297–2211–311

DMS–100 Family

ADAS OAM Position

User Guide

ADAS0012 and up Standard 07.01 November 1999

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DMS–100 Family

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User Guide

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- added Chapter 10, ‘‘Remote Access Workstations.” This chapter contains information on using a remote workstation to perform administrative and maintenance functions from a remote/central location. Also see feature AF6541.
- added Chapter 11,‘‘ADAS Parameter Setting Guidelines.” This chapter contains suggested guidelines for setting ADAS parameters along with descriptions, ranges, defaults, and precautions.
- updated Chapters 3 and 6 to include Base Service Enhancements that allows changing the collection period for performance data with the ability to save the collected performance data. Other enhancements include support for separate Service Error parameters for each prompt. Also see feature AF6540.
- updated Chapter 3 to include Prompt Talkover extended parameter values that now includes support for 600, 700, 800, 900, and 1000 milliseconds, as well as ‘‘Full” talkover. The previous values were limited to 0, 100, 200, 300, 400, and 500 milliseconds of talkover. Also see feature AF6542.
- updated to include mention of Base Echo Cancellation that minimizes echoes during the recording of a subscriber’s response. Echo cancellation is performed automatically as a part of call processing routines. See feature AF6543 for further details.
- updated to include reference to Per Line Blocking that allows disabling ADAS service for specified subscribers on a DN basis. Restricted callers are routed directly to a live operator for DA service. Per Line Blocking is accomplished by adding the caller’s DN to TOPS datafill. See NTP 297–8021–350, ‘‘NA 100 Translations Guide” and look up functionality ‘‘ADAS – OSDA 0004” for details. Also see feature AF6544.

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July 1993

Released for VO as BCS35 Preliminary 01.01.

Contents

About this document

When to use this document

This guide describes the use of the OAM (operation, administration, and maintenance) position of the ADAS (Automatic Directory Assistance Service) used with TOPS (Traffic Operator Position System). ADAS operates with TOPS MP, TOPS MPX, or TOPS IWS.

This guide includes information on how to:

- load audio files
- manage ADAS announcements and prompts
- modify the service parameters that control ADAS customer interaction
- collect ADAS performance data
- use the remote access feature

These functions are accessed from a UNIX OAM workstation.

ADAS is part of the TOPS line of products. This guide is written for ADAS OAM position workstations that have software release loads ADAS0012 and up.

How to check the version and issue of this document

The version and issue of the document are indicated by numbers, for example, 01.01.

The first two digits indicate the version. The version number increases each time the document is updated to support a new software release. For example, the first release of a document is 01.01. In the *next* software release cycle, the first release of the same document is 02.01.

The second two digits indicate the issue. The issue number increases each time the document is revised but rereleased in the *same* software release cycle. For example, the second release of a document in the same software release cycle is 01.02.

To determine which version of this document applies to the software in your office and how documentation for your product is organized, check the release information in the *DMS-10 and DMS-100 Family Product Documentation Directory*, 297-8991-001.

This document is written for all DMS-100 Family offices. More than one version of this document may exist. To determine whether you have the latest version of this document and how documentation for your product is organized, check the release information in the *DMS-10 and DMS-100 Family Product Documentation Directory*, 297-8991-001.

Related information

Prior Nortel Networks software releases were referred to as batch change supplements (BCS) and are identified by a number, for example, BCS36. Nortel is now delivering software in the form of PCLs (product computing-module loads). Each PCL has an associated set of NTPs, and the contents of each NTP within that set pertain only to what is included in the PCL.

PCL specific information is now provided by the DMS evolution (DMSE) documentation structure. NTPs are identified by the following number structure:

XX–YYYY–ZZZ,

where XXX denotes the system (for example, 297 denotes the DMS),
YYYY denotes the document layer number (for example, 8401 denotes the TOPS),
and ZZZ denotes the type of NTP (for example, 311 denotes a user guide)

The following chart lists related documentation.

Number	Title
	Codes
297-YYYY-350	*Translations Guide*
297-YYYY-814	*Operational Measurements Reference Manual*
297-YYYY-840	*Log Reports Reference Manual*
297-1001-822	*Commands Reference Manual*
297-1001-592	*Peripheral Modules Maintenance Guide*

What precautionary messages mean

The types of precautionary messages used in Nortel Networks documents include attention boxes and danger, warning, and caution messages.

An attention box identifies information that is necessary for the proper performance of a procedure or task or the correct interpretation of information or data. Danger, warning, and caution messages indicate possible risks.

Examples of the precautionary messages follow.

ATTENTION Information needed to perform a task

ATTENTION

If the unused DS-3 ports are not deprovisioned before a DS-1/VT Mapper is installed, the DS-1 traffic will not be carried through the DS-1/VT Mapper, even though the DS-1/VT Mapper is properly provisioned.

DANGER Possibility of personal injury

DANGER

Risk of electrocution

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

WARNING Possibility of equipment damage

WARNING

Damage to the backplane connector pins

Align the card before seating it, to avoid bending the backplane connector pins. Use light thumb pressure to align the card with the connectors. Next, use the levers on the card to seat the card into the connectors.

CAUTION Possibility of service interruption or degradation

CAUTION

Possible loss of service

Before continuing, confirm that you are removing the card from the inactive unit of the peripheral module. Subscriber service will be lost if you remove a card from the active unit.

How commands, parameters, and responses are represented

Commands, parameters, and responses in this document conform to the following conventions.

Input prompt (>)

An input prompt (>) indicates that the information that follows is a command:

>BSY

Commands and fixed parameters

Commands and fixed parameters that are entered at a MAP terminal are shown in uppercase letters:

>BSY CTRL

Variables

Variables are shown in lowercase letters:

>BSY CTRL ctrl_no

The letters or numbers that the variable represents must be entered. Each variable is explained in a list that follows the command string.

Responses

Responses correspond to the MAP display and are shown in a different type:

```
FP 3 Busy CTRL 0: Command request has been submitted.
FP 3 Busy CTRL 0: Command passed.
```

The following excerpt from a procedure shows the command syntax used in this document:

1 Manually busy the CTRL on the inactive plane by typing

>BSY CTRL ctrl_no
and pressing the Enter key.

where

ctrl_no is the number of the CTRL (0 or 1)

Example of a MAP response:

```
FP 3 Busy CTRL 0: Command request has been submitted.
FP 3 Busy CTRL 0: Command passed.
```

Understanding ADAS

Automatic Directory Assistance Service (ADAS) automates the initial request of directory assistance (DA) call processing. ADAS greets the subscriber and elicits the locality and the name of the needed listing. The call then goes to the operator and the recorded information is played back. By involving the operator only after the name and listing have been received, ADAS saves important time during the caller and operator interaction.

As a voice processing service, ADAS is built on experience of Nortel Networks with the Automated Alternate Billing Service (AABS). ADAS fits into a group of like services, such as voice mail, message delivery, and interactive automatic call distribution (ACD).

ADAS is the first application developed for the Voice Process Platform (VPP). The VPP is a software platform that supports improved voice and data service applications. This software platform is integrated with a Digital Multiplex System (DMS) switch.

The ADAS system functions with either a DMS-100/200/TOPS or a DMS-200/TOPS SuperNode switch, possibly configured as a host, remote, or stand-alone operator center. ADAS is compatible with S/DMS-100/200 TOPS switches that use TOPS MP, TOPS MPX, or other open position protocol (OPP) positions. ADAS can function with any commercially available DA system because the switch contains ADAS functionality.

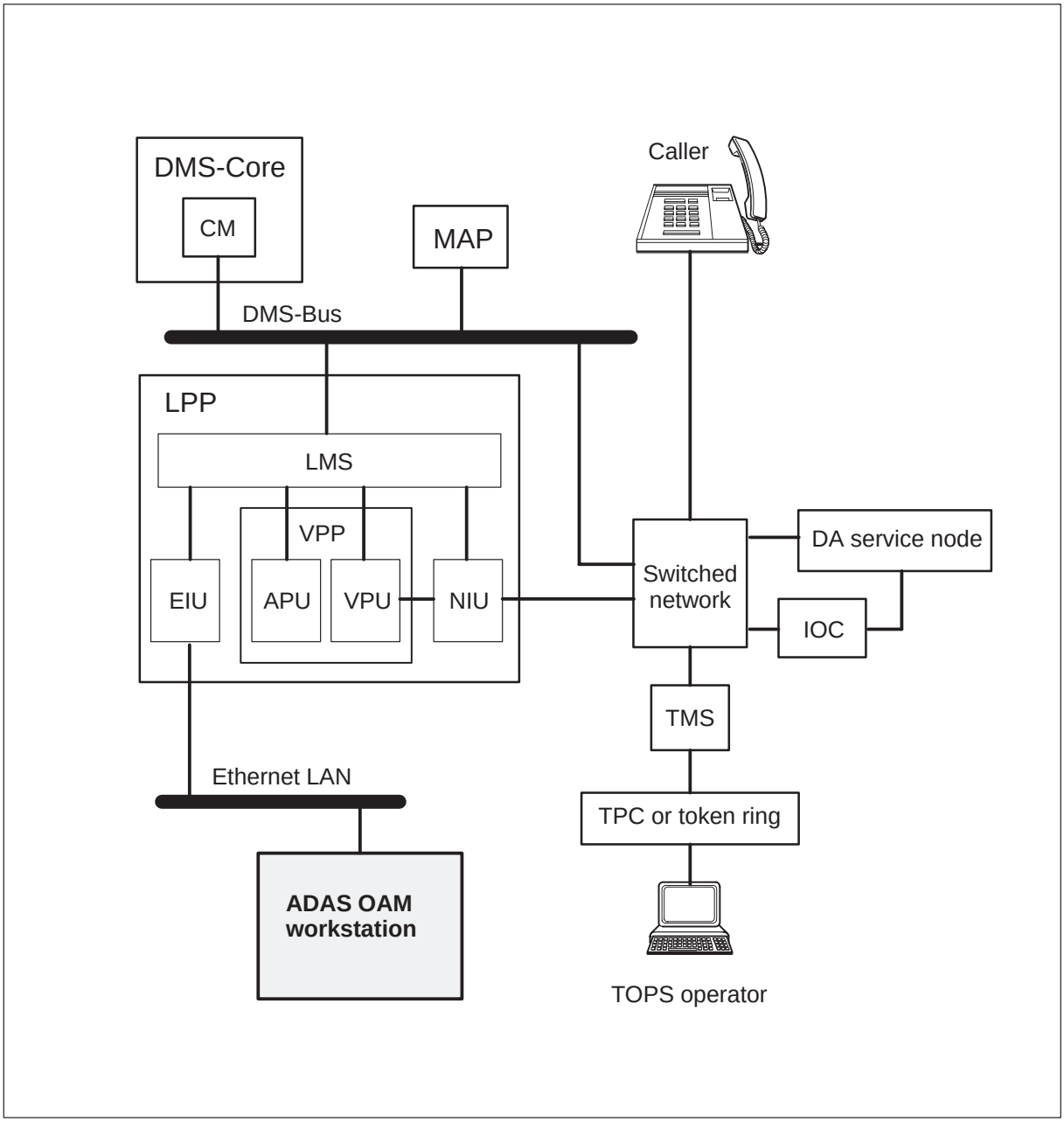
This chapter describes the following subjects:

- ADAS hardware and software configuration
- call processing
- OAM (operations, administration, and maintenance) functions for the MAP
- equipment customization for ADAS

Hardware and software

The basic hardware configuration required to run the ADAS application software is a DMS-100/200/TOPS front end with a link peripheral processor (LPP) cabinet connected to a DMS-Bus component. (See Figure 1–1.)

Figure 1–1
OAM position interface to the DMS switch



DMS SuperNode platform

The main components of a DMS SuperNode are the DMS-Core and DMS-Bus components. The DMS-Core provides high-level call control for ADAS operations. It contains the computing module (CM) that processes calls and controls basic system functions such as loading and off-loading system software. The DMS-Bus is the communication interface between the CM and the LPP, and between the CM and outside network elements.

Link peripheral processor

The LPP provides OAM capabilities. The LPP also allows the DMS-Core to connect with the switch network and Ethernet local area network (LAN).

A standard LPP cabinet contains one shelf allocated to a local message switch (LMS). The LPP also contains one to three shelves allocated to link interface shelves (LIS). However, other configurations are also available.

Local message switch

An LMS routes messages between application processors in the LPP. An LMS also routes messages between the modular, provisionable cards that handle special applications and a DMS-Bus component.

Link interface shelves

The link interface shelves contain link interface units, which are modular, provisionable cards that handle special applications. For ADAS, the shelves have a voice processing platform (VPP) software platform that performs voice-processing tasks such as:

- silence thresholding
- detection of dual-tone multifrequency (DTMF)
- temporary storage of recorded audio
- playback of recorded audio

The VPP includes an application processor unit (APU), voice processing unit (VPU), network interface unit (NIU), and Ethernet interface unit (EIU). The following list describes these modules:

- The VPU has specialized hardware that:
  - plays prerecorded prompts
  - records a caller's response
  - detects DTMF tones
  - plays back the caller's recorded responses to an operator
- The APU contains application software that controls the VPU.
- The NIU is a voice channel interface between the network and a VPU.

- The EIU is the interface between the Ethernet LAN of an ADAS OAM position and the VPP.

Call processing

The DMS system performs these eligibility checks before routing a call to ADAS:

- The call must require DA service.
- The incoming trunk group (datafilled in table TOPSTOPT) must indicate ADAS service.
- DA billing checks pass inspection for the call.

If a call fails to meet eligibility, then it bypasses ADAS and goes to an operator to obtain necessary information. (This step prevents a call from arriving on the billing screen while the operator receives locality and listing information.)

If eligibility checks are successful, the ADAS application software:

1 greets the DA caller

2 prompts the caller for the locality and the requested listing

3 records the caller's responses

4 removes any silence found before and after caller responses

When the connection is made between ADAS and the operator, ADAS plays back the caller's responses (the caller hears silence or ringing). After completion of playback, ADAS service is released from the call. The remainder of the call process is then the same as a traditional DA call.

As with traditional calls, the operator conducts a DA database search. A data line connected to a DA service node provides this capability. When the needed listing data is identified, the operator releases the call to an audio response unit (ARU) at the DA service node.

Usually, an operator does not interact with a caller before releasing the call to the ARU. Operator interaction is required in the following conditions:

- ADAS is bypassed or fails. In either event, the call is no longer handled by ADAS and is sent to an operator to handle.
- a customer's response is either not complete or not clear.
- additional information from the caller is necessary to identify a common listing name.

ADAS is the first automated service that does not require automatic number identification (ANI). For automated services with ANI, the calling number is sent with the connected call. Datafill changes provide functions of this feature.

OAM functions

Standard OAM functions include resource, service, and application maintenance. These functions are as follows:

- Resource maintenance supports the resources represented by APUs and VPUs in the ADAS system using the generic LIU node maintenance system.
- Service maintenance supports the following functions:
  - — load of application programming code and data into specific processors
  - — allocation and de-allocation of APU components on demand
  - — evaluation of application components and ADAS resources
- Application maintenance supports global control and APU function reports.

OAM position

The OAM position is a Hewlett Packard (HP) 712/60 series workstation that runs UNIX and provides capabilities of the MAP terminal to work with OAM data. The operating system of the ADAS workstation is HP UNIX (HP-UX) 09.07.

The workstation is configurable with a modem for dial-up access from the public switched network. The OAM position provides a direct user interface for ADAS or interface from a remote machine.

Several general-purpose tools also work together with the OAM position. For example, the DMS Passthru tool allows the user to perform MAP operations from the OAM position. The Passthru tool also allows the user to open multiple MAP sessions at the same time.

MAP terminal

Standard OAM functions are accessible at a MAP terminal. The MAP terminal is a component of every DMS SuperNode system and provides the following functions:

- communicates with the DMS-Core component
- detects and corrects errors
- manages the network
- adds and removes subscribers
- tests network functions

The MAP terminal helps to monitor the maintenance status of APUs, VPUs, and EIUs in the ADAS system. (The CPSTATUS level also is accessible from the nonmenu CPSTATUS directory.)

Logs

ADAS produces logs when a status change occurs within a system component. ADAS OAM screens include standard alarms that alert maintenance personnel to a problem with any system component.

Operational measurements

ADAS also produces operational measurements (OM) that track DA calls that are:

- made available to ADAS
- completed by ADAS
- aborted to the operator
- given to the operator due to lack of ADAS resources

Customer-controlled ADAS customization

ADAS uses audio load files for announcements to the caller. Production of high-quality audio is very important for successful voice applications. ADAS audio load files of Nortel Networks are prepared and packaged separately from the DMS switch as a digital audio tape (DAT) that is loaded on the UNIX-based workstation. After the tape is loaded, it is uploaded and stored on a system load module (SLM) disk in the DMS switch.

Operating companies can change and control several ADAS service parameter values. For example, a service parameter that can be set is the maximum acceptable length of a caller's response. Operating companies can create customized ADAS greetings or prompts and load them into the system through a UNIX workstation. Customization is accessible from the service data administration option on the advanced services toolset menu. See Chapter 5, ''Managing audio loads'' for details.

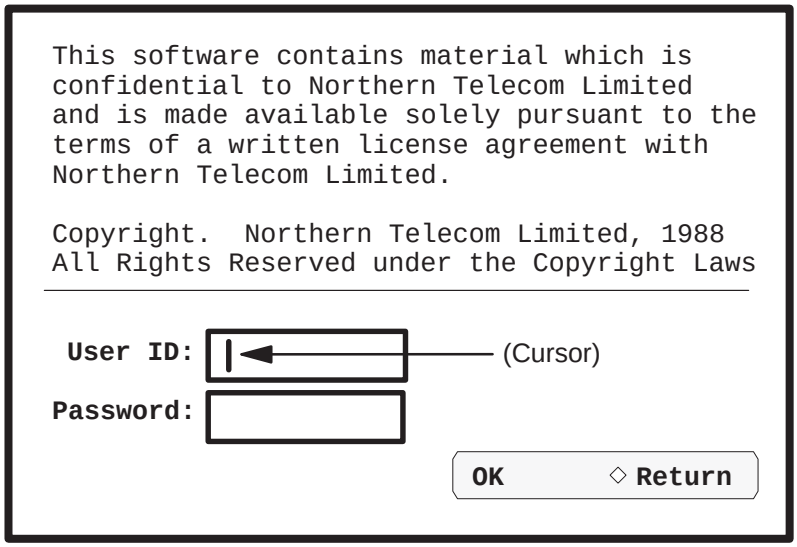
Understanding the OAM position

This chapter describes login and logout procedures, functions of toolset icons, tools available for each toolset, and the mechanisms that activate options and perform X-window actions.

Logging on

When the system is activated, it displays the logon (dialog window) shown in Figure 2-1. The cursor automatically rests in the user ID block. There are different user IDs for general and root accounts.

Figure 2–1
Logon display



General accounts

The initial user ID is **adasprov** and the password for general user accounts is also **adasprov.**

To logon, type the user ID in the ID block. Then, move the cursor to the password block either by pressing the TAB key or clicking on the block with the left mouse button and type the password. The password is masked and does not appear on the display.

After entering the password, use the mouse to move the cursor to the OK action button. Click any mouse button on the OK indicator to confirm the entry. Or, use the keyboard shortcut by holding down EXTEND CHAR and pressing the RETURN key.

If the logon is successful, the toolset icons shown in Figure 2–2 are displayed at the top of the screen.

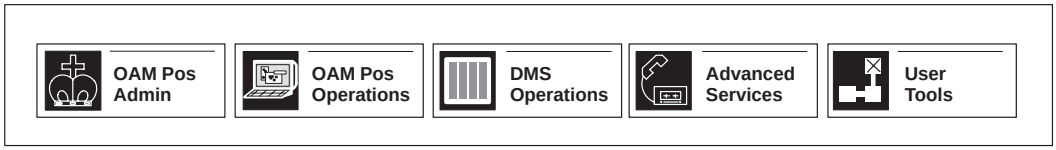
Note: The OAM Pos Admin icon shown in Figure 2–3 is not accessible to general users.

Figure 2–2
Toolset for general accounts

Root accounts

Root accounts are available to operating company ADAS administrators only. Root accounts cannot be changed by the user. At installation, the initial user ID is **admin** and the password for root accounts is also **admin.** The logon procedure for root accounts is the same as for general accounts; however, the displayed toolset includes the addition of the Admin icon. (See Figure 2–3.)

Figure 2–3
Toolset for root accounts



OAM Pos Admin icon

This icon contains tools that the system administrator uses to perform system installation and user configuration tasks. These tools are described as follows:

- an installation tool that is used to query and perform administrative functions on OAM position load images
- a group and user setup tool that is used to configure user logon accounts, and to manage tool and toolset definitions
- a help selection for on-line text that describes the function of the OAM position administration icon.

OAM Pos Operations icon

This icon provides common X-system utility programs. These programs include the following:

- a system load manager program that displays a graphic view of the processor load on the OAM position workstation
- a program that provides a UNIX shell in an xterm window.
- a clock selection that displays an analog clock
- a lock terminal program that prevents unauthorized access to a workstation while the user is away. Unlocking the terminal requires using the password associated with the user's terminal
- a help selection for an on-line description of this operations icon.

DMS Operations icon

The DMS operations icon contains tools for interacting directly with the DMS switch. Selections are as follows:

- a tool that emulates a MAP terminal for DMS switch access
- a help selection for an on-line description of the DMS operations icon.

Advanced Services icon

The advanced services icon contains tools for use by the system administrator for manipulating voice services data. With this icon, service parameters are customized and new audio loads established. The use of this icon is explained in detail in "Services data administration", Chapter 3.

User Tools icon

The user tools icon contains tools common to all users. Selections are as follows:

- an update selection for changing a password (another user's password cannot be changed with this tool).
- a logoff selection for logging out from any session of the advanced services icon. Logging off automatically closes all open windows
- a help selection for an on-line description of the user tools icon.

Common selection techniques

Each toolset icon has menus that also produce dialogs (sub-menus) when particular selection are made. The following common selection techniques are used with most of the dialogs.

Action buttons

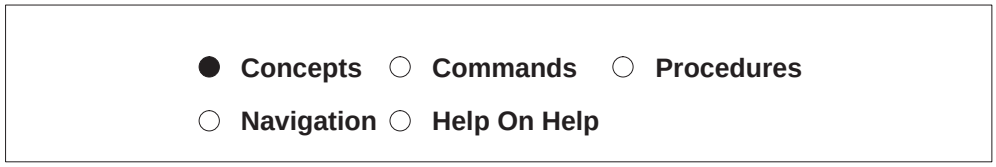
Action buttons tell the system to do something, such as apply changes to a service parameter or cancel a dialog. Each action button has a label and may have keyboard shortcuts assigned. (See Figure 2–4.) Action buttons are used to close windows, save settings, delete items, and confirm user or system actions. Activate an action button by clicking on it with the left mouse button.

Figure 2–4
Action buttons

Radio buttons

Radio buttons appear as an array of labeled circles. (See Figure 2–5.) Use the left mouse button to click on the radio button. A black dot appears in the middle of an activated radio button.

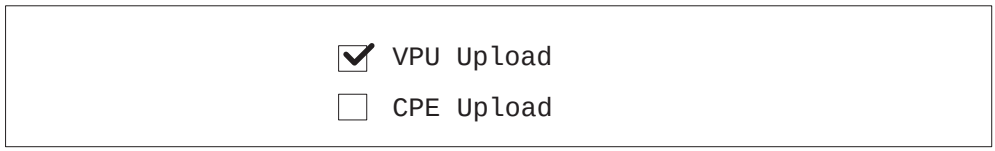
Figure 2–5
Radio buttons



Check boxes

Check boxes appear as an array of labeled boxes. (See Figure 2–6.) A check box with a check mark in it indicates it is activated. To de-activate a check box option, click on it with the left mouse button.

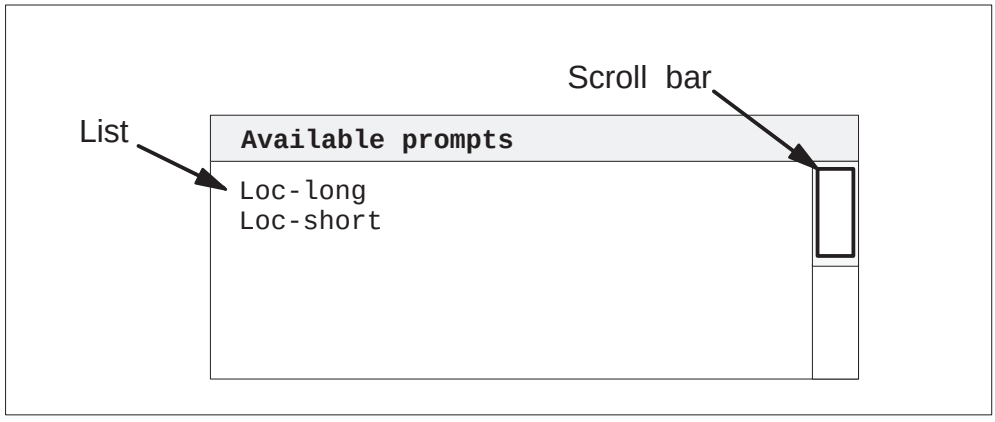
Figure 2–6
Check boxes



Lists

To select an item in a list, click on the item with the left mouse button. Some lists extend beyond the limits of the window screen. When this happens, a vertical scroll bar appears on the right side of the displayed window. (See Figure 2–7.) To scroll through an extended list, position the cursor in the vertical scroll bar and hold down the left mouse button.

Figure 2–7
Lists



Meta key shortcuts

Some menu selections are activated either by selecting the option with the left mouse button or by typing keystroke combinations on the keyboard. These selections are identified on a menu by a diamond and single letter of the alphabet. (See Figure 2–8.) To use the shortcut, hold down the meta key and type the letter. For example, to close a window, press the meta key and the letter *W*.

Note: Some keyboards show the meta key as the EXTEND CHAR key.

Figure 2–8
Meta key shortcuts

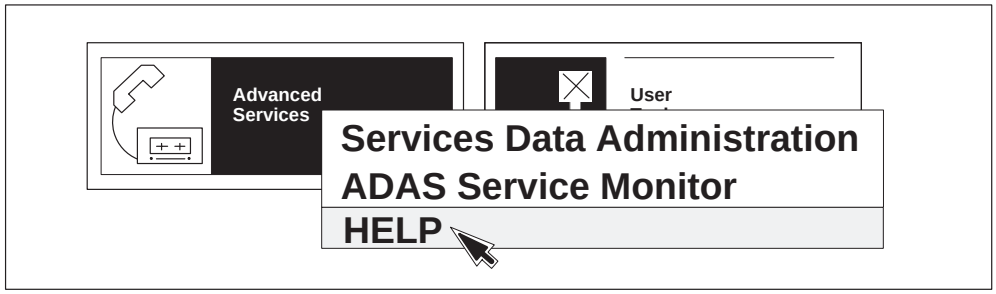
Help menus

There are help menus for toolsets and dialogs (sub-menus).

Toolset help

Each toolset icon contains a selection for on-line help text and at least one other selection. (See Figure 2–9.) Use the right mouse button (click and hold) to obtain the text of a help selection.

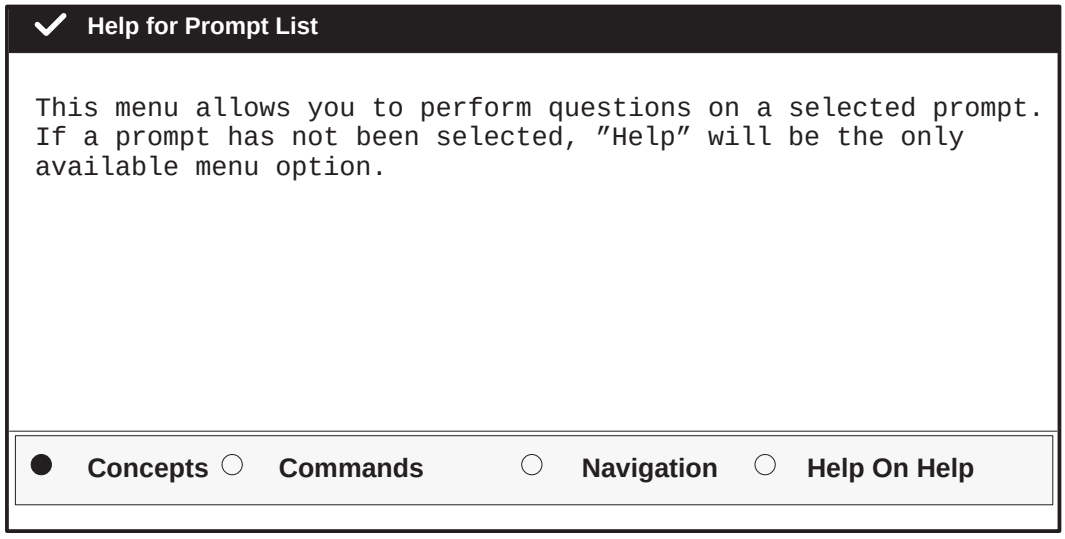
Figure 2–9
Toolset help menu



Dialog help

Access help text by selecting the help option from dialogs. A help menu first displays a general purpose explanation of the concepts related to the area for which help was selected. (See Figure 2–10.) To view other types of help, select appropriate radio buttons for concepts, navigation, commands, or help on help. To exit a help display, click and release in the top bar of the help window with the right mouse button.

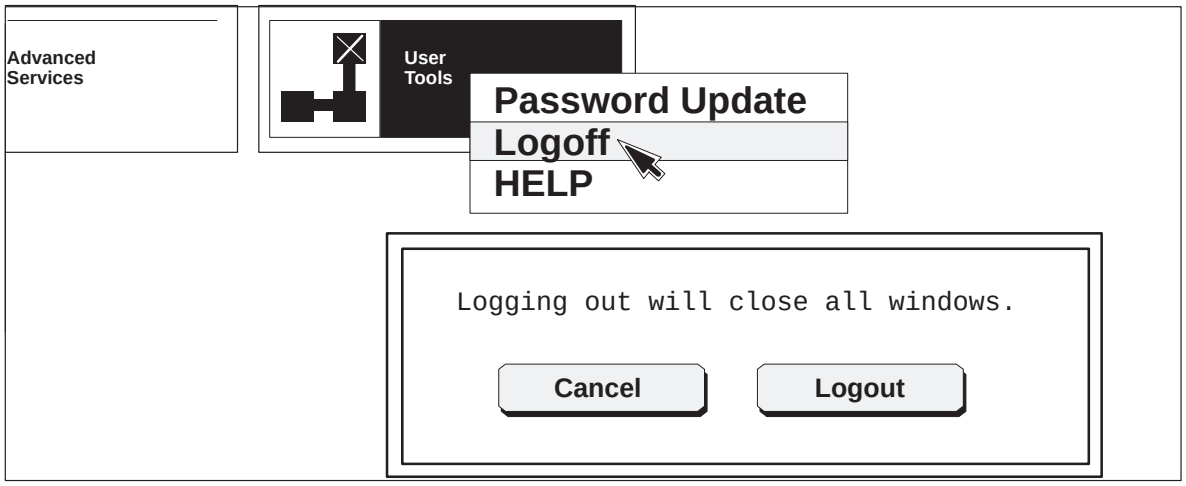
Figure 2–10
Dialog help menu



Logging off

After finishing an ADAS session, use the Logoff selection from the User Tools icon to exit the system. Click on the Logout button to exit or click on the Cancel button to continue the session. (See Figure 2–11.)

Figure 2–11
Logoff



Service data administration

The information in this chapter can be used along with the information in Chapter 4, “ADAS datafill,” to control ADAS settings.

Service data administration tools are used to customize default service parameters built into the initial workstation audio load. Different parameter values affect both what a caller hears when ADAS is activated and how the caller, ADAS, and an operator interact.

Service data manager menu

This chapter describes using the Service Data Manager menu, its title bar menu, service parameters menu, and miscellaneous dialogs to edit service data. Changing service parameter values with these menus does not interrupt ADAS service. Changes made to parameter values do not take effect in the ADAS system until a call processing engine (CPE) service data upload is performed by the user.

The data manager menu is obtained from the Advanced Services icon. Hold down the right mouse button on the icon. A menu with a selection for service data administration appears. Slide the indicator arrow to the service data administration option and release the mouse button. (See Figure 3–1.)

Call scenario

The status of the service data (referred to as the call scenario) currently being edited is indicated in the main menu. The last superset of the service data successfully uploaded to the host DMS switch is called an *active* scenario. The active scenario is identified by the initial main menu display. If there is no active scenario (no upload has been done), the default or non-active call scenario is indicated as the *current* scenario. For example, the title **`Current scenario : adas_default_scenario`** shown in Figure 3–1 identifies the current non-active call scenario.

Icons in the main menu represent the states and flow of the call scenario. Normal call flow is represented by the left-to-right order of the icons. The default scenario of the icons represent states that do the following:

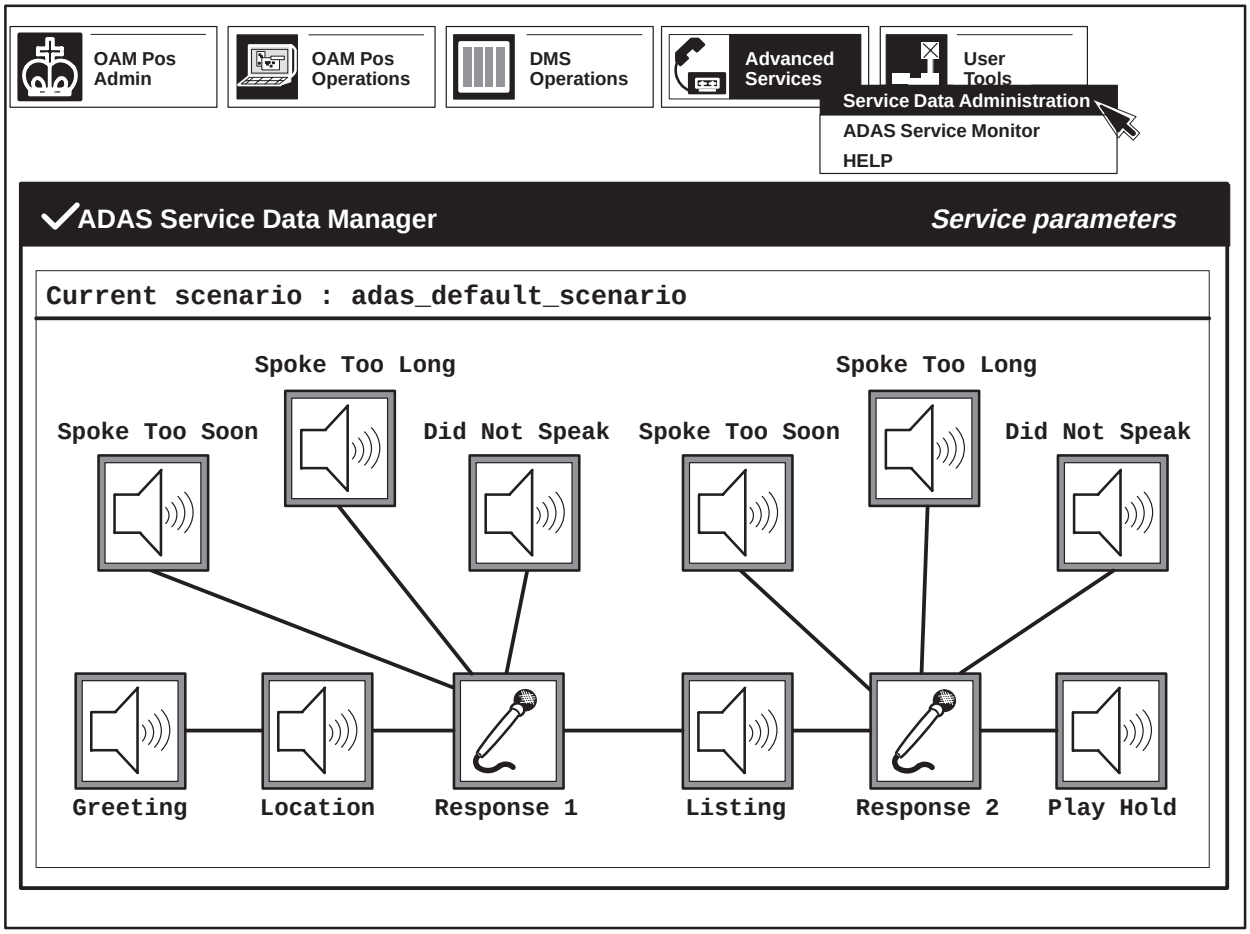
- play the greeting prompt

- play the prompt that asks for the location
- record the locality response
- play the prompt that asks for the listing
- record the listing response
- play the hold prompt

In states where prompts are played, represented by speaker icons, the prompts can be viewed and changed. In states where responses are recorded, represented by microphone icons, recording parameters can be changed.

The icons labeled Response 1 and Response 2 represent error states that occur if a subscriber speaks too soon, too long, or does not speak. An error prompt is played in these states.

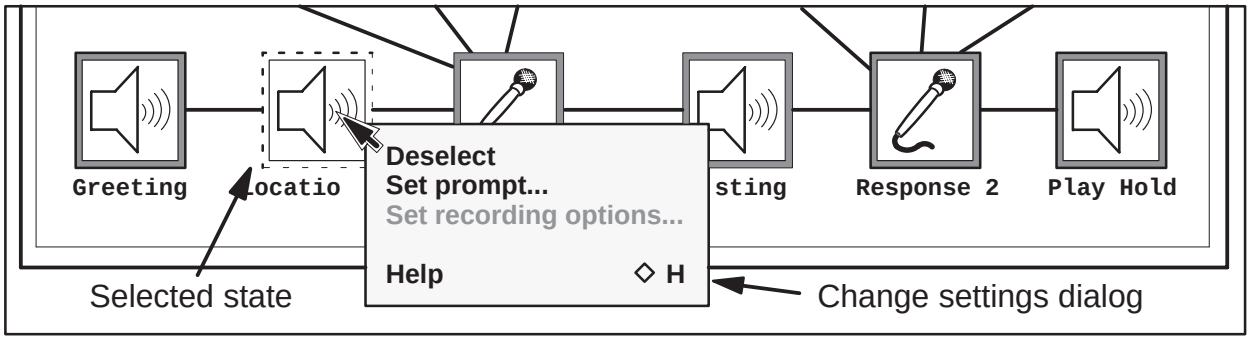
Figure 3–1
ADAS main menu



Change settings dialog

To display a change settings dialog for a selected state in the main menu, click on the state icon with the left mouse button, then hold down the right mouse button on the selection. An example of a change settings dialog is shown in Figure 3–2.

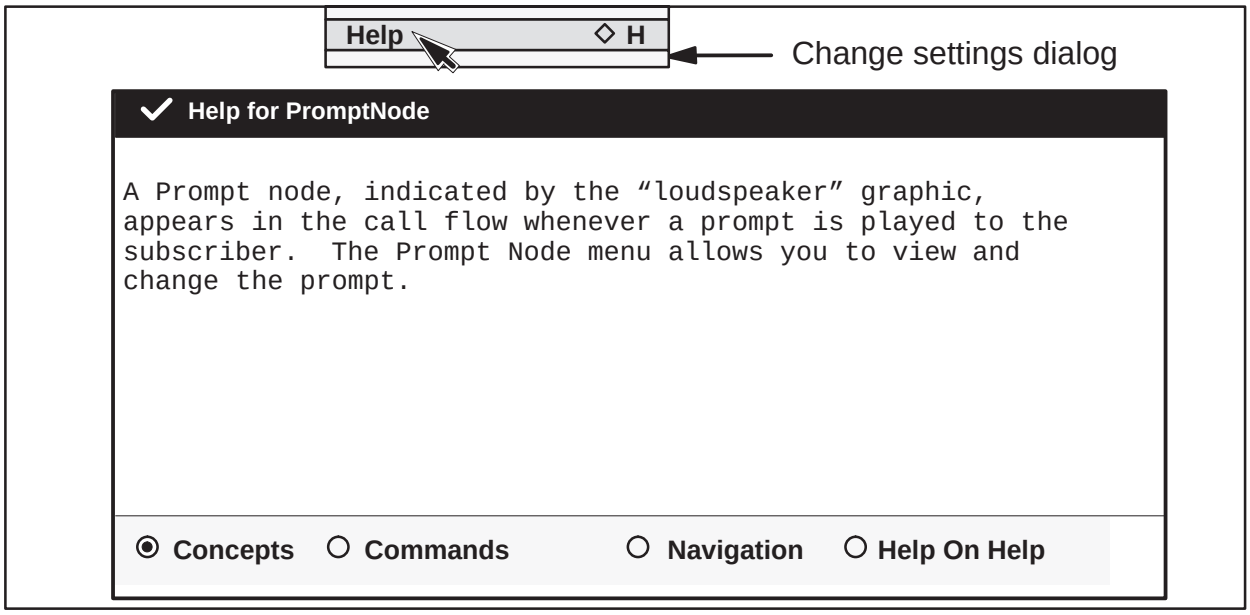
Figure 3–2
Example of a change settings dialog



Help for change settings dialog

This option activates a help dialog for the change settings dialog. To close the help window, place the indicator arrow in the help title bar and press the right mouse button. Slide the arrow over the Close option and release the mouse button.

Figure 3–3
Help window for change settings dialog



Deselect

This option deselects a selected state. If an icon is not selected, the only available menu option is help.

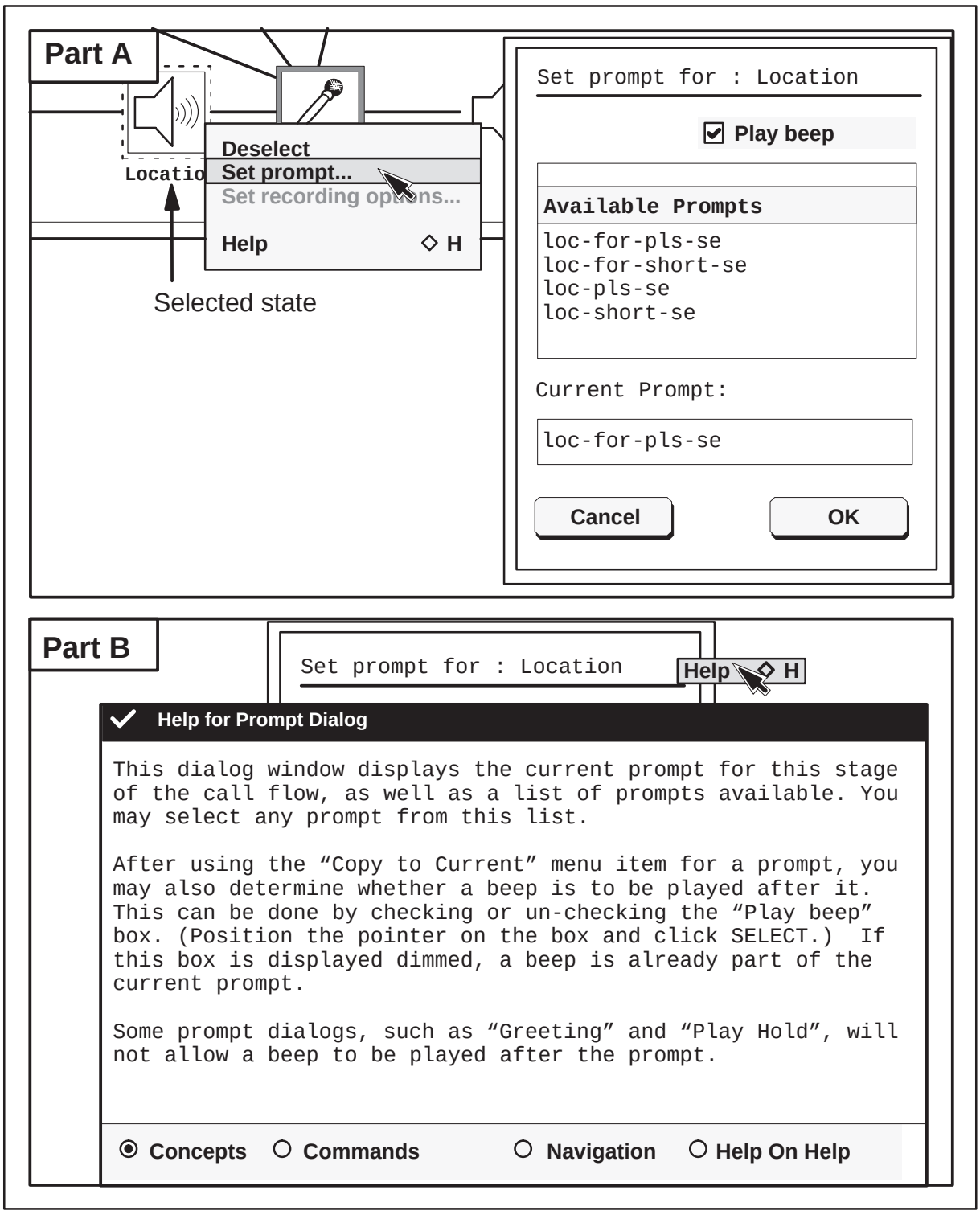
Set prompt...

Only states that play prompts have this menu option enabled. This option activates a set prompt dialog. (See Figure 3–4, Part A.) The set prompt dialog is used to view and change a prompt for the selected state, and to enable a beep to be played after the current prompt. The current prompt for the selected icon is shown under the `Current Prompt:` field. (See `loc-for-pls-se` in Figure 3–4.)

To obtain a help window for this dialog, place the indicator arrow to the right of the title “Set prompt for: Location (or Listing)” and press the right mouse button. Slide the arrow over the help option that appears and release the mouse button. (See Figure 3–4, Part B.) Help windows can also be selected for the Cancel and OK buttons. They are obtained in the same way as the set prompt dialog. Help windows can also be selected for the Cancel and OK buttons.

To close the help window, place the indicator arrow in the help title bar and press the right mouse button. Slide the arrow over the Close option and release the mouse button.

Figure 3–4
Example of a set prompt dialog



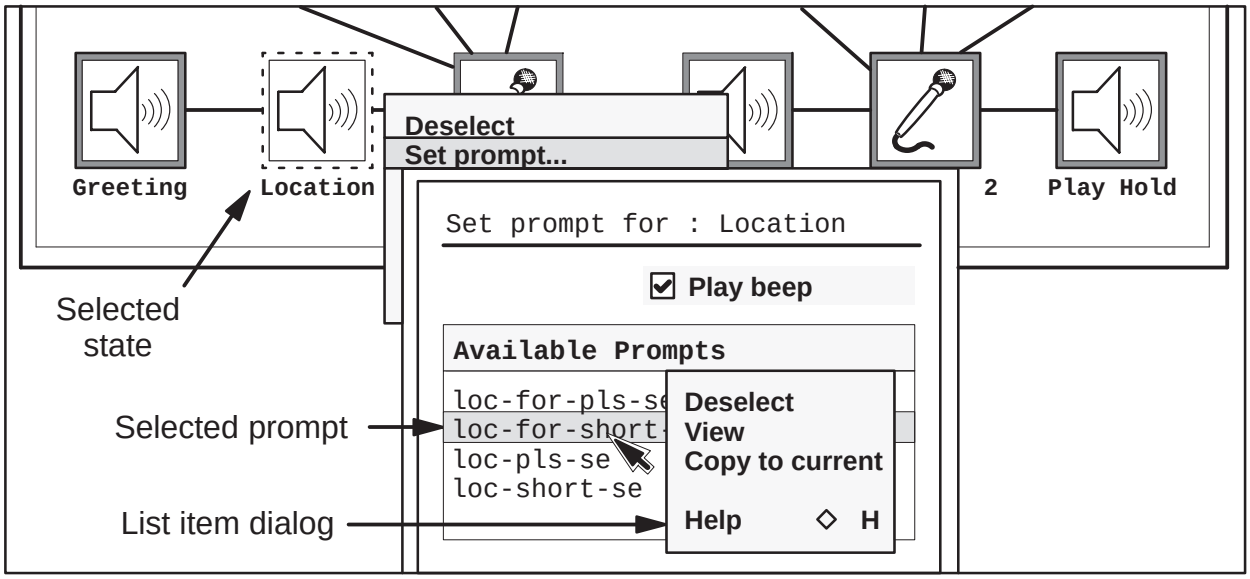
The default is to not add a beep with the current prompt. A check (left mouse button) in the play-beep box indicates a beep is included with the prompt. Another beep cannot be added to a prompt that already includes a beep. This beep alerts the caller (similar to a telephone answering machine), and ADAS records the caller's response. In the following example, "What city?" is the prompt, beep is the signal to the caller, and "Albuquerque" is the caller's response.

(ADAS) "What city?" (beep)
(caller) "Albuquerque"

Prompts applicable to the selected state are listed as available prompts. Although prompts cannot be deleted, they can be replaced by new prompts. A list item dialog is used to view the text of a prompt and to change the current prompt. To obtain a list item dialog, click on an available prompt with the left mouse button and then hold down the right mouse button on the prompt. (See Figure 3–5.)

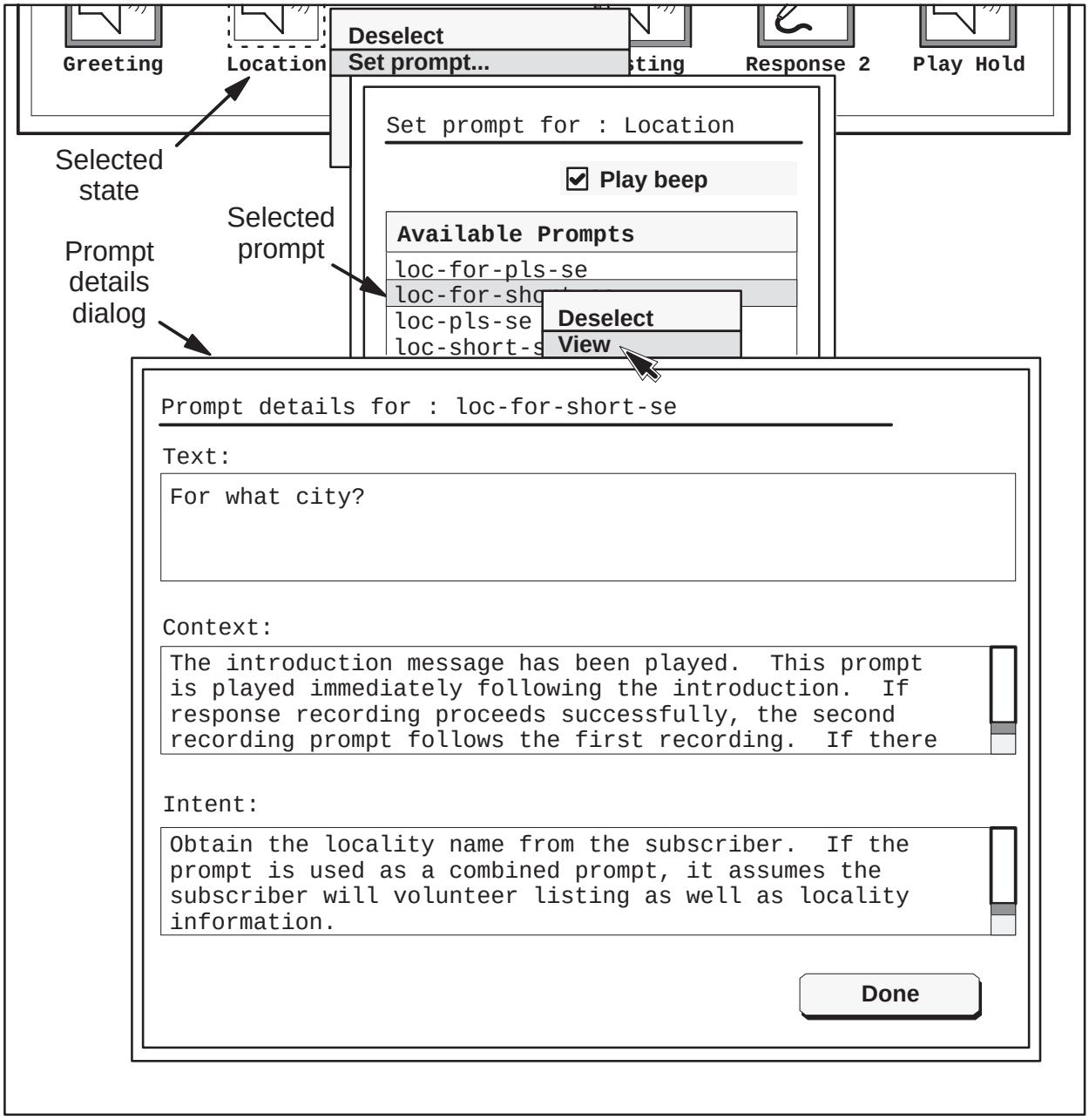
Depending on the selected state, a list item dialog may include options for deselect, view, copy to current, and help. Select these options with the right mouse button. The deselect option deselects a currently selected prompt. The copy to current option copies the currently selected prompt into the current prompt data entry field. The help option activates a dialog that describes the list item dialog.

Figure 3–5
Example of a list item dialog for a set prompt dialog



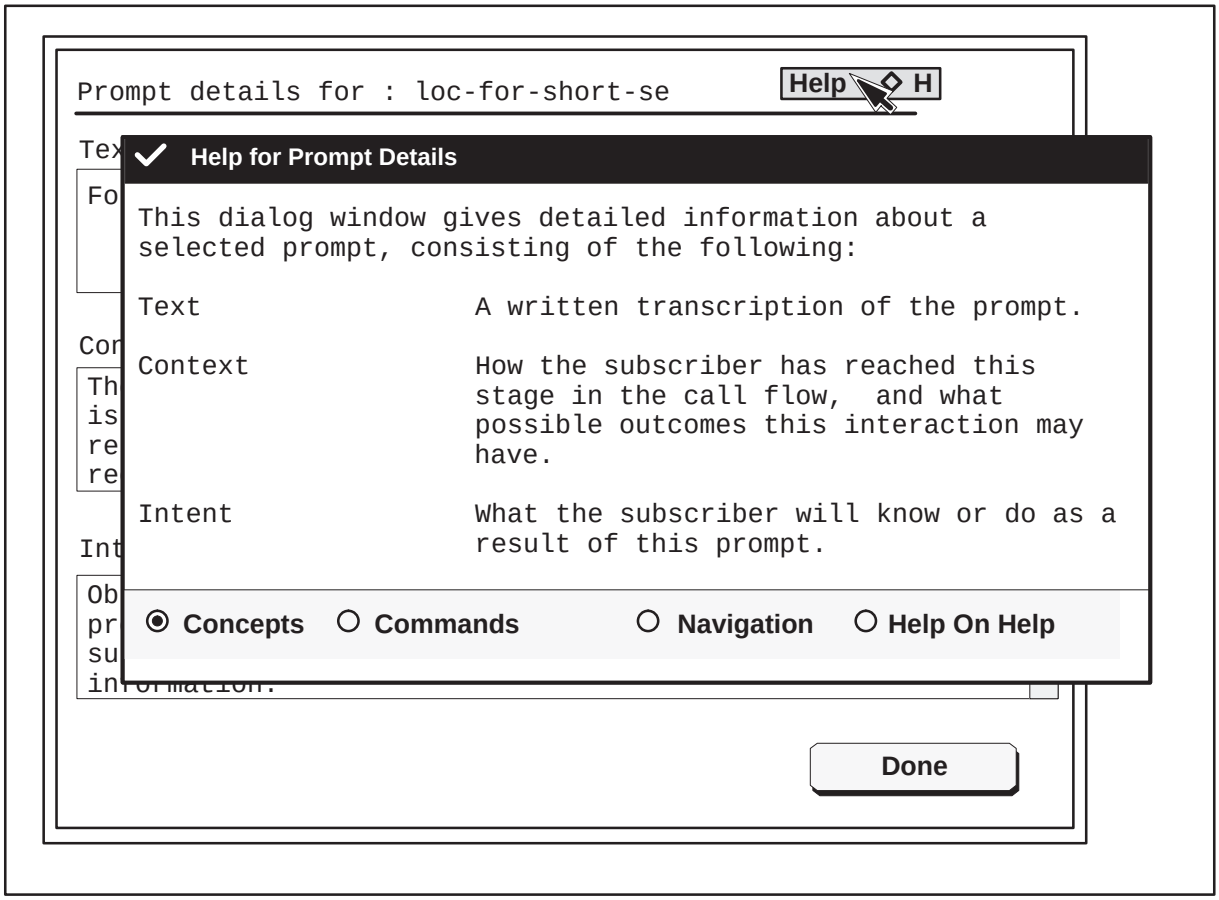
The View option in the list item dialog displays a prompt details dialog. (See Figure 3–6.) A prompt details dialog is used to review the prompt message and information associated with a selected prompt. After reviewing the dialog, click on the Done button with the left mouse button to return to the set prompt dialog.

Figure 3–6
Example of a prompt details dialog



To obtain a help window for a prompt details dialog, place the indicator arrow to the right of the heading “Prompt details for: ,” and press the right mouse button. Slide the arrow over the help option that appears and release the mouse button. (See Figure 3–7.) A help window can also be selected for the Done button in the same way as for the prompt dialog.

Figure 3–7
Help for prompt details dialog



Set recording options...

This option activates a dialog (see Figure 3–8, Part A) used to set recording options for a selected record response icon (response 1 or response 2). Only icons representing states in which responses are recorded have this dialog available. Select this dialogue by clicking on the response icon with the right mouse button and then selecting the recording options from the response menu.

To obtain a help window for this dialog, place the indicator arrow to the right of the title “Set recording options for : Response 1 (or 2)” and press the right mouse button. Slide the arrow over the Help option that appears and release the mouse button. (See Figure 3–8, Part B.) Help windows can also be selected for the Cancel and OK buttons. They are obtained in the same way as for the Recording dialog.

Parameter options include maximum initial silence, maximum recording time, maximum allowable silence, maximum record attempts allowed, record compression, prompt talkover, silence removal, redundant frame removal, and continue on recording error.

To change a value in the first seven options, move the indicator arrow to the right side of the box, and then hold down the right mouse button to display valid time values. When the desired value is highlighted, release the mouse button.

To set the silence removal or redundant frame removal options on or off, use the left click boxes.

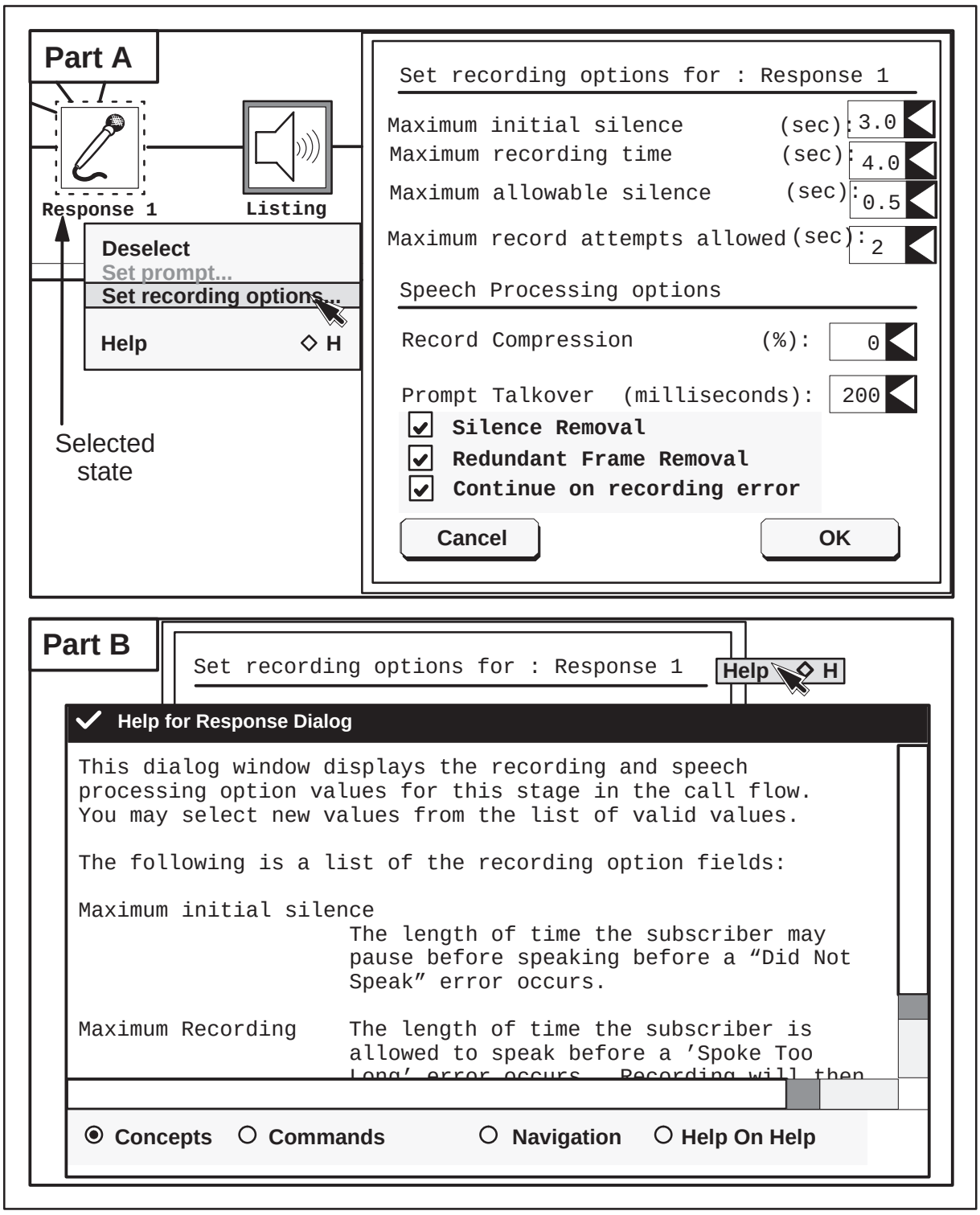
To save the recording parameters, click on the OK button with the left mouse button to return to the ADAS main menu. To cancel any changes and exit the dialog, click on the Cancel button with the left mouse button.

Maximum initial silence

This time is used to determine whether a caller has responded to a prompt. If a caller does not begin responding before the maximum initial silence time is exceeded, a silence error occurs and the caller may receive a did-not-speak prompt.

Valid values for maximum initial silence are 2.0, 3.0, and 4.0 seconds. The default value is 3.0 seconds in both combined and separate prompt modes.

Figure 3–8
Example of a set recording options dialog for a response icon



Maximum recording time

When a caller's response time exceeds the maximum recording time, a spoke-too-long error occurs and the caller receives a re-prompt, such as

"Please say the name of the city only."

Valid values for maximum recording time are 3.0, 4.0, 5.0, 6.0, 7.0, and 8.0 seconds. The default value is 7.0 seconds in combined prompt mode, and 4.0 seconds in separate prompt mode.

Maximum allowable silence

This is the maximum time a caller can remain silent after speaking before the recording of a response is ended. This time is used to differentiate between a short pause in a response and a completed response. If ADAS does not detect speech for a duration equal to the maximum allowable silence time, it stops recording the response.

Valid values for maximum allowable silence are 0.5, 0.8, 1.0, 1.2, and 1.4 seconds. The default value in the combined prompt mode is 1.4 seconds. In the separate prompt mode, the default is 1.0 seconds for locality and 1.0 seconds for listing.

The maximum record errors data entry field contains the value for the maximum number of record errors a caller can attempt before the call is sent to an operator. Valid values are either 1, 2, 3, or 4 errors. The default value for this field is 3.

Record compression

This parameter shortens the recorded subscriber response by compressing the response as it is being recorded. Separate compression parameters are provided for the first subscriber response and the second subscriber response. The allowable values are 0, 5, 10, 15, 20, and 25 percent. The default value for both responses is 0 percent and the recommended values for both responses is 10 percent.

For example, if a record compression of 10 percent is specified for the first subscriber response, the stored recording of that response is compressed by 10 percent. When it is played back to the operator, it will be up to 10 percent faster than the original utterance.

Prompt talkover

Talkover is used to detect speech while a prompt is being played to the subscriber. When subscriber speech is detected, playing of the prompt is stopped and recording of the speech begins.

Allowable talkover parameter values are 0, 100, 200, 300, 400, 500, 600, 700, 800, 900, and 1000 milliseconds, as well as Full talkover. Starting from the end of the prompt and going backward, the selected value defines a window during which speech can be detected. Speech occurring outside of this talkover window is ignored.

Separate parameters are provided for first and second subscriber responses. The default value for both parameters is 0 milliseconds. The recommended value for both parameters is 200 milliseconds.

Silence removal

This option is used to remove non-significant periods of silence from the recording of the subscriber response. Silence that is necessary to understand what the subscriber is saying is not removed. Typically, the majority of silence removed from a recording is inter-word silence. Separate on or off removal options apply to first and second subscriber responses. The off state is the default setting for both responses. The on state is recommended for both responses.

Redundant frame removal

This option is used to remove spectrally redundant speech segments from the recording of the subscriber response. Frames are on the order of tens of milliseconds in length. Removing redundant frames shortens the subscriber response but does not significantly affect its intelligibility. For example, if the subscriber says “Ummmmm, Elm City please” in response to the city prompt, the recording is shortened to “Um Elm City please.”

Separate on or off removal options apply to first and second subscriber responses. The off state is the default setting for both responses. The on state is recommended for both responses.

Continue on recording error

A recording error is produced when a caller speaks too soon, too long, or not at all. Except for errors due to a caller not speaking at all, this continue option controls whether a call continues when a recording error occurs. If this option is enabled and a recording error occurs, the subscriber response is accepted and the call continues. If this option is disabled when a recording error occurs, the subscriber is handled based on the maximum number of record attempts allowed.

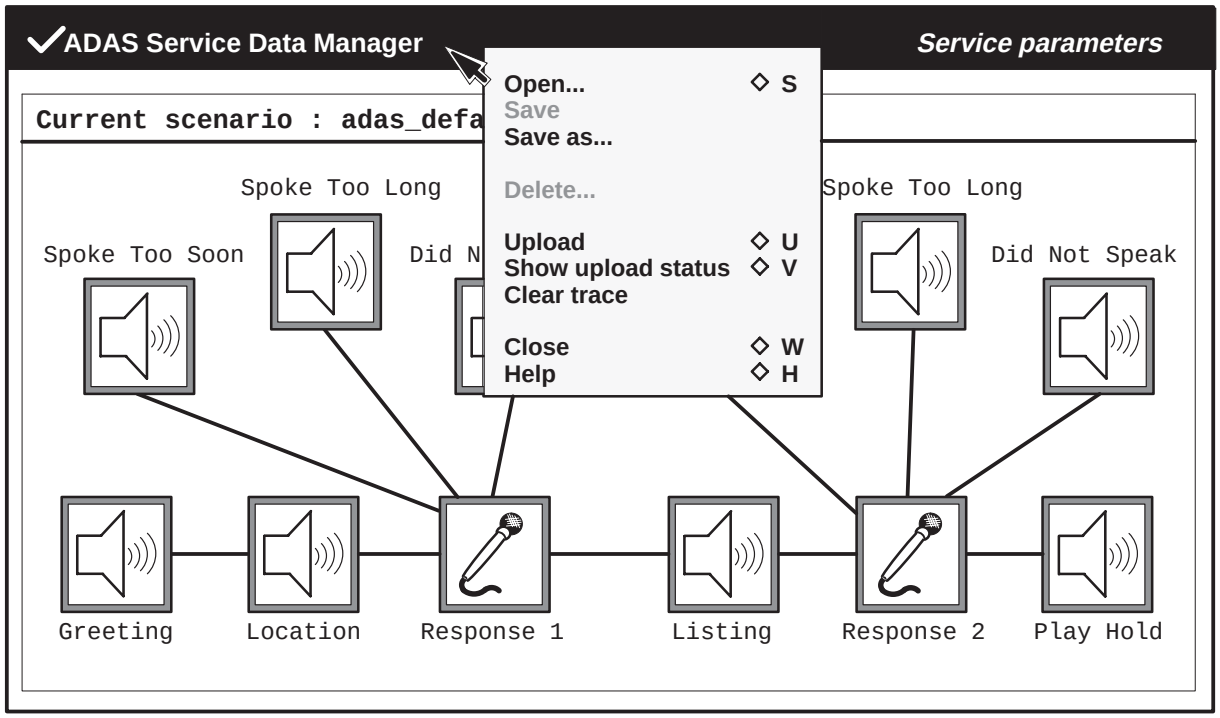
The default value for this option is enabled. Click on the check box with the left mouse button to enable or disable the option.

> ***Note:*** Because errors due to a caller not speaking at all are always handled in accordance with the maximum number of record attempts allowed, they are not affected by this option.

Title bar menu

Access the title bar menu by holding down the right mouse button in the header bar of the ADAS main menu. Figure 3–9 shows the options contained in the title bar menu. Some title menu options access sub-menus that allow operating company personnel to make changes and to confirm or reject a change.

Figure 3–9
Title bar menu

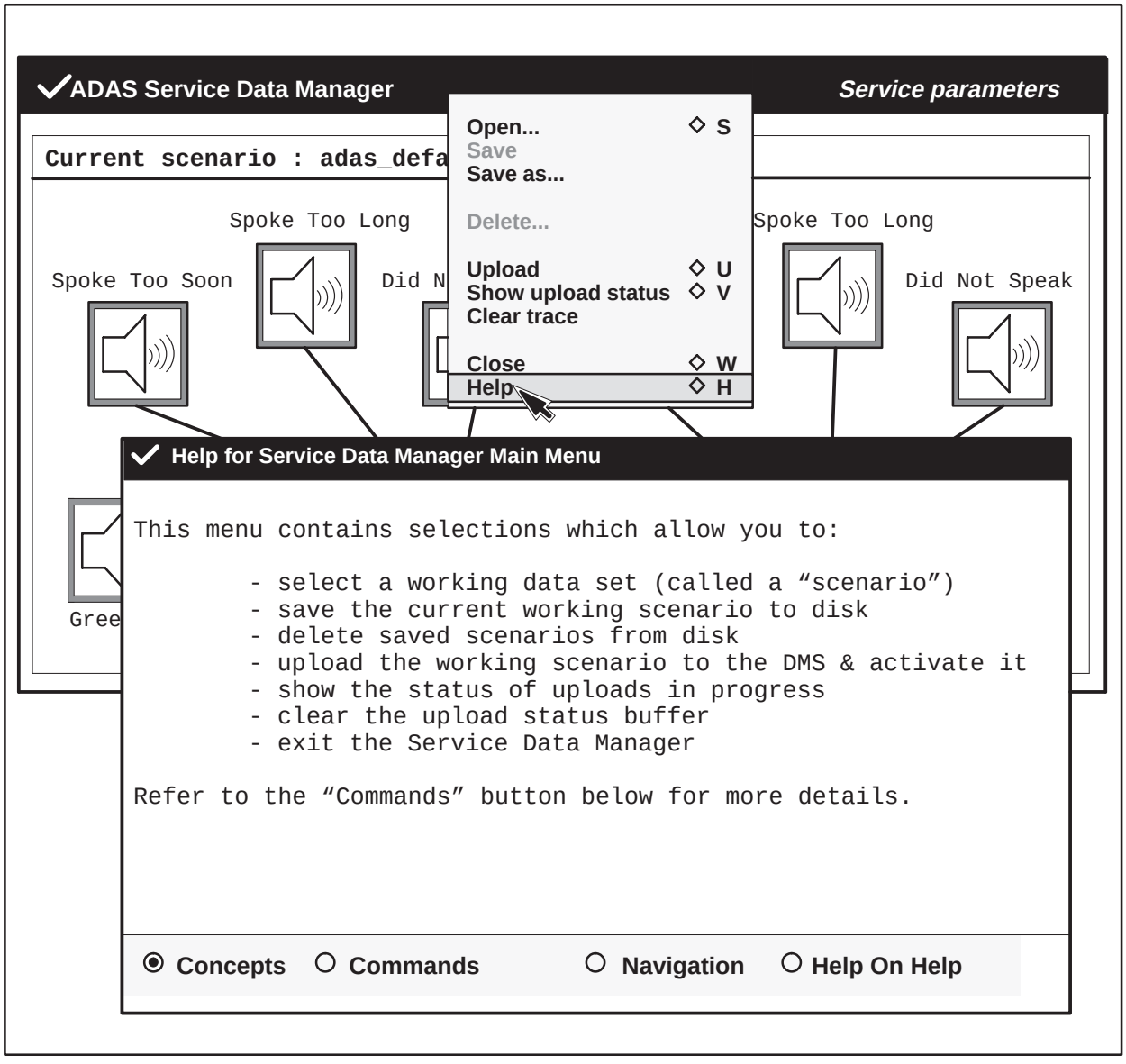


The title bar menu contains controls for ADAS session operation functions. For example, the Open option controls a particular call scenario of prompts, messages, and responses. The Save option updates the call scenario with any changes before a session is exited. The Close option exits from the service data administration tools screen and returns to the initial toolset screen. This menu also provides audio load upload functions. Upload functions monitor the status of an upload, or clear upload trace files after an audio file upload is complete. Title bar menu options are described in the following paragraphs.

Help for title bar menu

This option activates a help dialog for the title bar menu. To close the help window, place the indicator arrow in the help title bar and press the right mouse button. Slide the arrow over the Close option and release the mouse button.

Figure 3–10
Help for title bar menu

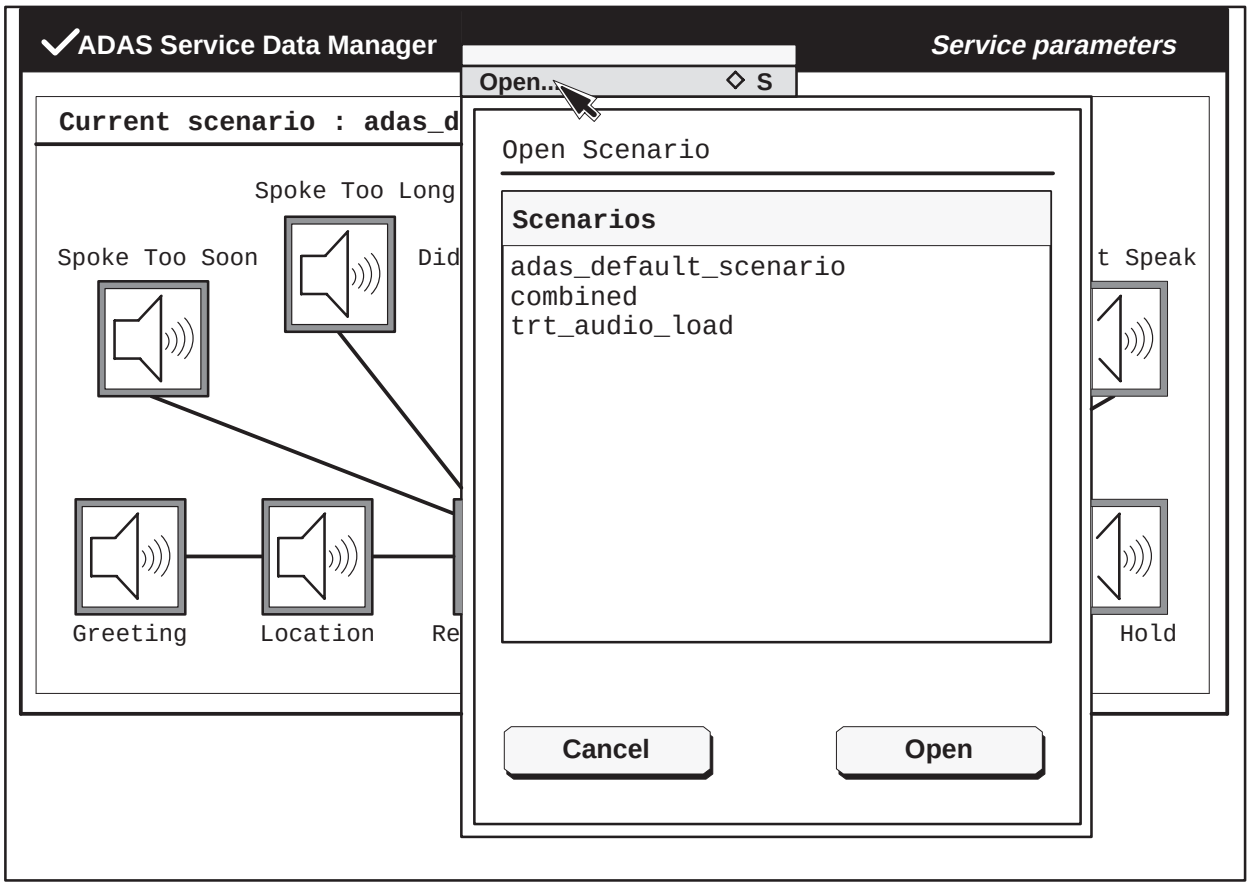


Open...

This option activates the open scenario dialog (see Figure 3–11) that lists the names of any saved scenarios.

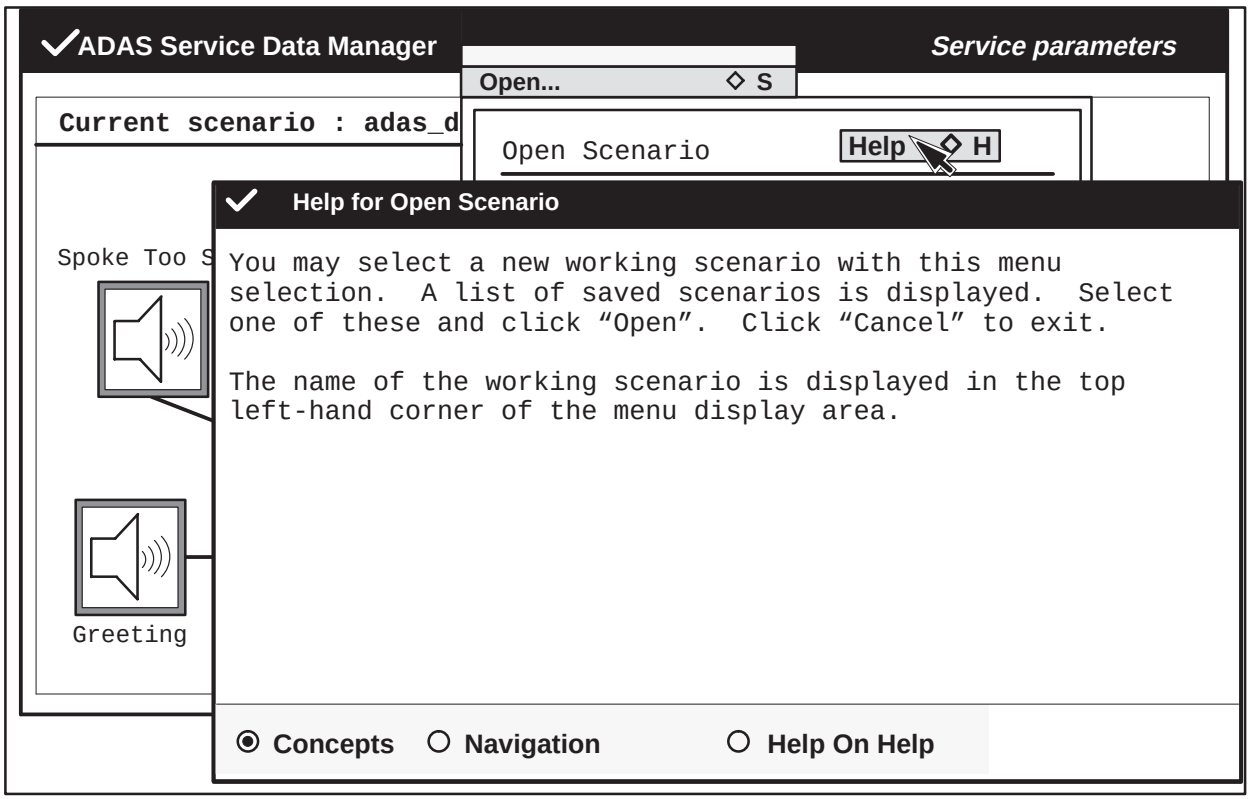
To select a scenario, click on the scenario name (for example, `adas_default_scenario`) with the left mouse button. To open the scenario, click on the Open button with the left mouse button. (An open scenario is not activated in the ADAS system until a data upload operation is performed by the user.) To cancel and exit the dialog, click on the Cancel button with the left mouse button.

Figure 3–11
Open scenario dialog



To obtain a help window for this dialog, place the indicator arrow to the right of the title Open Scenario, and press the right mouse button. Slide the arrow over the Help option that appears and release the mouse button. (See Figure 3–12.) Help windows can also be selected for the Cancel and Open buttons. They are obtained in the same way as for the dialog.

Figure 3–12
Help for open scenario



Save

This option saves (stores on disk) the working scenario under its current name. The old version of the scenario is overwritten. To prevent the default scenario from being overwritten, this option is disabled when the default scenario is loaded. Use the Save-as option to save changes to the default scenario under a new scenario name.

Save as...

This option activates a dialog (see Figure 3–13) that is used to save (store on disk) the current scenario after it is given a new name. Use the empty data entry field (`Scenario name`) to enter the new name of the scenario. (For example, see the new name `combined` in Figure 3–13.) Special keystrokes are not required to type a new name. However, to make changes to an existing name, use the back space key to delete characters. To confirm the new name, click with the left mouse button on the save button. If the scenario cannot be saved, the screen displays an error message. To Cancel and Exit this dialog, click on the Cancel button with the left mouse button.

To obtain a help window for this dialog, place the indicator arrow to the right of the title Save Scenario, and press the right mouse button. Slide the arrow over the Help option that appears and release the mouse button. (See Figure 3–14.) Help windows can also be selected for the scenario name field, and the Cancel and Save buttons. They are obtained in the same way as for the dialog.

Figure 3–13
Save as scenario dialog

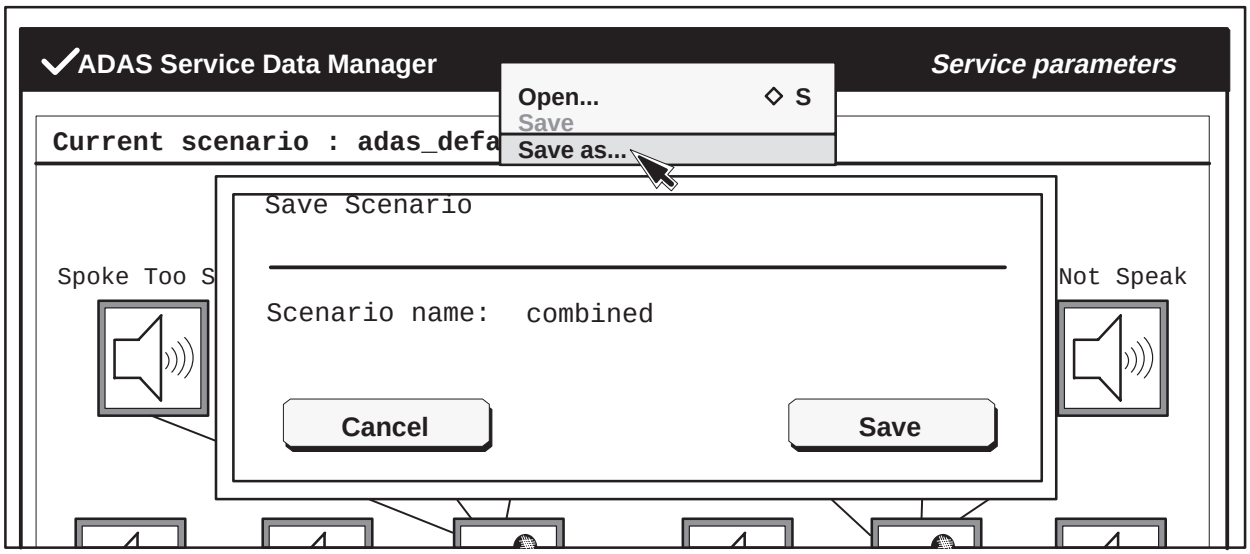
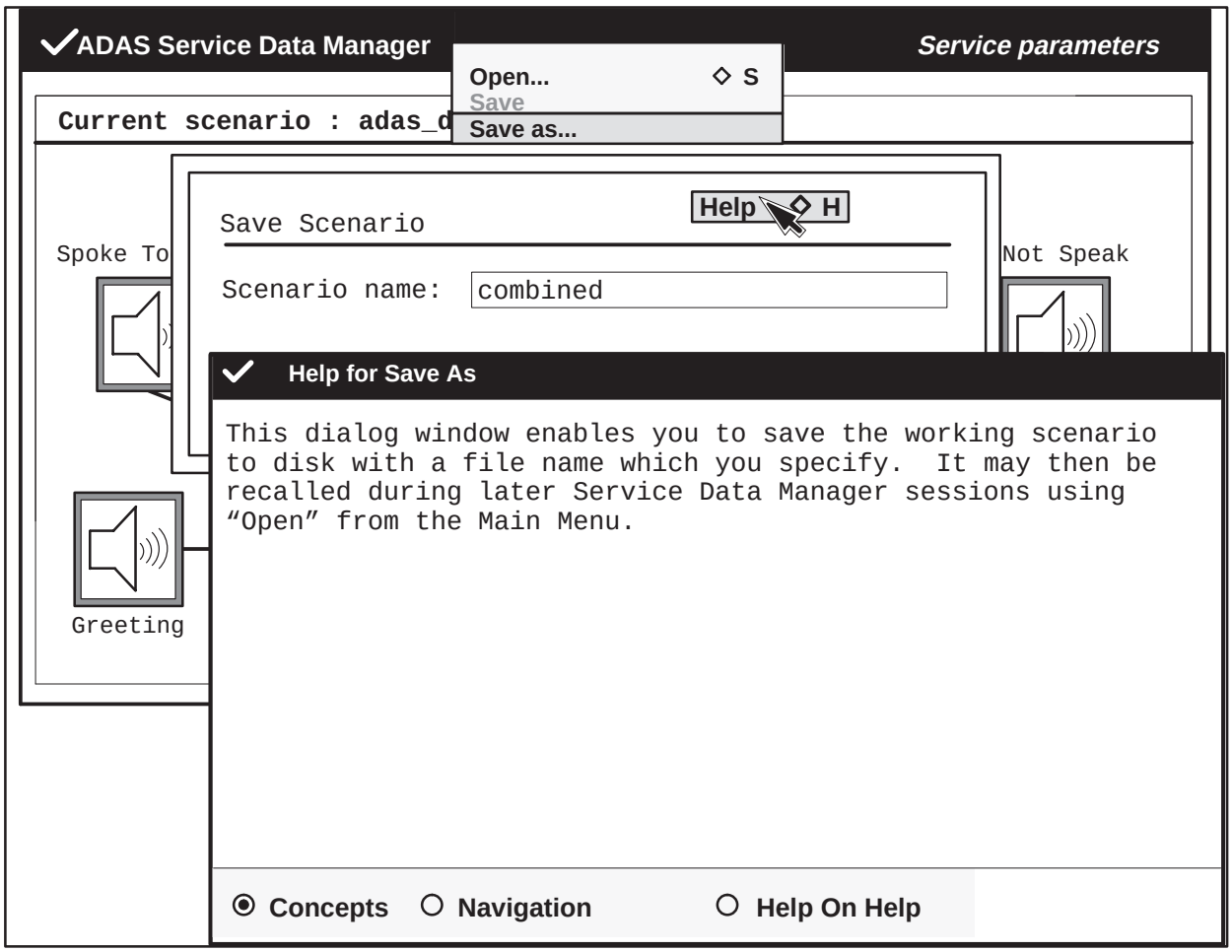


Figure 3–14
Help for save as scenario dialog



Delete

This option confirms the deletion of the current scenario. (See Figure 3–15.) After the scenario file is deleted from disk, the default scenario is loaded automatically. The default scenario cannot be deleted. (The delete option is disabled when the default scenario is loaded.)

To obtain a help window for this dialog, place the indicator arrow to the right of the title **"**Are you sure you want to delete scenario:," and press the right mouse button. Slide the arrow over the Help option that appears and release the mouse button. (See Figure 3–16). Help windows can also be selected for the scenario name field, and the Cancel and Delete buttons. They are obtained in the same way as for the dialog.

To confirm the deletion of a scenario, click on the Delete button with the left mouse button. To cancel and exit the dialog, click on the Cancel button with the left mouse button.

Figure 3–15
Delete scenario dialog

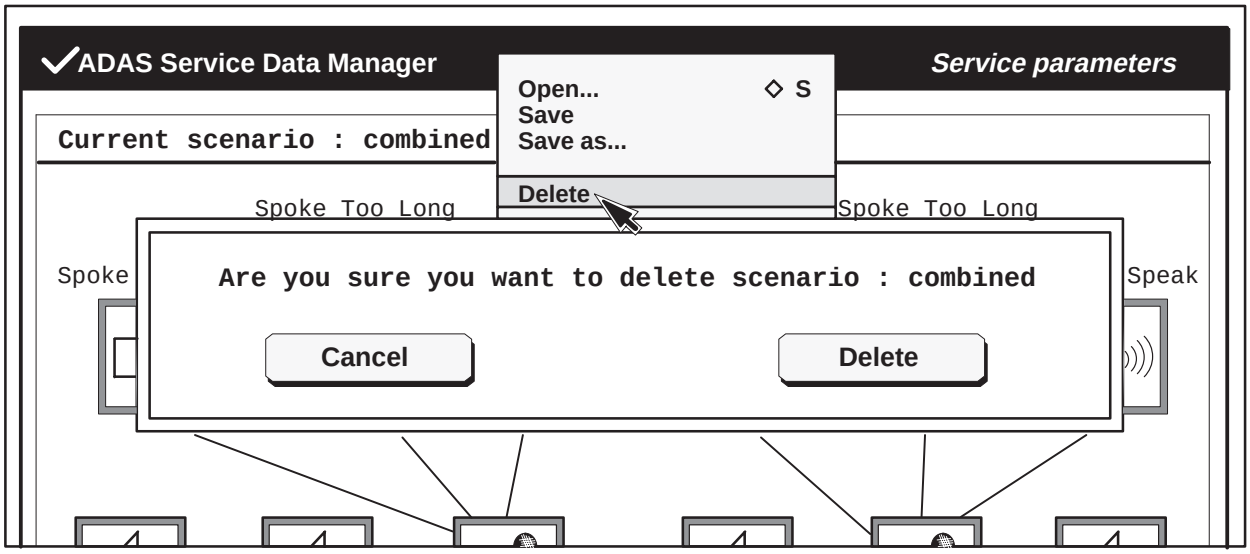
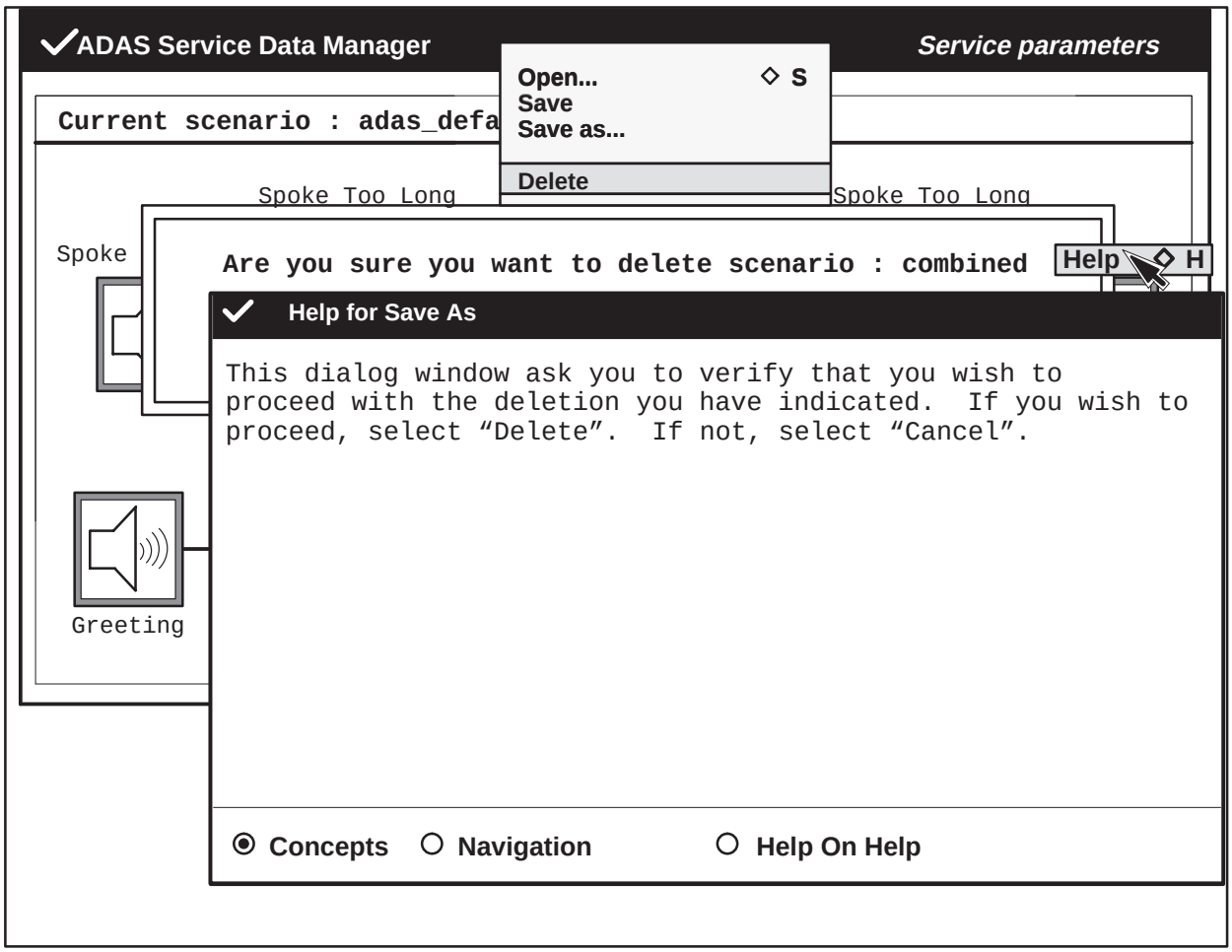


Figure 3–16
Help for delete scenario dialog



Upload...

This option is used to upload CPE and VPU data files to the DMS switch. The CPE data upload defines the behavior of ADAS service to the DMS switch. Changes made to parameter values by use of the ADAS menus do not take effect in the ADAS system until a CPE data upload is performed by the user. The VPU upload transfers an audio load to the DMS switch.

The ADAS system determines whether CPE service data, VPU data, both CPE and VPU data, or no data are to be uploaded to the DMS switch. One of the four possible Upload dialogs shown in Figure 3–17 is displayed when the Upload option is selected. To obtain a help window for these dialogs, place the indicator arrow to the right of the title, and press the right mouse button. Slide the arrow over the Help option that appears and release the mouse button. Help windows can also be selected for the Cancel and Upload buttons in the same way as for the dialogs.

When the Upload dialog shows that CPE data will be uploaded, then only changes in the current CPE load will be made by the data upload. The CPE upload is required basically when the user changes anything (such as prompts, error settings, operator interaction, and so on) in the environment of the service data administration. The CPE upload is required to make these changes effective on the DMS side of the ADAS system. The CPU upload takes only a few minutes to complete.

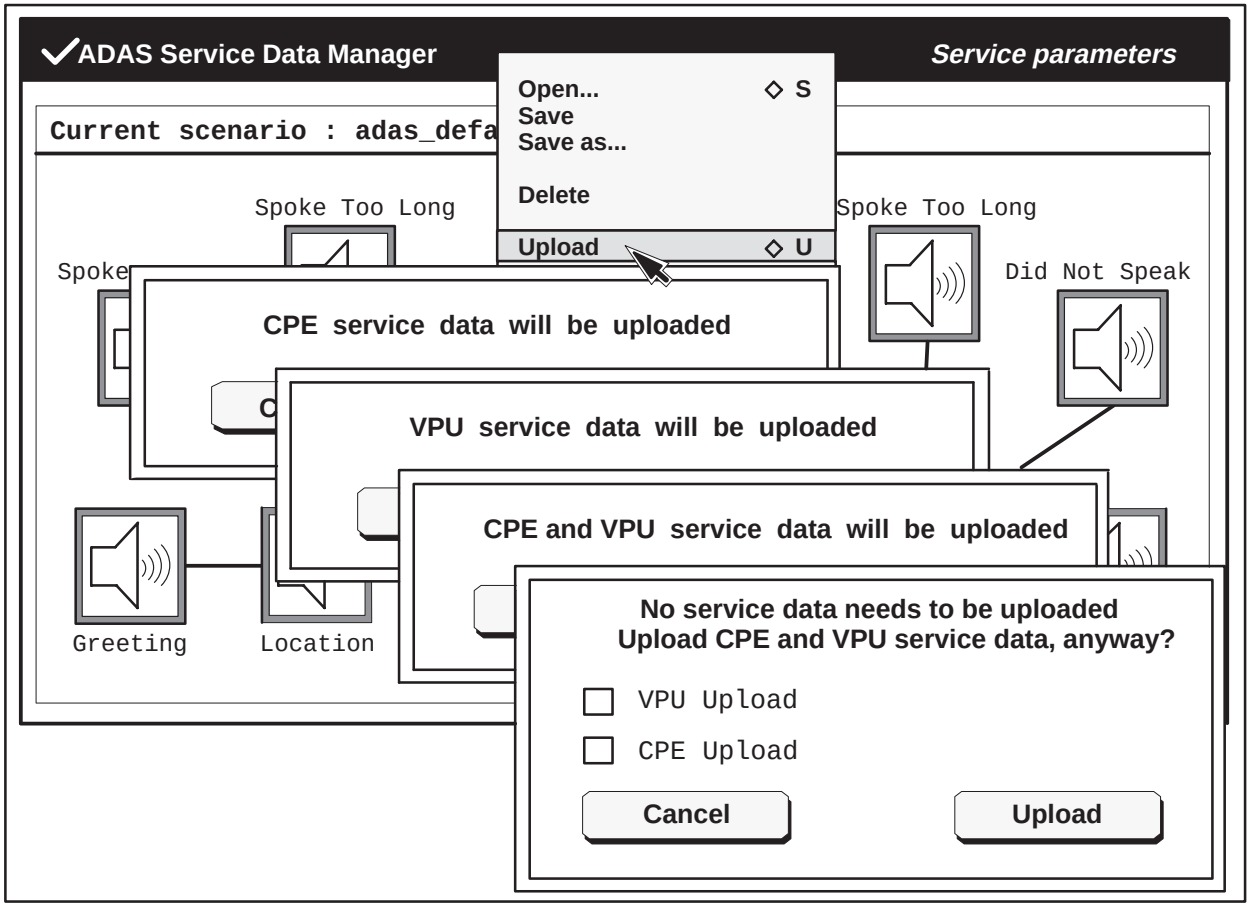
When the Upload dialog states that VPU data will be uploaded, then only changes in the current VPU load will be made by the data upload. Changes in the current VPU data occur when the user receives a new audio load from Nortel Networks, or when the operating company creates specialized prompts through its own VDS system. The new VPU audio load will be transferred from the OAM workstation to the DMS side of ADAS. Depending on the number of VPUs and APUs there are in the ADAS system, a VPU data upload may require an hour or more to complete. After the VPU audio loads are transferred to the SLM disk of the DMS switch, the VPUs are set, one-by-one, to a system busy state while the audio loads are loaded into each VPU.

When the dialog shows that both CPE and VPU data will be uploaded, then changes in both the CPE and VPU data loads will be made by the data upload. This type of upload is usually made when the OAM workstation is first installed and for upgrades in the ADAS software.

When the Upload dialog indicates that no service data needs to be uploaded, no changes will be made by an upload. But the user can still elect to make a CPE, VPU, or both a CPE and VPU data upload by clicking in the boxes next to the CPE and VPU options with the left mouse button. The uploads

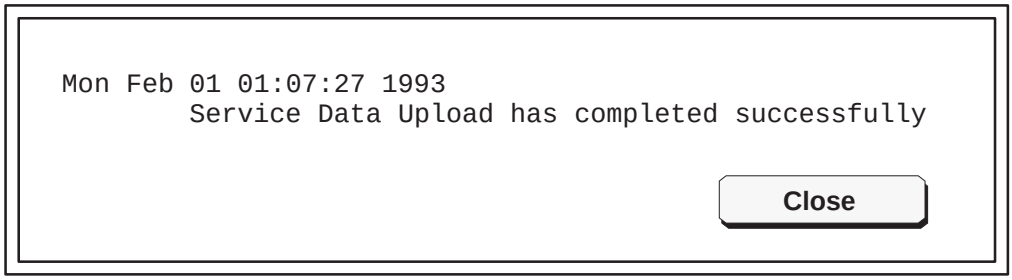
could be made, for example, to refresh the data load on the DMS side of ADAS.

Figure 3–17
Upload dialogs



Click on the Upload button with the left mouse button to confirm a data upload. When an upload has been completed, an update response dialog is activated. This response dialog indicates whether the latest data update was successful or not. (See Figure 3–18.) To exit an Upload dialog without any upload action taken, click on the Cancel button with the left mouse button.

Figure 3–18
Example of a service data update response dialog

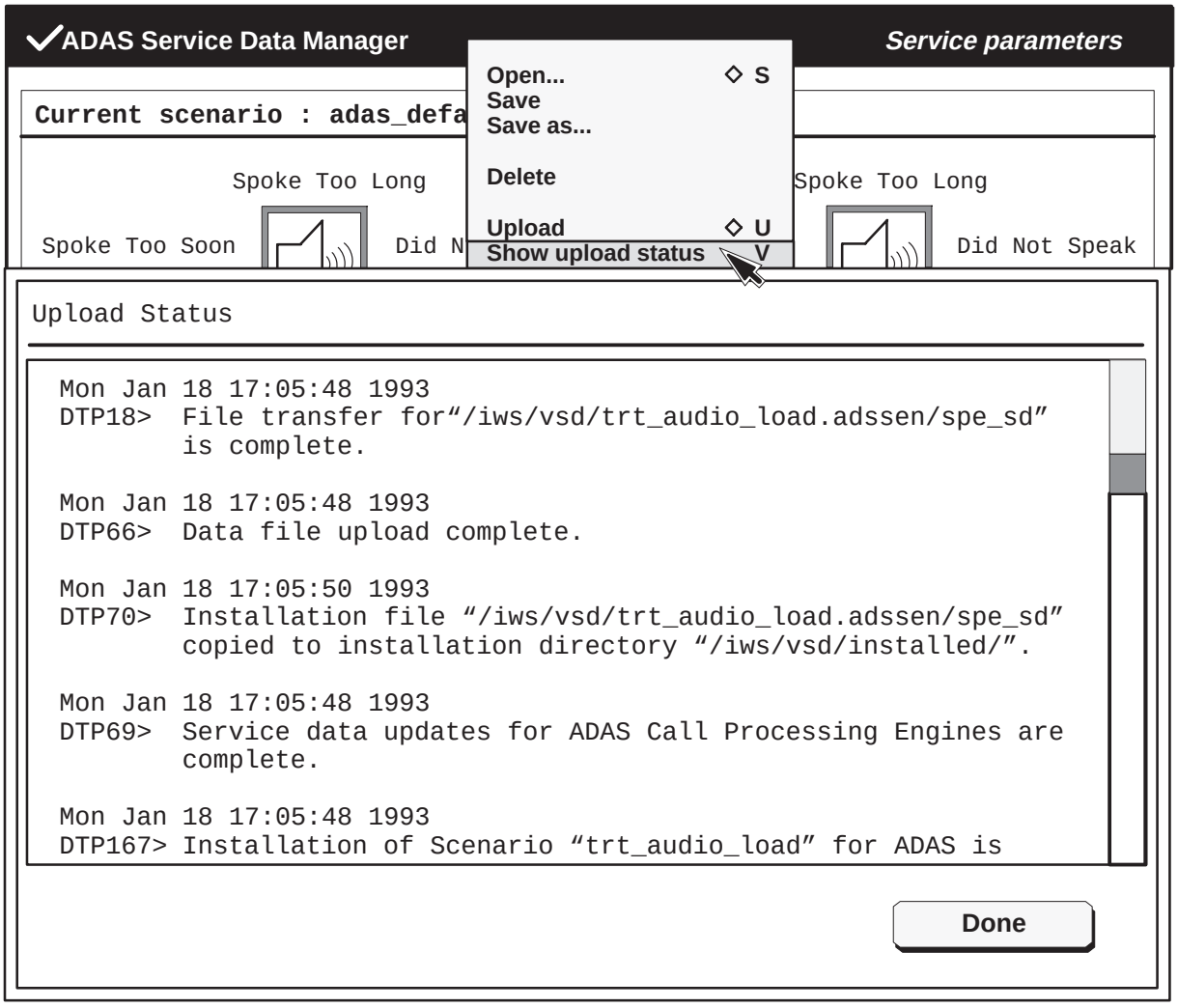


Show upload status

This option activates the upload status dialog. (See Figure 3–19.) This dialog displays the status comments from the last updates. After reviewing the status comments, click on the Done button with the left mouse button.

To obtain a help window for this dialog, place the indicator arrow to the right of the title **"**Upload Status," and press the right mouse button. Slide the arrow over the Help option that appears and release the mouse button. A help window can also be selected for the Done button in the same way as for the dialog.

Figure 3–19
Example of an upload status dialog



Clear trace

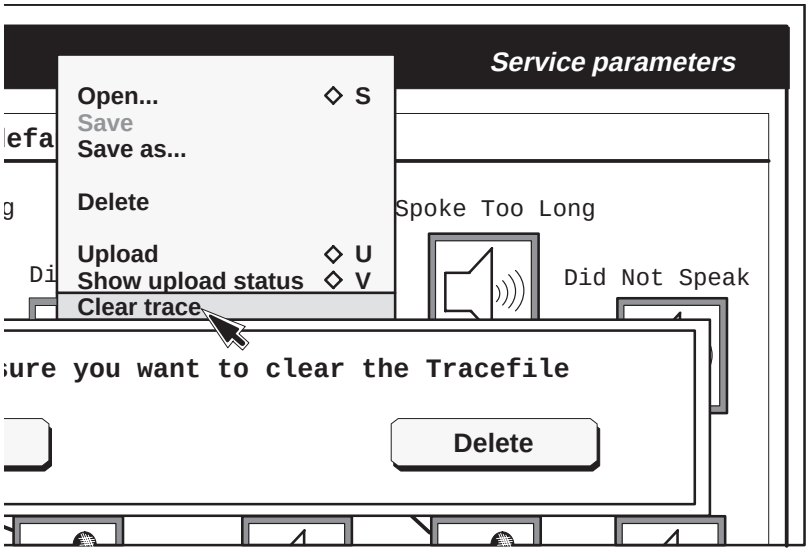
This option activates the Clear trace dialog. (See Figure 3–20.) This dialog confirms that the user wants to clear the update status traces. Choose this selection to discard status messages from previous service data uploads.

> ***Note:*** The clear trace selection is not available while an upload is in progress.

To obtain a help window for this dialog, place the indicator arrow to the right of the title, and press the right mouse button. Slide the arrow over the Help option that appears and release the mouse button. A help windows can also be selected for the Cancel and Delete buttons in the same way as for the dialog.

To confirm this selection, click on the Delete button with the left mouse button. To exit this dialog without action, click on the Cancel button with the left mouse button.

Figure 3–20
Clear trace dialog



Close

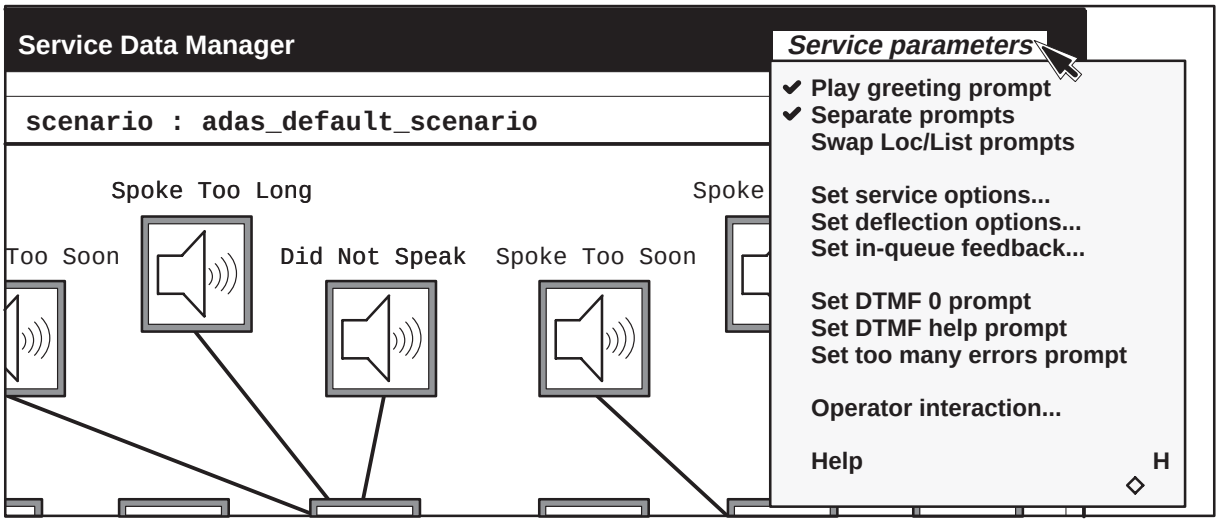
This option closes the service data administration window. If an upload already has been initiated, the upload continues. (The status of that upload can be reviewed during another session using the show upload status selection.) When the service data administration window is closed, the initial toolset screen is displayed. The user can then either select another toolset or access the user tools icon and logoff the system.

Service parameters menu

Access the Service parameters menu by holding down the right mouse button on the Service parameters header of the ADAS main menu. Figure 3–21 shows the options contained in the Service parameters menu.

The Service parameters menu controls the flow of a call scenario by changing service parameter settings. These settings affect how and when prompts and messages are presented to a caller, how the recording of the caller's responses are played back to an operator, and how the operator is included in the call scenario.

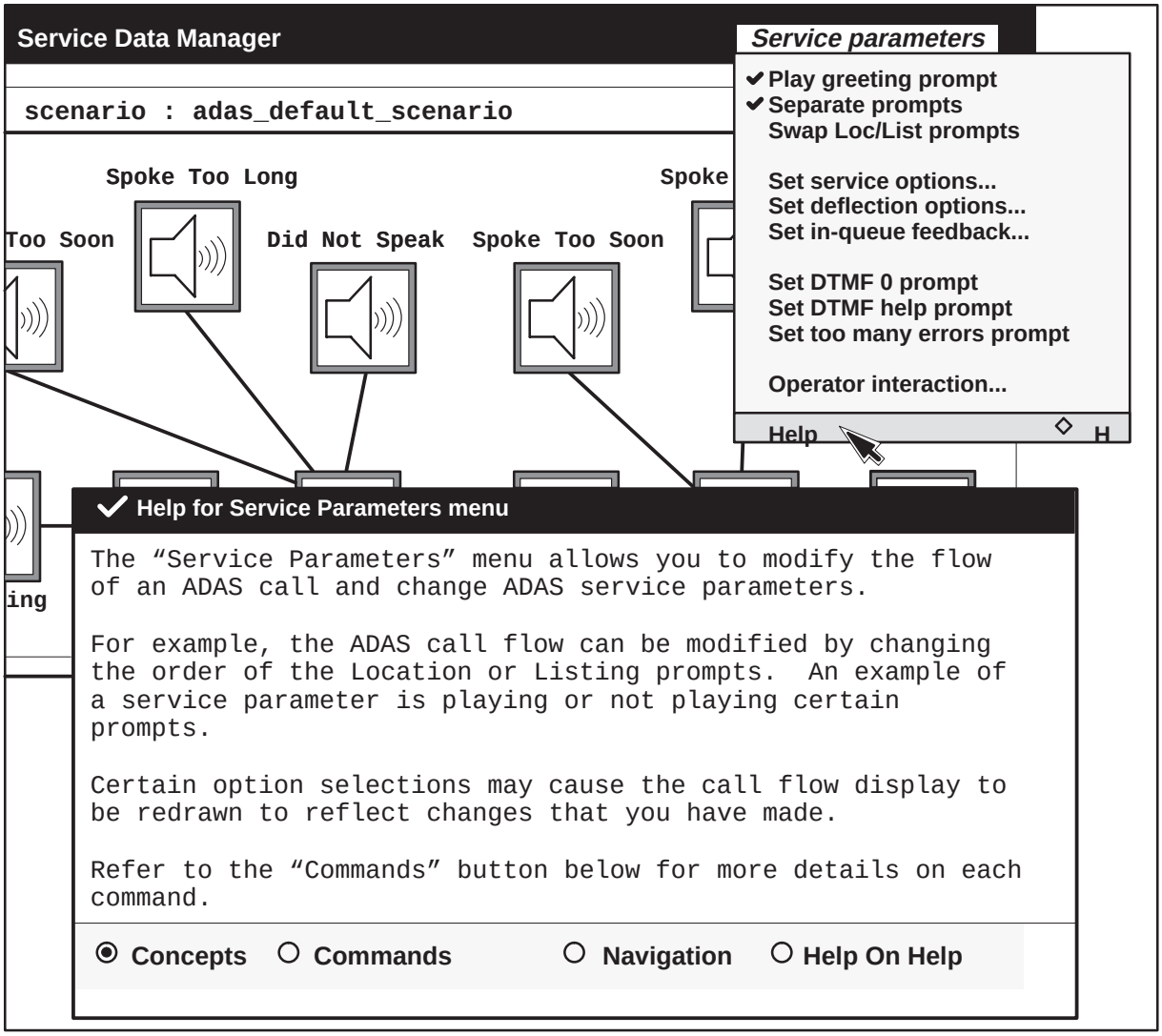
Figure 3–21
Service parameters menu



Help for Service parameters menu

This option activates a help dialog for the items in the Service parameters menu. To close the help window, place the indicator arrow in the help title bar and press the right mouse button. Slide the arrow over the Close option and release the mouse button.

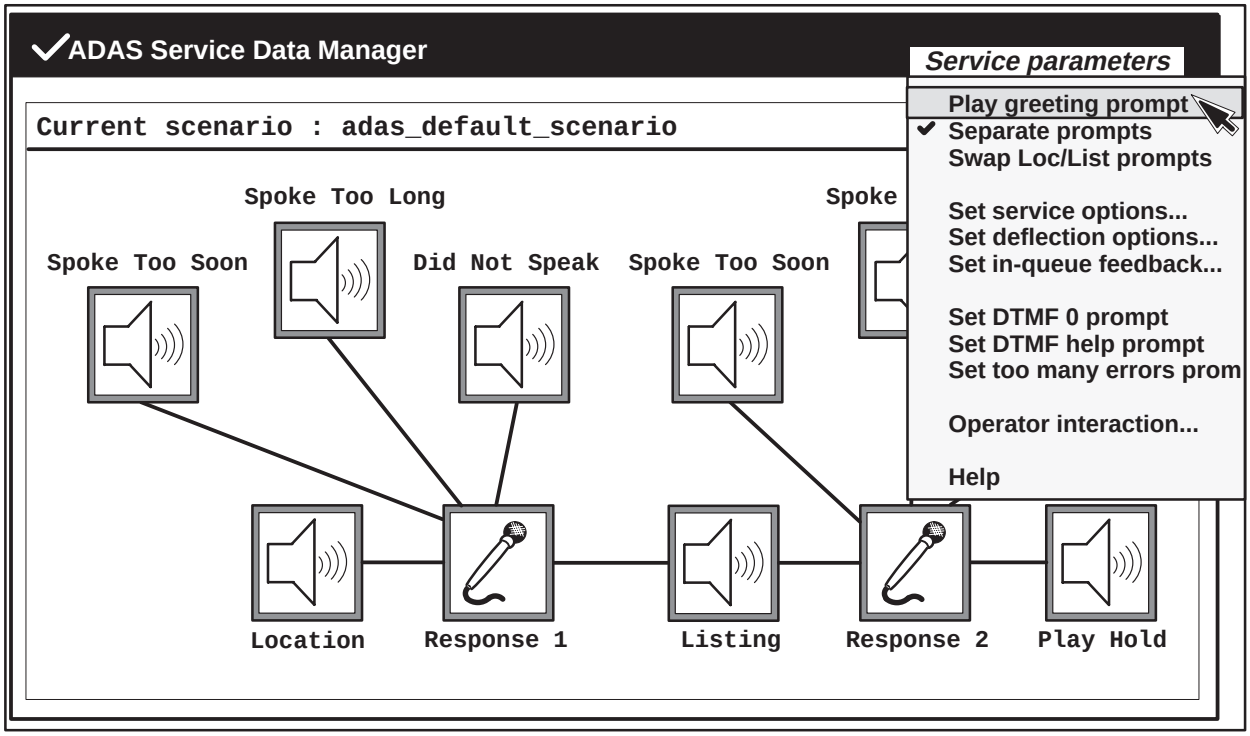
Figure 3–22
Help for Service parameters menu



Play greeting prompt

This option enables or disables the play greeting prompt. The default is enabled. If the greeting is disabled, the icon does not appear in the ADAS main menu, and the caller does not hear a greeting prompt. (See Figure 3-23.)

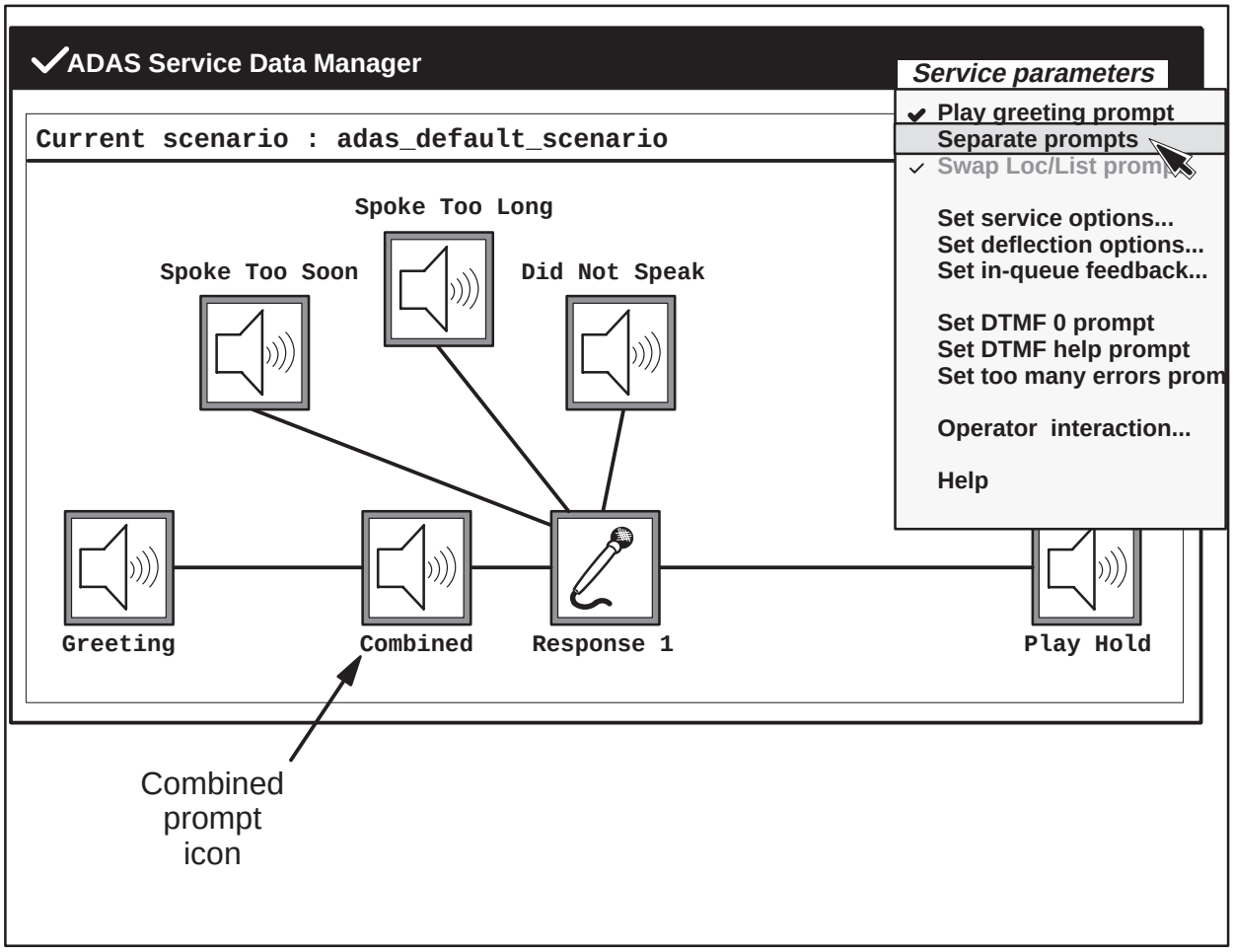
Figure 3–23
Play greeting prompt (disabled)



Separate prompts

This option enables or disables the separate prompts mode for locality and listing. The default is enabled. When this option is disabled, the caller is prompted for both locality and listing in the same prompt. (See the combined prompt icon in Figure 3–24.) Also, the icons for response 2 are removed from the main menu.

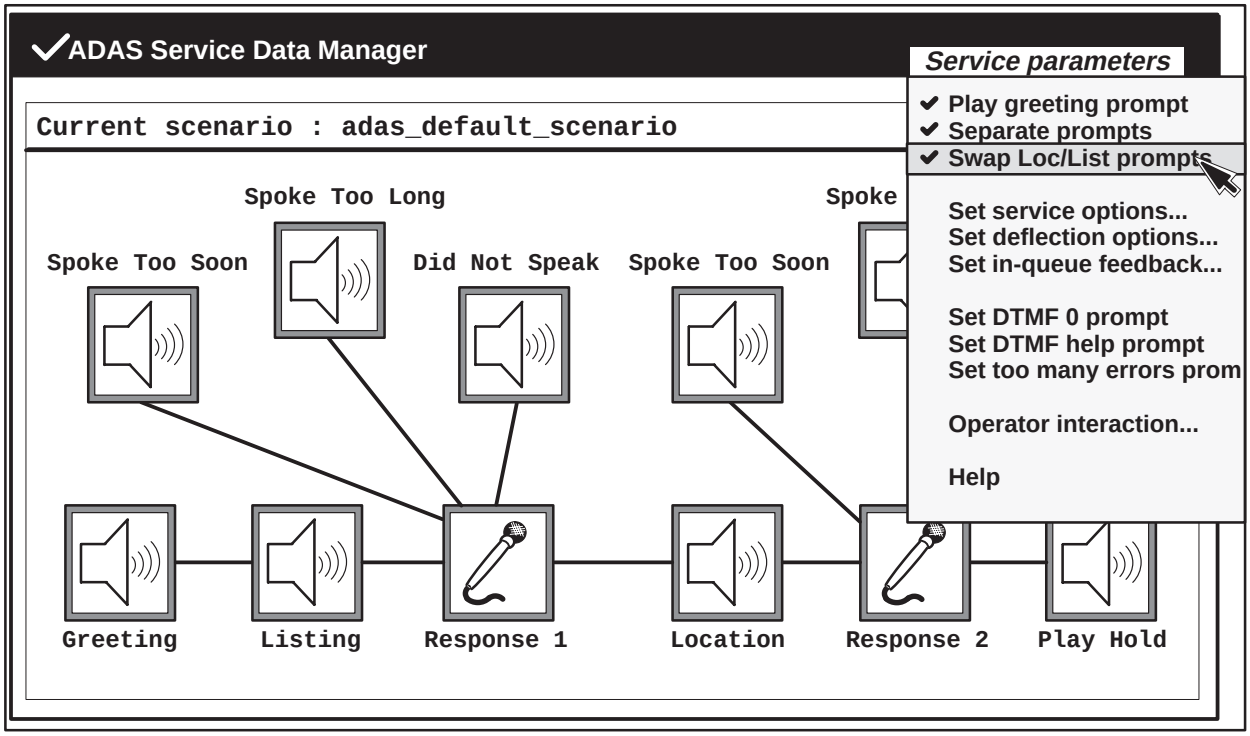
Figure 3–24
Separate prompts (disabled)



Swap loc/list prompts

This option swaps the order of the locality and listing prompts. The ADAS main menu reflects the changed order. (See order of the listing and location icons in Figure 3–25.) This swap option is available only when the Separate prompts option is enabled.

Figure 3–25
Swap loc/list prompts (enabled)



Set service options...

This option activates the Service options dialog. (See Figure 3–26, Part A.) This dialog allows the operating company to view and change the current ADAS Service options.

To select the Service options dialog, click in the box next to the desired selection with the left mouse button. Click on the OK button with the left mouse button to confirm a selection. To cancel this dialog and exit the menu, click on the Cancel button with the left mouse button.

To obtain a help window for this Service dialog, place the indicator arrow to the right of the title “Service options” and press the right mouse button. Slide the arrow over the help option that appears and release the mouse button. (See Figure 3–26, Part B.) Help windows can also be selected for the Cancel and OK buttons. They are obtained in the same way as for the Service dialog.

Play DTMF help message

The check box for play DTMF (dual-tone multifrequency) help message determines whether or not a DTMF help message is played when a caller enters an invalid DTMF digit.

Skip prompt

The check box for skip prompt determines whether a caller can enter a skip digit (#) to skip over the prompts and go straight to recording, or to end the recording of a response.

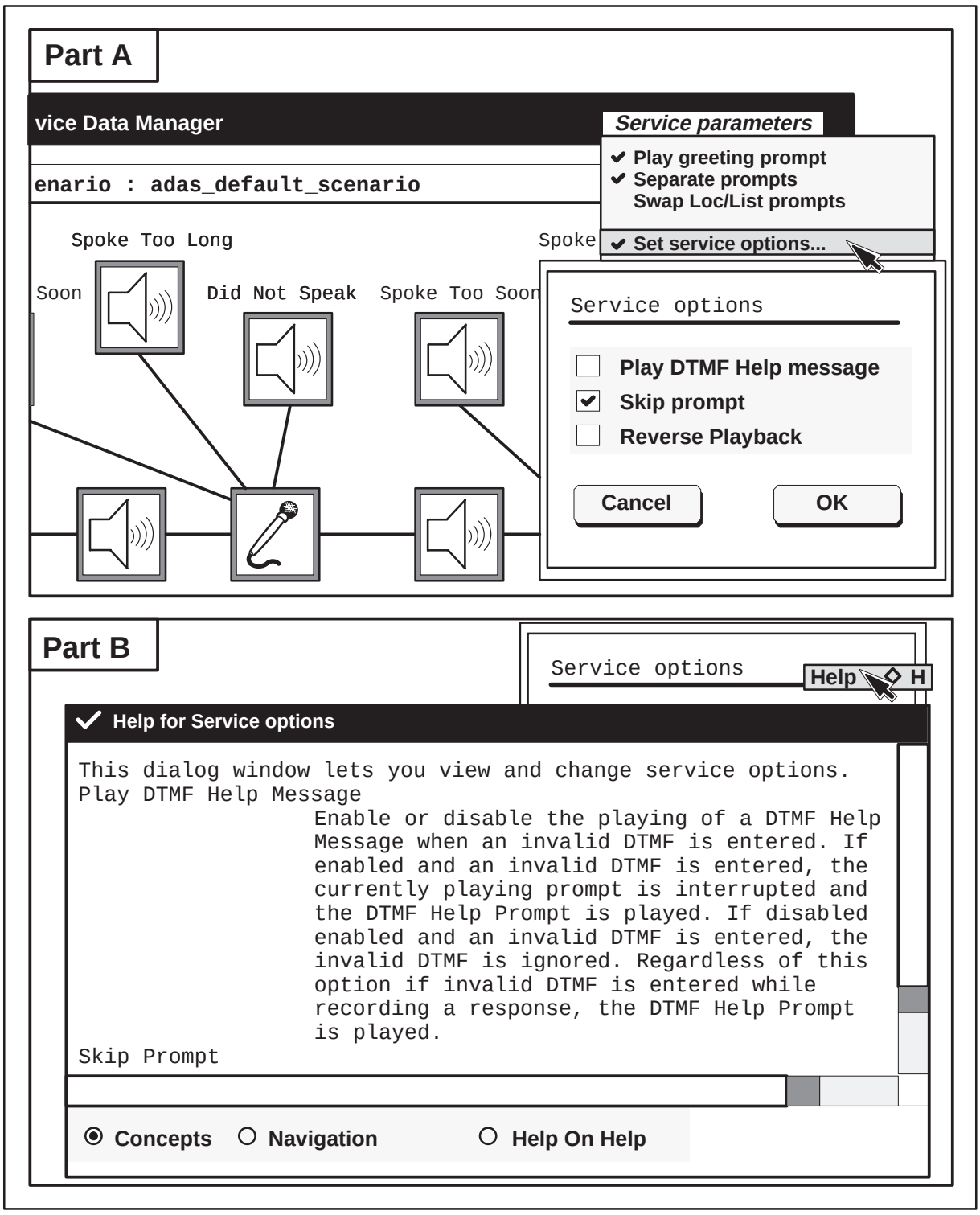
Reverse playback

Reverse playback allows the operating company to specify that the subscriber responses be played back to the operator in the reverse order in which they were given.

In many areas, the first prompt asks for the city, and the second prompt asks for the listing. However, the listing often contains embedded information that identifies the city. In these cases, if the listing is played first, time is saved because the operator can launch the search without listening to the city playback.

The default state for this reverse parameter is off. It is recommended that this parameter be set so that the operator hears the listing first and the city second (this could be either on or off, depending on how other service data parameters are set).

Figure 3–26
Service options dialog



Set deflection options...

When a call is deflected it is diverted from ADAS to the DMS switch for handling. The set deflection option activates a dialog (see Figure 3–27, Part A) that shows the deflection options for ADAS. A call is deflected when it meets all the deflection conditions described in this section.

To obtain a help window for the deflection dialog, place the indicator arrow to the right of the title “Deflection options” and press the right mouse button. Slide the arrow over the Help option that appears and release the mouse button. (See Figure 3–27, Part B.) Help windows can also be selected for the Cancel and OK buttons. They are obtained in the same way as for the deflection options.

Enable deflection

This option enables or disables ADAS call deflection. A check in the check box indicates that call deflection is enabled. The default is disabled.

Minimum holding time to begin deflection

This option indicates the minimum holding time required before a call is deflected. The holding time is the length of time a caller waited for an operator to respond. The holding time of the last successful ADAS call is compared against the datafilled minimum. Valid values are 15, 20, 25, 30, 35, and 40 seconds. The default value is 15 seconds.

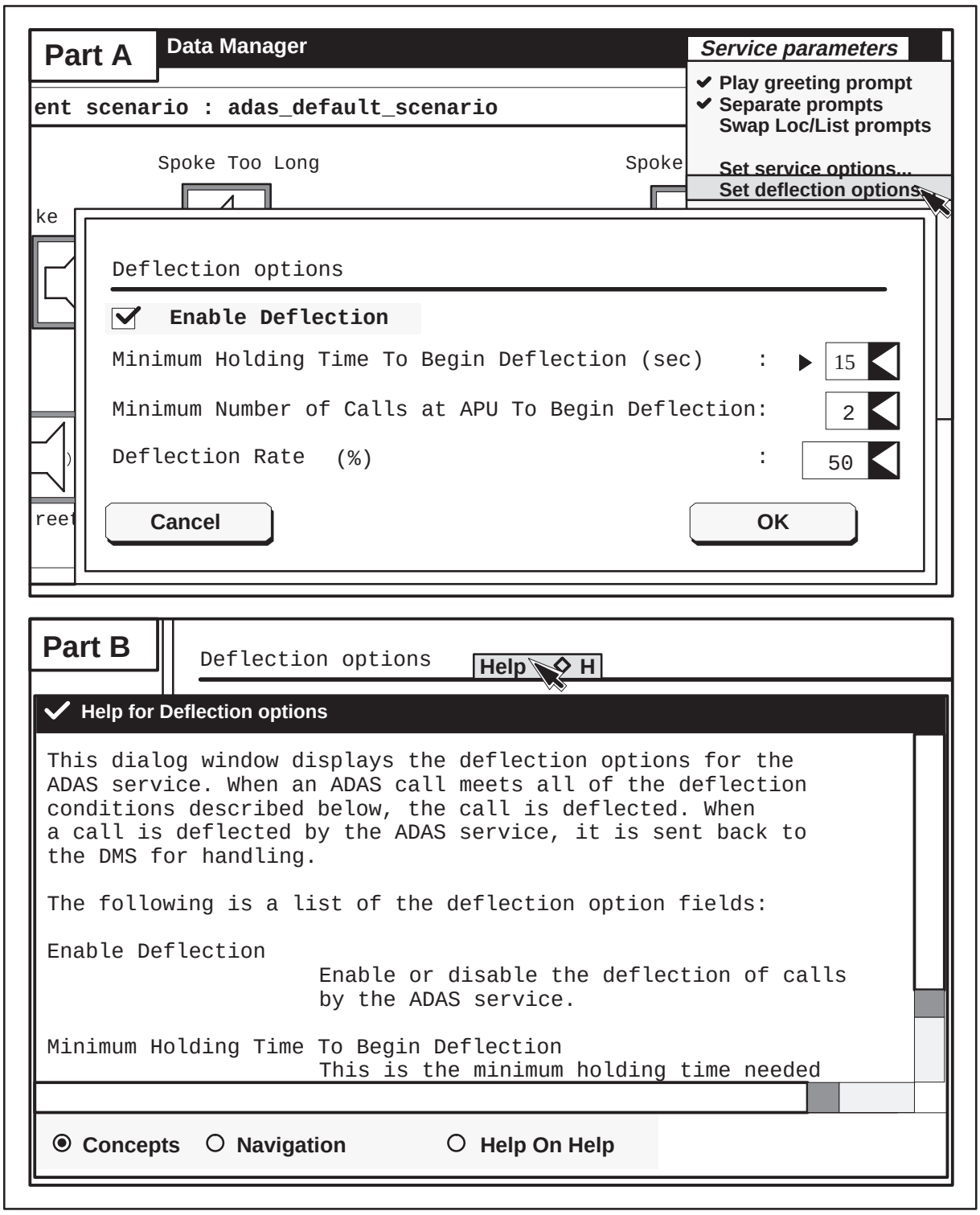
Minimum number of calls at APU to begin deflection

This option indicates the number of calls needed at an APU before call deflection begins. The APU must be handling this minimum number of calls before deflection begins. Valid values are 1 to 15 calls. The default is 2 calls.

Deflection rate

This is the rate at which calls are deflected from ADAS. When an ADAS call meets all the other deflection conditions (minimum holding time and minimum number of calls at APU), calls are deflected at the datafilled rate on a percentage basis. Valid values are 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, and 100 percent. The default value is 50 percent.

Figure 3–27
Set deflection dialog



Set error options...

This option activates a Service error options dialog. (See Figure 3–28, Part A.) It allows operating company personnel to do the following:

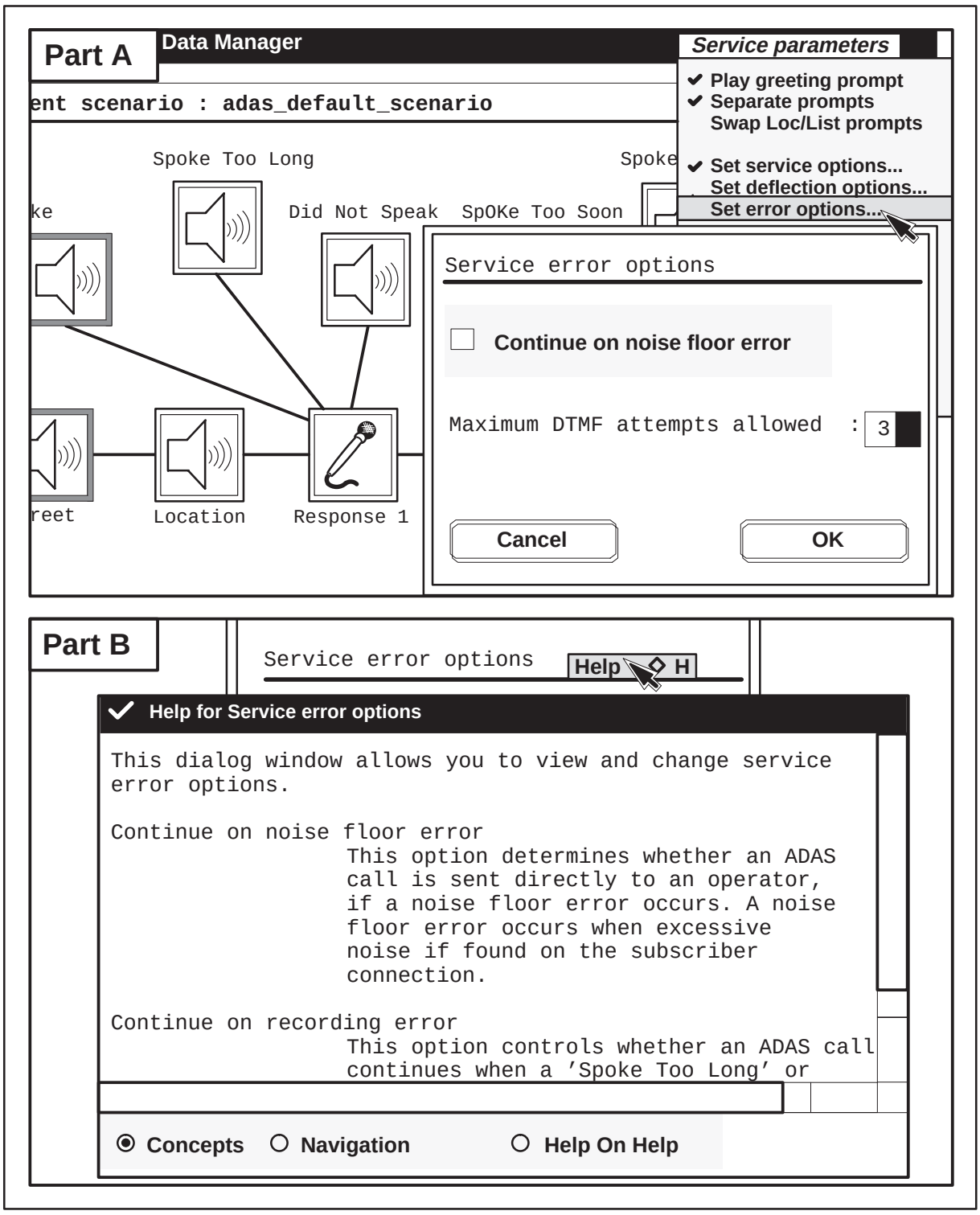
- view and change error parameters
- set whether to continue on a noise floor error
- set the maximum number of DTMF errors allowed before a call is forwarded to an operator

To obtain a Help window for the error dialog, place the indicator arrow to the right of the title “Service error options” and press the right mouse button. Slide the arrow over the Help option that appears and release the mouse button. (See Figure 3–28, Part B.) Help windows can also be selected for the Cancel and OK buttons. They are obtained in the same way as for the error options.

Continue on noise floor error

This option determines whether or not a call will continue if a noise floor error occurs. For example, a phone booth on a busy street can produce a noise floor error caused by the volume of background noise. To continue a call even if a noise floor error occurs, click on this check box with the left mouse button. This option is disabled for default.

Figure 3–28
Service error options dialog



Maximum DTMF errors

The maximum DTMF errors data entry field contains the value for the maximum number of DTMF errors the caller can make before the call is sent to an operator. Valid values are either 1, 2, 3, or 4 errors. The default value for this field is 3.

To change the value in the maximum DTMF error field, move the indicator arrow to the right side of the box. Then hold down the right mouse button to display valid values. Move the mouse until the desired selection is highlighted and release the mouse button.

To save entered error values, click on the OK button with the left mouse button. To cancel the changes and exit the dialog, click on the Cancel button with the left mouse button.

Set in-queue feedback...

This option activates a parameters dialog that is used to enable or disable an audible feedback prompt to a caller waiting for an operator. This prompt can be a tone (the current default) with a specified time interval, or a verbal prompt such as “Please hold for an operator.”

To enable or disable the feedback prompt feature, click the left mouse button in the box located upper-left in the dialog. If the feedback feature is enabled, a check appears in the check box.

To obtain a Help window for the in-queue feedback dialog, place the indicator arrow to the right of the title “In-Queue Feedback parameters” and press the right mouse button. Slide the arrow over the Help option that appears and release the mouse button. Help windows can also be selected for the Cancel and OK buttons. They are obtained in the same way as for the feedback options.

For tones, the time between tones can be set. Valid entry values for the interval field are 6 (default), 8, and 10 seconds. To change the time indicated, move the indicator arrow to the right side of the time box. Then hold down the right mouse button to display the time selections. Then move the mouse until the desired selection is highlighted and release the mouse button.

The default tone prompt is changed to a message prompt by selecting a message from the list of available prompts. Although prompts cannot be deleted, they can be replaced by new prompts. A list item dialog is used to view the text of a prompt and to change the current prompt. To obtain a list item dialog, click on an available prompt with the left mouse button, and then hold on the prompt with the right mouse button. The list item dialog includes options for deselect, view, copy to current, and help. Select these options with the right mouse button.

Figure 3–29
In-queue feedback dialog

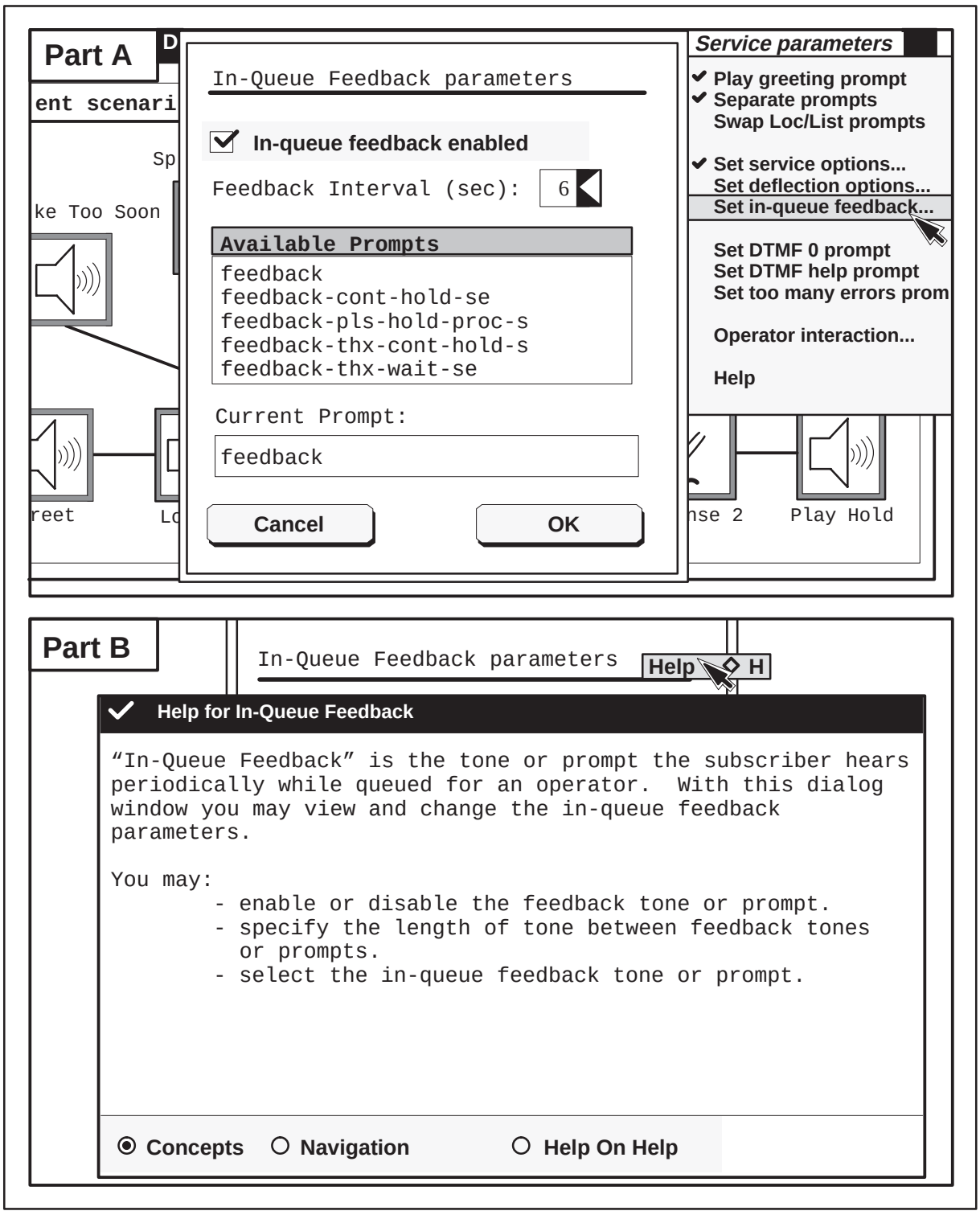
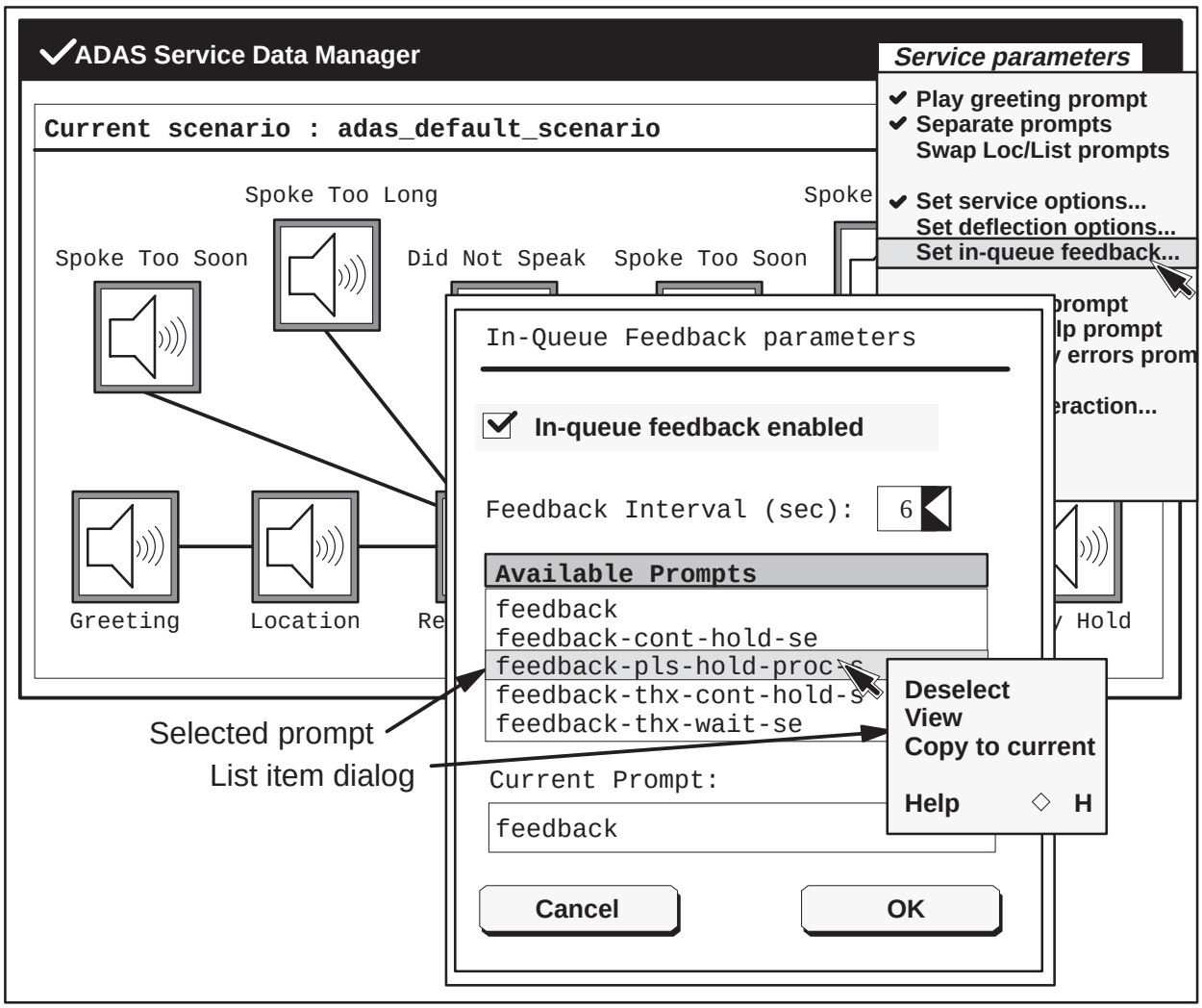


Figure 3–30
Example of a list item dialog for the feedback dialog



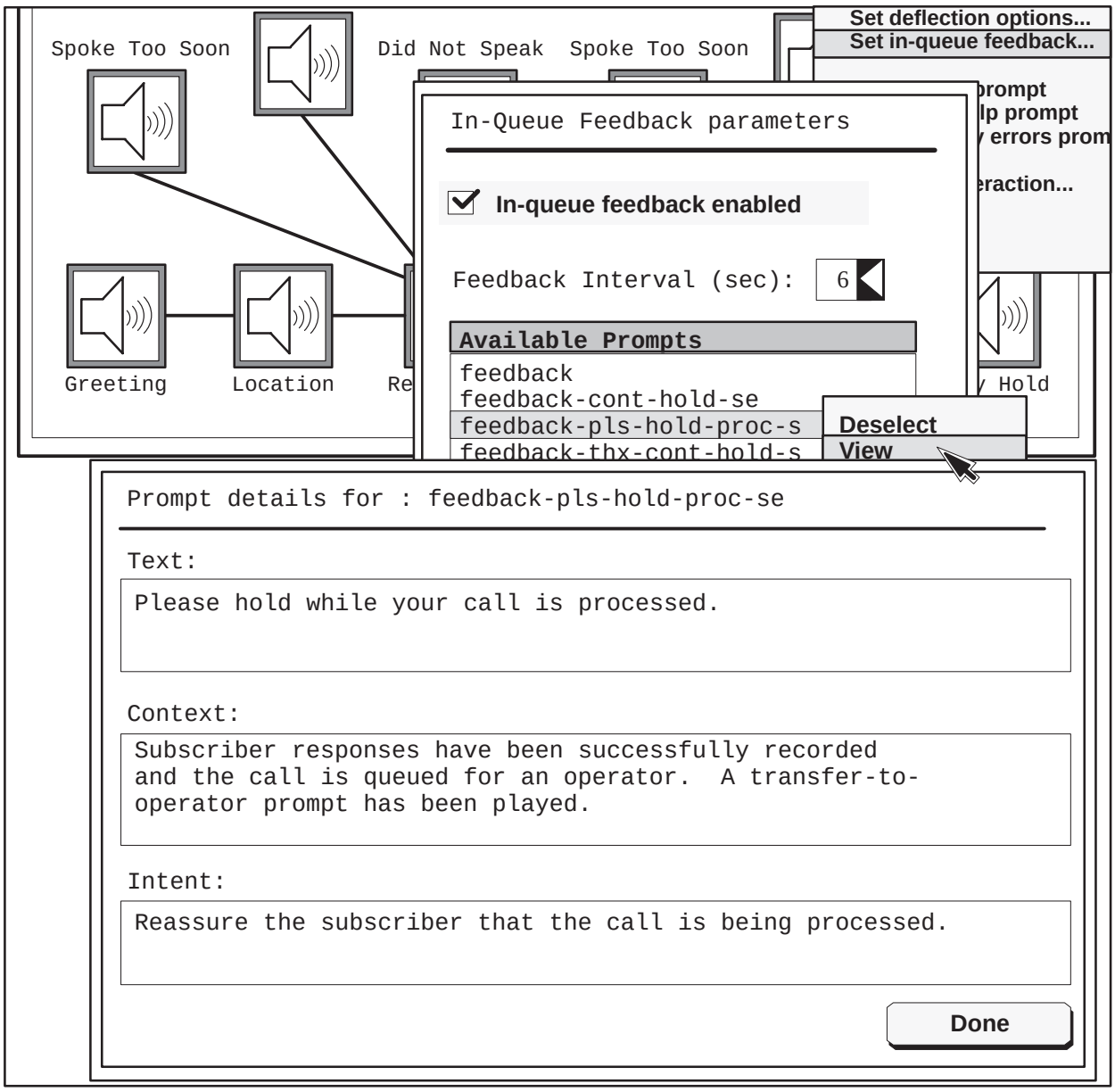
The Deselect option deselects a currently selected prompt. The copy to current option copies the currently selected prompt into the current prompt data entry field. The Help option activates a dialog that describes the list item dialog.

The view option in the list item dialog displays a prompt details dialog. A prompt details dialog is used to review the prompt message and information associated with a selected prompt. To obtain a help window, place the indicator arrow to the right of the heading “Prompt details for : ,” and press the right mouse button. Slide the arrow over the help option that appears and release the mouse button. A help window can also be selected for the Done button in the same way as for the dialog. After reviewing the dialog,

click on the Done button with the left mouse button to return to the set prompt dialog.

To confirm a selection, click on the OK button with the left mouse button. To cancel the dialog and exit the menu, click on the Cancel button with the left mouse button.

Figure 3–31
Example of a prompt details dialog for the in-queue feedback dialog



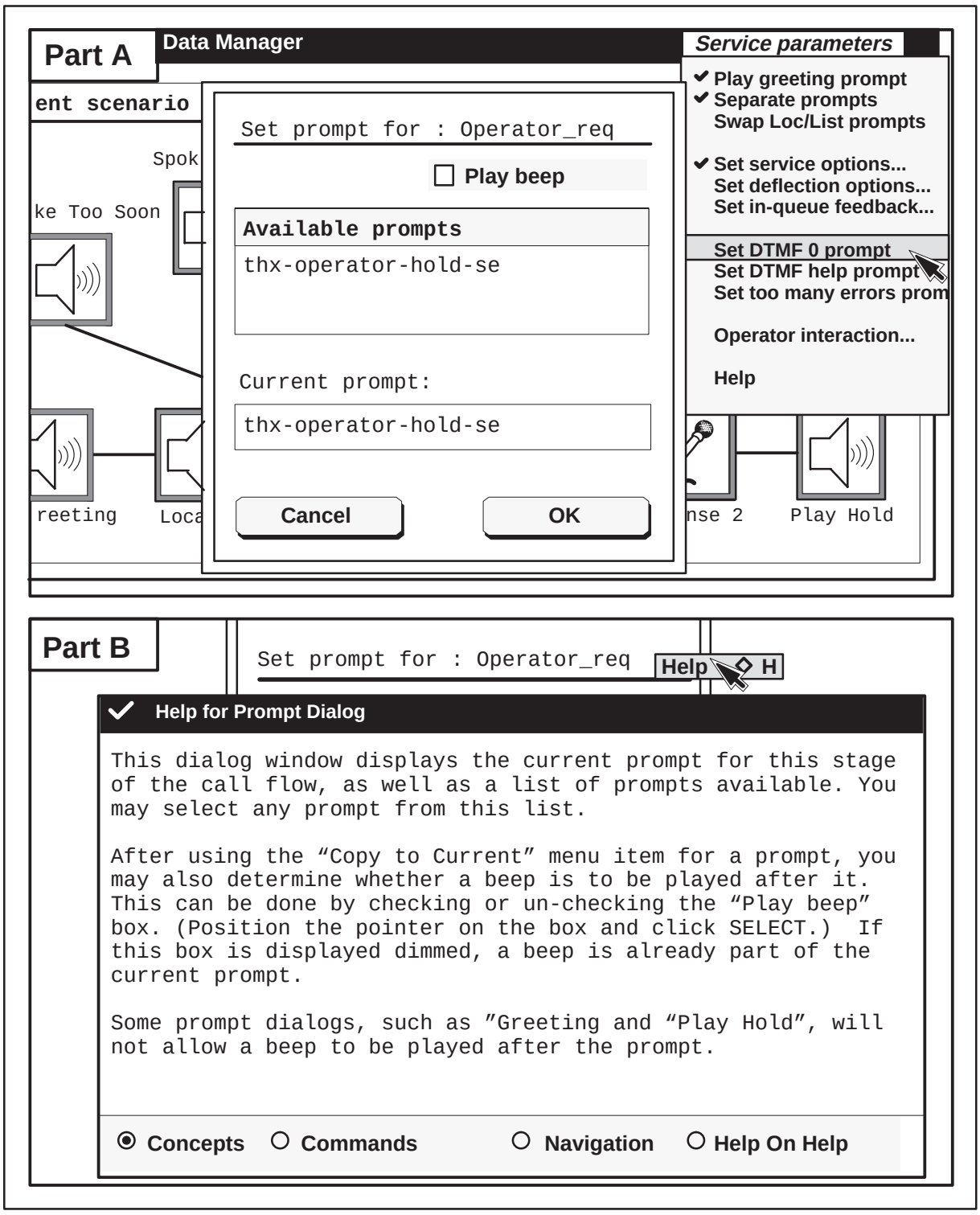
Set DTMF 0 prompt

This option activates a set prompt dialog (see Figure 3–32) that is used to choose a prompt to be played when the caller presses 0 on the key pad. This option is also used to enable a beep to be played after the prompt.

The default is to not add a beep with the current prompt. The current prompt for DTMF 0 is shown under the `Current prompt` field. (See `thx_operator_hold` in Figure 3–32.) A check (left mouse button) in the play-beep box indicates a beep is included with the current prompt. Another beep cannot be added to a prompt that already includes a beep. This beep (similar to a telephone answering machine) alerts the caller, and ADAS records the caller's response.

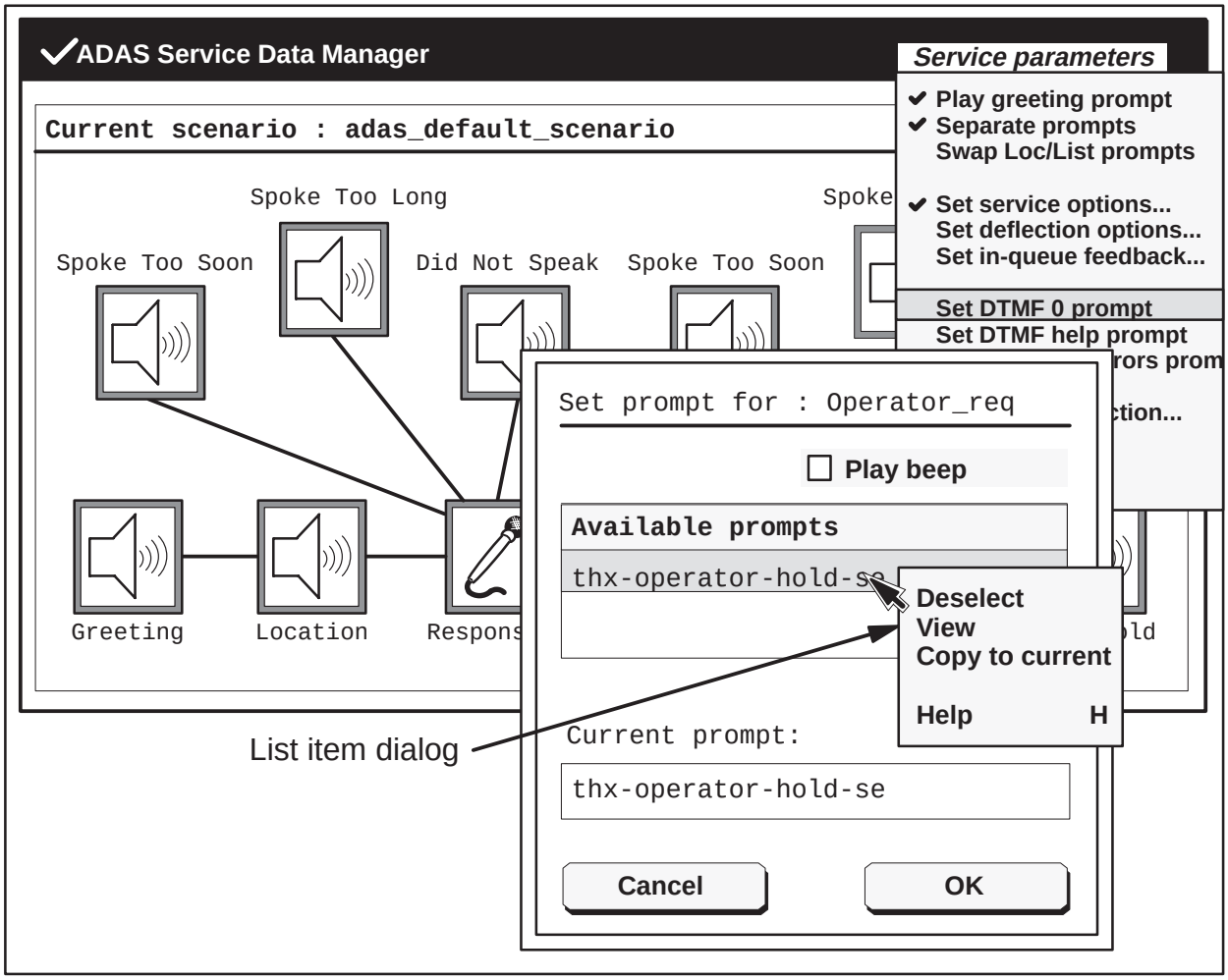
To obtain a help window for this dialog, place the indicator arrow to the right of the title "Set prompt for : Operator_req" and press the right mouse button. Slide the arrow over the help option that appears and release the mouse button. Help windows can also be selected for the Cancel and OK buttons. They are obtained in the same way as for the DTMF 0 prompt options.

Figure 3–32
Set prompt for DTMF 0 dialog



Prompts currently associated with requesting an operator are listed as available prompts. A list item dialog is used to view the text of a prompt and to change the current prompt for DTMF 0. To obtain a list item dialog, click on an available prompt with the left mouse button, and hold on the prompt with the right mouse button. (See Figure 3–33.)

Figure 3–33
List item dialog for DTMF 0 prompt

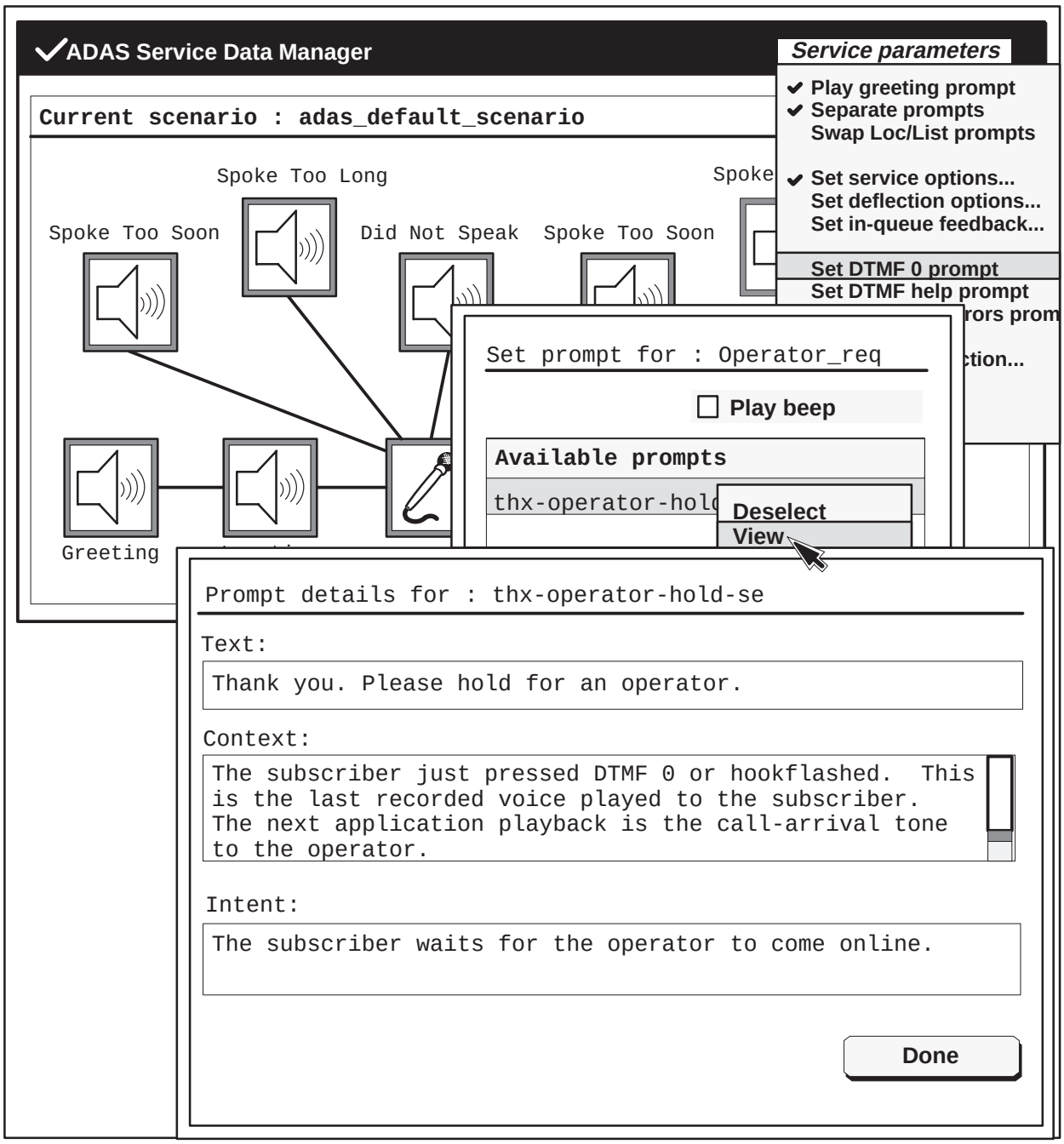


The deselect option in the list item dialog is used to deselect the currently selected prompt. The copy to current option copies the currently selected prompt into the current prompt data entry field. The help option activates a dialog that describes the list item dialog.

The view option in the list item dialog displays a prompt details dialog (see Figure 3–34) that is used to review the prompt message and information associated with a selected prompt. To obtain a help window, place the

indicator arrow to the right of the heading “Prompt details for : ,” and press the right mouse button. Slide the arrow over the help option that appears and release the mouse button. A help window can also be selected for the Done button in the same way as for the dialog. After reviewing the dialog, click on the Done button with the left mouse button to return to the set prompt dialog.

Figure 3–34
Prompt details dialog for DTMF 0 prompt



Set DTMF help prompt

This option activates a set prompt dialog (see Figure 3–35) that allows an operating company to choose a prompt to be played when a caller presses an invalid DTMF key, and to enable a beep that is played after the prompt.

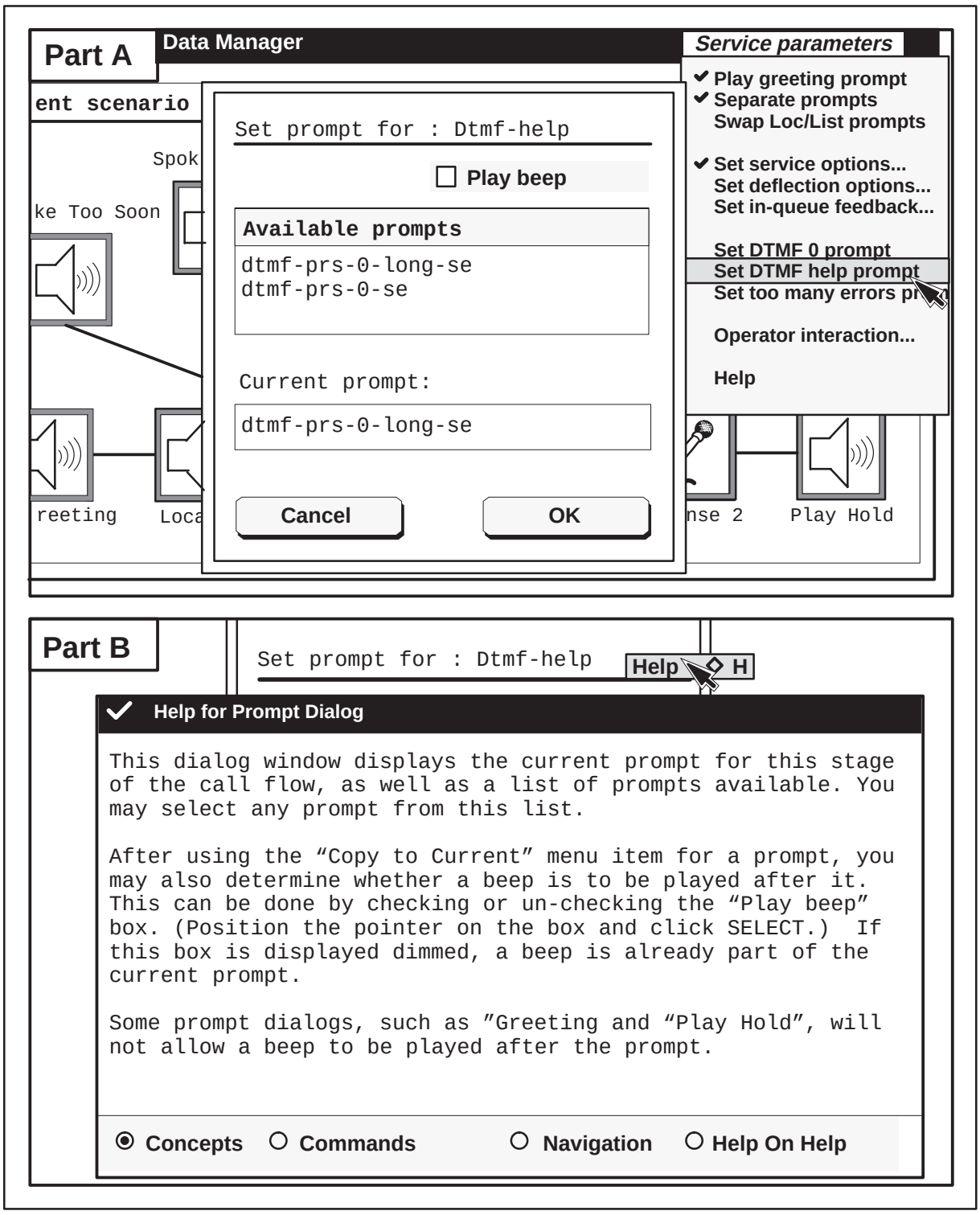
> ***Note:*** Invalid keys are digits 1 through 9 and the star symbol (*). Key 0 is always valid. The octothorpe sign (#) is valid when the skip prompts and messages option is enabled and invalid when the skip prompts and messages option is disabled. For more information about DTMF keys, refer to “Prompt and message interrupt” on page 4-3, “Skip prompts and messages” on page 4-4, and “DTMF errors” on page 4-4.

The default is to not add a beep with the current prompt. The current prompt for DTMF help is shown under the `Current prompt` field. (See `DTMF-prs-0-long` in Figure 3–35.) A check (left mouse button) in the play-beep box indicates a beep is included with the current prompt. Another beep cannot be added to a prompt that already includes a beep. (In Figure 3–35, the beep is shown disabled.) This beep alerts the caller (similar to a telephone answering machine), and ADAS records the caller’s response.

To obtain a help window for this dialog, place the indicator arrow to the right of the title “Set prompt for : Dtmf_help” and press the right mouse button. Slide the arrow over the help option that appears and release the mouse button. Help windows can also be selected for the cancel and ok buttons. They are obtained in the same way as for the DTMF help options.

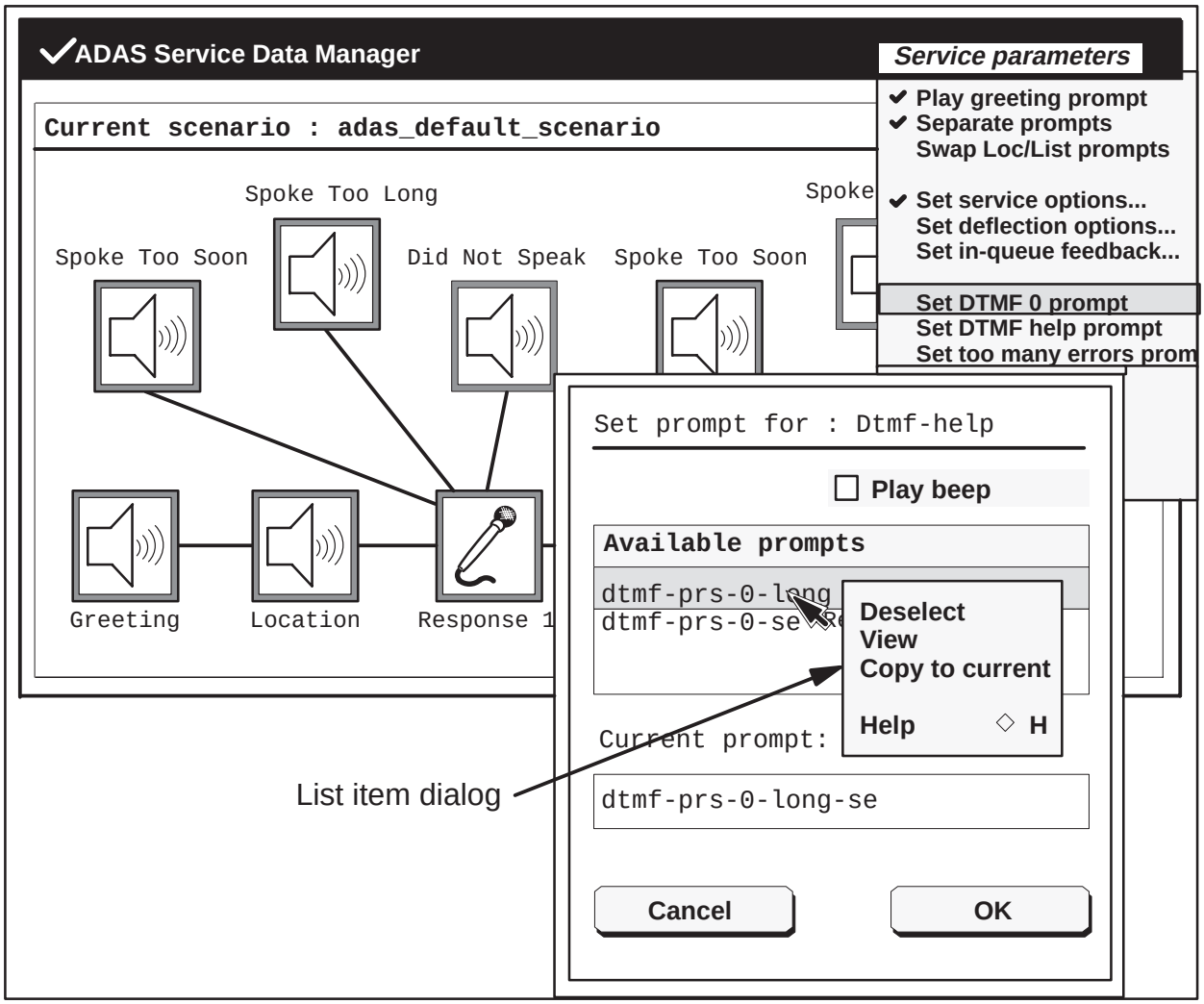
A set of prompts associated with DTMF help are shown as available prompts. To select a prompt, click on the prompt with the left mouse button. After the prompt is selected, hold down the right mouse button to display a list item dialog. (See Figure 3–36.)

Figure 3–35
Set prompt dialog for DTMF help



The list item dialog is used to view the text of a prompt, and it can be used to change the current prompt for DTMF help. Select any option in the list item dialog with the right mouse button. The deselect option deselects a selected prompt. The copy to current option copies a selected prompt into the current prompt data entry field. The Help option activates a dialog that describes the list item dialog.

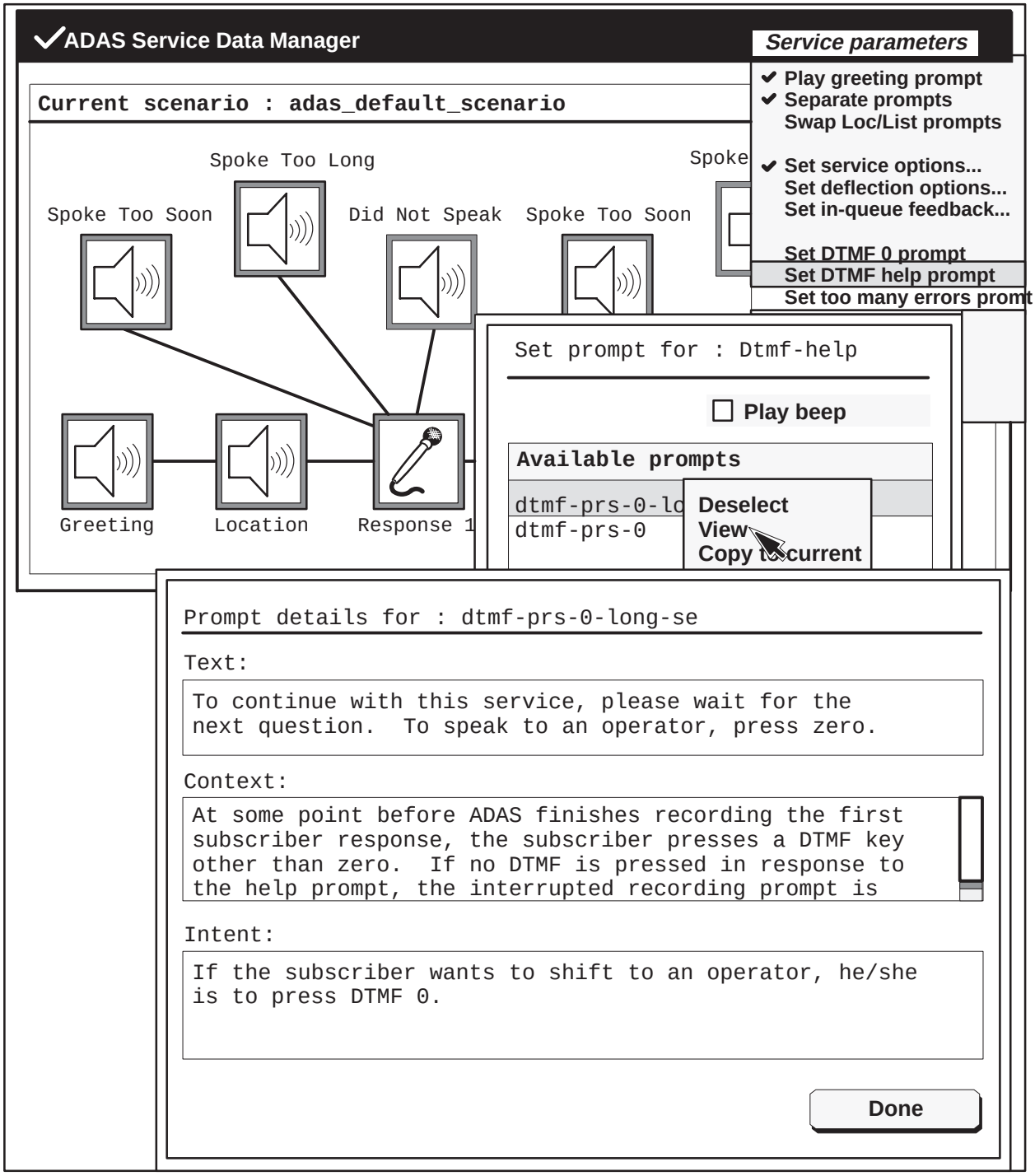
Figure 3–36
List item dialog for DTMF help



The View option in the list item dialog displays a prompt details dialog (see Figure 3–37) that is used to review the message and information associated with a selected prompt. To obtain a help window, place the indicator arrow to the right of the heading “Prompt details for : ,” and press the right mouse button. Slide the arrow over the help option A help window can also be selected for the Done button in the same way as for the dialog. After

reviewing the dialog, click on the Done button with the left mouse button to return to the set prompt dialog.

Figure 3–37
Prompt details dialog for DTMF help



Set too many errors prompt

This option activates a set prompt dialog (see Figure 3–38) that is used to set a prompt that is played when a caller makes too many errors (the number of errors is defined by the set error options dialog). This option is also used to enable a beep that is played after the prompt.

To obtain a help window for this dialog, place the indicator arrow to the right of the title “Set prompt for : Operator_err” and press the right mouse button. Slide the arrow over the help option that appears and release the mouse button. Help windows can also be selected for the cancel and ok buttons. They are obtained in the same way as for the error options.

The default is to not add a beep with the prompt. A check (use left mouse button) in the play-beep box indicates a beep is included with the prompt. Another beep cannot be added to a prompt that already includes a beep. This beep alerts the caller (similar to a telephone answering machine), and ADAS records the caller’s response.

The current prompt given when a caller makes too many errors is shown under the heading `Current prompt.` (See `Operator_hold` in Figure 3–38.) A set of other prompts are shown as available prompts. To select a prompt, click on the prompt with the left mouse button. After a prompt is selected, hold down the right mouse button on the prompt to display a list item dialog. (See Figure 3–39.)

The list item dialog allows an operating company to view the text of a prompt, and it can be used to change the current prompt. Select any option in this dialog with the left mouse button. The deselect option deselects a selected prompt. The copy to current option sets a selected prompt as the current prompt. The Help option activates a dialog that describes the list item dialog.

Figure 3–38
Set prompt dialog for errors prompt

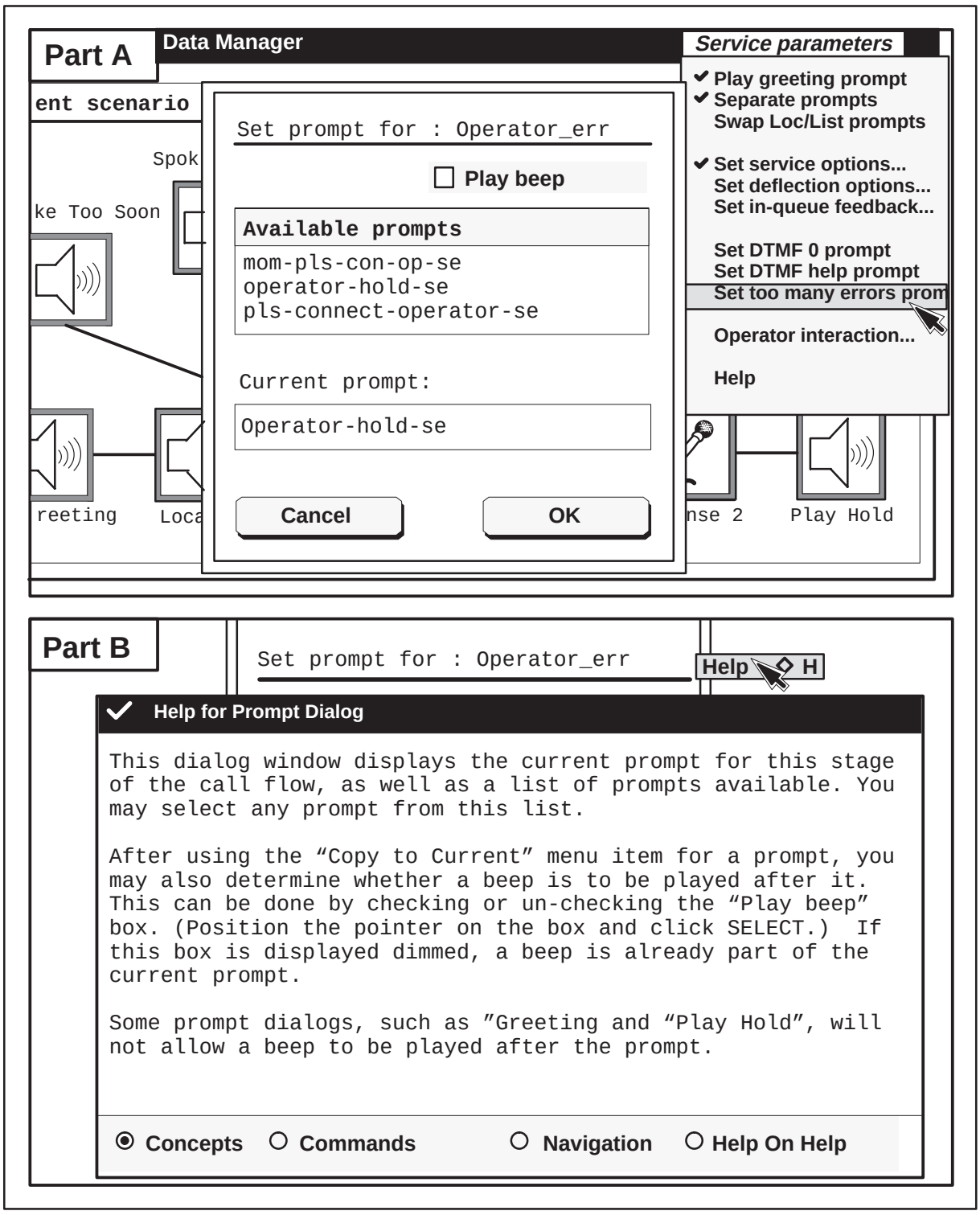
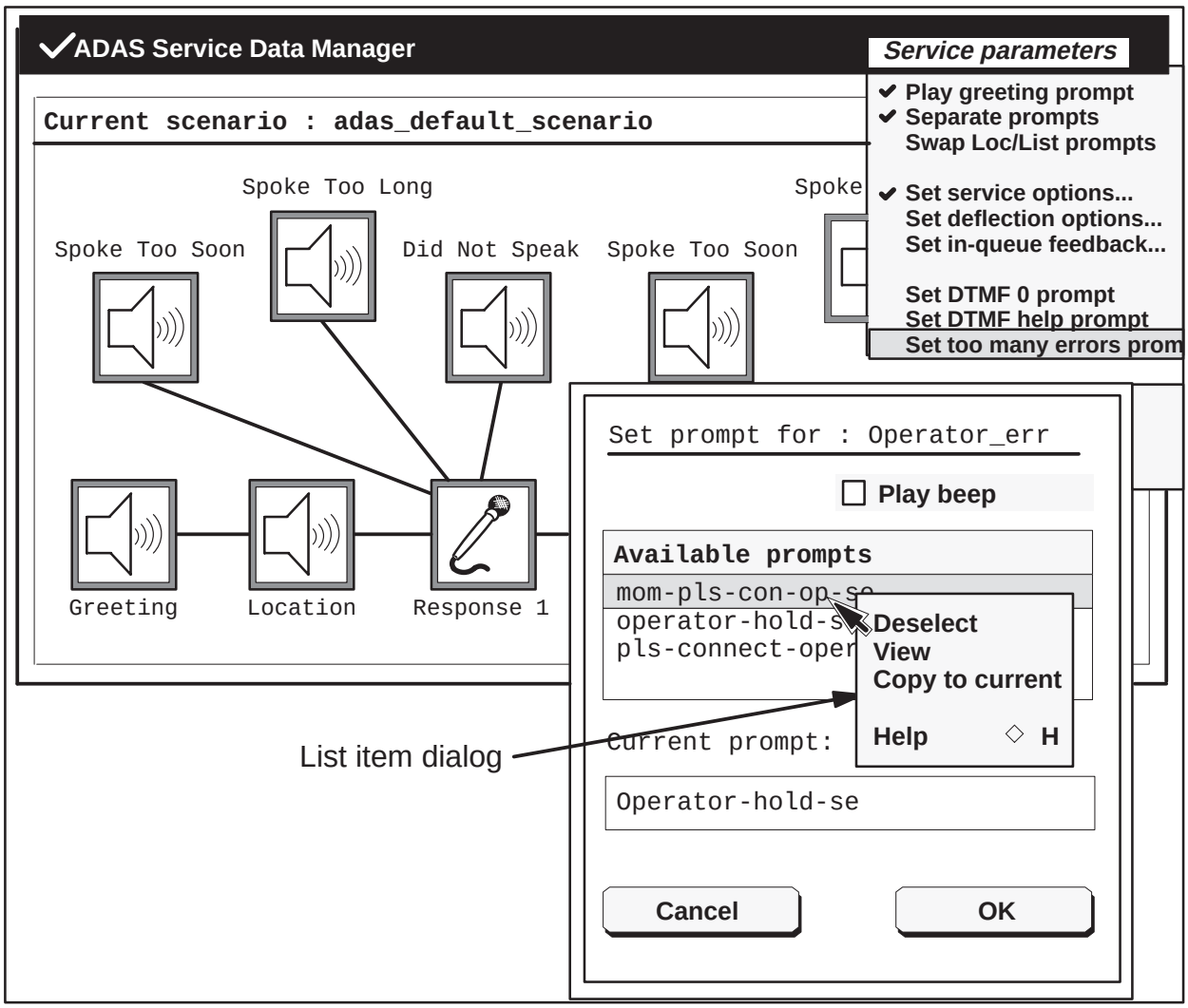
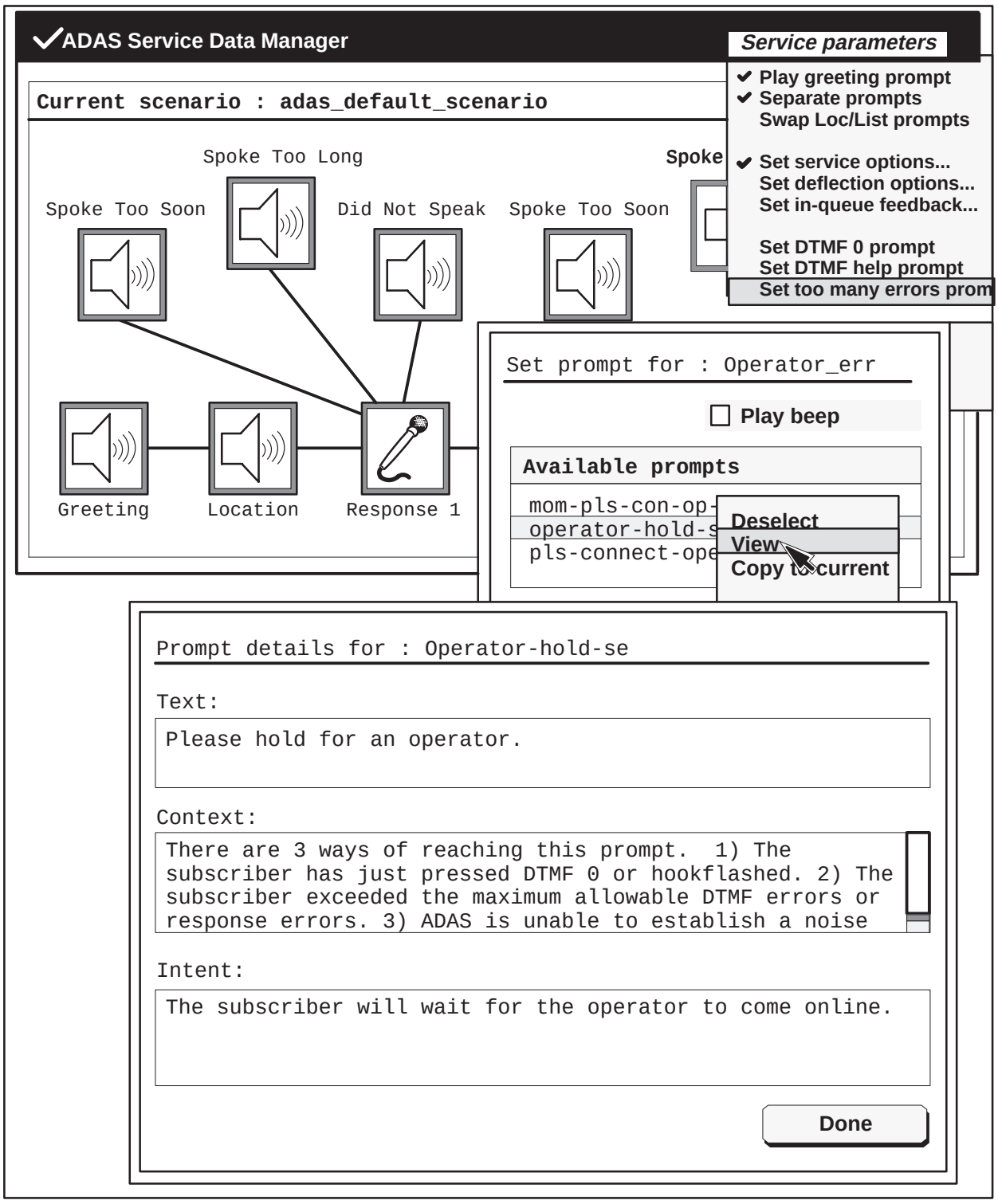


Figure 3–39
List item dialog for errors prompt



The View option in the list item dialog displays a prompt details dialog (see Figure 3–40) that is used to review the message and information associated with a selected prompt. To obtain a help window, place the indicator arrow to the right of the heading “Prompt details for : ,” and press the right mouse button. Slide the arrow over the help option A help window can also be selected for the Done button in the same way as for the dialog. After reviewing the dialog, click on the Done button with the left mouse button to return to the set prompt dialog.

Figure 3–40
Prompt details dialog for errors prompt



Operator interaction...

This option activates the operator interaction dialog. (See Figure 3–41.) This dialog allows an operating company to choose a period of silence that precedes the playback of recorded responses.

To obtain a help window for this dialog, place the indicator arrow to the right of the title “Operator Interaction” and press the right mouse button. Slide the arrow over the help option that appears and release the mouse button. Help windows can also be selected for the Cancel and OK buttons. They are obtained in the same way as for operator interaction.

The silence field for response 1 sets the period of silence between a call arrival signal and the playback of response 1 from the caller. Valid values are 0.0, 0.2, 0.5, 0.8, and 1.0 seconds. The default is 0.5 seconds.

The silence field for response 2 sets the period of silence between the playback of response 1 and the playback of response 2 from a caller. Valid values are 0.0, 0.2, 0.5, 0.8, and 1.0 seconds. The default is 0.2 seconds. (A response 2 field does not appear if the separate prompts option is on.)

> ***Note:*** The default value is targeted for an office being introduced to ADAS. Once operators are ADAS trained, the inserted silence before playback of the responses may be reduced to 0.0 or 0.2 seconds.

To change the value of a response field, move the indicator arrow to the right side of the box. Hold down the right mouse button to display valid values. Move the mouse until the desired selection is highlighted and release the mouse button.

A set of prompts associated with the call arrival signal is shown as available tones. The current tone is shown under the heading `Call Arrival Signal.` (See Figure 3–41.) After a prompt is selected, hold down the right mouse button on the prompt to display a list item dialog (see Figure 3–42) that is used to view the text of the prompt, and that can be used to change the current prompt.

Select any option in the list item dialog with the left mouse button. The deselect option deselects the selected prompt. The copy to current option sets the selected prompt as the current prompt. The help option activates a dialog that describes the list item dialog.

Figure 3–41
Operator interaction dialog

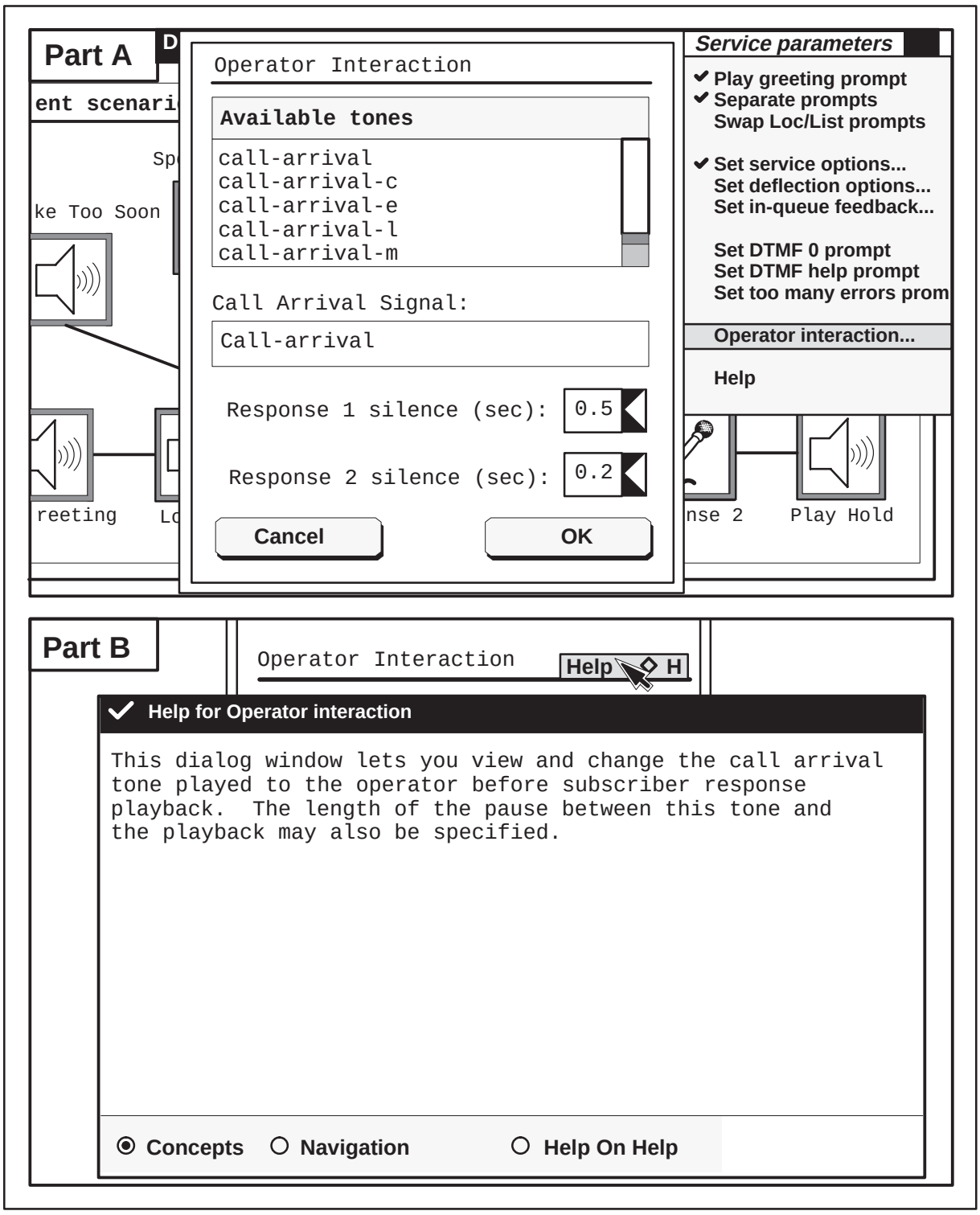
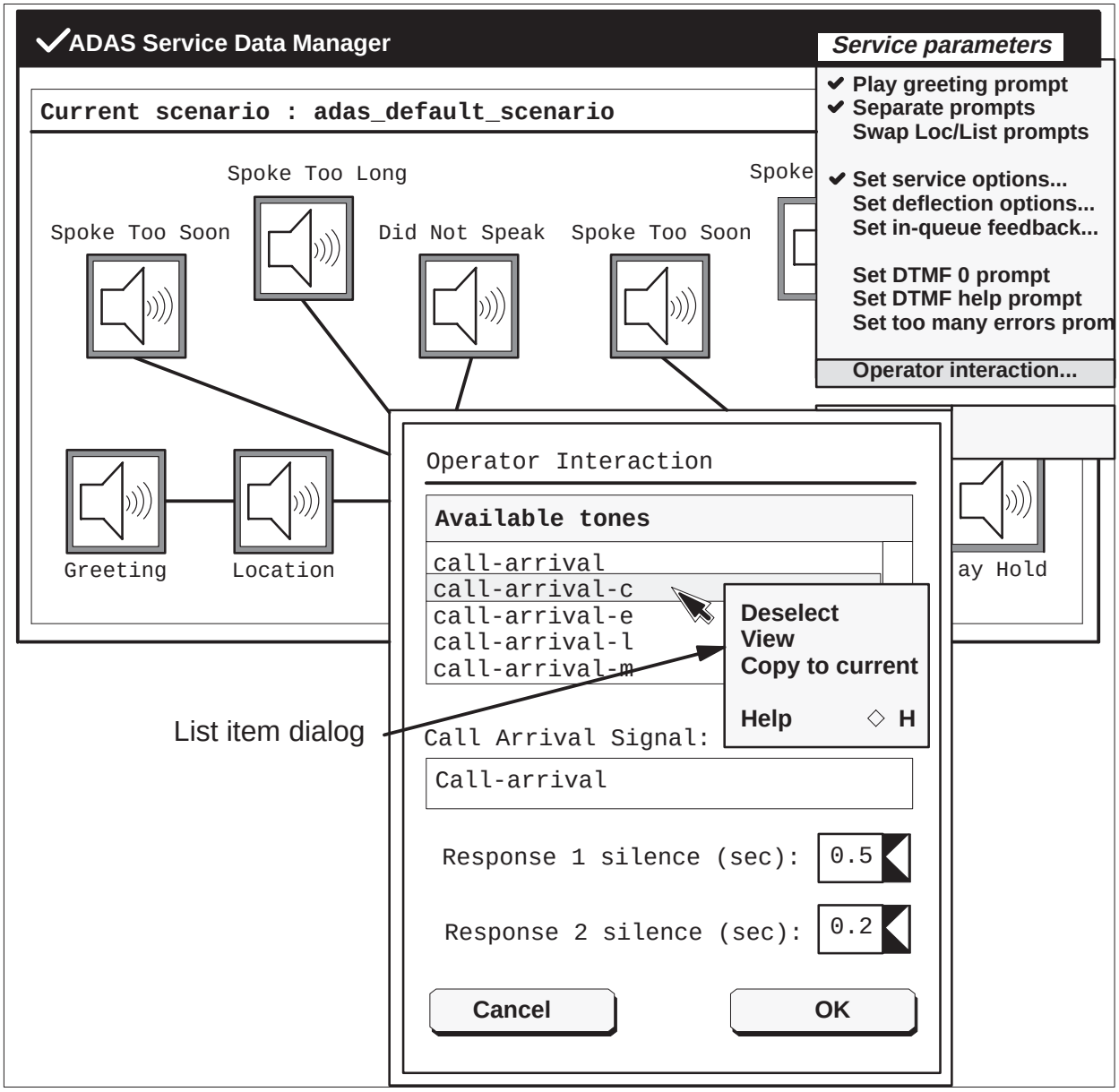
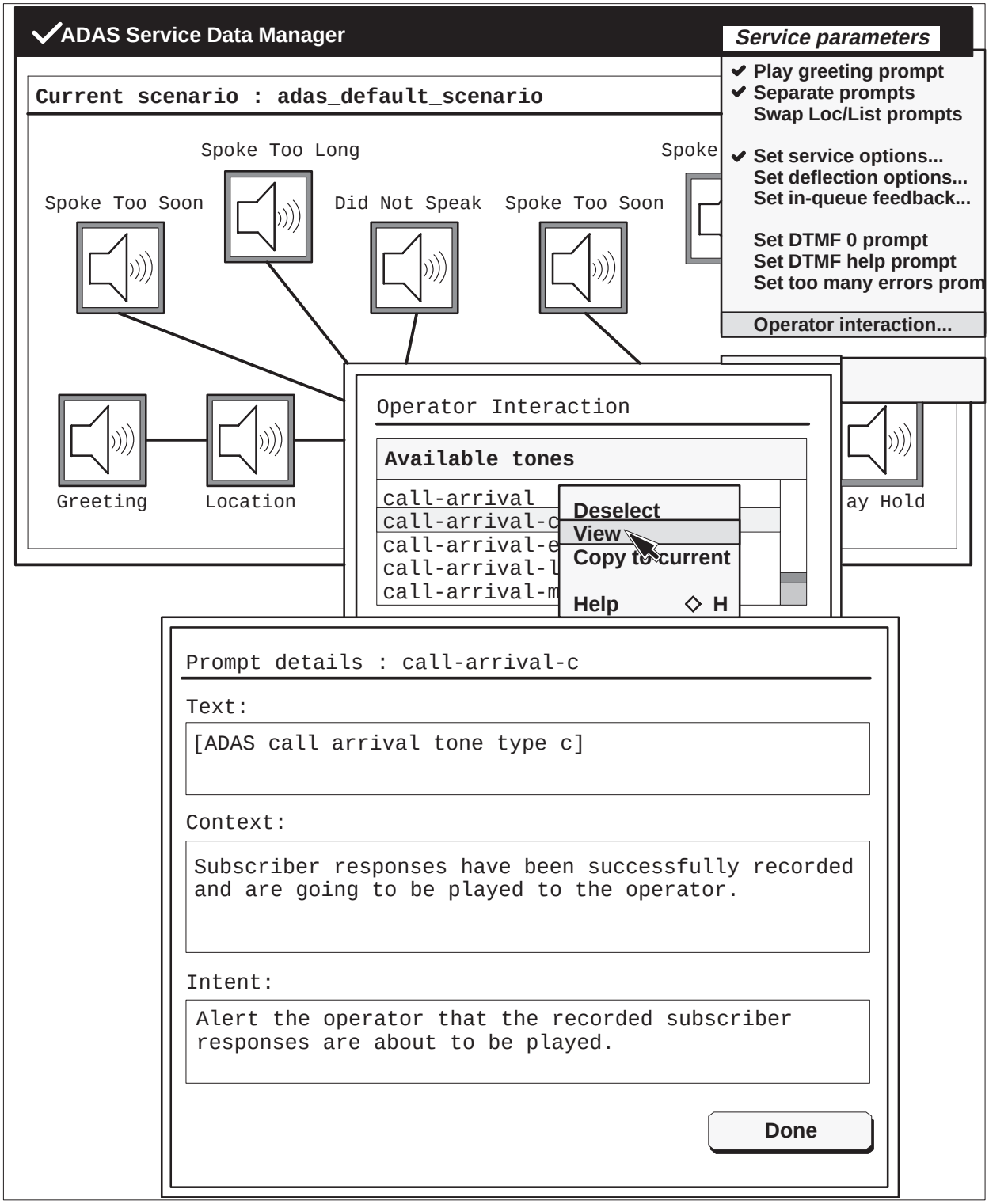


Figure 3–42
List item dialog for operator interaction



The view option in the list item dialog displays a prompt details dialog (see Figure 3–43) that is used review the message and information of a selected prompt. To obtain a help window, place the indicator arrow to the right of the heading “Prompt details for : ,” and press the right mouse button. Slide the arrow over the help option A help window can also be selected for the Done button in the same way as for the dialog. After reviewing the dialog, click on the Done button with the left mouse button to return to the operator interaction dialog.

Figure 3–43
Prompt details dialog for operator interaction



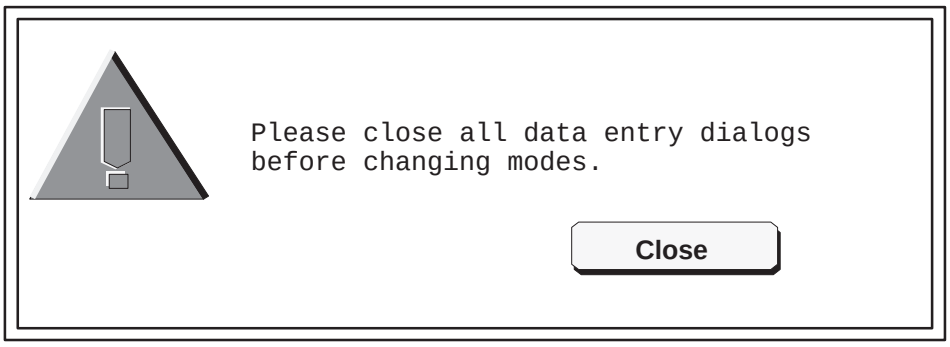
Warning dialogs

In addition to the above dialogs, ADAS also provides general purpose warning dialogs. (See Figure 3–44.) Warnings dialogs are activated by error conditions that affect the operation of ADAS. Warning dialogs are closed during installation, so fatal installation errors are not monitored by a warning dialog.

Warning dialogs indicate errors such as failure during ipc_init., failure generating a file, failure reading a file, or failure reading an audio file. Some warning dialogs indicate fatal errors that prevent the SDM from initializing. Other types of warning dialogs indicate the following conditions:

- All data entry dialogs must be closed before changing modes or activating an upload.
- A default scenario cannot be overwritten.
- An upload status tracefile is empty.
- An error reading or writing a scenario occurred.
- Scenario names must begin with an alphanumeric character and must not contain a space.

Figure 3–44
Example of a warning dialog



ADAS datafill

This chapter describes ADAS settings used to datafill, or specify, ADAS options and responses. This chapter can be used with Chapter 3, “Service data administration”, to control ADAS settings.

ADAS prompts can be configured to meet the needs of an operating company. For example, the operating company can omit the prompt for a city name. Prompts can also be rearranged so callers provide information to ADAS in a specified order.

Prompts

This section describes optional settings for the following prompts.

- Greeting prompt
- Separate prompting mode
- Combined prompting mode
- Prompt and message interrupt
- Skip prompts and messages

Greeting prompt

The greeting prompt introduces ADAS as an automated directory assistance service and can include operating company branding. Options and defaults are described in the following table.

Options: Greeting prompt
• Play greeting prompt enabled • Play greeting prompt disabled
Default:
Play greeting prompt enabled

The operating company can choose how ADAS prompts callers for directory assistance database search information. Information can be requested from a caller either in a separate prompting mode or in a combined prompting mode. These modes are described in the following sections.

Separate prompting mode

In separate prompting mode, ADAS presents locality and listing prompts one at a time to a caller. The caller must respond to one prompt at a time. In this mode, operating company personnel can specify what information (locality or listing name) each prompt requests.

Combined prompting mode

In combined prompting mode, ADAS combines the locality and listing prompts into one prompt. The caller must provide both locality and listing information in the same response. The order of a combined prompt is determined by the selected recorded prompt. Operating company personnel can also specify that only one prompt be presented (only a listing, for example).

Options for the prompt in the combined and separate prompting modes are described in the following table.

Options: Separate prompting mode • First prompt = locality , second prompt = listing name • First prompt = listing name, second prompt = locality
Options: Combined prompting mode—combined prompts • Locality/Listing name = locality first, listing name second • Listing name/Locality = listing name first, locality second **Options: Combined prompting mode—one prompt only** • Locality prompt • Listing prompt
Recommended defaults: Mode = separate prompt mode First prompt = locality, second prompt = listing name

Prompt and message interrupt

An ADAS prompt or message can be interrupted by a dual-tone multifrequency (DTMF) keystroke entry from the caller. If the DTMF is invalid, the prompt or message discontinues and ADAS plays a help message. Prompt and message interrupt options are described in the following table.

Options: Prompt and message interrupt
• Interrupt enabled = play a DTMF help message • Interrupt disabled = do not play a DTMF help message
Recommended default: Interrupt disabled for all ADAS prompts, reprompts and messages

When ADAS is interrupt enabled, any DTMF keystroke (digit) stops playing the current prompt or message. When ADAS is interrupt disabled, all DTMF keystrokes are ignored and the prompt or message continues without interruption.

The DTMF 0 keystroke always interrupts a current ADAS prompt, reprompt, or message regardless of the interrupt attribute of the prompt, reprompt, or message. DTMF 0 aborts ADAS interaction, and the caller hears the prompt specified for the Set DTMF 0 prompt, for example the message "Thank you. Please hold for an operator."

Skip digit

The DTMF # keystroke, also referred to as a skip digit, skips a current prompt or message. When it is enabled, this option is independent of ADAS interruption. When it is disabled, DTMF # is treated the same as other invalid DTMF keys.

Skip prompts and messages

The skip prompts and messages option allows a caller to skip prompts and messages and go directly to recording a response by pressing DTMF #. If this option is disabled, ADAS treats DTMF # as an invalid DTMF key (digit). Skip prompts and messages options are described in the following table.

Options: Skip prompts and messages
• Skip prompts enabled • Skip prompts disabled
Recommended default:
Skip prompts enabled for all ADAS prompts, reprompts and messages

DTMF errors

A caller may press a DTMF key during ADAS interaction. DTMF keys (digits) are either valid or invalid, as described in the following table.

Valid DTMF digits:
• 0 (always valid) • # (valid if skip digit is enabled) (see note)
Invalid DTMF digits:
• 1 to 9 (always invalid) • # (invalid if skip digit is disabled) (see note)
Note: Refer to “Prompt and message interrupt” on page 4-3 for more information on the skip digit.

Valid DTMF digits are those digits that are acceptable during ADAS interaction. Invalid DTMF digits are those which are not acceptable during ADAS interaction. A DTMF error occurs when a caller makes an invalid keystroke (presses an invalid digit).

Total DTMF error maximum

The total number of DTMF errors is equal to the sum of DTMF errors made by a caller during each response collection. If a DTMF error occurs and the total number of DTMF errors has not been exceeded, the caller hears a DTMF help message. For example,

"To speak to an operator, press 0."

The caller can choose to press a DTMF key or to continue the ADAS interaction after the help message is played.

The number of DTMF errors is reset to zero after each of the following phases of response collection:

- introduction
- first response
- second response

For example, after the first response is successfully collected, the number of DTMF errors is reset to zero for the second response collection. If the maximum number of DTMF errors are exceeded, the caller hears operator message 2, as follows:

"Please hold for an operator."

The call is sent to an operator, and the operator does not receive subscriber playback.

The operating company can specify the maximum number of total DTMF errors that a caller can make during an ADAS interaction. Maximum number of total DTMF error options are described in the following table:

Options: DTMF error maximum
• 1 error • 2 errors • 3 errors • 4 errors
Recommended default:
Maximum number of total DTMF errors = 3

Call deflection

If the number of calls per operator exceeds operator queue limits, DA calls are deflected to treatment (before ADAS-caller interaction occurs). If call deflection is enabled, the following parameters must be datafilled:

- minimum holding time to begin deflection
- minimum number of calls at APU to begin deflection
- deflection rate

Call deflection options are described in the following table.

Options: Minimum holding time to begin deflection • 15.0 seconds • 20.0 seconds • 25.0 seconds • 30.0 seconds • 35.0 seconds • 40.0 seconds **Recommended default:** 15.0 seconds
Options: Minimum number of calls at APU to begin deflection 1 to 15 **Recommended default:** 2
Options: Deflection rate (%) 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100 **Recommended default:** 50%

Record errors

If a caller's response does not meet ADAS response collection conditions, ADAS may reprompt the caller for a response. Subscriber errors are described in the following table.

Error: Silence ADAS did not detect a caller's response.
Error: Spoke too soon A caller responded before ADAS response collection began.
Error: Spoke too long A caller's response exceeded the maximum response collection time.

Maximum record errors

The total number of subscriber response errors is calculated as follows:

number of silence errors + number of spoke-too-soon errors + number of spoke-too-long errors = number of subscriber errors

If a subscriber response error occurs and the total number of response errors has not been exceeded, ADAS reprompts the caller. The total number of errors is maintained for each call and is reset to zero after each response collection. For example, after the first response is successfully collected, the number of response errors is reset to zero for the second response collection.

If the maximum number of subscriber response errors is exceeded, the caller hears the Set too many errors prompt. For example, "Please hold for an operator." This call is sent to an operator with no subscriber response playback to the operator.

The operating company must specify the maximum number of combined subscriber response errors. The following table describes the errors and combinations of errors that can comprise a maximum number of two subscriber response errors.

Example maximum subscriber response error combination:
Maximum response errors = 2

- 2 silence errors
- 2 spoke-too-soon errors
- 2 spoke-too-long errors
- 1 silence error and 1 spoke-too-soon error
- 1 silence error and 1 spoke-too-long error
- 1 spoke-too-soon error and 1 silence error
- 1 spoke-too-soon error and 1 spoke-too-long error
- 1 spoke-too-long error and 1 silence error
- 1 spoke-too-long error and 1 spoke-too-soon error

Maximum total number of response errors options are described in the following table.

Options: Number of response errors

- 1 error
- 2 errors
- 3 errors
- 4 errors

Recommended default:

Maximum total number of response errors = 4

A recording error is produced when a caller speaks too soon, too long, or not at all. Errors due to a caller not speaking at all are always handled in accordance with the maximum number of record attempts allowed.

Recording envelope

The ADAS recording envelope refers to the total time allocated for ADAS to collect a caller response. It consists of maximum initial silence, maximum recording time, and maximum allowable silence. The operating company must specify a value representing the allowable time for each component of the recording envelope.

Prespeech time (maximum initial silence)

Prespeech time is the maximum time (number of seconds) a caller can remain silent at the beginning of the recording of a response before no speech is detected by ADAS. Maximum initial silence options are described in the following table. These options apply to both combined and separate prompting modes.

Options: Maximum initial silence
• 2.0 seconds • 3.0 seconds • 4.0 seconds
Recommended default: Prespeech time for subscriber responses = 3.0 seconds

In-speech time (maximum recording time)

In-speech time is the maximum amount of time (number of seconds) that a caller is allowed to speak for a particular response. The operating company must specify a value for this time. Maximum recording time options are described in the following table. These options apply to both combined and separate prompting modes.

Options: Maximum recording time
• 3.0 to 8.0 seconds
Recommended default: Combined prompting mode In-speech time for subscriber responses = 7.0 seconds

Recommended default: Separate prompting mode

In-speech time for subscriber responses = 4.0 seconds

Post-speech time (maximum allowable silence)

Post-speech time is the maximum time (number of seconds) a caller must remain silent after speaking to successfully end the recording of a response. The operating company must specify the values for this time. Maximum allowable silence options are described in the following table. These options apply to both combined and separate prompt modes.

Options: Maximum allowable silence

- 0.5 seconds
- 0.8 seconds
- 1.0 seconds
- 1.2 seconds
- 1.4 seconds

Recommended default: Combined prompting mode

Post-speech time for subscriber responses = 1.4 seconds

Recommended default: Separate prompting mode

Post-speech time for subscriber responses:
locality = 1.0 seconds
listing = 1.0 seconds

Recording beeps

ADAS can play a recording beep after a prompt to indicate the beginning of a response recording to a caller. If a beep is not recorded with a prompt, the operating company can specify whether a recording beep should follow the prompt and precede the recording of a caller's response. Recording beep options are described in the following table.

Options: Recording beep • Do not play recording beeps • Play recording beeps
Recommended default: Do not play recording beeps
Specifications: 250 ms of silence followed by 1300 Hz tone at –20 dBm lasting 300 msec

Call arrival signal

An ADAS call arrival signal is sent to the operator to indicate the arrival of a call and the beginning of caller playback. The call arrival signal should be distinct from other tones and auditory indicators used to differentiate the call as an ADAS call.

Treatment icons

Icons for automated (ADAS) treatment and for no automated treatment are displayed on a TOPS MP or TOPS IWS operator screen to provide additional information at call arrival. The TOPS MPX does not have the capability of displaying an icon.

If an IBM DA is used with the TOP IWS an icon will not appear; however, a text string is available.

The icon for automated treatment indicates that a call received automated treatment. The icon for no automated treatment indicates that ADAS failed or was not available to handle a call. The operator takes over the call and asks the caller for locality and listing information.

It is recommended that these two icons be mutually exclusive. Depending on the office environment of an operating company, only one of the two should be displayed. The datafill for these icons are located in table TOPSPARM, parameters ADAS_CASSETTE_ICON and ADAS_OPR_PROFILE_ICON.

Options for these icons are described in the following table.

Options: Treatment icons
• Do not display either icon • Display the no automated treatment icon only • Display the automated treatment icon only • Display both icons separately
Recommended default:

- If the operating company's normal call is an ADAS call, display the icon for no automated treatment when a call arrives at an operator position with ADAS treatment.

- If the operating company's normal call is not an ADAS call, display the icon for automated treatment when a call arrives at the operator position with ADAS treatment.

In-queue feedback interval

An operator wait interval starts when an operator or please hold message finishes playing and ends when a caller voice path is opened at the operator position. This interval consists of the time required to connect to the operator. Set in–queue feedback allows the setting of phrases or tones. The caller will hear a tone or message depending on what is set in set in–queue feedback.

Operator interaction

After caller playback is completed, the operator hears a call arrival tone followed by the caller's response. A brief interval of silence can be inserted before the state for response 1 and the state for response 2.

Silence intervals

Silence interval options are described in the following table.

Options: Silence intervals
• 0.0 seconds • 0.2 seconds • 0.5 seconds • 0.8 seconds • 1.0 seconds
Recommended default: Response 1 silence 0.5 seconds
Recommended default: Response 2 silence 0.2 seconds (see note)
Note: The default value is targeted for an office being introduced to ADAS. Once operators are ADAS trained, the inserted silence before playback of responses can be reduced to 0.0 or 0.2 seconds.

Managing audio loads

Automatic Directory Assistance Service (ADAS) uses audio load files for announcements that either elicit information from a caller or provide information to the caller. Nortel Networks ADAS audio load files are prepared and packaged as a digital audio tape (DAT) that is separate from the DMS SuperNode.

An ADAS audio load includes the following information:

- audio files containing prerecorded digitized speech for announcements, silences, and tones required for ADAS services
- information files for configuring the application containing text, length, and other information about each audio file

Custom audio loads

The initial (base) audio load delivered with ADAS by Nortel Networks can be customized. Operating companies can add their own customized set of prompts (audio files) to the base Nortel Networks-provided prompt set.

Audio loads can be customized by:

- Nortel Networks
- the operating company, or
- private vendors contracted to the operating company.

Considerations for customizing audio load files

The following should be considered when customizing audio load files:

- A Vocabulary Development System (VDS) audio file must exist for each ADAS prompt to be converted.
- The VDS files must be present on the ADAS OAM position. The operating company is responsible for transferring these files from the VDS system to the ADAS OAM position.
- At least one VDS audio file name must be specified; however, multiple audio file names may be specified.
- The semantic context and intent for each ADAS prompt being converted must be entered. The semantic context and intent are multiline texts that describe the ADAS prompt.
- One or more category selections for each ADAS prompt being converted must be entered. Category selections determine which categories an ADAS prompt is assigned to.
- A name for each ADAS prompt must be entered. This name is used by the service data manager (SDM).

  Note: The semantic intent, semantic context, tone, and category data for each audio file can be found in the ‘‘ADAS Base Voice Replacement (SAX-017)’’ document.

Maximum number of custom audio prompts

Currently, the number of custom audio prompts that can be uploaded into the ADAS service is 103. If the number of custom audio prompts exceeds the 103 limit, uploads in the SDM will fail.

If custom audio prompts have been installed and uploads to the CM are failing consistently, the number of installed custom audio prompts should be checked. The following UNIX system commands may be used to check the number of installed custom audio prompts.

```
cd  /iws/vsd/custom_audio_envs
 ls  *d  | wc  –l
```

If the number returned exceeds the 103 limit, please contact the the next Nortel Networks level of support. If no number is returned or the number is less than the limit, then the maximum number of custom audio prompts that may be uploaded has not been exceeded.

Service data manager files

The VDS-to-VRec (vds2vrec) conversion tool is used to add customized prompts to a standard Nortel Networks prompt set. The vds2vrec conversion tool uses the following SDM files:

- custom_audio/adscmmap.xxxxx (where xxxxx is a number from 32767 – 00001)
- custom_audio/custom_DARTlist

All files created by the vds2vrec conversion tool are stored in the custom_audio directory.

The custom_audio/adscmmap.xxxxx file maps custom audio to its proper categories.

The custom_DARTlist file tracks the allocation of DARTs to customized prompts. For custom DARTs, the maximum recorded DART value (32767) is issued to the first customized ADAS prompt. Subsequent customized ADAS prompts are issued in decreasing DART values. Once issued, a DART value is never reissued.

Installing custom audio prompts

1 Login to the OAM position as ‘admin.’

2 Open a UNIX shell from the OAM Positions Operations toolset.

3 In the UNIX shell window, enter the following command and press the enter key:

```
cd  /iws/vsd
```

4 For each audio file being installed, execute the vds2vrec command with the path name of the audio file:

```
./vds2vrec audio_loads/adas_def.XXNN/vds/prompt_name.aud
```

Where **XXNN** is the version of the current audio load and **prompt_name** is the name of the custom audio being installed. The **aud** suffix identifies the file as an audio data file. For example, if the current audio load was ‘‘adas_def.ab02’’ and the prompt being installed is ‘‘list–yes–se,’’ then the

following command would be entered:

./vds2vrec audio_loads/adas_def.ab02/vds/list–yes–se.aud

Note: Some audio files are stored in subdirectories under the vds directory. The subdirectories are ‘‘Intros-100ms-Silence, Beep-Frags, and Feedback-Strings.’’

5 The vds2vrec command will prompt the user for additional information. The FILE DESTINATION field of a prompt in the document ‘‘ADAS Base Voice Replacement (SAX-017)’’ indicates where an audio file is stored. For example, the destination for prompt ‘info–se’ is stored in ‘‘Intros-100ms-Silence.’’

Note: See the ‘‘ADAS Base Voice Replacement (SAX-017)’’ document for the required semantic intent, semantic context, tone, and category data for each audio file

6 From the ‘‘Advanced Services’’ toolset, select ‘‘Service Data Administration.’’ Verify that the custom audio is available. Use the ‘‘Service Data Manager’’ to select the desired custom audio.

7 Perform an ‘‘Upload’’ in the ‘‘Service Data Manager’’ as detailed later in this chapter.

8 Verify service with test calls.

User prompts

The following prompt sequence is repeated for each audio file, beginning with prompt 1.

Prompt 1

The first user prompt has a maximum character input of 650 characters. This prompt is as follows:

```
Processing VDS audio_file < file_name >
The message text for this audio is:
    < message text >

Enter the Semantic Intent for this
message (terminate input with < cr >< Ctrl–D > ) :
```

Prompt 2

The second user prompt has a maximum character input of 650 characters. This prompt is as follows:

```
Enter the Semantic Context for this
message (terminate input with < cr >< Ctrl–D >
```

Prompt 3

The third user prompt is as follows:

```
Does the message have a tone at the
end ( y or n )?  (terminate input with < cr > ) :
```

Prompt 4

The fourth user prompt lists the following category selections:

```
Category Selection
1:
Intro–messages
2:
Location
3:
Listing
4:
Combined
5:
Loc_sil_reprompt
6:
List_sil_reprompt
7:
Com_sil_reprompt
8:
Loc_early_reprompt
9:
List_early_reprompt
10:
Com_early_reprompt
11:
Loc_late_reprompt
12:
List_late_reprompt
13:
Com_late_reprompt
14:
Input_complete
15:
Request_break
```

```
16:
Error_break
17:
Help
18:
Feedback
19–21: (These categories are not displayed.)
22:
Call_arrival
```

Table 5–1 on page 5-8 describes each category (except categories 19–21) listed in prompt 4.

Prompt 5

The fifth and final user prompt in the series is as follows:

```
Enter a name for this
message ( terminate input with < cr > ) :
```

Prompt 6

The program repeats the accumulated information and requests confirmation before packaging begins, as shown in user prompt 6.

```
The current file is < input_filename >
Message text: < text >
You have entered the following information:
Message name: < name >
Semantic context: < text >
Semantic intent: < text >

Do you wish to continue with packaging ( y or n ) ?
( terminate input with < cr >) :
```

Prompt 7

If the user enters `n` for user prompt 6, the program requests further instructions, as follows:

```
Do you wish to re-enter information
for this message ( enter ‘r’ ) or
exit the program (enter ‘e’ ) ?
( terminate input with < cr > ) :
```

Position messages

The following messages are displayed at the OAM position during message processing:

```
Processing message < message_name >

DART number < dartnum > assigned to

this message

VDS audio data converted

Audio and Information envelope files

created

Category–Message Map entry created
```

These processing messages and the user prompts are repeated once for each audio file name provided on the command line, except for the final processing message, which is repeated once for each separate category entered by the user. When all files are processed the command prints the following terminating message:

```
VDS to VRec conversion complete
```

Service data categories

ADAS prompts are played to a caller to elicit directory assistance (DA) information. In the SDM, operating companies can choose from a list of prerecorded prompts and associate them with certain points (called transactions) in the ADAS call flow. Each ADAS prompt is defined by an information file containing text and a data file containing PCM data.

Information files allow operating companies to view information associated with each prompt, such as text, semantic context and semantic intent. Audio data files are loaded by the voice processing unit (VPU) and played to a caller at the correct transaction. Each prompt is identified by a DART.

These prompts are categorized during the definition process so the operating company can only select from a list of appropriate prompts for each transaction. For example, a general hold prompt is not available for the instruction transaction. The relationships between prompts and categories are defined in the SDM file category-message map.

An ADAS prompt belongs to one or more categories.

Operating companies can re-map the category assigned to a particular transaction. Re-mapping a category changes the available ADAS prompts for the transaction. Category definitions are described in Table 5–1.

Table 5–1
Service data categories

Category name	Description
Intro-messages	Used in the introduction transaction of the application.
Location	Used in prompt-1 and prompt-2 transactions to request the recording of locality.
Listing	Used in the prompt-1 and prompt-2 transactions to request the recording of listing.
combined	Used in prompt-1 and prompt-2 transactions to request the recording of locality and listing.
loc-sil-reprompt	Used in silence-reprompt-1 and silence-reprompt-2 transactions to re-request recording of locality when a caller did not answer a prompt.
list-sil-reprompt	Used in silence-reprompt-1 and silence-reprompt-2 transactions to re-request recording of listing when a caller did not answer a prompt.
com-sil-reprompt	Used in silence-reprompt-1 and silence-reprompt-2 transactions to re-request recording of locality and listing when a caller did not answer a prompt.
loc-early-reprompt	Used in too-soon-reprompt-1 and too-soon-reprompt-2 transactions to re-request recording locality when a caller began speaking too early.
list-early-reprompt	Used in too-soon-reprompt-1 and too-soon-reprompt-2 transactions to re-request recording listing when a caller began speaking too early.
com-early-reprompt	Used in too-soon-reprompt-1 and too-soon-reprompt-2 transactions to re-request recording locality and listing when a caller began speaking too early.
loc-late-reprompt	Used in the too-long-reprompt-1 and too-long-reprompt-2 transactions to re-request recording of locality when a caller spoke beyond the end of the recording period.
list-late-reprompt	Used in the too-long-reprompt-1 and too-long-reprompt-2 transactions to re-request recording of listing when a caller spoke beyond the end of the recording period.
com-late-reprompt	Used in the too-long-reprompt-1 and too-long-reprompt-2 transactions to re-request recording of locality and listing when a caller spoke beyond the end of the recording period.
input-complete	Used in the general-hold transaction when all caller responses have been successfully collected.

—continued—

Table 5–1
Service data categories (continued)

Category name	Description
request-break	Used in the operator-requested transaction when a caller presses DTMF 0.
error-break	Used in the response-errors transaction when the number of caller errors to a prompt has exceeded the datafilled limit.
feedback	Used in the in-queue feedback transaction when a caller is queued for an operator.
help	Used in the DTMF-help transaction when the subscriber has pressed an Invalid DTMF key.
ADAS call-arrival	Used in the call-arrival-signal transaction when a channel is open to the operator to play recorded subscriber responses.
record	Used in the record-tone transaction when a recording prompt has been played to the subscriber and the application is going to begin recording subscriber voice input.
End	

Uploading audio load files

Use the toolset menu to upload audio load files from the OAM workstation to the DMS-Core.

The upload procedure is as follows:

1 Select the service data administration tool from the advanced services toolset menu.

2 Using the right mouse button, click on the graphical title-bar menu and drag the mouse to pull down (display) the menu.

3 Click on the upload option.

Note: Upholding the audio load to the DMS-Core takes up to 45 minutes to complete.

Each audio file played to a caller is tagged by a unique digital audio reference tag (DART) to be recognized by the service data manager (SDM). If the SDM does not recognize DARTs that reference new custom prompts and messages, a dialog for unavailable prompts appears automatically when an upload is attempted. This dialog displays a list that references prompts that cannot be identified.

Service monitor

The service monitor provides ADAS call information such as speech processing data that is collected and displayed in several dialog windows. There is also a feature that collects and sends data with operational measurements (OM) pegs to the service monitor at intervals.

Furthermore, a tool monitors call scenarios during the period when the user starts the device and stops it. The workstation also displays the data in bar graphs and pie charts. Exact measurements are not available because data is rounded to the nearest millisecond, second, or percent.

The call processing engine (CPE) runs on the application processing unit (APU). The APU provides call processing for the ADAS part of the directory assistance call. Because the workstation communicates with the APUs, the LAN connection must be available.

The service monitor runs on the operation, administration, and maintenance (OAM) position workstation. The workstation is an HP 9000 series that runs UNIX and UNIX application environment (UAE) base software. The TOPS12 Feature 59007596 upgrades the operating system of the ADAS workstation from Hewlett-Packard UNIX (HPUX) 09.03 to HPUX 09.07. The procedures to install and to upgrade the HPUX 09.07 operating system for the ADAS workstation are in the *TOPS12 ADAS HP 9000/712 OAM Position Release Notes*.

The HP-UX 09.07 operating system can support a wider range of available hard drives. The upgrade to this operating system changed installation and upgrade procedures, which are described in the *TOP12 ADAS HP 9000/712 OAM Position Release Notes.*

The ADAS workstation applications were formerly built in and ran in the HPUX 09.03 operating system. HP has discontinued support for this system. While the HP712/60 workstation hardware is still supported, the one gigabyte (GB) hard drive in the ADAS workstation is no longer available. The HPUX 09.03 operating system does not support hard drives larger than one GB, which presented a problem with replacement of hard drives that failed.

Service monitor options menu

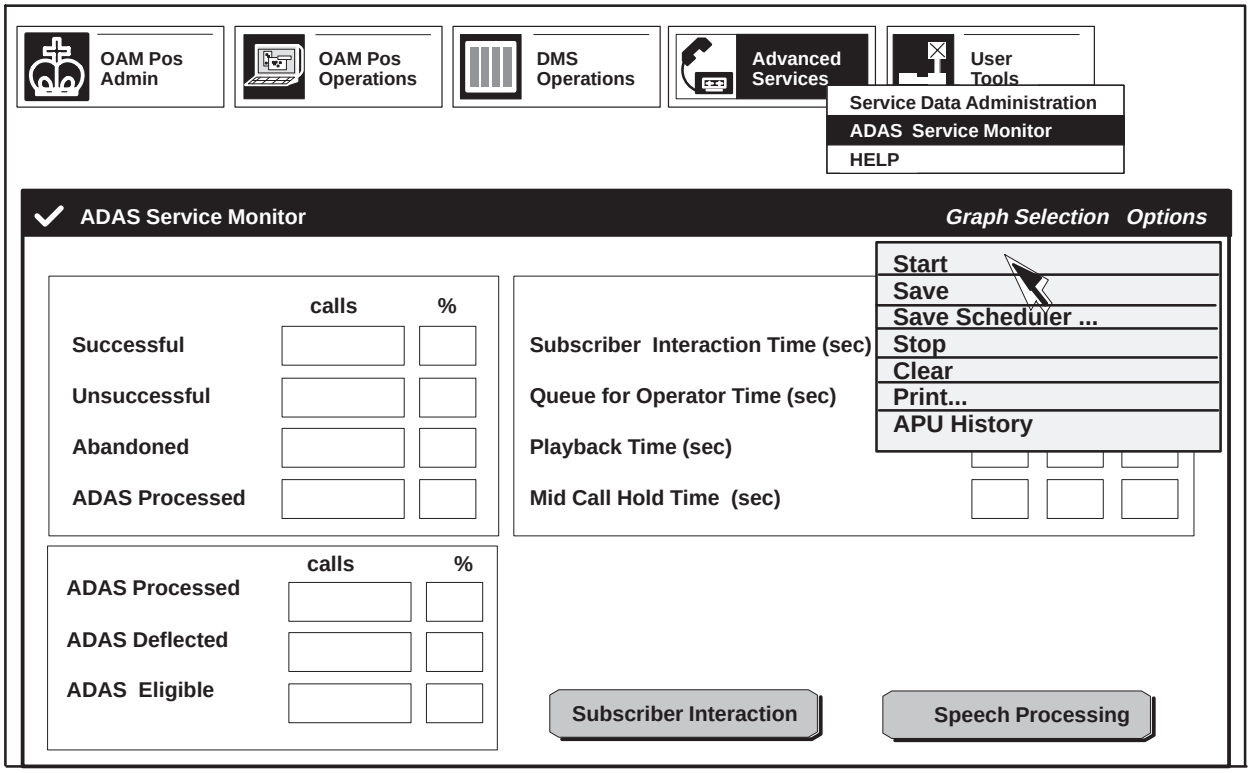
If the user clicks on the Options section with the right mouse button, the screen displays these choices:

- Start, which starts Service Monitor data collection from local APUs
- Save, which captures a snapshot of current Service Monitor data on a file
- Save Scheduler, which schedules a time to archive files
- Stop, which halts Service Monitor data collection
- Clear, which cancels all Service Monitor reports, charts, and graphs
- Print, which provides the capability to select and to print a Service Monitor data file
- APU History, which displays information about receipt of APU performance data

When the service monitor is open, it does not start collecting data until the user chooses the Start command. The service monitor receives notification when any APU changes from an active or inactive state.

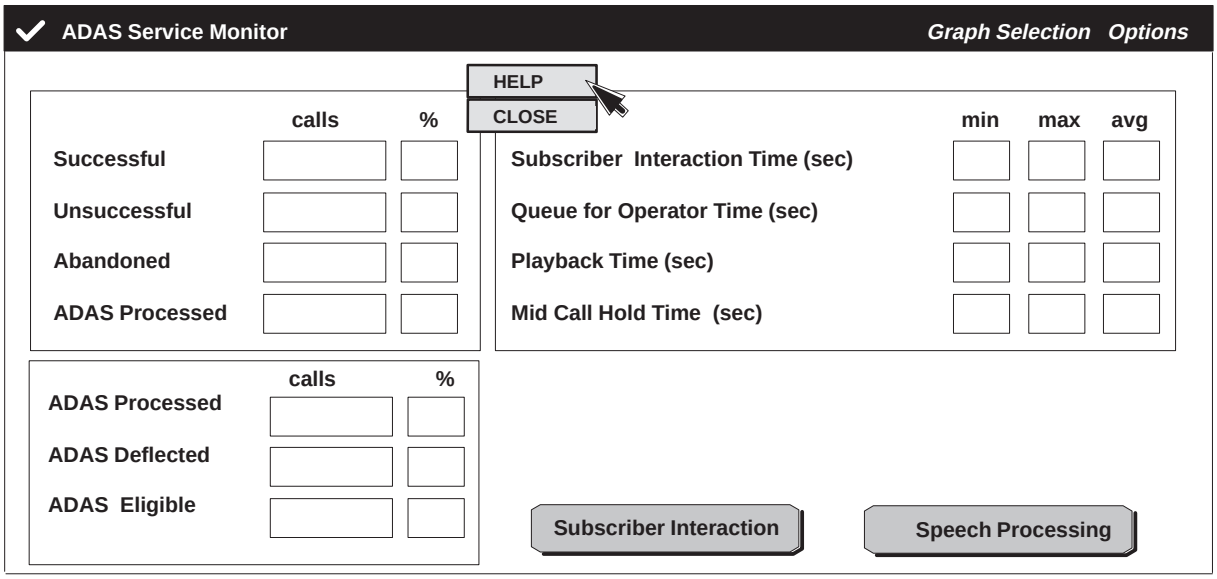
The user can access this feature through the Advanced Services icon of the toolset. A click with the right mouse button on the menu item of the ADAS service monitor makes the main window appear as shown in Figure 6-1.

Figure 6-1
Main window



There is a help option available to give more information about data the user is collecting. To get a help window, place the indicator to the right of the ADAS Service Monitor heading. Slide the arrow over the help option that appears and release the mouse button as shown in Figure 6-2.

Figure 6-2
Main window help option



Collection Scheduling Dialog

When the user selects the “Save Scheduler” menu item, a dialog box appears that allows the user to select the times when collection should stop and restart. Each hour has a corresponding toggle box. Select the toggle boxes by clicking the left mouse button while the mouse cursor is over the toggle box. Click the “Done” button to close the dialog box.

Print

When the user selects the “Print” menu item, the dialog box appears that shows all available performance data files. Click the left mouse button while the mouse pointer is over the file name to print a file. Once selected, print the file by clicking the “Print” button. Selection of this option causes a print dialog, which allows the user to set printer options. Use the “Done” button to exit from the Print dialog.

Performance Data File Contents

The Performance Data File contains all the performance data information that the ADAS service monitor screen displays. The data is formatted to fit on a single 8.5x11 page of paper. The file is stored in standard ascii text format.

APU History dialog

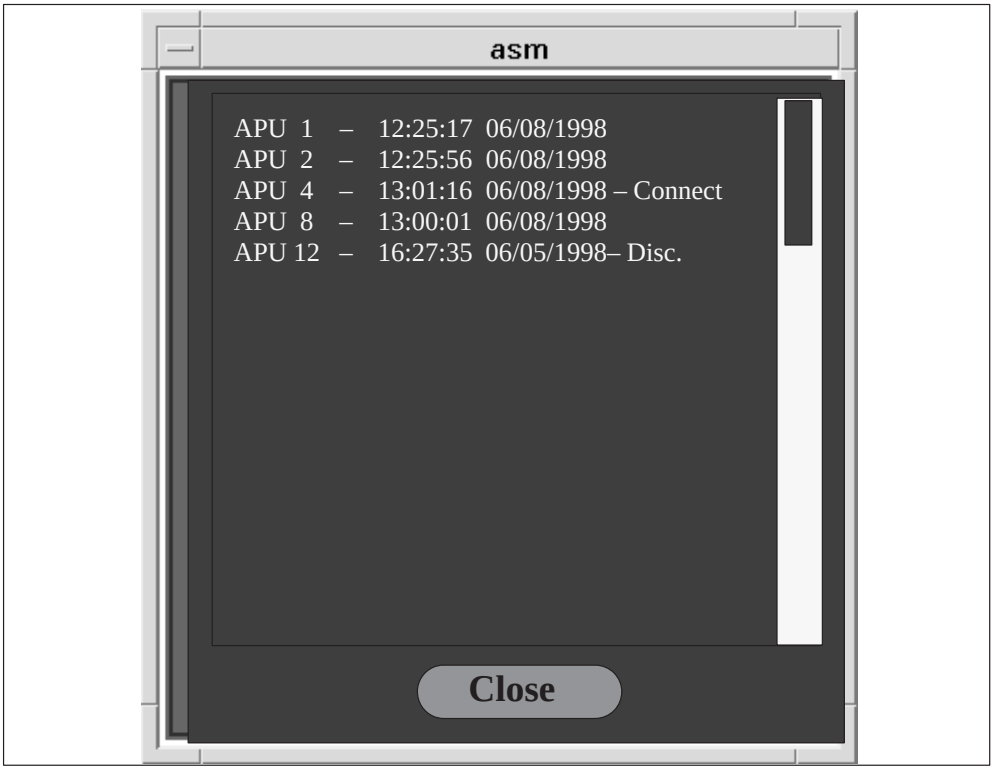
When the user selects the APU History option from the Options menu, the APU History dialog box appears on the screen. The dialog box displays information about the last time the APU history tool received data from each APU.

The ADAS service monitor allows the user to indicate the times at which the data is saved on the performance data files. The service monitor tells each local APU that it requires APU data. Every five minutes, each local APU sends call data to the service monitor. The dialog box automatically shows the updated APU information. It also gives the time and date that each APU last provided performance data. Updates appear in the dialog box at each interval.

The connection status, which is either connected or disconnected, appears for each APU in the dialog box. A “Disc” tag appears with the APU History status if the service monitor loses connection with an APU. When the service reestablishes a connection, a “Connect” tag appears until the first data update. See Figure 6-3. The tool saves the performance data in files each time performance data collection is stopped and restarted. The user can save and print these files at a later time.

Figure 6-3
APU History dialog box

FW-xxxxx



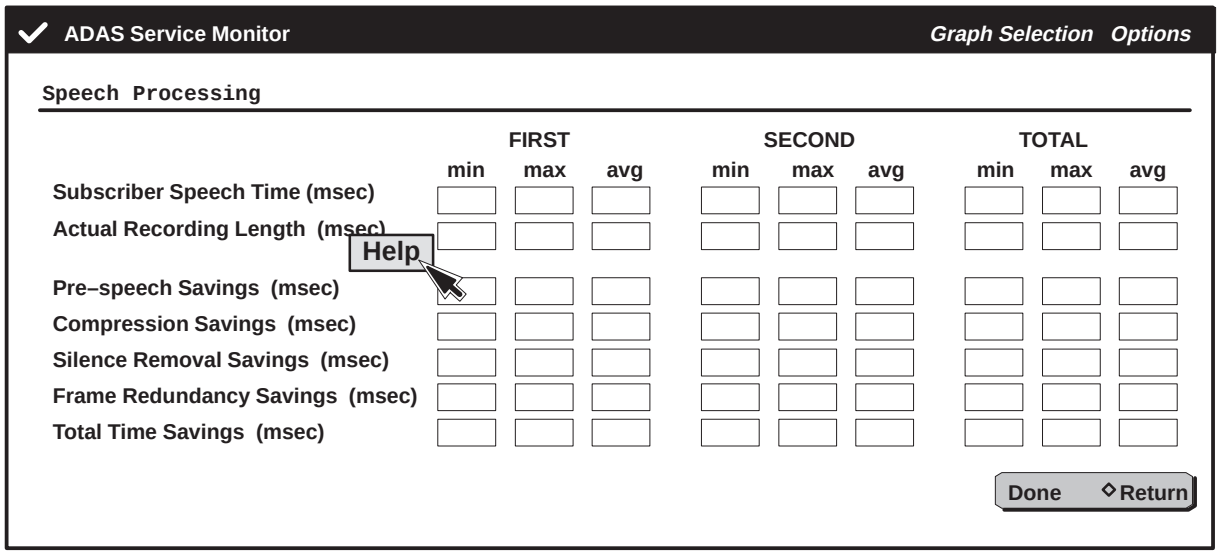
Use the scroll bar on the right side of the box if all of the APUs do not appear at one time. Use the “Close” button to close the dialog box and to remove it from the screen.

Service monitor data

The main window has four main divisions: call disposition, call phase times, speech processing, and subscriber interaction.

There is a help option in each of these four divisions. To get a help window for one of the division's sections, place the indicator arrow to the right of the heading. Then press down with the right button. Slide the right arrow over the help box that appears and release the button. Inside the subscriber interaction division, the user can get additional information about the actual recording length by clicking on the right mouse button near the heading as shown in Figure 6-4.

Figure 6-4
Data help options



Call disposition

The call disposition displays the total number of successful, unsuccessful deflected or abandoned ADAS calls in the main dialog box. (See Figure 6-5). The feature also provides the percentage of each call disposition type in relation to the total number of calls.

A successful call is an ADAS call that completes all of the following:

- correctly prompts the subscriber for the locality and listing
- connects the subscriber to an operator

- plays the listing and locality back to the operator

A call that is not successful can result under the following conditions:

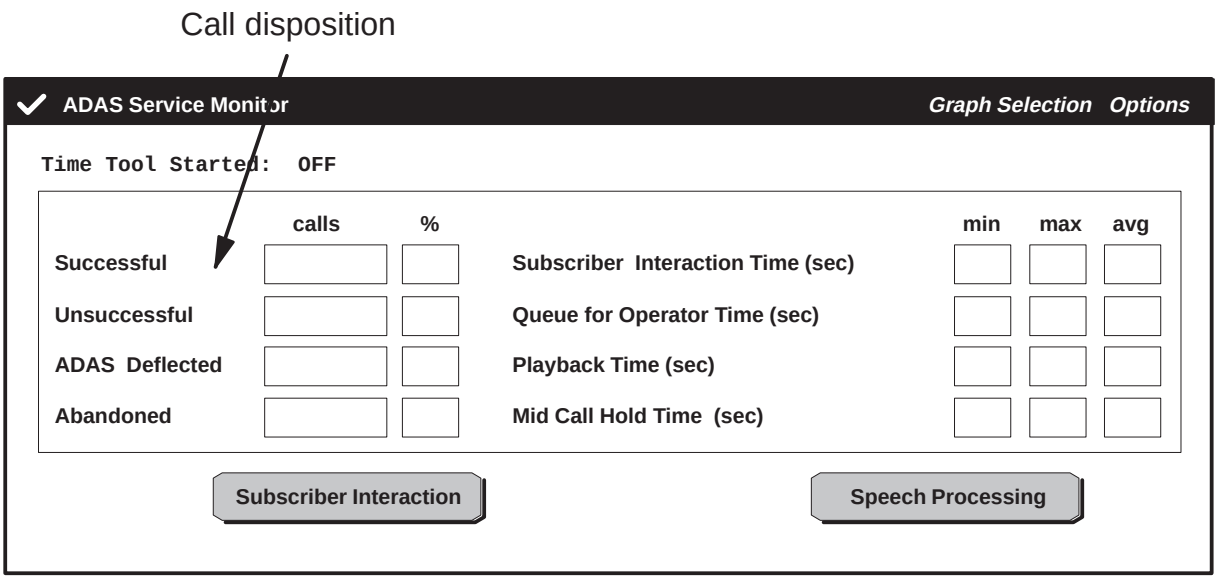
- the subscriber selects DTMF 0 to request an operator
- the set noise floor failed and ADAS was set to not continue when it fails
- the subscriber requests an operator anytime during the subscriber interaction phase of the call by hook-flashing. The term hook-flashing means the subscriber depresses and releases the telephone's switch-hook. Hook–flashing is used to request an operator from a non-touch-tone telephone.
- the subscriber presses too many invalid DTMF keys during the subscriber interaction phase of the call
- the subscriber records too many errors. This event includes speaking too soon or too long or recording silence

An abandoned call occurs when the subscriber discontinues the call under the following conditions:

- during subscriber interaction
- while in queue for an operator
- during playback of the locality and listing to the operator

A deflected call is a candidate for return to the compute module (CM) before any link between the subscriber and the ADAS system occurs. The APU decides if a call is a candidate for deflection, based on the determination about status of the operator queues in the CM.

Figure 6-5
Call disposition window



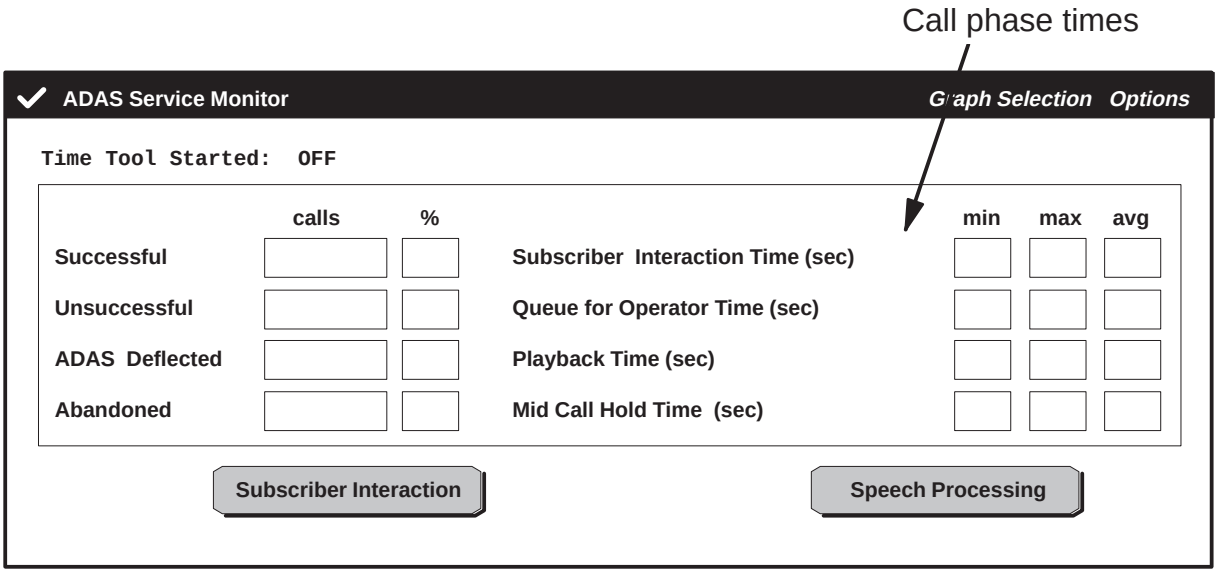
Call phase times

The main window also displays details about the the minimum, maximum and average length of time a call uses in each call phase. In the period of time of seconds, the call phase times are separated into these categories:

- subscriber interaction phase, which refers to the time the subscriber used from the beginning of the ADAS call until going into queue for an operator.
- queue for operator phase, which refers to the amount of time the ADAS call waits in queue for an operator after the locality and listing have been correctly recorded.
- playback phase, which refers to the time taken for recording to be played back to the operator.
- mid call hold phase, which refers the total time the subscriber spent in queue for an operator and waited while the recording played back to the operator.

When ADAS is configured for mixed prompts, the length of time for any of the above described phases is shown as the first response.

Figure 6-6
Call Phase Times



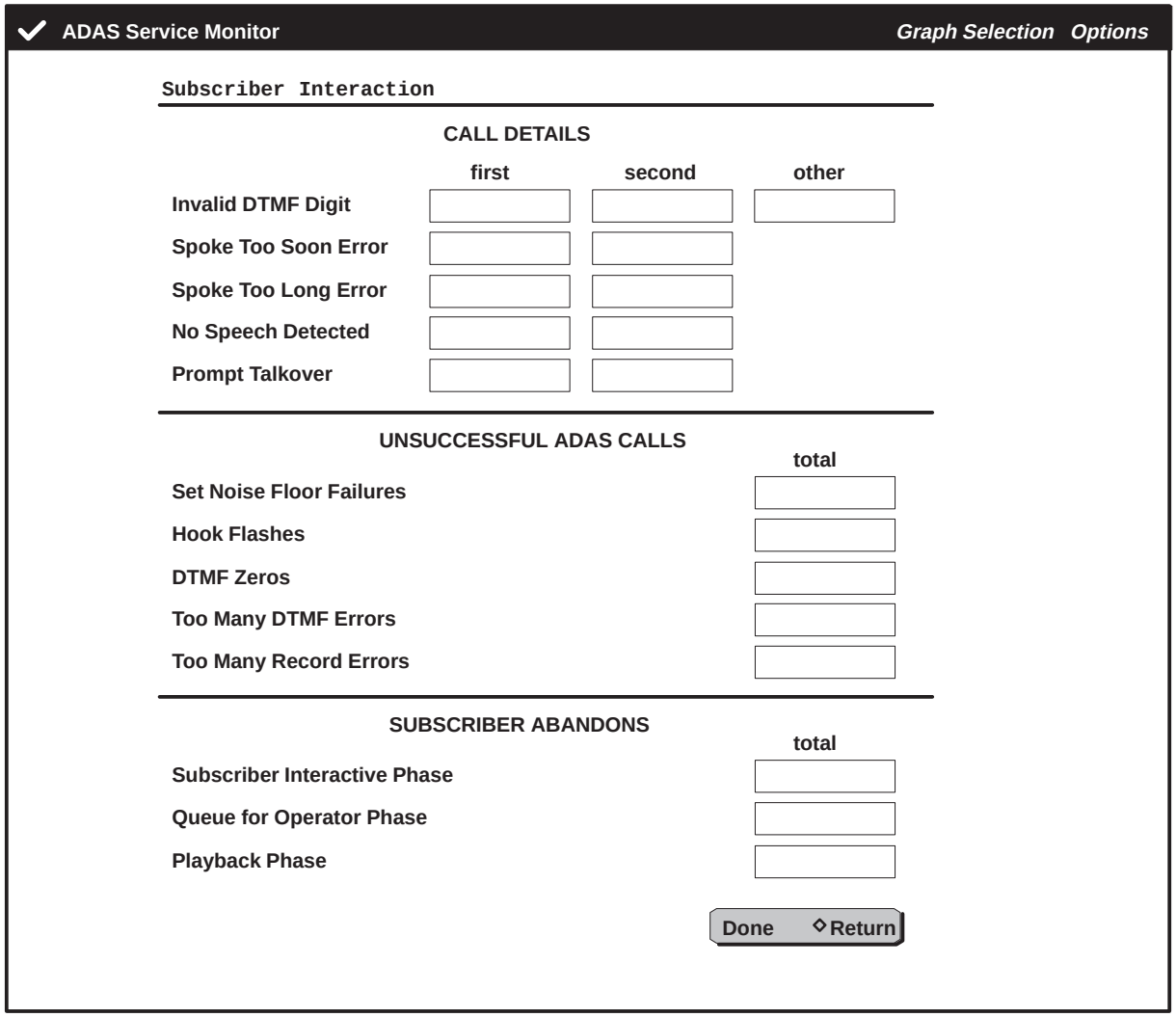
Subscriber interaction

The main window also provides access to inform the user about the time saved during subscriber interaction. With the left mouse button, click on the subscriber interaction heading in the lower right side of the window to display the subscriber interaction window. See Figure 6-7 for an example of the subscriber interaction window.

The following details are collected to help analyze subscriber interaction:

- invalid DTMF Digit, which refers to the when the subscriber hits an invalid DTMF key during the first or second prompt
- spoke too soon error
- no spoken language detected
- prompt talkover, which refers to the occurrence in which the subscriber responds to the prompt before it finishes.

Figure 6-7
Subscriber interaction



Speech processing

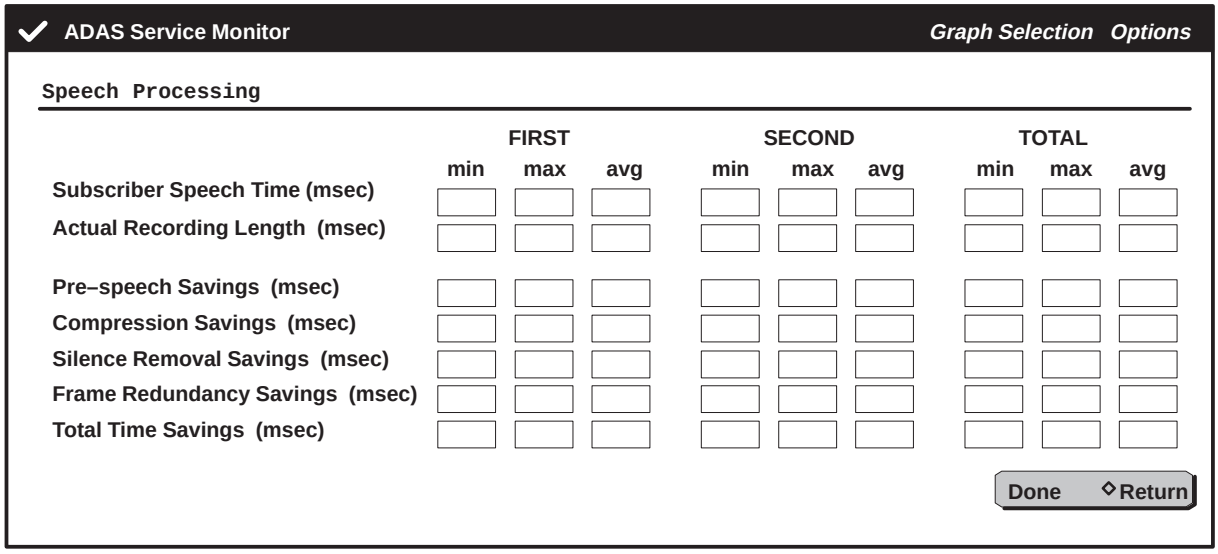
Because speech processing shortens the actual recorded prompts, the length of time the subscriber spends responding to the locality and listing prompts is collected with the time savings that occurs.

The main window provides access to speech processing, which gives an outline of the initial subscriber speech time and the actual recording length. The time saved during speech processing is given in milliseconds. A click on the Speech Processing heading with the left mouse button displays the speech processing window as shown in Figure 6-8.

The following techniques are used to record the subscriber's responses:

- Pre-speech removal adjusts the amount of silence from the beginning of the speech envelope.
- Speech compression shortens the subscriber response by compressing the response as the subscriber records it.
- Silence removal removes periods of silence not necessary from the recording of the subscriber response. Silence needed for comprehension of the subscriber response remains. It is generally removed when there is silence between words.
- Frame redundancy is removal of redundant speech segments from the recording of the subscriber response. Frames are on the order of tens of milliseconds in length. Removal of redundant frames shortens the subscriber response but does not significantly change how clear the response is.

Figure 6-8
Speech processing



Service monitor graphs

The service monitor also provides pie charts or graphs with information about call information, speech processing, and subscriber interaction.

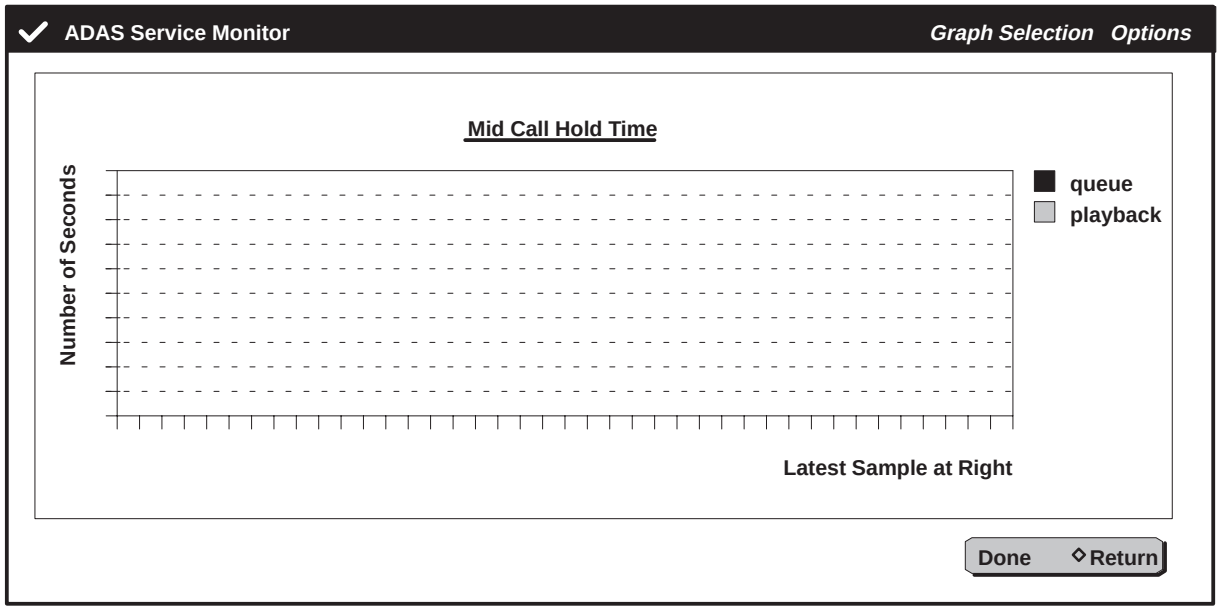
In the main window, click on the graph selection menu with the right button to view the three menu items, which are call information, speech processing, and subscriber interaction. There are several bar graphs and pie charts to also help analyze data.

Call information

The three items in the call information menu are:

- the call disposition pie chart, which describes the total number of ADAS calls divided into the number of successful, unsuccessful, deflected and abandoned calls.
- the call phase analysis pie chart, which represents the average length of time for an ADAS call. It is divided into three main phases, which are subscriber interaction, in queue and playback to an operator.
- the mid call hold time graph, which shows the average length of time the subscriber waits while in queue for an operator and waits during playback of the locality and listing to the operator. See Figure 6-9. The information appears at 15-minute intervals.

Figure 6-9
Mid call hold time graph



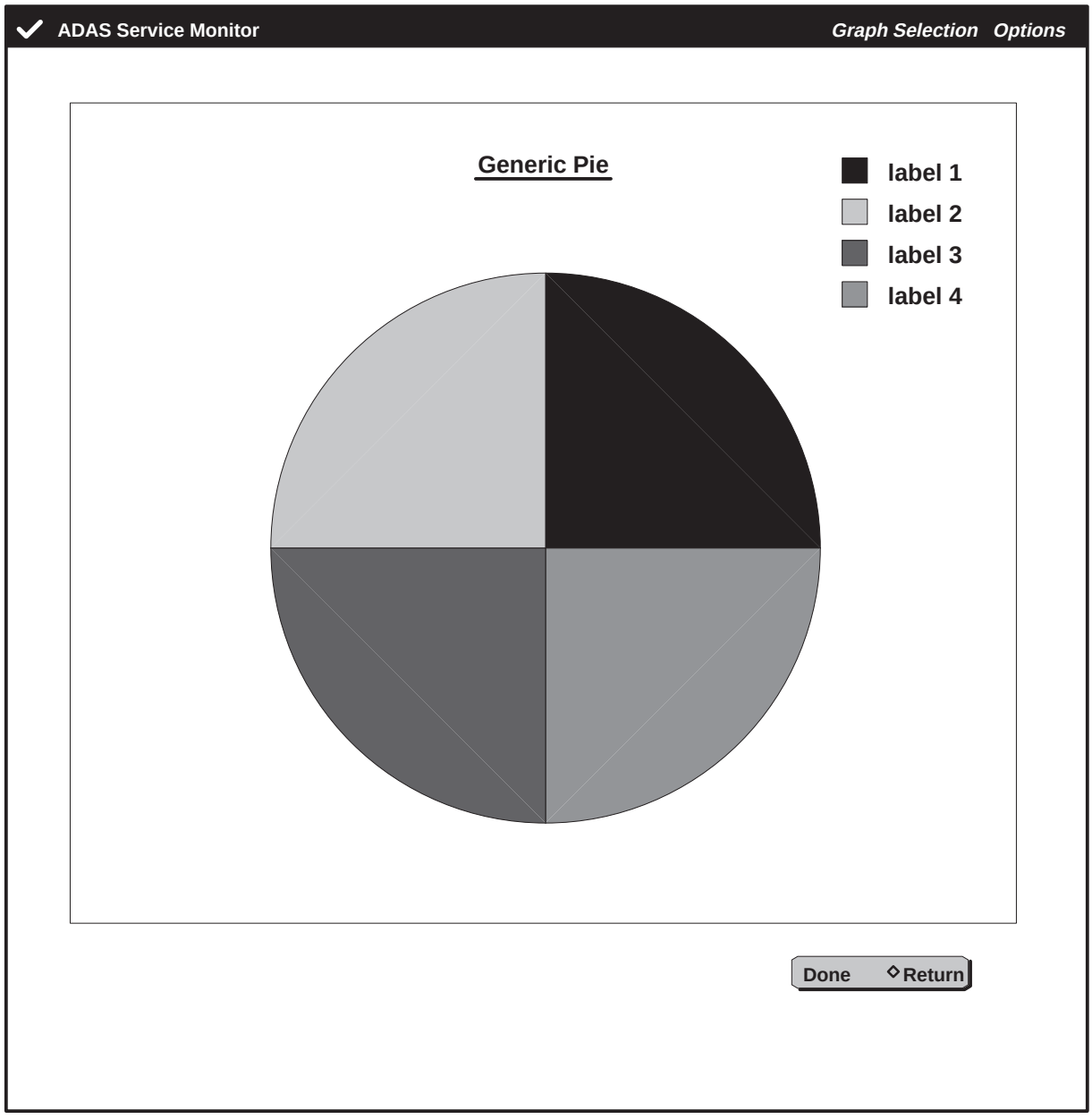
Speech processing

The two items in the speech processing menu are:

- the speech processing analysis pie chart, which represents the total subscriber speech time divided into the actual record length and the total time savings when applying the configured speech processing methods.
- the speech processing savings pie chart, which shows the total savings when applying speech processing methods, dividing the information into pre-speech elimination, speech compression, silence removal, and frame redundancy savings.

A generic pie chart is shown in Figure 6-10.

Figure 6-10
Pie chart example

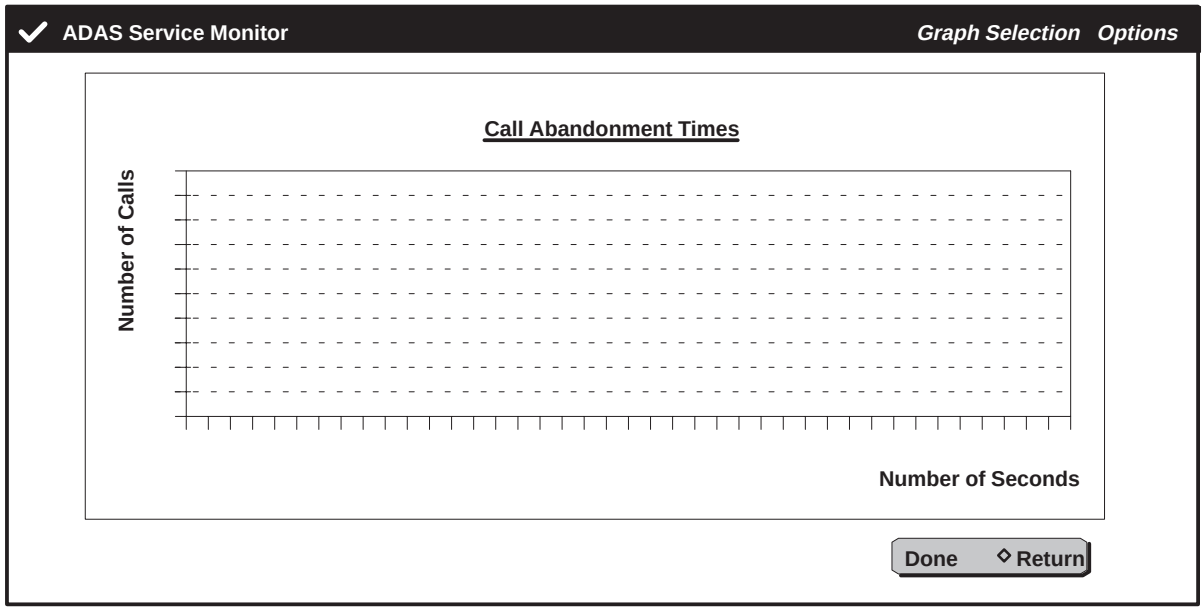


Subscriber interaction

The three items in the subscriber interaction menu are:

- the unsuccessful call analysis pie chart, which represents the total number of unsuccessful calls, divided into hook flashes, DMTF 0s, too many DTMF errors, too many record errors, and set noise floor failures when not configured to continue.
- the abandon call analysis pie chart, shows the total number of abandoned ADAS calls, divided into subscriber interaction, in queue and playback phases.
- the call abandonment times histogram divides the ADAS calls into 1 second intervals and shows the number of subscribers who discontinued ADAS at each interval. See Figure 6-11 for an example of the histogram.

Figure 6-11
Call abandonment times histogram



Data backup

ADAS-specific data files reside on the hard disk drive of the OAM position. These files can be transferred from the position disk drive onto a DDS (DAT-format cartridge) tape to create a backup copy. This backup tape can then be used at a later time, if necessary, to restore the data files to the hard disk drive unit of the OAM position.

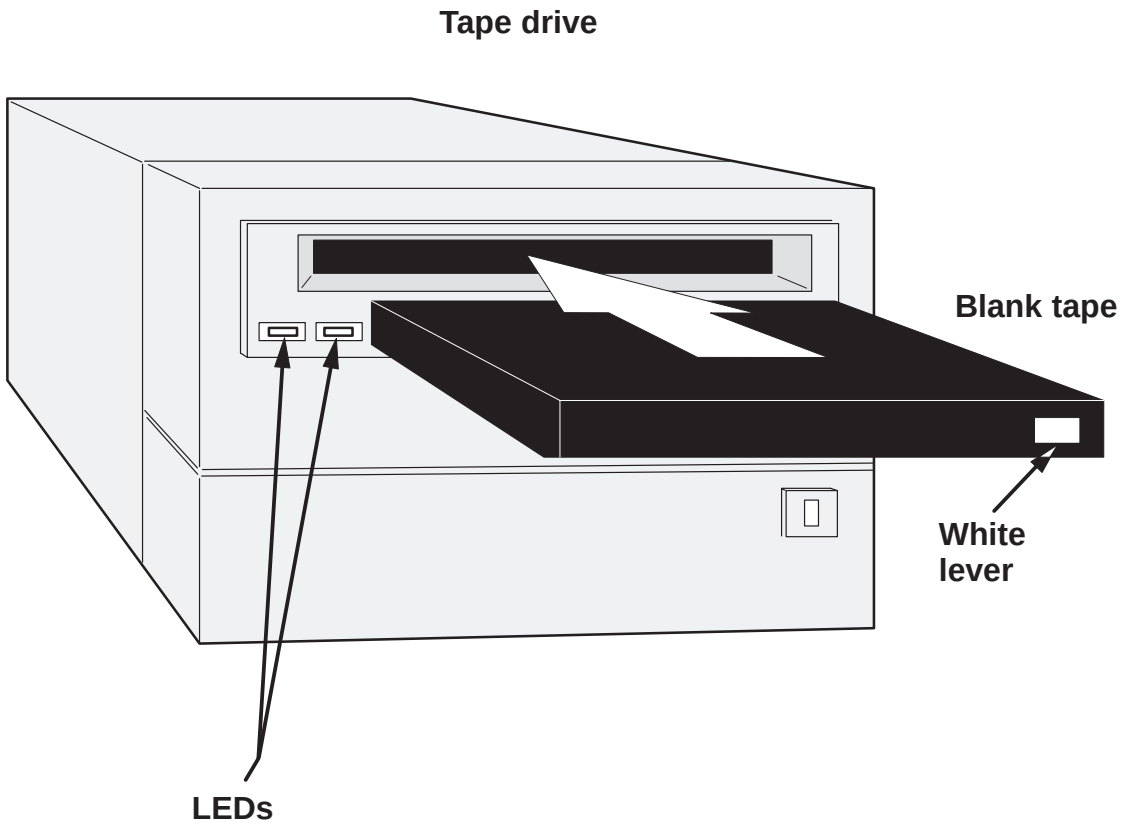
The OAM position administration toolkit is used by system administrators to perform backup operations.

Note: The user of this document should be familiar with the HP-UX documentation from Hewlett Packard, which also documents backup and restore procedures. (See Chapter 9, *Backing Up and Restoring Your Data*, in the HP system administration tools manual).

Backup procedure

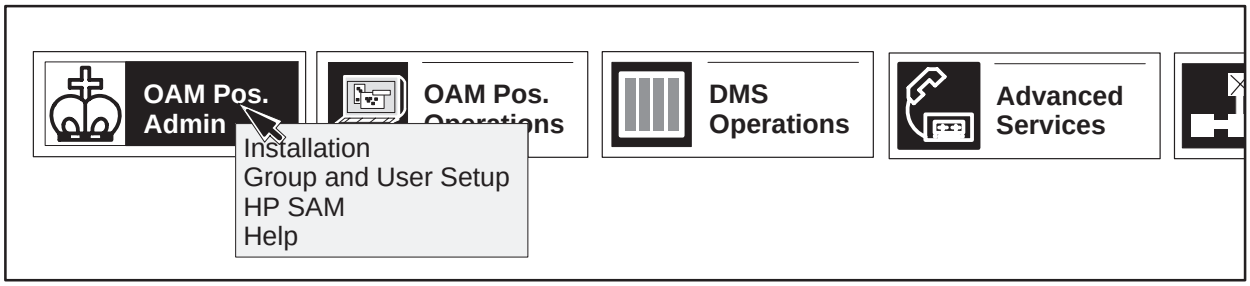
Perform the following steps to make a backup copy of the files stored on the hard disk of the ADAS OAM position.

1 Obtain a blank DDS tape to make a backup. Make sure the tape is write-enabled by moving the white lever so that it covers the opening in the back of the tape. Insert the blank tape into the tape drive and wait for the indicator lamps to stop blinking.

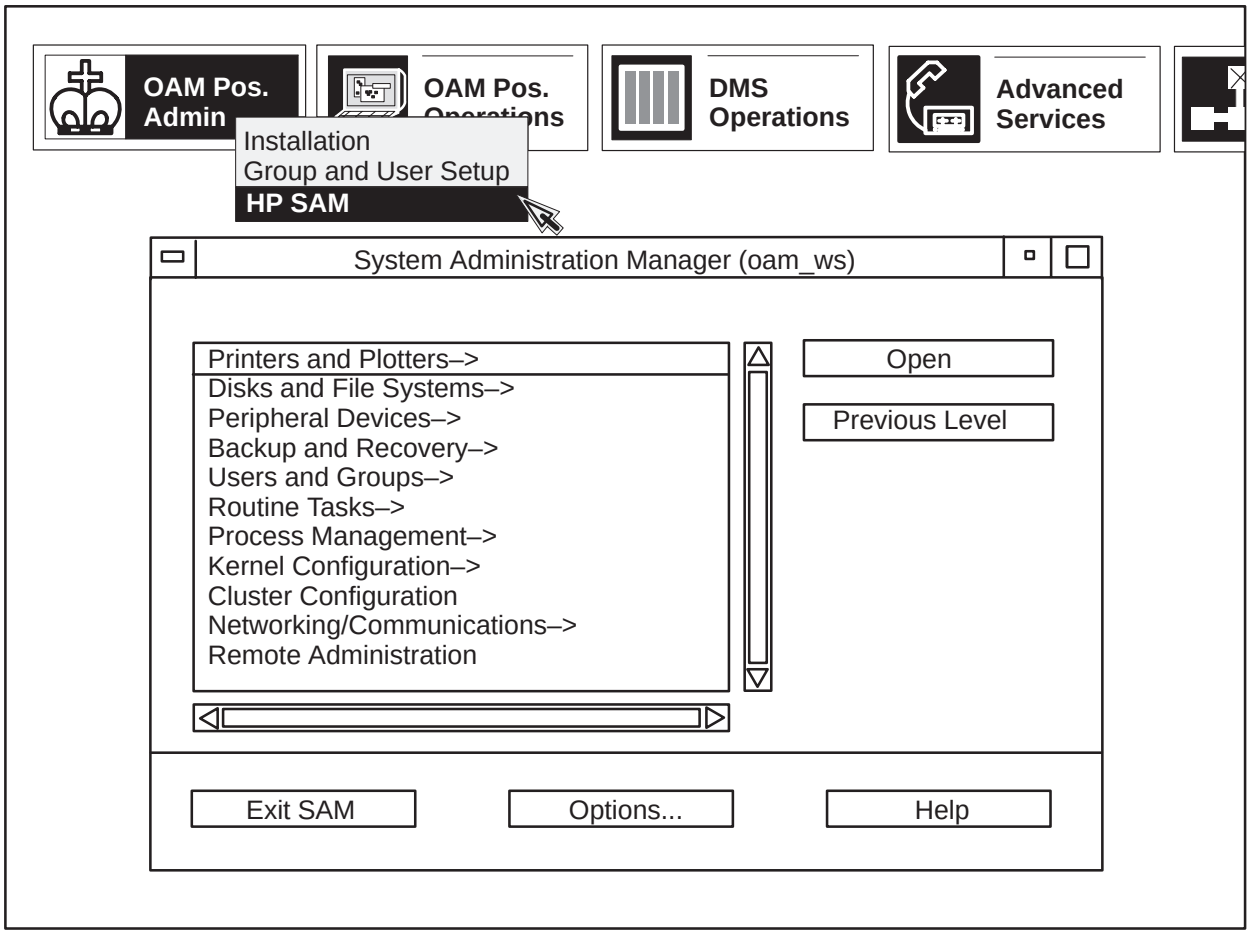


Note: This is an approximate representation of the model C1521B DDS tape drive to allow location of the SCSI address button and power button.

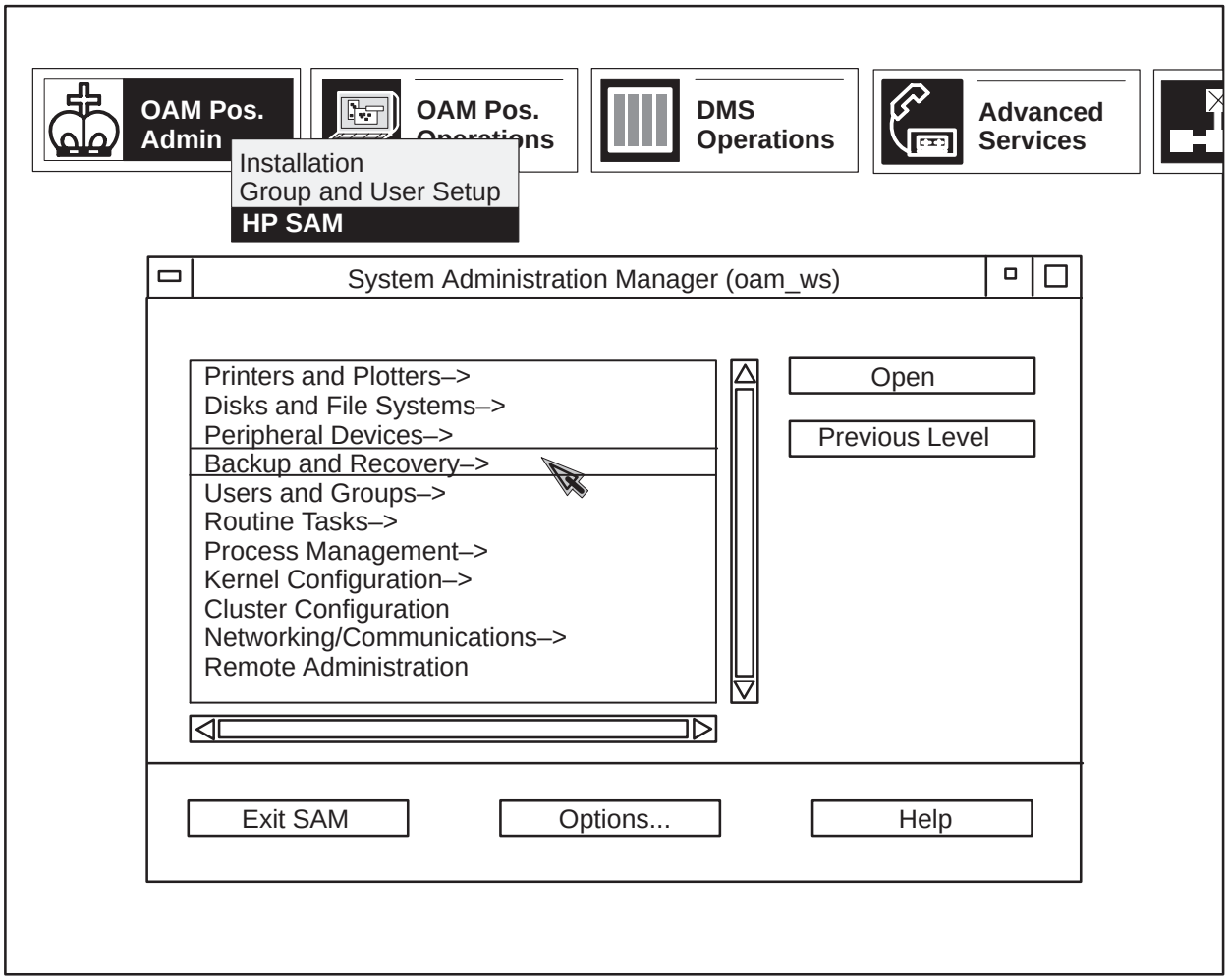
2 Click and hold down the right mouse button on the icon labeled OAM Pos Admin. A menu with HP SAM listed as an option appears.



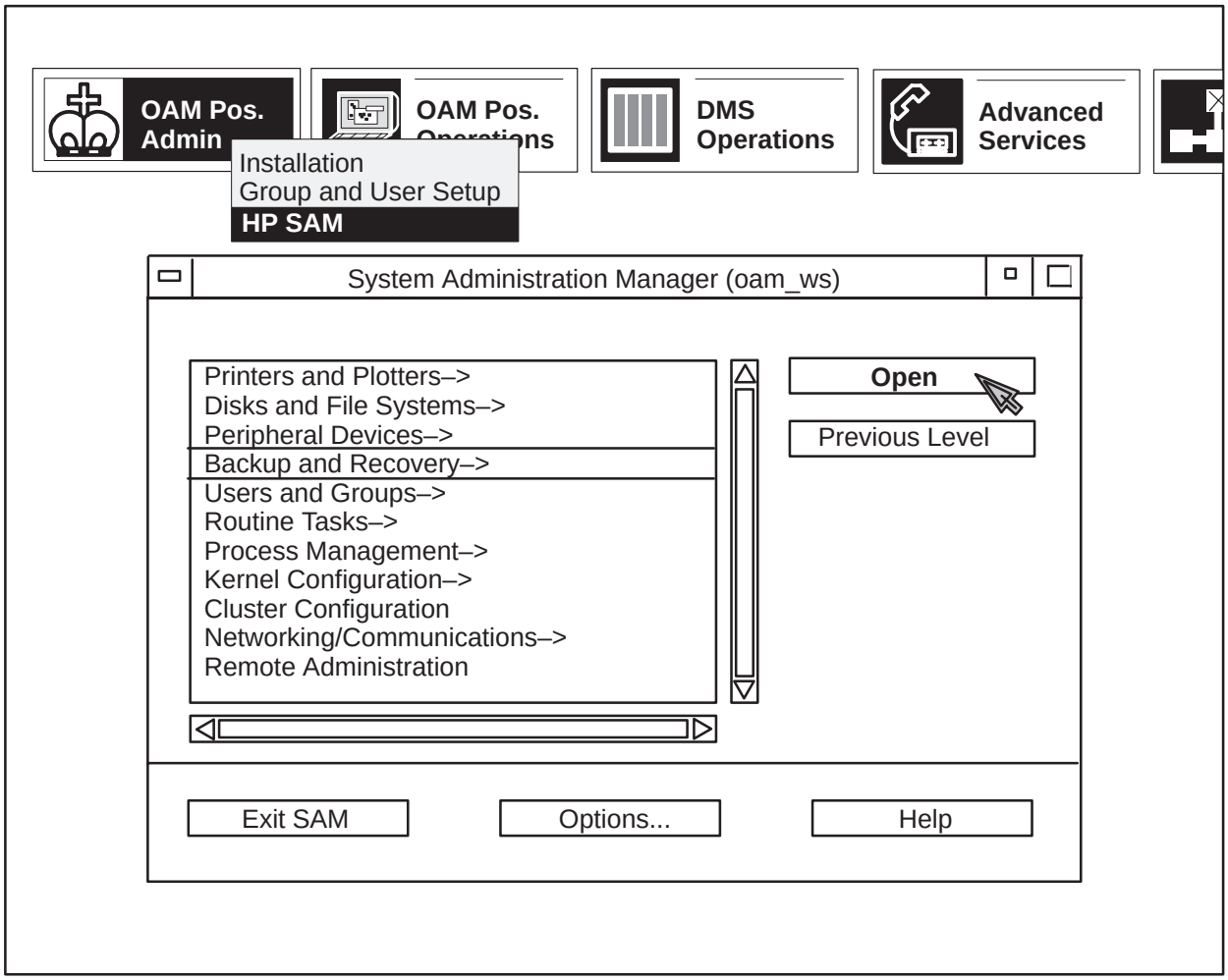
3 Slide the right mouse button to the HP SAM option and release the button. Wait for a System Administration Manager menu to appear.



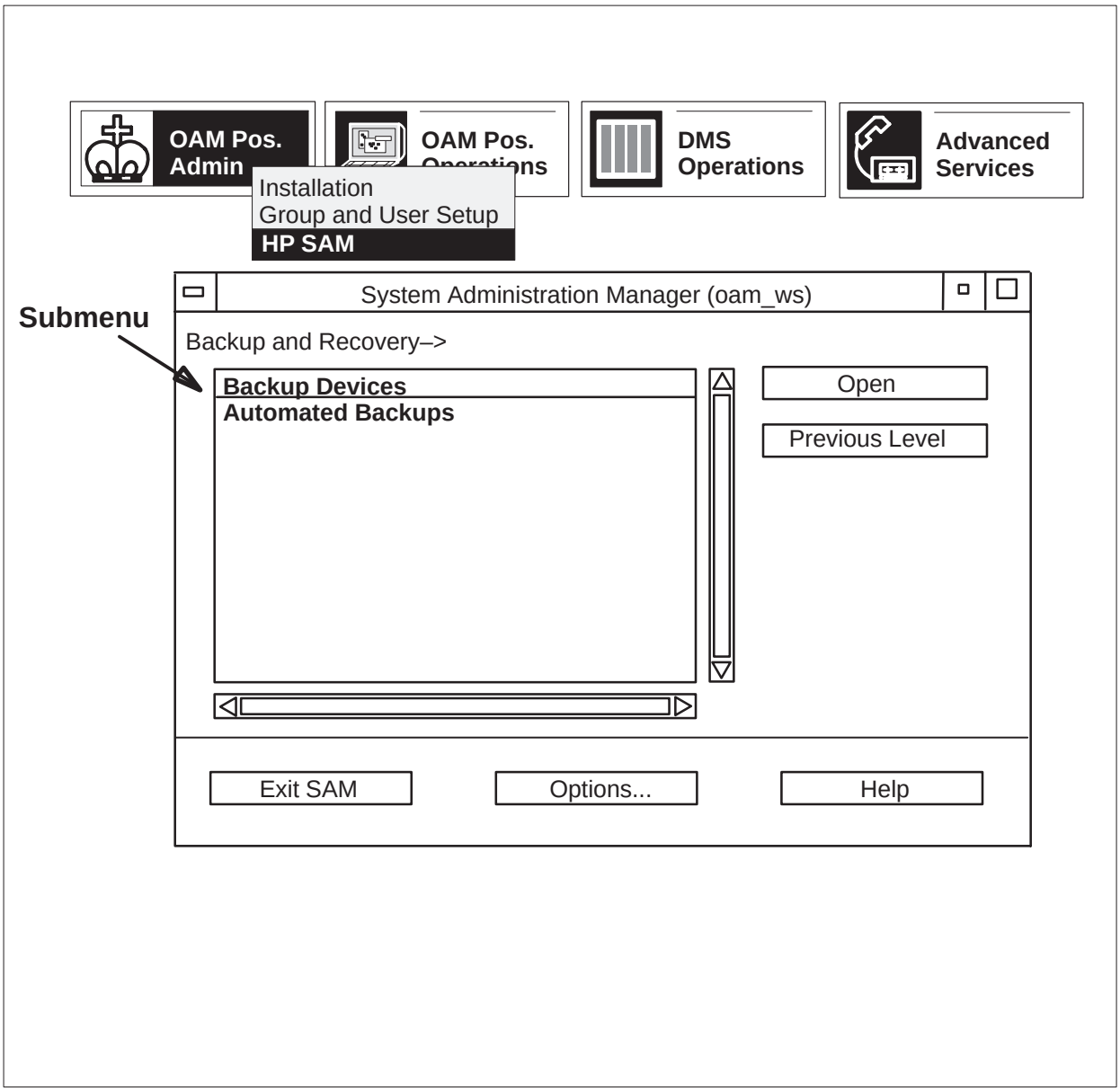
4 Select the Backup and Recovery option with the left mouse button.



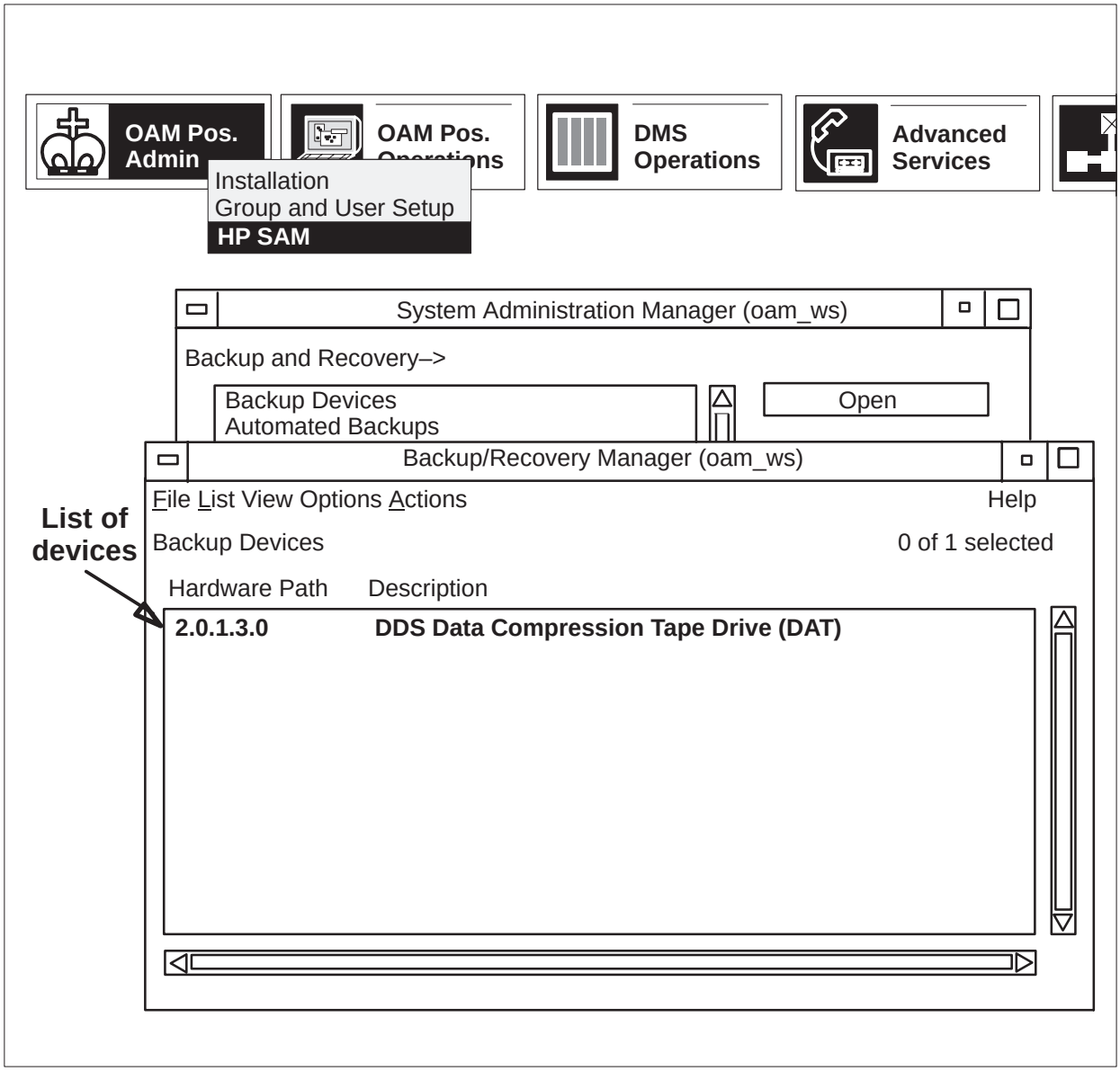
5 Click on the open button with the left mouse button.



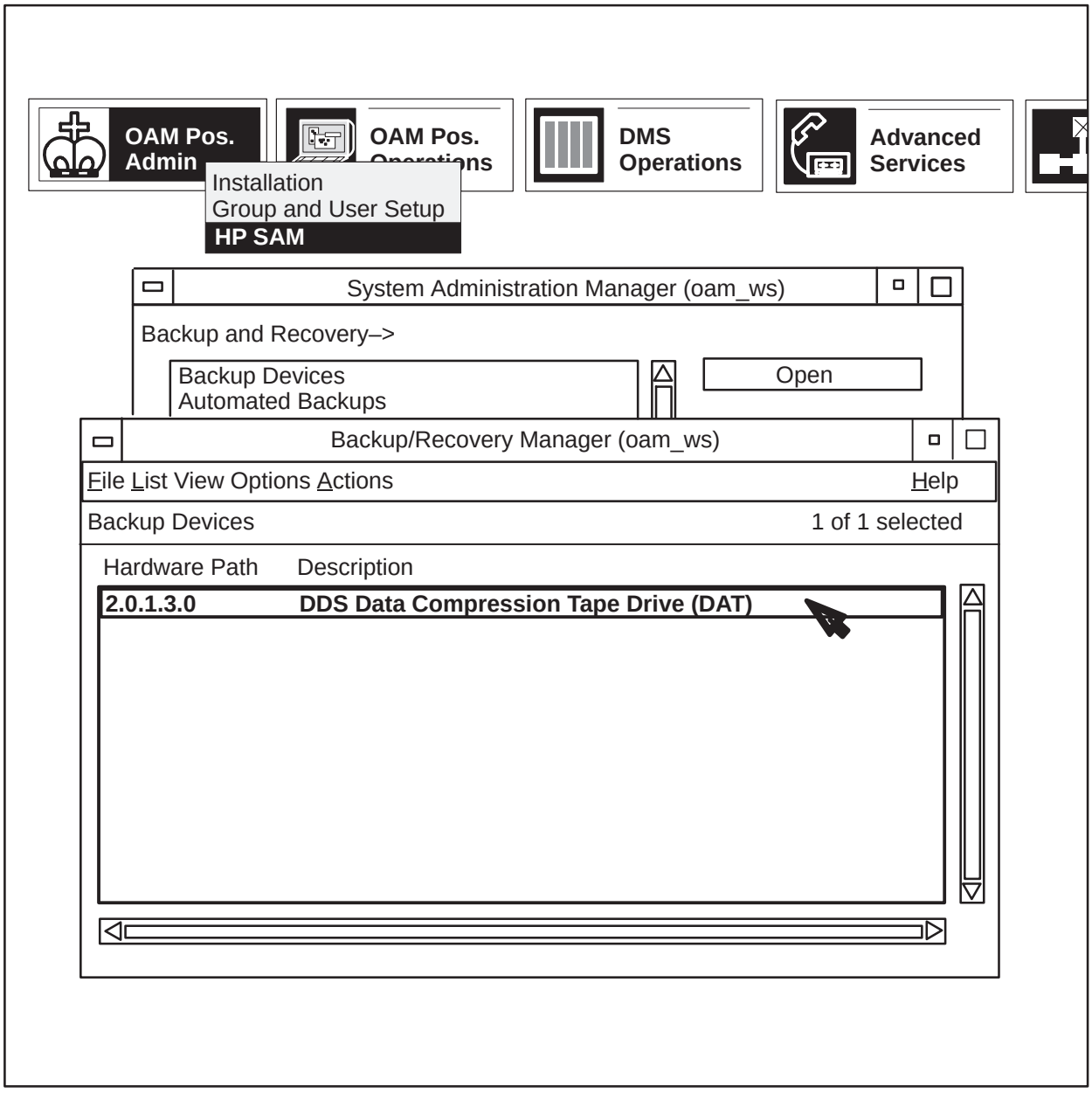
6 Wait for a Backup and Recovery submenu to appear. The option for Backup Devices is highlighted. Click on the Open button.



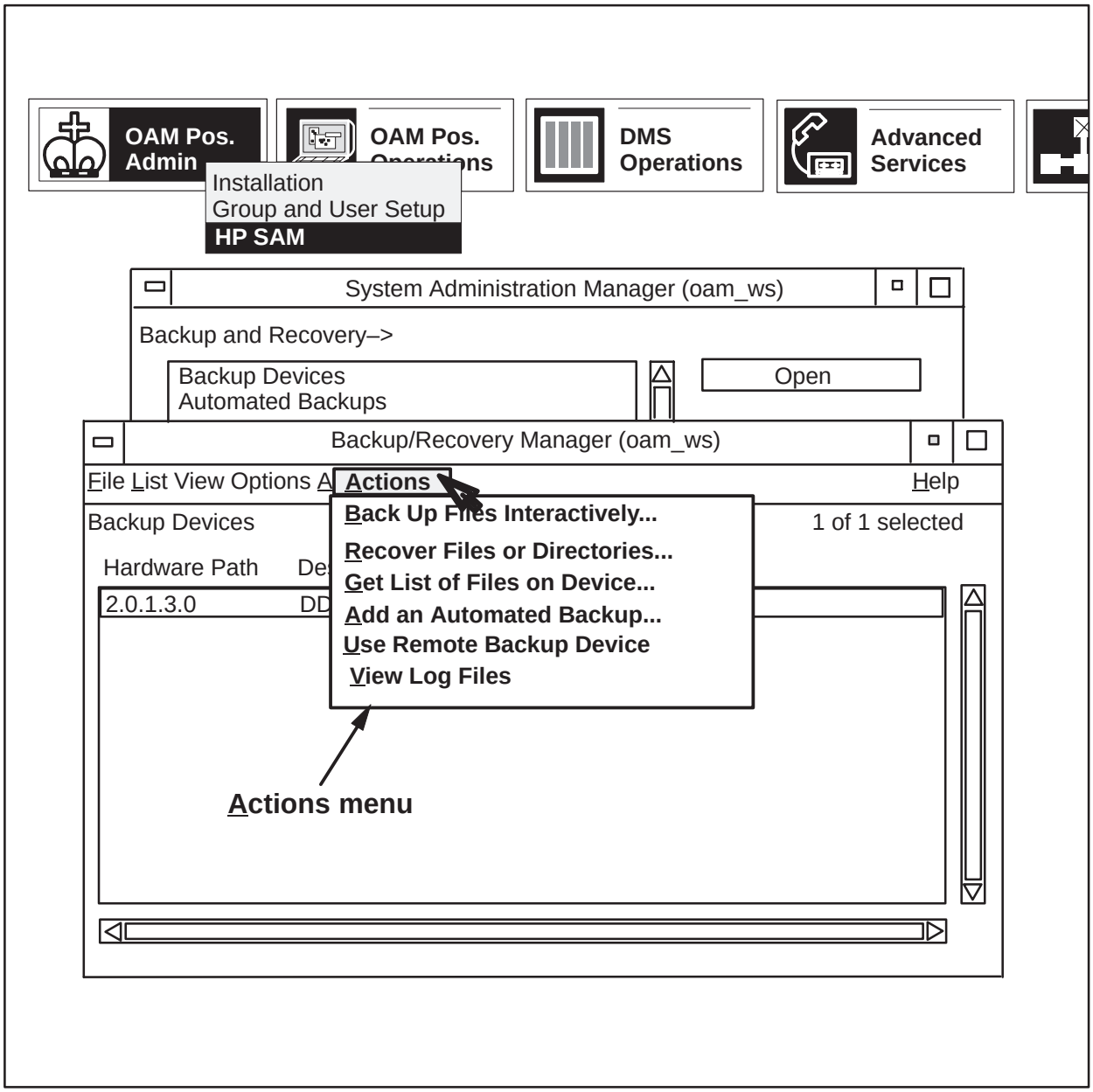
7 Wait for a list of backup devices to be displayed. For a standard OAM position, only one device, the DDS data compression tape drive (DAT) is listed as a backup device.



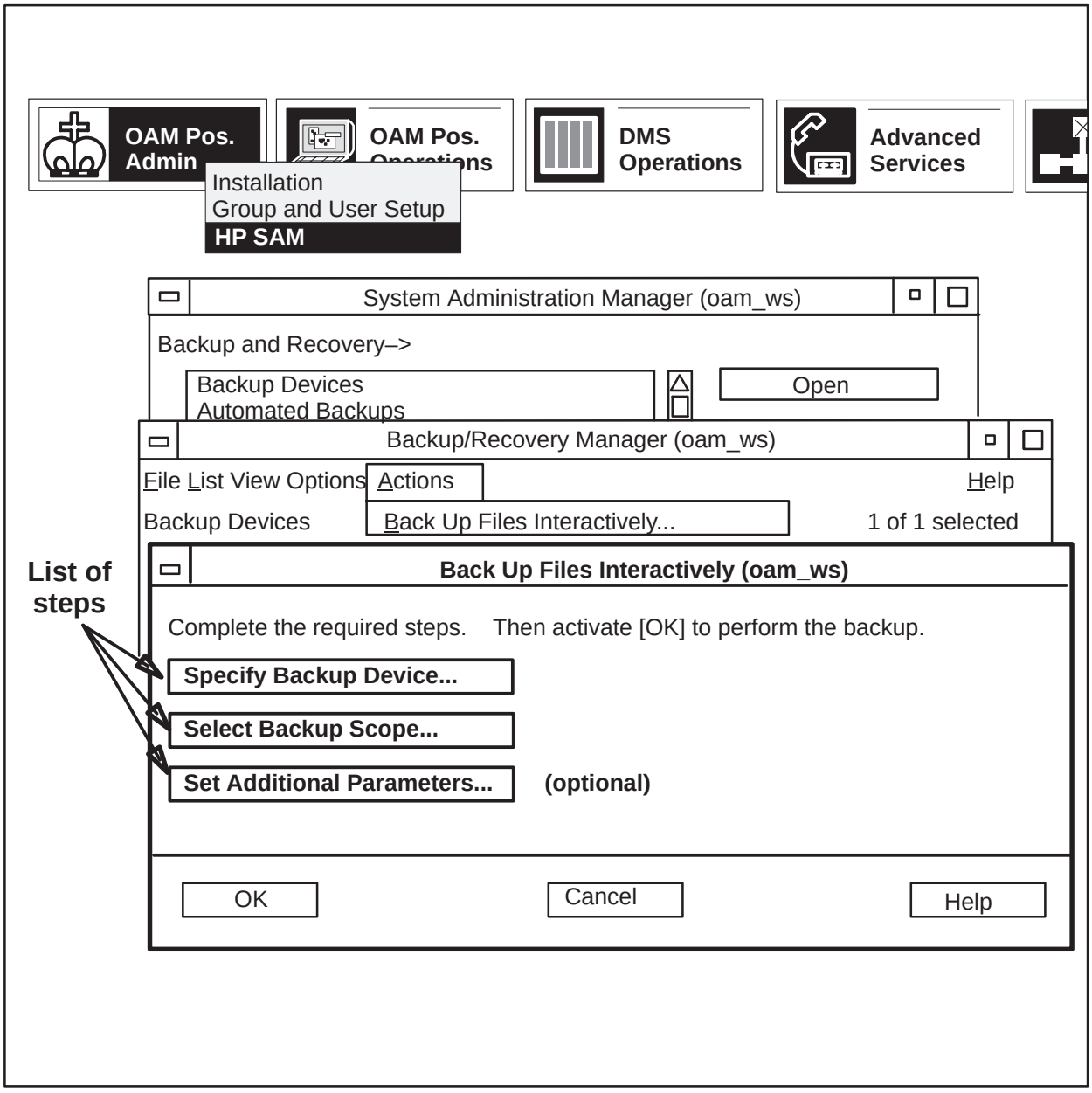
8 Select the tape drive option with the left mouse button.



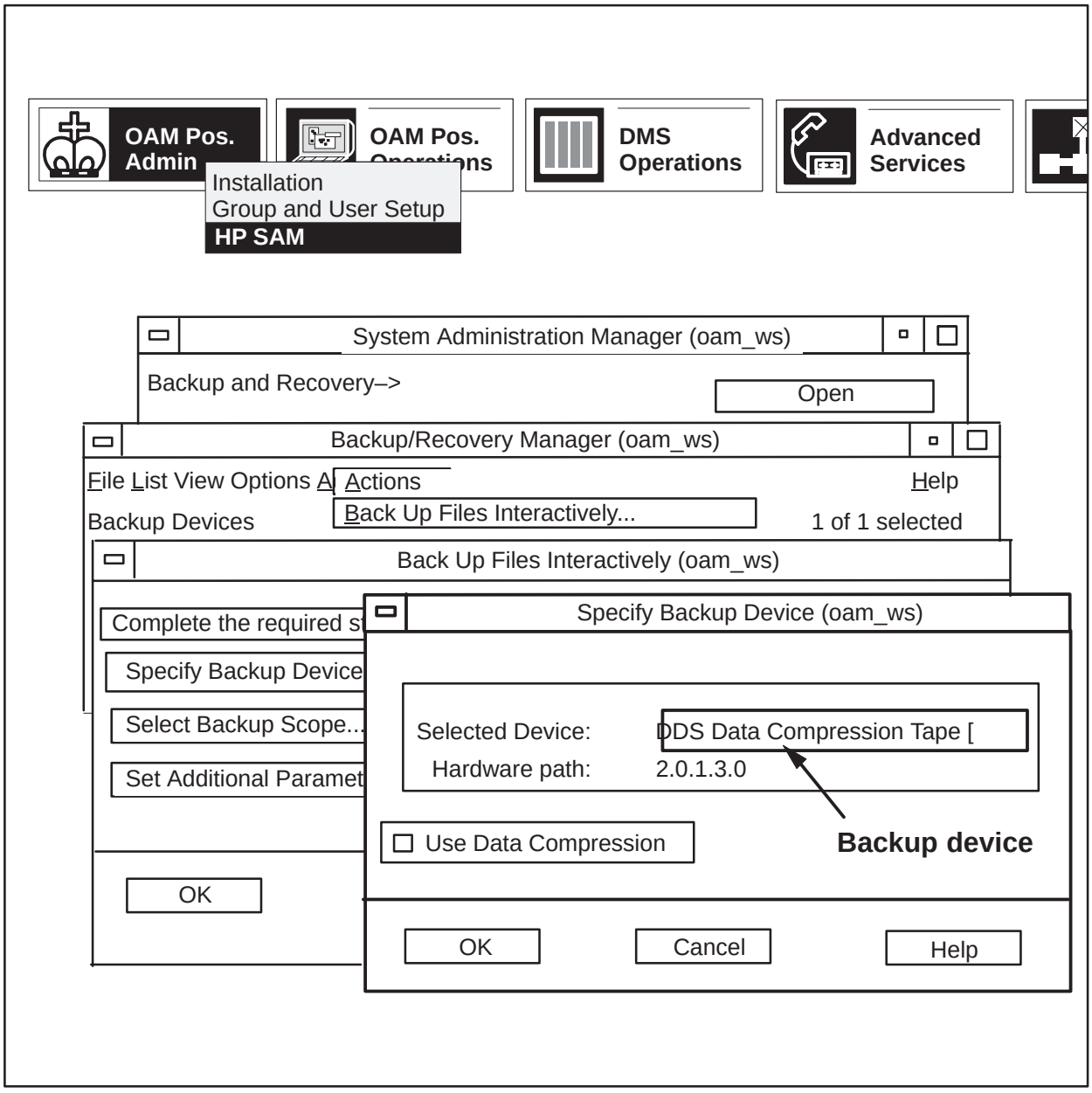
9 Click on the Actions option with the left mouse button. An Actions menu is displayed.



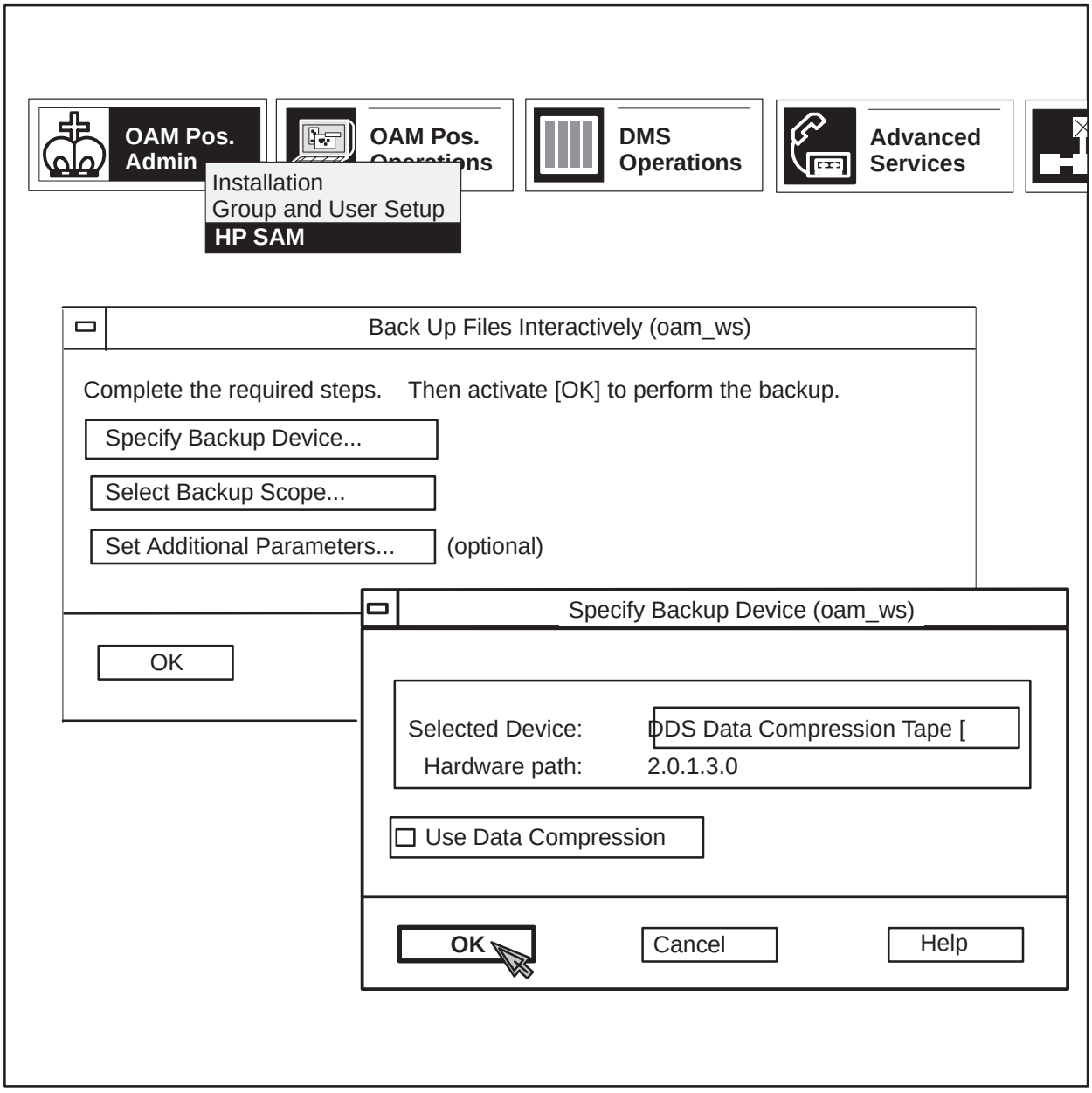
10 On the Actions menu, click on the option labeled Back Up Files Interactively. Another dialogue which lists the steps required to back up files interactively is displayed.



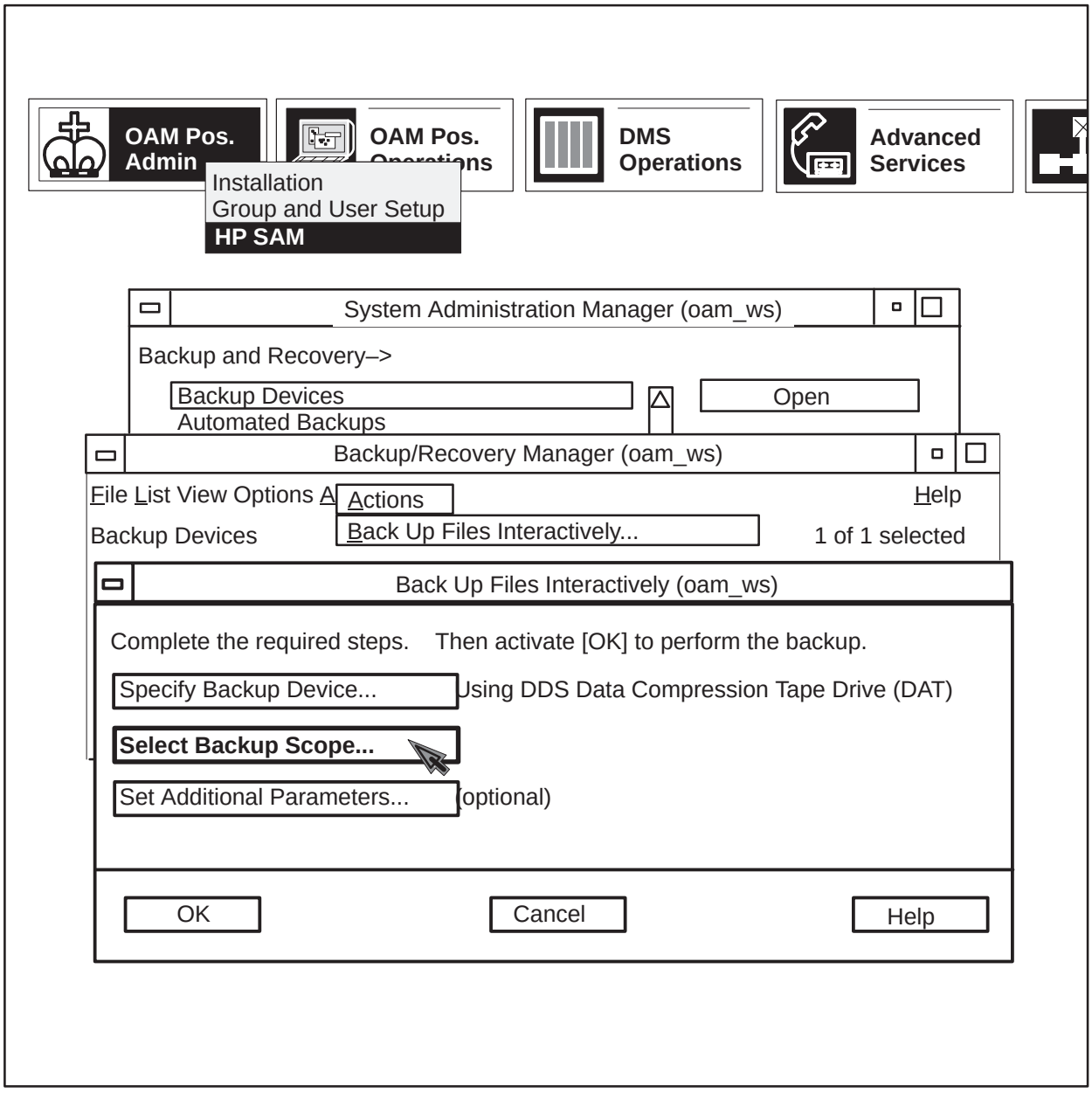
11 With the left mouse button, select the option labeled Specify Backup Device. Another dialogue box is displayed. In this box, the backup device is already filled in.



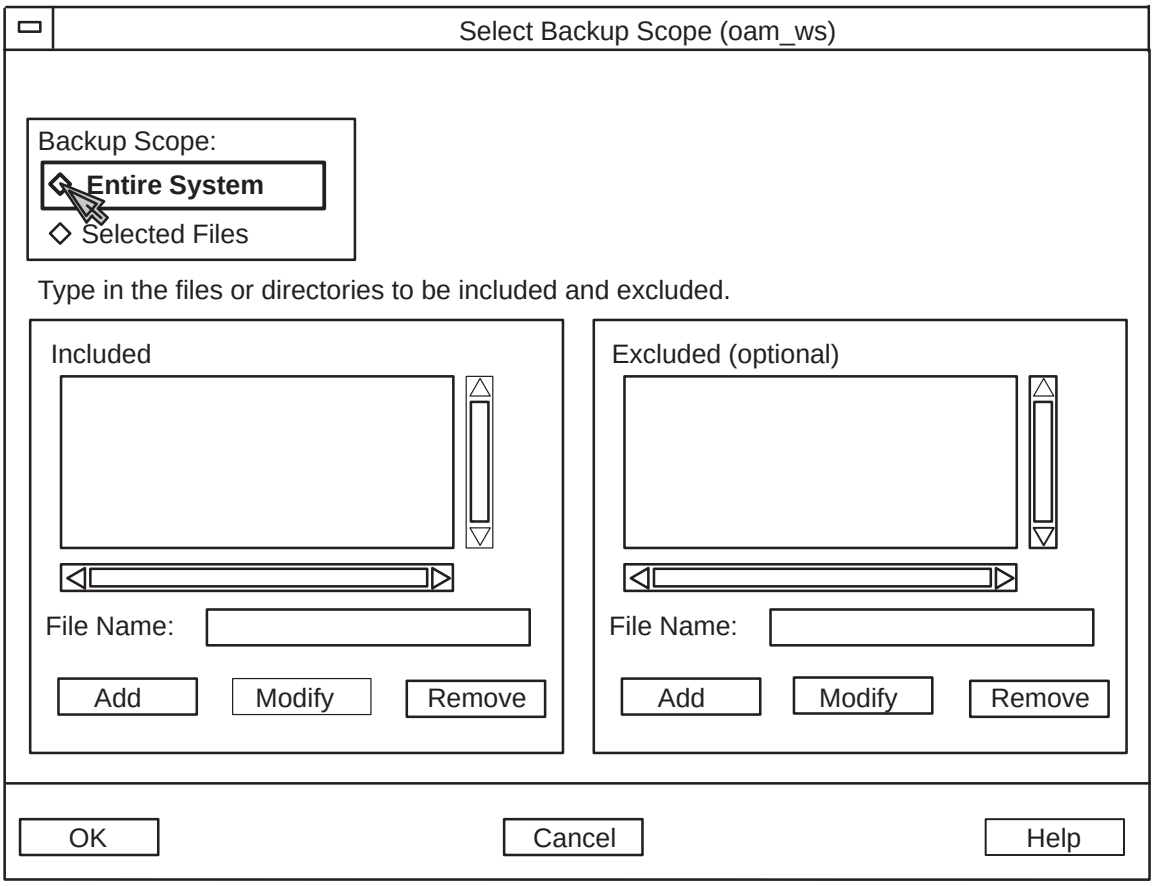
12 Click on the OK button with the left mouse button to select the designated backup device.



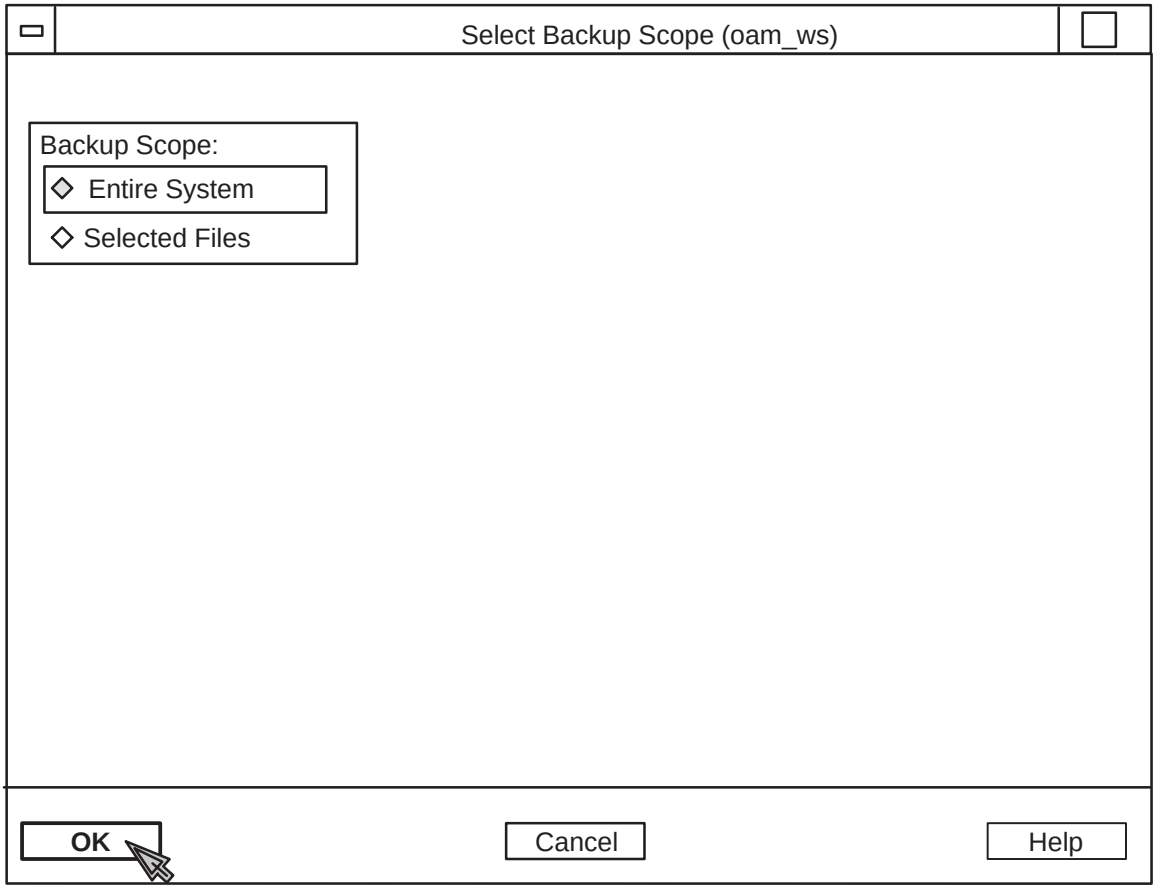
13 The dialogue which lists the steps required to back up files interactively is again displayed. Click on the second option labeled Select Backup Scope.



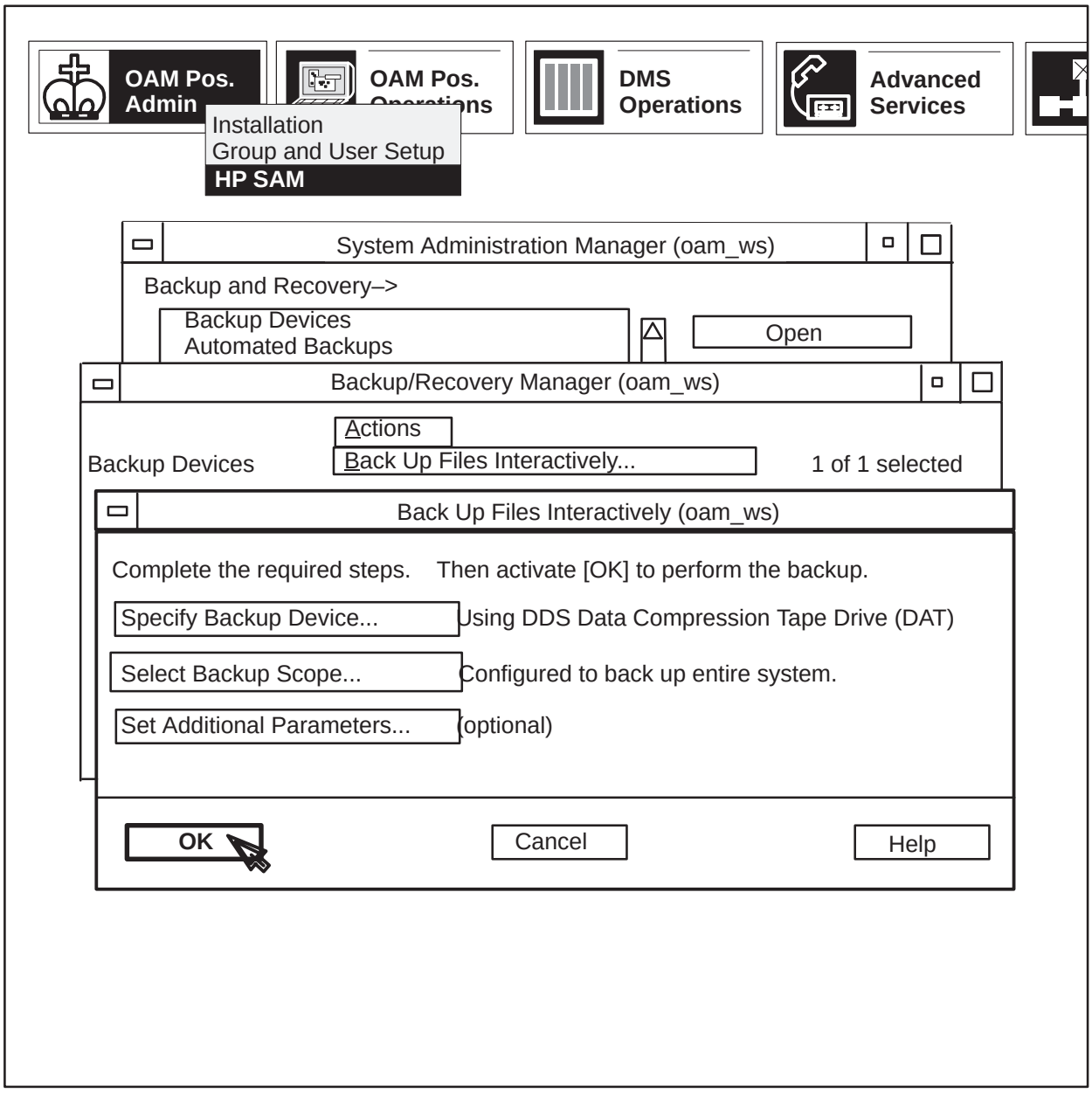
14 A backup scope dialogue is displayed. Select the option labeled Entire System by clicking on the diamond located to the left of the option.



15 Then click on the OK button at the bottom of the dialogue to confirm selection of the option labeled Entire System.

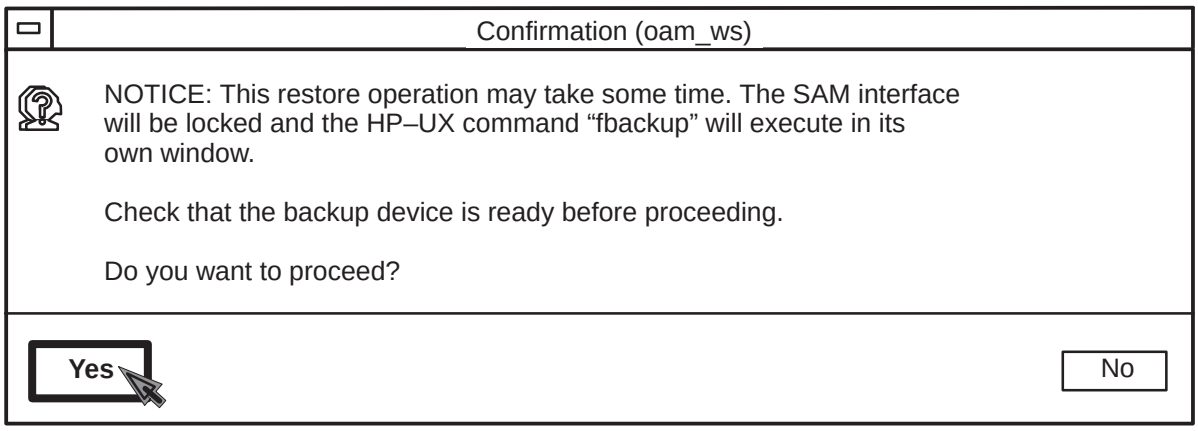


16 The dialogue which lists the steps required to back up files interactively is again displayed. Click on the OK button to confirm selection of the options for backup device and backup scope.

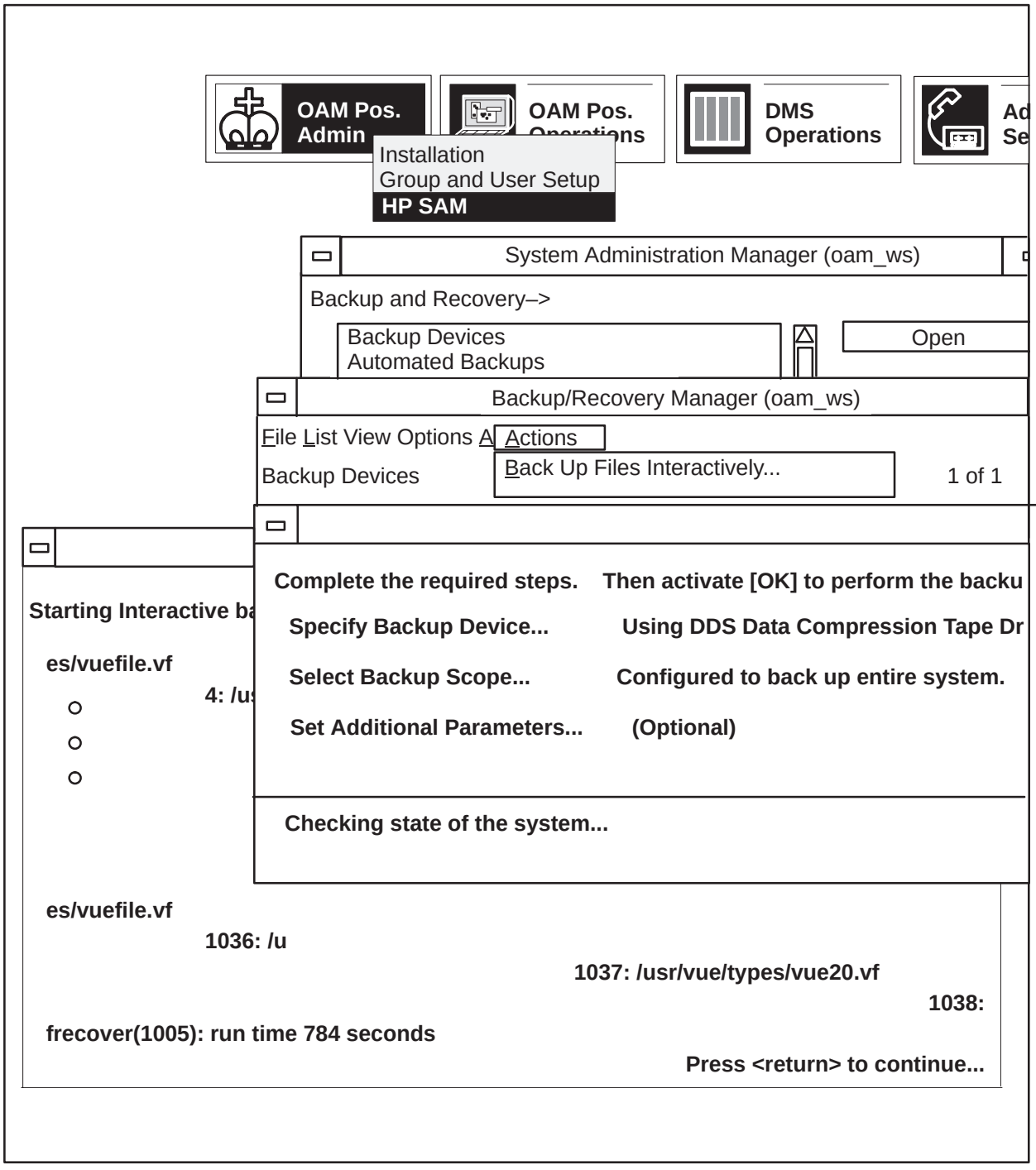


17 At this point a message might appear as a caution that there is more than one user on the system. This is not a problem as long as no users are writing to any files. To be sure, close any applications that are running, and click on the Yes button of the message dialogue.

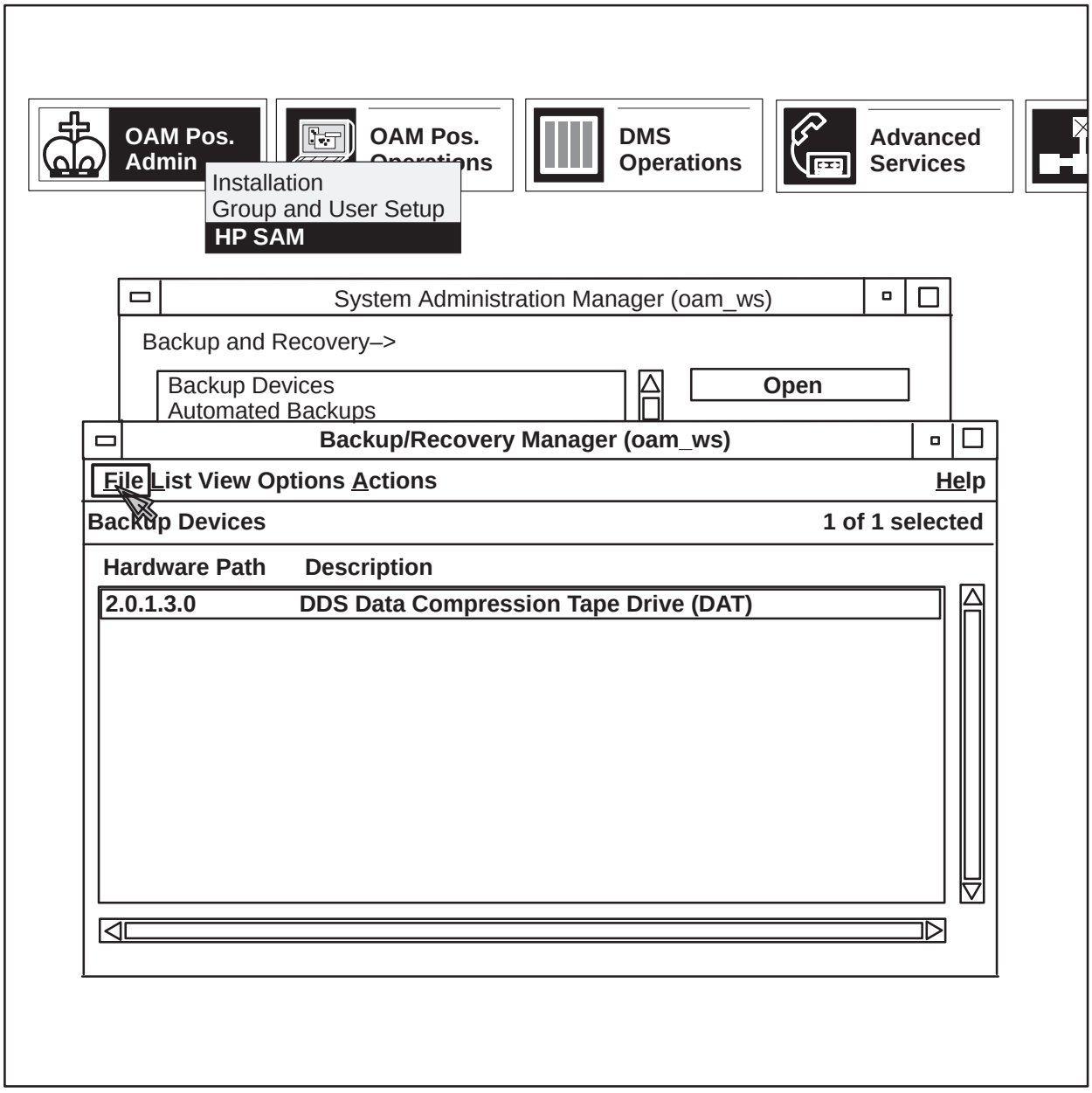
18 Before execution of the backup operation, a confirmation notice is displayed. Select the Yes button to proceed with the backup.



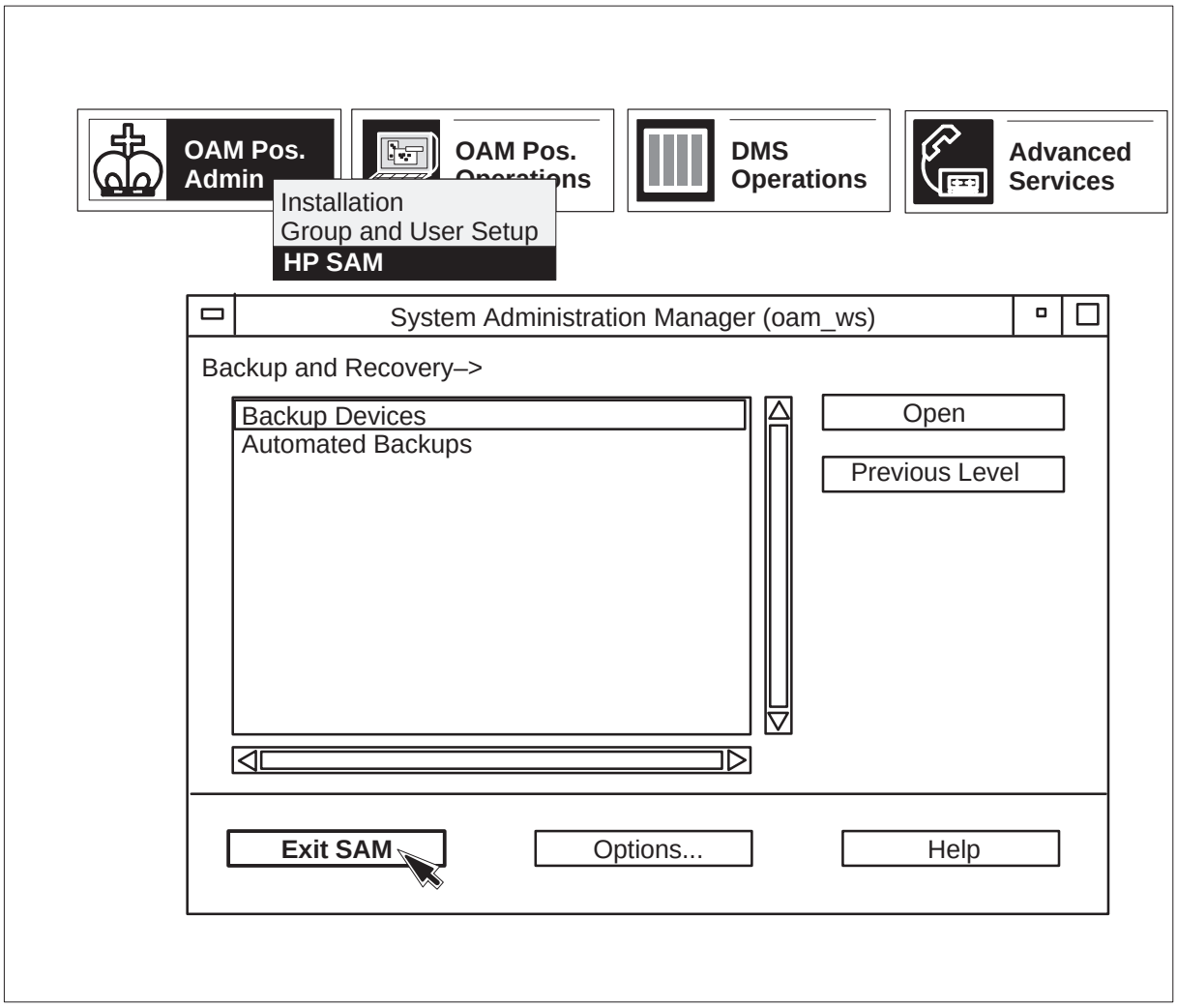
19 A window for showing the state of the system appears in the background. Wait for the message to press <return> to appear. This completes the copying of data onto the DDS tape. Press the Enter key (<Return>) to continue.



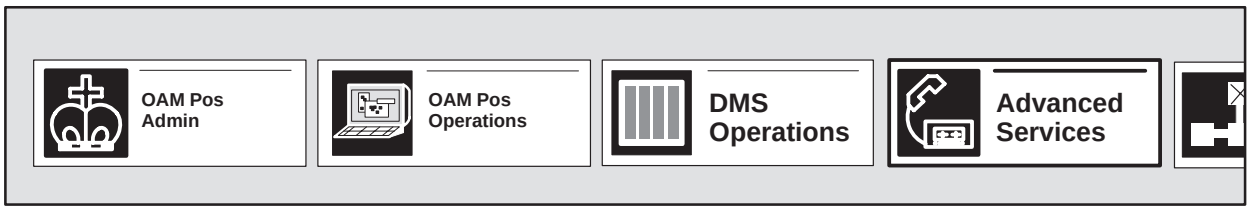
20 Click the left mouse button over the File option in the upper left box of the Backup/Recovery Manager window. Then click on the Exit icon that appears.



21 Use the left mouse button to exit SAM.



22 The toolset icons shown below are displayed at the top of the screen.



23 Remove the backup tape from the drive unit. Label and store the tape in a safe place for future use. This ends the data backup procedure.

Data restore

ADAS-specific data files reside on the hard disk drive of the OAM position. If a minor or catastrophic failure occurs, lost files can be restored on the hard disk drive unit of the OAM position from an appropriate backup copy. (See Chapter 7 of this guide.)

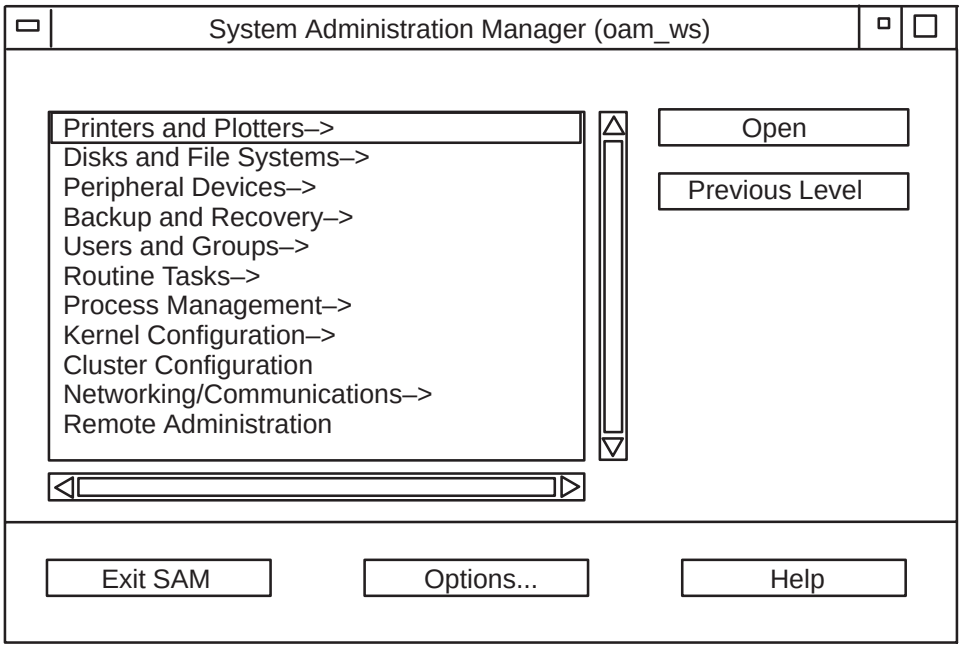
The OAM position administration toolkit is used by system administrators to perform restore operations.

Note: The user of this document should be familiar with the HP-UX documentation from Hewlett Packard which also documents backup and restore procedures. (See *Backing Up and Restoring Your Data* in the HP system administration tools manual.)

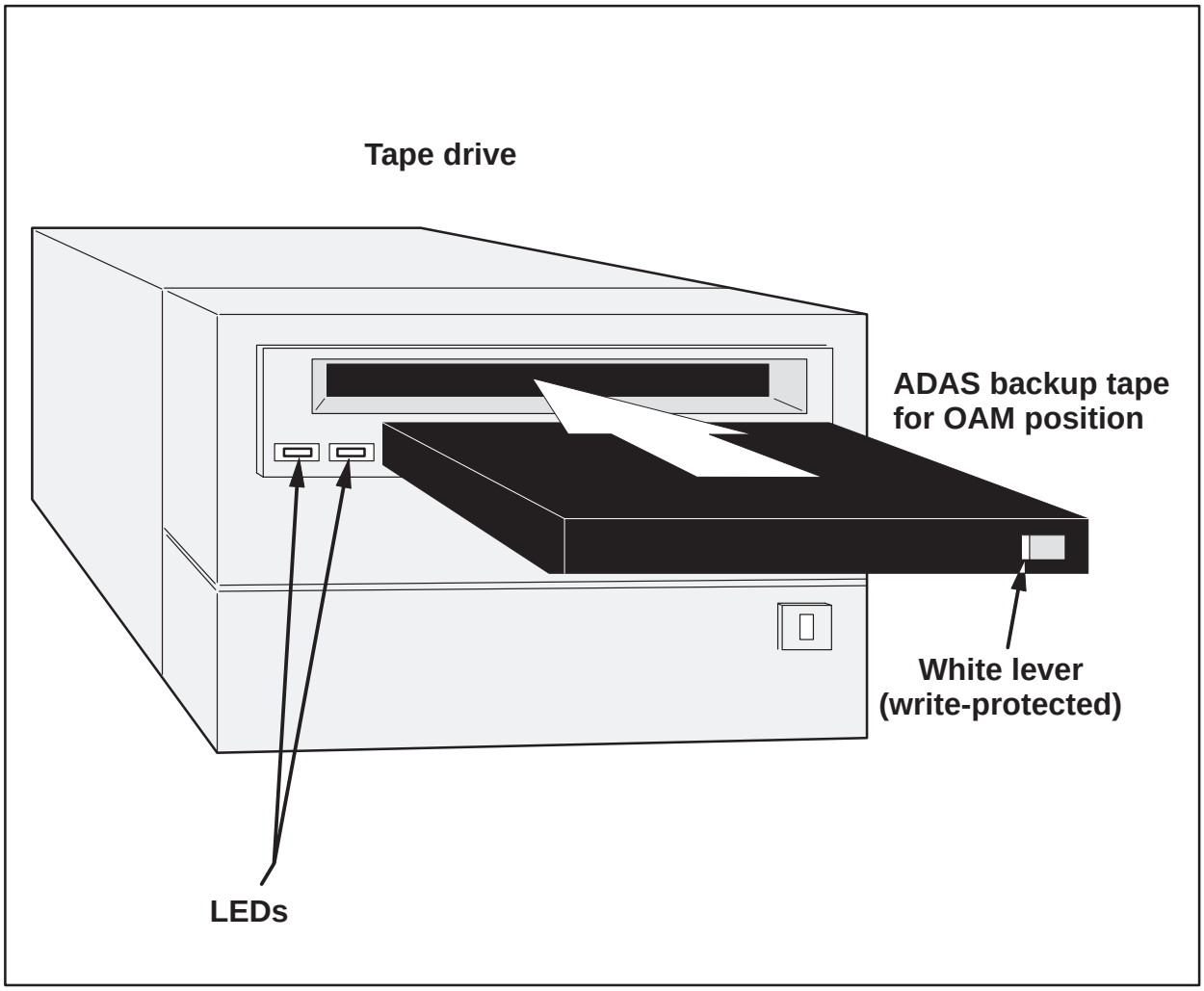
Restore procedure

Use the following steps to perform a total restore of data on the hard disk from a backup copy.

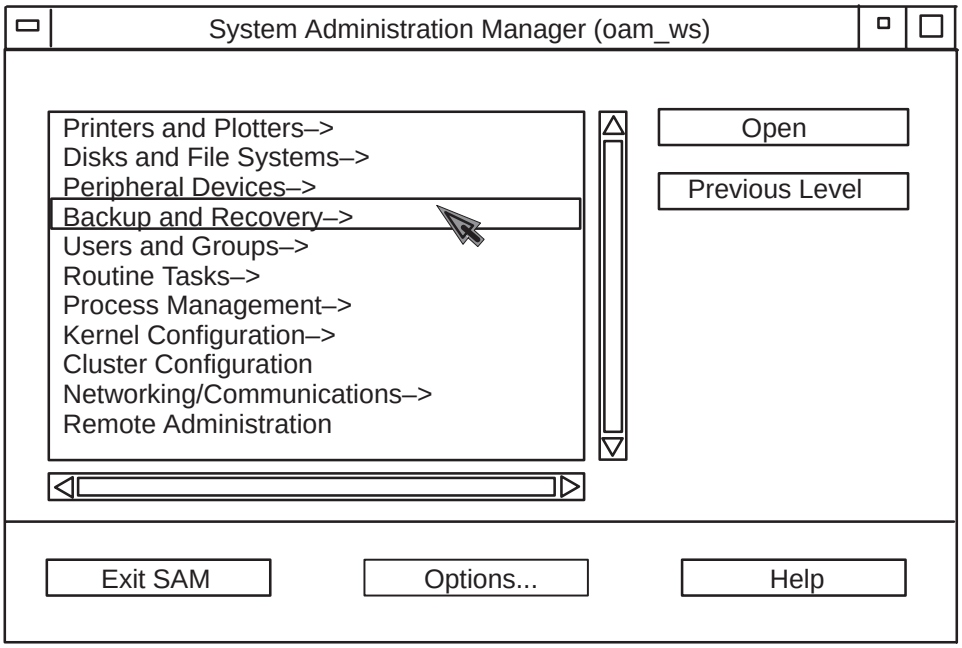
1 If necessary, re-install the HP-UX 10.20 operating system software as detailed in Chapter 9 of this operating guide; otherwise, select the SAM (System Administration Manager) menu from the OAM Pos. Admin icon of the toolset display.



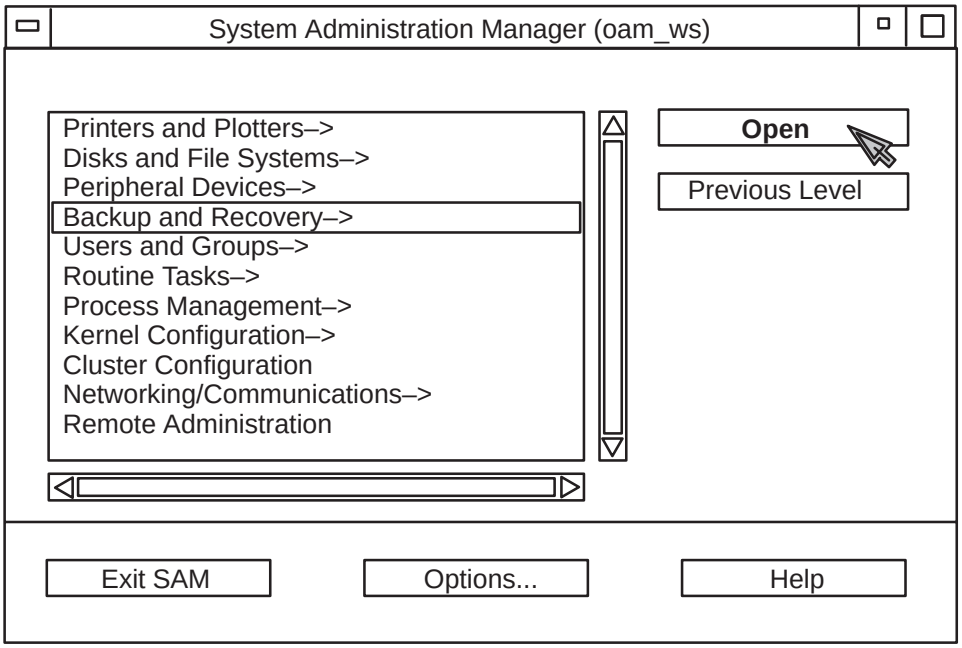
2 Obtain the appropriate system backup tape. Check that the white lever of the tape is set for “write-protected.” Insert the tape into the drive unit and wait for the indicator lamps to stop blinking.



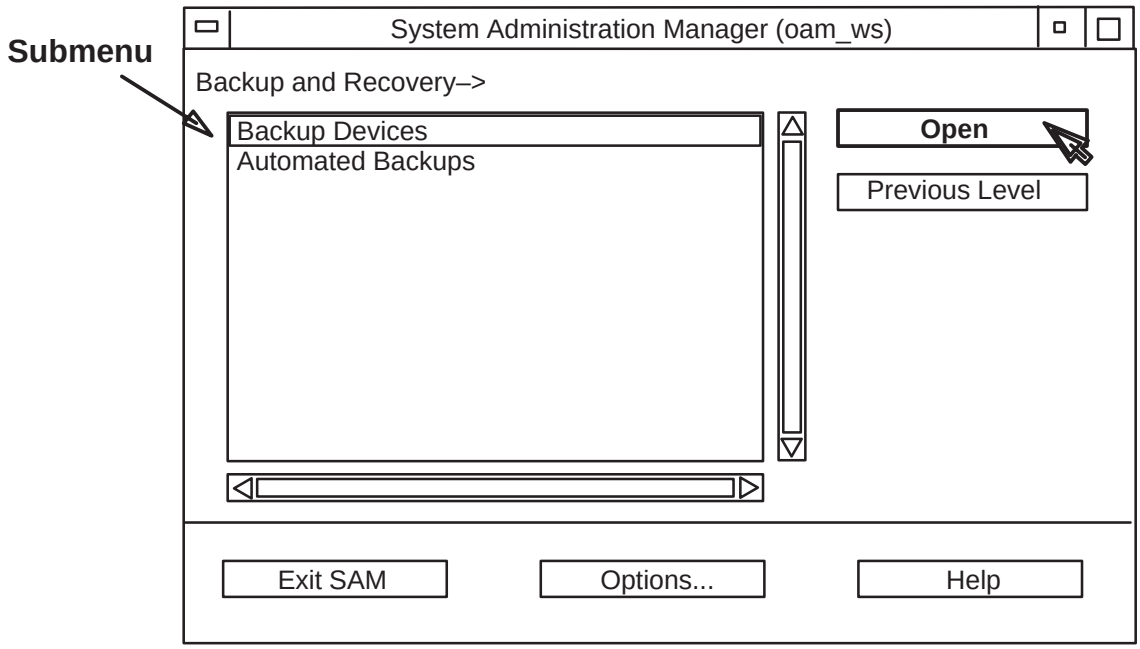
3 From the SAM menu, select the Backup and Recovery option by clicking on it with the left mouse button.



4 Click on the Open button with the left mouse button.

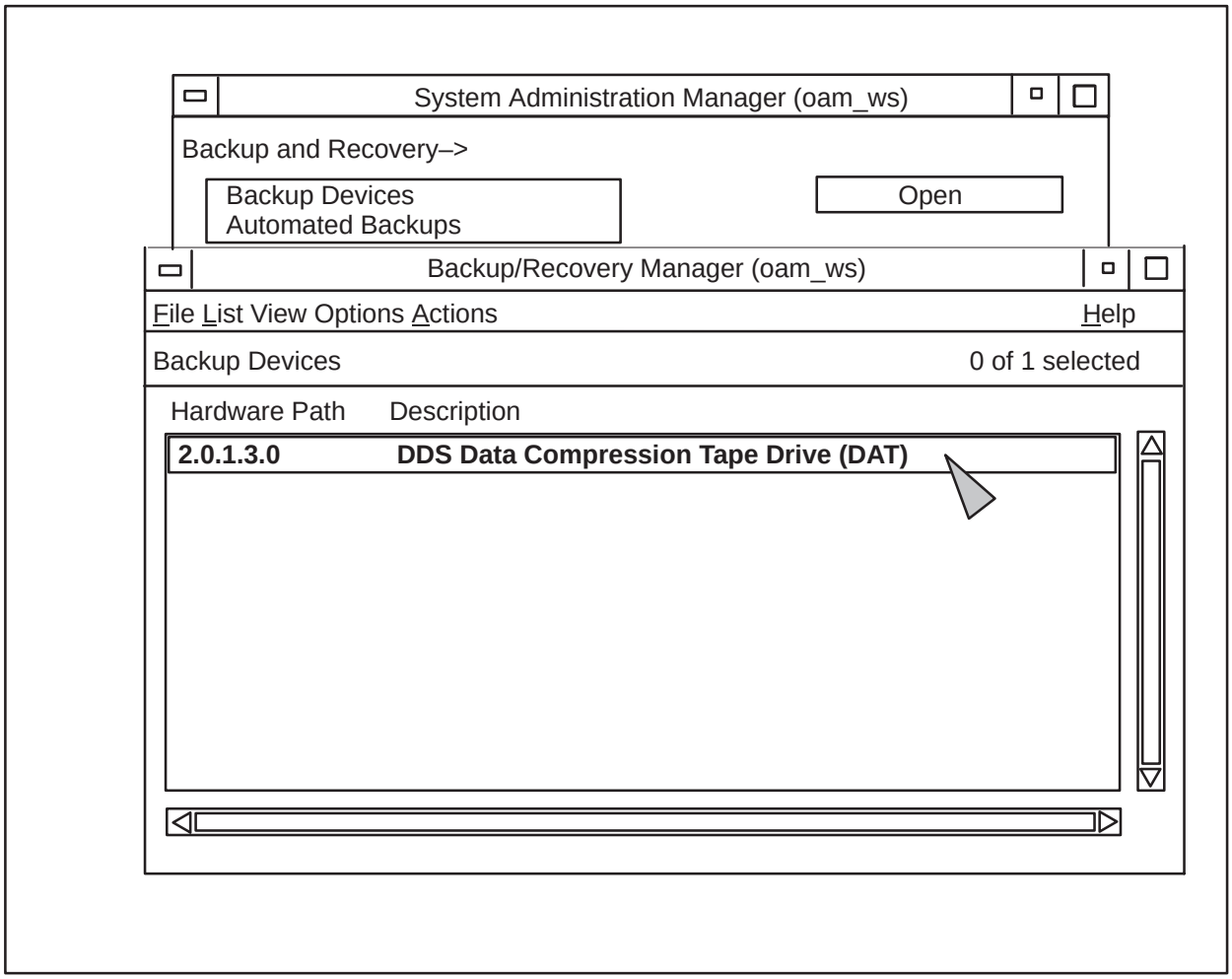


5 Wait for a Backup and Recovery submenu to appear. The option for Backup Devices is highlighted. Click on the Open button.

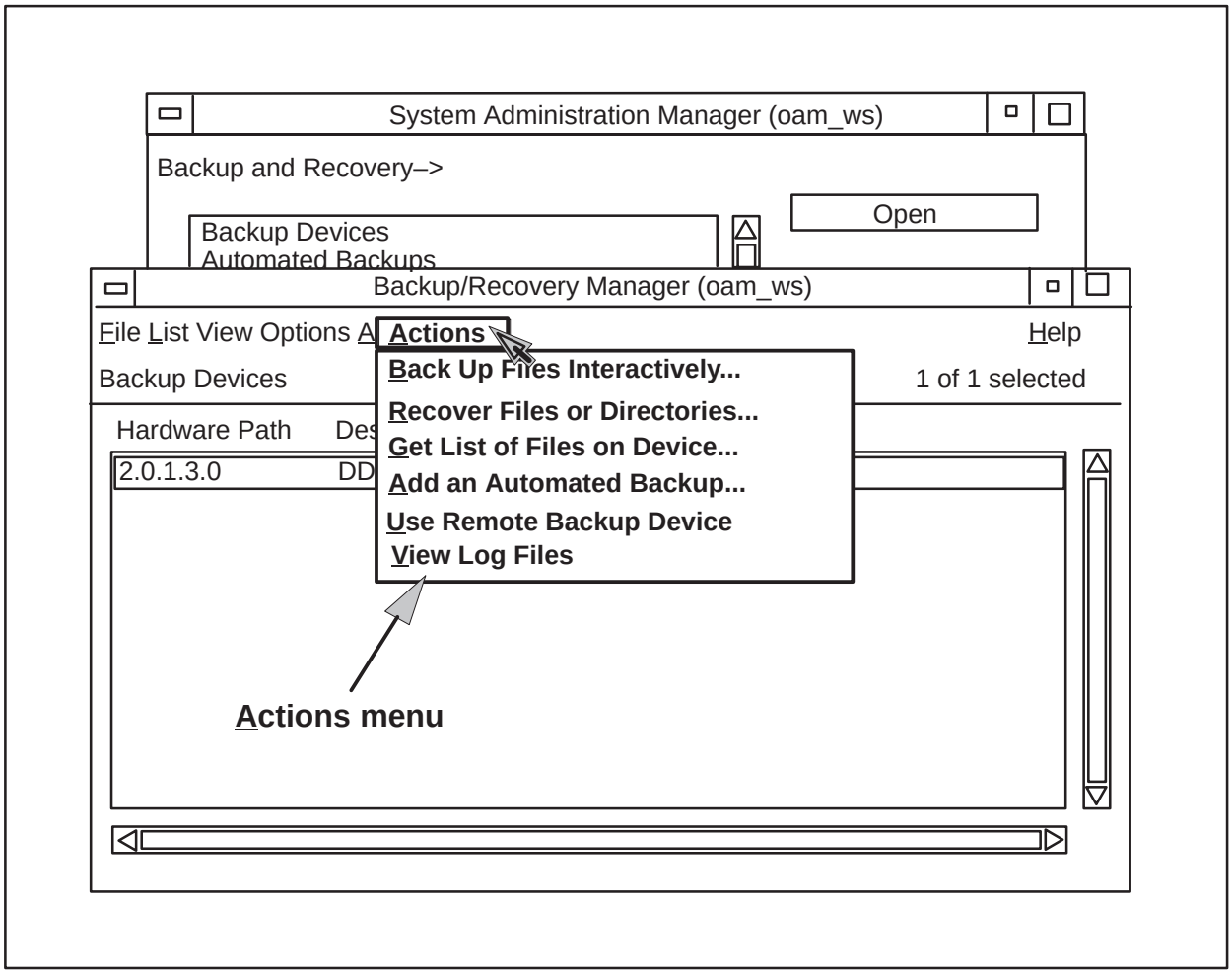


6 Wait for a list of backup devices to be displayed. For a standard OAM position, only one device, the DDS data compression tape drive (DAT) is listed as a backup device.

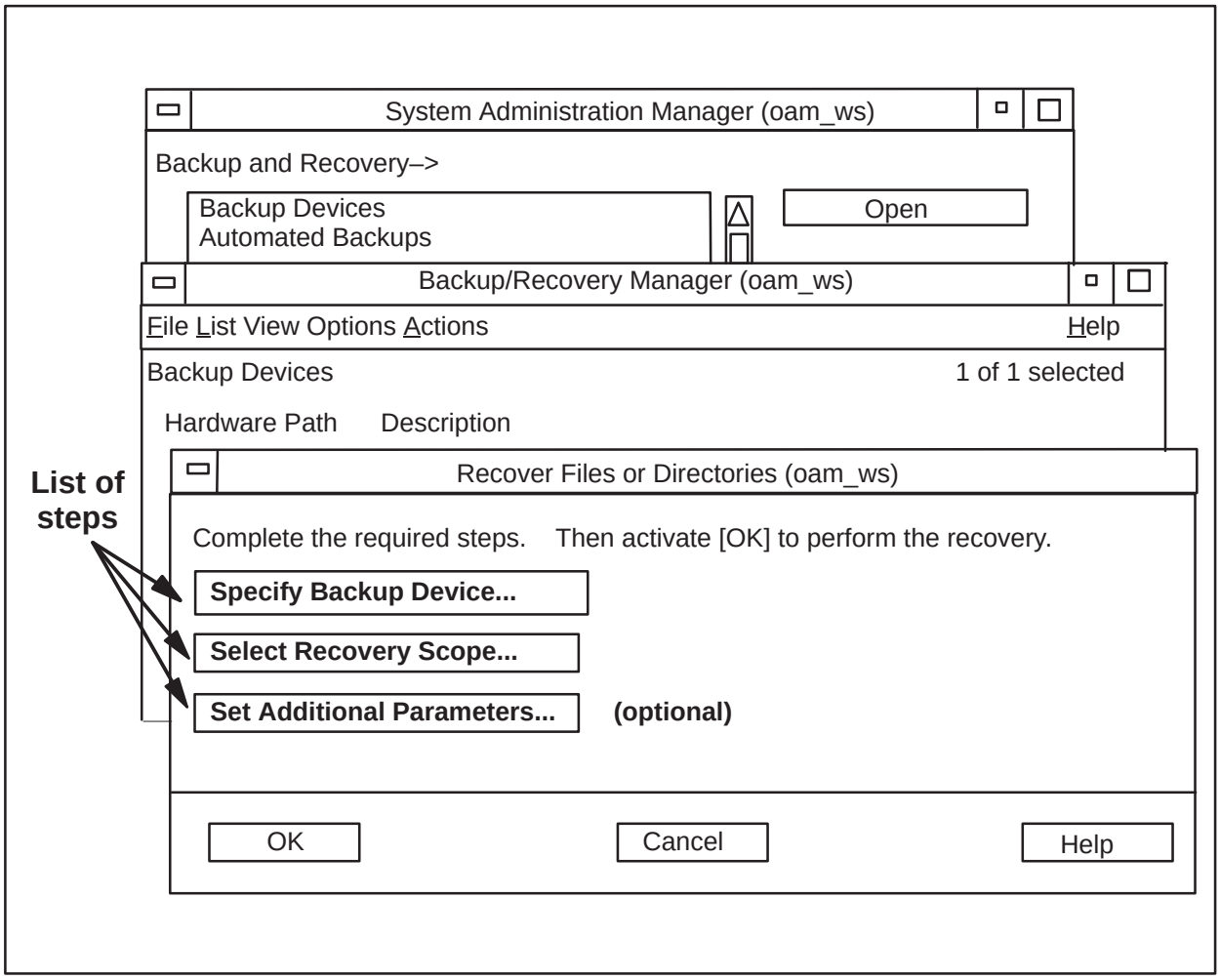
7 Select the tape drive option with the left mouse button.



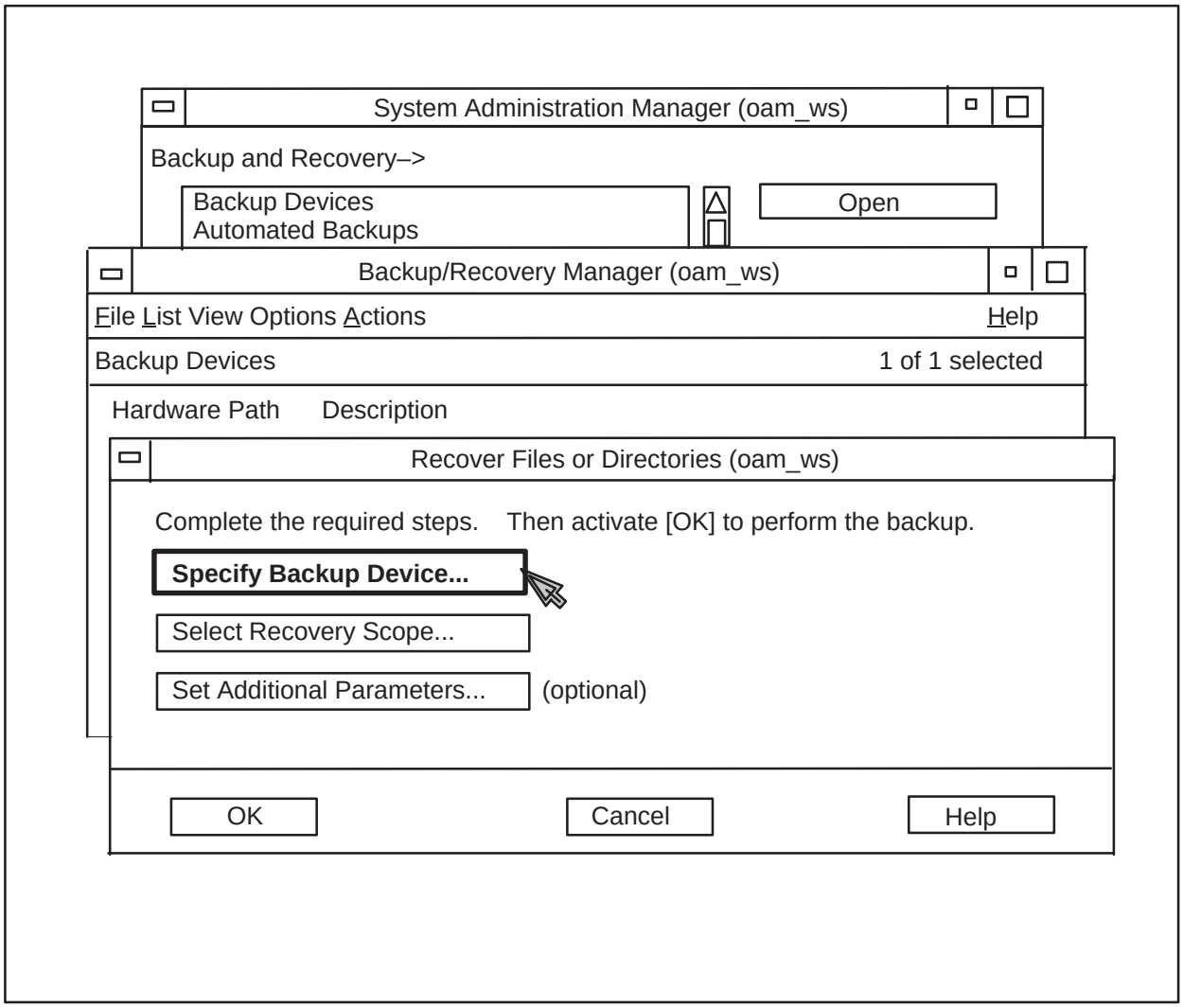
8 Click on the Actions option with the left mouse button. An Actions menu is displayed.



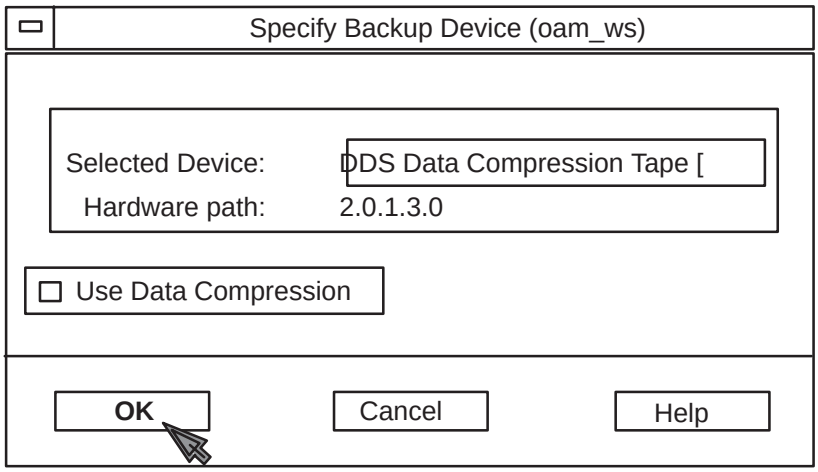
9 On the Actions menu, click on the option labeled Recover Files or Directories. Another dialogue which lists the steps required to recover files or directories is displayed.



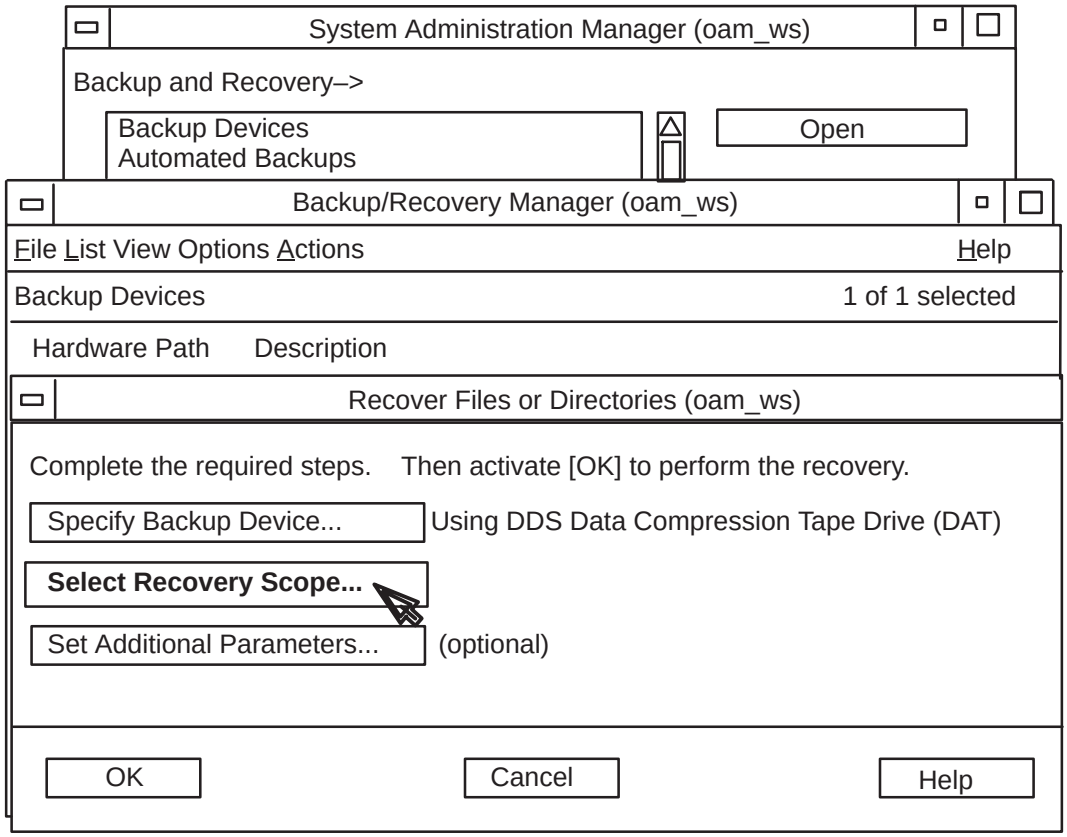
10 With the left mouse button, select the option labeled Specify Backup Device. Another dialogue box is displayed. In this box, the backup device is already filled in.



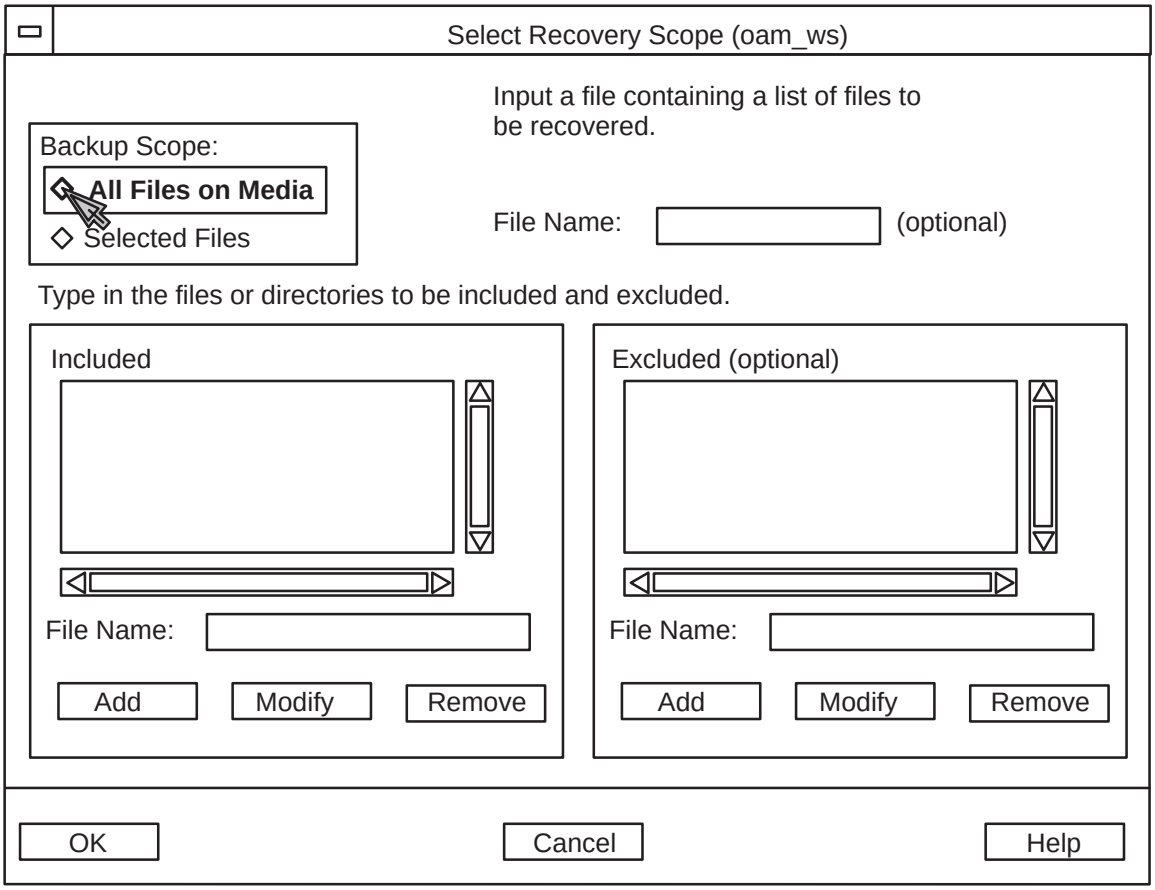
11 Click on the OK button with the left mouse button to select the designated backup device.



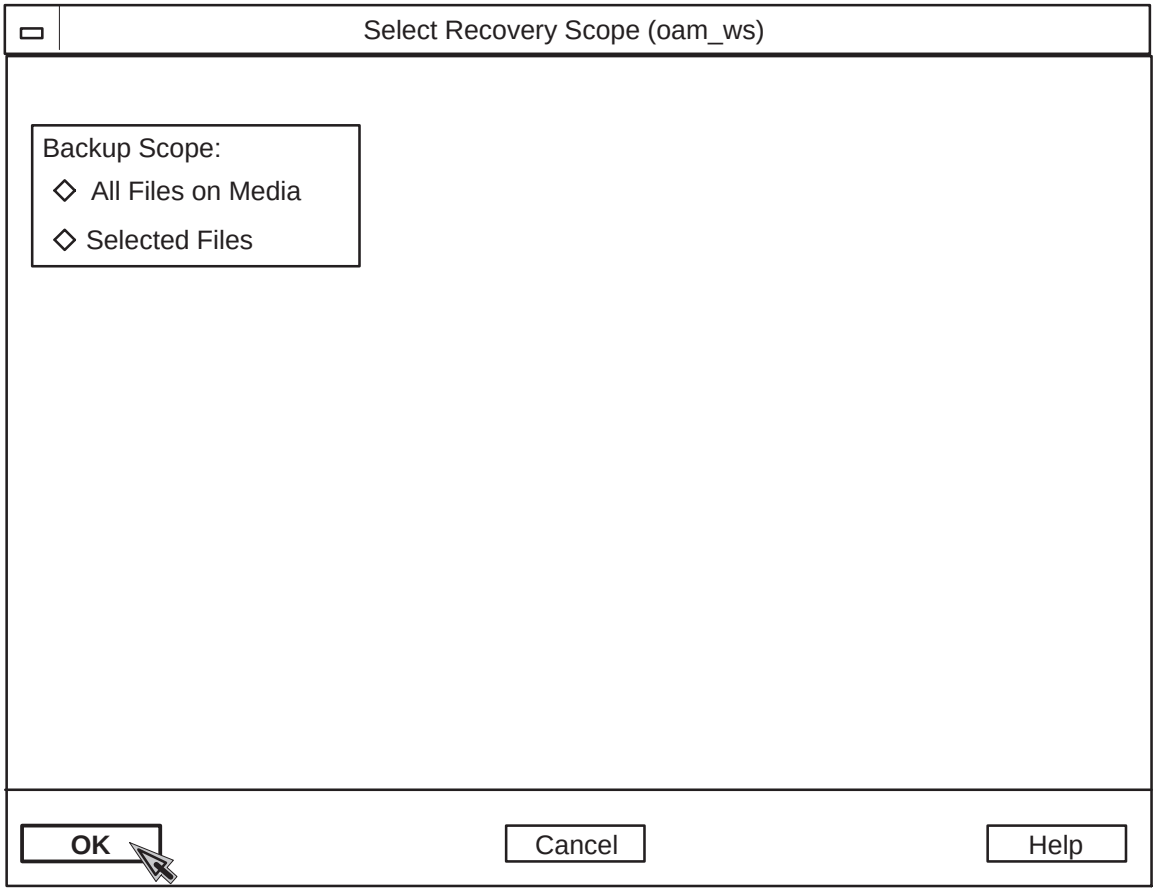
12 The dialogue which lists the steps required to recover files or directories is again displayed. Click on the second option labeled Select Recovery Scope.



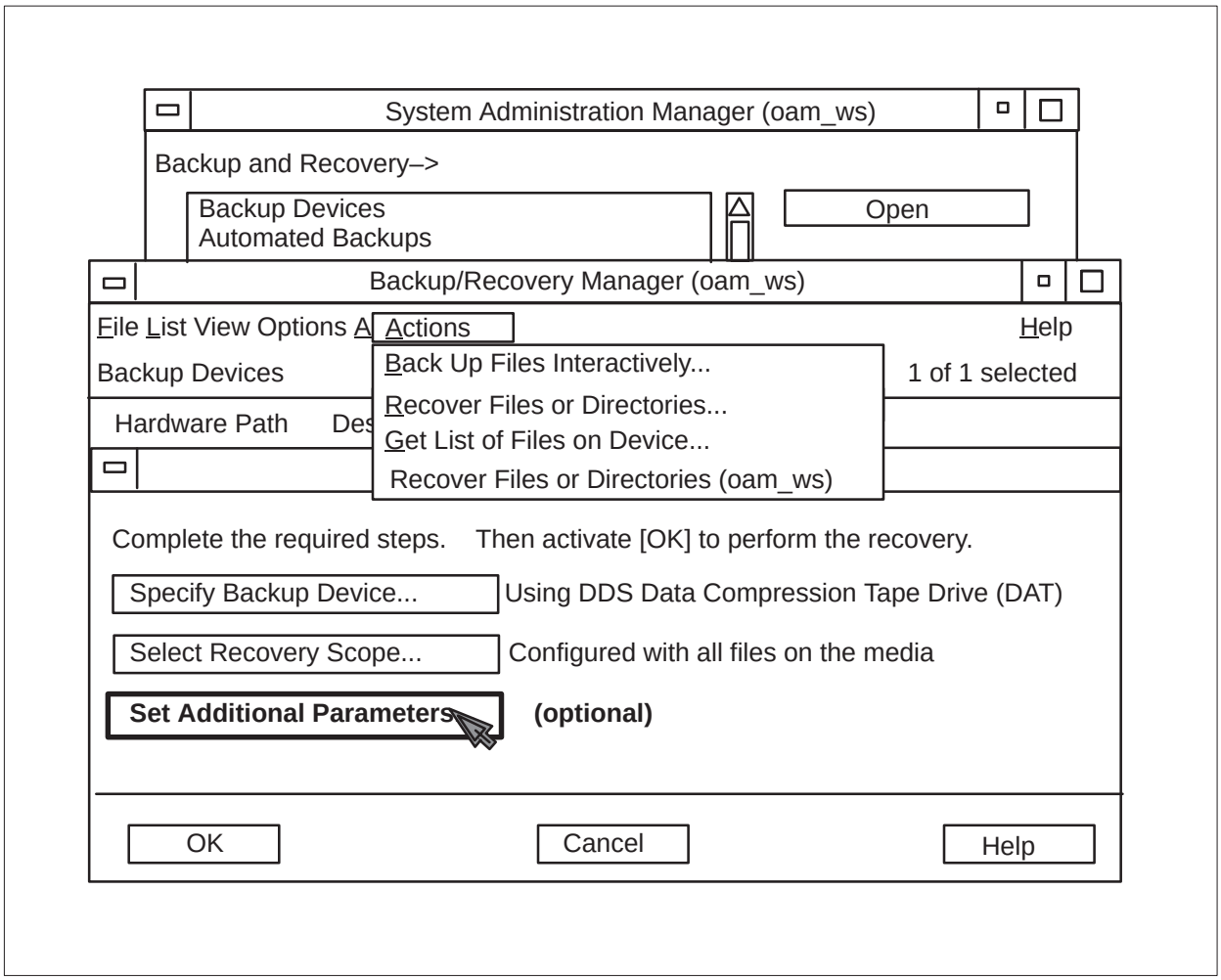
13 A backup scope dialogue is displayed. Select the option labeled All Files on Media by clicking on the diamond located to the left of the option.



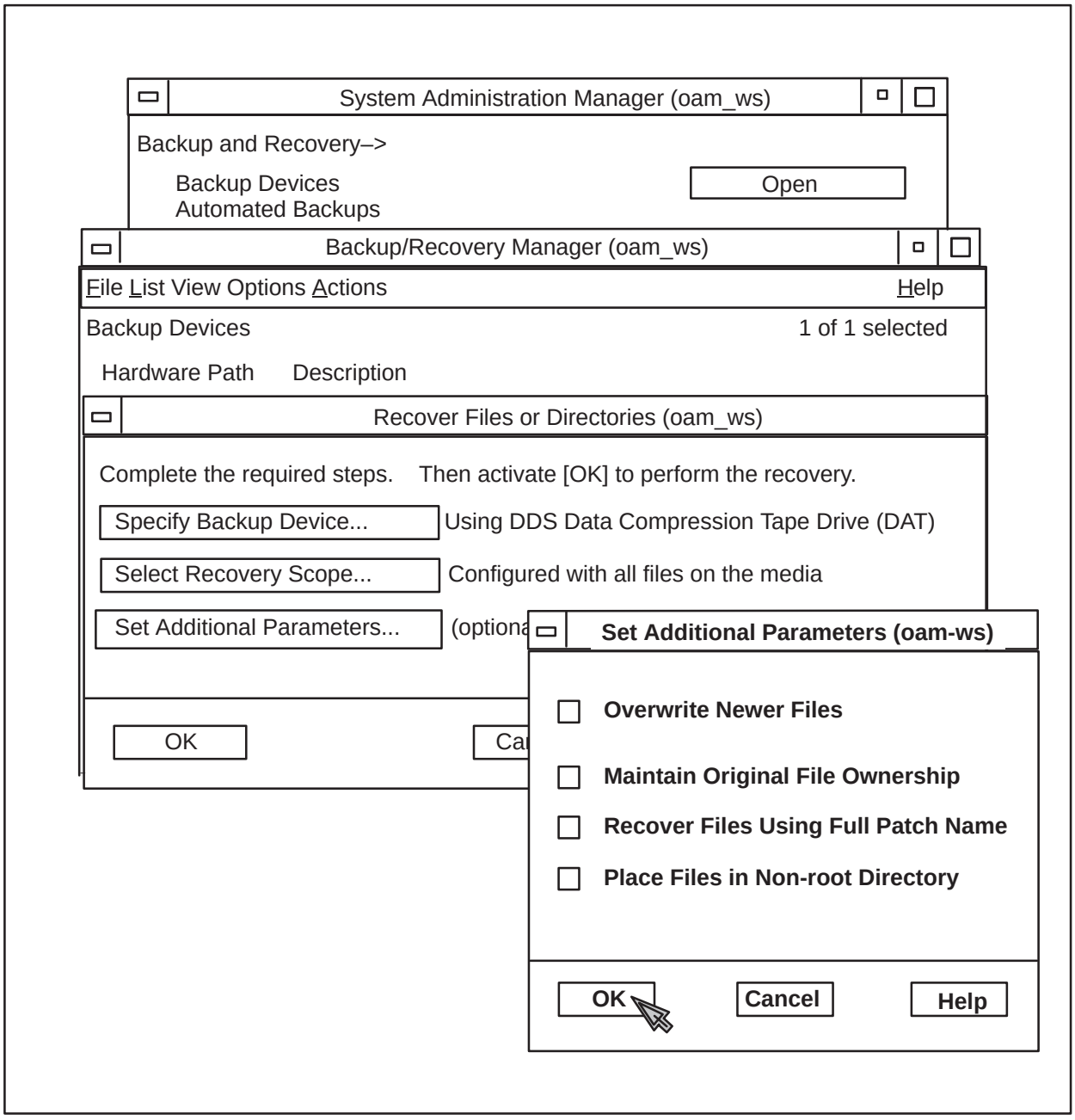
14 Then click on the OK button at the bottom of the dialogue to confirm selection of the option labeled All Files on Media.



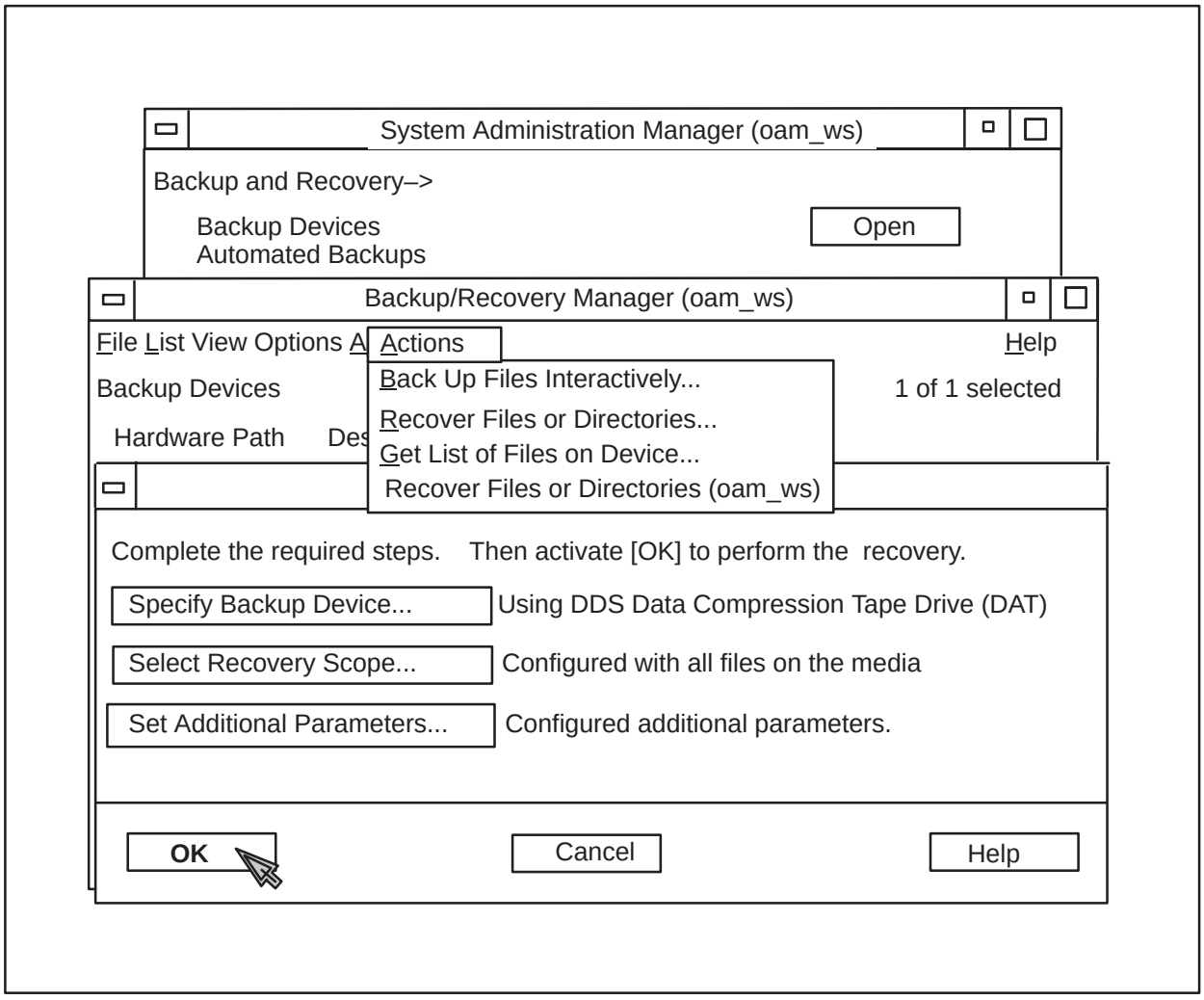
15 The dialogue which lists the steps required to recover files or directories is again displayed. Click on the third option labeled Set Additional Parameters.



16 Click on the option labeled Overwrite Newer Files. Then select OK to confirm.

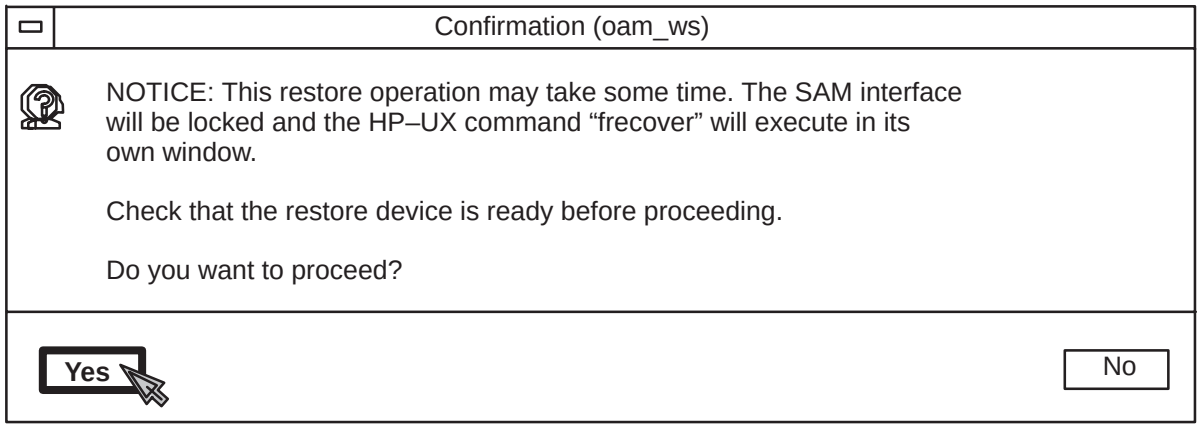


17 The dialogue which lists the steps required to recover files or directories is again displayed. Click on the OK button to confirm selection of the options for backup device, recovery scope, and additional parameters.



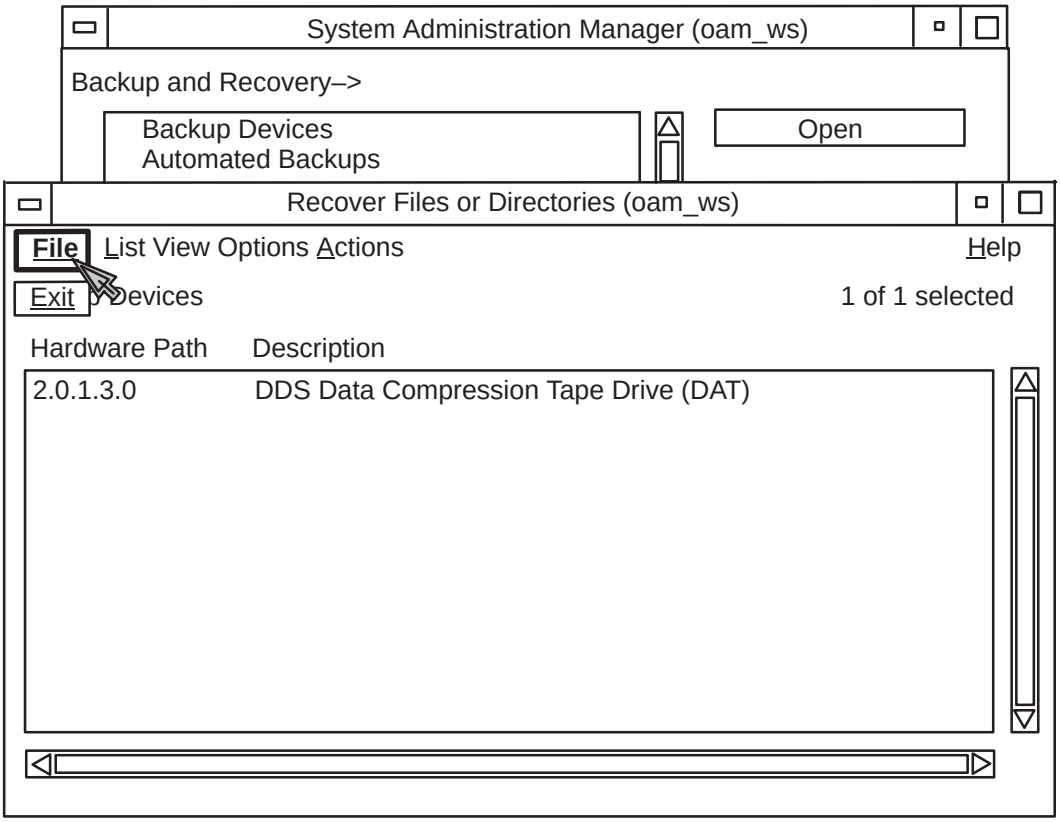
18 At this point a message might appear as a caution that there is more than one user on the system. This is not a problem as long as no users are writing to any files. To be sure, close any applications that are running, and click on the Yes button of the message dialogue.

19 Before execution of the recovery (restore) operation, a Confirmation notice is displayed. Select the Yes button to proceed with the restore operation.

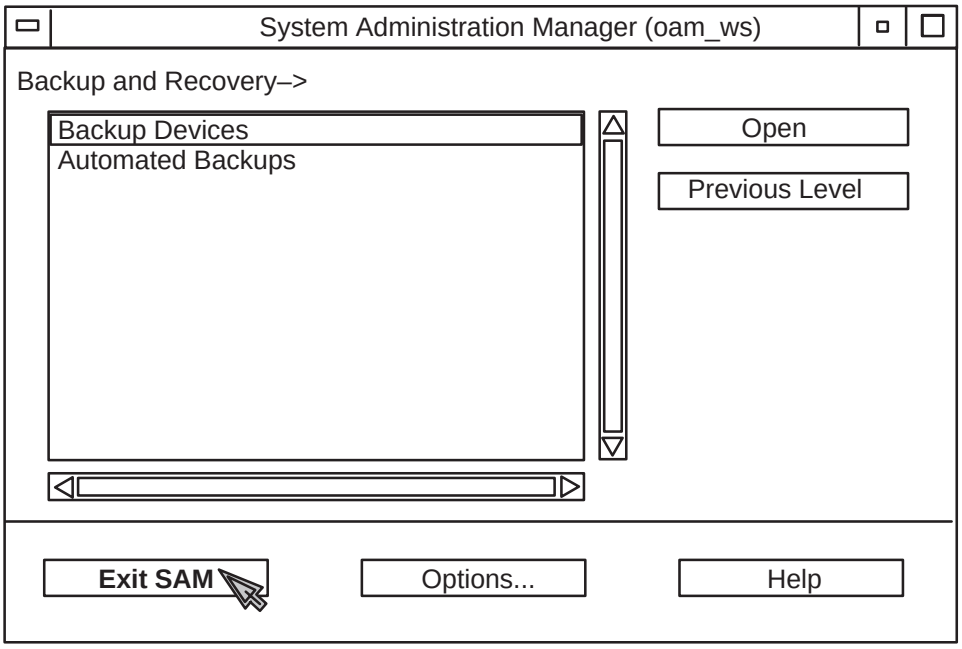


20 A window for showing the state of the system appears in the background. Wait for the message to press <return> to appear. This completes the restoration of data on the hard drive of the OAM position workstation. Press the Enter key to continue.

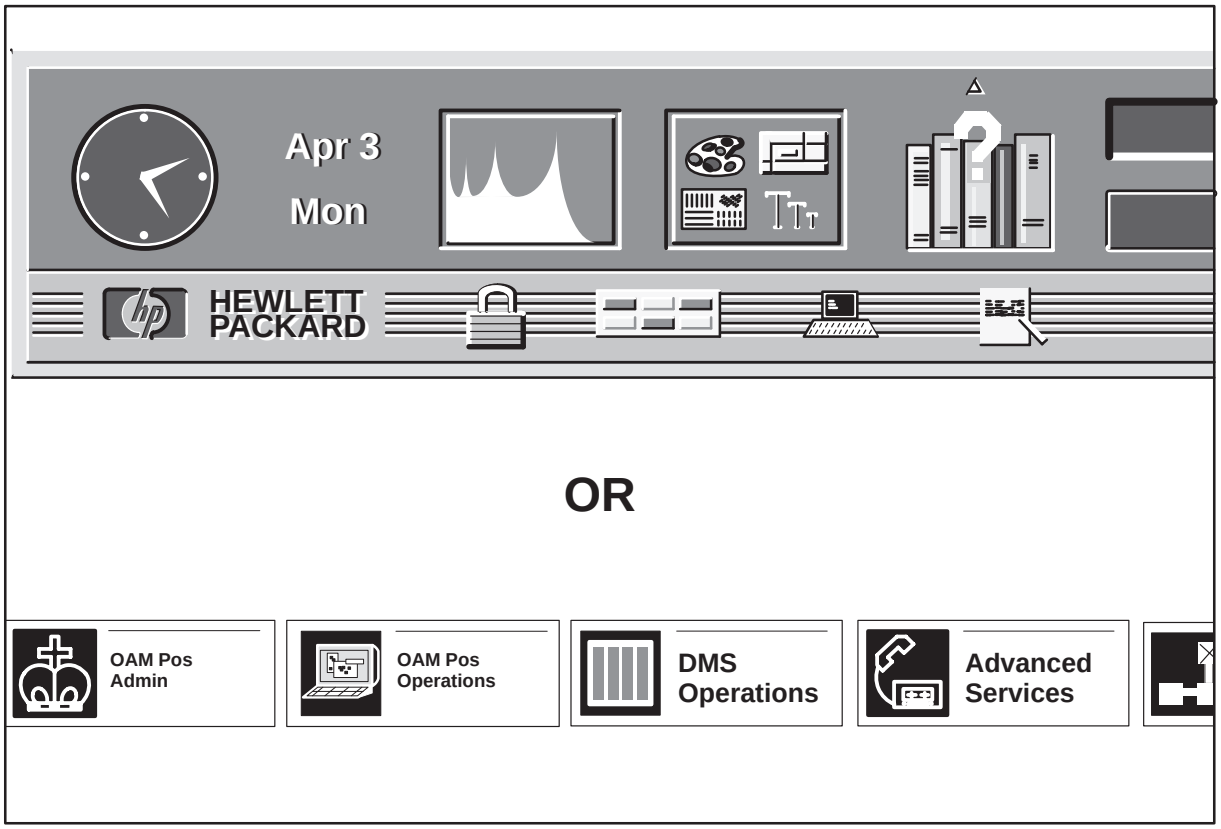
21 Click the left mouse button over the File option in the upper left box of the Backup/Recovery Manager window. Then click on the Exit icon which appears.



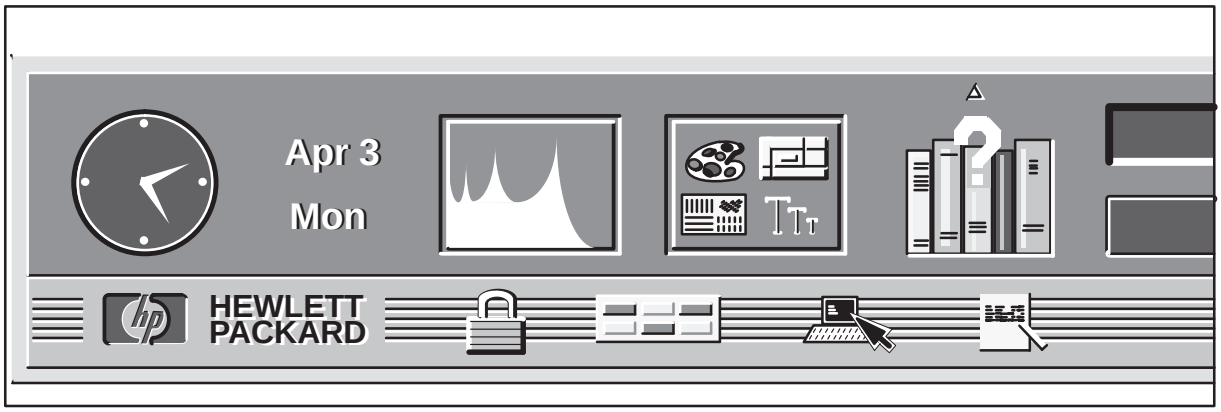
22 Use the left mouse button to exit SAM.



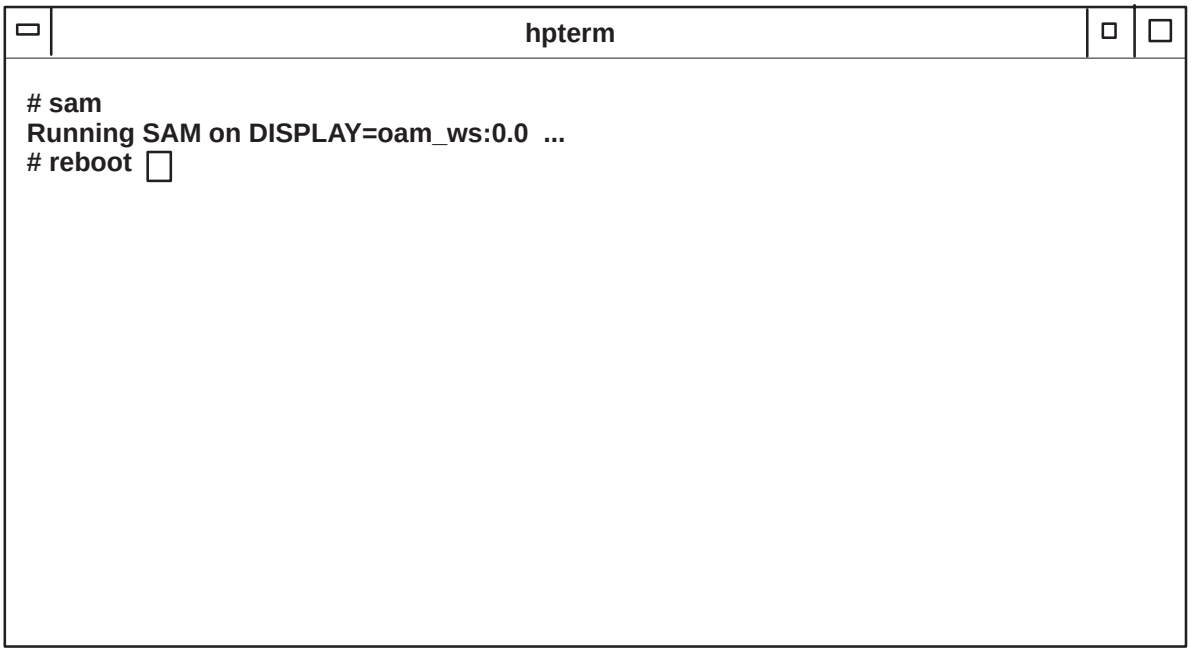
23 At this time, either a front panel control display is available, or toolset icons are displayed. If the front panel control is available, go to step 24. If the toolset icons are shown, skip steps 24 and 25, and go to step 26.



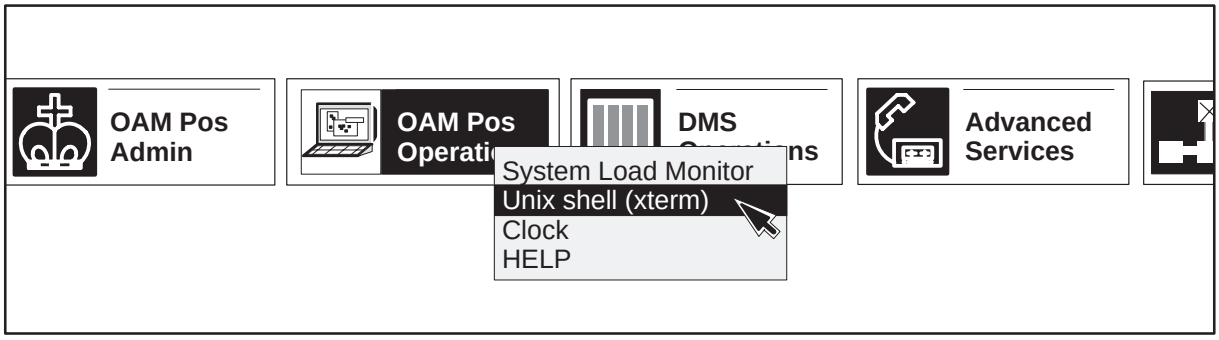
24 Position the arrow on the terminal icon and click the left mouse button.



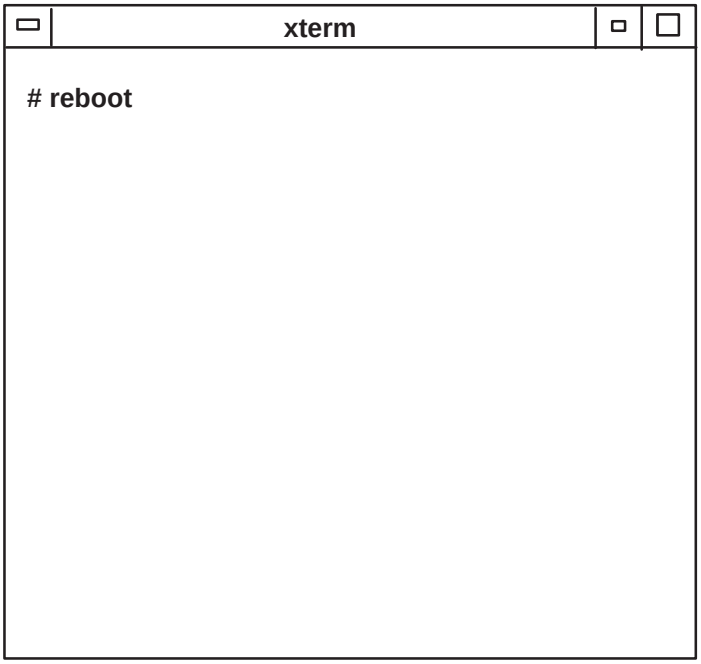
25 Wait for the hpterm window. Then type **reboot** and press the Enter key to restart the OAM position workstation. Skip steps 26 and 27, go to step 28.



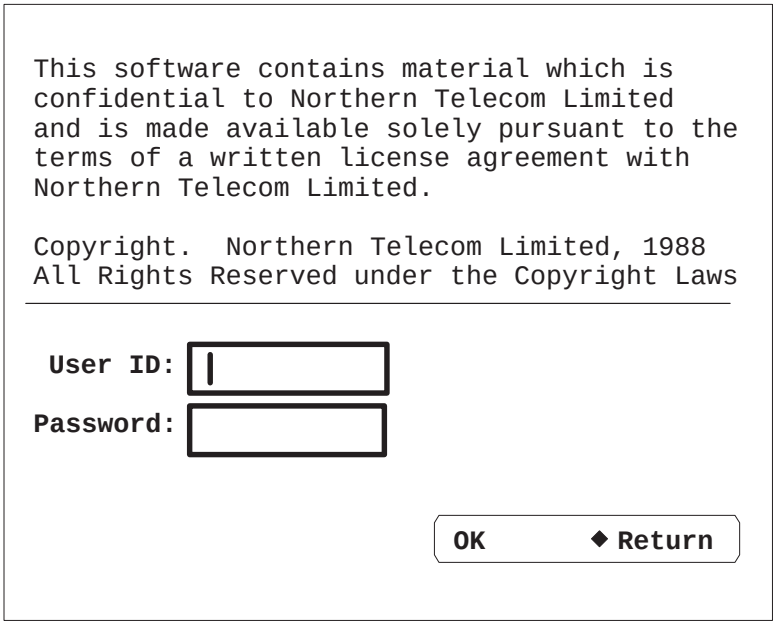
26 Click and hold down the right mouse button on the icon labeled OAM Pos Operations. A menu with the option UNIX shell (xterm) listed appears. Slide the right mouse button to this option and release the button.



27 Wait for the xterm window, type **reboot**, and press the Enter key to restart the OAM position workstation. Go to step 28.



28 The OAM position workstation will reload at this time. Allow the system to completely boot up.



29 Remove the backup tape from the drive unit. Store the tape in a safe place for future use. This ends the data restore procedure.

HP-UX operating system software

As delivered from Nortel Networks, the OAM position workstation is pre-equipped with the base operating system software. As part of the operating system software, an “instant-ignition” software package has also been pre-installed. The ignition software is used to automatically boot of base operating system software.

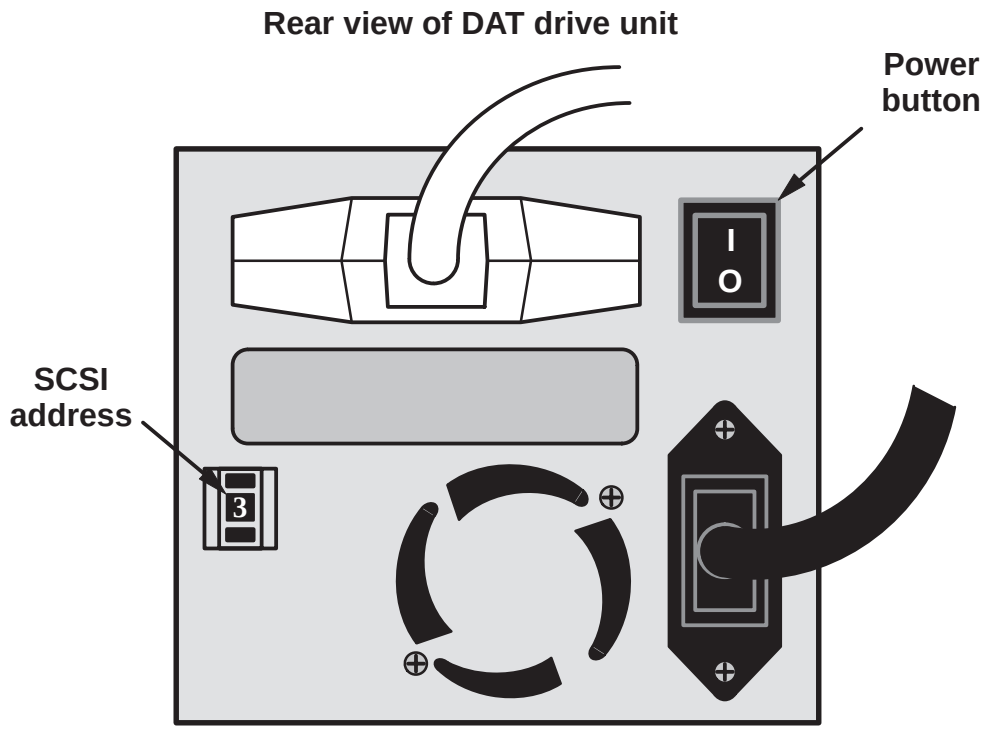
In the event of a catastrophic hard disk drive data failure, the following procedure can be used to reload the OAM position with the HP–UX 09.07 operating system software.

> ***Note:*** This install procedure is also provided in the appendices of the overall procedure that is contained in IM 20–2020, *Initial Installation for ADAS*, and which applies to the initial installation of ADAS software in the LPP. In addition, HP-UX documentation from Hewlett Packard documents the underlying workstation and software.

Load procedure

The HP-UX operating system software is contained on two DDS tapes that are provided with the OAM position workstation: one HP-UX 09.07 install tape and one runtime 8-user tape. The following load procedure takes approximately two hours and 45 minutes.

1 On the back of the DAT drive unit, set the SCSI address to (3). If it is not set to 3, use a paper clip or ball-point pen to push the located buttons above and below the number until the number 3 appears.

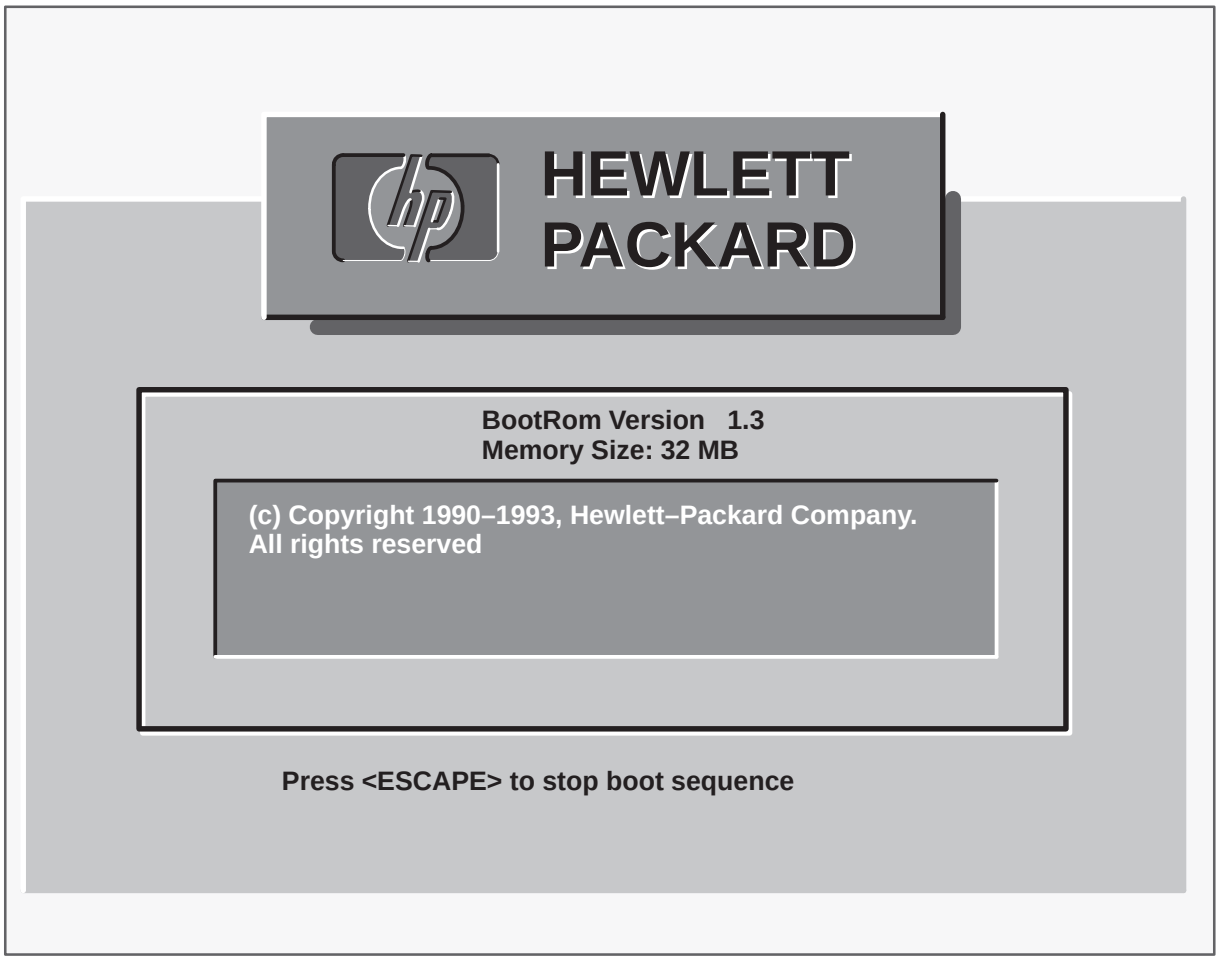


Note: This is an approximate representation of the model C1521B DDS tape drive to allow location of the SCSI address button and power button.

2 Turn the power switch of the drive unit to on (the drive's green LED lights when power is on).

3 Turn the power switch of the monitor to on. The monitor's LED indicates that power is on.

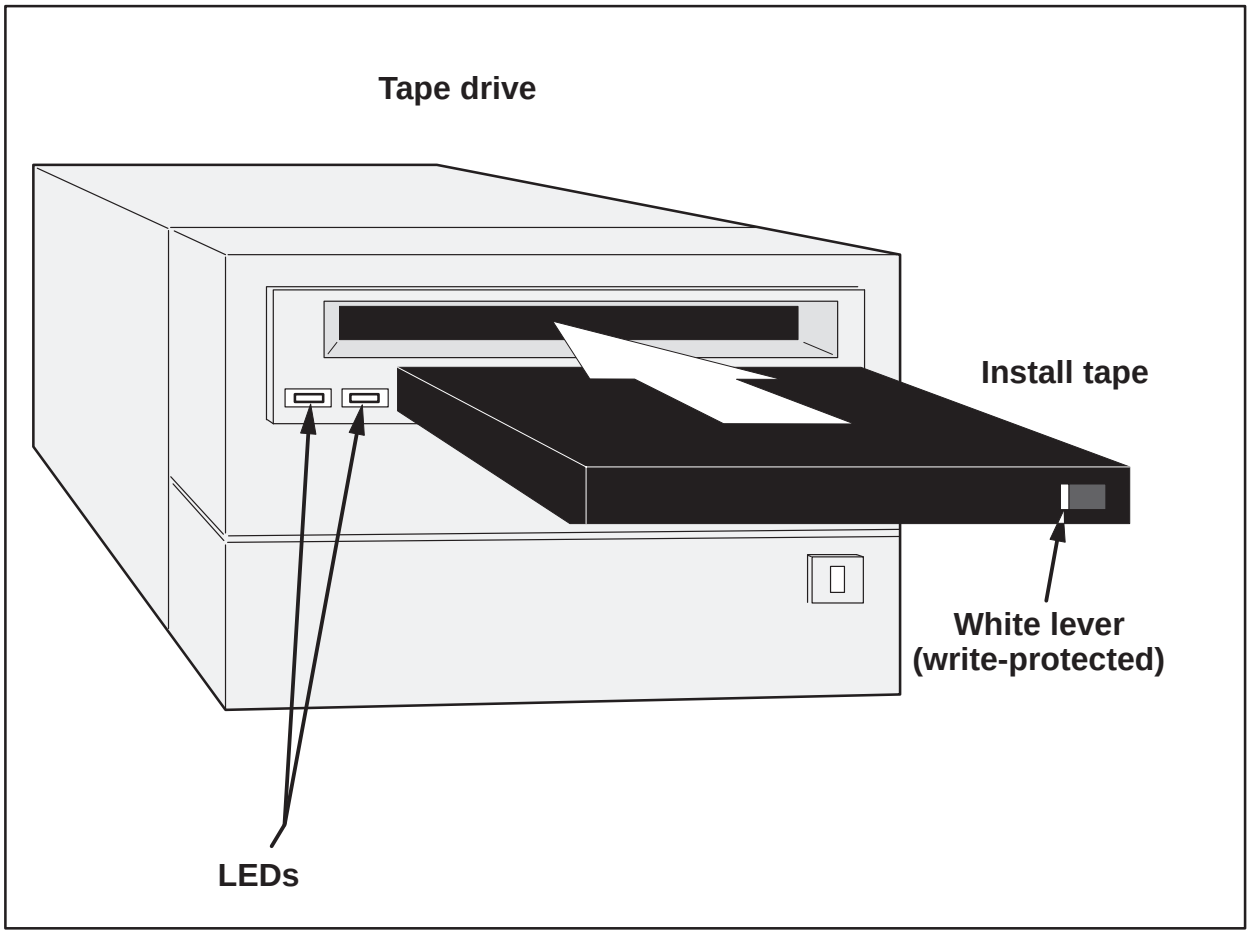
4 Turn the power switch of the base unit to on. The base unit's LED indicates that power is on. When the base unit is turned on, the system will begin a selection (boot) process. Look for the HP display shown below and use the ESC key as instructed to stop the selection (boot) process.



5 The following display should appear when the selection (boot) process is successfully stopped. If the system continues through the selection (boot) process, remove power (press the power switch) from the base unit and repeat steps 3 and 4 until the following display appears.

```
------------------------------------------------------------
Command                          Description
---------                        ----------
Auto [boot|search] [on|off]      Display or set auto flag
Boot [pri|alt|scsi.addr] [isl]   Boot from primary, alternate or SCSI
Boot lan[.lan_addr] [install] [isl] Boot from LAN
Chassis [on|off]                 Enable chassis codes
Diagnostic [on|off]              Enable|disable diagnostic boot mode
Fastboot [on|off]                Display or set fast boot flag
Help                             Display the command menu
Information                      Display system information
LanAddress                       Display LAN station addresses
Monitor [type]                   Select monitor type
Path [pri|alt] [lan.id|SCSI.addr] Change boot path
Pim [hpmc|toc|lpmc]              Display PIM info
Search [ipl] [scsi|lan [install]] Display potential boot devices
Secure [on|off}                  Display or set security mode
------------------------------------------------------------
BOOT_ADMIN >
```

6 Check that the white lever of the HP-UX install tape is set for "write-protected." Insert the HP-UX install tape into the DAT drive. Wait until both LEDs are on and not blinking.



7 Enter **search**. The system will search for the boot device. Wait for the boot prompt shown below. For example purposes, SEAGATE is used as the device type. The actual device type that is used on your system may vary.

```
Searching for potential boot device.
This may take several minutes.

To discontinue, press ESCAPE.

    Device Path              Device Type
    ––––––––––––             ––––––––––––
    scsi.6.0                 SEAGATE ST11200N
    scsi.3.0                 HP      HP35480A


BOOT_ADMIN >
```

8 Enter the boot selection **boot scsi.3.0** in response to the prompt. ADAS begins a pre-initialization process that requires several minutes to complete. When this pre-initialization is completed, the following final message appears.

```
EISA configuration has completed.  Following the completion of a successful
HP-UX installation, please check the "/etc/eisa/config.err" file for any
EISA configuration messages.

        Press any key to continue.  >
```

9 Press any key. The following operations are displayed in the following order.

```
Welcome to HP-UX install.  There are basically 4 steps to install–
ing HP-UX, which this and another utility will lead you through.

Step 1)  Select the root "destination disk" and its characteristics.

Step 2)  Optionally modify the file system parameters pre-set
         for your chosen destination disk.

Step 3)  Optionally choose any other disks to be added to the system.
         This may be useful if root disk space is insufficient.

Step 4)  Choose the filesets (functional groups of files) which
         you want loaded onto the destination disk.

A menu driven interface will guide you through the above steps.

    Press any key to continue.  >
```

10 Press any key. The following root destination menu appears. It contains a list of SCSI devices.

```
HP-UX INSTALLATION UTILITY  – – ROOT DESTINATION MENU

If the disk shown below (name and system location ) is the desired
destination device, press <Return>.
If the desired ROOT disk is not listed, maker sure it is connected
properly and turned on, then select the "Search Again" item.
If your disk is STILL not recognized, you can use the
"Other disk" item to manually enter the Disk address.

                          Slot      Bus  Func
Disk                      Number    Addr Num
------------------------------------------

1.  SEAGATE ST11200N at    0    6    1
2.  Search Again
3.  Other disk
4.  Exit Install

Enter selection [ 1 ]
```

11 Depress 1 to select the option for SEAGATE at address 0 6 1. A warning may appear if HP-UX has previously been installed on this system.

```
Note:  There may be an HP-UX system already on this disk.
(Press any key to continue.)
```

Note: The next three information screens (11a, 11b, and 11c) could appear. The appearance of these screens depends on the type of hard drive that is installed.

11a

```
Note: The destination type; "QUANTUM_LPS1080S" was not found
in the disk table /etc/disktab.

(Press any key to continue.)  >
```

11b

If model number: QUANTUM_LPS511080S, is incorrect, and a correct one (one that has an entry in /etc/disktab) is known, please enter it now, otherwise just press return.

11c

Default: file system parameters will be used. These parameters will work but you may not obtain optimal performance from your disk. If you would like to change these parameters, select the "Change FILESYSTEM parameters" option in the Main Menu.

(Press any key to continue.) >

12 Press any key. A request for long or short filenames will be made.

Root Filesystem Type Selection.

SEAGATE ST11200N at 0 6 1

This screen allows you to choose whether or not you want this filesystem to allow long filenames (up to 255 characters); or if you want to have the filenames restricted to 14 characters in length (short filename system). You may convert from a short filename filesystem to a long filename filesystem at any future time, but once you have a long filename filesystem you can't go back to a short filename system. (See also mkfs(1M) and converts(1M)).

Each individual filesystem (disk) on your system can be specified as being long or short (it is not a system wide parameter).

Do you want the root filesystem to allow long filenames? [y]

13 Key y for yes. The main menu shown next appears.

```
HP-UX INSTALLATION UTILITY – – MAIN MENU

                Major    Slot     Bus      Function
                Number   Number   Address  Number   Model          Mount Point
     Source:    –1       0        3        1        Tape
Root Device:    7        0        6        1        SEAGATE ST1120 /

If the destination device shown above is correct, and you
do not want to modify filesystem parameters or add any additional
non-root filesystems, select the "CONTINUE" option below.

    1. Continue Installation Process.
    2. Change ROOT Destination Device.
    3. Change ROOT Filesystem Type.
    4. Change ROOT Filesystem Parameters.
    5. Add a non-root Disk/Filesystem.
    6. Modify/Display non-root Disk/Filesystems.
    7. EXIT the Installation.

Enter selection [ 1 ]
```

14 Press the Enter key. The swap space verification menu shown next appears.

```
Swap space verification

Verify that the root disk swap space is sufficient and change if necessary.

Root Disk Swap space (in 1024 byte blocks): [98986    ]

CTRL-X = Done,  CTRL-U = Undo changes,  ? = Help on current item.
```

15 Key **90000** and then press the Enter key. The note shown below is added to the swap space verification menu.

```
Root Disk Swap space (in 1024 byte blocks):   [90000     ]

Note: swap space value will be rounded to match system constraints.
(Press any key to continue.)


CTRL-X = Done,   CTRL-U = Undo changes,   ? = Help on current item.
```

16 Press any key. The swap space value is rounded up. (Depending on the type of disk, the rounded up value may differ from the example value, 90094, shown below.)

```
Root Disk Swap space (in 1024 byte blocks):   [90094     ]
```

17 Press the Enter key. Wait for the following message to appear.

```
                Major    Slot     Bus        Function
                Number   Number   Address    Number   Model          Mount Point

Root Device:    7        0        6          1        SEAGATE ST1120 /

Continuing the installation process will destroy
the content of the disk listed above.

Do you want to continue? (y/n)  [    ]
```

18 Key **y** for yes. **Do not** depress any other keys at this time. This process is copying files from tape to disk and will reboot the workstation. Wait about 3 minutes for the following final message to appear.

```
Press Enter to select        "PS2_DIN_US_English"        Space for next
```

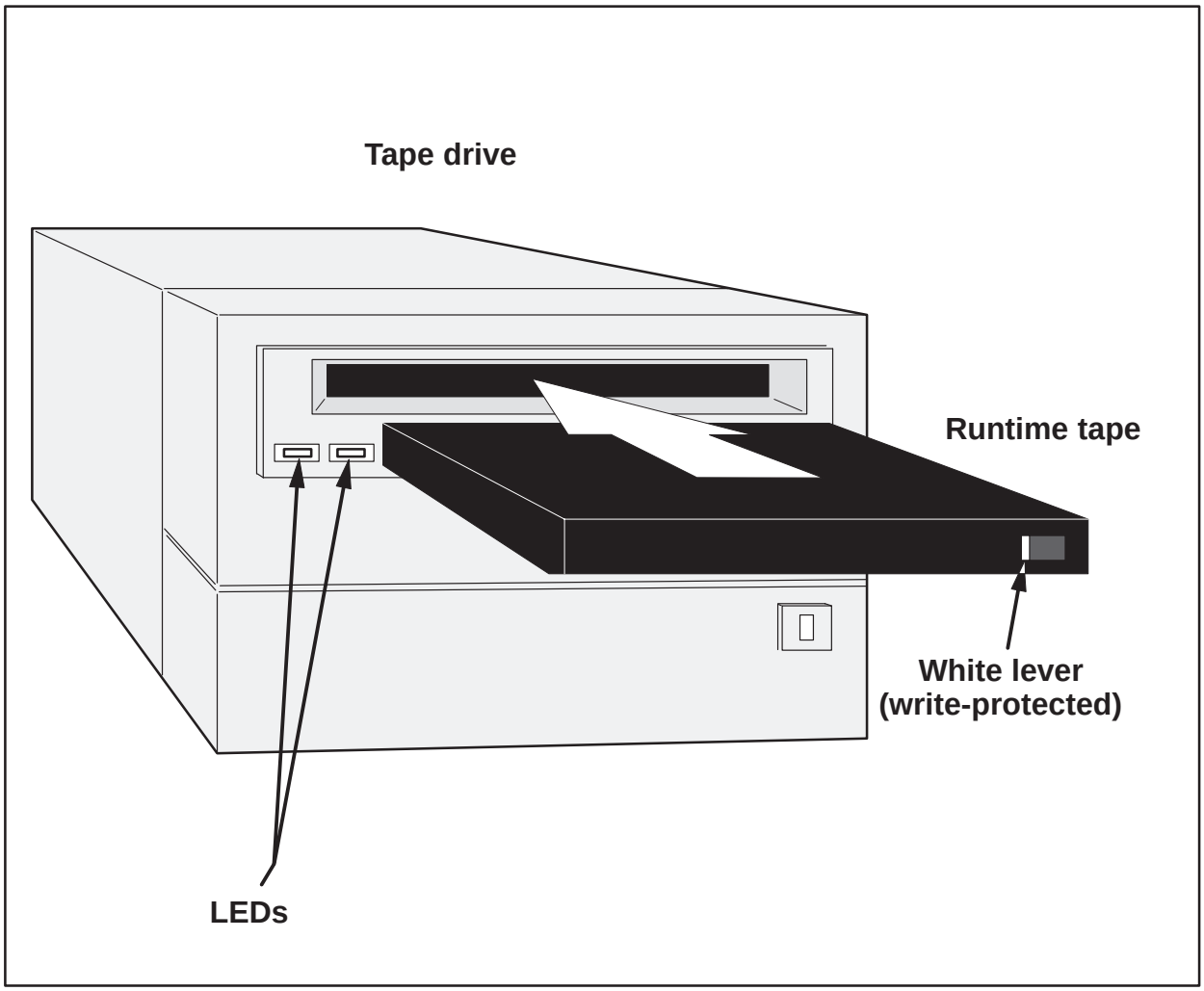
19 Press the Enter key. **Do not** depress any other key at this time. Wait for the following message to appear. (In the message, updated media unit refers to the HP-UX runtime 8-user tape.)

Ensure that the install media has been removed and an updated media unit is online and prepared for reading.

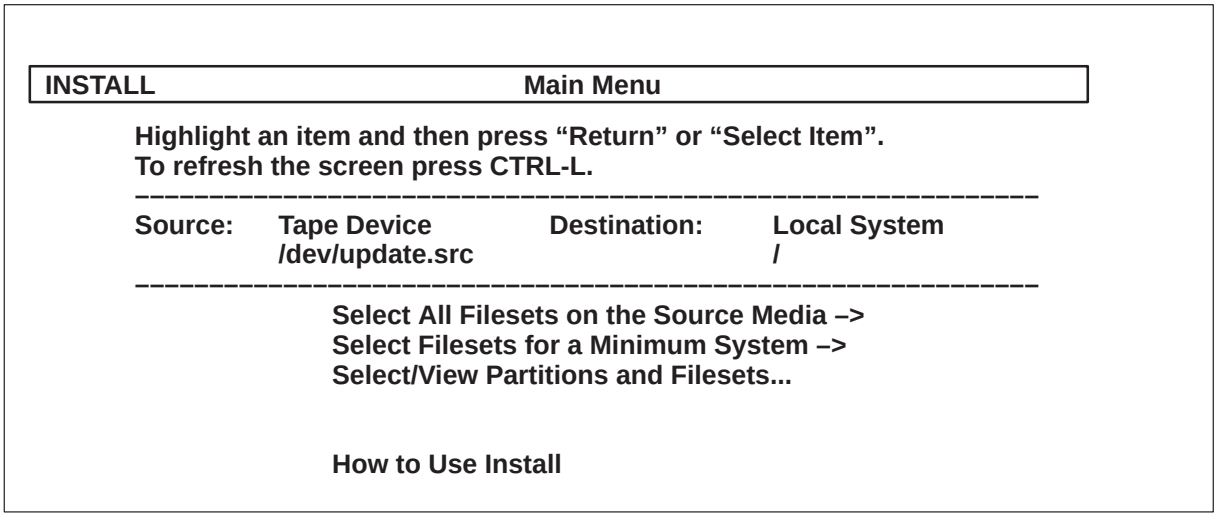
--- Press "Return" to continue ---

20 Press the eject button on the DAT drive and remove the HP-UX install tape.

21 Check that the white lever of the HP-UX runtime 8-users tape is set for "write-protected." Insert the runtime tape in the DAT drive unit. Wait until both LEDs are on and not blinking.



22 Press the Enter key. An install main menu appears. The option to Select All Filesets on the Source Media (runtime 8-users tape) is highlighted.



23 Press the Enter key. Wait for a window with a highlighted message to Start Loading Now.

```
INSTALL                          Main Menu

Highlight an item and then press "Return" or "Select Item".
To refresh the screen press CTRL-L.
------------------------------------------------------------
Source:   Tape Device          Destination:   Local System
          /dev/update.src                     /
------------------------------------------------------------

        Select All Filesets on the Source Media ->
                Select All Filesets on the Source Media

            Highlight an item and then press "Return" or "Selection".

            You have chosen to update your system by loading all of the
            filesets from the source:    /dev/update.src
            onto the destination:        /
            This update might take several hours to complete

            Would you like to:

                    Start Loading Now...
                    Modify View Partitions and Filesets...
                    Return to Main Menu
```

24 Press the Enter key. Wait for another window to appear with a last chance message to change your mind about the load selection.

```
The update should complete without additional attention.
Will load 157 filesets (138384 Kbytes), including 157 filesets (138384 Kbytes)
                    directly selected and 0 filesets (0 Kbytes) selected only due to
dependencies.
Review the log file, /tmp/update.log, afterward by:
1)  typing “more /tmp/update.log”;
2)  finding the correct date and time heading;
3)  looking for any messages that begin with ERROR or WARNING.

This is your last chance to change your mind about your selections, exit the program,
or escape to a shell.  Start loading filesets now?  (y or n)
```

25 Key y for yes. A running display for loading partitions and filesets appears. Filesets will be copied from tape to disk. This load process requires about 30 minutes. Go to step 26.

```
INSTALL          Loading Partitions and Filesets

      Loading filesets:    X11-RUN-MAIN          from/dev/update.src

            Kbytes loaded:              124546 of        138384     (90%)
            Loading fileset:               150 of           157
            Estimated remaining hours:minutes:              0.59
            Estimated post-load processing time:            05.23

            Summary of Messages (also logged to /tmp/update.log)
```

26 Wait for the following final message.

```
Are you ready to link this system to a network?

Press [y] for yes or [n] for no, then press [Return]
```

27 This completes installation of the HP-UX operating system software on the OAM position workstation.

28 At this point, if you are installing a new system or do not have a backup tape, leave this section and go to the ‘‘ADAS HP 9000/712 OAM Position Release Notes’’ to complete the installation.

29 If restoring from tape continue with this procedure. **Do not** link to a network at this time. Press **n** and then the Enter key for a no selection. Instructions for naming your system and identifying your time zone follow.

```
------------------------------------------------------------------------

Before you begin using this system, you need to provide the following
information:

    * A name for your system (host name).

    * Your time zone.

NOTE: If you plan to eventually connect your system to a network,
you may want to check with your network administrator to obtain a
valid system name now, so you won't have to do it later.

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

Do you wish to continue?

Press [y] for yes or [n] for no, then press [Return]
```

30 Press **y** and then the Enter key for a yes selection. Instructions for naming your system are presented. Enter **oam_ws** as the system name.

```
––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––

For the system to operate correctly, you must assign it a unique
system name.  The system name, or host name, must:

    * Contain no more than 8 characters.

    * Contain only letters, numbers, underscore (_), or dash (–).

    * Start with a letter.

NOTE: Uppercase letters are not recommended.

  If you do not yet have a system name, you may select the default name
  of 'unknown' by pressing [Return].

––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––

  Enter the system name, then press [Return]  oam_ws

You have chosen oam_ws as the name for this system.
Is this correct?

Press [y] for yes or [n] for no, then press [Return]
```

31 Confirm the name oam_ws by keying **y** and pressing the Enter key. Instructions for identifying your time zone are presented. In the example below, the selections North America (1) and Eastern Standard/Daylight (3) were made.

```
––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––

The following procedure enables you to set the time zone.

Select your location from the following list:

   1) North America or Hawaii

   2) Central America

   3) South America

   4) Europe

   5) Africa

   6) Asia

   7) Australia, New Zealand

––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––
Enter the number for your location (1–7), then press [Return]  1

––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––

Select your time zone from the following list:

   1) Newfoundland Standard/Daylight      | 7) Mountain Standard Only (Arizona)
                                          |
   2) Atlantic Standard/Daylight          | 8) Pacific Standard/Daylight
                                          |
   3) Eastern Standard/Daylight           | 9) Yukon Standard/Daylight
                                          |
   4) Eastern Standard (US: Indiana only  | 10) Aleutian Standard/Daylight
      Central Daylight)                   |
                                          |
   5) Central Standard/Daylight           | 11) Hawaii Standard/Daylight
                                          |
   6) Mountain Standard/Daylight          | 12) Unlisted time zone
                                          |
                                          | 13) Previous menu
––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––

Enter the number for your time zone (1–13), then press [Return]  3

The time zone entered is Eastern Standard/Daylight.
Is this correct?

Press [y] for yes or [n] for no, then press [Return]
```

32 Confirm the time zone by pressing **y** and the Enter key. The system clock is presented next. If the time shown is correct, enter y for yes and go to step 31; otherwise enter n for n. In the example below, the clock time shown, Sat Sep 4 06:40:52 EDT 1994, was incorrect. A new entry, Mon Apr 3 14:33:00 EDT 1995 (for Monday, April 3, 14 hours, 33 minutes, Eastern Daylight time, 1995) was made over a series of prompted entires.

```
------------------------------------------------------------------------

This section enables you to set the system clock.

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

The current time is Sat Sep  4 06:40:52 EDT 1994

Is this correct?

Press [y] for yes or [n] for no, then press [Return] n

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

You will be prompted for the date and time.  Please enter all values
numerically, for example January is 1.  The values in the parenthesis
give the acceptable range of responses.
------------------------------------------------------------------------

Please enter the month (1–12), then press [Return]  4

Please enter the day of the month (1–31), then press [Return]  3

Please enter the last two digits of the year (70–99), then press [Return]  95

Please enter the hour (using 24 hour time) (0–23)
For example: For 10 in the morning enter 10, for 3 in the afternoon enter 15.
Then press [Return]  14

Please enter the minute (0–59), then press [Return}  33

You have entered: Apr 3 14:33:00 EST5EDT 1995.
This time will be used to reset the system clock

Is this value correct?

Press [y] for yes or [n] for no, then press [Return] y

The date and time have been set to: Mon Apr  3 14:33:00 EDT 1995.

Press [Return] to continue...
```

33 Confirm the date and time by pressing the Enter key. The password for the root account is considered next. **Do not** set the root password at this time.

```
_____________________________________________________________________

This section enables you to set the "root" password for the system.

The "root" account is used for system administrative tasks.  To insure
the security of the system, the root account should have a password.

_____________________________________________________________________

Do you want to set the password at this time?

Press [y] for yes or [n] for no, then press [Return]
```

34 Key **n** and press the Enter key to confirm that you do not want to set the root password. Then wait for the following Console Login prompt.

```
GenericSysName [Release] (see /etc/issue)
Console Login:
```

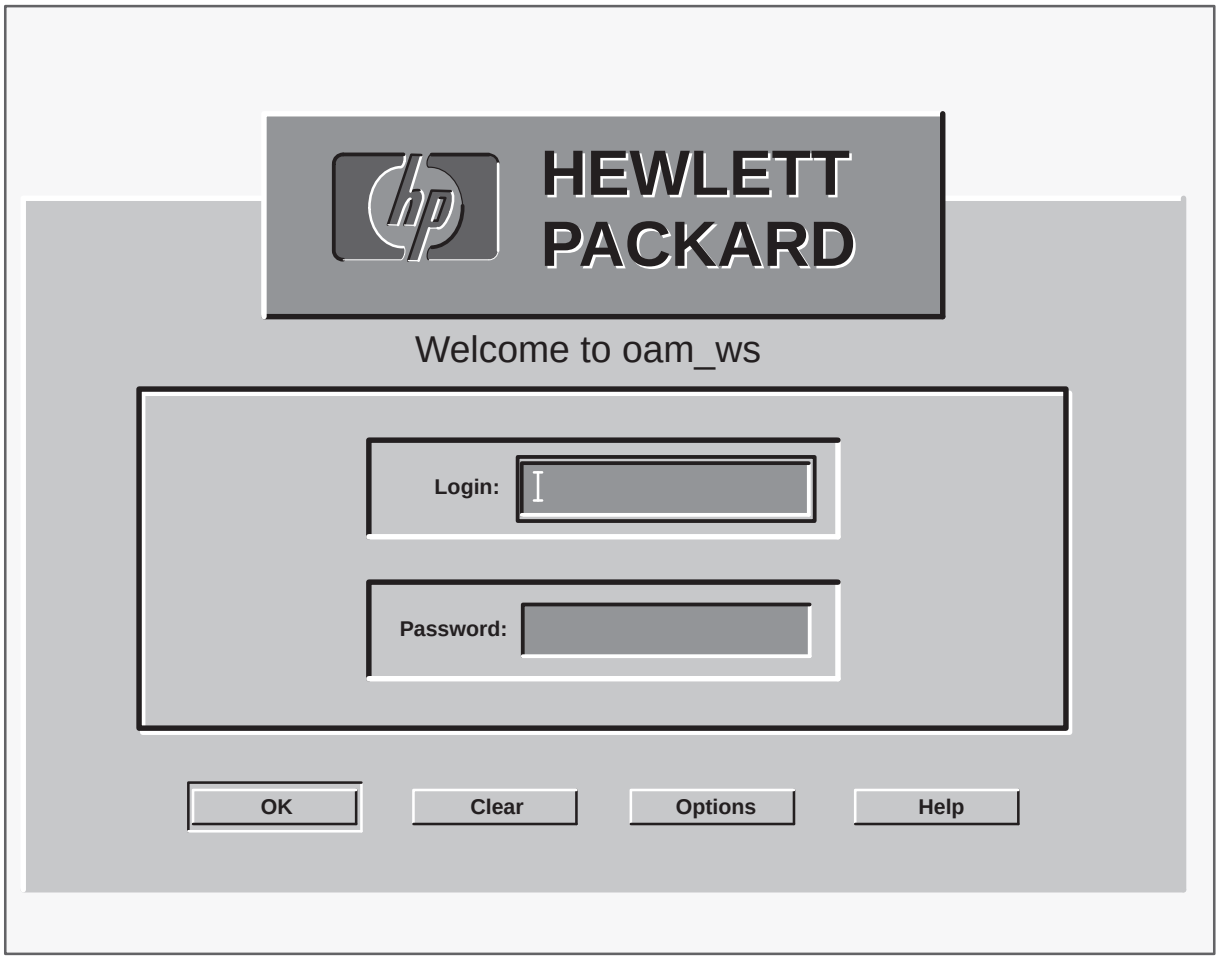
35 Log on as **root** without a password. Wait for the following prompt.

```
Is your console one of the following: a 2392A, 2393A, 2397A or 700/92? [y,n]:
```

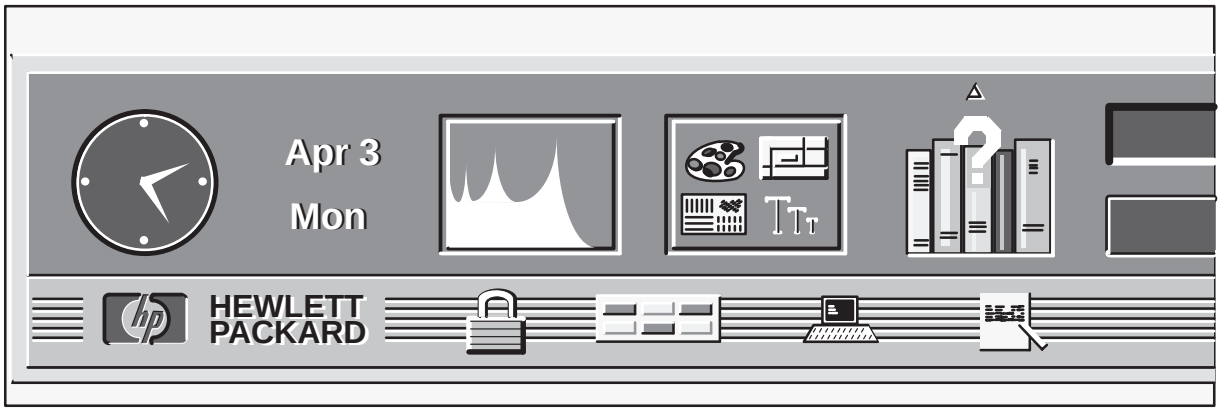
36 Key **y** and press the Enter key to confirm that your OAM position workstation is a 700/92 series workstation. Then wait for the following prompt.

```
Value of TERM has been set to "hp".
WARNING: YOU ARE SUPERUSER !!
#
```

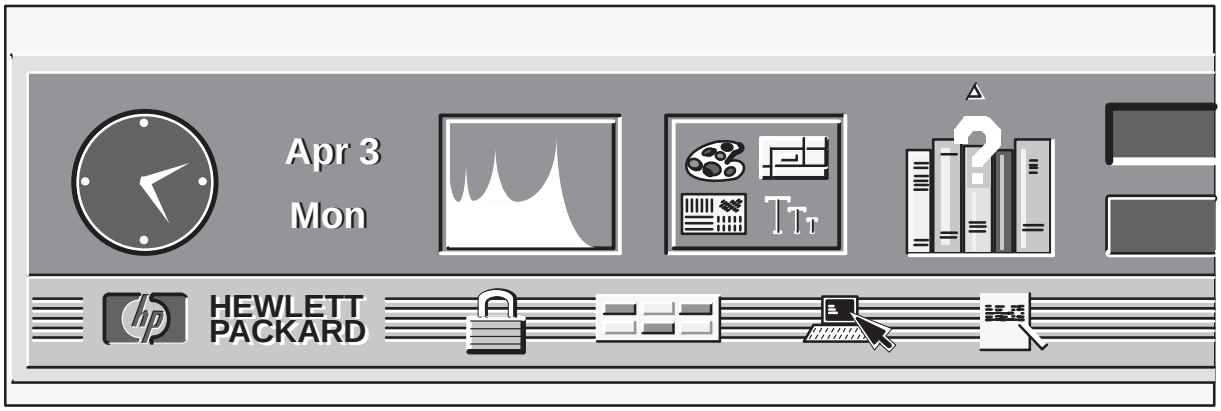
37 Type **init 3 ; exit**, then press the Enter key. Wait for the display shown below.



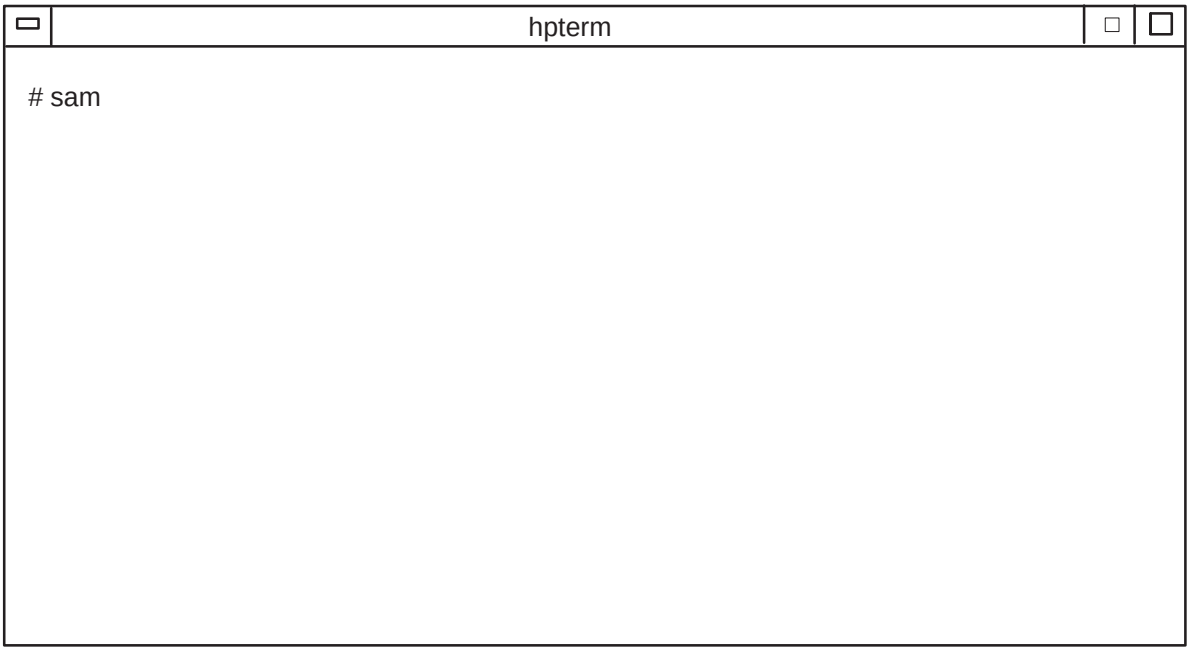
38 Login as **root**, then press the Enter key. Wait for the HP display below.



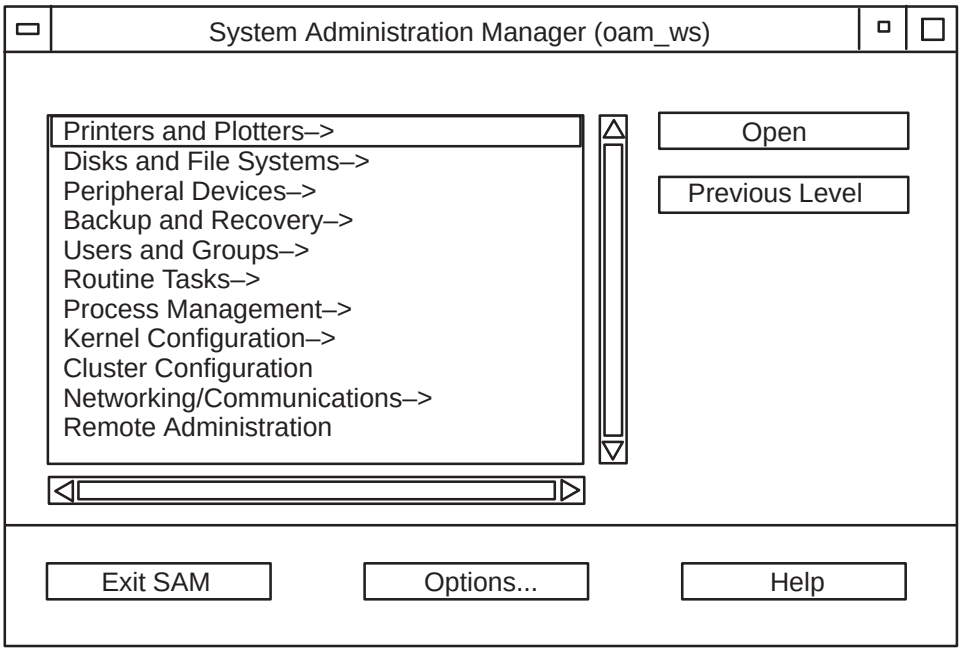
39 Position the arrow on the terminal icon and click the left mouse button.



40 Wait for the hpterm window, type **sam**, and press the enter key.



41 Wait for the SAM (System Administration Manager) menu to appear.



42 Press the eject button on the DAT drive and remove the HP-UX runtime 8-users tape. Store the tape in a safe place for future use. This is the end of the procedure which loads the HP-UX operating system software onto the hard drive of the OAM position workstation.

At this time, a total restore of lost OAM data can be performed. (See Chapter 8 of this guide.)

Workstation Remote Access

This chapter explains how to use the ADAS Workstation Remote Access feature. The information in this chapter is intended for use by ADAS administrators.

The Workstation Remote Access feature is a stand–alone program with an easy to use graphical interface for making remote–to–host connections between ADAS OAM Position workstations across a network.

The ADAS administrator can use the Workstation Remote Access feature to make direct network connection from a remote workstation to a host ADAS OAM Position workstation. A remote–to–host workstation connection allows the administrator to perform all ADAS administrative and maintenance workstation functions as if physically located at the host workstation. The output of the ADAS OAM Position (the host workstation) is displayed on the screen of the remote workstation.

The ADAS OAM Position workstations functions that can be accessed and administered through a remote access connection include:

- ADAS Service Monitor,
- Service Data configuration changes,
- Service Data uploads,
- DMS Switch access,
- UNIX access.

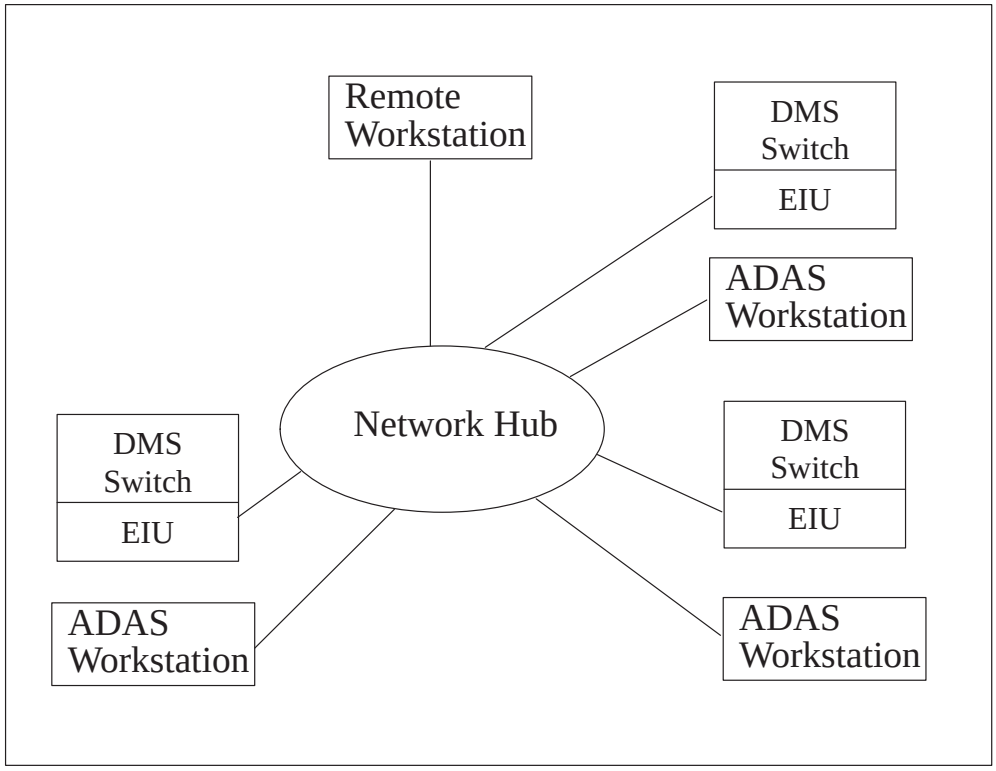
Remote access gives ADAS administrators the distinct advantage of being able to:

- react quickly to emergency situations,
- collect service data quickly and efficiently,
- monitor each workstation from a central location,
- eliminate or reduce travel to each TOPS switch.

The following diagram shows a typical network configuration that uses the Remote Access feature.

See ‘‘TOPS IWS and ADAS Network Configuration Reference Guide” NTP 297–2211–800 for detailed information on remote access networks.

Figure 10–1
Typical Remote Access Network



Remote Access Workstations

A remote workstation is actually a standard ADAS OAM Position (HP workstation) with the Remote Access software installed. The Remote Access software performs all the steps that set up and take down a remote–to–host connection.

Any ADAS OAM Position can be operated as an ADAS remote workstation if it meets the set-up conditions that follow:

- must have Remote Access software installed
- must have HP-UX 09.03 or higher operating system installed
- must be connected to one or more workstations through an Ethernet network that allows TCP/IP communications

- must be running the X Window system to allow display of windows from the host ADAS Workstation(s)

Note: A remote workstation does not require the ADAS OAM Position workstation software to be installed.

Note: For the Remote Access software to function properly, all networked workstations must have an unique IP addresses. See ‘‘TOPS IWS and ADAS Network Configuration Reference Guide” NTP 297–2211–800 for details on remote networking.

Remote–to–host workstation communication is accomplished through the use of existing HP-UX facilities. This arrangement allows all ADAS functions that are available on the host workstation to be performed from the remote workstation.

For example, the Service Data Administration program (see Chapter 3) can be started from the remote workstation and used to change the configuration of the host workstation. An upload can then be performed from the remote workstation to update the APUs and VPUs.

Host Workstations

A host workstation is a standard ADAS OAM Position (HP workstation) that is connected to an ADAS system.

For an ADAS OAM Position to be operated as an host workstation it must be set up with the conditions that follow:

- running TOPS07 or higher software
- have HP-UX 09.03 or higher operating system installed
- connected through an Ethernet network that allows TCP/IP communications to a remote workstation
- have a unique IP addresses

Note: Remote Access software is not required on a host workstation unless it will also be used as a remote workstation.

Host–To–Remote Interactions

This section contains important information on the interaction between a host workstation and a remote workstation.

- Only one host workstation should be connected to a remote workstation at a time. Connection to multiple workstations presents excess clutter on the remote screen because of the windows being displayed by each host workstation. To connect another host workstation, the connection to the first host workstation should be closed.
- Remote–to–host workstation connections should be coordinated to insure that conflicts do not arise. It is possible to have users logged on both the host workstation and remote workstation concurrently. In this case, changes made by the user at one location could interfere with changes being made by the user at the other location.
- Only one user should make changes to the ADAS Workstation at a time. Changes made remotely to a host ADAS workstation are not reflected on the host workstation display until a user at the host workstation manually causes an update by closing and restarting the Service Data Administration program. (See Chapter3.) Similarly, changes made from the host workstation while a remote administrator is using the system will not be reflected on the remote user's screen until the remote user manually performs an update. In either of these cases, incorrect data may be displayed on the screen.
- Only physical devices connected to the host workstation are accessible by the host workstation. For example, to load audio files from a DAT tape onto the host workstation, the tape must be put in a DAT drive connected to the host workstation. The tape drive connected to the remote workstation cannot be used.

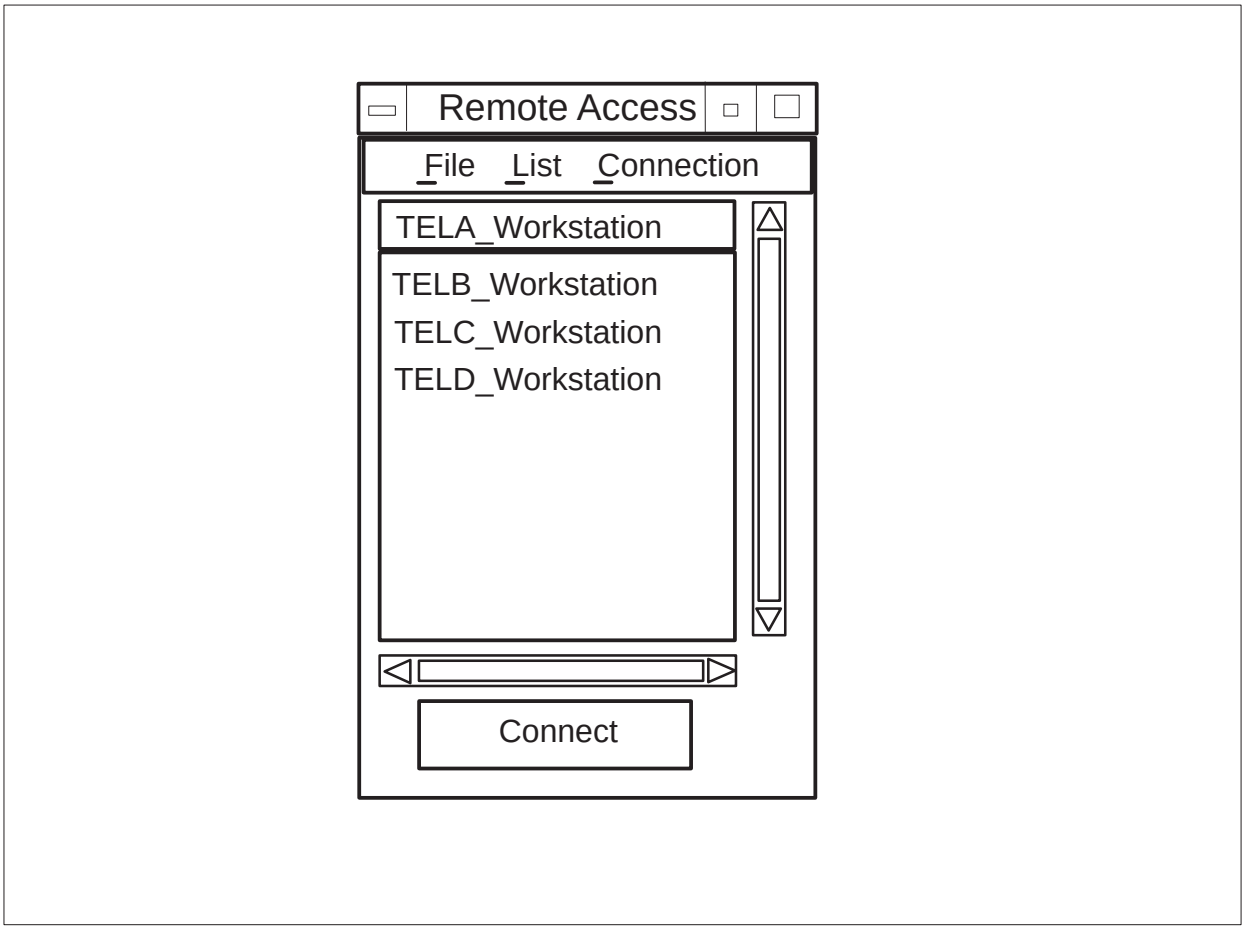
Starting the Remote Access software

To start the Remote Access software, at the remote workstation open a X terminal window. At the X terminal UNIX prompt, type "remote_access" and press Enter.

The Remote Access program starts and then displays the Remote Access main screen. (See Figure 10–2.)

The Remote Access main screen lists all the currently accessible host workstations. The main screen also contains three pull down menus used to administer the list of accessible workstations, check the status of the connection, disconnect from a workstation, and exit from the program. In addition, a "Connect" button is provided to make a connection to a selected host ADAS workstation.

Figure 10–2
Example of an ADAS Remote Access List Menu



Connect Button

The Connect button is used to start the process of connecting to the selected host workstation.

To connect to a host workstation, first select a host workstation by moving the mouse to a desired WorkStation and click the left mouse button to highlight the selection. Then click on the “Connect” button with the left mouse button.

The system will then access the selected host workstation and display an screen emulation of the selected host workstation.

The Connect button appears dim until a workstation is selected. In addition, any changes to the list of workstations must be saved before a connection may be made.

Using the host workstation

Once connected and logged in to the Host ADAS Workstation, the ADAS Workstation menu icons will appear across the top of the remote workstation screen. In addition, a UNIX window appears for accessing UNIX on the host workstation.

The remote workstation display appears similar to the screen that is displayed when normally logging in to a host workstation. At this point, any operations that would be allowed from the host workstation are available from the remote workstation.

File Menu

The File menu is used to store the host workstation list and exit from the Remote Access program.

Once datafilled, host workstations may be accessed by selecting the workstation with the mouse and clicking on the Connect button. The status of the connection can be checked and the connection closed by using items on the Connection menu.

To display the File menu move the cursor over the word “File” and click the the left mouse button.

Alternately, the keyboard shortcut “Alt–F” can be used.

Once active, items on the menu may be selected by clicking the left mouse button while the mouse cursor is positioned over the menu item. Alternately, the arrow keys can be used to move through the menu items and the “Enter” key used to select the item.

The following selections appear on the File menu:

- Reload List – Causes the list of workstations to be reloaded from the most recently saved version.
- Save – Saves the current list of workstations to disk. The most recently saved list is automatically loaded each time the Remote Access program is started.
- Close & Save – Saves the current list of workstations to disk. The most recently saved list is automatically loaded each time the Remote Access program is started. After saving, the program is terminated.
- Quit (No Save) – Exits the program. if the list of Workstations has been changed but not saved, a dialog box appears to inform the user of the need to save the list.

List Menu

The List menu allows accessible workstations to be added, deleted, and modified in the list. The File menu selection is used to store the workstation list and exit from the Remote Access program. Once datafilled, host workstations may be accessed by selecting the workstation with the mouse and clicking on the Connect button. The status of the connection can be checked and the connection closed by using items on the Connection menu.

To display the List menu move the cursor over the word “List” and click the the left mouse button.

Alternately, the keyboard shortcut “Alt–L” can be used.

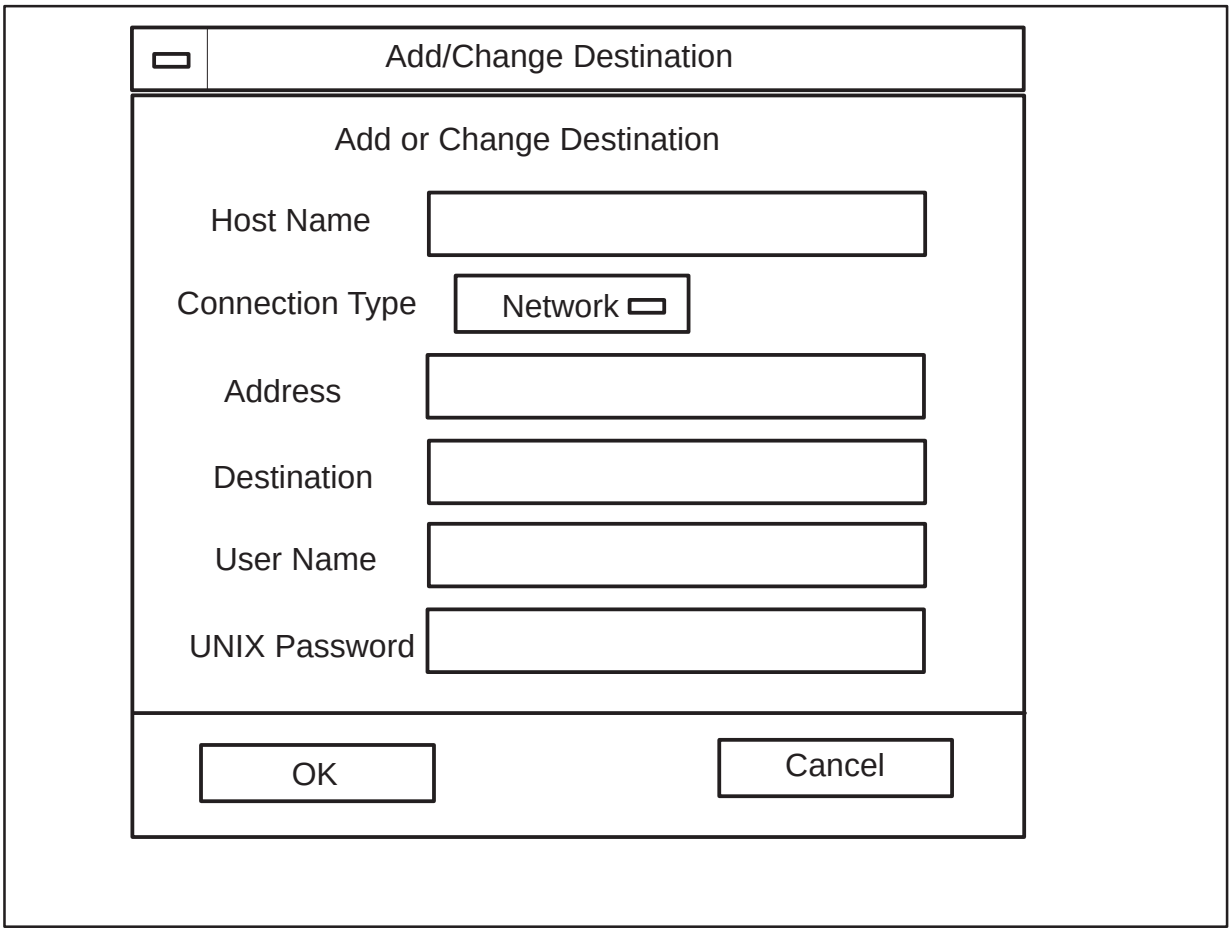
The items on the List menu are selected by clicking the left mouse button while the mouse cursor is positioned over the menu item. Alternately, the arrow keys can be used to move through the menu items and the “Enter” key used to select the item.

The following selections appear on the List menu:

- Add – displays a dialog box (see Figure 10–3) for adding a workstation to the list.
- Change – displays a dialog box (see Figure 10–3) for changing information about a workstation in the list. The workstation to change must first be selected by clicking on it with the left mouse button before selecting “Change”.
- Delete – deletes a workstation from the list. The workstation to delete must first be selected by clicking on it with the left mouse button before selecting “Delete”. A dialog box is presented to confirm that the workstation should really be deleted.
- Clear List – removes all workstations from the list. A dialog box is presented to confirm that all workstations should be removed from the list.

Figure 10–3 shows an illustration of a typical Add/Change dialog. The Add/Change dialog is displayed any time a workstation is being added or changed.

Figure 10 –3
Add/Change Destination dialog



The fields on the Add/Change Destination dialog are:

- Remote Host Name – The name of the Host ADAS Workstation. This is the name displayed in the workstation address.
- Connection Type – The method to use to connect to the host workstation. Currently, only Network connections through Ethernet are available.
- Address – The IP address of the Host ADAS Workstation.
- Destination – Not currently used.
- User Name – The UNIX user name for logging on to the host workstation.
- UNIX Password – The UNIX password for logging on to the host workstation.

To add the workstation to the workstation list and close the dialog box, click the “OK” button.

To discard the workstation information and close the dialog box, click the “Cancel” button.

To access the text fields, move the cursor to the text entry field being selected and click the left mouse button. The cursor can be moved between fields by pressing the “TAB” key.

Connection Menu

The Connection menu is used to check the status of the current connection and/or to disconnect a workstation connection.

To display the Connection menu move the cursor over the word ‘‘Connection’’ and click the the left mouse button.

Alternately, the keyboard shortcut “Alt–C” can be used.

To select items on the Connection menu, position the cursor over the desired menu item and click the left mouse button. Alternately, the arrow keys can be used to move through the menu items and the “Enter” key used to select the item.

The following selections appear on the Connection menu:

- Disconnect – disconnects the Remote and the current host workstations. Disconnect is only available if a connection exists and appears dim when it is not available.
- Status – creates a dialog box that shows the status of the current connection.

Disconnecting remote–to–host workstations

The preferable way to exit is to use the “Logoff” item on the ADAS icon menu. This method causes all host ADAS windows to close and the remote–to–host connection to be terminated.

Alternately, from the remote workstation select “Disconnect” from the Connection menu. The emulated windows from the host workstation will disappear from the remote screen.

Error Recovery

If a connection between a host workstation and remote workstation is terminated unexpectedly, processes cleanup is performed automatically. In some cases, it may still be necessary to select “Disconnect” from the “Connection” menu to reset the Remote Access interface.

ADAS Parameter Setting Guidelines

This chapter contains the parameters that can be modified from an ADAS OAM Position to control the behavior of the ADAS system. The guidelines and precautions are given only as suggestions. Optimum settings for each system will depend on the usage patterns of the particular system.

Use this chapter as a guide for setting the ADAS Service Parameters from an ADAS OAM Position. These guidelines may be used by maintenance technicians with a range of experience in switching, PM software, and PM software updating.

Compliance with local policies

The information in this chapter applies to Nortel Networks ADAS customers with the TOPS07 release installed. However, many telephone companies have company–specific and office–specific policies regarding parameter changes. Review these policies, and resolve any differences between the policies and this document, before beginning the ADAS parameter setting process.

Backwards–compatibility

This chapter is specifically designed to support the TOPS07 release of the ADAS. Much of the information is applicable to some previous loads.

Recording Parameters

This section describes the ADAS Service Parameters that affect the recording of the customer's voice during a call handled by ADAS. A description of each recording parameter is given along with the default value and the valid range of values. Suggested guidelines are given to aid in determining the optimal value for your system. There is also a section giving precautions to be aware of when setting the value.

The ADAS service prompts for and records two pieces of information from the customer: the location (city name) and the listing (person or business name). This information can be obtained using either separate prompts or combined prompts.

When the system is configured to use separate prompts, the location and listing information is prompted for and recorded separately. In this case, the recording parameters may be set individually for each of the recordings. This allows maximum flexibility in customizing the system.

When the system is configured for combined prompting, the location and listing information is prompted for and recorded as one piece. In this case, only one set of recording parameters is necessary to customize the single recording.

Before making any changes to the recording parameters, monitor the system for a period long enough to determine a performance baseline. Unless the guidelines suggest otherwise, make changes to only one parameter at a time. Allow the system to remain in the new configuration long enough to determine the performance as compared to the baseline. Be aware that changes to some parameters may require an adjustment period by either the customers or the operators. Meaningful measurements cannot be made until this adjustment is made.

It is important to note that there is no single set of optimal settings for the record parameters. Speech patterns in the areas served by each system may require different parameters in different systems. For example, the rate of speech in urban Northeastern areas is generally faster than the rate of speech in rural Southeastern areas. This difference would necessitate different settings for parameters dealing with compression and record times. For this reason, optimal system performance will be obtained by adjusting the parameters on each system individually.

Record Compression

Description:

The Record Compression parameter sets the amount of data compression that will be performed on the recorded speech before it is played back to the operator. This shortens the length of time it takes to play back the recording by the percentage that is set.

This parameter is available for both the Location and Listing recordings. It performs the same for both recordings. In the case of a system with a combined recording, a single compression parameter handles both the location and the listing. When combined recording is not used, the parameter can be set on the location and listing independently as needed.

Range:

0%, 5%, 10%, 15%, 20%, 25%

Default:

0%

Guidelines:

The optimal setting for this parameter is dependent on the normal speech characteristics of the users of the system. The faster the rate of speech of the caller, the less advantage that will be gained by compressing the speech. When the rate of speech is slower, more advantage is gained from compression.

An initial setting of 0% is recommended to obtain a baseline and allow operators to become accustomed to the system. After this period, the compression parameter may be set higher. In areas where callers speak more slowly, changing the setting to 10% should be tried. In areas where callers speak more quickly, changing the setting to 5% should be tried. If measurements of AWT and operator satisfaction are favorable, the parameter may be set higher in 5% increments. At the point where these measurements show no improvement or lower performance, set the parameter back to the previous setting. A higher setting may be acceptable for the Location recording than for the Listing recording because operators are familiar with the possible location names. They can be recognized more quickly.

Precautions:

Setting the Record Compression parameter too high may result in the recording sounding garbled. This makes the recording harder to understand and can result in the operator spending more time interacting with callers to ask for clarification.

Over time, operators may become accustomed to the garbled sound of over–compressed recordings. However, this will likely create stress and decrease operator efficiency and satisfaction. In addition, garbled recordings may result in the operator reprompting the subscriber, resulting in dissatisfied customers and longer AWT times.

Prompt Talkover

Description:

The Prompt Talkover parameter is used to allow the caller to begin speaking before the ADAS prompt has finished playing. This can be used to decrease the number of “Spoke too soon” errors resulting from callers speaking before the prompt has completed. This is especially advantageous when the prompt gets gradually quieter at the end rather than having a clear end. In this case, callers are more likely to speak before the prompt has finished playing. An example of a prompt that gets quieter or trails off at the end is “What city please?”. Compare this to the prompt “What city?”, which has a clear phonetic ending.

This parameter is available for both the Location and Listing recordings. It performs the same for both recordings. In the case of a system with a combined recording, a single talkover parameter handles both the location and the listing. When combined recording is not used, the parameter can be set on the location and listing independently as needed.

Range:

0, 100, 200, 300, 400, 500, 600, 700, 800. 900, and 1000 milliseconds or Full

Default:

0 milliseconds

Guidelines:

Start with the Prompt Talkover parameter set to 0 milliseconds. After initial caller training when the system reaches a steady state, monitor the number of “Spoke too soon” errors. Increase the setting by 100 milliseconds. Compare the number of “Spoke too soon” errors with the previous number. Repeat this process as long as the results are favorable until the optimal setting is obtained. At the point where these measurements show no improvement or worse performance, set the parameter back to the previous setting.

Setting the Prompt Talkover parameter to 400 or 500 milliseconds is not recommended. The echo described in the Precautions section is much more likely to be a problem when Prompt Talkover is set to a high setting.

Precautions:

Setting the Prompt Talkover parameter above 0 milliseconds may result in portions of the ADAS prompts being recorded and played back to the operator when there is significant echo on the caller’s line. The higher the

setting of the parameter, the more of the prompt that may be recorded. This can be confusing for the operator.

Maximum Initial Silence

Description:

The Maximum Initial Silence parameter specifies the amount of time the system will wait for customer response before recording a “No speech detected” error. The system begins timing at the end of the prompt played to the customer. If the customer responds before the time set for maximum initial silence is reached, the call continues normally. If the timer expires without a customer response being detected, an error is recorded and the call flow continues according to the error settings.

This parameter is available for both the Location and Listing recordings. It performs the same for both recordings. In the case of a system with a combined recording, a single maximum initial silence parameter handles both the location and the listing. When combined recording is not used, the parameter can be set on the location and listing independently as needed.

Range:

2, 3, 4 seconds

Default:

3 seconds

Guidelines:

Start with the Maximum Initial Silence parameter set to 3 seconds. After initial caller training when the system reaches a steady state, monitor the number of “No speech detected” errors. Increase the setting by 1 second. Compare the number of “No speech detected” errors with the previous number. If the number received is not significantly lower, the parameter may be set back to 3 seconds or lowered to 2 seconds. If the number of “No speech detected” errors increases when the setting is lowered, return it to a higher setting. Repeat this process as long as the results are favorable until the optimal setting is obtained. At the point where these measurements show no improvement or worse performance, set the parameter back to the previous setting.

Precautions:

Setting the Maximum Initial Silence parameter to higher values will result in a longer system hold time for the call. This will increase the time of use for system resources, but operator work time will not be affected unless silence removal is disabled. With silence removal enabled, the portions of the recording when the customer was silent will be removed before the recording is played back to the operator. Lower settings may cause a high number of “No speech detected” errors from customers not responding quickly enough. This could cause customer dissatisfaction if they feel they

are being rushed. It could also increase operator workload if they must handle the calls manually.

Silence Removal

Description:

The Silence Removal parameter turns on and off the removal of silence from recorded customer responses. If Silence Removal is set to True, the system removes portions of the recording that fall below the noise threshold that can be heard and understood by humans. These portions would otherwise be heard as silence by the operator. Silence that is necessary to understand what the customer is saying is not removed. The result is that the recording played back to the operator is shortened. If Silence Removal is set to False, the customer recording is played back to the operator with the silent portions included.

This parameter is available for both the Location and Listing recordings. It performs the same for both recordings. In the case of a system with a combined recording, a single silence removal parameter handles both the location and the listing. When combined recording is not used, the parameter can be set on the location and listing independently as needed.

Range:

True, False

Default:

False

Guidelines:

Set the Silence Removal parameter to True. Monitor the savings from silence removal. Verify that there is no impact to the operators and that AWT has decreased. If performance worsens, set the parameter back to False.

Savings from Silence Removal can vary greatly depending on the speech patterns of the areas served by the system. In areas where customers respond quickly, less savings are likely to be seen.

It is recommended that this parameter be set to True. Savings can almost always be gained from silence removal.

Precautions:

Setting the Silence Removal parameter to True could result in portions of the customer recording being removed if the sound level is very quiet. However, it is questionable whether these portions would have been intelligible to the operator. Setting the parameter to False may result in playback to the operator being much longer than necessary.

Redundant Frame Removal

Description:

The Redundant Frame Removal parameter turns on and off the removal of spectrally redundant speech segments from recorded customer responses. Frames are on the order of tens of milliseconds in length. Removing redundant frames shortens the subscriber response but does not significantly affect its intelligibility. For example, redundant frame removal would shorten the recording “Ummmmm, Elm City please” to “Um, Elm City please”. If Redundant Frame Removal is set to True, the system removes redundant frames of information. If Redundant Frame Removal is set to False, the customer recording is played back to the operator with the redundant portions included.

This parameter is available for both the Location and Listing recordings. It performs the same for both recordings. In the case of a system with a combined recording, a single redundant frame removal parameter handles both the location and the listing. When combined recording is not used, the parameter can be set on the location and listing independently as needed.

Range:

True, False

Default:

False

Guidelines:

Set the Redundant Frame Removal parameter to True. Monitor the savings from redundant frame removal. Verify that there is no impact to the operators and that AWT has decreased. If performance worsens, set the parameter back to False.

Savings from Redundant Frame Removal can vary greatly depending on the speech patterns of the areas served by the system. In areas where customers respond quickly, less savings are likely to be seen.

It is recommended that this parameter be set to True. Savings can almost always be gained from redundant frame removal.

Precautions:

Setting the Redundant Frame Removal parameter to True could result in the customer recording sounding much faster to the operator. This is not normally a problem for operators. Setting the parameter to False may result in playback to the operator being longer than necessary.

Maximum Recording Time

Description:

The Maximum Recording Time parameter sets the amount of time that the customer is given to record a response. If the customer speaks longer than the maximum time allowed, a “Spoke too long” error occurs.

This parameter is available for both the Location and Listing recordings. It performs the same for both recordings. In the case of a system with a combined recording, a single Maximum Recording Time parameter handles both the location and the listing. When combined recording is not used, the parameter can be set on the location and listing independently as needed.

Range:

3, 4, 5, 6, 7, 8 seconds

Default:

Separate Recording: 4 seconds

Combined Recording: 7 seconds

Guidelines:

The optimal setting for this parameter is dependent on the normal speech characteristics of the users of the system. The faster the rate of speech of the caller, the less advantage that will be gained by allowing a longer recording time. When the rate of speech is slower, more advantage is gained from a longer record time because fewer “Spoke too long” errors will occur.

An initial setting of 4 seconds (7 seconds for combined recording systems) is recommended to obtain a baseline and allow customers to become accustomed to the system. Monitor the number of “Spoke too long” errors. After this period, the maximum recording time parameter may be set higher. In areas where callers speak more slowly, incrementing the setting by 1 second should be tried. If measurements are favorable, the parameter may be set higher in 1 second increments up to a maximum of 8 seconds. At the point where measurements show no improvement or worse performance, set the parameter back to the previous setting.

In systems with separate Location and Listing recordings, the maximum time for the location recording can generally be set much lower than the time for the listing recording.

The recommended setting for separate recording systems is typically between 4 and 6 seconds. For combined recording systems, 7 seconds is recommended.

Precautions:

Setting the Maximum Recording Time parameter too low may result in excessive “Spoke too long” errors. This may decrease customer satisfaction and system acceptance. Setting the parameter too high will force the operator to listen to longer playbacks, especially in situations where the customer is calling from an area with high background noise. This may increase AWT.

Maximum Allowable Silence

Description:

The Maximum Allowable Silence parameter sets the amount of time that the customer can pause while being recorded without the system assuming they have finished speaking. If the customer pauses for longer than the maximum allowable silence, recording is stopped.

This parameter is available for both the Location and Listing recordings. It performs the same for both recordings. In the case of a system with a combined recording, a single Maximum Allowable Silence parameter handles both the location and the listing. When combined recording is not used, the parameter can be set on the location and listing independently as needed.

Range:

0.5, 0.8, 1, 1.2, 1.4 seconds

Default:

Separate Recording: 1 second

Combined Recording: 1.4 seconds

Guidelines:

The optimal setting for this parameter is dependent on the normal speech characteristics of the users of the system. The faster the rate of speech of the caller, the less advantage that will be gained by allowing longer silence intervals. When the rate of speech is slower, more advantage is gained by allowing longer pauses. This will prevent the customer from being cut off by the system during a pause.

An initial setting of 1 second (1.4 seconds for combined recording systems) is recommended to obtain a baseline and allow customers to become accustomed to the system. Monitor the frequency of customers being cut off when pausing too long. After this period, the maximum allowable silence parameter may be changed. If a high number of callers are being cut off when pausing too long, increasing the setting should be tried. If measurements are favorable, the parameter may be adjusted higher or left as it is. If very few callers are being cut off because of pausing too long, the maximum allowable silence parameter may be set lower. At the point where measurements show no improvement or worse performance, set the parameter back to the previous setting.

In systems with combined location and listing recordings, the maximum allowable silence will typically need to be set at a high setting. Customers tend to pause between saying the location and listing.

It is highly recommended that tuning the Maximum Allowable Silence parameter be done with the Silence Removal parameter enabled. This will negate any bad effects that higher allowable silence settings would have on the operator.

Precautions:

Setting the Maximum Allowable Silence parameter too low may cause a high number of customers to be cut off before giving both the location and listing. This may require the operator to ask for the needed information, increasing AWT. Setting the parameter too high causes the customer to have to wait for this interval before the system recognizes the end of speech. If Silence Removal is not enabled, the operator will be forced to listen to longer pauses during playback.

Operator Interaction Parameters

This section describes the parameters that customize the playback of customer responses to the operator.

A description of each operator interaction parameter is given along with the default value and valid range of values.

Suggested guidelines are given to aid in determining the optimal value for your system.

There is also a section giving precautions to be aware of when setting the value.

Response 1 Silence

Description:

The Response 1 Silence parameter specifies the silence that should be inserted between the playing of the call arrival tone and the playing of the customer's first response.

Range:

0.0, 0.2, 0.5, 0.8, 1.0 seconds

Default:

0.5 seconds

Guidelines:

The Response 1 Silence parameter should remain set at the default of 0.5 until the operators have become accustomed to ADAS. At that time, it may be set to 0.2 or 0.0. Experienced ADAS operators tend to not need the silence to understand the customer recording. With practice, most operators will easily handle a setting of 0.0 seconds. Monitor AWT and operator satisfaction to insure that lowering the value does not adversely affect performance.

Precautions:

A short silence interval between the call arrival tone and the playback of the first recording may cause stress in operators who are not yet comfortable with ADAS. Allow adequate time for the operators to readily recognize the ADAS call arrival tone before lowering the setting of this parameter.

Response 2 Silence

Description:

The Response 2 Silence parameter specifies the silence that is inserted between the playing of the customer's first response and the playing of the customer's second response.

In systems with combined playback of customer responses, only the Response 1 Silence parameter is used. The Silence 2 parameter is not necessary.

Range:

0.0, 0.2, 0.5, 0.8, 1.0 seconds

Default:

0.2 seconds

Guidelines:

The Response 2 Silence parameter should remain set at the default of 0.2 until the operators have become accustomed to ADAS. At that time, it may be set to 0.0. Experienced ADAS operators tend to not need the silence to understand the customer recording. With practice, most operators will easily handle a setting of 0.0 seconds. Monitor AWT and operator satisfaction to insure that lowering the value does not adversely affect performance.

Precautions:

No silence interval between the playback of the customer's first and second responses may cause stress in operators who are not yet comfortable with ADAS. Allow adequate time for the operators to become accustomed to the system before lowering the setting of this parameter.

In–Queue Feedback Parameters

This section describes the parameters that specify what the customer hears while waiting in queue for an ADAS operator to handle their call.

The in queue interval starts when an operator or please hold message finishes playing to the caller and ends when the call is assigned to an operator for handling. A description of each in queue feedback parameter is given along with the default value and valid range of values.

Suggested guidelines are given to aid in determining the optimal value for your system. There is also a section giving precautions to be aware of when setting the value.

In–Queue Feedback Enabled

Description:

The In–Queue Feedback Enabled parameter determines whether the customer should receive in–queue feedback while they are waiting for an operator to handle their call. If enabled, the customer may hear the feedback prompt zero or more times depending on the length of time they are in–queue and the setting of the Feedback Interval parameter.

Range:

True, False

Default:

True

Guidelines:

The In–Queue feedback parameter should be set to True to provide In–Queue feedback to customers. Setting the parameter to False will provide no in–queue feedback to callers. The parameter may be set to either True or False without changing system performance.

Precautions:

Customers must be trained in what responses to expect when using the ADAS system. Switching the In–Queue Feedback Enabled setting often may cause customer confusion and dissatisfaction.

Long in–queue times without any feedback may cause customers to become inpatient and abandon the call.

Feedback Interval

Description:

The Feedback Interval parameter specifies how often the customer should receive in–queue feedback while waiting for an operator to handle the call. If enabled with the In–Queue Feedback Enabled parameter, the customer may hear the feedback prompt zero or more times depending on the length of time they are in–queue and the setting of the Feedback Interval parameter. The higher the setting of this parameter, the longer the time interval will be between feedback.

Range:

0, 2, 4, 6, 8, 10 seconds

Default:

6 seconds

Guidelines:

The Feedback Interval parameter should be set to provide In–Queue feedback to customers so they do not feel they are being ignored. Shorter feedback prompts generally must be played more often than longer feedback prompts. Begin with the Feedback Interval set to 6 seconds. Monitor the system to obtain a baseline for comparison after making changes. Adjust the setting up 2 seconds to increase the length of the interval between feedback. Adjust the setting 2 seconds lower to shorten the interval. Continue adjusting the parameter until the interval between feedback seems natural. Monitor the number of in–queue abandons to insure callers are not hanging up while in–queue.

Precautions:

Customers must be trained in what responses to expect when using the ADAS system. Setting the Feedback Interval too high may cause callers to abandon while in–queue because they think their call has been dropped by the system.

Service Option Parameters

This section describes the parameters that control the available Service Option parameters. These options include playing of the DTMF Help Message, Skipping prompts, and doing Reverse Playback.

A description of each in queue feedback parameter is given along with the default value and valid range of values.

Suggested guidelines are given to aid in determining the optimal value for your system.

There is also a section giving precautions to be aware of when setting the value.

Play DTMF Help Message

Description:

The Play DTMF Help Message parameter specifies whether a DTMF help message should be played to a customer when invalid DTMF is entered during the playing of a prompt. The prompt stops playing immediately and the message instructs the user what the options are to do next. It is only played when the Play DTMF Help Message parameter is set to True and the user has not reached the Maximum DTMF Errors Allowed. The message is similar to "To speak to an operator, press 0." If this parameter set to False, invalid DTMF entry does not interrupt playing of the prompts.

The DTMF Help Message is always played if invalid DTMF is entered while recording a response, regardless of the parameter setting.

Range:

True, False

Default:

False

Guidelines:

The Play DTMF Help Message parameter should be set to True for the prompt to be interruptible by invalid DTMF entry and for the customer to receive a DTMF Help Message when invalid DTMF is entered during the playing of a prompt. Setting the parameter to false prevents playing of the DTMF Help Message in this situation. It also prevents the prompts from being interrupted by invalid DTMF entry.

Precautions:

None.

Skip Prompt

Description:

The Skip Prompt parameter specifies whether or not the “#” key can be used to skip prompts and messages. If this parameter is set to False, the “#” key is treated as an invalid digit. When set to True, pressing the “#” key during the playing of prompts and messages causes the call flow to skip immediately to response recording.

Range:

True, False

Default:

True

Guidelines:

The Skip Prompt parameter should be set to True for using the “#” key to skip directly from a prompt to a recording state. To disable use of the “#” key, set this parameter to False.

Precautions:

None.

Reverse Playback

Description:

The Reverse Playback parameter specifies whether the locality and listing responses should be played back to the operator in the reverse order of how they were recorded by the subscriber. For example, consider a system where this option is enabled and the recording order is Locality first and Listing second. The playback order to the operator would be Listing first and Locality second.

Range:

True, False

Default:

False

Guidelines:

The Reverse Playback parameter should be set to True to reverse the playback order. If this parameter is set to False, the playback order is the same as the record order.

Precautions:

None.

Service Error Parameters

This section describes the parameters that control the handling of errors in the ADAS system while a customer call is in progress. These parameters determine what the system will do when customers make mistakes during response recording. They also control system response when a noise floor or recording error occur.

A description of each service error parameter is given along with the default value and valid range of values.

Suggested guidelines are given to aid in determining the optimal value for your system.

There is also a section giving precautions to be aware of when setting the value.

Maximum Record Attempts Allowed

Description:

The Maximum Record Attempts Allowed parameter controls how many record errors the customer is allowed to make and still be reprompted. If the caller exceeds the datafilled number of record errors, the call is sent to an operator for handling.

The following types of errors are counted as Record Errors:

- Silence – No speech detected
- Spoke too soon – The caller responded before ADAS response collection began.
- Spoke too long – The caller's response exceeded the maximum response collection time.

The total number of caller response errors is calculated by adding the number of each of these types of errors that occur during the call.

Range:

1, 2, 3, 4 errors

Default:

3 errors

Guidelines:

The Maximum Record Attempts Allowed parameter should be set at a level to allow the system to handle as many calls as possible while not frustrating confused customers with multiple reprompts when they make a mistake. For initial training of customers when the system is first installed, the number of reprompts allowed should be set high, either 3 or 4. This will allow customers to make mistakes while learning to use the system. As customer expertise increases, the number may be lowered to 2 or 1. Setting the Maximum Record Attempts Allowed to 1, meaning no reprompts, is acceptable. Monitor the number of record errors received to determine the optimal setting for your system.

Precautions:

Setting the Maximum Record Attempts Allowed to a high number may cause frustration among customers who are having trouble using the system. Reprompting decreases customer satisfaction.

Maximum DTMF Attempts Allowed

Description:

The Maximum DTMF Attempts Allowed parameter controls how many DTMF errors the customer is allowed to make and still be reprompted. A DTMF error is defined as a caller pressing an invalid DTMF key during ADAS interaction. The “0” key is always valid. The “#” key is allowed at certain times during the call. The keys “1” through “9” are always invalid. If a DTMF error occurs and the total number of DTMF errors has not been exceeded, the caller hears a DTMF help message. The message may instruct the user to press 0 to speak to an operator. Otherwise, the caller may continue with ADAS interaction. If the caller exceeds the datafilled number of DTMF errors, the call is sent to an operator for handling.

The number of DTMF errors is reset to 0 after each of the following call phases:

- Introduction
- First response collection
- Second response collection

For example, if a DTMF error occurs during the first response and the response is successfully collected, the total number of DTMF errors is reset to 0 before the second response is collected.

Range:

1, 2, 3, 4 errors

Default:

3 errors

Guidelines:

The Maximum DTMF Attempts Allowed parameter should be set at a level to allow the system to handle as many calls as possible while not frustrating confused customers with multiple reprompts when they make a mistake. For initial training of customers when the system is first installed, the number of reprompts allowed should be set high, either 3 or 4. This will allow customers to make mistakes while learning to use the system. As customer expertise increases, the number may be lowered to 2 or 1. Setting the Maximum DTMF Attempts Allowed to 1, meaning no reprompts, is acceptable. Monitor the number of DTMF errors received to determine the optimal setting for your system.

Precautions:

Setting the Maximum DTMF Errors Allowed to a high number may cause frustration among customers who are having trouble using the system. Reprompting decreases customer satisfaction.

Continue on Noise Floor Error

Description:

The Continue On Noise Floor Error parameter determines whether a call is handled by ADAS when excessive noise is detected on the subscriber's line. If this parameter is True, ADAS will handle the call. If it is set to False, the call is sent directly to an operator.

Range:

True, False

Default:

False

Guidelines:

The Continue On Noise Floor Error parameter should be set to True if the ADAS system should handle calls where noise floor errors have occurred. To have these calls handled by an operator without ADAS interaction, set this parameter to False. The recommended setting is False.

Precautions:

Allowing the ADAS system to handle calls where there is an excessive amount of noise on the line may result in recordings that are difficult or impossible for the operator to understand. In this occurs, the operator will have to reprompt the subscriber for information. Having to repeat information decreases customer satisfaction.

Continue on Recording Error

Description:

The Continue On Recording Error parameter determines whether an ADAS call continues when a “Spoke Too Long” or “Spoke Too Soon” error occurs. If this set to True and one of these errors occurs, the subscriber response is accepted and the call continues. If one of these errors occurs when Continue On Recording Error is set to False, the call proceeds based on the setting of the “Maximum Record Attempts Allowed” parameter.

Range:

True, False

Default:

True

Guidelines:

The Continue On Recording Error parameter should be set to True to cause calls that have recording errors to continue as if no error occurred. To treat recording errors as errors, set this parameter to False.

Precautions:

If the Continue on Recording Error is set to True and the caller speaks too soon, only the portions of the speech that occurred during the valid record window will be recorded and played back for the operator. This can result in the first part of the caller’s speech being cut off. For example, the city name “Atlanta” may actually sound like “lanta” to the operator. This can make comprehension difficult for the operator.

If Prompt Talkover is turned on, the record window is extended to overlap the end of the prompt given to the caller. This will reduce the incidence of chopped off responses when Continue on Recording Error is set to True.

Deflection Parameters

This section describes the parameters that control the deflection of calls from the ADAS system. When deflection is enabled and all the deflection conditions described in this section are met, calls are deflected at the datafilled rate. When a call is deflected by the ADAS system, it is sent back to the DMS for handling.

A description of each deflection parameter is given along with the default value and valid range of values.

Suggested guidelines are given to aid in determining the optimal value for your system.

There is also a section giving precautions to be aware of when setting the value.

Enable Deflection

Description:

The Enable Deflection parameter controls whether or not directory assistance calls are deflected from receiving ADAS service before ADAS–caller interaction occurs when the number of calls per operator exceeds operator queue limits. If deflection is enabled, calls are deflected to the DMS according to the settings of the Minimum Holding Time to Begin Deflection, Minimum Number of Calls at APU to Begin Deflection, and the Deflection Rate parameters.

Range:

True, False

Default:

False

Guidelines:

The Enable Deflection parameter should be set to True to enable call deflection. To disable deflection, set this parameter to False. If Deflection Enabled is set to True, the parameters Minimum Holding Time to Begin Deflection, Minimum Number of Calls at APU to Begin Deflection, and Deflection Rate must also be datafilled.

Precautions:

Deflection is not recommended to be turned on without a good understanding of the site, forcing, and ADAS performance characteristics. Deflection can get a site into trouble very quickly if not properly set up.

Minimum Holding Time to Begin Deflection

Description:

The Minimum Holding Time to Begin Deflection parameter specifies the minimum holding time needed before deflection will begin. The holding time is defined as the length of time the subscriber must wait for an operator. The holding time of the most recent successful ADAS call is used to compare against the time datafilled for this parameter.

This parameter is not used unless the Enable Deflection parameter is set to True.

Range:

15, 20, 25, 30, 25, 40 seconds

Default:

15 seconds

Guidelines:

Tuning of this parameter is system and telco dependent. It should be greater than the peak average answer time during the busy hour. Monitor the ADAS system to obtain the average answer time during the busy hour. Insure that this parameter is set higher than the average. It is recommended that the value be set to 30 seconds to decrease deflection.

Precautions:

Setting this parameter too low will increase deflection needlessly. Setting the parameter high will increase subscriber hold time, perhaps decreasing satisfaction.

Minimum Number of Calls at APU to Begin Deflection

Description:

The Minimum Number of Calls at APU to Begin Deflection parameter specifies the minimum number of calls that must be at an APU before deflection will begin. Deflection will not begin until the APU is handling this minimum number of calls.

This parameter is not used unless the Enable Deflection parameter is set to True.

Range:

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

Default:

2

Guidelines:

Tuning of this parameter is system and telco dependent. It should be set to the average high water mark in the APU during busy hour. Monitor the ADAS system to determine the busy hour traffic. For most sites, this is actually greater than 15. For that reason, the suggested setting is 15.

Precautions:

Setting the Minimum Number of Calls at APU to Begin Deflection. A parameter too low may increase deflection needlessly, when APU capacity is still available.

Deflection Rate

Description:

The Deflection Rate parameter determines the rate at which calls are deflected from the ADAS service. When the other deflection conditions are met (Minimum Number of Calls at APU to Begin Deflection and Minimum Holding Time to Begin Deflection), ADAS calls are deflected at the datafilled rate.

Range:

0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100 percent

Default:

50 percent

Guidelines:

Tuning of this parameter is system and Telco dependent. The suggested rate of deflection is 10 percent.

Precautions:

Setting the Deflection Rate parameter too high may increase deflection needlessly.

List of terms

AABS

Automated Alternate Billing Service

ACD

Automatic Call Distribution

ADAS

Automatic Directory Assistance Service

AMA

automatic message accounting

ANI

automatic number identification

application processing unit (APU)

Contains the software which controls the voice processing performed within the voice processing unit (VPU) for ADAS. The APU is one of two modules in the voice processing platform (VPP).

APU

application processing unit

ARU

audio response unit

ASU

application specific unit

audio response unit (ARU)

Software that stores and plays previously-recorded directory assistance (DA) telephone number listings to callers requesting DA services.

Automated Alternate Billing Service (AABS)

A DMS TOPS feature that allows automated completion of calling card, collect, and third-number billed calls using voice recognition technology and prompt generation to communicate with the calling and billed parties. AABS consists of software in the DMS switch to handle call processing functions and loop-up initiations. This software also handles the external voice service node.

Automatic Call Distribution (ACD)

A set of Meridian Digital Centrex (MDC) features that assigns answering priorities to incoming calls and then queues and distributes the calls to a predetermined group of telephone sets designated as agent positions.

Automatic Directory Assistance Service (ADAS)

A voice processing system for directory assistance (DA) services. ADAS automates the initial inquiry portion of DA call processing. This limits the amount of time the operator interacts with DA caller and reduces the operator's average work time (AWT).

automatic message accounting (AMA)

An automatic recording system that documents all the necessary billing data of subscriber-dialed long distance calls.

automatic number identification (ANI)

A system whereby a calling number is identified automatically and transmitted to the automatic message accounting (AMA) office equipment for billing. *See also* operator number identification.

average work time (AWT)

The time (in seconds) required to handle the average call (includes all operator unavailable time).

AWT

average work time

batch change supplement (BCS)

A DMS-100 Family software release.

BCS

batch change supplement

call processing engine (CPE)

A software component of the SuperNode UNIX Application Processor (APUX) that simultaneously directs the processing of many calls by invoking software which implements an application's subscriber/operator

interaction. The application subscriber/operator software can be changed independently of the CPE.

C-bus

channel bus

CCS7

common channel signaling 7

central processing unit (CPU)

The hardware unit of a computing system that contains the circuits that control and perform the execution of instructions.

channel-bus (C-bus)

A proprietary Bell-Northern Research (BNR) duplicated 10-bit time division multiplexed bus running at 4 MHz. The C-bus interconnects network interface units (NIU) with link interface units (LIU).

common channel signaling 7 (CCS7)

A digital message-based network signaling standard defined by the CCITT that separates call signaling information from voice channels so that interoffice signaling is exchanged over a separate signaling link.

CM

computing module

computing module (CM)

The processor and memory of the dual-plane combined core (DPCC) used by DMS SuperNode. Each CM consists of a pair of CPUs with associated memory that operate in a synchronous matched mode on two separate planes. Only one plane is active; it maintains overall control of the system while the other plane is on standby.

CPE

call processing engine

CPU

central processing unit

DA

directory assistance

DART

digital audio reference tag

DAT

digital audio tape

DDS

digital data storage

digital recorded announcement machine (DRAM)

A peripheral module (PM), developed for the DMS switch, in which voice messages are stored in digital form, providing access to up to 30 different service voice announcements.

Digitone (DGT)

A service-related telephony feature that allows address information to be generated from a telephone set in the form of dual-tone multifrequency (DTMF) signals by manually pressing nonlocking buttons. Also known as dual-tone multifrequency dialing.

directory assistance (DA)

A service that allows a subscriber to ask an operator to look up information from a telephone listing database.

DMS-Bus

The messaging control component of the DMS SuperNode processor. The DMS-Bus components are a pair of message switches (MS).

DMS-Core

The call management and system control portion of the DMS SuperNode processor. The DMS-Core portion consists of a computing module (CM) and a system load module (SLM).

DMS-Link

The networking software of the DMS SuperNode processor. The DMS-link software consists of open and standard protocols that allow the DMS SuperNode to function in a multivendor environment.

DMS-STP

DMS SuperNode Signaling Transfer Point

DPCC

dual-plane combined core cabinet

DRAM

digital recorded announcement machine

DTMF

dual-tone multifrequency

dual-plane combined core cabinet (DPCC)

One of the three cabinet models for the DMS SuperNode processor. The DPCC contains two message switches and a system load module (SLM).

dual-tone multifrequency (DTMF) dialing

See Digitone

EIU

Ethernet interface unit

Ethernet interface unit (EIU)

The unit that connects the DMS SuperNode to the local area network.

F-bus

frame transport bus

frame transport bus (F-bus)

An 8-bit bus that provides data communications between a local message switch (LMS) and the link interface units (LIU) that are provisioned in a link peripheral processor (LPP). To ensure readability, two load-sharing F-buses are provided in an LPP. Each F-bus is dedicated to one of the two LMSs. *See also* link interface module.

IM

Installation Method

interunit (IU) channel

A type of interchannel connection used only by port 6 of a line concentrating module (LCM) unit. Interunit channel connections are necessary for link sharing.

IU

interunit

LAN

local area network

LCM

line controller module

LIM

link interface module

line concentrating module (LCM)

A peripheral module (PM) that connects the line trunk controller (LTC) or line group controller (LGC) and up to 640 subscriber lines using two to six DS30A links. *See also* international line concentrating module.

link interface module (LIM)

A peripheral module (PM) that controls messaging between link interface units (LIU) in a link peripheral processor (LPP). The LIM also controls messages between the LPP and the DMS-Bus component. An LIM consists of two local message switches (LMS) and two frame transport buses (F-bus). One LMS operates in a load sharing mode with the other LMS. This ensures LIM reliability in the event of an LMS failure because each LMS has adequate capacity to carry the full message load of an LPP. Each LMS uses a dedicated F-bus to communicate with the LIUs in the LPP. *See also* frame transport bus, link peripheral processor.

link interface shelves (LIS)

Shelves in the cabinet that house link interface units (LIUs) for special applications. For example, to implement the ADAS system, the LISs are equipped with a VPP to provide the voice service resources unique to the ADAS feature.

link interface units (LIU)

Modular, add-in cards in LISs that handle special applications, such as voice service resources.

link peripheral processor (LPP)

The DMS SuperNode equipment frame for DMS-STP that contains two types of peripheral modules (PM): a link interface module (LIM) and a link interface unit (LIU). For DMS-STP applications, CCS7 link interface units (LIU7) are used in the LPP. *See also* CCS7 link interface unit, link interface module.

LIS

link interface shelves

LIU

link interface units

LMS

local message switch

local area network (LAN)

A network that permits the interconnection and intercommunication of a group of computers, primarily for the sharing of resources such as data storage devices and printers.

local message switch (LMS)

A high-capacity communications hub that controls messaging between link interface units (LIU) in a link peripheral processor (LPP). An LMS also controls messaging between the LPP and the DMS-Bus component. The link interface module (LIM) uses a pair of LMSs to provide dual-plane redundancy.

LPP

link peripheral processor

maintenance and administration position

See MAP.

MAP

Maintenance and administration position. A group of components that provides a user interface between operating company personnel and the DMS-100 Family switches. The interface consists of a visual display unit (VDU) and keyboard, a voice communications module, test facilities, and special furniture.

MDC

Meridian Digital Centrex

Meridian Digital Centrex (MDC)

A special DMS business services package that uses the data-handling capabilities of DMS-100 Family offices to provide a centralized telephone exchange service. Formerly known as Integrated Business Network (IBN).

network interface unit (NIU)

A DMS SuperNode application specific unit (ASU) that provides channelized access for F-bus resident link interface units (LIU) using a channel bus (C-Bus). The NIU resides in a link peripheral processor (LPP) frame.

NIU

network interface unit

OAM

operation, administration, and maintenance

OM

operational measurements

operational measurements (OM)

The hardware and software resources of the DMS-100 Family switches that control the collection and display of measurements taken on an operating

system. The OM subsystem organizes the measurement data and manages its transfer to displays and records. The OM data is used for maintenance, traffic, accounting, and provisioning decisions.

operation, administration, and maintenance (OAM)

All the tasks necessary for providing, maintaining, or modifying the services provided by a switching system. These tasks include provisioning of hardware, creation of service, verification of new service, and trouble recognition and clearance.

OPP

open position protocol

PCM

pulse code modulation

pulse code modulation (PCM)

- The process used to convert an analog (voice waveform) signal to a digital code.
- A form of modulation in which the modulating signal is sampled, and the sample is quantified, coded, and sent as a bit stream.
- The representation of an analog waveform by coding and quantifying periodic samples of the signal such that each element of information consists of a binary number representing the value of the sample.

QMS

Queue Management System

RAP

Recording and announcement processor

recording and announcement processor (RAP)

Contains devices that provide voice services. The RAP directs these devices to record the caller's voice, playback the voice to the operator, and detect DTMF tones according to instructions received from RAP input/output drivers in the IPF.

SCSI

Small Computer System Interface

SDM

service data manager

SLM

system load module

system load module (SLM)

A mass storage system in a DMS SuperNode processor that stores office images. From the SLM, new loads or stored images can be booted into the computing module (CM).

TMS

TOPS message switch

TOPS

Traffic Operator Position System

TOPS message switch (TMS)

A DMS-100 Family XMS-based peripheral module (XPM) used as a concentration and switching device for data links.

TOPS MP

Traffic Operator Position System Multipurpose

TOPS MPX

Traffic Operator Position System MPX

Traffic Operator Position System (TOPS)

A call processing system made up of a number of operator positions. Each operator position consists of a visual display unit (VDU), a controller, a keyboard, and a headset.

Traffic Operator Position System Multipurpose (TOPS MP)

A call processing system made up of a number of operator positions. Each operator position consists of a visual display unit (VDU), a controller, a keyboard, and a headset.

Traffic Operator Position System MPX (TOPS MPX)

A dedicated directory assistance (DA) position with customized software, keyboard, and interface. TOPS MPX connects to the DMS switch through the TOPS message switch (TMS).

UAE

UNIX application environment

UNIX application environment (UAE)

A software system using a UNIX-based hardware platform, such as an HP 9000 workstation.

VDS

Voice Development System

VIW

voice interface workstation

voice processing platform (VPP)

A CO-compliant, flexible, modular, hardware, and base software platform for supporting enhanced voice and data service applications integrated with a DMS SuperNode switch.

voice processing unit (VPU)

Contains specialized hardware that records the caller's voice, detects dual tone multifrequency (DTMF) tones, and plays back stored audio recordings to the operator for ADAS. The VPU is one of two modules in the VPP.

VPP

voice processing platform

VPU

voice processing unit

DMS–100 Family

ADAS OAM Position

User Guide

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