163	thirty-one
164	trente-deux	1000	164	thirty-two
165	trente-trois	1000	165	thirty-three
166	trente-quatre	1000	166	thirty-four
167	trente-cinq	1000	167	thirty-five

Table A-2
Standard French prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
168	trente-six	1000	168	thirty-six
169	trente-sept	1000	169	thirty-seven
170	trente-huit	1000	170	thirty-eight
171	trente-neuf	1000	171	thirty-nine
172	quarante et un	1000	172	forty-one
173	quarante-deux	1000	173	forty-two
174	quarante-trois	1000	174	forty-three
175	quarante-quatre	1000	175	forty-four
176	quarante-cinq	1000	176	forty-five
177	quarante-six	1000	177	forty-six
178	quarante-sept	1000	178	forty-seven
179	quarante-huit	1000	179	forty-eight
180	quarante-neuf	1000	180	forty-nine
181	cinquante et un	1000	181	fifty-one
182	cinquante-deux	1000	182	fifty-two
183	cinquante-trois	1000	183	fifty-three
184	cinquante-quatre	1000	184	fifty-four
185	cinquante-cinq	1000	185	fifty-five
186	cinquante-six	1000	186	fifty-six
187	cinquante-sept	1000	187	fifty-seven
188	cinquante-huit	1000	188	fifty-eight
189	cinquante-neuf	1000	189	fifty-nine

Table A-2
Standard French prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
190	soixante et un	1000	190	sixty-one
191	soixante-deux	1000	191	sixty-two
192	soixante-trois	1000	192	sixty-three
193	soixante-quatre	1000	193	sixty-four
194	soixante-cinq	1000	194	sixty-five
195	soixante-six	1000	195	sixty-six
196	soixante-sept	1000	196	sixty-seven
197	soixante-huit	1000	197	sixty-eight
198	soixante-neuf	1000	198	sixty-nine
199	soixante et onze	1000	199	seventy-one
200	soixante-douze	1000	200	seventy-two
201	soixante-treize	1000	201	seventy-three
202	soixante-quatorze	1000	202	seventy-four
203	soixante-quinze	1000	203	seventy-five
204	soixante-seize	1000	204	seventy-six
205	soixante-dix-sept	1000	205	seventy-seven
206	soixante-dix-huit	1000	206	seventy-eight
207	soixante-dix-neuf	1000	207	seventy-nine
208	quatre-vingt-un	1000	208	eighty-one
209	quatre-vingt-deux	1000	209	eighty-two
210	quatre-vingt-trois	1000	210	eighty-three
211	quatre-vingt-quatre	1000	211	eighty-four

Table A-2
Standard French prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
212	quatre-vingt-cinq	1000	212	eighty-five
213	quatre-vingt-six	1000	213	eighty-six
214	quatre-vingt-sept	1000	214	eighty-seven
215	quatre-vingt-huit	1000	215	eighty-eight
216	quatre-vingt-neuf	1000	216	eighty-nine
217	quatre-vingt-onze	1000	217	ninety-one
218	quatre-vingt-douze	1000	218	ninety-two
219	quatre-vingt-treize	1000	219	ninety-three
220	quatre-vingt-quatorze	1000	220	ninety-four
221	quatre-vingt-quinze	1000	221	ninety-five
222	quatre-vingt-seize	1000	222	ninety-six
223	quatre-vingt-dix-sept	1000	223	ninety-seven
224	quatre-vingt-dix-huit	1000	224	ninety-eight
225	quatre-vingt-dix-neuf	1000	225	ninety-nine
226	centaines	1000	226	hundreds
227	cinq cent	1000	227	five-hundred
228	milliers	1000	228	thousands
229	dix mille	1000	229	ten-thousands
230	cent mille	1000	230	hundred-thousands
231	un	1000	231	ones
232	année	1000	232	year
233	jour	1000	233	day

Table A-2
Standard French prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
234	de	1000	234	of
235	millions	1000	235	millions
236	milliards	1000	236	billions
237	moins	1000	237	minus
238	moins	1000	238	negative
239	premier	1000	239	first
240	deuxième	1000	240	second
241	onzième	1000	241	eleventh
242	douzième	1000	242	twelfth
243	treizième	1000	243	thirteenth
244	quatorzième	1000	244	fourteenth
245	quinzième	1000	245	fifteenth
246	seizième	1000	246	sixteenth
247	dix-septième	1000	247	seventeenth
248	dix-huitième	1000	248	eighteenth
249	dix-neuvième	1000	249	nineteenth
250	vingtième	1000	250	twentieth
251	trentième	1000	251	thirtieth
252	pourcent (“%”)	1000	252	percent
253	crochet d’ouverture (“[”)	1000	253	left_sqr_bracket
254	oblique inverse (“\”)	1000	254	backslash
255	retour	1000	255	return

Table A-2
Standard French prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
256	entrée	1000	256	enter
257	tabulation	1000	257	tab
258	espace arrière	1000	258	backspace
259	effacement	1000	259	delete
260	espacement (“ ”)	1000	260	space
261	point d’exclamation (“!”)	1000	261	exclamation_mark
262	point (“.”)	1000	262	period
263	perluète (“&”)	1000	263	ampersand
264	apostrophe (“’”)	1000	264	apostrophe
265	plus (“+”)	1000	265	plus
266	virgule (“,”)	1000	266	comma
267	tiret (“-”)	1000	267	dash
268	séparation (“/”)	1000	268	divide
269	deux-points (“:”)	1000	269	colon
270	point-virgule (“;”)	1000	270	semi-colon
271	inférieur à (“<”)	1000	271	less_than
272	égal à (=)	1000	272	equal
273	supérieur à (“>”)	1000	273	greater_than
274	point d’interrogation (“?”)	1000	274	question_mark
275	parenthèse d’ouverture (“(”)	1000	275	open_parenthesis
276	parenthèse de fermeture (“)”)	1000	276	close_parenthesis
277	astérisque (“*”)	1000	277	asterisk

Table A-2
Standard French prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
278	accent circonflexe (“^”)	1000	278	caret
279	caractère de soulignement (“_”)	1000	279	underbar
280	guillemet simple (“ ’ ”)	1000	280	single_quote
281	guillemet double (“ ” ”)	1000	281	double_quote
282	crochet de fermeture (“]”)	1000	282	rght_sqr_bracket
283	tilde (“~”)	1000	283	tilde
284	barre verticale (“|”)	1000	284	pipe
285	accolade d’ouverture (“{”)	1000	285	open_brace
286	accolade de fermeture(“}”)	1000	286	close_brace
287	signe de dollar (“$”)	1000	287	dollar_sign
288	a commercial (“@”)	1000	288	at_symbol
289	Celsius	1000	289	Celsius
290	Fahrenheit	1000	290	Fahrenheit
291	degrés	1000	291	degrees
292	(not used in French to express temperature)	1000	292	above
293	(not used in French to express temperature)	1000	293	below
294	Celsius	1000	294	centigrade
295	degré	1000	295	degree
296	heure	1000	296	hour
297	minute	1000	297	minute
298	une (feminine gender)	1000	298	one_fem
299	vingt et une (feminine gender)	1000	299	twentyone_fem

Table A-2
Standard French prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
300	midi	1000	300	twelve-noon
301	minuit	1000	301	twelve-midnight
302	Veuillez entrer votre numéro de compte.	1000	302	Plse_Enter_Acc#
303	Veuillez entrer votre numéro d'identification personnel.	1000	303	Plse_Enter_idnt#
304	Veuillez entrer votre numéro matricule.	1000	304	Plse_Enter_Empl#
305	Le solde de votre compte est de…	1000	305	Balance_is...
306	Veuillez ne pas quitter : le système est en train de chercher l'information sur votre compte.	1000	306	Plse_wait
307	Si vous appelez à partir d'un poste Touch-Tone, faites le 1. Sinon, veuillez ne pas quitter : votre appel sera transféré.	1000	307	If_calng_touch
308	Il a été impossible de trouver cette inscription.	1000	308	Error_13
309	carré	1000	309	number_sign
310	Merci.	1000	310	Thank_you
311	Au revoir.	1000	311	Good-bye
312	Nous vous remercions de votre collaboration.	1000	312	Thank_you_calling

Table A-2
Standard French prompts (continued)

#	Meridian IVR Release 2 Prompt Script	File	Seg	VPE Prompt Name
313	Cette sélection n'est pas valide.	1000	313	Not_Valid_Slctn
314	Un téléphoniste vous répondra; veuillez ne pas quitter.	1000	314	Please_Wait_Oprt
315	Vous avez accédé à...	1000	315	You_Entered
316	Votre appel est transféré à un préposé.	1000	316	Transferring_To
317	Un moment s'il vous plaît.	1000	317	One_Moment
318	Si cette information est correcte, faites le 1. Sinon, faites le 2.	1000	318	If_Correct_Press
319	… suivi du	1000	319	Followed_By
320	Nous sommes désolés, mais il est impossible d'accéder à votre compte pour le moment.	1000	320	We_Sorry
321	Veuillez rappeler plus tard.	1000	321	Please_Try_Later
322	première (feminine gender)	1000	322	first_fem

Appendix B: Host error messages

Terminal Resource Server (TRS) Messages

ERR: Unable to reset application environment

Meaning: TRS was unable to reset the 3270 system.

Action to take: Stop Meridian IVR 2.0/I. Make sure the 3270 board has been downloaded correctly. The download command should be included in the profile file.

ERR: Unable to load configuration file

Meaning: TRS was unable to load the configuration file trs.conf.

Action to take: Revise the syntax error in trs.conf under 3270 directory.

ERR: Failed to startup VT100 Server

Meaning: TRS was unable to reset the vt100 system.

Action to take: Check file ../vt100/vt100.ctl and ensure its format is correct. Look at ../vt100/vt100.log to make sure that the communication ports have been opened successfully. Also make sure the communication device is properly defined.

ERR: VT100 Server startup

Meaning: VT100 Server has been started up.

Action to take: None. Notification only.

ERR: Create_3270_objects

Meaning: TRS was unable to create or initialize the session, board or process data structure.

Action to take: Contact a Nortel service representative.

ERR: Create_screen_templates

Meaning: TRS was unable to open a screen template file or found a syntax error in the screen template files.

Action to take: Check the screen template files for syntax errors.

ERR: Create_action_templates

Meaning: TRS was unable to open an action template file or found a syntax error in the action template files.

Action to take: Check the action template files for syntax errors.

ERR: Order_templates

Meaning: The screen templates referenced in the action templates were not found.

Action to take: Create the appropriate screen templates.

ERR: Load_runtime_config

Meaning: TRS was unable to load the configuration file trs.conf.

Action to take: Revise the syntax error in the trs.conf file.

ERR: Check_action_template

Meaning: TRS was unable to find the reset or logout action templates defined in the header of an action template.

Action to take: Check and create the appropriate action templates.

ERR: All communication boards are not operational

Meaning: None of the communication boards is operational.

Action to take: Ensure that the communication board has been downloaded correctly. The download command should be included in the .profile file.

ERR: All available session are non-operational

Meaning: None of the sessions is operational.

Action to take: Ensure that the communication board has been downloaded correctly. The download command should be included in the .profile file.

ERR: xx Sessions are Operational

Meaning: TRS found that xx sessions are operational.

Action to take: Check to see if the number matches the defined number of sessions in the trs.conf file.

ERR: BD xx SS xx Failure to create process object

Meaning: TRS was unable to allocate memory for the process structure for board xx session xx.

Action to take: Contact a Nortel service representative.

ERR: Unable to create Board Object Instance

Meaning: TRS was unable to allocate memory for the board object structure.

Action to take: Contact a Nortel service representative.

ERR: Unable to create Session Object Instance

Meaning: TRS was unable to allocate memory for the session object structure.

Action to take: Contact a Nortel service representative.

ERR: Unable to create Process Object Instance

Meaning: TRS was unable to allocate memory for the project object structure.

Action to take: Contact a Nortel service representative.

ERR: Unable to create Application Object

Meaning: TRS was unable to allocate memory for the application object structure.

Action to take: Contact a Nortel service representative.

ERR: xx is not a keyword

Meaning: The screen template contains an invalid keyword.

Action to take: Revise the screen template. Ensure that the KEYWORD (&LOGIN_ID, &PASSWORD, &LU_BUF1 and &LU_BUF2) is spelled correctly.

ERR: BD xx SS xxx ERR: start host notify

Meaning: TRS was unable to communicate with host on Board xx session xxx.

Action to take: Contact a Nortel service representative.

ERR: CH=xx ERR::Request does not contain action name

Meaning: The action template name passed by Meridian IVR 2.0/I is a zero-length string.

Action to take: Check the COMI or USER cell used to start an transaction to make sure it contains an action template name.

ERR: CH= xx ERR::Invalid action name xxx

Meaning: The action template name xxx in the USER or COMI cell was not found under the 3270 directory.

Action to take: Check or create action template file.

ERR: CH=xx ERR::Action xxx not defined in any appl

Meaning: The action template xxx did not define an application name.

Action to take: Revise the action template to add the application name in the appropriate field.

ERR: CH=xx ERR::Appl name xxx not defined in trs.conf

Meaning: The application name defined in the action template did not match any application name defined in the trs.conf file.

Action to take: Revise the trs.conf or the action template so that the application name matches.

ERR: CH=xx BD xxx SS xxxx: Session not working-manual mode

Meaning: This particular session is not working. TRS was unable to attach this session.

Action to take: Contact a Nortel service representative.

ERR: CH=xx ERR::Parse: Incorrect Action [xxx]

Meaning: Action template xxx was not found under the 3270 directory.

Action to take: Create an action template which matches the action template name in the COMI or USER cell.

ERR: CH=xx Read_input:ERR: Create_timer_instance

Meaning: TRS was unable to allocate memory for timer structure.

Action to take: Contact a Nortel service representative.

ERR: CH=xx BD xxx SS xxx Read_input:ERR: copy PS

Meaning: TRS was unable to copy the presentation space.

Action to take: TRS will try again. If this message continues to appear, contact your Nortel service representative.

ERR: CH=xx BD xxx SS xxxx Read_input:ERR: Query cursor

Meaning: TRS was unable to locate the cursor in the presentation space.

Action to take: Check the communication system and make sure the host connection exists.

ERR: CH=xx Read_Update:ERR: Create_timer_instance

Meaning: TRS was unable to allocate memory for timer structure.

Action to take: Contact a Nortel service representative.

ERR: CH=xx BD xxx SS xxxx Read_updated:ERR: Query PS CODE= xxxxx

Meaning: The presentation space was not updated as expected.

Action to take: Check the communication system, ensuring that it works properly.

ERR: Send Aid key failed

Meaning: TRS did not succeed in sending the aid key to host.

Action to take: Ensure that the host connection exists.

ERR: CH=xx Process:ERR: Syntax error for variable operation

Meaning: Syntax error in internal variable operation.

Action to take: Check the screen templates that use the internal variable operation and correct any syntax errors.

ERR: CH=xx Process:ERR: write to screen

Meaning: TRS was unable to copy a string to the presentation screen.

Action to take: Check if the field is write protected.

ERR: msg_wait_start

Meaning: Error message was received while TRS was waiting for other processes to initialize.

Action to take: Contact a Nortel service representative.

ERR: Initialize 3270 Controller software

Meaning: 3270 initialization failure.

Action to take: Check the communication system to make sure it works properly.

ERR: Failure to connect to a TRS Server

Meaning: TRS envoy was unable to connect to TRS server.

Action to take: Ensure that the TRS in server mode is running on a network node specified in the trs.node file. Also, check to see if the /etc/hosts file contains the node information and check that the socket number is contained in the /etc/services file. If the TRS is running in a server mode, make sure that the communication board is downloaded properly.

ERR: 3270 Server Process Startup

Meaning: 3270 server process has been started up.

Action to take: None. Notification only.

ERR: 3270 Envoy Process Startup

Meaning: 3270 envoy has been started up.

Action to take: None. Notification only.

ERR: Process Startup

Meaning: The TRS process with no 3270 communication capability has been started. This TRS process cannot run applications that access a remote host via COMI, COMO, COMA or USER cells.

Action to take: None. Notification only.

ERR: Received a service abort from the TRS Server

Meaning: TRS envoy process received a message indicating that the TRS server is exiting.

Action to take: If the TRS running in server mode was brought down, this is a notification message.

ERR: Received a Service Free Message

Meaning: Meridian IVR 2.0/I stopped.

Action to take: None. Normal shutdown notification.

ERR: Accept a connection to a client

Meaning: TRS server was unable to accept the TRS envoy's request for connection.

Action to take: Check the network integrity before consulting a Nortel service representative.

ERR: A flush command was sent prior to any request

Meaning: The flush command was sent before a transaction request was made.

Action to take: A COMI cell was missing in the application or the USER cell did not use function code 2 or 1 to initialize the request. Revise the application.

ERR: CH=xx illegal Command xxx

Meaning: TRS received an incorrect command from another process.

Action to take: Contact a Nortel service representative.

ERR: Server Node file trs.node does not exist

Meaning: The trs.node file was missing from the envoy process node.

Action to take: This error message may appear for two reasons. First, a TRS envoy may not be communicating with a TRS server running on another node. Ensure that the trs.node file exists in the 3270 directory and contains the node name where the TRS server is running. Second, the TRS may be running in a server mode, but the communication board is not downloaded correctly. The TRS assumes this TRS is running in envoy mode and then indicates that the trs.node file does not exist. In this case, make sure the communication board is downloaded correctly.

ERR: The server node name is the same as envoy node name

Meaning: The server node defined in the trs.node file is the same as the node name on which the TRS envoy is running.

Action to take: Revise the trs.node file so that it contains the proper remote TRS server node.

ERR: NET_TO_ENVOY: ERR: Reply Code =xx from SERVER

Meaning: The TRS envoy received an error message from the TRS server.

Action to take: Contact a Nortel service representative.

ERR: Invalid Aid key specified use the Enter Key

Meaning: The Aid key specified in the screen template is not valid. The system uses the <Enter> key as the Aid key in this case.

Action to take: Define a valid aid key.

ERR: Send_with_aid: Connect to Session xx failed

Meaning: TRS failed to connect to session xx before sending the aid key.

Action to take: Check the communication system to make sure it works properly.

ERR: Send_with_aid: failed with return code of xx

Meaning: TRS failed to send the aid key.

Action to take: Check the communication system to make sure it works properly.

ERR: Write_to_screen: Connect request to Session xx failed

Meaning: TRS failed to connect to session xx before it wrote to the presentation space.

Action to take: Contact a Nortel service representative.

ERR: Write_to_screen: Writing of input xx failed

Meaning: TRS failed to write to the presentation space.

Action to take: Check to see if the field is write-protected.

ERR: No Match Found for field id xx

Meaning: The field identification xx defined in the screen template could not be found in the presentation space.

Action to take: Revise the screen template so that it contains the valid field descriptor.

ERR: Session index xx not defined in appl

Meaning: The session index xx is out of the range of sessions defined for this application.

Action to take: Contact a Nortel service representative.

ERR: Ping request memory allocation failed

Meaning: TRS was unable to allocate memory for the ping request structure.

Action to take: Contact a Nortel service representative.

ERR: Create_queue_object: Attempt to create Queue class instance failed

Meaning: TRS was unable to allocate memory for the QUEUE_CLASS structure.

Action to take: Contact a Nortel service representative.

ERR: A request for this channel is already being processed

Meaning: The last COMO cell did not retrieve all the output buffers from TRS.

Action to take: Place a COMA cell in the clean up handler section of the application to ensure that all output buffers are flushed when a caller hangs up in the middle of a transaction. Furthermore, there should always be a COMO cell(s) after COMI cell(s) even though no output from the host is expected. The COMO cell(s) retrieve(s) a status indicating whether or not the transaction has been successful.

ERR: Create_transaction_instance: Unable to create Transaction Object Instance

Meaning: TRS was unable to allocate memory for the transaction structure.

Action to take: Contact a Nortel service representative.

ERR: Create_timer_instance: Unable to create Timer Object Instance

Meaning: TRS was unable to allocate memory for the timer structure.

Action to take: Contact a Nortel service representative.

ERR: Create_client_instance: Unable to create Client Object Instance - Exiting

Meaning: TRS was unable to allocate memory for the client object structure.

Action to take: Contact a Nortel service representative.

ERR: Create_request_instance: Create_request malloc failed for queuing

Meaning: TRS was unable to allocate memory for the request structure.

Action to take: Contact a Nortel service representative.

ERR: Create_idle_timer: Idle timer memory allocation failed

Meaning: TRS was unable to allocate memory for the idle timer structure.

Action to take: Contact a Nortel service representative.

ERR: Configuration file trs.conf not found

Meaning: Configuration file trs.conf was either not found or not readable.

Action to take: Create or change the permissions of trs.conf under 3270 directory.

ERR: No application field in trs.conf

Meaning: Application name is not defined in trs.conf.

Action to take: Revise trs.conf so that it contains the application name before the ":"

ERR: An invalid entry in the trs.conf

Meaning: An incorrect symbol occurred in the trs.conf file.

Action to take: Check syntax of the trs.conf file.

ERR: Init action missing, put - if not available

Meaning: Initial action template is missing from the trs.conf file.

Action to take: Add the initial action template in the trs.conf file or put "-" if not available.

ERR: Ping action missing, put - if not available

Meaning: Heartbeat action template was missing from the trs.conf file.

Action to take: Add a heartbeat action template in the trs.conf file or put "-" in this field if not available.

ERR: Protocol missing, specify 3270 or VT100

Meaning: The protocol type was missing from the trs.conf protocol field.

Action to take: Ensure that 3270 or vt100 is specified in the protocol field.

ERR: Incorrect syntax for ping action

Meaning: The heartbeat action template was specified incorrectly in the trs.conf file.

Action to take: Revise the trs.conf file so that the heartbeat field has the correct syntax.

ERR: Invalid Protocol xxx, protocol

Meaning: xxx is an invalid protocol.

Action to take: Revise the trs.conf file so that the protocol is either 3270 or vt100.

ERR: Invalid entry non-numeric

Meaning: A non-numeric symbol occurred in the board number or session number field of the trs.conf file.

Action to take: Check the syntax of the trs.conf file.

ERR: A board # was not specified in the trs.conf

Meaning: The board number was missing from the board field of the trs.conf file.

Action to take: Check the syntax of the trs.conf file.

ERR: Possibly exceeded number of allowable boards

Meaning: The number of total boards defined in the trs.conf file exceeds the total number of boards the system allowed.

Action to take: Revise the trs.conf file and ensure the total board number does not exceed the maximum allowed, which is 4.

ERR: First LU cannot be less than xx.

Meaning: The first session defined in the trs.conf file was less than specified by xx.

Action to take: Revise the session field of the trs.conf file.

ERR: Last LU cannot be greater than xx

Meaning: The last session defined in the trs.conf file was greater than specified by xx.

Action to take: Revise the session field of the trs.conf file.

ERR: An Invalid Board# xx is specified

Meaning: The board number xx as specified in the trs.conf file is outside the valid range.

Action to take: Revise the board field of the trs.conf file.

ERR: Couldn't create appl object

Meaning: TRS is unable to allocate memory for the application instance structure.

Action to take: Contact a Nortel service representative.

ERR: read data from map file ../3270/map.dat

Meaning: Invalid data in the map.dat file.

Action to take: Revise the map.dat file.

ERR: Invalid Channel specified in ../3270/map.dat

Meaning: The map.dat file contains an invalid channel number.

Action to take: Check the map.dat file.

ERR: Invalid Session Number xx specified in ../3270/map.dat

Meaning: The map.dat file contains invalid session number xx.

Action to take: Revise the map.dat file and ensure that the channels and sessions are named with numerics.

ERR: in map.dat:Session xx not defined in trs.conf

Meaning: The session number xx defined in the map.dat file was not defined in the trs.conf file.

Action to take: Revise the map.dat file or the trs.conf file and make sure that the session number matches.

ERR: read data from file ../3270/lubuf.dat

Meaning: Syntax error in lubuf.dat file.

Action to take: Revise lubuf.dat file.

ERR: Invalid Board number xx specified in ../3270/lubuf.dat

Meaning: lubuf.dat file defined an invalid board number xx.

Action to take: Revise lubuf.dat file.

ERR: Invalid Session Number xx specified in ../3270/lubuf.dat

Meaning: The lubuf.dat file contains an invalid session number.

Action to take: Check the lubuf.dat file.

ERR: “In ../3270/lubuf.dat:BD xx SS xxx not defined in trs.conf

Meaning: lubuf.dat contained board number xx session number xxx, which is not defined in the trs.conf file.

Action to take: Revise the trs.conf file or the lubuf.dat file to ensure that the board and session numbers match.

ERR: In ../3270/lubuf.dat:login_id xx exceeds xxx characters

Meaning: There are too many characters in the login ID defined in the lubuf.dat file.

Action to take: Revise the lubuf.dat file so that the length of the login ID does not exceed xxx.

ERR: In ../3270/buf.dat:password xx exceeds xxx characters

Meaning: There are too many characters in the password defined in the lubuf.dat file.

Action to take: Revise password in lubuf.dat file so that the length of the password does not exceed xxx characters.

ERR: In ../3270/lubuf.dat:lu_buf1 exceeds xx characters

Meaning: There are too many characters in the lu_buf1 field defined in the lubuf.dat file.

Action to take: Revise the lu_buf1 field in the lubuf.dat file so that the length does not exceed xx characters.

ERR: In ../3270/lubuf.dat:lu_buf2 exceeds xx characters

Meaning: There are too many characters in the lu_buf2 field defined in the lubuf.dat file.

Action to take: Revise the lu_buf2 field in the lubuf.dat file so that the length does not exceed xx characters.

ERR: Unable to open screen file xx

Meaning: TRS was unable to open the screen file xx.

Action to take: A screen file was missing or unreadable. Create one or change the permissions to make it readable.

ERR: Memory allocation failure for Screen entry

Meaning: TRS was unable to allocate memory for the screen template structure.

Action to take: Contact a Nortel service representative.

ERR: No header data for Screen file xx

Meaning: Header data was missing from the screen template file xx.

Action to take: Add header data to the screen template file xx.

ERR: Screen name xx exceeds xxx characters

Meaning: There are too many characters in the screen template file name xx.

Action to take: Change xx so that the length of it does not exceed xxx characters.

ERR: Screen name xx must match the file name without .scn

Meaning: Invalid screen name defined in the screen template file.

Action to take: Revise the screen template file and make sure the screen name is the screen template file name without .scn extension.

ERR: Validate tag xx of screen xxx exceeds xxx characters.

Meaning: There are too many characters in the validation tag field defined in the screen template file.

Action to take: Revise the validation tag in the screen template so that length of it does not exceed xxx characters.

ERR: Unable to get offset value from file xx

Meaning: Syntax error in row/column field defined in the screen template file.

Action to take: Revise the screen template file and make sure there is a comma between row and column.

ERR: Parse string xx of screen xxx

Meaning: Syntax error in screen template file.

Action to take: Check the syntax of the screen template file.

ERR: Field id xx exceeds xxx characters

Meaning: There are too many characters in the field ID name defined in the screen template file.

Action to take: Correct the field name in the screen template file so that the length of it does not exceed xxx characters.

ERR: I/O Descriptor xx of screen xxx exceeds xxxx characters

Meaning: There are too many characters in the I/O field of the screen template.

Action to take: Correct the I/O field of the screen template so that its length does not exceed xxxx characters.

ERR: The screen templates exceed xx

Meaning: There are too many screen templates in this application.

Action to take: Revise the application to keep the screen templates within the limit specified.

ERR: Open action file xx failed

Meaning: TRS failed to open the action file xx.

Action to take: Create or change permissions of the action template file to make it readable.

ERR: Memory allocation failure for ACTION entry

Meaning: TRS was unable to allocate memory for the action structure.

Action to take: Contact a Nortel service representative.

ERR: Read head data from action file xx

Meaning: Syntax error in the header section of the action template file.

Action to take: Check the syntax of the header section of the action template file.

ERR: Read screen name from action file xx

Meaning: The screen name is missing from the action template file xx.

Action to take: Add appropriate screen names under the header section of the action template file.

ERR: Action xx exceeds max screen entries xxx

Meaning: There are too many screens defined in the action template file xx.

Action to take: Revise the action template file to keep the total number of screens within the limit specified by xxx.

ERR: Screen xx of Action xxx not found

Meaning: Screen xx defined in the action template xxx was not found under the 3270 directory.

Action to take: Create the appropriate screen template file.

ERR: reset action xx of the action xxx not found

Meaning: The reset action template xx defined in the action template xxx was not found under the 3270 directory.

Action to take: Create the appropriate reset template file.

ERR: logout action xx of the action xxx not found

Meaning: Logout action xx defined in the action template xxx was not found under the 3270 directory.

Action to take: Create the appropriate logout template file.

ERR: Unable to find ACTION xx

Meaning: Action template file xx was missing from the 3270 directory.

Action to take: Create the appropriate action template file.

ERR: Unable to Open Information Logger

Meaning: TRS was unable to open trs.log file.

Action to take: Check the permissions of the trs.log file.

ERR: Buffer size is greater than xx

Meaning: The entry exceeds the maximum buffer size xx.

Action to take: Contact a Nortel service representative.

ERR: No row/column delimiter for screen template

Meaning: Syntax error in row/column field defined in the screen template file.

Action to take: Revise the screen template file and ensure that there is a comma between the row and column so that the format is row, col.

ERR: Set_timer: Error setting interval timer struct

Meaning: TRS got an operating system error when it was trying to set a timer.

Action to take: Contact a Nortel service representative.

Appendix C: Tools

All the tools available on Meridian IVR 2.0/I are described here. Tools reside in the **tools** directory unless noted otherwise.

bup—backs up files to a device, restores backed up files and enables creation of a daily backup schedule from the command line. Works in a similar manner to xbup, described later in this chapter

To invoke, type **bup** from the command line, using the appropriate switches from the following lists.

Table C-1
Command line switches

-schedule	to schedule a cron job, in the form: -s HH:MM
-unschedule	to unschedule a cron job, in the form: -u HH:MM
-file	to define the backup list file. If you do not specify a file, the default is: .../backup/backup_def.bup
-view	to view files in the media
-restore	to restore files from media to the appropriate directory
-device	to specify the backup media
-now	to do the backup immediately, instead of as scheduled
-edit	to edit a list of files using the vi editor

> ***Note:*** If you do not specify a device to which the file should be backed up, a default will be used. See your System Administrator for the default device name for your system.

chdbn—allows you to change the name of a database. To do this, type:

chdbn <old_database_name><new_database_name>

where **old_database_name** is the name of an existing database and **new_database_name** is the name of the updated database created from running the tool **chdbn**. The new database name must be eight characters or less. Press the **<Enter>** key.

devnt — displays the contents of the **csc_events** file, which resides in the **sys_file** directory. This file contains a list of all the application's times, telephone numbers, and event IDs scheduled to run.

dsysf — displays the contents of the **sysgen.d** file, which resides in the **sys_files** directory. This file contains the configuration information you enter in the System Configuration Management window.

exp — reads the data files in the Meridian IVR 2.0/I **stat.d** directory. As a file is read, it is data is exported into an ASCII file as tilde or comma separated fields suitable for import to databases or programs such as a report writer **.exp** also allows you to change the wrap size of statistics files.

mvsnf — used by **make_vsn_files** to create empty **vsn.data** files.

sched — allows you to schedule an application through the emulation of the DELV, UDLV, and LDLV cells.

sconfig — provides a systems administrator the ability to turn Call Auditing ON or OFF for Meridian IVR 2.0/I. Updates the Call Auditing Enabled field within the statistics configuration file (**stats.config**) located within the **stat.d** directory.

If you use **sconfig** to turn Call Auditing ON, Meridian IVR 2.0/I sends all collected Call Audit Statistics to the audit_stat.d statistics file.

If you use **sconfig** to turn Call Auditing OFF, Meridian IVR 2.0/I will not send the Call Audit Statistics collected to the **audit_stat.d** statistics file. (This can also be used to override an EVENT cell).

To invoke **sconfig**, type:

sconfig -audit [on off]

You must reset Meridian IVR 2.0/I for changes made by **sconfig** to take effect.

statsbkup — backs up the statistics file based on the type and path name from user inputs. If Meridian IVR 2.0/I is running, a reset option is available with this tool. To invoke the statsbkup tool, type:

statsbkup [-type | -t] statstype [-file | -f] filepath&name [-r | reset]

where **statstype** is the statistic file type. The currently available type is (case insensitive): **audit** — Call Audit Report. **filepath&name** indicate the path name to the file for deposit of the backup.

reset directs the system to reset the **audit_stat.d** file after the backup is created.

To regularly schedule a statistics files backup, you must create a crontab file and submit it to the UNIX cron process. See your UNIX administrator.

version — displays the version number of the Meridian IVR 2.0/I software installed on your machine.

vip_audit — displays the last 100 requests sent to a vip process for a particular trunk. To invoke the **vip_audit** tool, type:

vip_audit -t <trunk_num> -id <mrs_num>

where **trunk_num** is the number of the trunk on a particular MRS that you want to use. The valid range is zero (0) to two hundred fifty-four (254). **mrs_num** is the number of the MRS where the trunk resides. This number can be in the range one (1) to thirty-two (32). Meridian IVR 2.0/I must be running before you can use **vip_audit**.

xbup — backs up files to a device, restores backed up files and enables creation of a daily backup schedule.

The following tools are documented for informational purposes only. Nortel does not recommend that you run these tools.

dpnd — run when a user function is built with the **make** utility. (For informational purposes only. This tool is not used directly by you).

gmessage — run when Meridian IVR 2.0/I displays a message on the Meridian IVR 2.0/I Console. (For informational purposes only. This tool is not used directly by you).

logcp — run when a user function is built with the **make** utility. (For informational purposes only. This tool is not used directly by you).

makedepend.drv — run when a user function is built with the **make** utility. (For informational purposes only. This tool is not used directly by you).

mkproto.drv — run when a user function is built with the **make** utility. (For informational purposes only. This tool is not used directly by you).

ptype — run when a user function is built with the **make** utility. (For informational purposes only. This tool is not used directly by you).

Appendix D: Error codes and severity levels

This feature allows you to assign severity levels, text, and actions to Meridian IVR 2.0/I. The severity file is located in the following directory: */u/ivr/ui_lang/en_US/severity*.

Note that you can access a default of the severity file in the following directory: */u/ivr/ui_lang/en_US/severity.sample.*

Any Meridian IVR 2.0/I error is considered a log event, as is the start-up or shutdown of any process. Whenever a log event occurs, Meridian IVR 2.0/I adds the text string and carries out the action you assign.

This feature allows you to make informed responses to log events depending on their severity level. For example, a severity code ADVISORY informs you that a log event occurred, but since its event code corresponds with ADVISORY, no action is necessary. An event associated with the severity code FATAL, however, generally requires you to take action.

When log events occur, the event log and the User Error Handler (UEH) log them. You may encounter situations when you only wish to have log events above or below a certain severity level sent to the UEH. The Error Codes and Severity Levels feature allows you to set a threshold for the log events sent to the UEH.

The Error Codes and Severity Levels feature consists of a severity file which replaces the alarm file in previous versions of Meridian IVR 2.0/I. The severity file translates a numerical log event into a severity level, text string, and action.

The severity file consists of three parts. The first part sets the severity level threshold for the log events sent to the UEH. The second part maps the severity levels to the text strings and actions. The third part maps the error codes to the severity levels.

You can create the severity file with a text editor like vi.

Severity Level Threshold

The first part of the severity file determines the threshold above or below which log events will be sent to the UEH. Before entering a value in this field, you must decide on the range of severity levels you are going to use for all log events. Once you have determined this, you must determine a severity level above which or below which log events will be sent to the UEH.

The following entry sets the severity level threshold:

LEVEL N greater than or less than

where **N** is the severity level threshold. Enter **GE** for greater than or equal to, or **LE** for less than or equal to. Separate the entries with spaces or tabs.

Severity Level, Text String, and Action

The second part of the severity file maps the severity level to the text string and action. You map the severity level, text string, and action in the following manner:

MAPseverity leveltext stringaction

Separate the entries with spaces or tabs.

Severity Level

There are five standard levels of severity (0-4). You are not limited to these severity levels. You can define as many severity levels as you find necessary.

Text String

You should use the text string to describe the level of severity of the log event. Typically, ADVISORY, MINOR, MAJOR, CRITICAL, and FATAL are the standard descriptions of the 5 standard severity levels. You may rename existing severity levels.

Action

You can tell Meridian IVR 2.0/I to carry out a Meridian IVR 2.0/I System Action or a User Defined Action. An Meridian IVR 2.0/I System Action is a predefined system action. A User Defined Action is an action you define to carry out a task specific to your needs.

Note: Meridian IVR 2.0/I is not responsible for managing User Defined Actions after their execution. Therefore, we recommend them for expert Meridian IVR 2.0/I users only.

Mapping Error Codes to Severity Levels

The third part of the severity file maps the Meridian IVR 2.0/I error codes to the severity levels defined in the first part of the severity file. You map them in a simple two column format with spaces or tabs in between as shown:

0 0

1 0

2 1

3 1

4 1

5 2

6 0

The first column is the Meridian IVR 2.0/I error code. The second column is the severity level. It is a good idea to comment this part of the severity file in order to provide a key to the meaning of the Meridian IVR 2.0/I error codes. You can map the error codes and severity levels in any order you desire. For example:

490 3

13801

0 0

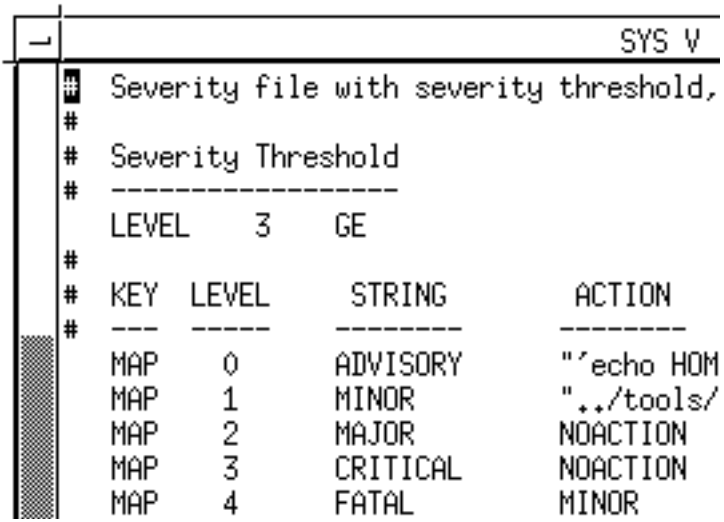
560 2

109 4

Severity File Syntax

Figure D-1 illustrates an example of the severity file.

Figure D-1
Example severity file



Severity Threshold

The first non-comment field in the severity file is the severity level threshold. In this field, enter LEVEL, then the severity level you wish to log to the UEH, then GE or LE. To log events greater than or equal to the severity level, enter GE after the severity level. To log events less than or equal to than the severity level, enter LE after the severity level. In Figure D-1, the UEH will log events greater than or equal to severity level 3.

Key

Enter MAP in this column to instruct Meridian IVR 2.0/I to associate the severity level with the text string and action.

Level

In this column, enter the numerical values for the different severity levels you wish to use.

String

In this column, enter an eight-character or less text string to describe log events with the corresponding severity level. Meridian IVR 2.0/I will trim a text string exceeding eight characters.

Action

In this column, enter the action you wish Meridian IVR 2.0/I to carry out upon encountering a log event with a defined severity level. You have two categories of actions to choose from—Meridian IVR 2.0/I **System Actions** and **User Defined Actions**.

The Meridian IVR 2.0/I System Actions are MINOR, CONSOLE, and NOACTION. MINOR will turn on the minor system alarm on the AP. CONSOLE prints the error message in the xconsole window. NOACTION tells Meridian IVR 2.0/I to ignore the event completely. The difference between an undefined event and an event assigned NOACTION is that Meridian IVR 2.0/I will still consider an undefined event an error and log it to the event file.

A User Defined Action is any UNIX command you could execute or any executable you could run from the system prompt. Simply place the text you would enter at the system prompt in quotation marks as shown in severity levels 0 and 1 in Figure D-1.

If Meridian IVR 2.0/I encounters an error when trying to execute your User Defined Function, it will display a message on the screen but will take no action to correct the error. For this reason, User Defined Actions should be reserved for expert Meridian IVR 2.0/I users.

You can combine Meridian IVR 2.0/I System Actions and User Defined Actions by separating them with a comma.

Error code

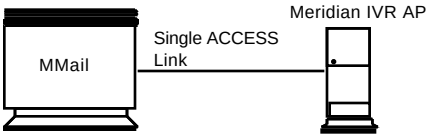
In this column, enter the number of the Meridian IVR 2.0/I Transaction Log message.

Severity level

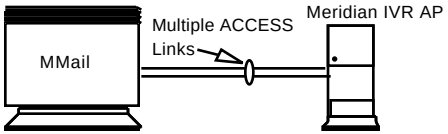
In this column, enter the severity level defined in the first part of the severity file.

Appendix E: Connectivity diagrams for Meridian IVR and Meridian Mail

This appendix illustrates different methods of connecting the Meridian IVR Application Processor to Meridian Mail. In addition, it provides you with guidelines for each configuration.

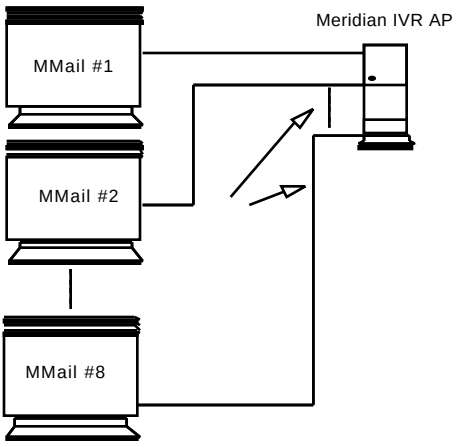


Standard Architecture



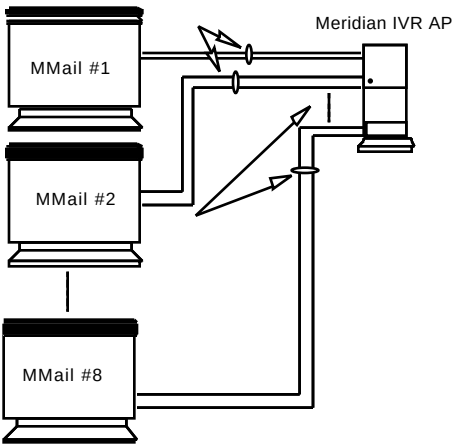
Standard Architecture Multiple ACCESS Links

DO'S	DON'TS
1- Assign different classes for channels on different links **2-** Balance the load (number of shared and dedicated channels) on the links	



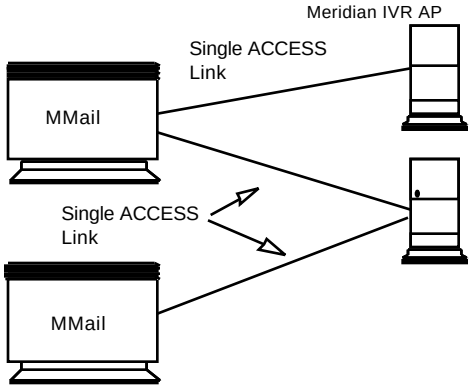
Multiple Mail Architecture

DO'S	DON'TS
1- Assign different classes for channels on different links **2-** Balance the load (number of shared and dedicated channels) on the links **3-** Use different Mailbox numbers on different MMail systems	**1-** Do not assign same link number for different links **2-** Use different Access classes for different MMail systems



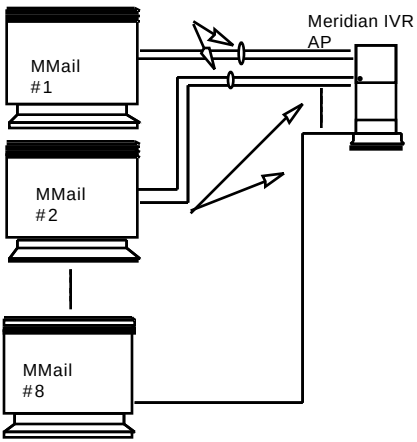
Multiple Mail Architecture Multiple ACCESS Links

DO'S	DON'TS
1- Assign different classes for channels on different links **2-** Balance the load (number of shared and dedicated channels) on the links **3-** Use different Mailbox numbers on different MMail systems	**1-** Do not assign same link number for different links **2-** Use different Access classes for different MMail systems



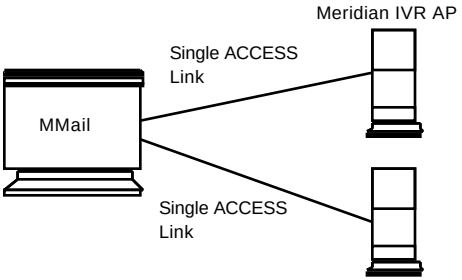
Multiple Mail Multiple AP Architecture

DO'S	DON'TS
1- Make sure you define a different class for channels assigned to different APs that are also assigned to different Links **2-** Use a different mailbox for different APs **3-** Use different Mailbox numbers on different MMail systems.	**1-** Do not use the same channels that the other APs are using



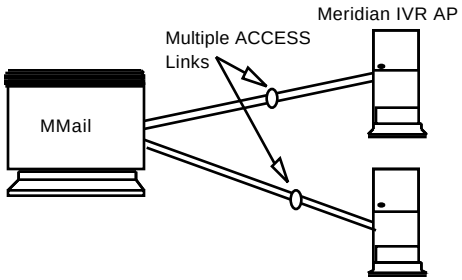
Multiple Mail Architecture Multiple and Single ACCESS Link

DO'S	DON'TS
1- Assign different classes for channels on different links **2-** Balance the load (number of shared and dedicated channels) on the links **3-** Use different Mailbox numbers on different MMail systems	**1-** Do not assign same link number for different links **2-** Use different Access classes for different MMail systems.



Multiple AP Architecture

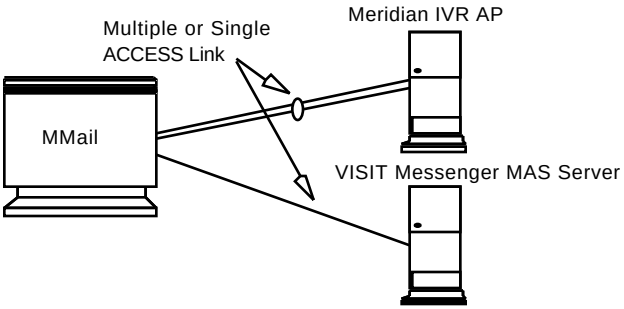
DO'S	DON'TS
1- Make sure you define different classes for channels assigned to different APs that are also assigned to different Links **2-** Use a different mailbox for different APs **3**- Use a different Mailbox number on different MMail systems.	**1**- Do not use the same channels that the other APs are using



Multiple AP Architecture Multiple ACCESS Links

(This configuration is valid for MMail MSM and MMail running MM10 and above)

DO'S	DON'TS
1- Make sure you define different classes for channels assigned to different APs that are also assigned to different Links **2-** Use a different mailbox for different APs **3**- Use a different Mailbox number on different MMail systems.	**1**- Do not use the same channels that the other APs are using



Multiple ACCESS Links Multiple ACCESS Application Server

(This configuration is valid for MMail MSM and MMail systems running MM10 and above)

DO'S	DON'TS
1- Make sure you define different classes for channels coming from different APs **2-** Use different mailboxes for different APs	**1-** Do not use the same channels that the other APs are using

Glossary

ACD
Automatic call distribution. Meridian IVR uses this feature to distribute calls to Meridian Mail voice channels.

application processor
A computer or workstation running Meridian IVR.

channel
A telephone trunk within a cluster of APs.

devnt tool
A tool that displays the contents of the csc_events file in the /usr/sys_files directory. This file contains a list of the application's times, telephone numbers, and event IDs that are scheduled to be run. This file is created by the DELV cell.

host
A networked computer that provides applications and services to other networked computers.

mailbox
A directory that users can access through a voice channel to store and retrieve voice messages and voice prompts. Each mailbox has its own password.

Meridian ACCESS
The software interface between the application module running Meridian IVR and Meridian Mail.

Meridian IVR software
A set of integrated programs that allow you to develop and execute IVR applications.

Meridian Mail

A comprehensive voice processing module that manages incoming and outgoing calls and provides user services for performing various voice messaging functions.

node

A grouping composed of an application processor connected to one or more APs.

prompt

A voice recording that helps lead a caller through an application.

sai

System administration interface. It is a non-essential Meridian IVR process.

system administrator

A person who is responsible for configuring AP'S, installing and running IVR applications, managing prompts, and running reports.

templates

ASCII files used by the TRS process to manage terminal sessions.

transaction

The function performed by a set of action and screen template files when executed by TRS.

trs

Terminal resource server. It is a Meridian IVR process that manages the assignment of the available terminal resources on the application processor.

voice channels

See channel.

voice message file

Meridian Mail voice mail messages are voice message files that are addressed and submitted to Meridian Mail for delivery.

voice segment file
A single file containing zero or more (up to 1000) voice segments. A voice segment (typically less than a minute in length) consists of a recorded voice, a name, a title, and a text field usually used to store the script of the voice. By using the Voice Prompt Editor, you can create and modify voice segment files, record individual segments, and edit associated text fields. Different segments can be concatenated to form prompts. (Segments can be played using the PLAY, GDAT, PDAT, MENU, or HANG cell.)

VPE
Voice Prompt Editor. It is a non-essential Meridian IVR process that is used to edit and play prompts stored on Meridian Mail.

Meridian IVR

System Administration Guide

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