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DMS-100 Family

TOPS IWS

RAMP and Provisioning User's Guide

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NORTEL NETWORKS™

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RAMP and Provisioning User's Guide

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1.0 Introduction

The main function of the remote access maintenance position (RAMP) is to perform maintenance on other Traffic Operator Position System Intelligent Workstation Subsystem (TOPS IWS) positions to which it is connected. The RAMP functionality is intended for use by operating company personnel at customer sites and Nortel Networks personnel who provide support for IWS operations.

The user is assumed to have basic knowledge of DOS and Microsoft Windows. In general, information about other vendors' tools is not duplicated in this document.

1.1 RAMP tools

The RAMP provides access to the tools listed below:

- Dial-up networking: A RAMP can dial in and connect to an on-ring RAMP even though it is not on the same network with a Microsoft Windows XP Professional dial-up networking GUI.
- Trace: A RAMP can monitor activities of an IWS position and the applications running on it, remotely.
- Logs**:** The user can access log information on previous or current problems occurring on IWS positions.
- Profile: A RAMP can provide access to the profile tool for detailed information of each IWS position on the LAN and information on RAMP-compliant software applications running on the position.
- Print screen capture: The operator can capture and print screen displays of call processing.
- Manual file transfer: The user can transfer files between the RAMP and the other IWS positions using Windows Explorer.
- Software distribution (SWD): The user can distribute IWS software and datafill files between the RAMP and other IWS positions
- Schedule manager: The user can set up software distributions to occur at later, specified times.
- Access to SWD script editor: The user can create and edit IWS software distribution script files to use with the software distribution tool
- Access to the provisioning tool: The user can create and edit datafill for IWS positions. The datafill can be .INI files, table (.TBL) files and language (.LNG) files.
- Access to KeyBind: The user can assign a specific action to a specific key at an IWS position. KeyBind can also be used to validate keyboard datafill.
- Reboot: The user can reboot other IWS positions from the RAMP

1.2 RAMP configurations

A RAMP can be configured to perform solely as a maintenance position, or as both a general operator position and a maintenance position. A RAMP can be part of an IWS cluster, or it can perform maintenance from a remote site. In any case, each RAMP is

installed with IWS base software and is able to act as the dedicated maintenance position of an IWS cluster.

1.2.1 On-ring RAMP

In Figure 1, the RAMP is a part of the IWS cluster. In this configuration, the RAMP is generally referred to as on-ring.

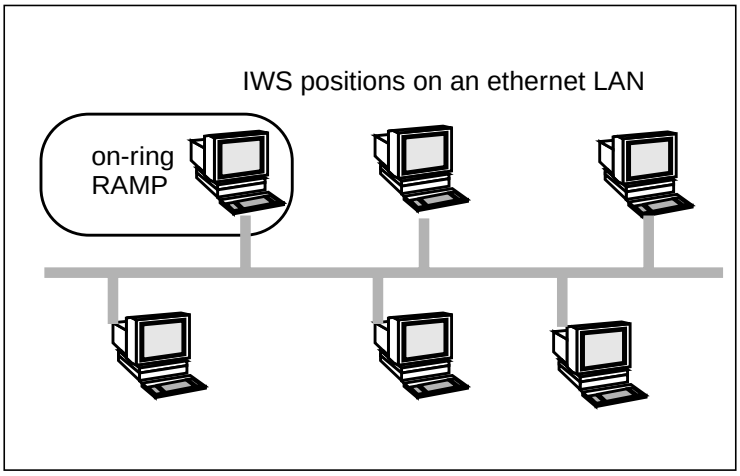


FIGURE 1. On-ring RAMP

1.2.2 Standalone RAMP

In Figure 2, a RAMP is shown that is not a part of the IWS cluster. This RAMP, called a standalone RAMP, uses a switch/modem bank and a dedicated phone line to connect to an on-ring RAMP. The on-ring RAMP is shown connected to options such as a printer.

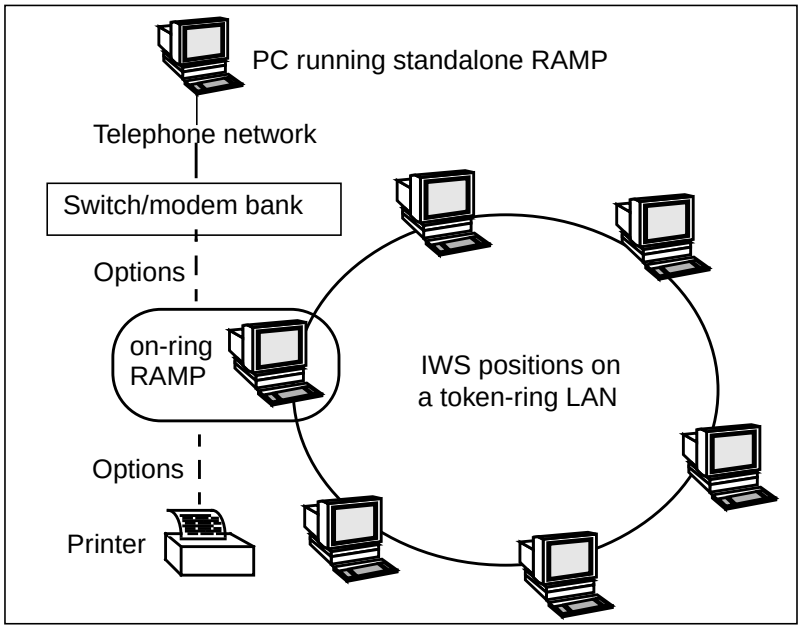


FIGURE 2. Standalone RAMP

1.2.3 RAMP controlling a remote LAN

In Figure 3, the RAMP is attached to a remote cluster through a commercial router network. The IWS base software is not active on this RAMP, which is referred to as off-ring.

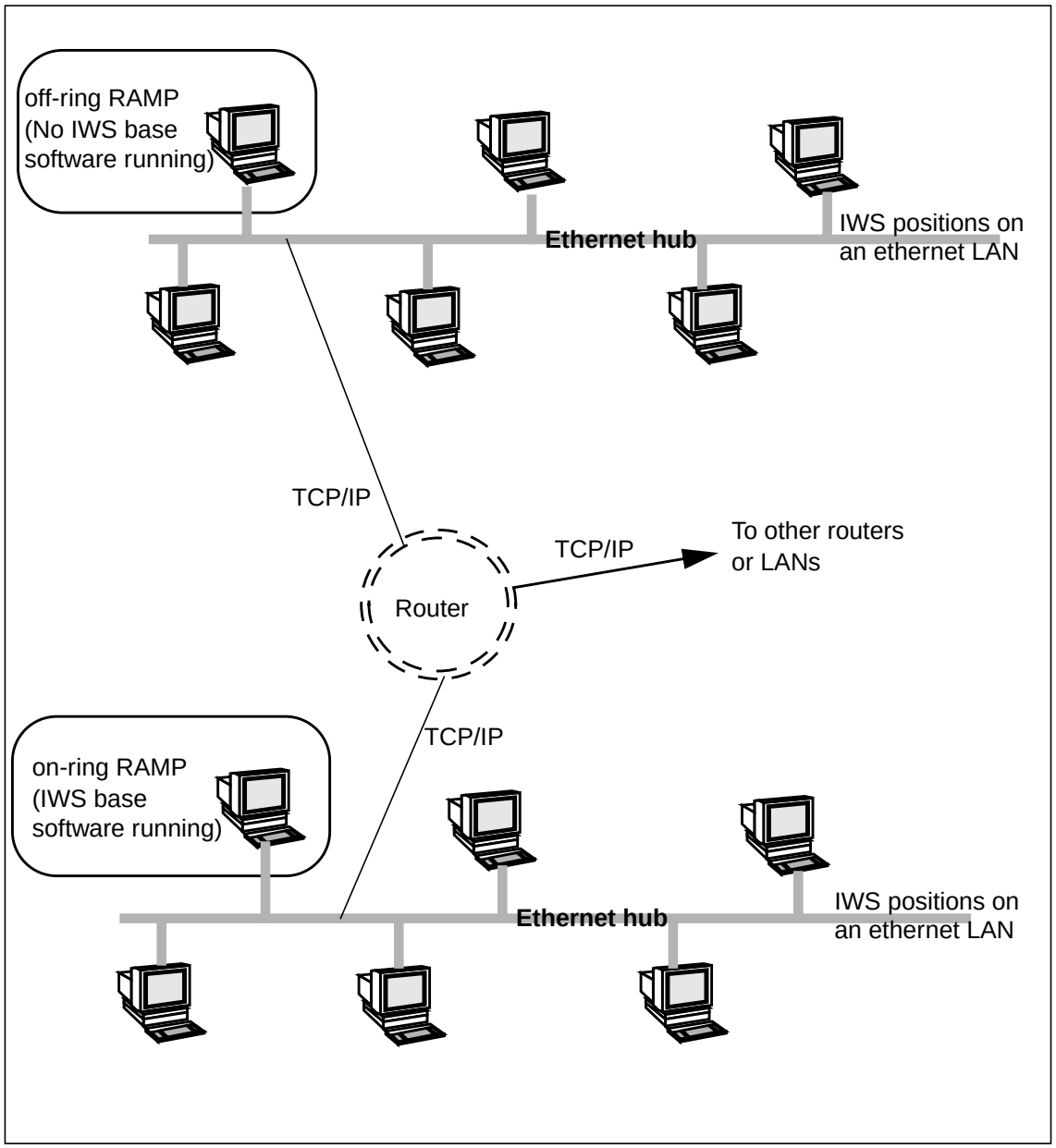


FIGURE 3. RAMP controlling a remote LAN

1.3 Accessing the RAMP display

While another IWS application is running, you can access the RAMP window by pressing **Alt**+**Tab**.

You can enable the **Alt**+**Tab** key combination on an IWS position by setting an environmental variable called alttab to 1.

Refer to Chapter 5 of the *TOPS IWS Base Platform User's Guide*, 297-2251-010, for information on enabling the Alt +Tab key combination.

If you are configuring a RAMP to control a remote IWS cluster, you must deactivate the IWS base software on that position. Use the following steps:

1. Reboot the position.
2. Press and hold the **Ctrl** key as the position boots, so it will display the Windows XP Professional desktop.
3. Select the Start button.
4. From the Start menu, select Program, TOPS IWS, and then RAMP.

1.4 Use of TOPS IWS keyboard

The following sections describes basic keystrokes and menus for accomplishing tasks in the RAMP, SWD editor, provisioning, and KeyBind utility tools.

The following conventions are used:

- A plus sign (+) between key names indicates that the keys are pressed simultaneously (for example, **Alt**+**Esc**).
- A comma (,) between two key names indicates that the keys are pressed sequentially (for example, **Alt**, space bar means press **Alt**, then press the space bar).

For location of keys on the PC keyboard, see Figure 4. For detailed information on keystrokes, refer to supporting Microsoft documentation.

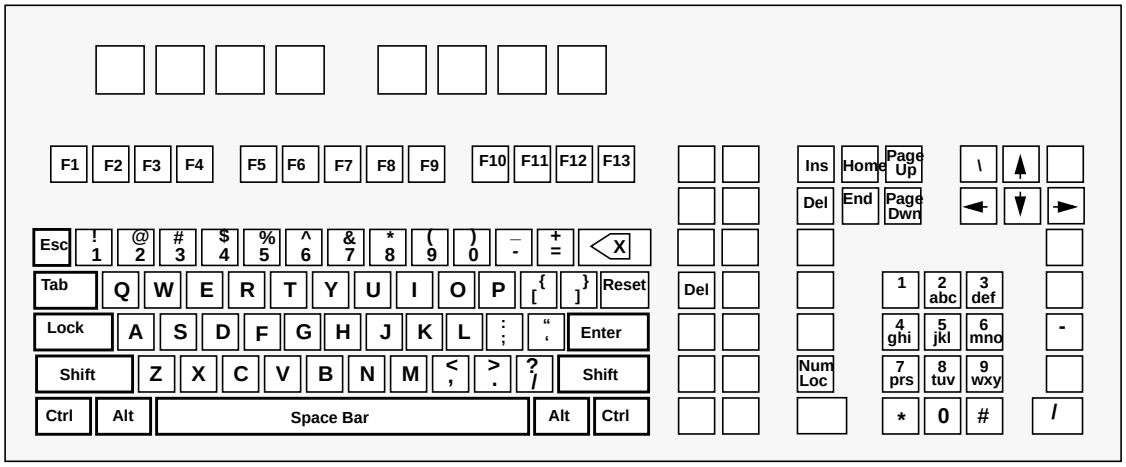


FIGURE 4. Sample layout for PC keyboard

1.5 Using the mouse

Some users of the RAMP may find it helpful to set up a mouse to help carry out maintenance tasks.

If you do use a mouse, you may experience an occasional loss of focus. Clicking the mouse in certain areas causes the active window to gray out and lose focus. If focus is lost, Softkeys do not respond, and any keyboard keystrokes associated with the window may be inactivated. To regain focus, move the cursor over the window where you were working and click the mouse. You should also be aware that it is possible to use the mouse to cut and paste.

2.0 RAMP

The following sections describe the tools and functions that can be accessed by selecting one of the RAMP menu options.

2.1 File menu

The File menu provides options to open a file and exit the RAMP application. If you are working with a standalone RAMP (an IWS position that is configured as a RAMP and is not running IWS base), you can also connect to another RAMP or a local or remote network.

2.1.1 RAMP-to-RAMP connections

A RAMP on one IWS position cluster can be connected to a RAMP on another cluster to exercise control over it and perform maintenance. To establish this connection, the controlling RAMP must know the IP address or host name of the other RAMP. Once connected, the following happens at the controlled RAMP.

- A message displays to indicate it is controlled by a remote RAMP.
- The controlled RAMP sends information about its IWS position cluster layout (as defined by the MPXNET.INI file) to the controlling RAMP. This information and the site name of the other RAMP display at the controlling RAMP.
- Menu options are not available, and enabled tracing stops.
- Profiling activity halts and all profiling windows disappear from the screen. Logs are still received and stored.

When maintenance is complete, the RAMPs can be disconnected by closing the status window at the controlling RAMP. Another connection to another RAMP can be made.

To establish a connection between a standalone RAMP and another RAMP, do the following steps.

1. From the menu bar on the standalone RAMP, select File and Connections to display the IWS Site Connections dialog box. (See Figure 5.)

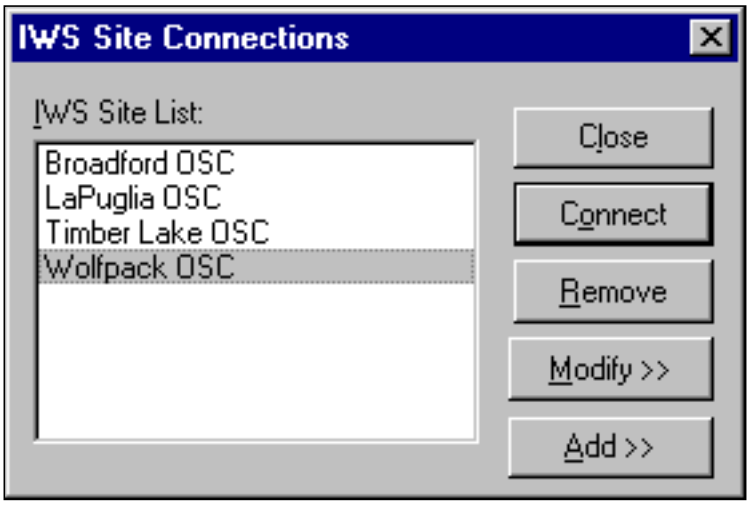


FIGURE 5. WS Site Connections dialog box

2. Select a site from the list in the dialog box, then select Connect. To add a site, see section 2.1.1.1.

   Once a connection to the target site is established, the LAN Status window displays to show the current status of the LAN at the target site. Remote maintenance can then be performed on any position at the target site.

3. To close the connection, select Close.

2.1.1.1 Use of IWS Site Connections dialog box command buttons

In addition to the Connect and Close command buttons, you can select Remove, Modify, and Add in the Site Connections dialog box.

Remove	Select Remove to delete the highlighted site connection definition from the list. You are prompted for confirmation before the removal. If you try to remove a site that has a scheduled task in progress, a message box displays to indicate that removal is not allowed. If the site has a pending scheduled task, a message box displays so that you must choose to cancel or proceed with the removal.
Modify	Select Modify to edit the highlighted site connection definition. If you try to modify a site that has a scheduled task in progress, a message box displays to indicate that modification is not allowed. If the site has a pending scheduled task, a message box displays so that you must choose to cancel or proceed with the modification.
Add	Select Add to create a new site connection definition. In the IWS Site Name field, enter a site name. The name can be up to 20 alphanumeric characters. The text in this field displays in the IWS Site List when the definition is applied. Enter an IP address in the IP Address field.

You can also enter a dial-up connection name for the site in the Dial-up Networking Connection Name field. The default name, DIRECT CONNECT, does not make a site connection.

When the dialog box expands to show the additional section to add or modify site connections, only Close, Apply, and Cancel are enabled.

2.1.2 RAMP standalone dial-up connection

The RAMP dial-up connection enables a PC equipped with Windows XP Professional and configured as a standalone RAMP to dial in to an on-ring RAMP and perform maintenance to the LAN where the on-ring RAMP resides. All the functionalities of an off-ring RAMP are supported when a standalone RAMP is used. Refer to section “Dial-up networking tool” on page 31 for a discussion of dial-up networking.

2.1.3 Modify or add a connection definition

To modify or add a connection definition, do the following steps.

1. From the RAMP menu bar, select File and Connections to display the IWS Site Connections dialog box. (See Figure 5 on page 22.)
2. Select Add or Modify to display the expanded IWS Site Connections dialog box.
3. Select the IWS Site Name field and enter a site name.

   The name can be up to 20 alphanumeric characters. The text in this field displays in the IWS Site List when the definition is applied.
4. Select the IP Address field and enter an IP address.

   The format for an IP address is nnn.nnn.nnn.nnn where “nnn” is a 1–3 digit number; for example, 76.802.5.23.
5. Optionally, select the Dial-up Networking Connection Name box and choose a dial-up connection name for the site. The default name, DIRECT CONNECT, does not make a site connection.

   Note: Multiple sites can be associated with the same connection name.
6. Select Apply.

   The following occur:

   - For a new site definition, the site name is added to the IWS site list.
   - For a modified site connection definition, the modified information is updated according to your entries.
   - If an entry is made in the Dial-up Networking Connection Name box, a connection to an on-ring RAMP is made.

   If the site name or IP address are not specified or incorrectly specified, an error window displays.

Alternatively, you can select Cancel to close the dialog box without adding or modifying site connections.

2.1.4 RAMP-to-RAMP connection failures

When a connection failure occurs between RAMPs, error messages such as those shown below display momentarily in the connection field in the status bar:

- "Remote RAMP is not responding!"

  The following are troubleshooting suggestions when the remote RAMP does not respond:

  — IP address is incorrect

  — the routers are not powered up

  — there are other network problems

- "Remote RAMP is in maintenance state"

  — When the target RAMP is in the process of file transfer, the RAMP does not return the status of its local configuration and a connection cannot be made.

- "Remote RAMP is not an On-Ring RAMP"

  — The target RAMP must be an on-ring RAMP.

2.1.5 RAMP-to-RAMP disconnect

To disconnect one RAMP from another, close the LAN status window by selecting File from the menu bar, and Close from the drop-down list.

2.2 Tools menu

RAMP tools are accessible through the tools menu as shown in Figure 6. RAMP tools are described in detail in the following chapters.

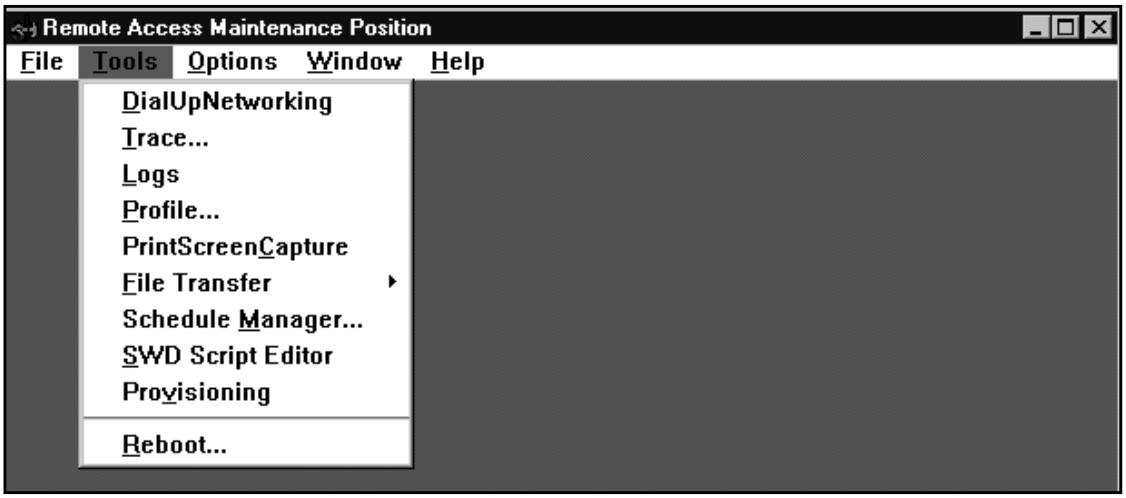


FIGURE 6. Tools menu

2.3 Options menu

Use the Options menu to configure the RAMP for detail level of status messages and ping interval. (See Figure 7.)

The RAMP obtains the status of the LAN by pinging (calling) the other positions. When ping is set to Off (the default), the RAMP cannot obtain information from any positions, and tracing, profiling, and file transfer functionalities are disabled. You can set the ping interval to determine the frequency at which the LAN status window is refreshed.

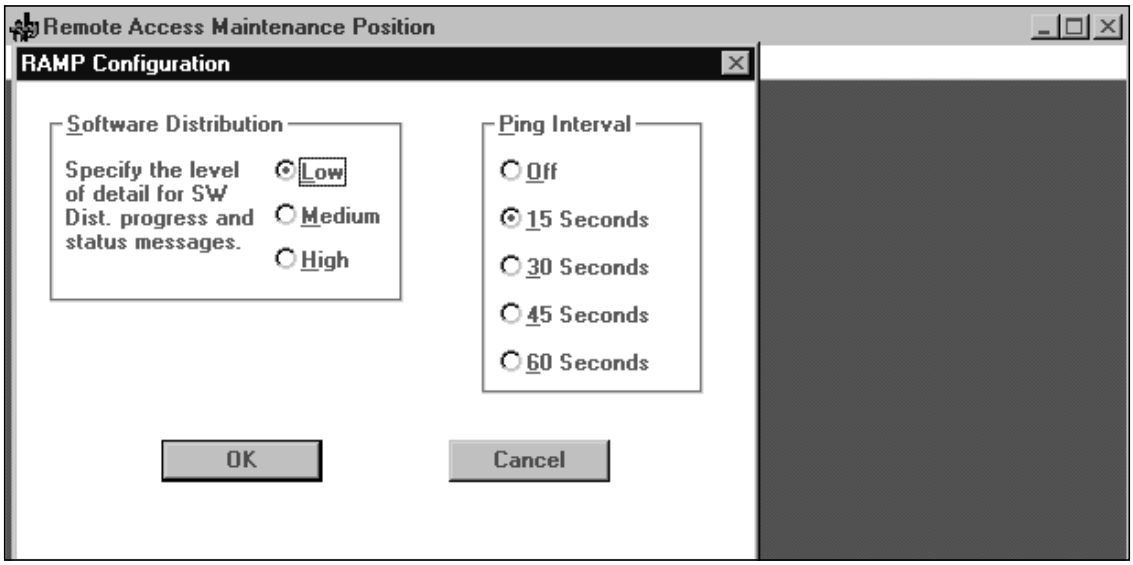


FIGURE 7. Options menu with RAMP Configuration chosen

When the Logs window is opened (from the Tools menu), a second choice becomes available in the Options menu drop-down box. You can toggle a Sound option on or off with the space bar. (See Figure 8.) When sound is toggled On, you will hear a beep when the RAMP receives a log.

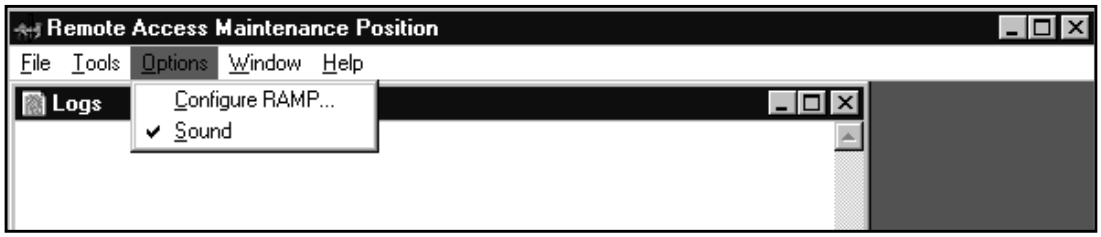


FIGURE 8. Options menu with sound toggled on

2.4 Window menu

The window menu is used in conjunction with observation windows. It contains a list of options followed by listings of active observation windows.

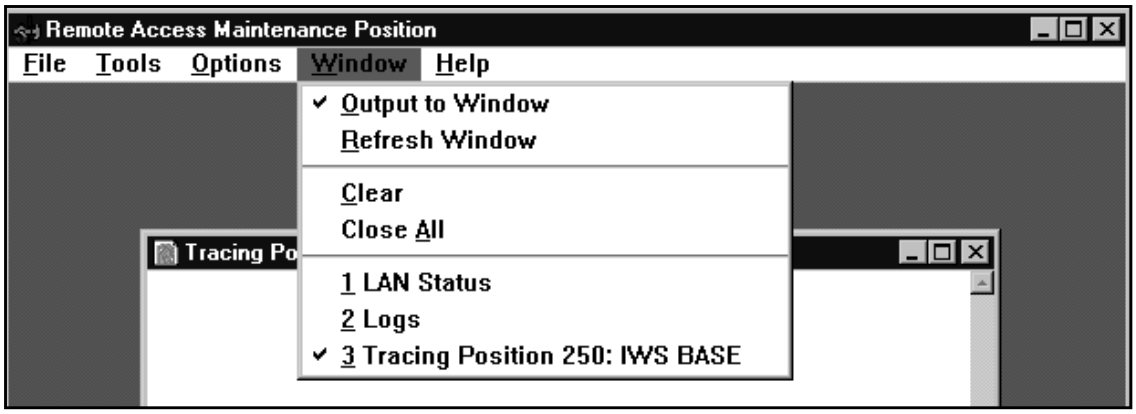


FIGURE 9. Window menu

The options shown vary according to which observation window is active. In Figure 9 on page 26, the open observation windows are LAN status, logs, and trace. The checkmark preceding the trace window listing indicates that this window is currently active.

The following options are found in the window menu:

- The Output to Window option displays any new messages that arrive in an active observation window. This option is not used when the LAN status window is active.
- The Refresh Window option refreshes the display of an active observation window with any new messages that arrive while the Output to Window option is off. This option is not used when the LAN status window is active.
- The Clear option removes the contents of an active observation window from the display. This option is not used when the LAN Status window is active.
- The Close All option closes all observation windows. When an observation window is closed, tracing is turned off automatically. Before each window is closed, you are prompted to save the contents.

2.4.1 LAN Status window

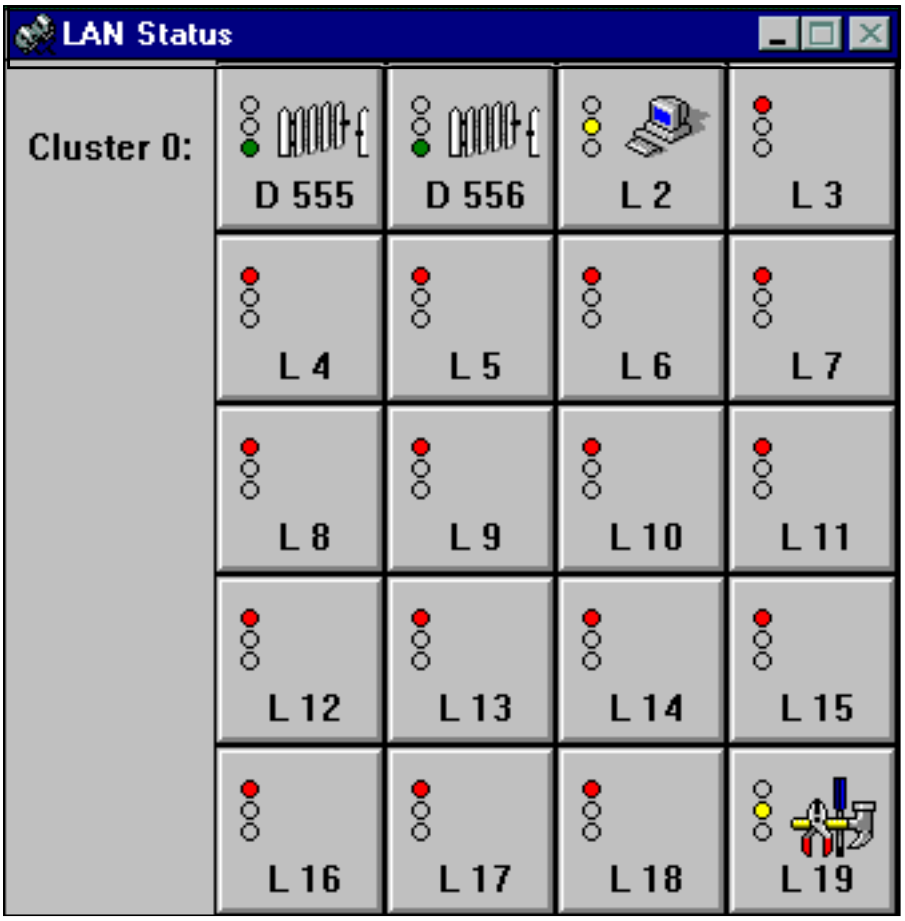


FIGURE 10. LAN Status window

The LAN Status window has a control menu box, a title bar, and a minimize button. When minimized, the LAN Status window is reduced to an icon in the main RAMP window. It cannot be maximized. This window contains the following information.

- number of clusters on the LAN
- a graphical display of positions on the LAN. This display shows:
  - — position types (general, gateway, RAMP)
  - — status of each position (RES, not RES, not communicating)
  - — position IDs

The following section explains position types, status, and IDs in more detail.

2.4.1.1 Position type, status, and ID

Following are enlarged graphical displays of IWS position type, status, and ID as they are displayed in the LAN status window.

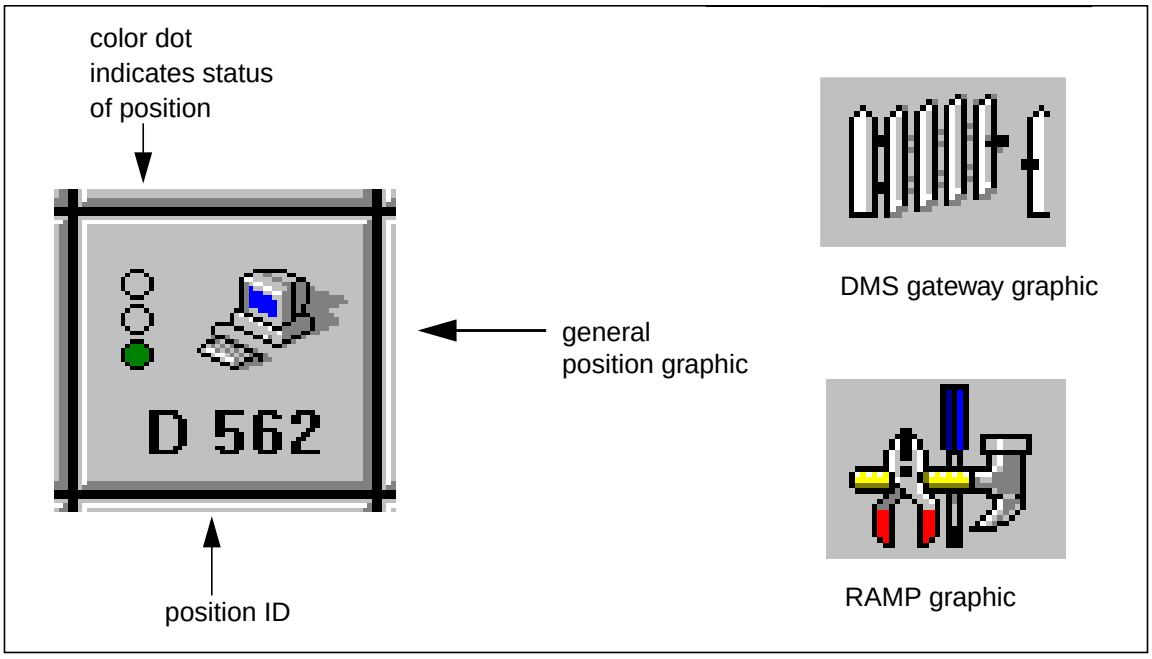


FIGURE 11. Position type, status, and ID

- The three IWS position types displayed include:
  - — gateway–for communicating with the DMS switch. All DMS information for each position on the LAN is passed through the gateway positions. The gateway position has the same capabilities as a general operator position.
  - — RAMP–for performing maintenance on other general positions. A RAMP can also function as a general position.
  - — general–a regular operator position.
- The position status information includes:
  - — “RES” (green dot)–indicates the position is in a reset state in the DMS switch and is communicating with the RAMP.
  - — “not RES” (yellow dot)–indicates the position is not in a reset state in the DMS switch but is communicating with the RAMP.
  - — “not communicating” (red dot)–indicates that the position is not communicating with the RAMP.

    Note: If RAMP pinging functionality is set to Off, all position icons show a red light and no information for position type or status displays.
- The position ID shows in the lower portion of the graphic. An example of an ID number is D562 as shown in Figure 11. “D” indicates the position has communication with the DMS switch. The three-digit number signifies the ID number specified in the DMS switch for that position. The ID is also specified in file MPXNET.INI. If the position is not communicating with the DMS switch, an “L” shows in place of a “D,” followed by a LAN position number. For example, see position L2 in Figure 10, “LAN Status window,” on page 27.

2.5 RAMP status bar

The status bar, found at the bottom of the main RAMP window, consists of five fields that provide the following information. (See Figure 12.)

- connection field–When the RAMP is connected to another RAMP at another site, this field provides the name of the other site.
- capture field–If an observation window is currently being captured to a file, this field contains the word “capture.”
- schedule field–Display in this field is in red when a schedule is in progress. It is in black when a schedule is pending. Otherwise, the field is empty.
- ping field–This field displays a moving bar as positions on the LAN respond to RAMP ping messages. This field also contains the word “Ping” as long as pinging is on.
- log count field–This field contains the number of logs received since the RAMP application started. The log count resets to 0 when it reaches 9999 or when the connection between a RAMP and a remote site closes.

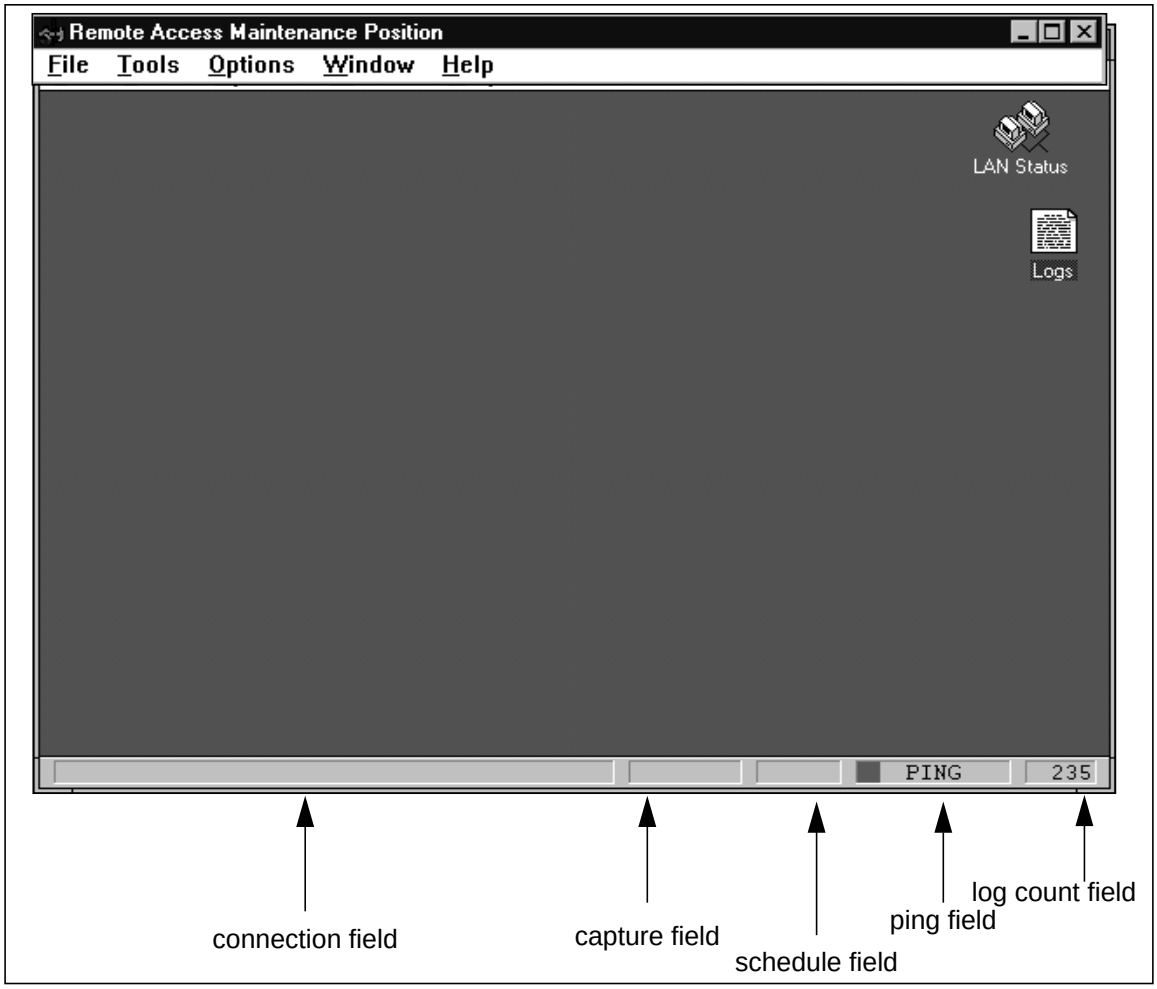


FIGURE 12. RAMP status bar

3.0 Dial-up networking tool

The RAMP dial-up networking tool enables a PC equipped with Windows XP Professional and configured as a standalone RAMP to dial in to an on-ring RAMP and perform maintenance on the LAN where the on-ring RAMP resides. All the functionalities of an off-ring RAMP are supported when a standalone RAMP is used. Follow the steps below to create a dial-up configuration:

1. In the main RAMP window, select Tools from the menu bar.
2. Select DialUpNetworking from the drop-down list. This box shows the currently defined dial-up networking connections. (See Figure 13.)

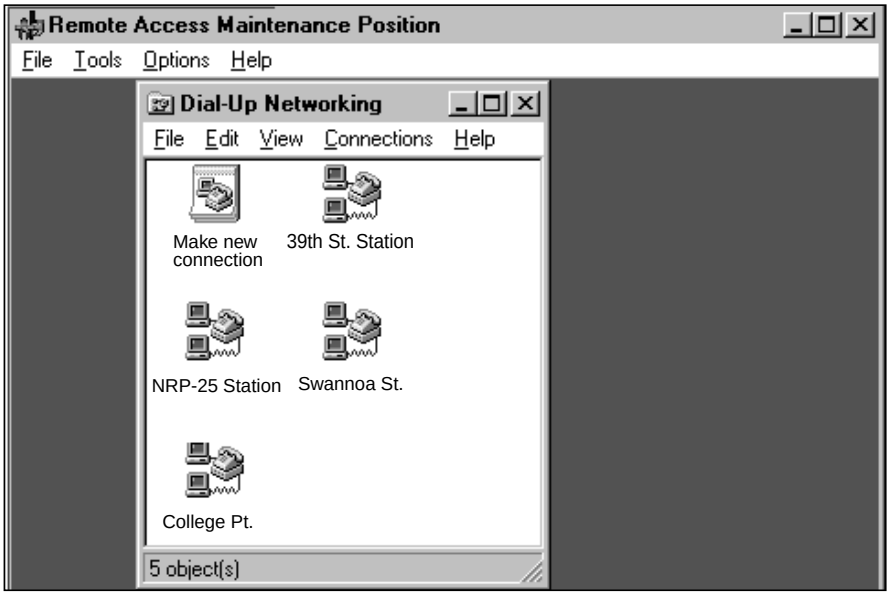


FIGURE 13. Dial-Up Networking display

3. Select Make New Connection, and enter a name for the site you are dialing in.

   Note: A name can be shared among multiple sites.

4. In the “Select a modem” box, choose your modem from the pull-down list.
5. Select Next to proceed to the next box. Enter the area code, telephone number, and country code of the site.
6. Select Next to proceed to the final screen and select Finish to complete the creation of the dial-up connection.

To modify an existing dial-up connection definition, select a connection in the Windows Dial-up Networking connections dialog box, then select Properties from the File menu.

To remove an existing dial-up connection definition, select a connection in the Windows Dial-up Networking connections dialog box, then select Delete from the File menu.

When you attempt to make a connection with the dial-up feature, you are prompted to enter a user name and a password. You have the option to save these entries.

4.0 Tracing tool

The RAMP tracing tool is used in cases when the exact activity of a position needs to be monitored. For example, you can monitor OPP activity between a position and the DMS switch, or API activity between the IWS base application and another application.

This tool can also trace messages remotely at each position. Knowledge of OPP and IWS messaging is required to interpret the data. Position performance can be affected when this tool is activated.

At least one position must be communicating with the RAMP before the tracing option can be selected from the tools menu. Otherwise, a warning displays.

4.1 Trace Setup dialog box

The Trace Setup dialog box (see Figure 14) contains smaller boxes for selection of available positions, available applications, and trace options.

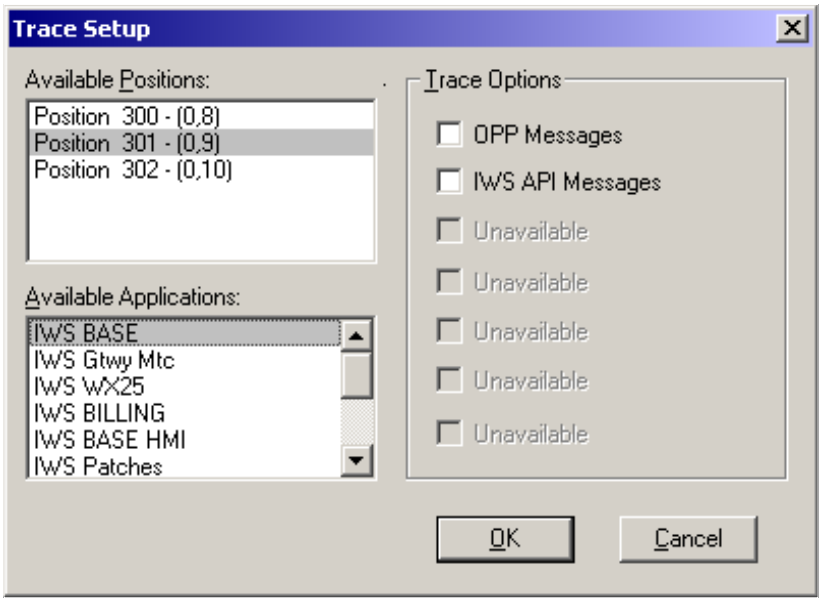


FIGURE 14. Trace Setup dialog box

- The Available Positions box lists:
  - — the positions that are communicating with the RAMP
  - — the DMS position ID if the position is communicating with the DMS switch
  - — question marks instead of DMS position ID if the position is not communicating with the DMS switch
  - — the network cluster and position number in parentheses
- The Available Applications box lists the applications running on the position that you selected in the Available Positions box.
- The Trace Options box lists what can be traced according to the position selected in the Available Applications box and the application selected in the Available

Applications box.

To start tracing, use the following steps.

1. Select the position you want to trace in the Available Positions box. Only one position can be selected at a time.
2. Select the application you want to trace in the Available Applications box. Only one application can be selected at a time. For example, IWS BASE is selected in Figure 14.
3. Select the options to be traced in the Trace Options box. More than one type of data can be traced.
4. Select OK to start tracing.

   Tracing can be canceled any time by pressing the **Esc** key.

A trace observation window displays while tracing is in process. See Figure 15.

If you choose to trace another position or application, another trace window displays. Use the **Ctrl,Tab** key combination to move among the windows. The windows can be resized and scrolled vertically.

While a trace observation window displays, the File menu provides standard Windows options to execute trace-related actions.

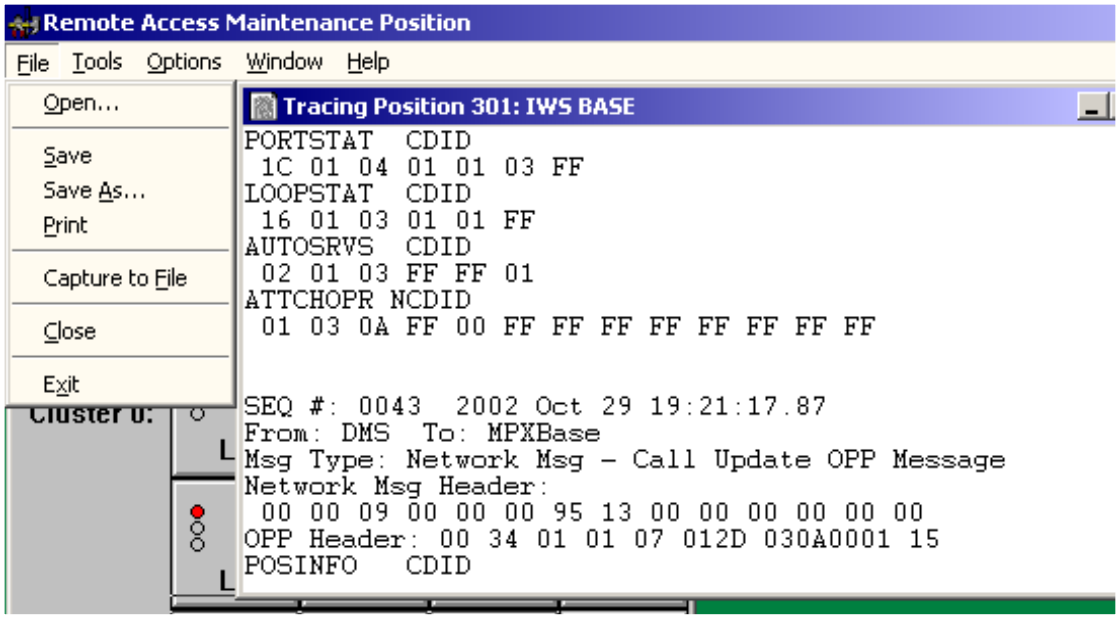


FIGURE 15. Trace file menu

While tracing is in process, it can be stopped by selecting the stop-trace option in the Options menu. A stop-trace box displays as shown in Figure 16.

The messages available for selection in this box depend on the application specified for tracing. You can stop tracing a message by checking or unchecking the associated box.

To terminate all tracing, select option Stop All Tracing on This Position.

To exit, select Cancel or Done.

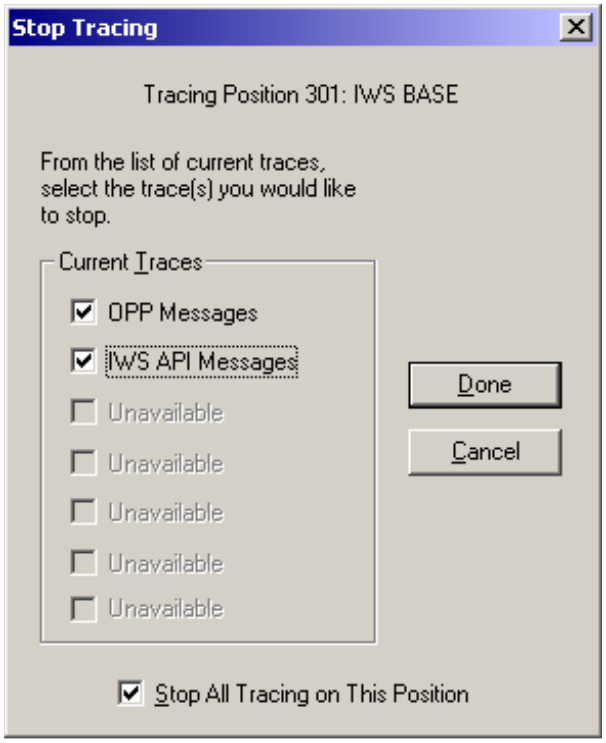


FIGURE 16. Stop Tracing box

4.2 OIA tracing

When the OIA application is selected for tracing, a message appears in the observation window indicating that messages are being stored in a file located on the position selected for tracing. Once this file reaches 100 Kb in size, tracing stops and the file is closed. The name of this file is shown in the RAMP observation window. (See Figure 17.) The RAMP file transfer tool can be used to transfer the message file from the selected position to the RAMP.

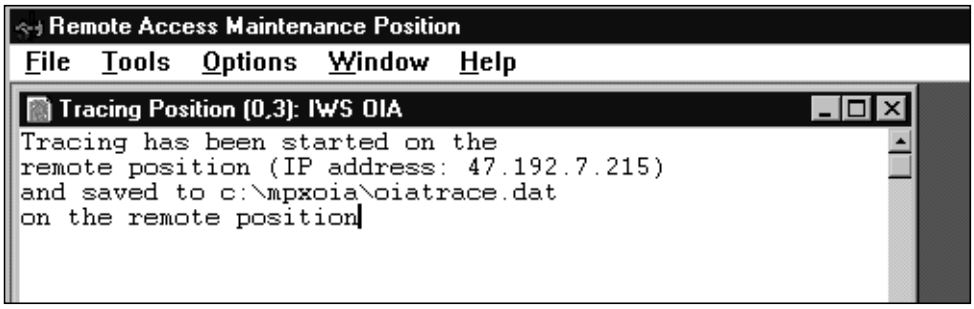


FIGURE 17. IWS OIA application message window

5.0 Logs tracing tool

The logs tracing tool collects all logs produced by all IWS positions on the LAN. It is used to check previous and current problems on positions.

To turn logs tracing on, select the Logs option from the Tools menu. Logs are captured from all positions and displayed in an observation window. (See Figure 18.) The window's title bar indicates the type of information being displayed. You can scroll up or down, and minimize or maximize the window.

To enable the RAMP to collect logs, each position on the IWS LAN must assign the RAMP to the correct node. This assignment is datafilled in the MPXNET.INI file, which is discussed in section 13.3, "MPXNET provisioning," on page 115.

Logs are stored in an ASCII file named MPXLOGS.DAT. This file has a maximum size of 500 Kb. When the log file exceeds the maximum size, it is copied to an archive file named MPXLOGS.ARC and a new MPXLOGS.DAT file is created. When a current log file is archived, any existing archive file is deleted. Both the log file and the log file archive are stored in the IWS logs directory, C:\MPXLOGS.

A log has the following format:

<Alarm> <LogID> <Date> <Time> <Application>
SEQNO <*AAAA:BBBB*> POSID <*CC:DD*> Cluster <*EE*> IP Address <*address*>
Log from File: <*file*(*Line no*)>
<Log Text>

The above fields are defined as follows:

Alarm	A blank field indicates an informational alarm. An asterisk (*) indicates a minor alarm. Two asterisks (**) indicate a major alarm that requires action to correct the problem. Three asterisks (***) indicate a critical alarm that requires immediate action to correct the problem. Three question marks (???) indicate this field is not filled in by the application vendor.
LogID	This field identifies the log. The ID can be up to eight characters. The format YYYXXXX is used, where YYY defines the application and XXXX is a number of the log. For example, BAS0001 is a log created by the IWS base application.
Date	This field contains the date the log is generated. The format YYYY MMM DD is used, where YYYY is the year, MMM is the month, and DD is the day.
Time	This field contains the time the log is generated. The format HH:MM:SS:HS is used, where HH is the hour,

	MM is the minute, SS is the second, and HS is the hundredth second. This field can contain question marks (??) if the position time has not been synchronized with the DMS switch time.
Application	This field names the IWS application that created the log.
SEQNO *AAAA:BBBB*	This field contains the sequence number of the log. The format AAAA:BBBB is used, where AAAA is the sequence number of all logs created since the log application started, and BBBB is the sequence number of the position that created the log.
POSID *CC:DD*	This field contains the position ID. The format CC:DD is used, where CC is the position number within the cluster (from the MPXNET.INI file) and DD is the DMS position ID. This field can contain question marks (??) if the position has not been returned to service by the DMS switch.
Cluster *EE*	This field contains the cluster number found in the MPXNET.INI file.
IP Address *address*	This field contains the IP address of the position that created the log.
Log from file: *file (Line no*)	This field contains the code module that creates the log and the line number of the line in the code module.
Log Text	This is the text content of the log.

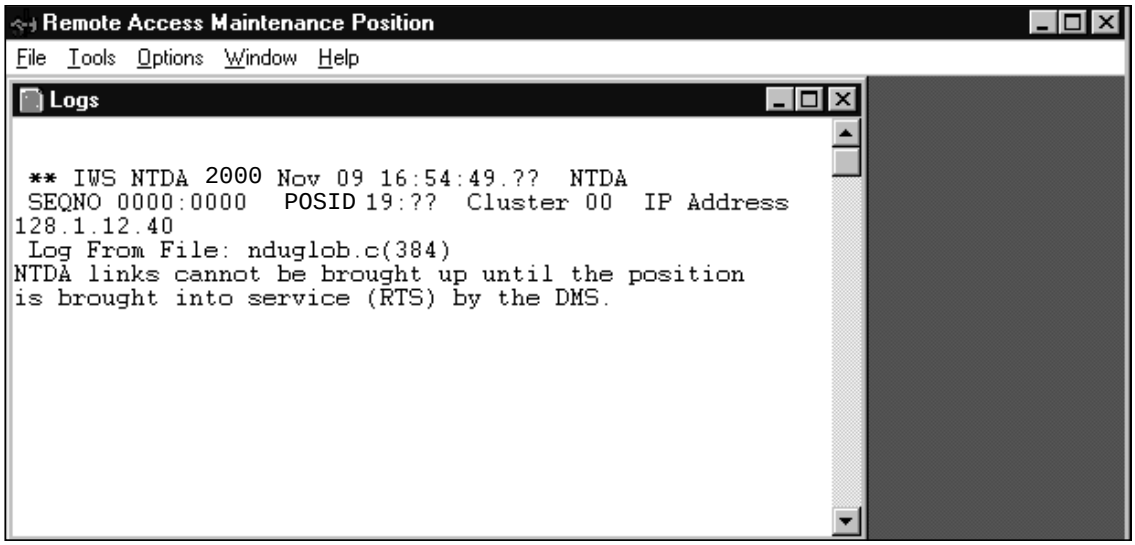


FIGURE 18. Logs observation window

When the logs observation window displays, the file menu (see Figure 19) can be used for the following actions.

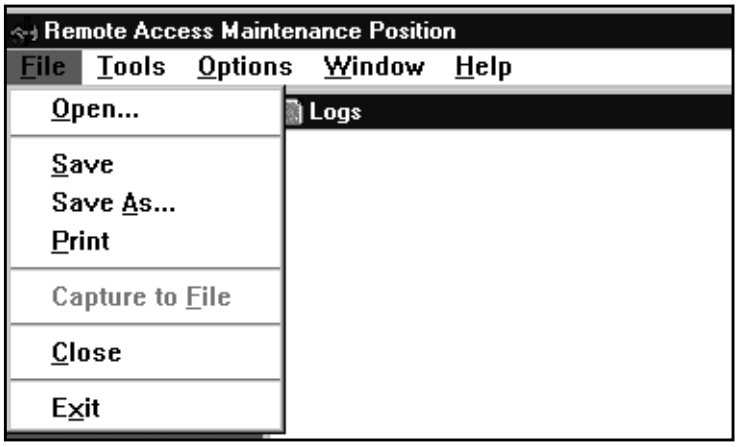


FIGURE 19. File menu

Open–This option opens existing text files including log files. The default logs file is MPXLOGS.DAT in the C:\MPXLOGS directory. If the file is too large for RAMP to open, use a Windows application such as Wordpad to view the file.

Save–This option saves a log file.

Save As–This option specifies the name for a file to be saved. It is also be used.

Print–This option prints the contents in the logs observation window.

Capture to File–This option is not available when a log observation window is open since the Save option can be used to retain the log file content.

Close–This option closes an observation window.

Exit–This option terminates the RAMP application.

6.0 Profile tool

The RAMP profile tool provides information and enables you to change certain parameters for various applications loaded on the IWS position. To activate this tool, do the following.

1. Make sure at least one position is communicating with the RAMP.
2. From the tools menu in the main RAMP window, select Profile.

   The Position Profile dialog box displays. (See Figure 20.)

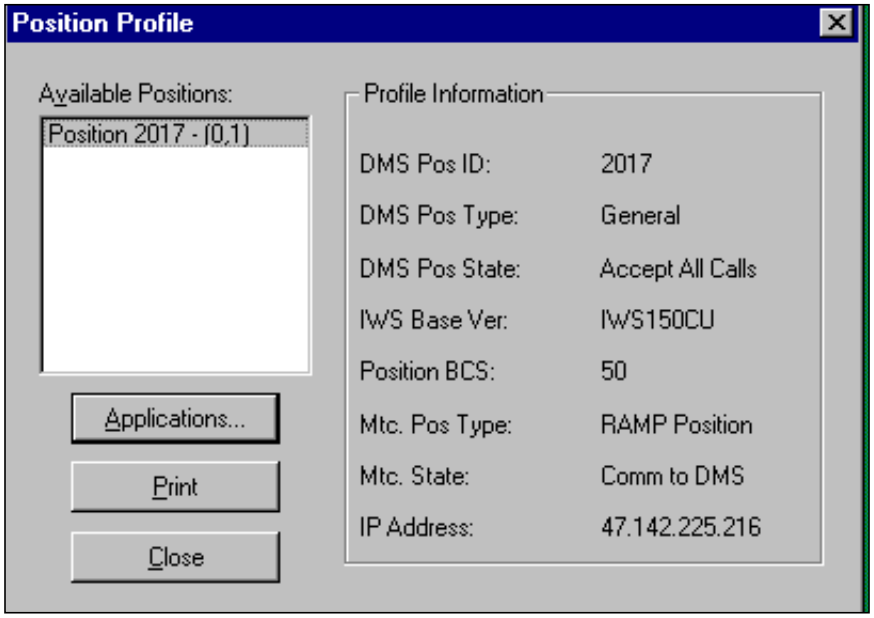


FIGURE 20. Position Profile dialog box

If a position is communicating with the DMS switch, the position ID displays. If a position is not communicating with the DMS switch, question marks display instead of the ID. Network cluster and position number of a position display in parentheses. The Profile Information area in this box shows more information on a specific position.

Note: If no position is communicating with the RAMP when the profile option is selected, a warning displays.

3. Select a position to be profiled. You can select only one position to be profiled at a time.
4. Select Applications.

   The Applications Profile dialog box (see Figure 21) shows a list of applications running on the position in the Available Applications box. Information about various parameters that configure the selected application shows in the Parameter Name box.

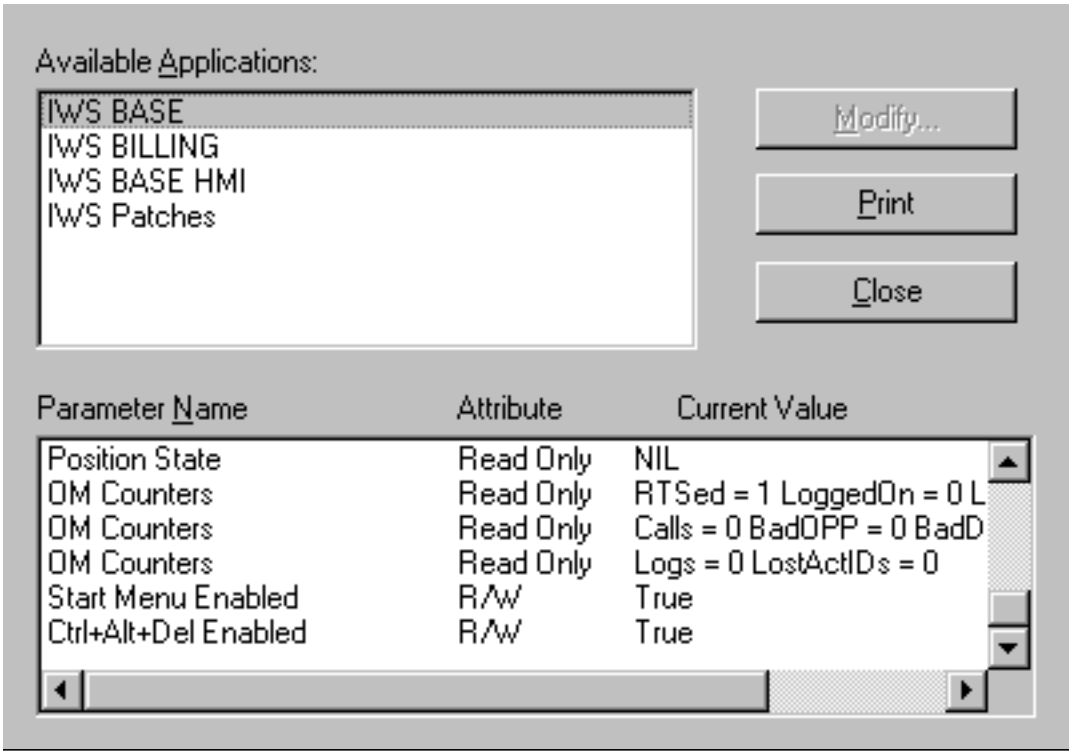


FIGURE 21. Applications Profile dialog box

5. You can modify the value of a parameter by selecting Modify. Only parameters with read/write attributes can be modified.

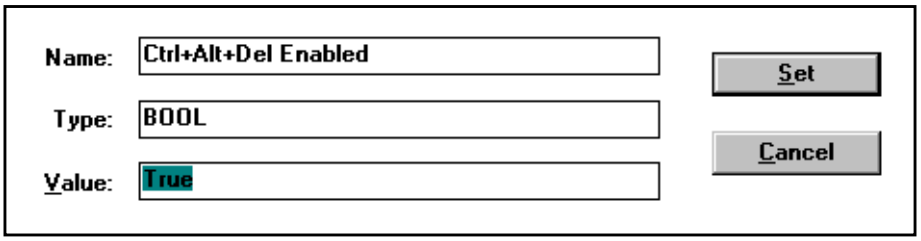


FIGURE 22. Application Parameter Modification dialog box

   You can enter a new name, type, and value for the selected parameter. (See Figure 22.) Then select Set. The new entries are passed to the selected application through the RAMP API.

6. You can print the parameter names, attributes, and values by selecting Print.
7. Select Close to exit the dialog box.

7.0 Screen capture file printing tool

The screen capture file printing tool allows an operator to print screen displays captured during call processing. Screen captures are for problem reporting purposes. (See *TOPS IWS Base HMI Application Guide*, 297-2511-013, for information on capturing call screen displays.)

Screen captures are saved in files in directory SCRNCAPT at the operator position. Each screen capture generates a log that can be displayed in the logs observation window of the RAMP. To collect screen capture files from the operator positions to a common location at the RAMP (the recommended location is C:\RAMP\SCRNCAPT directory), use the RAMP File Transfer tool.

To print the screen capture files from the C:\RAMP\SCRNCAPT directory,

1. Select the PrintScreenCapture option from the RAMP tools menu to display the Print Screen Capture dialog box. (See Figure 23.)

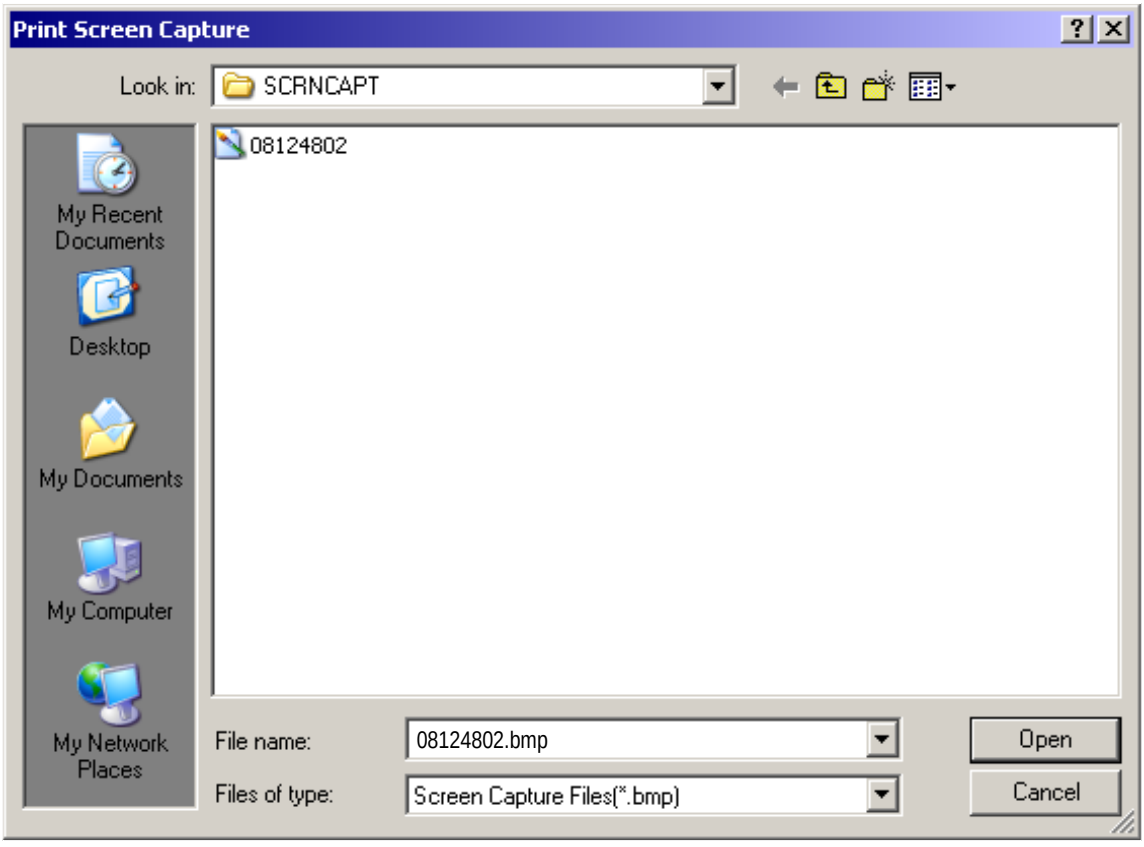


FIGURE 23. Print Screen Capture dialog box

2. Select the file you wish to print.

   For these files, the file name format is DDHHMMSS.BMP, where DD = day, HH = hour, MM = minutes, and SS = seconds. BMP is the file extension.

3. Select Open. A dialog box displays to show the available printers. (See Figure 24.) Select the desired on and press the OK button. If the file you selected is not a bitmap file, an error message displays.

   Use the Windows XP Professional Add Printer wizard (found in Settings - Printers) to define a printer for the RAMP.

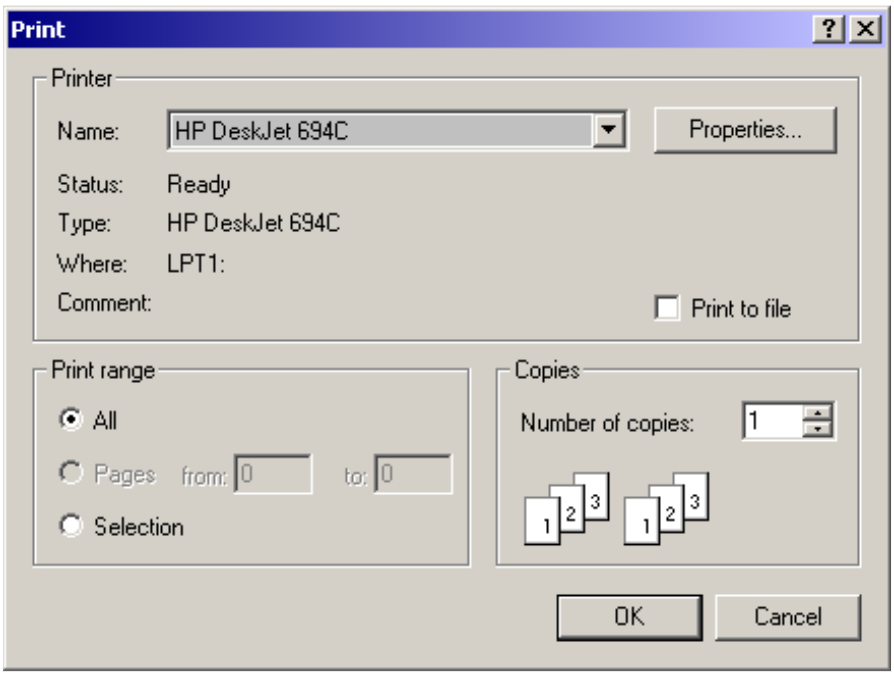


FIGURE 24. Print Bitmap dialog box

8.0 File transfer tool

The RAMP file transfer tool is used to transfer files between the RAMP and other IWS positions. Both file transfer options (manual and software distribution) are accessed from the Tools menu. (See Figure 25.)

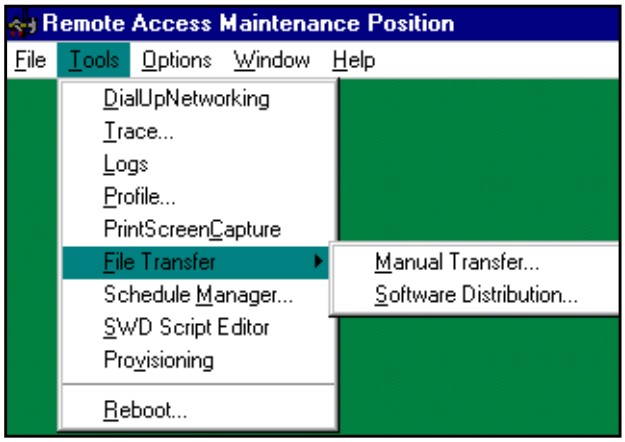


FIGURE 25. File Transfer option

8.1 Manual file transfer

The RAMP manual file transfer uses Windows Explorer as the interface to the Windows file manager.

8.1.1 Manual file transfer considerations

Before using the RAMP manual file transfer, note the following considerations:

- Both the RAMP and the target positions must have Windows XP Professional installed. Consequently, this file transfer capability is not compatible with any release prior to IWS release 17.0.
- Installing a mouse provides the easiest way to work with manual file transfer on the RAMP.
- The computer name of the IWS target position must match its IP address. To determine the IP dress, go to the Start Menu, Settings, and then Network Connections. Double click on the Local Area Connection. When this window appears, double click on the Internet Protocol (TCP/IP).

  To verify the computer name, go to the Start Menu, Settings, and then System window. Select the Computer Name tab. In the “Full Computer name” line, make sure the computer name uses the format nnxnnnxnnnxnnn, where “nn” is a segment of the IP address, and “x” replaces the period (.). Thus an IWS position with the IP address 47.192.6.131 must have a computer name of 47x192x6x131.

- Files cannot be transferred unless file sharing is enabled.

- Be alert for potential datafill issues in any file you transfer. Especially with the mpxini.ini, mpxnet.ini, and host files, if you transfer a file containing generic default datafill, and do not replace the default datafill with your customized datafill, you may have problems operating IWS at the target position.

8.1.2 Implementing manual file transfer

The following section describes the steps to implement manual file transfer.

1. From the Tools menu of RAMP, select File Transfer and Manual Transfer.

   The Specify Position dialog box displays. (See Figure 26.)

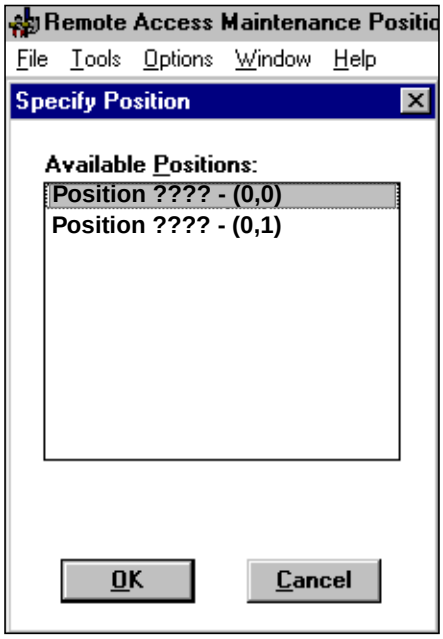


FIGURE 26. Specify Position dialog box

2. Use the arrow keys and spacebar to select and highlight one position to receive the transferred files.
3. Select OK.

   The RAMP communicates with the IWS base software on the target position to set up the position to handle file transfers. The RAMP verifies whether the position is in a state to receive files. If communication with a target position fails or the target position is not in a state to receive files, a message displays to indicate the problem.

   Once file transfer communication between the RAMP and the target position is established, two file boxes display on the RAMP screen. The left-side box contains the files on the RAMP and the right-side box contains the files on the target position. (See Figure 27.)

   The target position displays the message “Position Maintenance: File Transfer in Progress” until the transfer is complete.

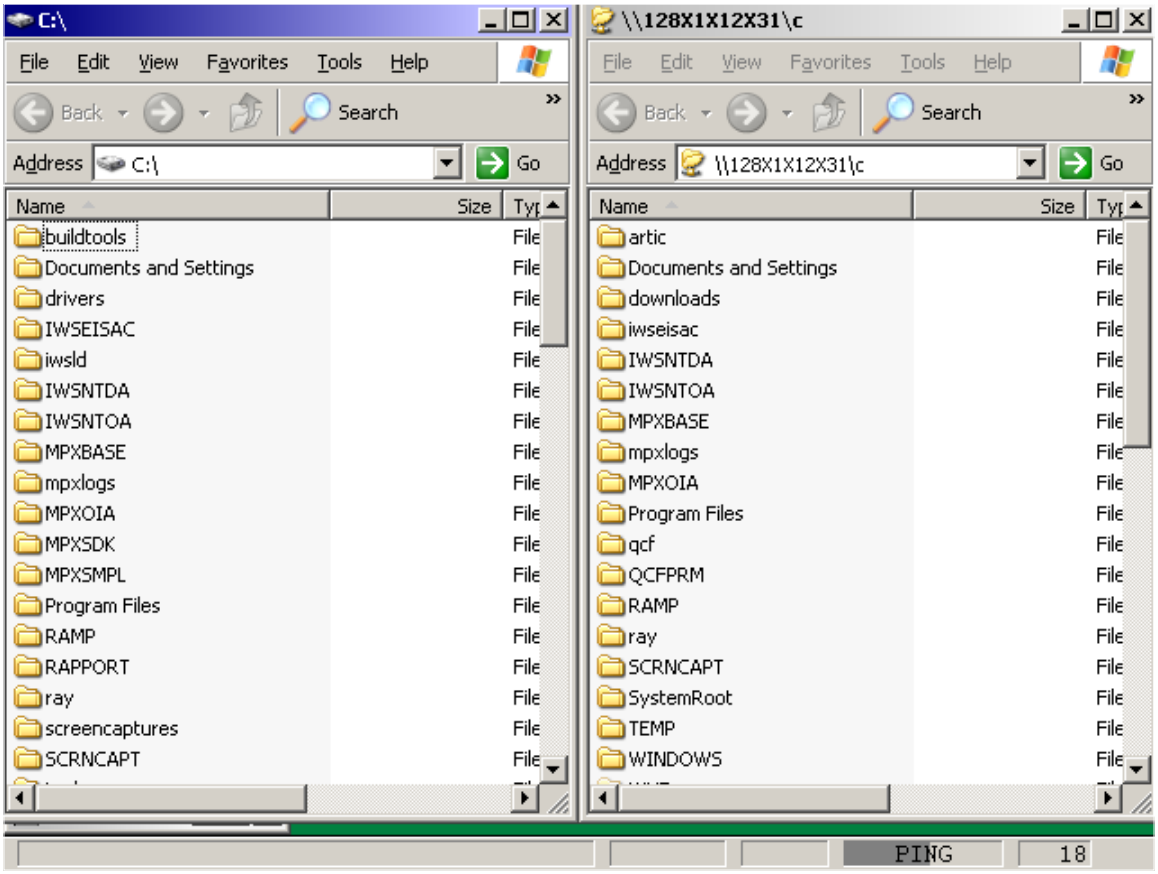


FIGURE 27. File boxes of the RAMP and target position

4. In the RAMP file box, select the file you want to transfer and move it to the desired location on the target position. This completes the procedure for manual file transfer.

8.2 Software distribution

Software applications and datafill can be transferred from the RAMP to other operator positions using the software distribution tool.

There are two types of software distribution: immediate and scheduled. An immediate distribution transfers files at the time you implement the distribution. A scheduled distribution transfers files at a later date or time through the schedule manager. (See “Schedule manager” on page 71.)

Either immediate or scheduled distribution can be done

- from a local RAMP
- from a remote or standalone RAMP to one or more sites
- with multiple software distribution configuration sets

8.2.1 Software distribution configurations

A software distribution configuration consists of a list of target positions to which a list of files are to be transferred. A configuration is defined when you select one or more positions, one or more script files, and one or both check options in the Files To Transfer box.

The list of target operator positions is based on the available positions at the site connected to the RAMP. The software distribution scripts contain the files available to be transferred to the target positions. The selection of types of files to transfer includes application software and datafill.

Because IWS positions can have different applications loaded depending on position type or purpose, the Define Software Distribution Configurations dialog box allows multiple configurations to be specified for distribution. These configurations can be saved together in a software distribution configuration set. Refer to section 8.2.2 on page 50.

If it is necessary to transfer a specific set of files not already shown in an existing software distribution script list, custom files can be created. For example, if you want to transfer application datafill that has been pre-configured and saved in a special directory, you can create a new script file and save it into a configuration. Refer to section 10.3, “Creating SWD script files.”

Create a configuration by following these steps:

1. From the Tools menu in the main RAMP window, select File Transfer, then select Software Distribution.

   The Software Distribution dialog box displays the alphabetical list of software distribution configuration sets currently saved on the RAMP. (See Figure 28.)

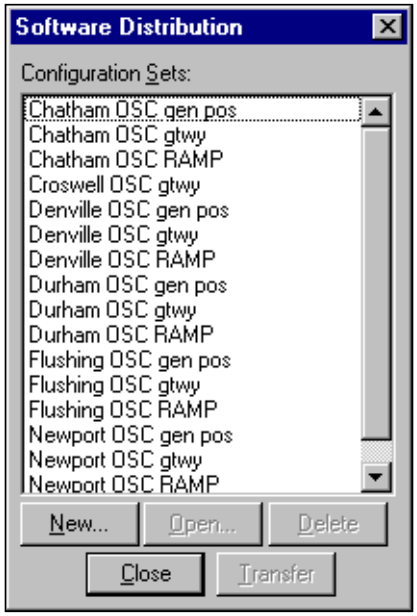


FIGURE 28. Software Distribution dialog box

2. From the Software Distribution dialog box, select New.

The Define Software Distribution Configuration dialog box displays. No positions or scripts are selected, both boxes in the Files to Transfer frame are checked, and "Untitled" displays in the title bar. (See Figure 29.)

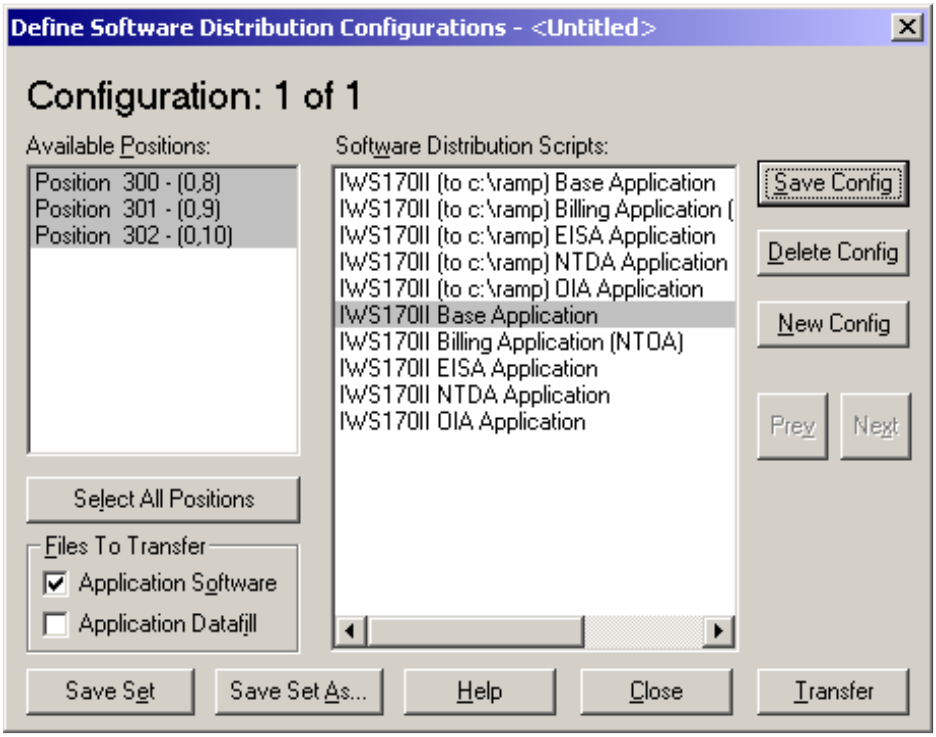


FIGURE 29. Define Software Distribution Configurations dialog box

3. In the Available Positions box, select the appropriate target positions individually, or use the Select All Positions button. If you use the Select All Positions button, you must click in the list on the RAMP position at which you are working, to de-select it and remove it from the list of positions to which you are distributing software.

4. In the Software Distribution Scripts list box, select the software distribution scripts you want to use. This is the point at which you must indicate whether you are distributing software from one RAMP to another RAMP or from a RAMP to a general operator position.

5. In the Files To Transfer box, select the types of files (Application Software, Application Datafill, or both) to transfer.

   Note: The default scripts listed in the Software Distribution Scripts box contain both software files and datafill files, but these file types are not transferred automatically. Your checkmarks in the Files To Transfer box control which types of files in the scripts are sent to the positions.

6. Select Save Config to save the configuration.

   Save Config saves the configuration in system memory. You must make selections in all the boxes (steps 3, 4, and 5) before you select Save Config. Otherwise, an

error message displays. The Save Config button can also be used to save an existing configuration that you have modified.

When a new configuration is successfully saved, the configuration number in its sequence displays in black in the upper left corner of the dialog box. For example, in Configuration 2 of 3, 2 indicates the number of the new configuration and 3 indicates the total number of configurations in the set. You can select Prev or Next to display other configurations in the set.

Instead of selecting New in the Software Distribution window, you can modify an existing configuration. In this case, choose a configuration set to work with and then select Open. The positions and scripts, the appropriate options in the “Files To Transfer” box, and the title of the chosen software distribution configuration display. To modify this configuration, select New Config and follow steps 2–6. When a new configuration is added, the configuration list is renumbered accordingly.

A software distribution configuration can be removed as follows:

1. In the Define Software Distribution Configuration dialog box, select the configuration you want to delete by using the Prev or Next button.
2. Select Delete Config.

   A dialog box displays for you to confirm the deletion. Once the deletion is confirmed, the selected configuration is removed and the configuration list renumbered.

8.2.2 Software distribution configuration sets

You may wish to configure the order in which applications and files are received at the target positions, possibly to preserve site datafill or to ensure that the Windows XP Professional operating system is installed before the position receives a software load of IWS release 11 or later. You can ensure this order by saving the configurations you created into a set. Select either Save Set, Save Set As, or Close. Each selection displays a Save Configuration Set box with a field for the name of the software distribution configuration set.

If you have modified an existing set (if you selected Open in the Software Distribution dialog box), you can select Save Set As to name the modified set. If you select Close, a message displays to ask you if you wish to save the new configuration set. You can select Yes or No to close the Define Software Distribution Configurations box, or Cancel to keep the box open.

To remove a software distribution configuration set,

1. In the Software Distribution dialog box, select the configuration set you want to delete.
2. Select Delete.

If the set chosen for deletion is included in a schedule, a message box displays to indicate this. A dialog box displays for you to confirm the deletion. Once the deletion is confirmed, the selected configuration set is removed.

8.2.2.1 Software distribution configuration set characteristics

A software distribution configuration set has the following characteristics:

- A software distribution configuration set may be portable from a current release to a future one. This portability is valid if the LAN configurations and software distribution scripts are the same in the current and future releases.

  If any software distribution scripts in the set are renamed or removed, or if there are changes in an IWS LAN configuration, the portability is no longer valid.

- When you edit or delete a configuration set, the RAMP checks whether that particular set is scheduled for software distribution. If it is, you are prompted for a confirmation. Transfer failure can occur under the following conditions:

  — distribution scheduled for a deleted set

  — invalid changes in LAN configuration

  — missing configurations in a configuration set

- When a file transfer fails at a position, that position is not rebooted regardless of the rebooting choice made prior to the transfer.

- Files to be transferred to a particular position must be included in one configuration set and not separately specified in multiple sets. When a position has a failed file transfer, the position cannot accept the transfer from the subsequent configuration set. This is because the position is not rebooted, regardless of any prior request to reboot it upon completion of the transfer. You can later reboot it from the RAMP by selecting the Reboot option from the Tools menu in the main RAMP window.

- Once you have created a configuration set, you can implement immediate file transfer. Files are transferred to the site currently connected to the RAMP. This is true even if the site currently connected to the RAMP is different from the one that was connected when the set was created. One configuration set can be used for more than one site as long as the sites have the same LAN configuration. When you are working from an off-ring RAMP, you must first send the files to an on-ring RAMP. From there, you can transfer them to the other positions on the ring. You cannot send the host file from the off-ring RAMP, because it is different for the on-ring RAMP. To send files from an off-ring RAMP, you must turn off the IWS software at that position, go to the Windows desktop, and use the RAMP application from there (the off-ring RAMP) to connect to the other RAMP (the on-ring RAMP). After you have made contact with the on-ring RAMP, you can initiate file transfer.

8.2.3 Managing datafill during a RAMP software transfer

When the RAMP is used to update positions with a new IWS software release, care must be taken to prevent the default IWS datafill files in the new load from overwriting the existing customized datafill files. The default IWS datafill files are not likely to work at a given site, and they could prevent the IWS position from coming back into service after the completion of the RAMP transfer.

This section describes two possible methods to ensure that the proper datafill remains when the RAMP transfer is complete. Be aware that, no matter which method you choose, some hand-management of the datafill files will be required.

8.2.3.1 Before you upgrade

Before starting to transfer files, *always* make backup versions of all datafill files. This is a critical step to safeguard your datafill against any errors that might happen during the software distribution transfer. The key files to back up are the language, table, host, and initialization files, as well as the base platform executable, mpxbase.exe. For a detailed explanation of how to back up files, and guidelines on which files to back up, refer to *TOPS IWS Base Platform User's Guide*, 297-2251-010.

Also, as part of preparing for software distribution transfer, research the changes that may have affected files between your old release of IWS and the new one. These changes are documented release by release in the Revisions section of *TOPS IWS Base Platform User's Guide*, 297-2251-010. Between releases, old files might have been deleted or modified, and new files might have been added. Your decision about how to manage your datafill might be affected by the number and nature of those changes.

8.2.3.2 Updating files manually

When a datafill file that you have customized is changed by a new release, you must manually enter your customizations into the updated file. You can use the provisioning tool to move your customized datafill line by line into the new version of the file. If you don't make these changes, the new file will contain only the default generic datafill.

In order to update a file manually, you must have access to the old version of the file for comparison. If you chose the preserve datafill option when you upgraded the RAMP, IWS will have preserved the old version of the file and given it the file extension .iws. Look for this extension to determine which is the old version of the file.

You can use the provisioning tool to open both versions of the file at once, in order to read the old one as you enter the changes in the new one. You might choose instead to work from a printout of the old file, or to load a floppy diskette containing the old file onto your A drive and open the file in a window beside your provisioning tool session.

If you are proficient in DOS or in Windows Notepad, you can use them to copy lines from one file to another. If you do this, however, you must take great care not to corrupt the file. The advantage of using the provisioning tool is that it protects you against making datafill errors that could cause problems with the file.

8.2.3.3 Software distribution example: method A

The default scripts listed in the Software Distribution Scripts box contain both software files and datafill files, but these file types are not transferred automatically. Your checkmarks in the Files To Transfer box control which types of files in the scripts are sent to the positions.

The method used in this example involves a software upgrade from IWS11 to IWS13, but the same principles apply when upgrading to the current release. In this example, the user has customized many datafill files for IWS11 and wants to keep those customized files to use in IWS13.

The user creates a configuration set containing two configurations. The first configuration includes all the application software and the default datafill files. (The default scripts are selected in the Software Distribution Scripts list box, and both Application Software and Application Datafill are checked in the Files To Transfer box.)

The second configuration, which uses scripts written with the Script Editor, contains all the customized datafill files. Because the RAMP processes the configurations sequentially, the customized datafill files in the second configuration overwrite the generic datafill files in the first configuration. After both configurations have been transferred, the target positions may be rebooted.

Note: It is very important not to reboot the IWS positions until both configurations in the set have been transferred. If the configurations were transferred as separate configuration sets, with the positions rebooted in between, vital identifying data in the host and mpxnet.ini files would be lost when the generic datafill overwrote it, and the RAMP position would no longer recognize the target IWS positions.

Table 1 lists typical IWS11 datafill files that might be on a target general operator position before the RAMP of new software and datafill.

TABLE 1. Before the software distribution transfer

File	Contents
ntoa.lng	Default IWS11 datafill
mpxnet.ini	Customized IWS11 datafill
xkboard.tbl	Customized IWS11 datafill
posmsa.lng	Customized IWS11 datafill
hosts	Customized IWS11 datafill

Note that four of these files (mpxnet.ini, xkboard.tbl, posmsa.lng, and hosts) contain customized IWS11 datafill.

For the first configuration, the Application Datafill checkbox in the Define Software Distribution Configurations window is selected (with the checkmark displayed) to ensure that all the datafill files for IWS13 are transferred.

Table 2 shows the datafill files on the target IWS position after the first configuration transfer.

TABLE 2. After the first configuration transfer

File	Contents
ntoa.lng	Default IWS13 datafill
mpxnet.ini	Default IWS13 datafill
xkboard.tbl	Default IWS13 datafill
posmsa.lng	Default IWS13 datafill
hosts	Default IWS13 datafill
newfile	Default IWS13 datafill -- new to IWS13

For the sake of this example, note that a new file was added in IWS13 that did not exist in IWS11. (In reality, IWS13 contains no new files.)

In the second configuration, the user wants to restore the datafill customizations that would otherwise be lost in the four customized files (mpxnet.ini, xkboard.tbl, posmsa.lng, and hosts). Therefore, the customized IWS11 versions of these files are listed in the second configuration.

The Revision section of *TOPS IWS Base Platform User's Guide*, 297-2251-010, however, shows that the posmsa.lng file was affected by Nortel Networks changes added in IWS12. Therefore, using the provisioning tool, the user must *manually* apply the customizations from the IWS11 version to the IWS13 version of the file on the RAMP. Then the newly updated IWS13 file must be included in the second configuration, instead of the old IWS11 customized version.

In addition, the user decides to change the default values that came in the new file on the RAMP. So the second configuration must include the new file as well.

Table 3 lists the datafill files on the target IWS position after the second configuration transfer.

TABLE 3. After the second configuration transfer

File	Contents
ntoa.lng	Default IWS13 datafill
mpxnet.ini	Customized IWS13 datafill
xkboard.tbl	Customized IWS13 datafill
posmsa.lng	Customized IWS13 datafill -- IWS11 customizations added to IWS13
hosts	Customized IWS13 datafill
newfile	Customized IWS13 datafill -- new to IWS13

At this point, both configurations in the configuration set have been transferred to the target IWS positions and the resulting datafill is correct for the user's site. Depending on the rebooting choice the user made before file transfer began, the system may now reboot the target positions.

8.2.3.4 Summary: configuring method A

1. Study section 10.0, “Software Distribution Script Editor Tool,” to learn how to write a script. Study section 8.2.1, “Software distribution configurations,” to learn how to create software distribution configurations.
2. Check the Revisions section of *TOPS IWS Base Platform User’s Guide*, 297-2251-010, to see whether any files have changed since the last release. On the RAMP, manually update the new version of those files with your customized data.
3. Use the Script Editor tool to write a script listing the customized datafill files that should be included in the second configuration. After you save your script, it will appear in the Software Distribution Scripts list box in the Define Software Distribution Configuration window.
4. In the Define Software Distribution Configurations window, create the first configuration by highlighting all the relevant application software distribution scripts in the list. Leave both the Application Software and the Application Datafill boxes checked, as they are by default. This allows the default datafill to be transferred to the position.
5. Select the New Configuration button and then create the second configuration by highlighting your new script containing all the datafill files with customized values. (In the example, that would include files mpxnet.ini, posmsa.lng, hosts, and newfile.) The values in these files will overwrite the default values transferred in the first configuration. Under Files To Transfer, check only the Application Datafill box.
6. Transfer both configurations in the set before rebooting the positions.

8.2.3.5 Software distribution example: method B

Just as in the example for method A, this example for method B involves a software upgrade from IWS11 to IWS13. The user has customized many datafill files for IWS11 and wants to keep those customized files for use in IWS13.

As in method A, the user creates a configuration set containing two configurations. In this case, however, the first configuration contains *only* the application software. The second configuration, written using the Script Editor, contains customized versions of all the datafill files that have been modified or added by Nortel Networks in the new software releases IWS12 and IWS13.

Note: It is very important not to reboot the IWS positions until both configurations in the set have been transferred. If any datafill files have changed between the two releases, you will receive an error message if you reboot before sending the new datafill files.

Table 4 lists typical IWS11 datafill files that might be on a target general operator position before the RAMP of new software and datafill.

TABLE 4. Before the software distribution transfer

File	Contents
ntoa.lng	Default IWS11 datafill
mpxnet.ini	Customized IWS11 datafill
xkboard.tbl	Customized IWS11 datafill
posmsa.lng	Customized IWS11 datafill
hosts	Customized IWS11 datafill

Note that four of these files (mpxnet.ini, xkboard.tbl, posma.lng, and hosts) contain customized IWS11 datafill.

In the first configuration, the checkbox in the Application Datafill in the Define Software Distribution Configurations window is deselected (with no checkmark displayed) to ensure that no datafill files for the IWS13 load are transferred.

Table 5 shows the datafill files on the target IWS position after the first configuration transfer:

TABLE 5. Before the software distribution transfer

File	Contents
ntoa.lng	Default IWS11 datafill
mpxnet.ini	Customized IWS11 datafill
xkboard.tbl	Customized IWS11 datafill
posmsa.lng	Customized IWS11 datafill
hosts	Customized IWS11 datafill

Note that none of the file contents have changed, because no IWS13 datafill files were transferred.

In the second configuration, the user wants to keep the datafill customizations in the posmsa.lng file. The posmsa.lng file, however, was affected by Nortel Networks changes added in IWS12. Therefore, the user must *manually* apply the customizations from the IWS11 version to the IWS13 version of the file on the RAMP. Then the newly customized IWS13 file must be included in the script for second configuration set, instead of the old IWS11 customized version.

In addition, for the sake of this example, IWS13 introduced a new file that did not exist in IWS11. (In reality, IWS13 contains no new files.) This file, too, must be sent to the target IWS positions. If the new file was not transferred to the IWS positions, IWS13 startup would fail, and the positions would not be able to come back into service after the RAMP transfer was complete.

Just as in the example for method A, the user decides to change the default values that came in the new file. Therefore, the script the user writes for the second configuration set must include both the posmsa.lng file and the new file.

Table 6 lists the datafill files on the target IWS position after the second configuration transfer.

TABLE 6. After the second configuration transfer

File	Contents
ntoa.lng	Default IWS11 datafill
mpxnet.ini	Customized IWS11 datafill
xkboard.tbl	Customized IWS11 datafill
posmsa.lng	Customized IWS13 datafill -- IWS11 customizations added to IWS13
hosts	Customized IWS11 datafill
newfile	Customized IWS13 datafill -- new to IWS13

At this point, both configurations in the set have been transferred to the target IWS positions, and the resulting datafill is correct for the user's site. Only the datafill files that changed between IWS11 and IWS13 are included in IWS13 versions on the target positions. The old IWS11 versions are still accurate for the files that were unchanged by the new release. Depending on the rebooting choice the user made before file transfer began, the system may now reboot the target positions.

8.2.3.6 Summary: configuring method B

1. Study section 10.0, "Software Distribution Script Editor Tool," to learn how to write a script. Study section 8.2.1, "Software distribution configurations," to learn how to create software distribution configurations.
2. Check the Revisions section of *TOPS IWS Base Platform User's Guide*, 297-2251-010, to see whether any datafill files have changed or been added since the last release. These are the files you will need to include in your script for the second configuration.
3. Look at the list of datafill files affected by the new release, and determine whether any of those files are ones that you have customized. If so, manually update the new version of the files on the RAMP with your customized data, and include the new customized versions of those files in your script. If there are new datafill files with this release that will require customizing, you must also include the customized version of the new files in your script.
4. Use the Script Editor tool to write a script listing the datafill files you identified in the previous step, the ones that have changed or been added in the new release. (In the example, that would include the posma.lng file and the new file.) After you save your script, it will appear in the Define Software Distribution Configuration window.
5. In the Define Software Distribution Configuration window, create the first configuration by highlighting all the relevant application software files. Uncheck the Application Datafill box. This box is checked by default; unchecking it prevents the datafill files from being overwritten. Leave the Application Software box checked.

6. Select the New Configuration button and then create the second configuration by highlighting your new script containing all the datafill files that have changed since the last release. With the configurations in this order, the new application files will overwrite the old ones, but the old customized datafill files will be untouched. Under Files To Transfer, check only the Application Datafill box.
7. Transfer both configurations in the set before rebooting the positions.

8.2.4 Managing datafill upgrades using diskettes

Some companies do not use the Software Distribution Tool to upgrade datafill. If your company's datafill policy is to upgrade each position individually using diskettes, then follow these steps:

1. Use the Software Distribution Tool to transfer *only* the application software files. Do not transfer any datafill files.
2. Upgrade the datafill files on each position individually, using your customized and upgraded datafill files.
3. Reboot the position.

8.2.5 Software distribution configuration set transfer

Follow these steps for immediate software distribution:

1. From the Tools menu in the main RAMP window, select File Transfer and Software Distribution.

   The Software Distribution dialog box displays.

2. Select the configuration set you wish to transfer, and select Open.

   The Define Software Distribution Configuration dialog box displays.

3. Select Transfer.

   You are asked if you wish to capture the results to a file. If you select Yes, a Save As dialog box appears, where you can specify a directory and filename. After you specify a filename, you are asked if you want to reboot the target positions following the transfer. If you answered No at the file-saving prompt, you will see the reboot box now.

   When you answer Yes or No to the reboot, file transfer begins. The RAMP software distribution window displays. (See section 8.2.5.1, below.)

   When file transfer is complete and you are closing the window, you will be given another opportunity to save the file transfer information to a file. If you answer Yes, you will get the dialog box where you can specify a directory and filename. After you save the file, or if you answer No, the window will close.

8.2.5.1 RAMP software distribution window

The RAMP software distribution window (see Figure 30) displays information about a software distribution in progress, including the files being transferred. Contents of this window can be stored in a results file. (See section “Displaying a results file” on page 76.) The status bar at the bottom of the window contains the five fields described below.

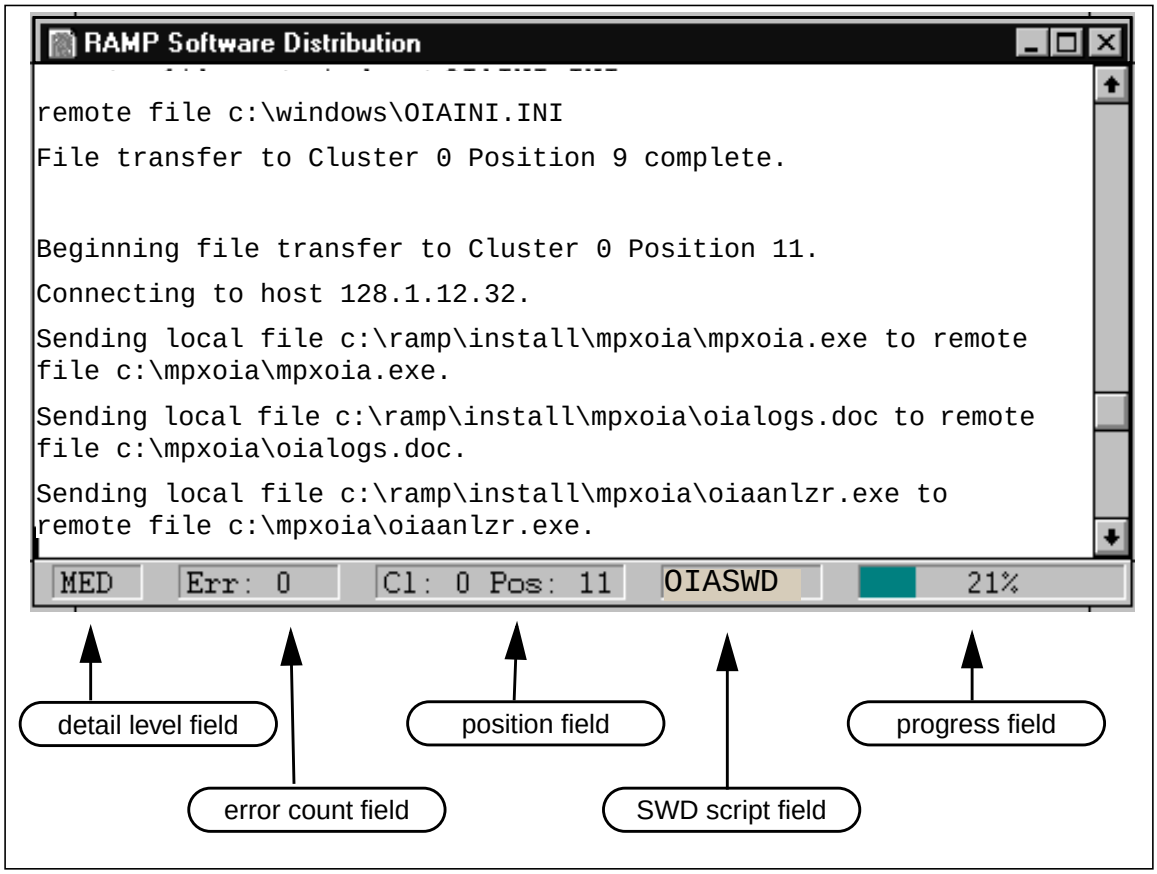


FIGURE 30. RAMP Software Distribution status window

Detail level field

This field refers to the degree of detail of the information displayed. It can be Low, Medium, or High and can be specified in the RAMP Configuration dialog box accessible from the Options menu in the main RAMP window. It can be changed during software distribution. Once you change the level, all subsequent output displays at the new level. The choice of detail level affects file transfer time. The higher the level, the more time it takes to transfer files. For example, the choice of a high detail level increases the file transfer time up to ten times longer than the choice of low detail level.

Information displayed at each level is described in Table 7.

TABLE 7. Contents in RAMP software distribution window

Detail Level	Display Contents
Low (default)	• beginning file transfer message with start time • position connections and disconnections • error messages • software distribution process complete message with end time
Medium	• beginning file transfer message with start time • position connections and disconnections • names of the files being transferred • software distribution configuration set names • source and destination file names and directories • error messages • software distribution process complete message with end time
High	• beginning file transfer message with start time • position connections and disconnections • names of the files being transferred • software distribution configuration set names • source and destination file names and directories • error messages • FTP information • software distribution process complete message with end time

Error count field

This field displays the number of errors that occurred during the distribution. When the count is more than 0, the display is in red.

Position field

This field displays the cluster number and the operator position to which files are being transferred.

Software Distribution (SWD) Script field

This field displays the name of the software distribution script file in use.

Progress field

This field displays the progress of the distribution to the current operator position. It displays the number of files transferred, as a percentage of the total number of files in a configuration set to be transferred to the current operator position. A progress bar also displays graphical indication of the percentage of completion.

Other displays

When a target position is not in a state to receive files through software distribution, a message displays in the RAMP software distribution window to indicate this.

When a software distribution is complete, the message “Software Distribution Process Complete” displays.

When these messages occur, you can choose to store them in the results file.

8.2.5.2 Interrupting a software distribution

While software distribution is in progress, you can interrupt the file transfer through one of the following methods:

- Select the Interrupt File Transfer option from the Options menu.
- Close the site connection on a remote RAMP. You can do this by selecting the File menu and Close from the main RAMP window. This method applies to immediate and scheduled software distribution.
- Close the RAMP software distribution window while file transfer is in progress. This only applies to scheduled software distribution.

When any of the above methods is used, a dialog box prompts you to confirm or cancel the interruption.

***Note*:** When an interruption occurs, target operator positions are not rebooted, regardless of previous requests to reboot after file transfer.

8.2.5.3 Online help for software distribution

You can obtain online help for software distribution by accessing the Define Software Distribution Configuration dialog box. Activate online help by selecting the Help button in this dialog box. Then scroll through the help text displayed to find the appropriate help topic.

8.3 Using the RAMP to upgrade other IWS positions

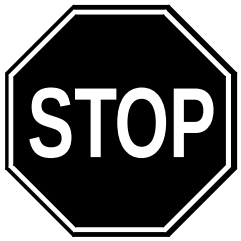
IWS positions can be upgraded from a local on-ring RAMP or from a RAMP located on another LAN. In off-ring RAMP mode, a RAMP-only PC can be used to distribute IWS software, such as NTDA application files, to another IWS position.

8.3.1 Before you begin to distribute software

Before you start the procedure for distributing software through the RAMP, you must decide how you will handle updating your customized files. You also need to understand the concepts of scripts and of distribution configurations. If you choose to, you can use the RAMP's schedule manager to set this software distribution for a later date and time. In addition, the RAMP's script file editor can be used to create special datafill files for distribution.

8.3.2 Software file distribution procedure

Use the following steps to upgrade target positions with a new release of IWS. (This procedure is also documented in *TOPS IWS Base Platform User's Guide*, 297-2251-010.)



DO NOT start the file distribution procedure until you have determined how you will handle your customized datafill. This procedure assumes that the handling of customized datafill has already been worked out. For detailed information on how to manage your customized datafill during an upgrade, refer to section 8.3.3.

DISCLAIMER: If your company's standard practice is to transfer customized datafill to positions individually with a floppy diskette, scripts will not be necessary.

1. **Start the software file distribution procedure only after all customized datafill issues have been worked out.**

2. **Ensure that the positions to be upgraded have been put into a Busy INB state at the MP Level from the DMS switch MAP position.**

   It is important to busy the target positions before starting the file transfer procedure. Failing to make the target positions Busy INB will cause alarms at the switch.

3. **At the RAMP, from the IWS logo window, press the Start key.**

   The Operator Administration window appears.

4. **In the Operator Administration window, press the Position Profile softkey.**

   The IWS Position Profile window appears, displaying a list of all the applications loaded onto this position.

5. **Verify that the RAMP has been loaded with the appropriate IWS 17.0 software.**

   Note: You cannot use a RAMP-only PC to upgrade the Windows operating system of another IWS position. A RAMP-only PC, however, can be used in an off-ring RAMP mode to transfer IWS software, such as NTDA application files, to another IWS position.

6. **Press the Quit softkey twice to return to the IWS logo window.**

7. **Use the Alt+Tab key combination to bring up the RAMP window.**

   Hold down the Alt key while pressing the Tab key as many times as necessary to reach the RAMP, then release both keys.

8. **Ensure that the ping function of the RAMP is working.**

   Before this RAMP can be used to monitor another IWS position, the ping function of the RAMP must be set to on. This is done by opening the RAMP's Options menu and setting the ping interval (usually at 15 seconds) in the RAMP Configuration window. Follow substeps a through d to set the ping interval.

   a. Press Alt+O to open the Options menu.

   b. Press the C key to choose the option "Configure RAMP."

   c. When the RAMP Configuration dialog box appears, tab to the Ping Interval box and use the arrow keys to select 15 Seconds as the ping interval.

   d. Press the O key to close the RAMP Configuration dialog box.

9. **Press Alt+T to open the RAMP Tools menu from the RAMP window.**

10. **Press the F key to open the File Transfer submenu and then the S key to access Software Distribution from the menu.**

    The Software Distribution window displays, as shown in Figure 31.

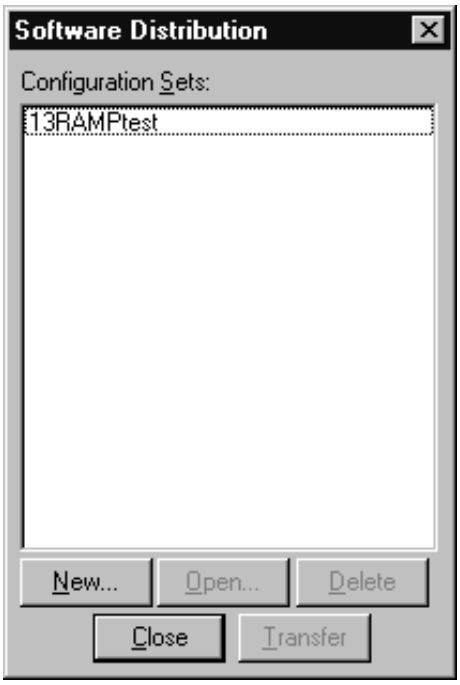


FIGURE 31. Software Distribution window

11. If the configuration set you need is listed in the Software Distribution window, follow substeps a through c. If no configuration sets appear, or if the configuration set you need is not listed in this window, go on to step 12.

a. Select and highlight the configuration set you will be using.

b. Press Alt+O to select the Open button. This opens the Define Software Distribution Configurations dialog box.

c. Go to step 22.

12. If no sets are listed, or if you need to create a new set, press Alt+N to select New. This opens the Define Software Distribution Configurations dialog box, shown in Figure 32.

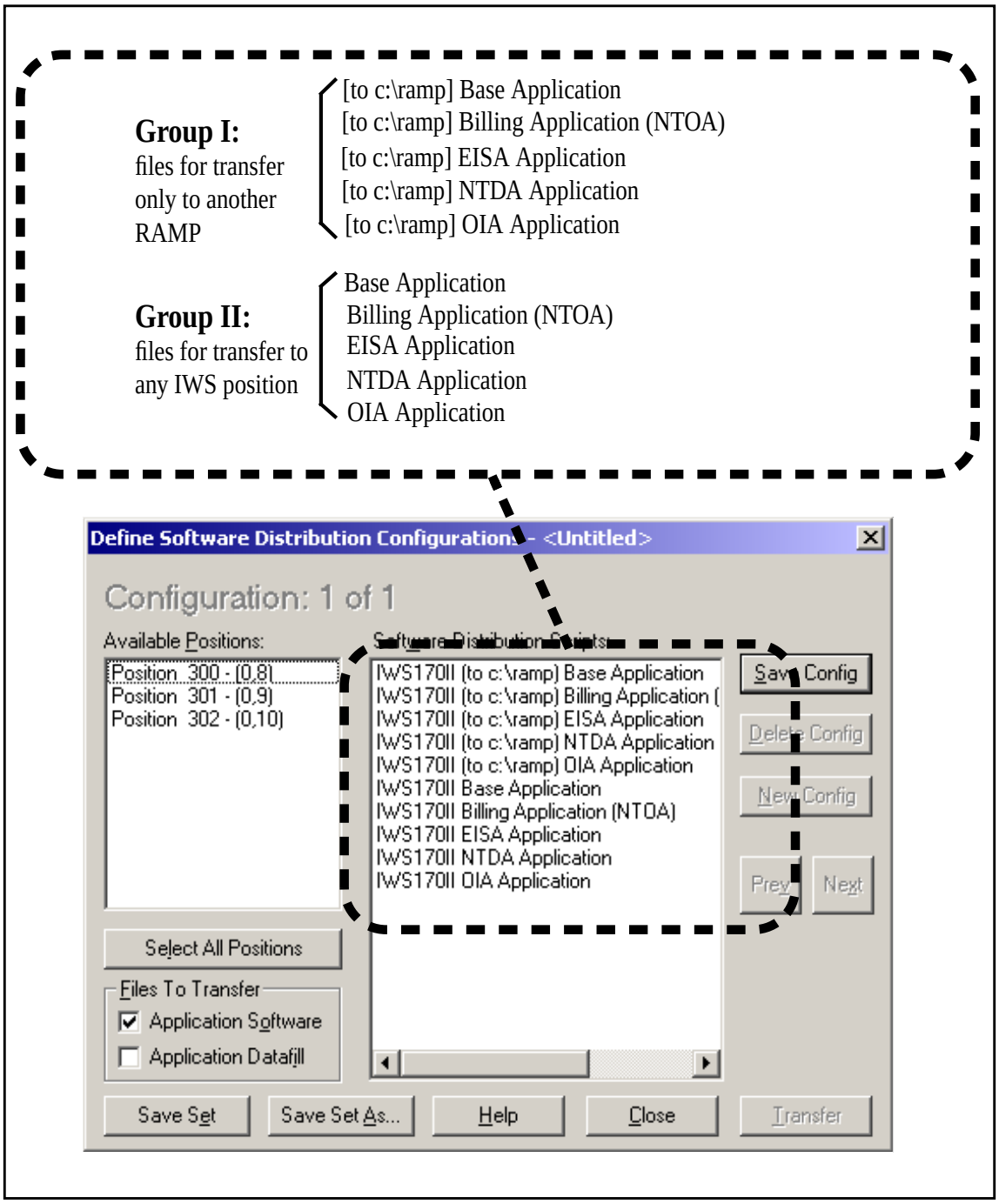


FIGURE 32. Example Software Distribution Dialog Box

13. **The window opens with the cursor in the Available Positions listing. Use the arrow keys and spacebar to highlight and select the target positions individually, or press Alt+L to select all positions, and then use the space bar to deselect the RAMP.**

If you are working at an on-ring RAMP, and you use the Select All Positions button, be sure to deselect the RAMP position from which you are working. You cannot distribute software to the position from which you are sending the files.

Note: If you used Ctrl+Alt+Del to close the Base application, instead of enabling Alt+Tab, you will not see the RAMP listed with the other positions.

14. Press the Tab key to move to the list of software distribution scripts.

15. Use the arrow keys and the space bar to select the scripts for the appropriate IWS 17.017.0 applications.

The list of software scripts includes preset scripts provided with the new software release, in addition to any customized scripts that have been created previously at your site. The list of scripts shown in Figure 32 is only an example. The actual content of the list always depends on which applications have been loaded onto the RAMP.

The scripts are divided into two groups, as illustrated in Figure 32:

- Group I scripts, which are used only when sending files from one RAMP to another RAMP. The titles of these scripts include the path name for their RAMP destination.
- Group II scripts, which are used when sending files to all positions, general operator positions as well as RAMPs.

The contents of both groups of files are essentially the same, but their target destinations differ.

16. Tab to the Files To Transfer option box (in the lower left corner of the window, as shown in Figure 32) and select the types of files to transfer.

Regardless of which scripts are selected for transfer (from Group I, Group II, or both), it is important to note that the Files To Transfer option box can be set up to transfer

- only application software
- only application datafill
- both application software and datafill

This transfer option determines how the datafill of a target position will be affected by an upgrade.

WARNING: If you have a manual process for transferring datafill, select only application software in the Files to Transfer option box. Do not select application datafill.

In this case, upgrading the positions requires three tasks:

1. Use the Software Distribution Tool to transfer only the application software.
2. Use a diskette to update the datafill manually.
3. Reboot the positions.

Remember that there is more than one way to handle the datafill of a target position, to allow you to maintain datafill that has been customized or to implement datafill revisions required by a new IWS release. All decisions about upgrading customized datafill should already have been made at this point, as explained in step 1 of this procedure. For detailed information on managing datafill during a RAMP software transfer, refer to section 8.2.3.

17. If you are creating more than one configuration in the configuration set, press Alt+S to save the configuration. Otherwise, go on to the next step.

At this point, you may create an additional configuration to include in this configuration set, or you may choose to have only one configuration in the set. To create a second configuration, press Alt+N for a new configuration, and repeat steps 9 through 17.

When you are ready to save your configuration set, go to the next step.

18. Press Alt+C to close the Define Software Distribution Configurations window.

In response, the RAMP Software Distribution dialog box displays. If you have not already saved the configuration, it prompts you to save it now with the question, “Save the changes?” Press Y to answer YES.

Next, the RAMP Software Distribution dialog box prompts you to save the configuration *set* with the question, “Save the changes?” Press Y to answer YES.

Note: If you pressed Alt+S to save each individual configuration as you created it, the RAMP Software Distribution dialog box will prompt you only once, to save the configuration set.

19. **When you answer YES, the Save Configuration Set dialog box prompts you to enter a text string describing the configuration set. Give your new configuration set a descriptive name, and press Alt+O for OK.**

    This saves the configuration set under the name you have entered and closes the Save Configuration Set dialog box. The descriptive name appears in the Software Distribution window.

20. **Press Alt+C to close the Define Software Distribution Configurations dialog box.**

21. **Back in the Software Distribution window, use the arrow keys and the space bar to highlight the configuration set you have created.**

22. **Press Alt+O to open the configuration.**

23. **Press Alt+T to transfer the configuration. When the question "Capturing results to file?" appears, answer YES or NO, depending on whether you want to keep a file with the results.**

24. **When the question "Rebooting after completion?" appears, stop and read this step carefully before you answer it.**

Before you answer the question "Rebooting after completion?," consider how you are handling the update of your customized datafill files. Keep the following points in mind:

If you are upgrading from IWS 17.0, you are about to transfer

o IWS 17.0 software
o Customized datafill files (See Step 16 for specifics.)

If this is not the case, do not answer this question. Stop and call your next level of support.

If you have chosen to use a manual datafill process, apply your datafill at this point.

Note: The upgraded version of software does not take effect on the target positions until the positions are rebooted. In cases when it would be useful to delay when the upgrade took effect, you might choose to distribute the files, but not reboot the positions until later when you were ready.

25. **After you have rebooted the target positions, return them to service (RTS) at the MP Level from the DMS switch MAP position.**

26. **This completes the installation of IWS software onto the target IWS positions. At this point you may go to the separate patch installation procedure, which is covered in *TOPS IWS Base Platform User's Guide,* 297-2251-010.**

8.3.3 What Happens During File Transfer

When you press Alt+T (in step 22), the software begins to be distributed. After they receive the software, the target positions gather existing network parameters and begin upgrading. At each position, the upgrade is automatically driven by a scripting file. Several information screens appear during this operation, and the following automated actions occur:

- Files from the IWS disks or the IWS CD are copied to a targeted position. These files are used to perform the upgrade.
- Existing network values (IP address, subnet mask, and database gateway IP addresses) are extracted for use under Windows XP Professional.

When a file transfer is initiated, the following events occur:

- The RAMP sends a message informing the target position of a pending file transfer.
- If the target position is not in a state to receive a file transfer, a message is displayed at the RAMP to indicate this. If there is another target position, file transfer starts with that position. **Remember to go back later to the position that was skipped.** The RAMP software distribution tool does not automatically return to that position to attempt file transfer again.
- When a file transfer is in progress, a message is displayed at the target position to indicate this. Also, an unsolicited BSY is sent to the DMS switch.
- For security reasons, the FTP server application is terminated after each file transfer.
- When all file transfers are completed to a target, the RAMP sends a message to the target position to indicate this.
- If a target position is to be rebooted, the RAMP sends a message to do so. If the target is not rebooted, the FTP server application ends, and an RTS message is sent to the DMS switch to return the IWS position to service.

9.0 Schedule manager

Use the schedule manager option to schedule software distribution for a later date and time. This option is available from the Tools menu in the main RAMP window on a local or remote RAMP connected or unconnected to an IWS LAN. The schedule manager displays the following data:

- name of the schedule
- schedule dates and times
- brief status
  - pending (schedule is queued for execution)
  - in-progress (schedule is in the process of being executed)
  - pre-empted (schedule prioritized for execution before the other schedules)
  - interrupted (schedule execution is canceled)
  - unexecutable (unable to execute the schedule)
  - successful (schedule successfully executed)
  - failed (schedule execution failed)

Note: All schedules, regardless of status, remain in the schedule manager until you remove them. This is true even when the system is rebooted. In-progress schedules cannot be removed. See section 9.1.3 on page 75.

The schedule manager is designed to schedule various tasks. Currently, it is available to schedule software distribution only.

9.1 Scheduled software distribution

To operate scheduled software distribution properly, the following considerations must be noted:

- When a scheduled distribution time arrives, a local RAMP distributes the software to the site to which it is connected. A remote RAMP connects and disconnects from sites on the basis of information in the scheduled distribution configuration sets. For the distribution to occur, it must not be already connected to a site when distribution arrives.
- When a local RAMP is controlled by a remote RAMP, scheduled distributions on the local RAMP do not execute as the scheduled time arrives. When the RAMPs are disconnected, the local RAMP executes any remaining scheduled distributions.
- A scheduled distribution can still occur up to five minutes after the scheduled time. Once the five-minute time limit passes, the schedule status is changed to pre-empted. This happens, for example, when a local RAMP controlled by a remote RAMP is disconnected up to five minutes after the scheduled time.
- When a scheduled distribution time arrives, a RAMP must be in the same mode (remote or local) as it was when that distribution schedule was created.

- A scheduled distribution status can become unexecutable under the following conditions:
  - — A remote RAMP is connected to a site when a scheduled distribution time arrives. This is still true even though the site that the remote RAMP is connected to is the same as the one specified in the scheduled distribution.
  - — Another software distribution is in progress when a scheduled distribution time arrives.
- When an operator uses a combined RAMP/operator position where a scheduled distribution is in progress, time to process a call can increase at that position.
- A RAMP is automatically disconnected from a site after a software distribution. It is recommended that you not perform any RAMP functions during a scheduled software distribution. When distribution ends, disconnection can occur while a RAMP function is being performed.

When a scheduled software distribution occurs on a remote RAMP, the following events take place:

- The RAMP connects with the first site specified in the schedule.
- A LAN status window displays to show this connection. (See Figure 10, “LAN Status window” on page 27.)
- Files are transferred to the positions at this site on the basis of the information in the software distribution configuration sets.
- The RAMP Software Distribution window displays the progress and results of the transfer. (See Figure 30, “RAMP Software Distribution status window” on page 59.)
- Results of the file transfer are stored in a results file.
- The above events are repeated for each site designated for the distribution. In the results file, the results of each subsequent file transfer are appended to the results of the transfer just completed. When file transfer is completed at the last position listed in the configuration set, the RAMP is disconnected from the site of that position. The LAN status window, logs window, and the RAMP Software Distribution window are closed.

When a scheduled software distribution occurs on a local RAMP, the following events take place:

- Files are transferred to the positions on the basis of the information in the software distribution configuration sets.
- The RAMP Software Distribution window displays the progress and results of the transfer.
- When the distribution is completed, the RAMP Software Distribution window remains on display.

9.1.1 Adding a schedule

A schedule can be added as follows:

1. From the Tools menu in the main RAMP window, select Schedule Manager.

   The Schedule Manager dialog box displays. (See Figure 33.) It contains chronological listings of schedules on the RAMP. The command buttons are enabled or disabled according to the status of the selected schedule.

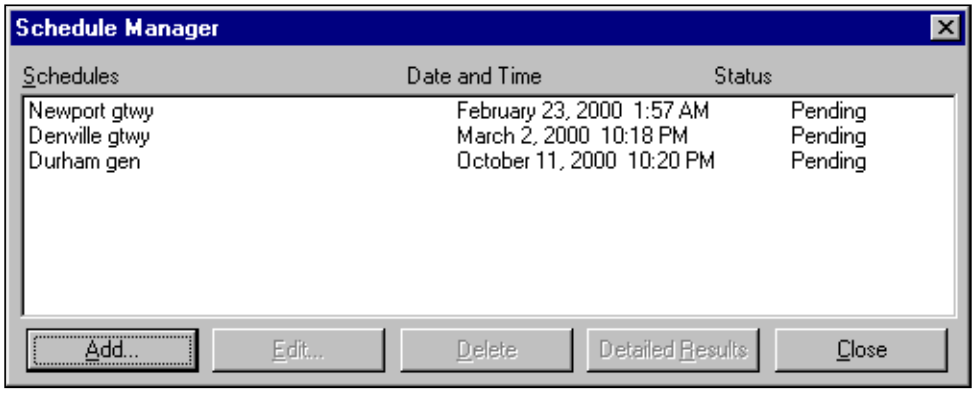


FIGURE 33. Schedule Manager dialog box

2. Select Add.

   The Add Scheduled Software Distribution dialog box displays. For a remote RAMP, the dialog box also contains IWS site listings. (See Figure 34.)

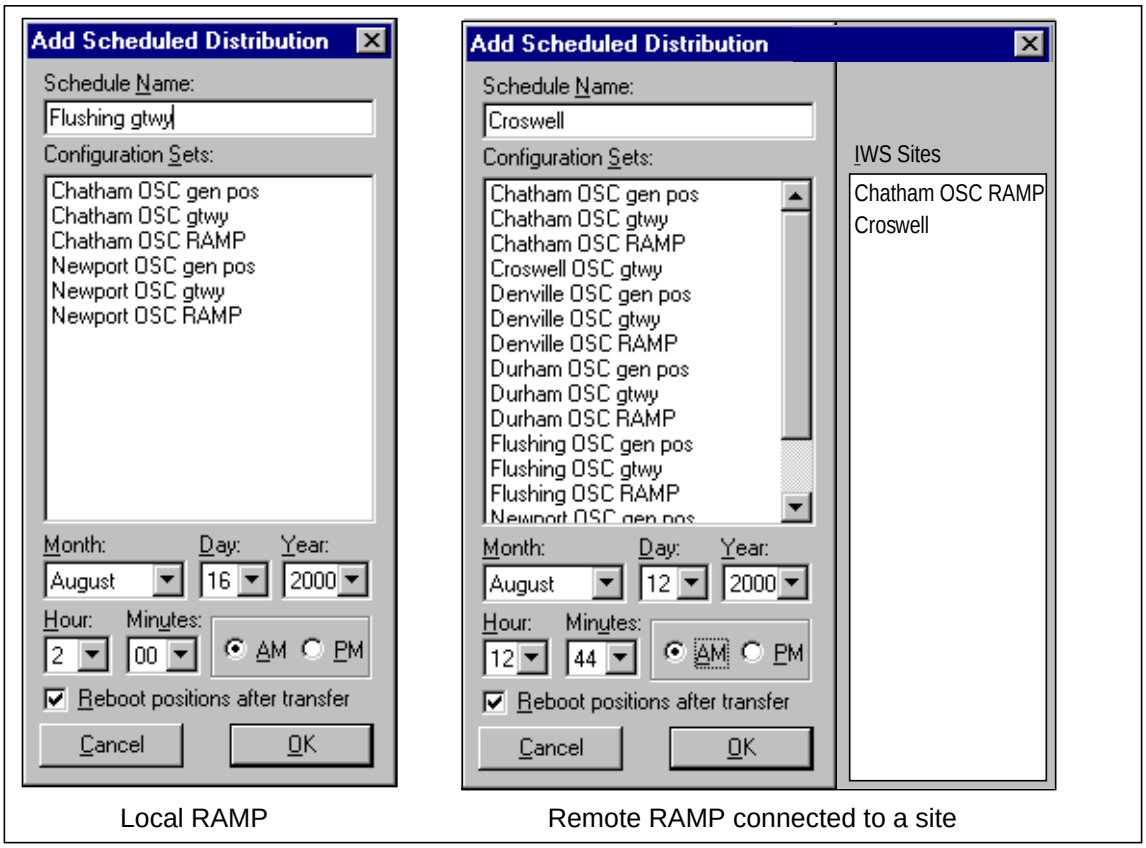


FIGURE 34. Add Scheduled Software Distribution dialog box

3. Type a name in the Schedule Name field.

   The name can be up to 30 alphanumeric characters.

4. Select one or more configuration sets in the Configuration Sets list box.

   For a remote RAMP, also select one or more desired sites from the Sites list box.

5. Select month, day, year, hour, minutes, and AM or PM for hour.

   The hour and minutes are concurrent with the local time zone and reflect the PC system clock time. The year selection can be the current or the following year.

   Note: Dates and times used by another schedule or earlier than the current date and time cannot be selected.

6. Optionally, select the checkbox for “Reboot positions after transfer.”

   If the files being transferred are system files, you must choose to reboot the system to activate these files.

7. Select OK.

   A message box displays to prompt you for a results file name.

   Optionally, select Cancel to exit from adding a schedule.

8. Select OK from the message box.

   A dialog box titled “Save As” displays for you to enter a file name.

9. Type a file name and path.
10. Select OK.

    If the results file name is used for another schedule, a message box displays to indicate this. Otherwise, the Schedule Manager dialog box displays.

11. Optionally, select Close to exit from the Schedule Manager dialog box.

9.1.2 Editing a schedule

A schedule can be edited as follows:

1. From the Tools menu of the RAMP, select Schedule Manager.

   The Schedule Manager dialog box displays.

2. Select a schedule.
3. Select Edit.

   The Edit Scheduled Software Distribution dialog box displays. All settings in this box are based on the information of the selected schedule. (See Figure 35.)

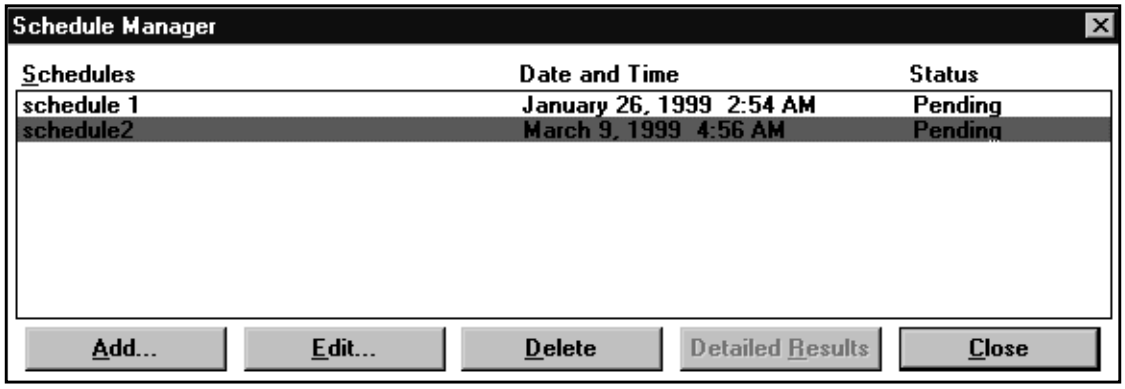


FIGURE 35. Edit Scheduled Software Distribution dialog box

4. Make changes accordingly in the dialog box.
5. Select OK to save the changes. Alternatively, select Cancel to quit editing the schedule.

   The Schedule Manager dialog box displays.

6. Optionally, select Close to exit from the schedule manager.

9.1.3 Removing a schedule

A schedule can be removed as follows:

1. From the Tools menu of the RAMP, select Schedule Manager.

The Schedule Manager dialog box displays.

2. Select a schedule.
3. Select Delete.

   A dialog box displays to prompt you for confirmation.

4. Select “yes.”
5. Optionally, select Close to exit from the dialog box.

9.1.4 Displaying a results file

A results file can be displayed with the following steps:

1. From the Tools menu of the RAMP, select Schedule Manager.

   The Schedule Manager dialog box displays.

2. Select a schedule.
3. Select Detailed Results.

   A RAMP observation window displays the contents of the results file of the selected schedule. When the size of the file exceeds the storage capacity of the window, a message box displays to inform you of the situation. You can choose to open the file in the text editor of your choice.

9.1.5 File transfer process

When the RAMP communicates with each operator position for software distribution, a computer program in the FTP server starts transferring files listed in the selected software distribution script. The sequence of events is as follows:

- The RAMP is connected to the target operator position.
- The RAMP parses the software distribution script.
- The file directory on the target position is changed to the one specified in the distribution script.
- The RAMP transfers and renames system files (see section “Types of files for distribution,” below) by changing the last character of the file extension to an underscore character. For example, MPXBASE.EXE is changed to MPXBASE.EX_. These files are placed in the file directories specified in the distribution script.
- File WININIT.INI that handles general system functions is transferred.
- The RAMP is disconnected from the target position when file transfer is complete.

10.0 Software Distribution Script Editor tool

Software distribution scripts can be predefined and supplied with a software release by Nortel Networks or created by you.

A software distribution script is a file that lists applicaton and datafill files for transfer from the RAMP to operator positions. Each script file name has the extension “SWD” (for example, DISTRIB.SWD). Some software distribution scripts are provided in available software loads by Nortel Networks; for example, those in the IWS Billing, OIA, and Base applications. You can also create your own software distribution scripts. To create a script, see section 10.3 on page 79.

The Software Distribution (SWD) Script File Editor tool is used to create software distribution scripts that list software application and datafill files for transfer from the RAMP to operator positions. Access the SWD Script Editor from the Tools menu in the main RAMP window.

10.1 Software distribution script file format

Software distribution script files are text files. A script file contains the four sections shown below. Note that NTOA has been renamed the IWS Billing application as of IWS release 13.0. To transfer IWS Billing application files, however, continue to use the “NTOA” designation.

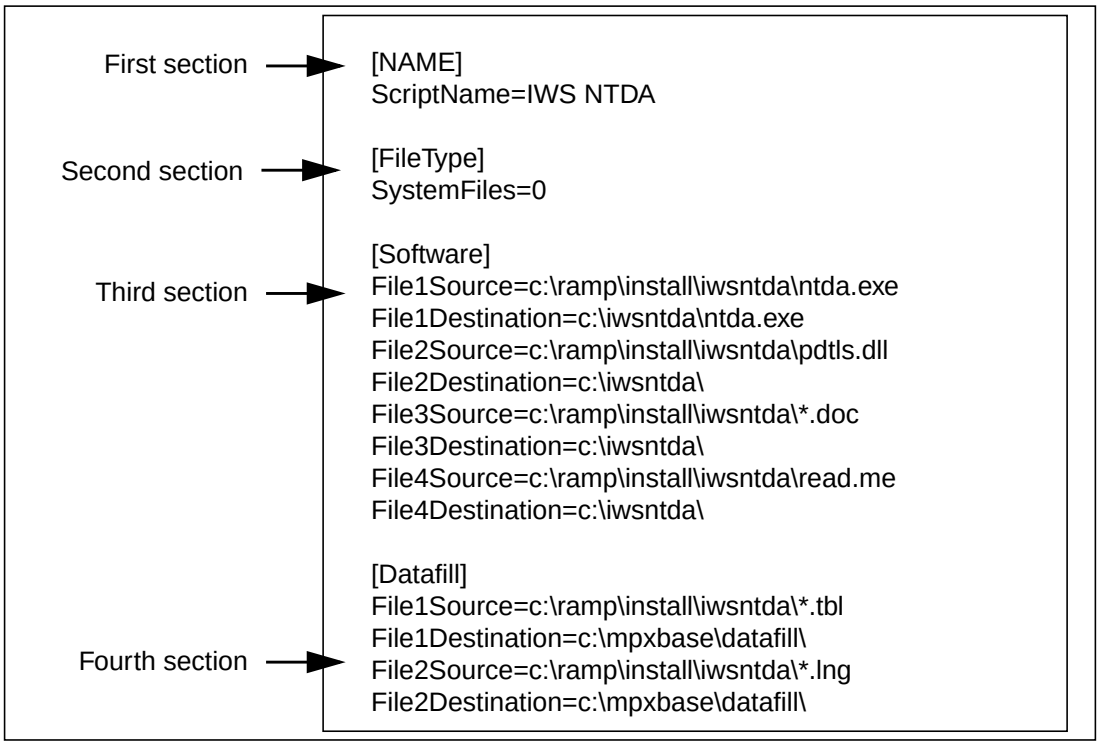


FIGURE 36. Sample SWD script file

- The [Name] section contains the ScriptName entry. This entry is a description of the software application with which the transferred files are associated. The contents of this entry also displays in the Define Software Distribution Configurations dialog box. (See Figure 29 on page 49.)

  If the ScriptName is missing, the script file is still valid.

  The [FileType] section contains the SystemFiles entry. This entry is a value that reflects the selection (System Files or Non-System Files) made in the SWD Script Editor Edit Window. (See Figure 38.) Software application files are system files. (See section "Types of files for distribution" on page 78.) They will be become active on the position only when the system is rebooted.

- The [Software] section lists the application files to be transferred.
- The [Datafill] section lists the datafill files to be transferred

The software and datafill sections contain listings of the file source and destination. The source is the location of the files (to be transferred) at the RAMP. The corresponding destination is the location of the files (after the transfer) at the target position. Each source file must have an associated destination file. Each pair of source and destination listings is numbered, starting with 1 and having an increment of 1. Each listing of files must contain the designated disk drives and file directories of the files.

When you use a text editor other than the SWD script file editor to create a script file, an incident of missing destination can occur. When a script file is being opened and a source file is missing a matching destination file, an error displays and the system stops reading in the script file. Also, the system ignores extra destination files numbered higher than the last source file.

Because these are DOS directory and file naming conventions, you can use the asterisk (*) wild card to simplify your file list entries. For example, if you want to transfer all the files in a directory, enter the path and use the wild card in the standard DOS format (c:\ramp\install\ntda\iwsntda*.*). If you want to transfer all the template files in a directory, enter the path and use the wild card and the template extension (c:\ramp\install\ntda\mpxbase\tools\template*.tpl). See Figure 38 on page 80 for examples of the asterisk wild card used to simplify SWD scripts.

When the wild card is used, you do not need to specify the destination file names, because they will be the same as the source file names. You can rename files at the destination if you specify file names different from the source file names.

10.2 Types of files for distribution

Files transferred by software distribution are either system or non-system files. File types can be specified in the File Types box in the Software Distribution Script Editor Edit Window. See Figure 38, "Script editor window" on page 80.

A system file is an executable or dll file. This type of file resides in the system memory to enable proper operation of software applications. When system files are transferred to an operator position, the position must be rebooted to activate these files.

A non-system file is a non-executable file that does not need to reside in the system memory. System and non-system files are selected in the File Types box in the SWD Script File Editor edit window.

10.3 Creating SWD script files

To create SWD script files, do the following steps.

1. Access the main RAMP window.
2. In the RAMP window, select Tools.
3. In the Tools menu, select SWD Script Editor. (See Figure 37.)

FIGURE 37. RAMP Software Distribution Script File Editor window

4. In this window, select File in the top menu bar, then select New.

   The Script File Editor window displays with “Untitled” showing in the title bar. (See Figure 38.)

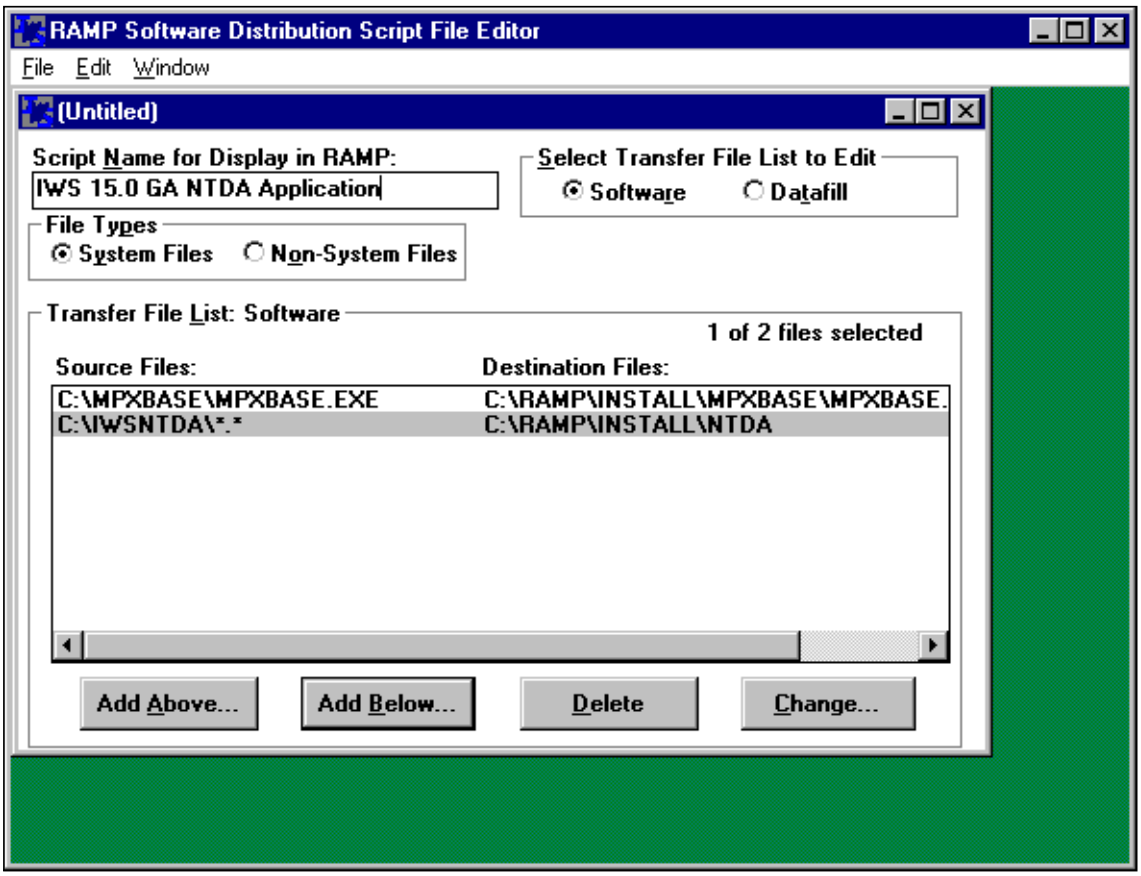


FIGURE 38. Script editor window

5. Enter a script name, up to 55 characters, in the Script Name box.

   Use a common prefix in the script name for related SWD script files. This allows related files to be displayed together in the Software Distribution Scripts list box.

6. Select Software or Datafill in the Select Transfer File box.

7. Select System Files or Non-System Files in the File Types box. (See section 10.2 on page 78.)

8. In the Transfer File List box, select Add Above. (See Figure 39.)

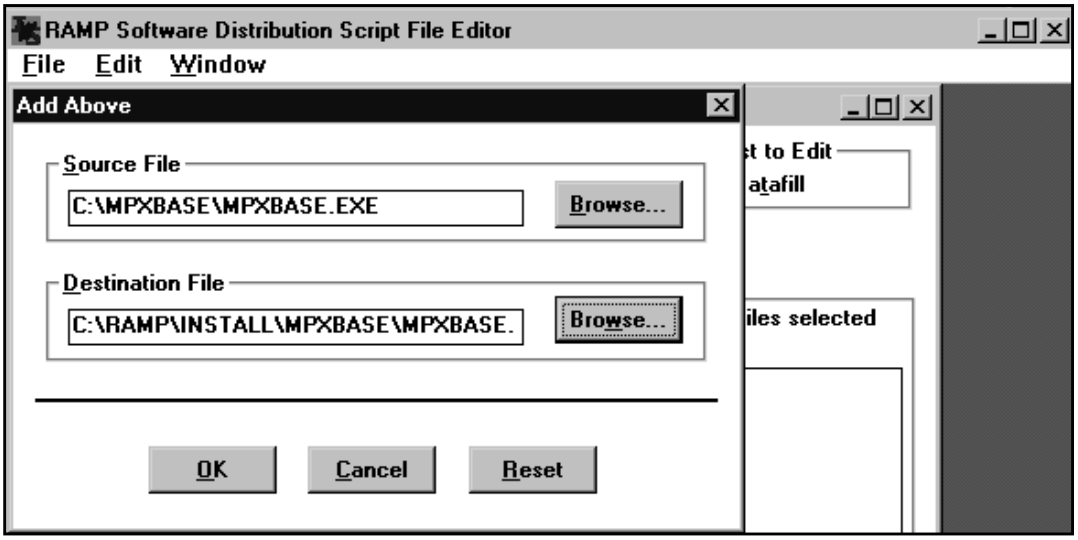


FIGURE 39. Add Above dialog box

9. In the Source File box of this dialog box, enter the path and name of the source file. Alternatively, select Browse to open the Browse dialog box to select the wanted file.
10. In the Destination File box, enter the path and name of the destination file. Alternatively, select Browse to open the Browse dialog box to select the wanted file.
11. Select OK.

    An entry of source file and destination file displays in the Transfer File List.

    Optionally, you can select Cancel in the Add Above dialog box to cancel the entries, or Reset to reset the entries to the last saved version.
12. To add more files to this list, select Add Above or Add Below and repeat the above steps.
13. When all wanted files are added to the list, select File from the top menu bar of the Script editor window. Then select Save or Save As to save the script file.

    Alternatively, you can select Close to close the script file without saving it.

    Note: The Save As option also allows you to save an existing file with another name. The Save All option saves all files that you have opened and changed. If this ScriptName box is empty when you save the file, an error message displays.
14. Select Exit from the File menu to leave the script editor, or proceed to other commands in the menu bar.

10.4 Editing SWD script files

To edit SWD scripts, do the following steps.

1. Access the main RAMP window.

2. In the RAMP window, select Tools.
3. In the Tools menu, select SWD Script Editor.
4. In this window, select File in the top menu bar, then select Open. (See Figure 40.)

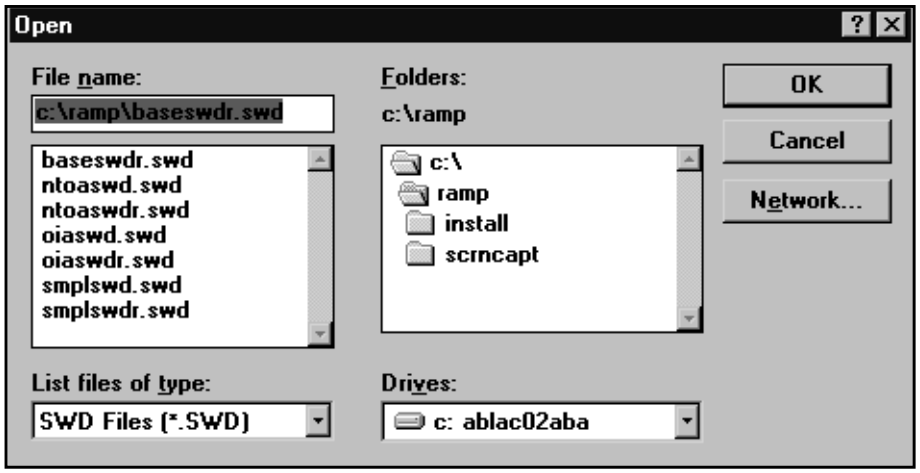


FIGURE 40. Open dialog box

5. Select the file to be edited. Then select OK. (See Figure 41.)

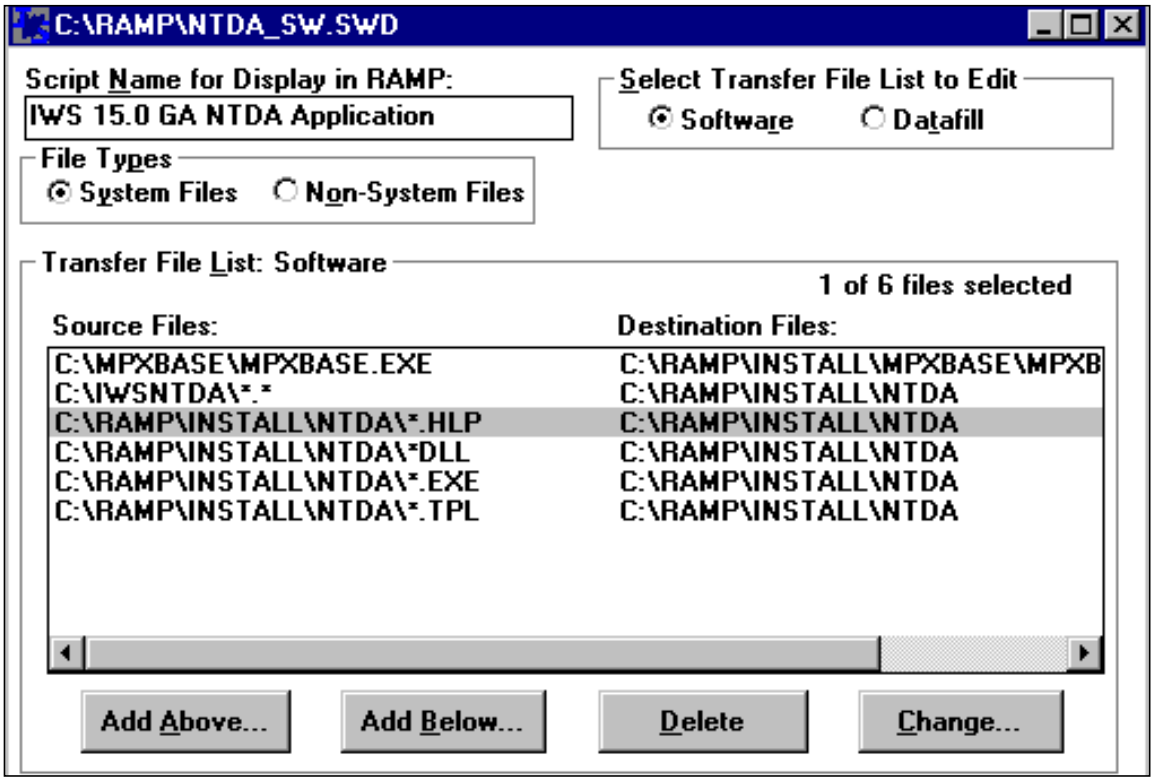


FIGURE 41. RAMP SWD Script File Editor window

6. Select the area to be changed.

When you are in the Transfer File List area, you can select any of the listings and use the Add Above, Add Below, Delete and Change buttons to make changes to the listings.

If you select Change, the Change dialog box displays. (See Figure 42.)

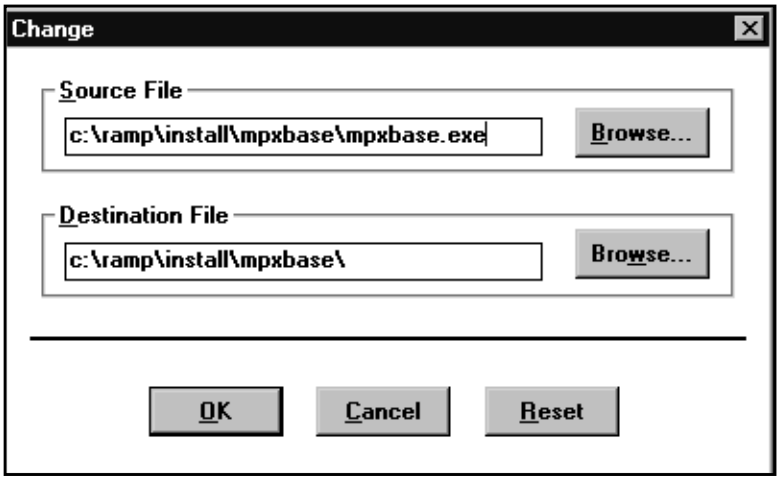


FIGURE 42. Change dialog box

Note: To select multiple listings, click the mouse on the desired listing and drag the cursor to select sequential listings. To select out of sequence, click the mouse on the first listing, hold down the **Ctrl** key, and click each listing you want to select.

Alternatively, you can use the arrow keys to select the first listing and hold down the **Shift** key while pointing the arrow key to the desired listings for multiple, sequential selections.

7. In the File menu, select Save or Save As to save the script file.

   Alternatively, you can select Close to close the script file without saving it.

8. Select Exit from the File menu to leave script editor, or proceed to other options in the menu bar.

10.5 Software Distribution Script File Editor window

The RAMP Software Distribution Script File Editor window has three drop-down menus that can be accessed while the Editor window has focus:

- File
- Edit
- Window

These menus provide Microsoft Windows functions to open, edit, and save RAMP software distribution scripts. Note that files must be saved in the C:\RAMP\ directory with the file extension ".swd." This allows the software distribution tool to find the files.

11.0 Reboot

IWS positions on the network can be rebooted from the RAMP. Choose the Reboot option from the Tools menu to access the Specify Positions dialog box to choose one, some, or all positions to be rebooted.

When the positions have been chosen, select the OK button to display the Position Reboot dialog box. (See Figure 43.) The Position Reboot dialog box provides one check box for clearing trace settings at the positions being rebooted. Trace settings are sometimes established so that messages occurring during the reboot can be captured. The check box allows you to specify whether existing trace settings are to remain in effect during position reboot, or are to be cleared.

Note that pressing the **Enter** key cancels the reboot process. You must select Continue to activate the reboot process.

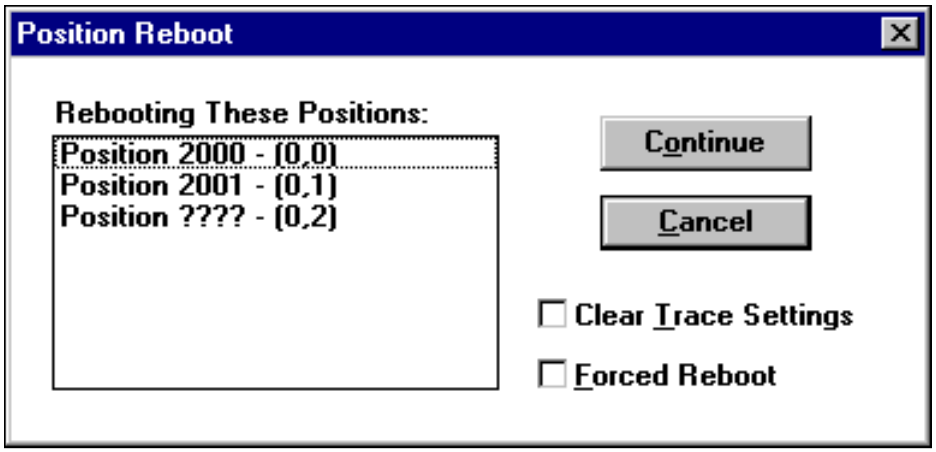


FIGURE 43. Position Reboot dialog box

If you attempt to reboot a position that is in an RTS state with the DMS switch, the Reboot Failure message box displays to inform you that the position is RTSed. You can then cancel the reboot if necessary.

Reboot may be denied by a position for the following reasons.

- operator logged in
- position is a RAMP
- application active
- file transfer in progress
- position is an IWS gateway, currently controlling active positions
- unknown

When reboot is denied, an observation window displays the following message:

```
*** REBOOT Denied ***
Cluster: <cluster no.>
Position: <pos no.>
DMS Pos ID: <pos id>
Reason: <reason text>
```

Note: If the position does not have communication with the DMS switch, the DMS Pos ID will not be displayed.

If reboot is denied by several positions, a message for each position is displayed in the observation window.

12.0 Provisioning tool

The provisioning tool enables you to create or change the initialization (.INI), table (.TBL), and language (.LNG) datafill files. The provisioning tool can be customized by changing default datafill in the PROVTOOL.INI file. See “Configuring the provisioning tool” on page 92.

Note: The provisioning tool cannot read a datafill file that exceeds the size of 250,000 characters or 3,000 lines.

12.1 Using the provisioning tool

1. In the main RAMP window, select Tools, then select Provisioning.

   The IWS Provisioning Tool window displays. (See Figure 44 and section “Provisioning tool window” on page 90.)

FIGURE 44. Provisioning tool window

2. Select File, then select New or Open from the File menu to create or change a file.

   When the New option is selected, a list of file names displays. (See Figure 45.) These are names for .INI, table, and language files that you can create.

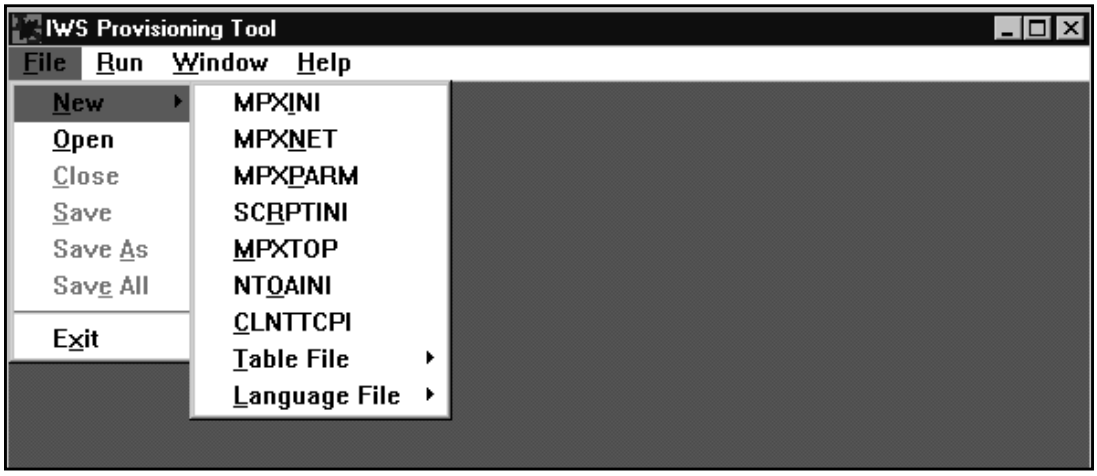


FIGURE 45. File menu with New option selected

When you select a name, a configuration window displays for you to create the file. The values of the parameters in these files are the default values that were assigned for the software load that is currently in use. (See Figure 46.)

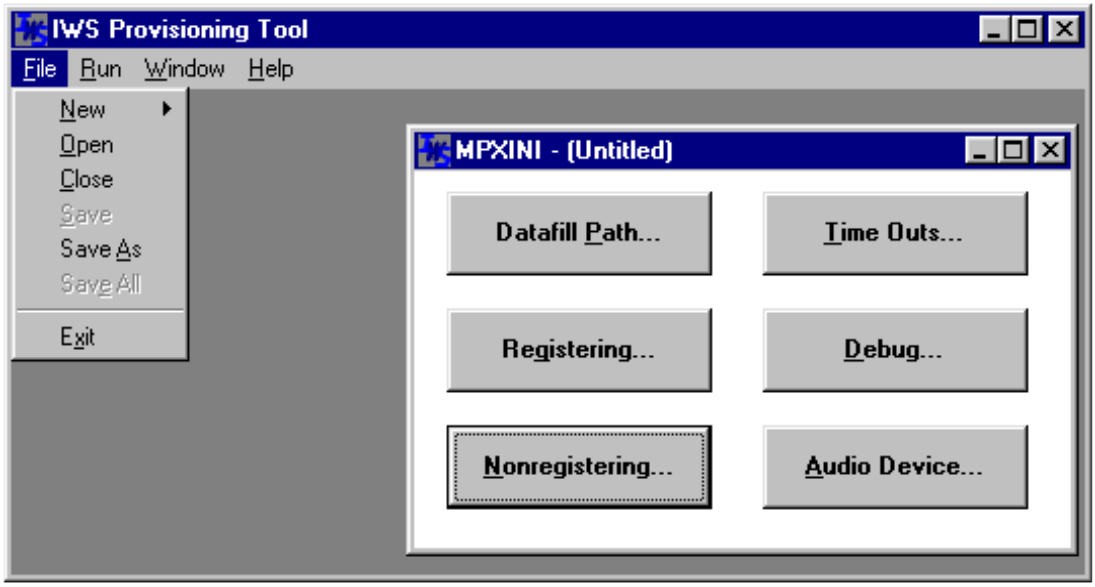


FIGURE 46. Example of an open file when New option is used

When the Open option is selected, the Open dialog box displays. (See Figure 47.)

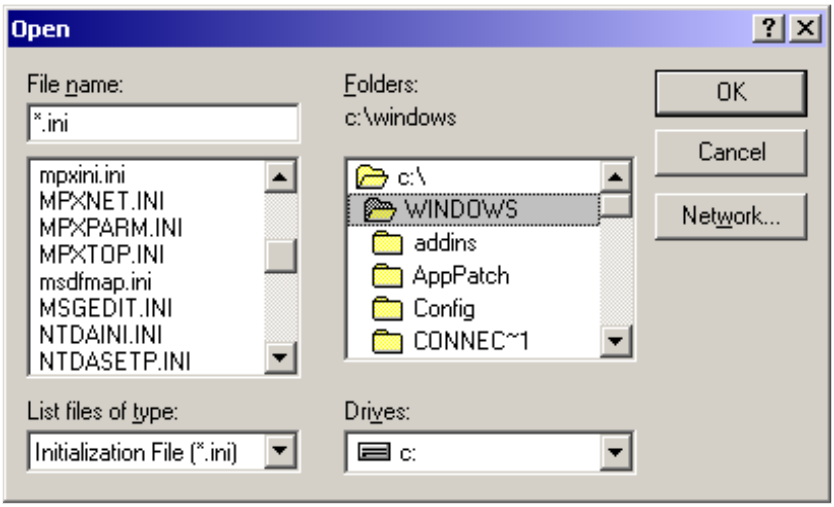


FIGURE 47. Example of Open dialog box

In this dialog box, select the file you want to open (for example, MPXINI.INI), then select OK. A configuration window displays for you to modify the file. Until you assign customized datafill to these files, the values of the parameters will represent the default datafill that comes with the current software load.

You can access help for each parameter by selecting the Help menu in the top menu bar when a particular parameter is selected.

See following sections on creating and changing specific datafill files.

3. When all changes are done, select Close.

   A dialog box displays to prompt you to save any changes made. (See Figure 48.)

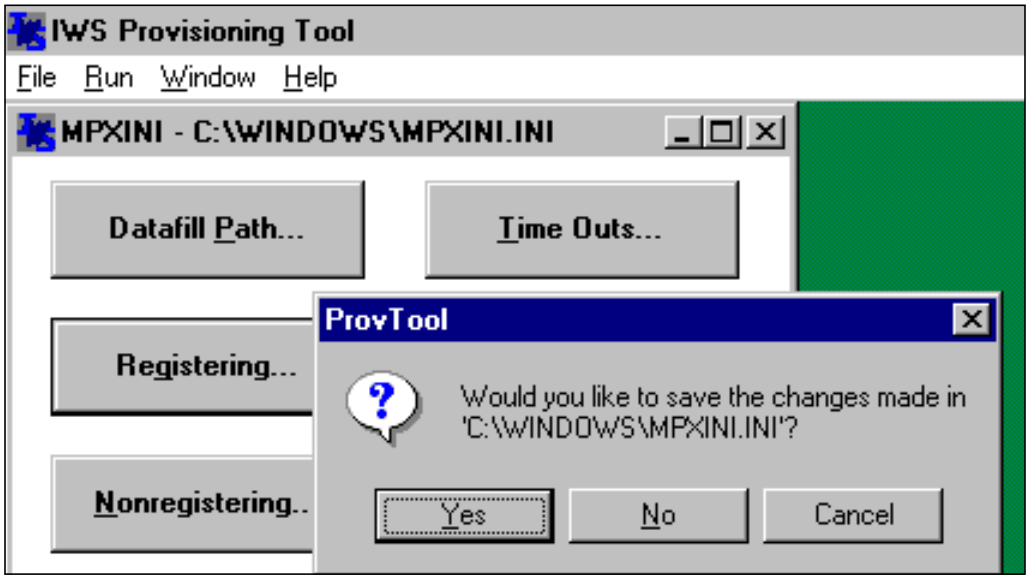


FIGURE 48. Dialog box prompting you to save changes

4. Optionally, select Exit to close the provisioning tool main window.

12.2 Provisioning tool window

The Provisioning Tool window has the following menus in the menu bar:

- File
- Run
- Window
- Help

12.2.1 File menu

The File menu contains the following options:

FIGURE 49. Example of File menu

New	This option creates new datafill files. When it is selected, you can access .INI, table and language files with their default values which you can modify. (See Figure 46 on page 88.)
Open	This option opens existing datafill files for changes.
Close	This option closes any open files. It prompts you to save changes before closing.
Save	This option saves changes to an open file.
Save As	This option saves an existing file with another file name.
Save All	This option saves changes made to all opened files.
Exit	This option exits the provisioning tool. You are prompted to save changes before exiting.

12.2.2 Run menu

The options that display in the Run menu depend on what IWS software applications are installed on the position and whether any modifications have been made to the PROVTOOL.INI file. For example, NTDASetup is listed as an option on the Run menu after NTDA is installed on the position. For details on the PROVTOOL.INI file, see “Configuring the provisioning tool” on page 92.

FIGURE 50. Example of Run menu

The AUDIOINI.INI option allows access to the audtool utility for datafilling the AUDIOINI.INI file. For information on the audtool utility, refer to *TOPS IWS Audio Card Configuration and Diagnostics*.

12.2.3 Window menu

The options shown in the Window menu are disabled when no files are open.

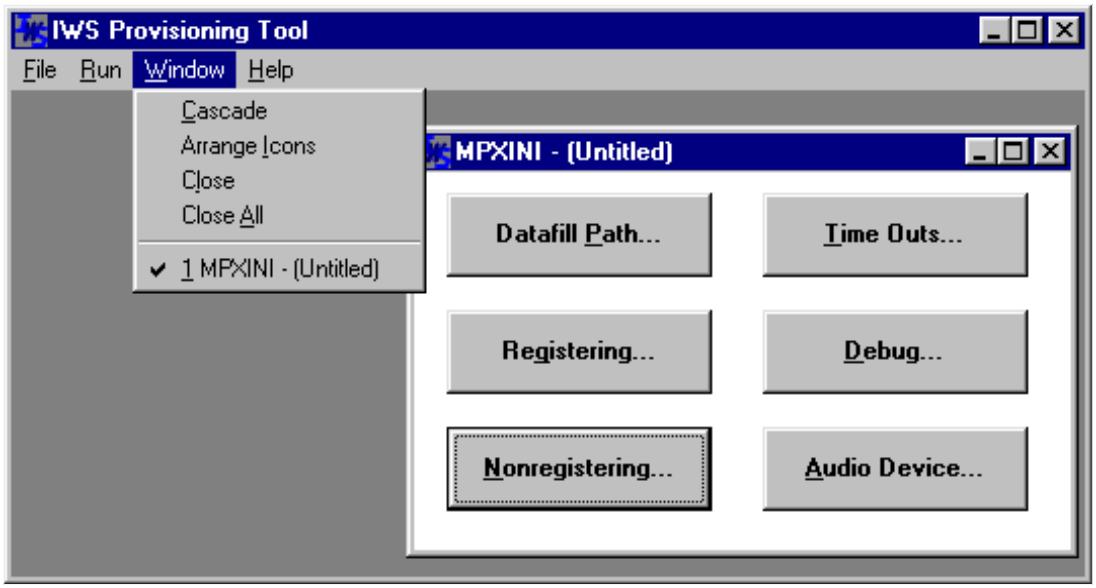


FIGURE 51. Window menu with file open

Cascade This option arranges open file windows in a cascade form.

Arrange Icons	This option arranges minimized file configuration windows along the bottom of the main window.
Close	This option closes the selected file configuration window. You are prompted to save the open file if it is not saved.
Close All	This option closes all open file configuration windows. You are prompted to save any files that are not saved.

The Window menu also displays the names of any open datafill files.

12.2.4 Help menu

The Help menu contains the following options.

FIGURE 52. Example of Help menu

Help	This option provides access to a help text box.
About	This option provides the version number of the provisioning tool, which matches the current IWS software load.

You can access the Help menu from any open file window to read information about a specific file.

12.3 Configuring the provisioning tool

The provisioning tool can be customized by changing the default datafill in the PROVTOOL.INI file. For example, this tool can be configured to open certain .INI files automatically when it is activated. The Run menu of this tool can also be customized to include desired datafill files, including files of other vendors' API-compliant applications.

To customize this tool, do the following steps.

1. Select Run in the main menu bar of the provisioning tool.

FIGURE 53. Run menu with PROVTOOL.INI option

2. Select PROVTOOL.INI. (See Figure 54.)

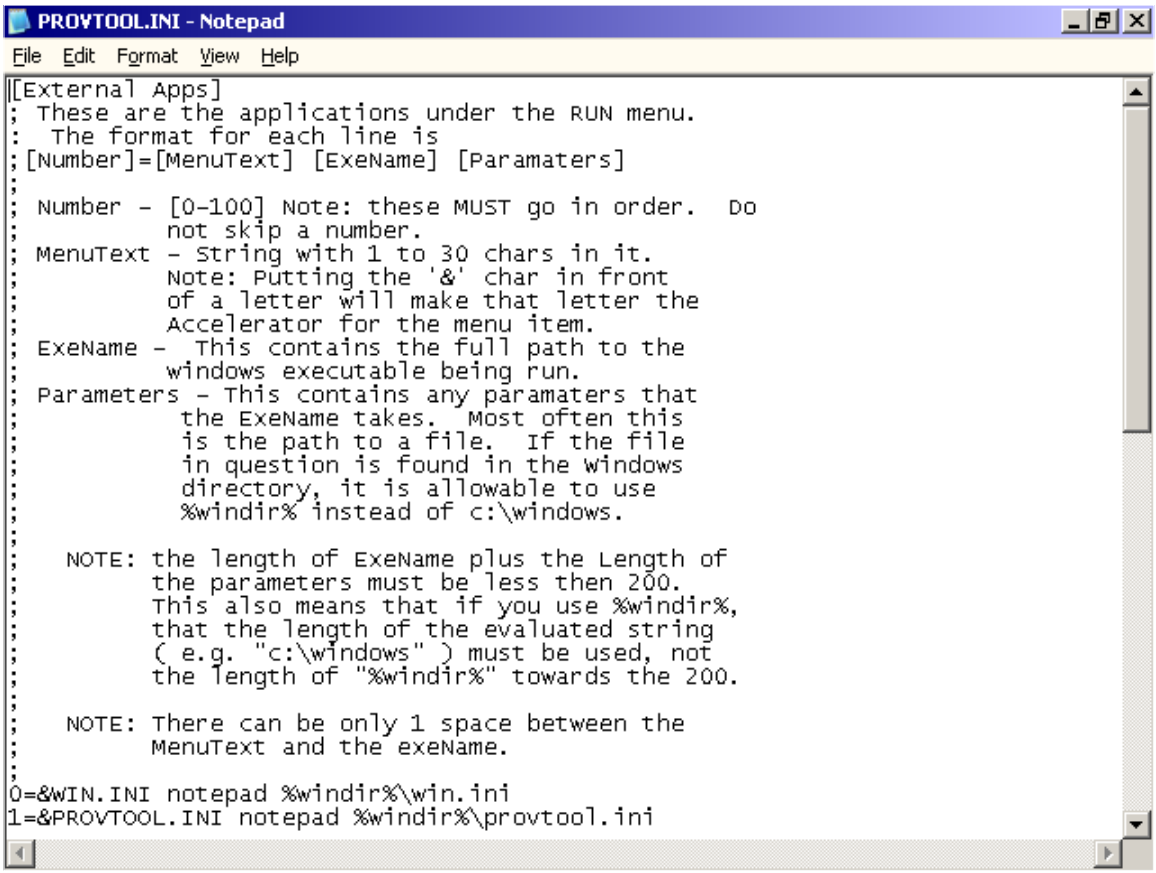


FIGURE 54. Edit window for PROVTOOL.INI file

3. In the edit window, make desired changes such as adding or removing program files. For example, in Figure 55, line 6 (6=&NTDASetup c:\IWSNTDA\NTDASETP.EXE) is added to the PROVTOOL.INIl file. This line provides access to an IWS program called NTDA Setup.

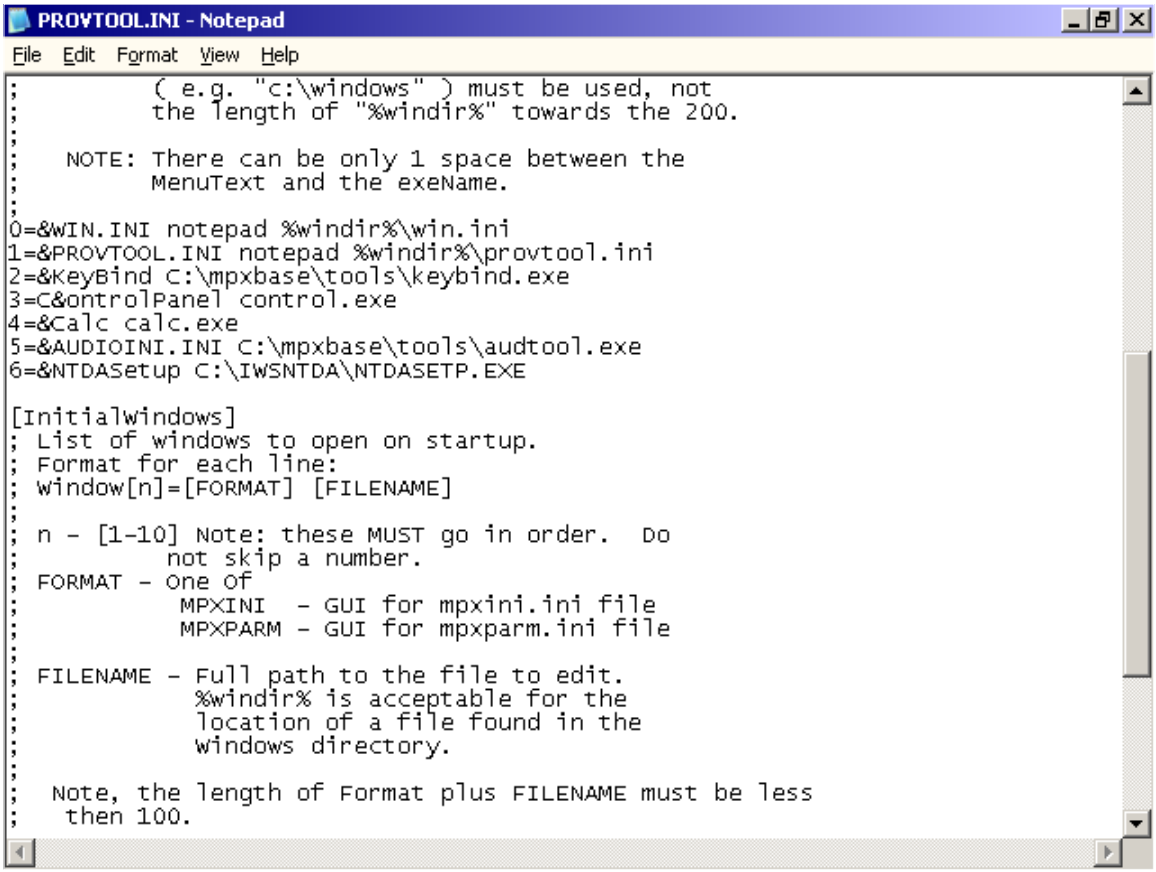


FIGURE 55. Example of modified PROVTOOL.INI file

To have the provisioning tool open all .INI files when it is activated, delete the semicolon (;) at the beginning of the following lines in the PROVTOOL.INI file:

;Window1=MPXINI %windir%\MPXINI.INI

;Window2=MPXNET %windir%\MPXNET.INI

;Window3=MPXPARM %windir%\MPXPARM.INI

;Window5=SCRPTINI %windir%\SCRPTINI.INI

4. When you are done with changes, select File, then select Save.
5. To exit from the edit window, select File, then select Exit.

12.4 Provisioning tool error checking

The provisioning tool provides error checking when you create a datafill file or open an existing file for modification. There are two types of error checking: full or limited. Full checking can be applied to a parameter that has specific boundaries; for example, an integer with a defined range. Limited checking can be applied to a parameter such as a string whose length and alphanumeric content is checked.

Error checking prohibits many typing mistakes; for example, in the XCASTS.TBL file, the valid entries for call arrival type are integers between 1–8. If you enter any other value,

the field remains blank. Similarly, if you type a character string longer than the maximum length, it is truncated.

When errors such as duplicate entries or out-of-range values occur in language files, a box displays with the error message, “An error was encountered in <line #> of C:\MPXBASE\DATAFILL\<filename>. ProvTool cannot continue.” You must open the file with a text editor to repair it.

13.0 Using the provisioning tool to datafill files

The following sections describe how to create and change datafill files of IWS applications. These files are discussed in *TOPS IWS Base Platform User's Guide*, 297-2251-010.

13.1 MPXINI.INI provisioning

The MPXINI.INI file starts IWS applications. The file is datafilled to provide the names and directory paths of registering and nonregistering application that run on the IWS position. In addition the file is datafilled to set some audio card and timer parameters.

1. From the top menu bar of the Provisioning Tool window, select File.
2. From the File menu, select New or Open.

   If Open is selected, the Open dialog box displays. If New is selected, a list of files displays.
3. Select MPXINI. (See Figure 56.)

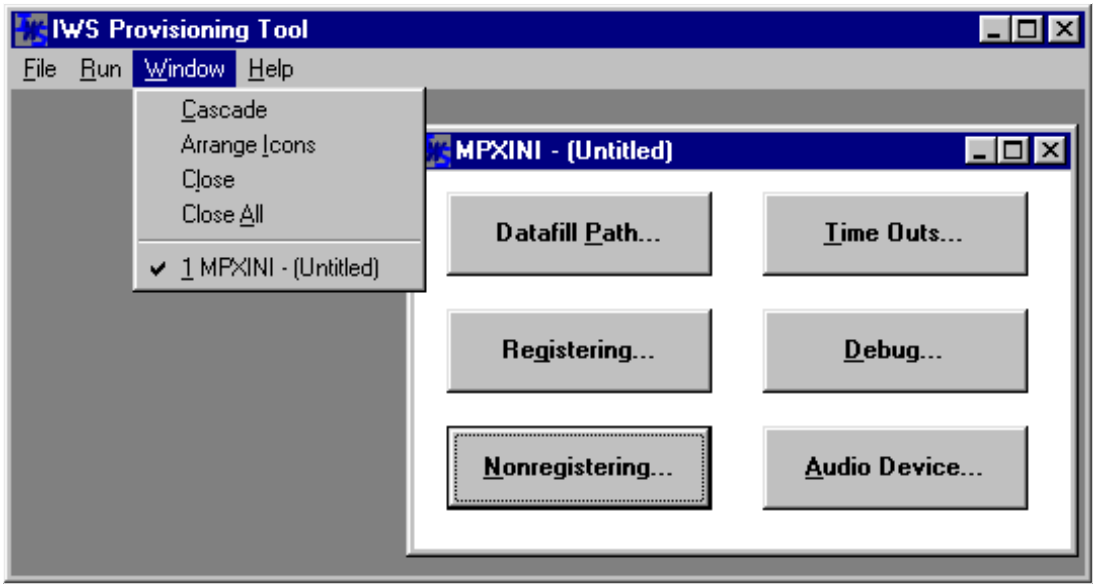


FIGURE 56. Example of MPXINI.INI configuration window

4. Select the desired command buttons in the configuration window. The following sections describe the usage of the command buttons which enable you to specify values and settings.
5. When you are done with the command buttons and want to save the values and settings specified, select File, then select Save.

   The Save As option enables you to save the file with another name.
6. To close the configuration window, select Close from the File menu.

A message box displays to prompt you to save before closing the window. Select from Yes, No, and Cancel.

13.1.1 Datafill Path command button

The Datafill Path command button enables you to specify a file directory path for your datafill files.

1. In the configuration window, select Datafill Path. (See Figure 57.)

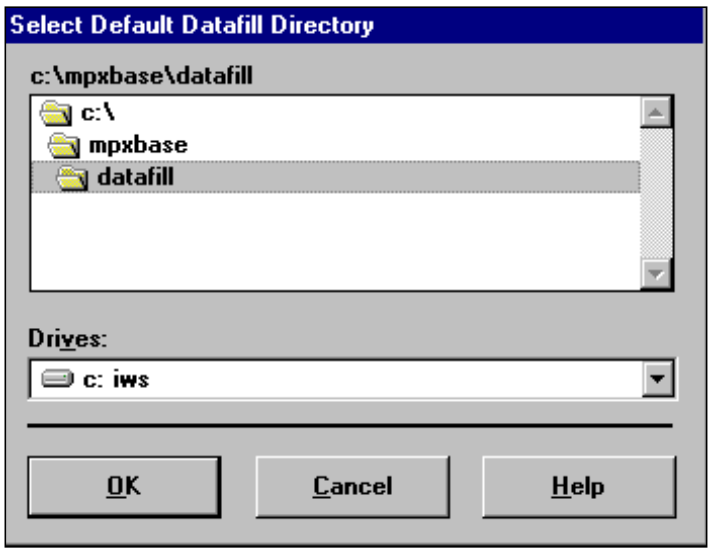


FIGURE 57. Select Default Datafill Directory dialog box

2. Select the desired path.
3. Select OK. Optionally, you can select Cancel to leave the dialog box without entering or saving a path.

13.1.2 Registering command button

The Registering command button enables you to specify the registering applications. A registering application is service-providing; that is, billing can be assigned. The first application in the registering list should be the one to switch to if a call arrives at an IWS position and no application is available to process the call.

1. In the configuration window, select Register. The Registering Applications dialog box displays with the default registering application. (See Figure 58.)

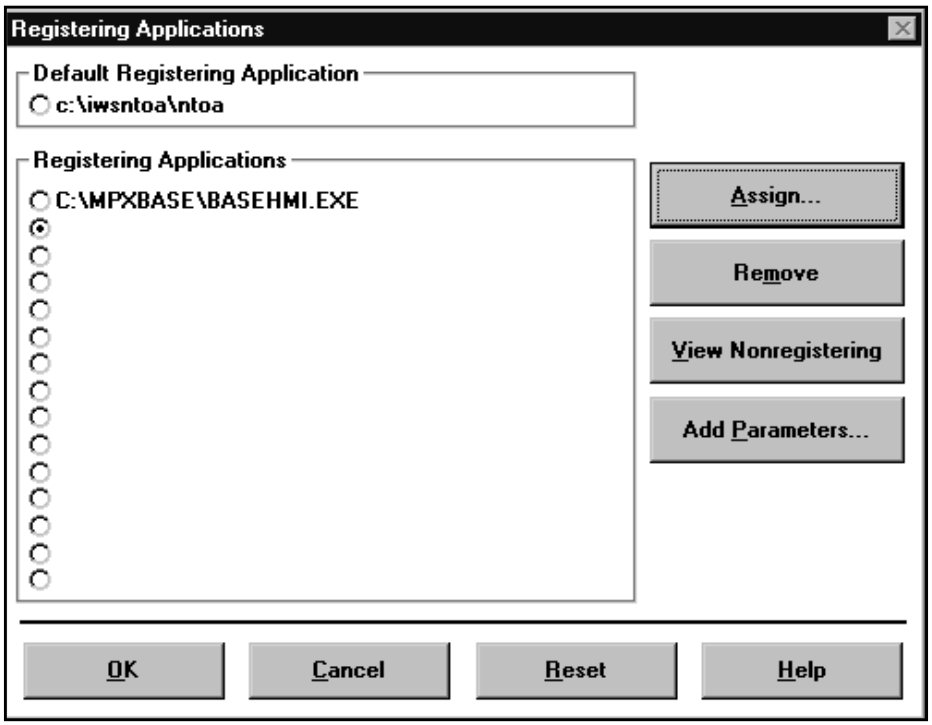


FIGURE 58. Example of Registering Applications dialog box

Note: As of IWS release 13.0, the NTOA/NTOA Plus application was renamed as the IWS Billing application. Continue to select path c:\iwsntoa\ntoa to choose the IWS Billing application as the default registering application for IWS.

2. Select Assign to assign a registering application to the MPXINI file.

   A dialog box displays for you to select the path name of the registering application. Select OK.

3. Select Remove to remove any unwanted registering applications.

4. Select View Nonregistering Applications to see what nonregistering applications have been assigned. You cannot add a nonregistering application from this box. You must select the Nonregistering button shown in Figure 56 on page 97.

   When done, select OK to close this dialog box.

5. Select Add Parameters to add any necessary command line parameters to a selected application. (See Figure 59.)

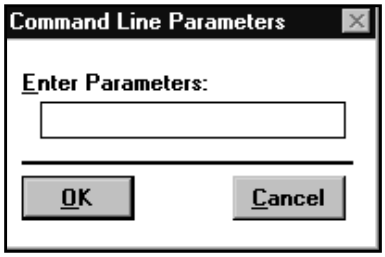


FIGURE 59. Example of Command Line Parameters dialog box

Enter a parameter, then select OK.

6. When you return to the Registering Application dialog box, you can select OK to keep the entry and close the dialog box. Alternatively, select Cancel to leave the dialog box, or Reset to return to the previous settings. A Help button is also available in this dialog box.

The view shown in Figure 58 on page 99 has 15 lines plus the top line. Thus you can list 16 registering applications for both the standard and extended versions of the IWS base. However, the standard version of IWS base supports five registering applications, so even if you list 16, only the first five are supported.

13.1.3 Nonregistering command button

The Nonregistering command button enables you to specify the nonregistering applications; that is, those applications that are not service-providing.

1. In the configuration window, select Nonregistering. (See Figure 60.)

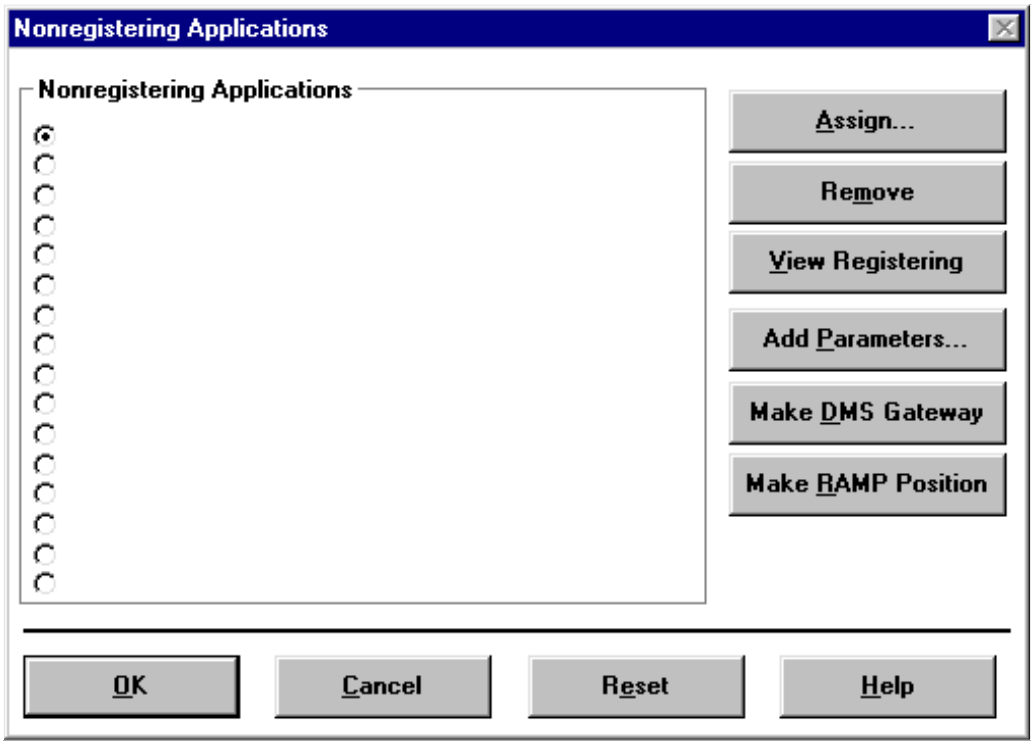


FIGURE 60. Example of nonregistering applications dialog box for TDM positions

The Nonregistering Applications dialog box displays currently datafilled applications that do not require registration with the IWS base application. If no applications are datafilled, this box is blank.

Note: If this is an IP position, the **Make DMS Gateway** button will be grayed out and unavailable as in Figure 61.

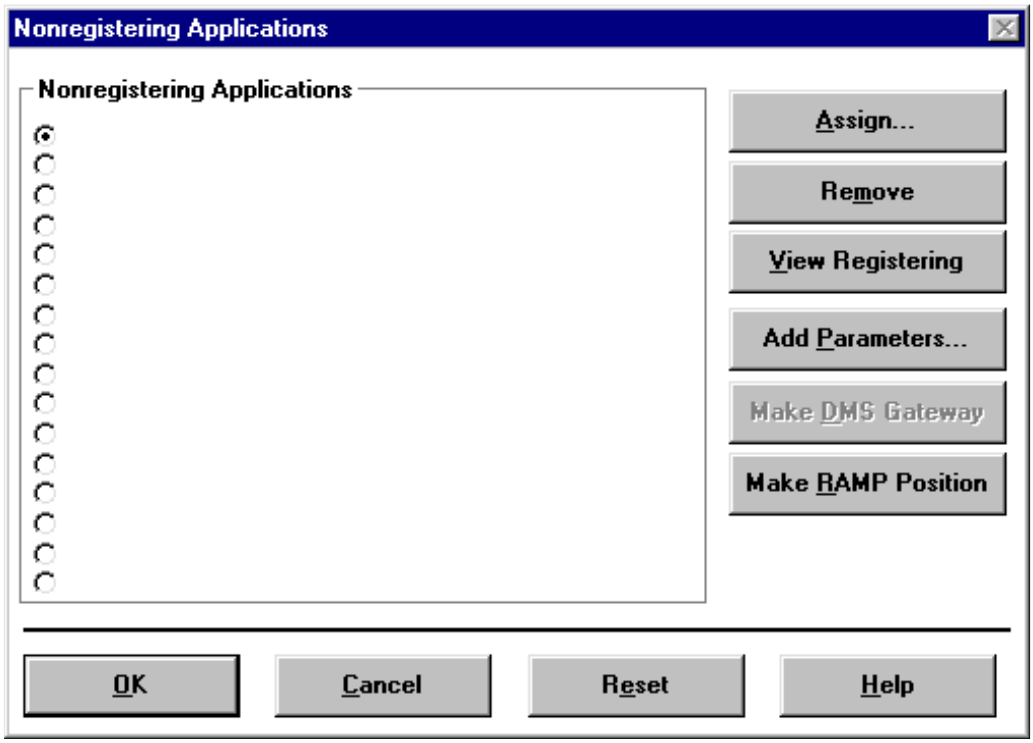


FIGURE 61. Example of nonregistering applications dialog box for IP positions

2. Select Assign to assign a nonregistering application to the MPXINI file.

   A dialog box displays where you can select the path name of the nonregistering application. Select OK.

3. Select Remove to remove any unwanted nonregistering applications.
4. Select View Registering to view the registering applications.
5. Select Add Parameters to add command lines to a selected application.
6. Select Make DMS Gateway to add the necessary applications for the DMS gateway automatically.
7. Select Make RAMP Position to add the necessary applications for the remote access maintenance position automatically.
8. When all changes are made, you can select OK to keep the changes and close the dialog box. Alternatively, select Cancel to leave the dialog box, or Reset to return to the previous settings. A Help button is also available in this dialog box.

The view shown in Figure 60 on page 101 has 16 lines. Thus you can list 16 nonregistering applications for both the standard and extended versions of the IWS base. However, the standard version of IWS base supports five nonregistering applications, so even if you list 16, only the first five are supported.

13.1.4 Time-Outs command button

The Time-Outs command button enables you to specify server, application, and logon time out values for operator positions.

1. In the configuration window, select Time Outs. (See Figure 62.)

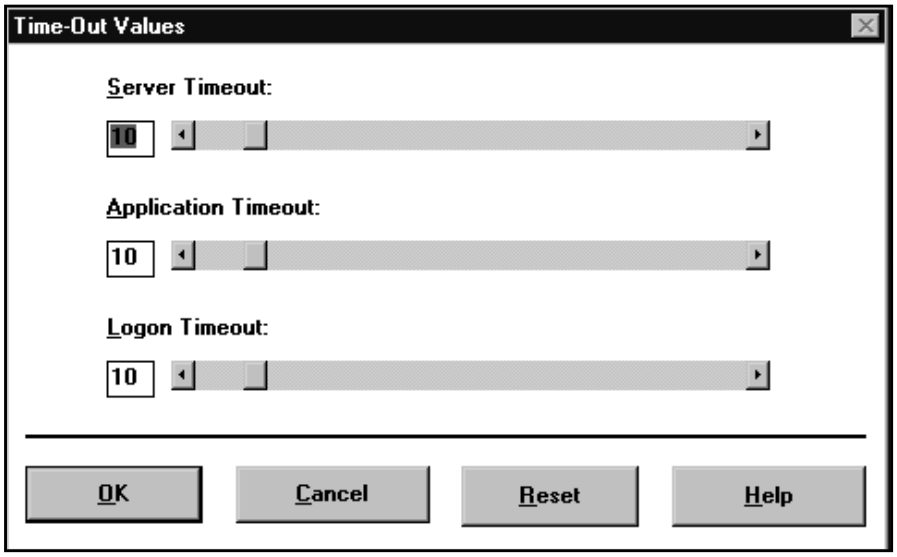


FIGURE 62. Example of Time-Out Values dialog box

2. In this dialog box, specify a timeout value for server, application, and logon respectively.

   You can specify a value by typing in the number box, or by using the scroll button.

   If the value you specify is out of the valid range, a message box displays to alert you. You have to correct the values before you can exit the dialog box.

3. When all changes are made, select OK to keep the changes and close the dialog box. Alternatively, select Cancel to leave the dialog box, or Reset to return to the previous settings. A Help button is also available in this dialog box.

13.1.5 Debug command button

The Debug command button enables you to specify options for the debugging tools at the operator positions.

1. In the configuration window, select Debug.

   A message box displays to indicate that the debug settings can affect system performance. Select OK. The Debug Options dialog box displays. (See Figure 63.)

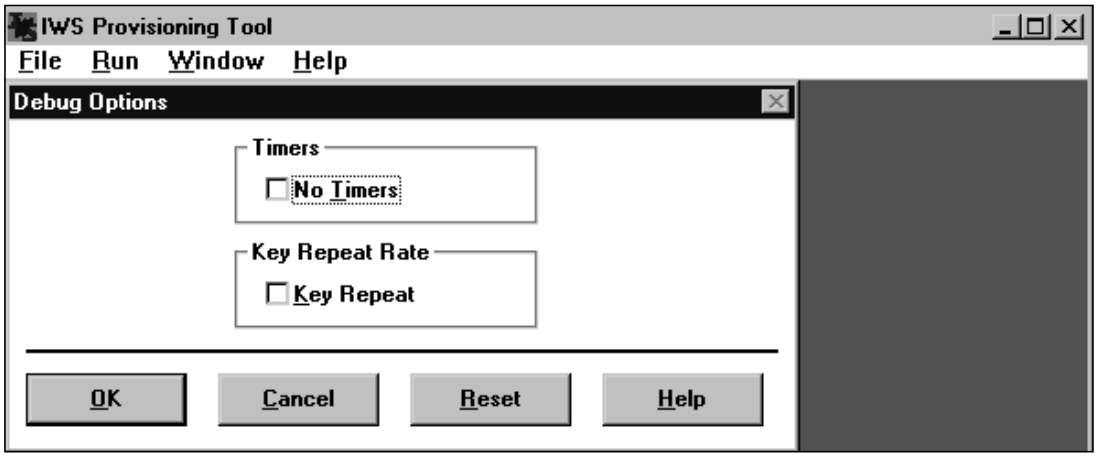


FIGURE 63. Example Debug Options dialog box

2. Select the desired options.
3. You can select OK to keep the settings and close the dialog box. Alternatively, select Cancel to leave the dialog box, or Reset to return to the previous settings. A Help button is also available in this dialog box.

13.1.6 Audio Device command button

The Audio Device command button enables you to specify options for audio cards and headsets at operator positions. The type of position used, TDM or IP, will determine the screens displayed when you select the Audio Device button.

13.1.6.1 TDM Audio Device command button

Upon selecting the Audio Device command button on a TDM position, the Nortel Audio Card window will appear. Follow these steps to configure the options.

1. In the configuration window, select Audio Card. (See Figure 64.)

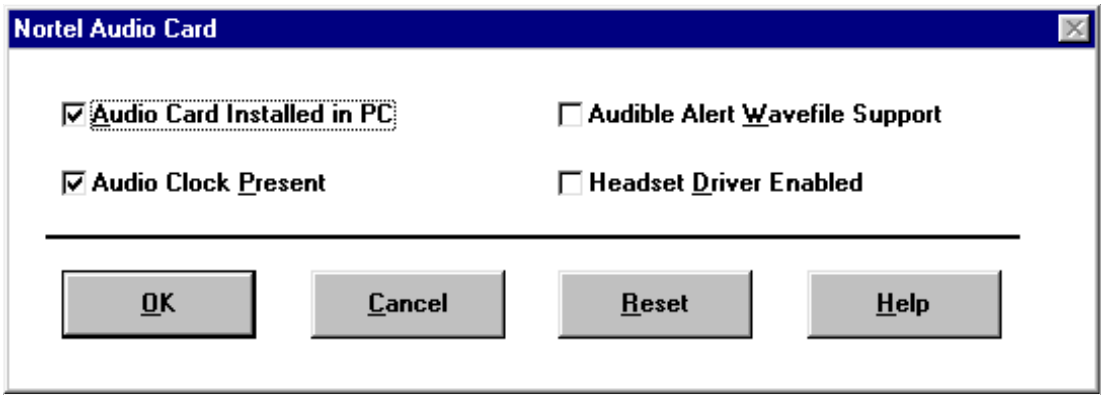


FIGURE 64. Example of the Audio Device dialog box for TDM positions

2. Select the desired options. Detailed information about each option is provided in *TOPS IWS Base Platform User's Guide*, 297-2251-010.

3. You can select OK to keep the settings and close the dialog box. Alternatively, select Cancel to leave the dialog box, or Reset to return to the previous settings. A Help button is also available in this dialog box.

13.1.6.2 IP Audio Device command button

Upon selecting the Audio Device command button on a IP position, the Plantronics Headset window will appear. Detailed information about each option or setting is provided in *TOPS IWS Base Platform User's Guide*, 297-2251-010. Follow these steps to configure the options.

1. In the configuration window, select the **Headset Installed in USB port** checkbox. The default will automatically check it. (See Figure 65.)

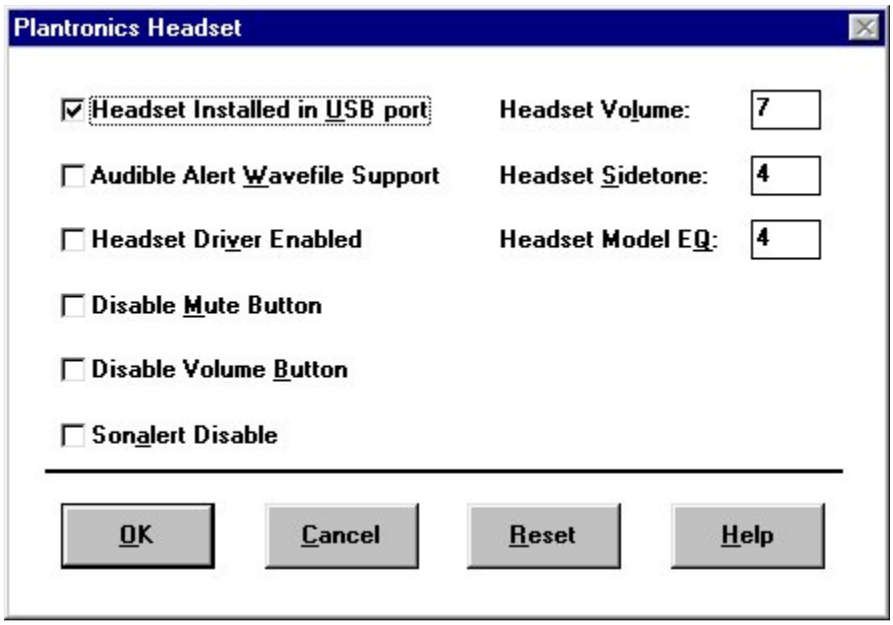


FIGURE 65. Example of the Audio Device dialog box for IP positions

2. The Headset Volume will reset at 7, but it has a range of 1 to 12.
3. The Headset Model EQ Preset will reset at 4, but it has a range of 0 to 6.
4. The Headset Sidetone will reset at 4, but it has a range of 0 to 5.
5. You can select OK to keep the settings and close the dialog box. Alternatively, select Cancel to leave the dialog box, or Reset to return to the previous settings. A Help button is also available in this dialog box.

13.2 MPXPARM provisioning

The MPXPARM.INI file is contains various IWS parameters that can be defined and used by API-compliant applications that reside on the IWS platform.

1. From the top menu bar of the provisioning tool window, select File.
2. From the File menu, select New or Open.

If Open is selected, the Open dialog box displays. If New is selected, a list of files displays.

3. Select MPXPARM. (See Figure 66.)

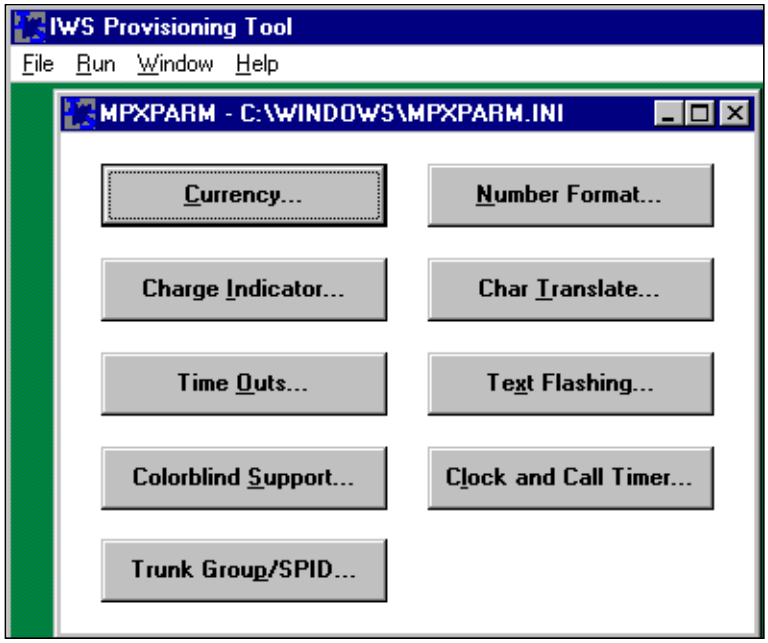


FIGURE 66. Example of the MPXPARM configuration window

4. Select the desired command buttons in the configuration window. The following sections describe the use of the command buttons.
5. When you are done with the command buttons and want to save the values and settings specified, select File, then select Save.

   The Save As option enables you to save the file with another name.
6. To close the configuration window, select Close from the File menu.

   A message box displays to prompt you to save before closing the window. Select from Yes, No, and Cancel.

13.2.1 Currency command button

The Currency command button enables you to specify the placement of the currency symbol, number of decimal digits, the type of currency symbol, and the currency separator.

1. In the configuration window, select Currency. (See Figure 67.)

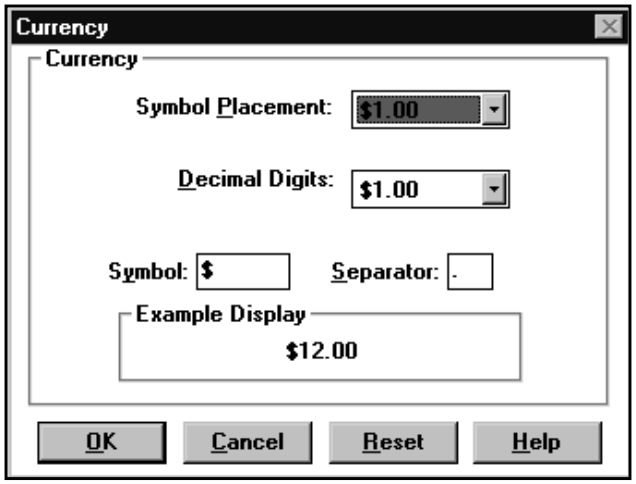


FIGURE 67. Example of Currency dialog box

2. To select the placement for the currency symbol, select the down arrow button and a placement from the pull-down box.
3. To select the decimal digits, select the down arrow button and the number of digits you want from the pull-down box.
4. To enter the currency symbol of your choice, type the symbol in the Symbol box. Up to five characters can be entered. Any ASCII characters are accepted.
5. To enter the separator of your choice, type the separator in the Separator box. Only one character can be entered. Any ASCII character is acceptable.
6. Select OK to keep the settings and close the dialog box. The settings are saved when you select Save from the File menu in the provisioning tool window.

   Alternatively, select Cancel to leave the dialog box, or Reset to return to the previous settings. A Help button is also available in this dialog box.

13.2.2 Number Format command button

The Number Format command button enables you to specify the character to be used as a separator of a directory number or calling card number.

1. In the configuration window, select Number Format. (See Figure 68.)

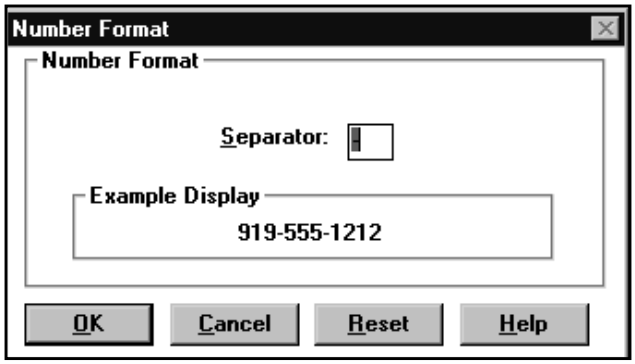


FIGURE 68. Example of Number Format dialog box

2. Enter a character in the Separator box. Any ASCII character is acceptable.
3. Select OK to close the dialog box. The entry will be saved when you select Save from the File menu in the Provisioning Tool window.

   Alternatively, select Cancel to close the dialog box without saving the entry. You can also use Reset in this dialog box to reset the entry to the previous state. A Help button is also available in this box.

13.2.3 Charge Indicator command button

The Charge Indicator command button enables you to set various indicators for charge adjust values.

1. In the configuration window, select Charge Indicator. (See Figure 69.)

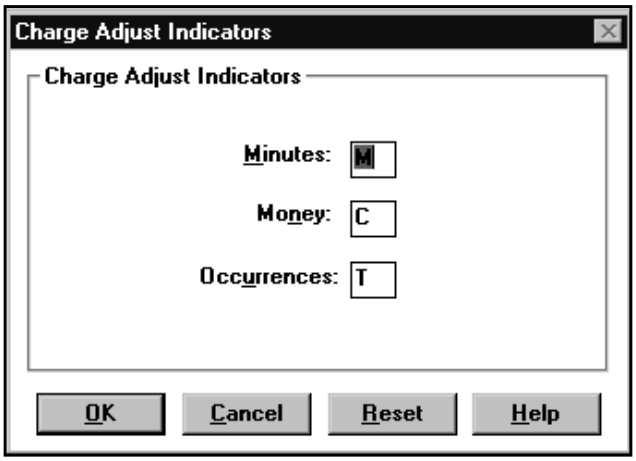


FIGURE 69. Example of Charge Adjust Indicators dialog box

2. To set the indicator for minutes, enter an upper-case ASCII character in the Minutes box.
3. To set the indicator for money, enter an upper-case ASCII character in the Money box.

4. To set the indicator for occurrences (number of calls credited), enter an upper-case ASCII character in the Occurrences box.
5. Select OK to close the dialog box. The entries are saved when you select Save from the File menu in the provisioning tool window.

   Alternatively, select Cancel to close the dialog box without saving the settings, or Reset to return to the previous settings. A Help button is also available in this box.

13.2.4 Char Translate command button

For TOPS software loads earlier than TOPS13, select the Char Translate command button if your alphabet has characters above ASCII value 127. These characters must be translated before being sent to the DMS switch.

As of IWS release 13.0, the Character Translator section is no longer used unless the TOPS software load in the DMS switch is earlier than TOPS13.

1. In the configuration window, select Character Translation. (See Figure 70.)

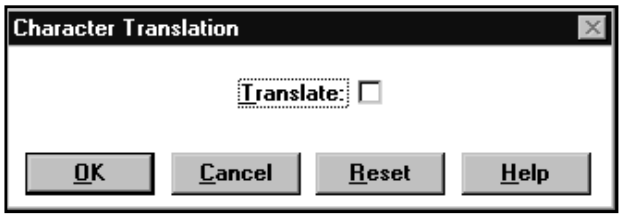


FIGURE 70. Example of Character Translation dialog box

2. Select the Translate checkbox.
3. Select OK to close the dialog box. The setting is saved when you select Save from the File menu in the Provisioning Tool window.

   Alternatively, select Cancel to close the dialog box without saving the settings, or Reset to return to the previous settings. A Help button is also available in this box.

13.2.5 Time-Outs command button

The Time-Outs command button enables you to set time-out values for the Make Busy/ Withhold Calls position states.

1. In the configuration window, select Time Outs. (See Figure 71.)

FIGURE 71. Example of Time-Out Values dialog box

2. Select the button in the scroll bar and slide it left or right to set the time-out value in seconds.

   Alternatively, select the text box on the left of the scroll bar and enter the desired integer value in seconds.

3. Select OK to close the dialog box. The setting is saved when you select Save from the File menu in the Provisioning Tool window.

   Alternatively, select Cancel to close the dialog box without saving the settings, or Reset to return to the previous settings. A Help button is also available in this box.

13.2.6 Text Flashing command button

The Text Flashing command button enables text flashing. The text flashing capability works with the colorblind mode to emphasize alert and error messages, regardless of this datafill. You can activate text flashing without activating colorblind support.

1. In the configuration window, select Text Flashing. (See Figure 72.)

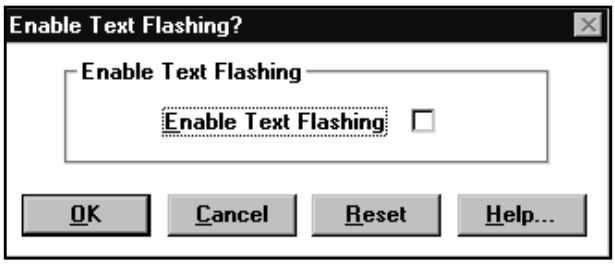


FIGURE 72. Example of Enable Text Flashing dialog box

2. Select the Enable Text Flashing checkbox.

3. Select OK to close the dialog box. The setting is saved when you select Save from the File menu in the Provisioning Tool window.

   Alternatively, select Cancel to close the dialog box without saving the settings, or Reset to return to the previous settings. A Help button is also available in this box.

13.2.7 Colorblind Support command button

The Colorblind Support command button enables colorblind support.

1. In the configuration window, select Colorblind Support. (See Figure 73.)

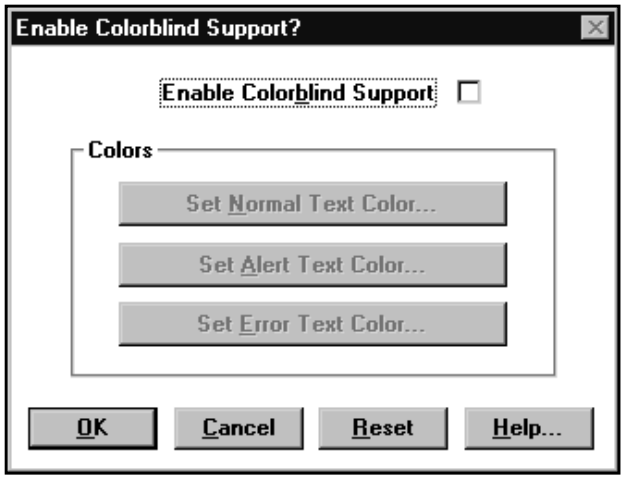


FIGURE 73. Example of Enable Colorblind Support dialog box

2. Select the Enable Colorblind Support check box.

   The command buttons in the Colors section are enabled. You can set the colorblind option on normal, alert, or error text. The text colors are specified by the industry standard of red, green, and blue (RGB).

3. To set colorblind normal text color, select the Set Normal Text Color button. (See Figure 74.)

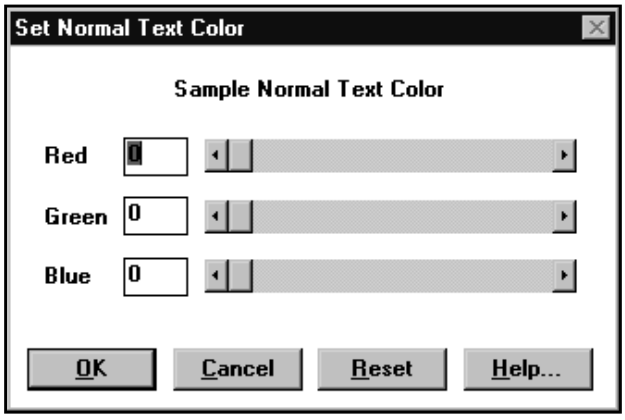


FIGURE 74. Set Normal Text Color dialog box

4. Select the button in each scroll bar and slide it left or right to set the value for each color (red, green, blue). You can also enter an integer value (range 0–255) in the box next to each color.

   Default datafill sets the colorblind normal text color to black, which is the recommended color. Black is specified with the values of 0 for red, 0 for green, and 0 for blue. The color of the string “Sample Normal Text Color” at the top of the

dialog box changes to display whatever color corresponds to the current numeric settings.

5. Select OK to keep the settings and close the dialog box. Alternatively, select Cancel to leave the dialog box, or Reset to return to the previous settings. A Help button is also available in this dialog box.

6. To set alert text color, select the Set Alert Text Color button. (See Figure 75.)

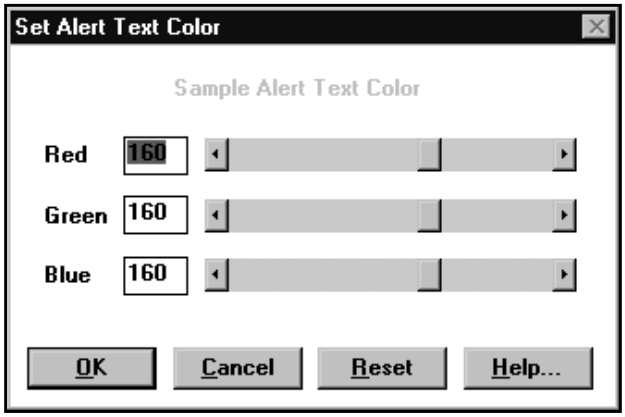


FIGURE 75. Set Alert Text Color dialog box

7. Select the button in each scroll bar and slide it left or right to set the value for each color (red, green, blue). You can also enter an integer value (range 0–255) in the box next to each color.

   Default datafill sets the colorblind alert color to light-medium grey, which is the recommended color. Do not set this value equal to the colorblind normal text color value. Light-medium grey is specified with the values of 160 for red, 160 for green, and 160 for blue. The color of the string “Sample Alert Text Color” at the top of the dialog box changes to display whatever color corresponds to the current numeric settings.

8. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the dialog box, or Reset to return to the previous settings. A Help button is also available in this dialog box.

9. To set Error Text Color, select the Set Error Text Color button. (See Figure 76.)

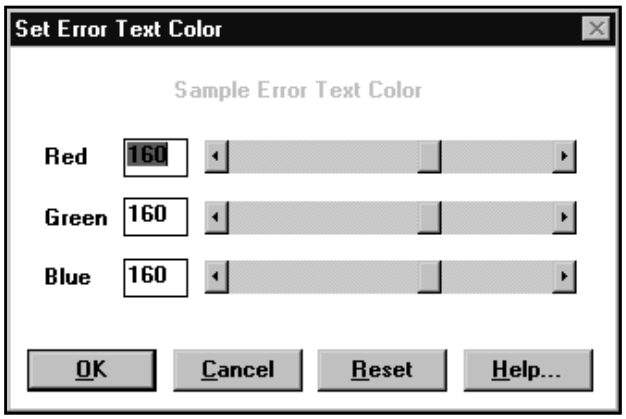


FIGURE 76. Set Error Text Color dialog box

10. Select the button in each scroll bar and slide it left or right to set the value for each color (red, green, blue). You can also enter an integer value (range 0–255) in the box next to each color.

    Default datafill sets the colorblind error color to light-medium grey, which is the recommended color. Do not set this value equal to the colorblind normal text color value. Light-medium grey is specified with the values of 160 for red, 160 for green and 160 for blue. The color of the string “Sample Error Text Color” at the top of the dialog box changes to display whatever color corresponds to the current numeric settings.

11. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the dialog box, or Reset to return to the previous settings. A Help button is also available in this dialog box.

12. In the Enable Colorblind Support dialog box, select OK to keep the settings for normal, alert, and error text. Alternatively, select Cancel to leave the dialog box, or Reset to return to the previous settings. A Help button is also available in this dialog box.

13.2.8 Clock and Call Timer command button

The Clock and Call Timer command button enables display of the clock and the call timer. The clock displays when an operator logs on and the call timer displays when a call arrives.

1. In the configuration window, select Clock and Call Timer. (See Figure 77.)

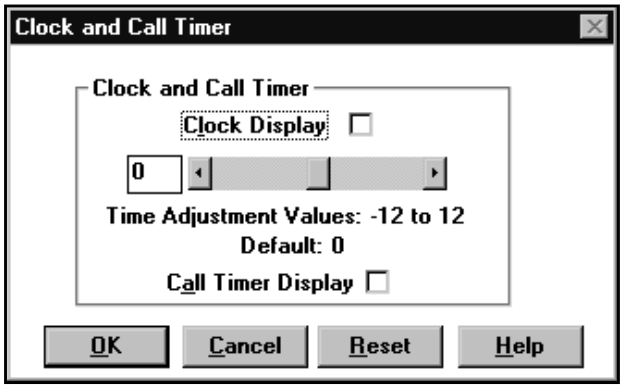


FIGURE 77. Clock and Call Timer dialog box

2. To enable the clock display, select the Clock Display check box.
3. Select the button in the scroll bar and slide it left or right to make adjustments to the time, or enter an integer value in the entry box on the left of the scroll bar.

   The default value is 0. The adjustment range is plus or minus 12 hours.
4. To enable the call timer display, select the Call Timer Display check box.
5. Select OK. The settings are saved when you select Save from the File menu in the Provisioning Tool window. Alternatively, select Cancel to leave the dialog box, or Reset to return to the previous settings. A Help button is also available in this dialog box.

13.2.9 Simultaneous Display of Trunk Group/SPID command button

The Trunk Group/SPID command button enables the simultaneous display of trunk group and service provider identification (SPID).

1. In the configuration window, select Trunk Group/SPID. (See Figure 78.)

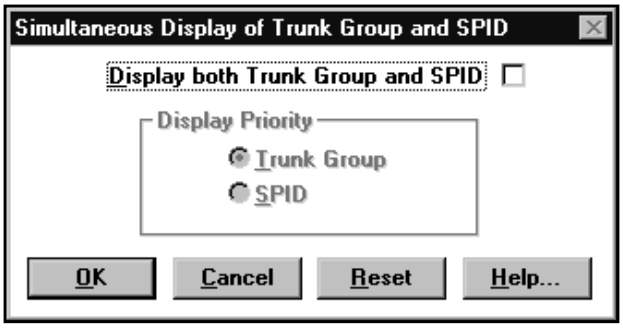


FIGURE 78. Trunk Group/SPID dialog box

2. To enable simultaneous display of trunk group and SPID, select Display both Trunk Group and SPID.
3. In the Display Priority box, select either Trunk Group or SPID. If Trunk Group is selected, Trunk Group displays first. If SPID is selected, SPID displays first.

4. Select OK. The settings are saved when you select Save from the File menu in the Provisioning Tool window. Alternatively, select Cancel to leave the dialog box, or Reset to return to the previous settings. A Help button is also available in this dialog box.

Note: To ensure proper working of this feature, the following guidelines apply:

- When the OPP_ALWAYS_SEND_SPID_INFO parameter (in table TOPSPARM in the DMS switch) is set to "Yes," you must select Display both Trunk Group and SPID in the Simultaneous Display of Trunk Group and SPID window.
- When OPP_ALWAYS_SEND_SPID_INFO is set to "No," do not select Display both Trunk Group and SPID.

13.3 MPXNET provisioning

The MPXNET.INI file contains configuration information about IWS clusters and positions. All positions in a cluster should have the same MPXNET.INI file.

A discussion of the parameters that make up the MPXNET.INI file can be found in *TOPS IWS Base Platform User's Guide*, 297-2251-010.

13.3.1 TDM positions - MPXNET

1. From the top menu bar of the Provisioning Tool window, select File.
2. From the File menu, select New or Open.

   If Open is selected, the Open dialog box displays. If New is selected, a list of files displays.
3. Select MPXNET. (See Figure 79.)

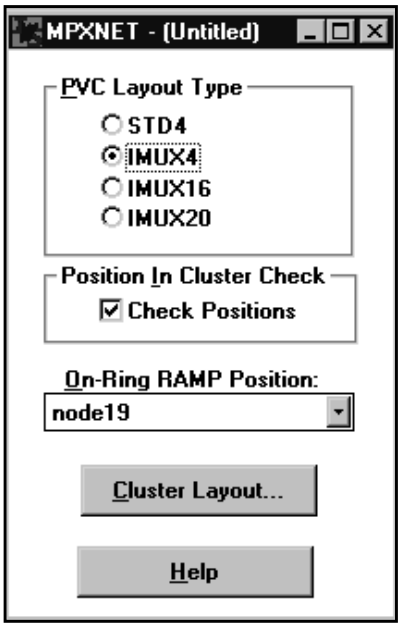


FIGURE 79. MPXNET configuration window

4. In the PVC Layout Type box, select one of the following listings: STD4, IMUX4, IMUX16, or IMUX20.

   STD represents standard layout and IMUX represents increased multiplexed layout. The STD layout supports a 4-position configuration (STD4). The IMUX layout supports a 4, 16, or 20 position configuration (IMUX4, IMUX16, IMUX20).

5. To check a position for its assigned cluster, select the Check Positions option in the Position In Cluster Check box.

   Note: When a RAMP is not datafilled as a position assigned to a cluster, do not select the Check Positions option.

6. To assign an on-ring RAMP, select the down arrow button at the On-ring RAMP Position box. Then select the host name of the on-ring RAMP position from the listings displayed.

   The selected on-ring RAMP position determines where logs are sent. The log destination must be on a valid LAN, but need not be an IWS operator position. Any position (except a DMS gateway) on the LAN can be the on-ring RAMP position if RAMP software is installed. Each cluster must have an on-ring RAMP position.

7. To define the layout of each cluster of operator positions, select Cluster Layout. (See Figure 80.)

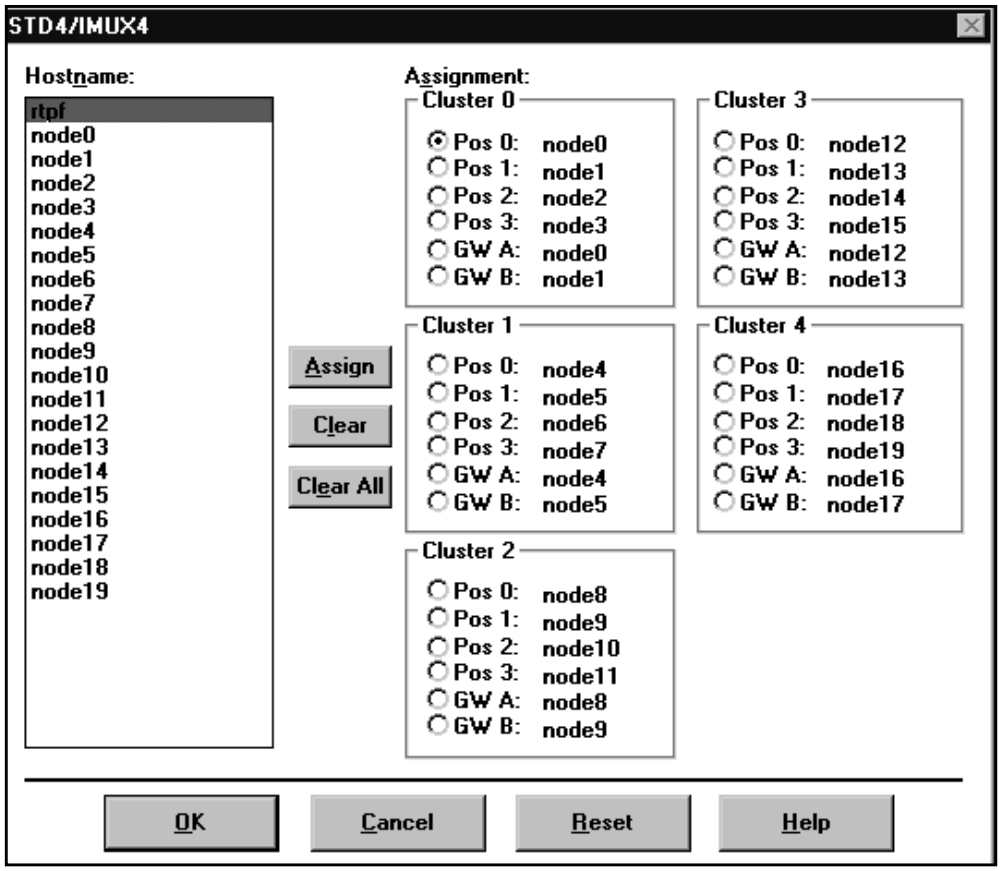


FIGURE 80. Example of MPXNET STD4/IMUX4 dialog box

The cluster dialog box reflects the selection of STD4 or IMUX4 PVC layout type from the MPXNET dialog box. If the IMUX16 PVC layout type is selected in the MPXNET dialog box, a cluster dialog box with a different layout displays. (See Figure 81.)

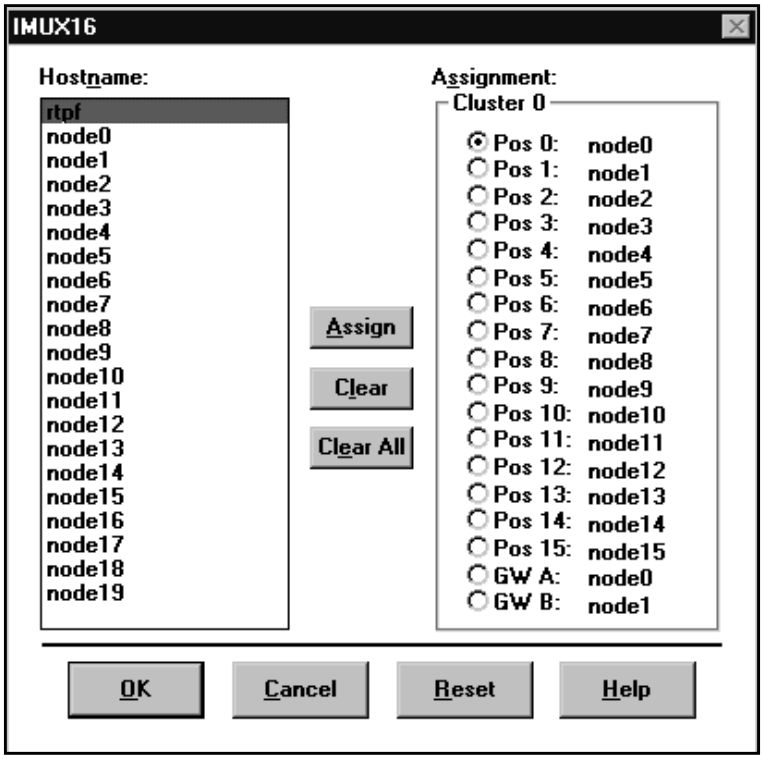


FIGURE 81. Example of MPXNET IMUX16 dialog box

Note: Within a LAN, positions are organized into clusters. Each cluster has one or two DMS gateways. The cluster datafill maps the IWS position/cluster definitions to the network that addresses the scheme provided by the network TCP/IP software. At least one position must be assigned in one cluster. Clusters must be datafilled in order (for example, Cluster 0 must be datafilled before Cluster 1) and GWA (Gateway A) must be assigned in any cluster with assigned positions. GWB (Gateway B) is optional.

In the dialog box, the Hostname box lists all host names in the C:\WINDOWS\SYSTEM32\DRIVERS\ETC\HOSTS file.

a. To assign a position to a host name, select the radio button next to the position, then select Assign.

b. To clear a host name from a position, select the radio button next to the position, then select Clear. You can also select Clear All to clear the host names assigned to all the positions.

   Note: The position assignments in the Hostname box MUST MATCH the assignments made in the C:\WINDOWS\SYSTEM32\DRIVERS\ETC\HOSTS file. The HOSTS file is not available for editing with the provisioning tool.

This file can be referred to or edited using a standard Windows editor such as Notepad. If these assignments do not match, the positions cannot initialize.

c. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the dialog box, or Reset to return to the previous settings.

4. When you return to the MPXNET configuration window, you can save the settings by selecting Save from the File menu in the provisioning tool window. You can also close the window by selecting Close from the File Menu, when you will be prompted to save the file.

13.3.2 IP Positions - MPXNET

1. From the top menu bar of the Provisioning Tool window, select File.
2. From the File menu, select New or Open.

   If Open is selected, the Open dialog box displays. If New is selected, a list of files displays.

3. Select MPXNET. (See Figure 82.)

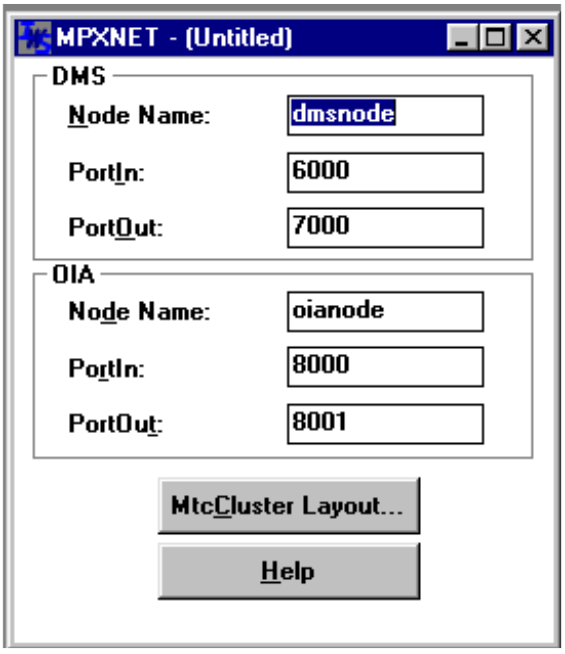


FIGURE 82. MPXNET IP configuration window

4. In the DMS section, enter a valid node name from the HOSTS file that specifies the IP address of the DMS switch with which the position is to communicate.

   For the PortIn value of the DMS section, enter the UDP port number that will be used for messaging from the DMS to the IP position.

   For the PortOut value of the DMS section, enter the UDP port number that will be used for messaging from the IP position to the DMS.

If you are using the OIA application, in the OIA section, enter a valid node name from the HOSTS file that specifies the IP address of the OIA database with which the position is to communicate.

For the PortIn value of the OIA section, enter the UDP port number that will be used for messaging from the OIA database to the IP position.

For the PortOut value of the OIA section, enter the UDP port number that will be used for messaging from the IP position to the OIA database.

5. To define the layout of each cluster of operator positions, select MtcCluster Layout. (See Figure 83.)

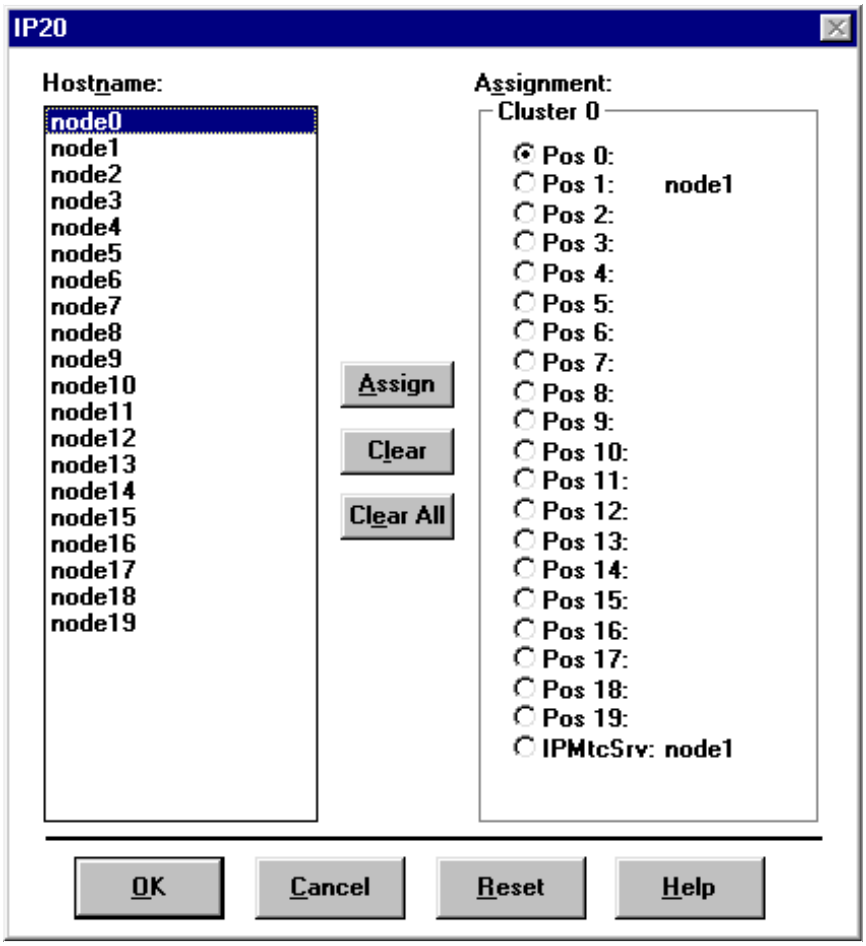


FIGURE 83. Example of MPXNET IP Maintenance dialog box

In the dialog box, the Hostname box lists all host names in the C:\WINDOWS\SYSTEM32\DRIVERS\ETC\HOSTS file.

a. To assign a position to a host name, select the radio button next to the position, then select Assign.

b. To clear a host name from a position, select the radio button next to the position, then select Clear. You can also select Clear All to clear the host names assigned to all the positions.

Note: The position assignments in the Hostname box MUST MATCH the assignments made in the C:\WINDOWS\SYSTEM32\DRIVERS\ETC\HOSTS file. The HOSTS file is not available for editing with the provisioning tool. This file can be referred to or edited using a standard Windows editor such as Notepad. If these assignments do not match, the positions cannot initialize.

c. The IPMtcSrv specifies the RAMP position that maintains this IP position.

4. When you return to the MPXNET configuration window, you can save the settings by selecting Save from the File menu in the provisioning tool window. You can also close the window by selecting Close from the File Menu, when you will be prompted to save the file.

13.4 SCRPTINI provisioning

The SCRPTINI.INI file contains the following information:

- Standard versus enhanced scripting mode setting
- Scripting window size and location for each application that displays the scripting window
- Standard scripting mode priority settings for determining which call arrival data drives the contents of the script window
- Other miscellaneous scripting settings

To configure IWS scripting, the IWS Provisioning tool, PVTOOL.EXE, can be used as follows:

1. From the top menu bar of the Provisioning Tool window, select File.
2. To edit a pre-existing SCRPTINI.INI file, select “Open”. A Windows “Open” dialog box displays. Select the SCRPTINI.INI file in the C:\WINDOWS directory. To create a new SCRPTINI.INI file, select “New”. A template list appears. Select SCRPTINI.
3. By default, parameters that relate to enhanced scripting are grayed out. (See Figure 84.)

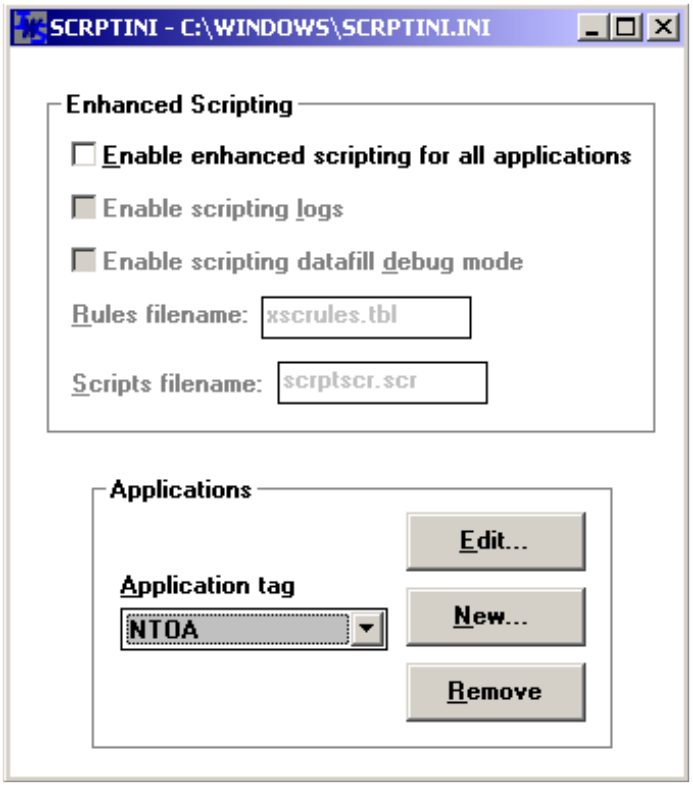


FIGURE 84. SCRPTINI configuration window for standard scripting

If the enhanced scripting check box is checked, then all the enhanced scripting related parameters are no longer grayed out. (See Figure 85.). Note also that in the figure the user has enabled enhanced scripting's datafill debug functionality.

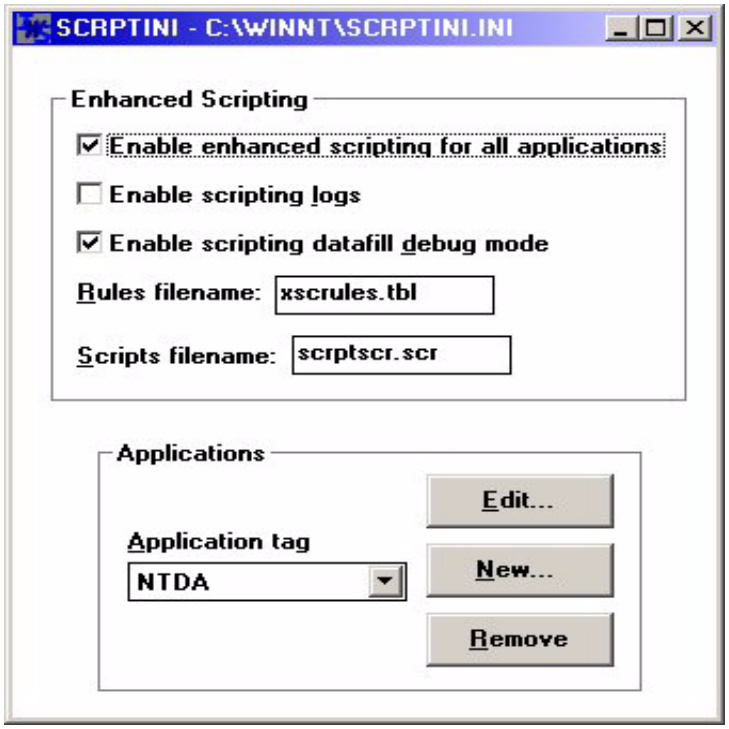


FIGURE 85. SCRPTINI configuration window for enhanced scripting

4. To configure the scripting parameters that pertain to a particular application, select the down arrow button at the Applications box to display the available applications. Then select the appropriate application from the displayed list (for example, NTOA or NTDA).

   Note: As of IWS release 13.0, the NTOA/NTOA Plus application was renamed the IWS Billing application. In the Applications box, however, continue to select NTOA when you wish to configure the scripting window to automatically display on call arrivals in the IWS Billing application.

5. Select Edit to edit the scripting settings for an existing application. (See Figure 86.)

   The Edit Application window includes a field for the name of the selected application (up to eight characters), a box for enabling display of the scripting window, four fields to define the X and Y coordinates, the width, and the height of the scripting window, and other application specific scripting settings.

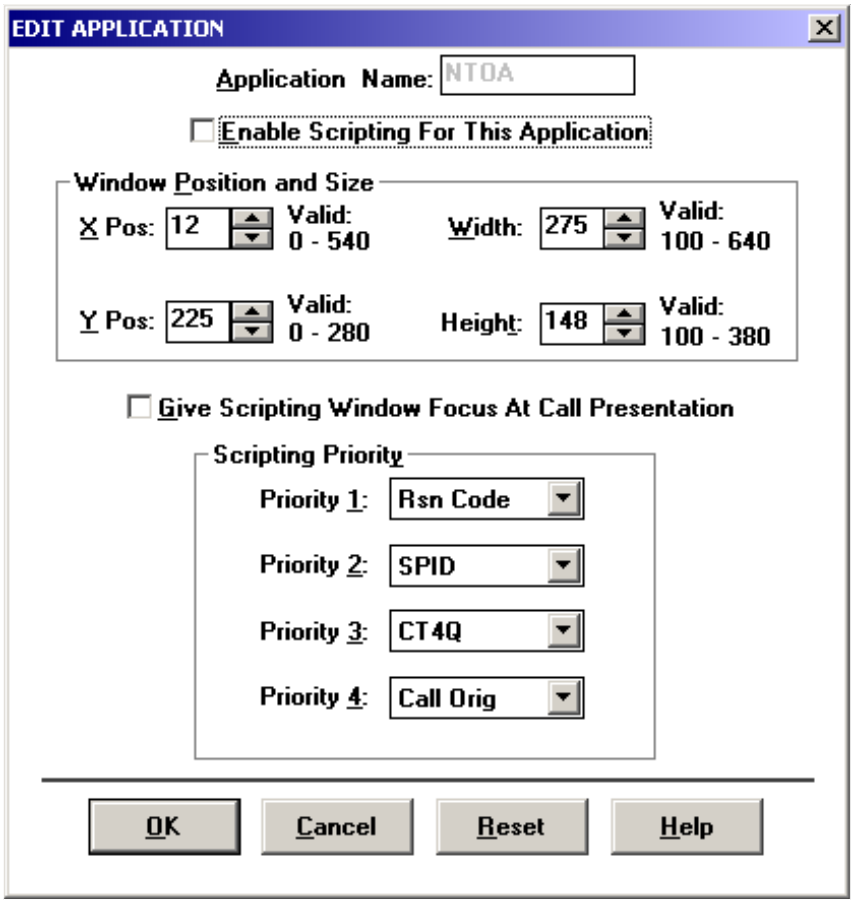


FIGURE 86. Example of the Edit Application window with NTOA (IWS Billing application) selected

6. Select the Enable Scripting checkbox if you want automatic display of the scripting window when the call arrives in this application.
7. In the Window Position and Size section, you can change the values for the X and Y coordinates, width, and height for the scripting window. You can either enter a value or use the up/down arrow buttons to make these changes.
8. If NTOA (IWS Billing) is the selected application, you can select the GiveScrptFocusOnArrival option to give the scripting window focus automatically at call arrival. The default is to give focus to an NTOA call processing field, for example, Clg field, Cld field, etc.
9. If either the NTDA or NTOA application is selected as the application name, and if enhanced scripting mode is not selected, the Scripting Priority section (lower portion of the window) is not grayed out and can be datafilled. For standard scripting, these priorities are used in determining which call information is used by IWS to determine the text contents of the scripting window.
    - If NTDA is the selected application, you can set scripting priority among CT4Q, call origination type, and SPID.

- If IWS Billing (NTOA) is the selected application, you can set the scripting priority among CT4Q, call origination type, SPID, and reason code.

When there are duplicates in the priority choices, an error message window shows. (See Figure 87.)

FIGURE 87. Example of error window when duplicates occur

10. Select OK on “Edit Application” window to close the window and keep the current settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous settings. A Help button is also available in this window. Changes made in this window will be saved when you select Save from the File menu in the Provisioning Tool window.

The SCRPTINI.INI file by default has a section for both NTOA and NTDA. A section can be created for another IWS registering application that supports IWS scripting. To configure a new application section, do the following steps;

1. Enter the desired application name in the Application Name box. The application name can contain up to eight characters. (See Figure 88.). Note, if you enter one of the pre-existing applications, NTDA or NTOA as the application name, the current settings for that application appear.

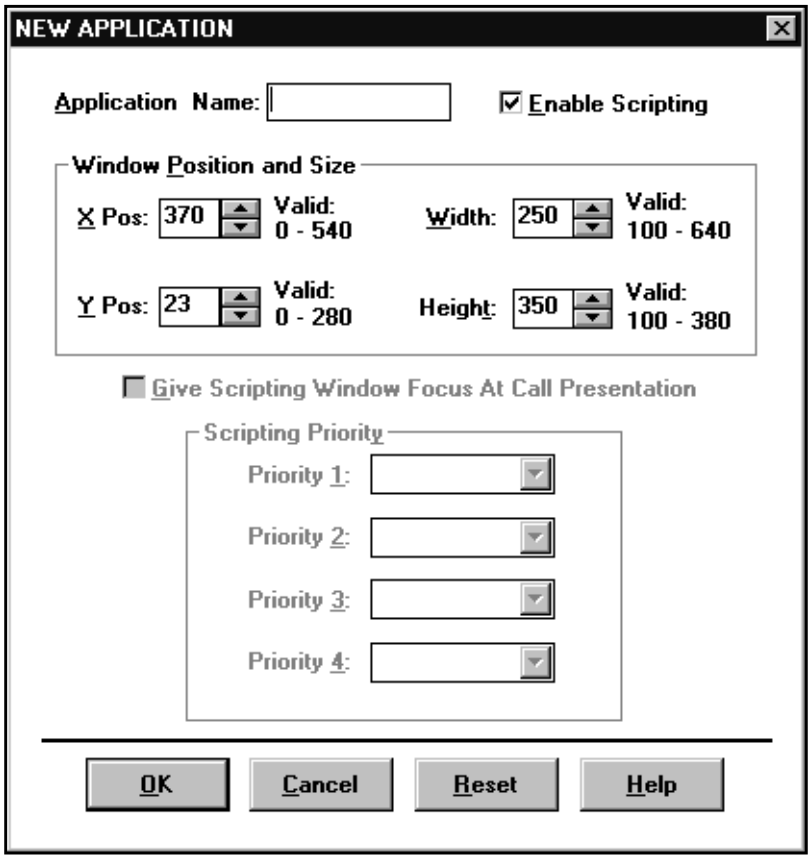


FIGURE 88. Example of the SCRPTINI New Application window

2. Follow the steps for the Edit Application procedure (page 123) to customize the scripting settings for the application.
3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous settings. A Help button is also available in this window.

   The SCRPTINI configuration window redisplays. A new application is added to the Applications list box in the SCRPTINI configuration window. A maximum of 16 applications can be listed. The New command button is disabled once the maximum is reached.

An application section can be removed from the SCRPTINI.INI file.

1. Select an application in the Applications list box in the configuration window.
2. Select Remove.

   A confirmation message displays.
3. Select Yes to confirm the deletion. The selected application section is removed from the SCRPTINI file.

   Alternatively, select “No” to cancel the deletion.

   The configuration window redisplays.
4. When you are done with the command buttons in the configuration window and want to save the settings, in the Provisioning Tool window select File, then select Save.

   The Save As option enables you to save the SCRPTINI file to another name, but the IWS will not read this file because the IWS always looks for the file C:\WINDOWS\SCRPTINI.INI.
5. To close the configuration window, select Close from the File menu.

For more information on configuring IWS scripting, refer to *TOPS IWS Base HMI Application Guide*, 297-2251-013.

13.5 CLNTTCPI provisioning

CLNTTCPI.INI is reserved for Nortel Networks maintenance use.

13.6 NTOAINI provisioning

The NTOAINI.INI file contains configuration information for the IWS Billing application. For more information on the NTOAINI.INI file, refer to *TOPS IWS Billing Application User Guide*, 297-2251-016.

1. From the top menu bar of the Provisioning Tool window, select File.
2. From the File menu, select New or Open.
3. If Open is selected, the Open dialog box displays. If New is selected, a list of files displays.
4. Select NTOAINI. (See Figure 89.)

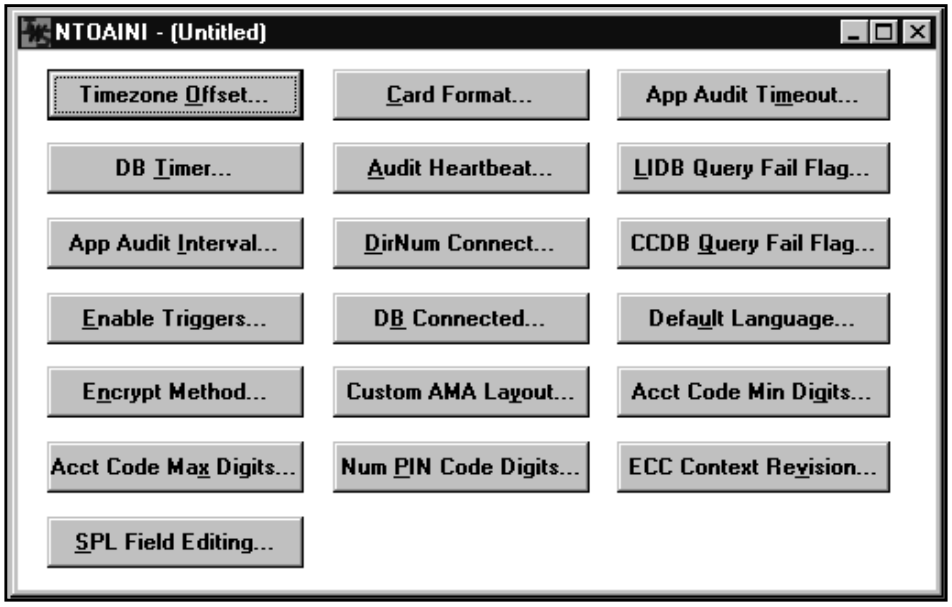


FIGURE 89. Example of NTOAINI configuration window

5. Select the desired command buttons in the configuration window. The following sections describe the purpose of these command buttons.
6. When you are done with the command buttons and want to save the values and settings specified, select File, then select Save.

   The Save As option enables you to save the file with another name.
7. To close the configuration window, select Close from the File menu.
8. A message box displays to prompt you to save before closing the window.

13.6.1 Timezone Offset command button

1. To make timezone adjustments, select Timezone Offset in the configuration window. (See Figure 90.)

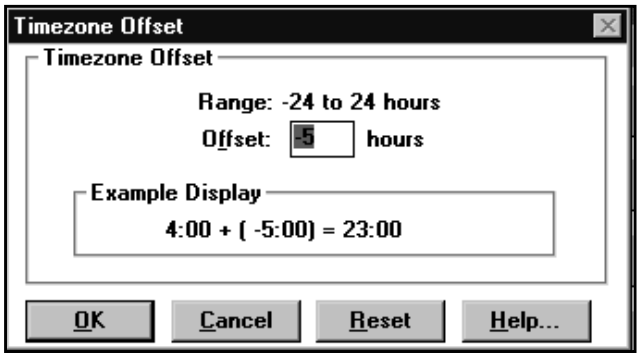


FIGURE 90. Example of Timezone Offset dialog box

2. In the Offset entry box, enter a number in the range of +/-24 hours.

This determines the number of hours added to Greenwich mean time (GMT) to get local time.

3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.2 Card Format command button

1. To set the number of digits between each separator in a card number, select Card Format in the configuration window. (See Figure 91.)

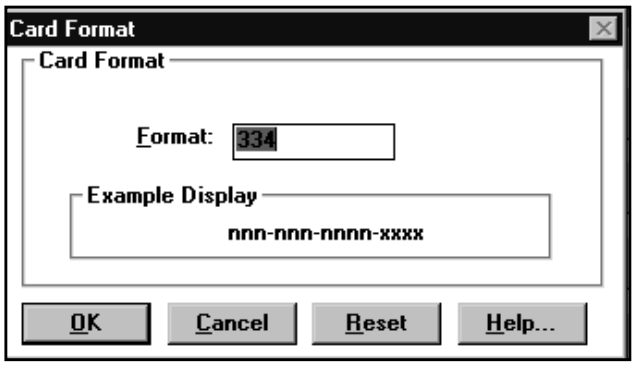


FIGURE 91. Example of Card Format dialog box

2. In the Format entry box, enter the number of digits you want to display between each separator.

   The sum of the digits must not exceed ten. The example in the dialog box reflects your entry. “n” represents a digit. “x” represents the PIN.

3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.3 Application Audit Timeout command button

1. To set the number of seconds the IWS Billing application waits for an audit response from the calling card database (CCDB), select App Audit Timeout in the configuration window. (See Figure 92.)

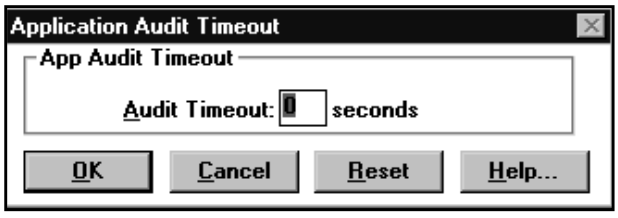


FIGURE 92. Example of Application Audit Timeout dialog box

2. In the Audit Timeout entry box, enter a value.

The value can range from 1–65 but must be less than the App Audit Interval. Otherwise, zero will be used.

3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.4 DB Timer command button

1. To set the number of seconds the IWS Billing application waits for a response to an operator query from the CCDB or the Intelligent Service Node Provisioning System (IPS), select DB Timer in the configuration window. (See Figure 93.)

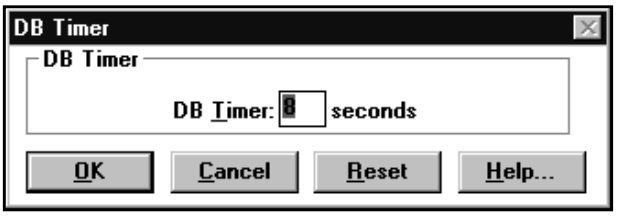


FIGURE 93. Example of DB Timer dialog box

2. In the DB Timer entry box, enter a value between 1–65.
3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.5 Audit Heartbeat command button

1. To set the number of seconds the datalink (a component in the IWS Billing application) waits for a response from the CCDB, select Audit Heartbeat in the configuration window. (See Figure 94.)

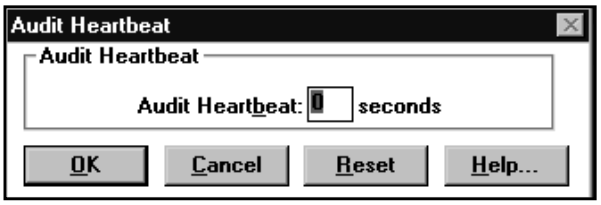


FIGURE 94. Example of Audit Heartbeat dialog box

2. In the Audit Heartbeat entry box, enter a value between 0–65.
3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.6 LIDB Query Fail Flag command button

1. To block or unblock a call or to send custom AMA when a domestic call is completed, select LIDB Query Fail Flag in the configuration window. (See Figure 95.)

FIGURE 95. Example of LIDB Query Fail Flag dialog box

2. Check or uncheck the Query Flag checkbox.

   When this box is unchecked, a call is blocked and no custom AMA is sent when a domestic call is completed. This indicates one of the following:

   - the CCDB is active, but no card is found, and the LIDB (line information database) is inactive.
   - the CCDB and the LIDB are inactive.

3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.7 App Audit Interval command button

1. To set the number of seconds between each Application Audit message sent to the CCDB, select App Audit Interval in the configuration window. (See Figure 96.)

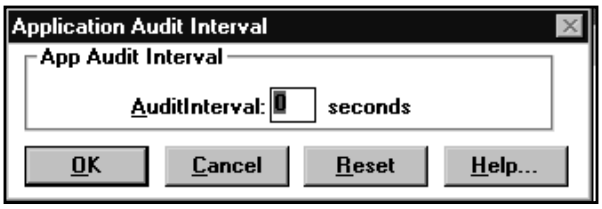


FIGURE 96. Example of Application Audit Interval dialog box

2. In the AuditInterval entry box, enter a value between 1–65.
3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.8 DirNum Connect command button

1. To connect to a directory number automatically upon pressing the **Start** key, select DirNum Connect in the configuration window. (See Figure 97.)

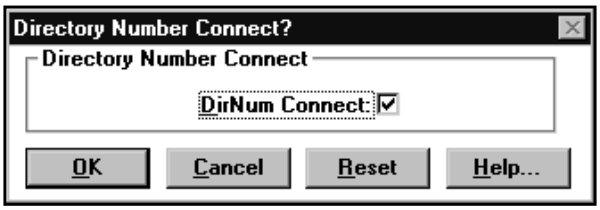


FIGURE 97. Example of Directory Number Connect dialog box

The DirNumConnect checkbox is checked by default. This indicates the directory number is to be outpulsed.

Note: If DirNumConnect and Enable Triggers (see page 133) are both checked, an inconsistent trigger message can occur.

2. Check or uncheck the DirNumConnect checkbox.
3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.9 CCDB Query Fail Flag command button

When the CCDB is inactive and the LIDB is active, the CCDB Query Fail Flag command button can be used to:

- block calls
- complete domestic calls
- send custom AMA

1. Select CCDB Query Fail Flag in the configuration window to do any of the above. (See Figure 98.)

FIGURE 98. Example of CCDB Query Fail Flag dialog box

2. Check or uncheck the Query Flag checkbox.
3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.10 Enable Triggers command button

1. To send trigger messages to the DMS switch, select Enable Triggers in the configuration window. (See Figure 99.)

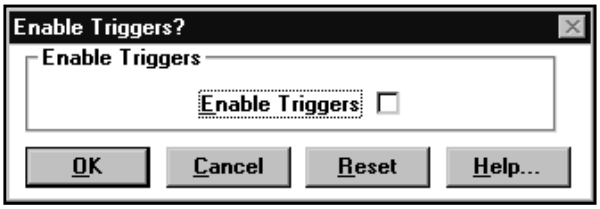


FIGURE 99. Example of Enable Triggers dialog box

2. Check or uncheck the Enable Triggers checkbox.
3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

Note: If DirNumConnect and Enable Triggers are both checked, an inconsistent trigger message can occur.

13.6.11 DB Connected command button

1. To connect to or disconnect from the CCDB or the Intelligent Service Node Provisioning System (IPS), select DB Connected in the configuration window. (See Figure 100.)

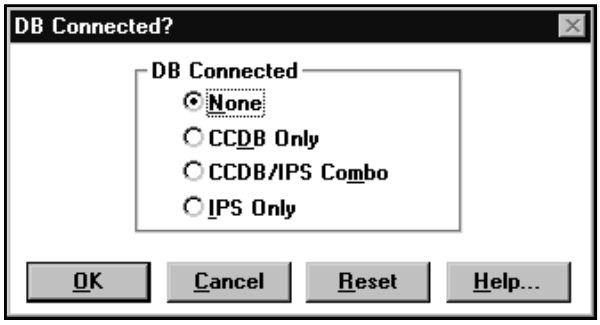


FIGURE 100. Example of DB Connected dialog box

2. Select one of the following four options in the dialog box:
   - None (disconnect from all databases)
   - CCDB Only (connect to the CCDB)
   - IPS Only (connect to the IPS)
   - CCDB/IPS Combo (connect to both IPS and CCDB)

   Note: When you configure the NTOAINI.INI file for the IWS Billing application, select either CCDB Only or IPS Only in the dialog box.

   The IWS Billing application provides operator backup support for Billing Access Services on the IWS. Billing Access Services uses the IPS to manage certain types

of datafill. When a call arrives at an operator position from Billing Access Services, the position automatically queries the IPS database for basic reseller information (a greeting, terminating brand, or allowed billing types). If connectivity to the IPS is established, the IPS returns any restrictions or terminating brand information, to display at the position.

3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.12 Default Language command button

1. To choose a default language, select Default Language in the configuration window. (See Figure 101.)

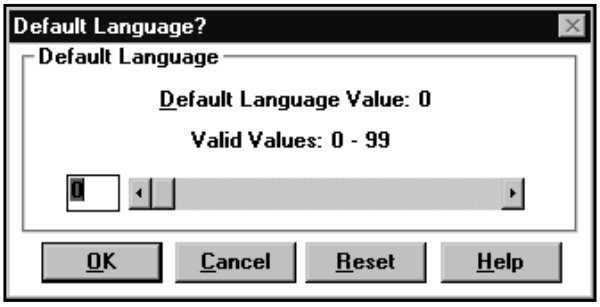


FIGURE 101. Example of Default Language dialog box

2. In the dialog box, enter a value (from 0–99) in the entry box or slide the scroll button to select a value to indicate the wanted language.

   A selected default language is needed when one is not supplied by the calling party or the XDBCOMP.TBL file.

3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.13 Encrypt Method command button

1. To choose an encryption method for the enhanced calling card PIN, select Encrypt Method in the configuration window. (See Figure 102.)

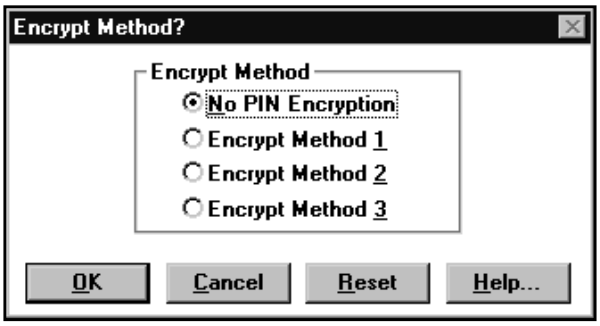


FIGURE 102. Example of Encrypt Method dialog box

2. In the dialog box, select either no PIN encryption or one of the encryption methods.

   The default encryption method is No PIN Encryption. The same method must be used on all enhanced calling card components, including Calling Card ServiceNode and Calling Card Database.

3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.14 Custom AMA Layout command button

1. To select a custom AMA layout when the record is sent to the DMS switch, select Custom AMA Layout in the configuration window. (See Figure 103.)

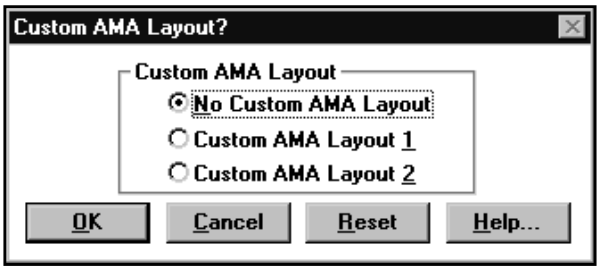


FIGURE 103. Example of Custom AMA Layout dialog box

2. In the dialog box, select one of the AMA layout options.
3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.15 Acct Code Min Digits command button

1. To select the minimum number of digits in the account code, select Acct Code Min Digits in the configuration window. (See Figure 104.)

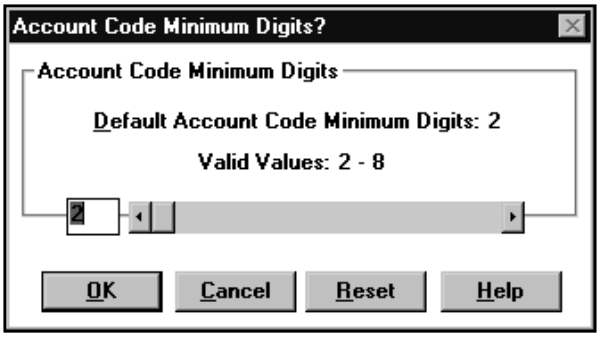


FIGURE 104. Example of Account Code Minimum Digits dialog box

2. In the dialog box, enter a value in the entry box or move the scroll button to select a value from 2–8. The default is 2.
3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.16 Account Code Max Digits command button

1. To select the maximum number of digits in the account code, select Acct Code Max Digits in the configuration window. (See Figure 105.)

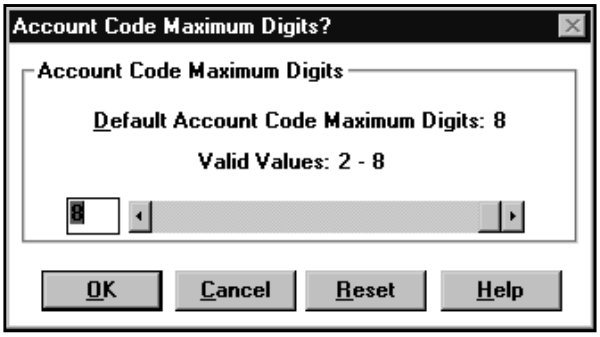


FIGURE 105. Example of Account Code Maximum Digits dialog box

2. In the dialog box, enter a value in the entry box or move the scroll button to select a value between 2–8.
3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.17 Num PIN Code Digits command button

1. To select the maximum number of digits a valid PIN number can contain, select Num PIN Code Digits in the configuration window. (See Figure 106.)

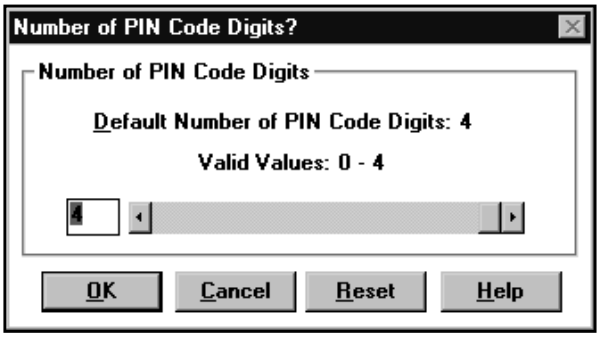


FIGURE 106. Example of Number of PIN Code Digits dialog box

2. In the dialog box, enter a value in the entry box or move the scroll button to select a value from 0–4.
3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.18 ECC Context Revision command button

1. To select a revision level for an enhanced calling card (ECC) context block to be created by the IWS, select ECC Context Revision in the configuration window. (See Figure 107.)

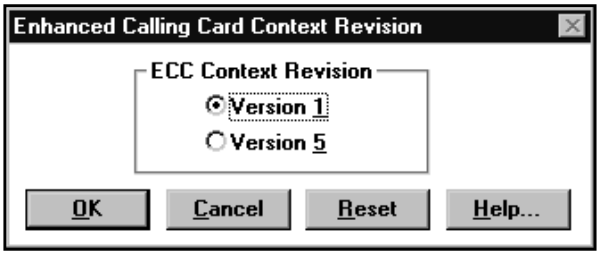


FIGURE 107. Example of ECC Context Revision dialog box

When an IPS database is not connected, the IWS creates a context block. A revision level is needed to create the context block.

If the database is a CCDB and an enhanced calling card is used by the caller, IWS uses the revision level specified in the ECC Context Revision to create a context block.

2. In the dialog box, select the revision level of either version 1 or 5.

   The default is version 1.

3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.6.19 SPL Field Editing command button

1. To allow editing in the special field when you press the **Edit** key, select SPL Field Editing in the configuration window. (See Figure 108.).

FIGURE 108. Example of Special Field Editing dialog box

2. In this dialog box, check the SPL Field Editing checkbox.
3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this window.

13.7 MPXTOP provisioning

The MPXTOP.INI file contains various connection parameters used by the IWS Billing and NTDA applications. For more information on the MPXTOP.INI file, refer to *TOPS IWS Billing Application User Guide*, 297-2251-016, or *TOPS IWS Base Platform User's Guide*, 297-2251-010.

Note: The connection parameters for the NTDA application are set using NTDA Setup. Both the NTDA section of the MPXTOP.INI file and information on NTDA Setup can be found in *TOPS IWS NTDA Application Guide*, 297-2251-017.

1. From the top menu bar of the Provisioning Tool window, select File.

   From the File menu, select New or Open.

   If Open is selected, the Open dialog box displays. If New is selected, a list of files displays.

2. Select MPXTOP. (See Figure 109.)

FIGURE 109. Example of the MPXTOP configuration window

3. Select the NTOA Service Number 16 button to enter primary and secondary IP address information. (See Figure 110.)

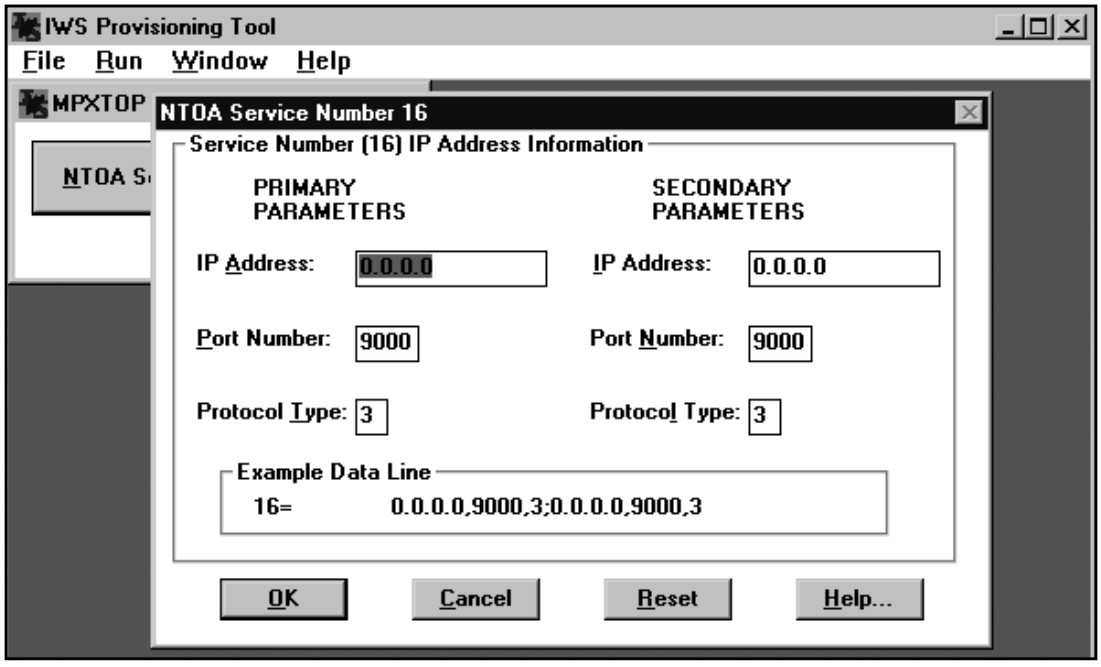


FIGURE 110. Example of the NTOA Service Number 16 dialog box (for IWS Billing)

4. In the dialog box, enter the IP address (valid range is 0 to 255.255.255.255), port number (valid range is 0 to 9000), and protocol type (valid range is 3) for primary and secondary parameters as wanted.

5. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this dialog box.

13.8 Datafilling table files

Table files provide for the orderly reference and location of data. All IWS table files are datafilled by default, but you may wish to customize some or all of these files for your site. Even though table files are local to the IWS position, note that many are referenced to

tables in the DMS switch and the values must correspond. Each table has a help section, where you will find references to table files in the DMS switch, if any exist.

TOPS IWS Base Platform User's Guide, 297-2251-010, *TOPS IWS Billing Application User Guide*, 297-2251-016, *TOPS IWS NTDA Application Guide*, 297-2251-017, *TOPS IWS OIA Application Guide*, 297-2251-012, and *TOPS IWS Base HMI Application Guide*, 297-2251-013 all contain discussions of the table files provided by the applications they reference.

Follow the steps below to change the datafill in a table file.

Note: The process of datafilling the XFNCTS and XCT4QMNU table files differs slightly from that of other table files. For instruction on how to datafill the XFNCTS table file, refer to section 13.10 on page 144. For instruction on how to datafill the XCT4QMNU table file, refer to section 13.11 on page 147.

1. From the top menu bar of the Provisioning Tool window, select File.
2. From the File menu, select New or Open.
3. If you chose Open, select Table File (*.tbl). in the List files of type box. If you chose New, select Table File.

   A list of table files displays.
4. Select a file from the listing; for example, file XAltRte. (See Figure 111.)

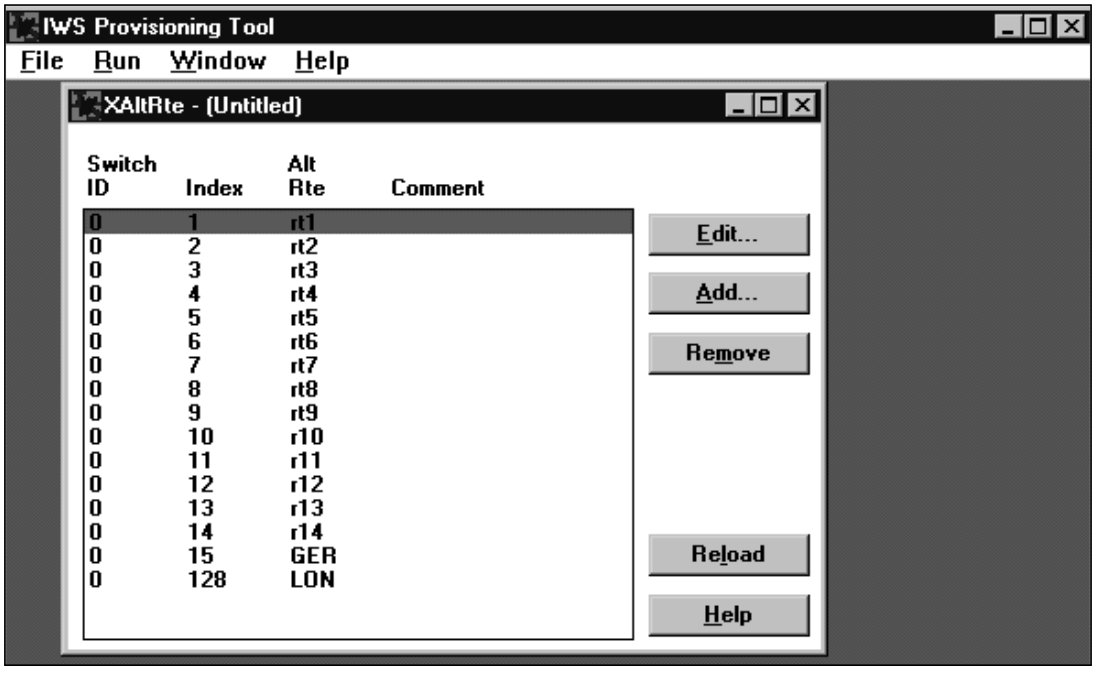


FIGURE 111. Example of a table file dialog box

5. To customize the datafill, select the line you wish to change. For example, select the line that contains Switch ID as 0, Index as 1, Alt Rte as rt1. Then select Edit to open the Edit dialog box. (See Figure 112.)

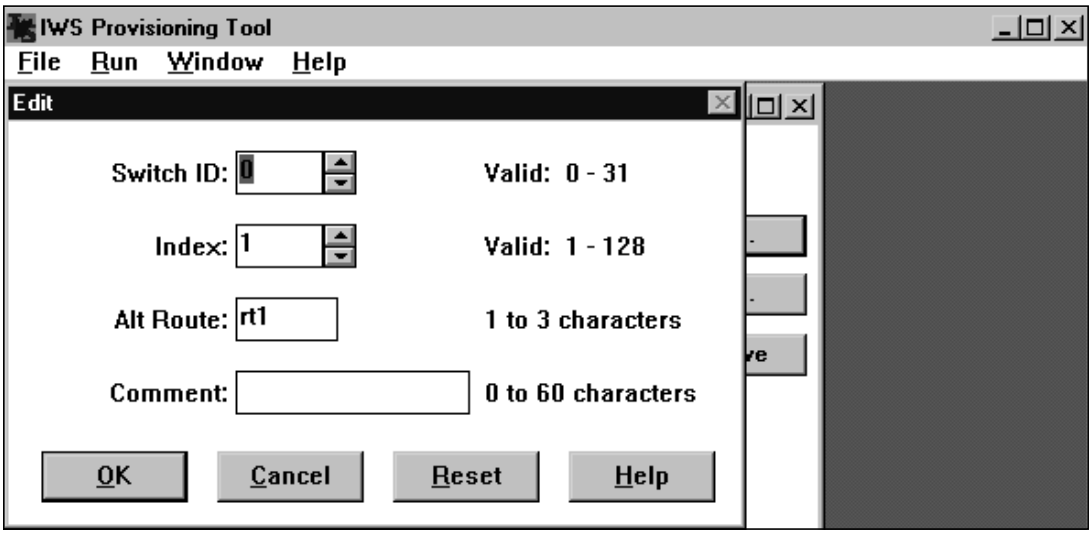


FIGURE 112. Example of Edit dialog for a table file

6. Select or make an entry for each entry box within the valid range indicated.
7. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this dialog box.
8. To add data, select Add to open the Add dialog box. (See Figure 113.)

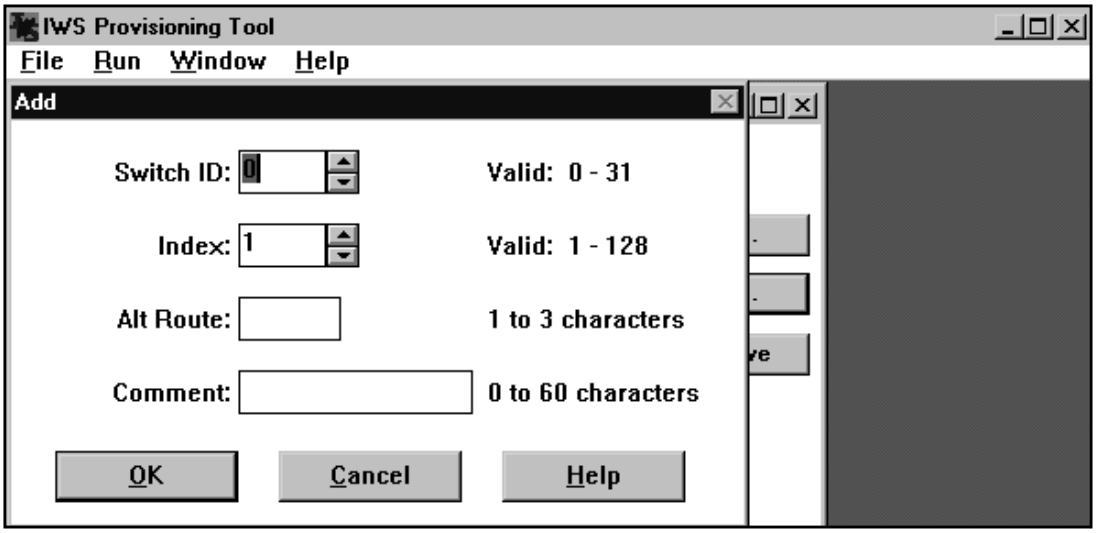


FIGURE 113. Example of Add dialog box for a table file

9. Select or type a value for each entry box within the valid range indicated.
10. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this dialog box.
11. To remove data displayed, select the data, then select Remove. A confirmation message displays.

12. To reset all the data in the file to the settings in place at the last save command, select Reload.

You can access online help for each file by selecting the Help option that is available in the main table window and the Edit and Add windows. (See Figure 114.)

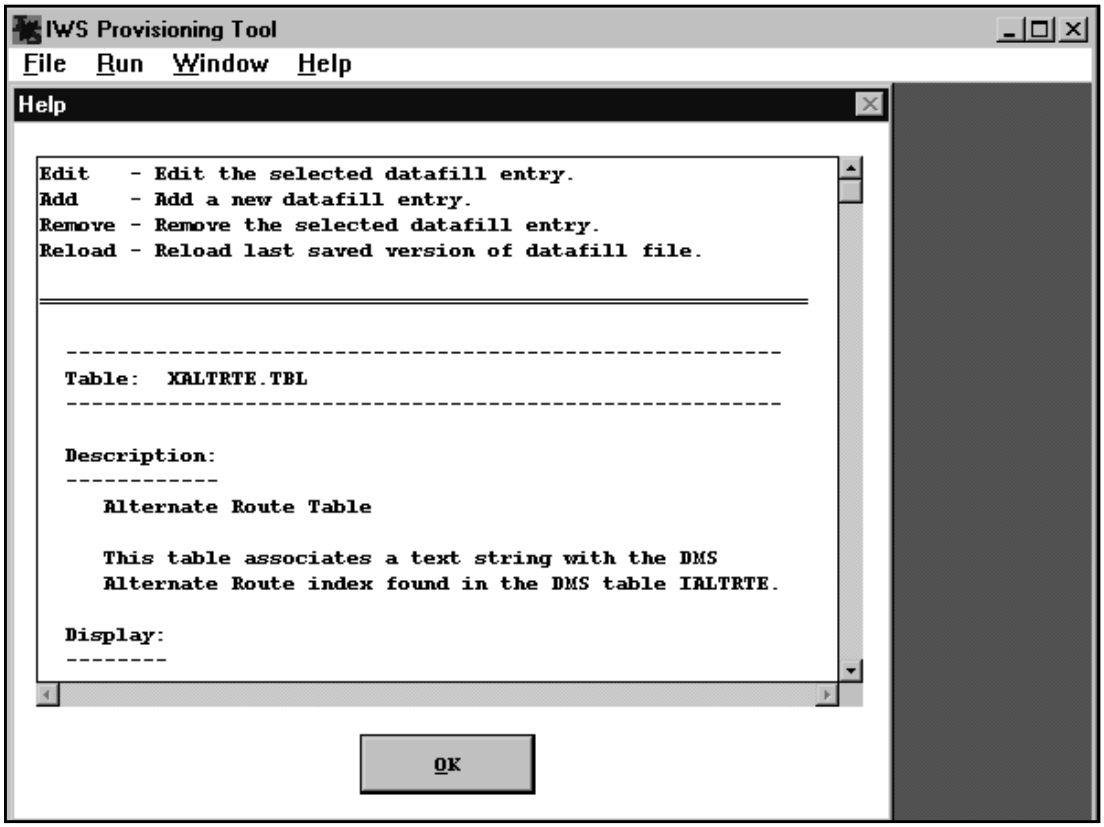


FIGURE 114. Example of Help dialog for a table file

13.9 Datafilling language files

Language files contain datafillable text strings for the IWS screen displays. Each file comes with online help text.

TOPS IWS Base Platform User's Guide, 297-2251-010, *TOPS IWS Billing Application User Guide*, 297-2251-016, *TOPS IWS NTDA Application Guide*, 297-2251-017, *TOPS IWS OIA Application Guide*, 297-2251-012, and *TOPS IWS Base HMI Application Guide*, 297-2251-013 all contain discussions of the language files provided by the applications they reference.

Follow the steps below to change the datafill in a language file.

1. From the top menu bar of the Provisioning Tool window, select File.
2. From the File menu, select New or Open.
3. If you chose Open, select Language File (*.lng). in the List files of type box. If you chose New, select Language File.

A list of language files displays.

4. Select a file from the listing; for example, file IDLMSA. (See Figure 115.)

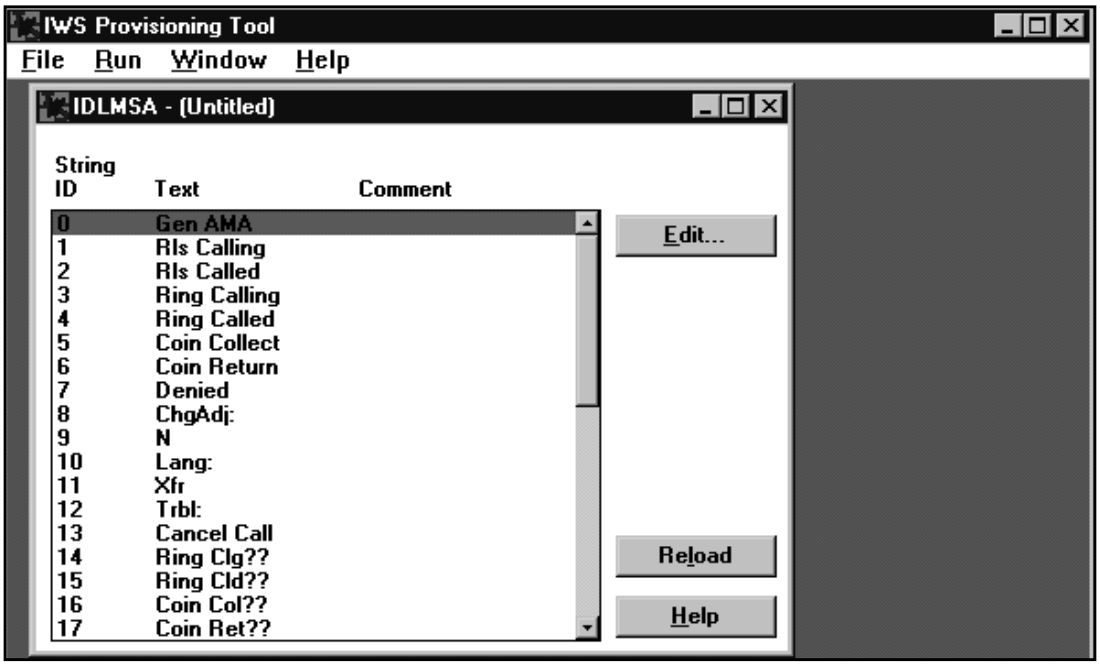


FIGURE 115. Example of language file dialog box

5. To change the data displayed, select the data. For example, select the line that contains String ID as 0, Text as Gen AMA. Then select Edit. (See Figure 116.)

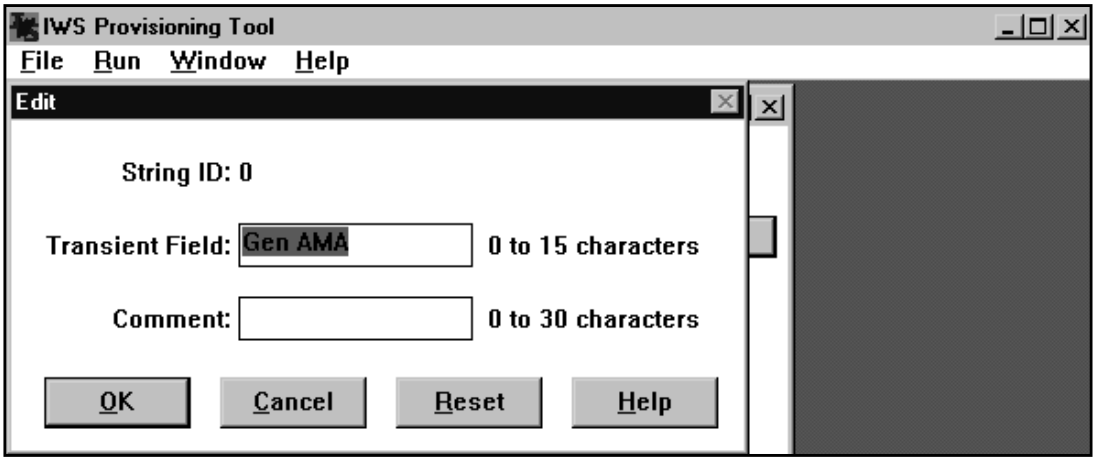


FIGURE 116. Example of Edit dialog box

6. Select or make an entry for each entry box within the valid range indicated.
7. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this dialog box.
8. To reset all the data in the file to the settings in place at the last save command, select Reload.

You can access online help for each file by selecting the Help option that is available in the main table window and the Edit window. (See Figure 117.)

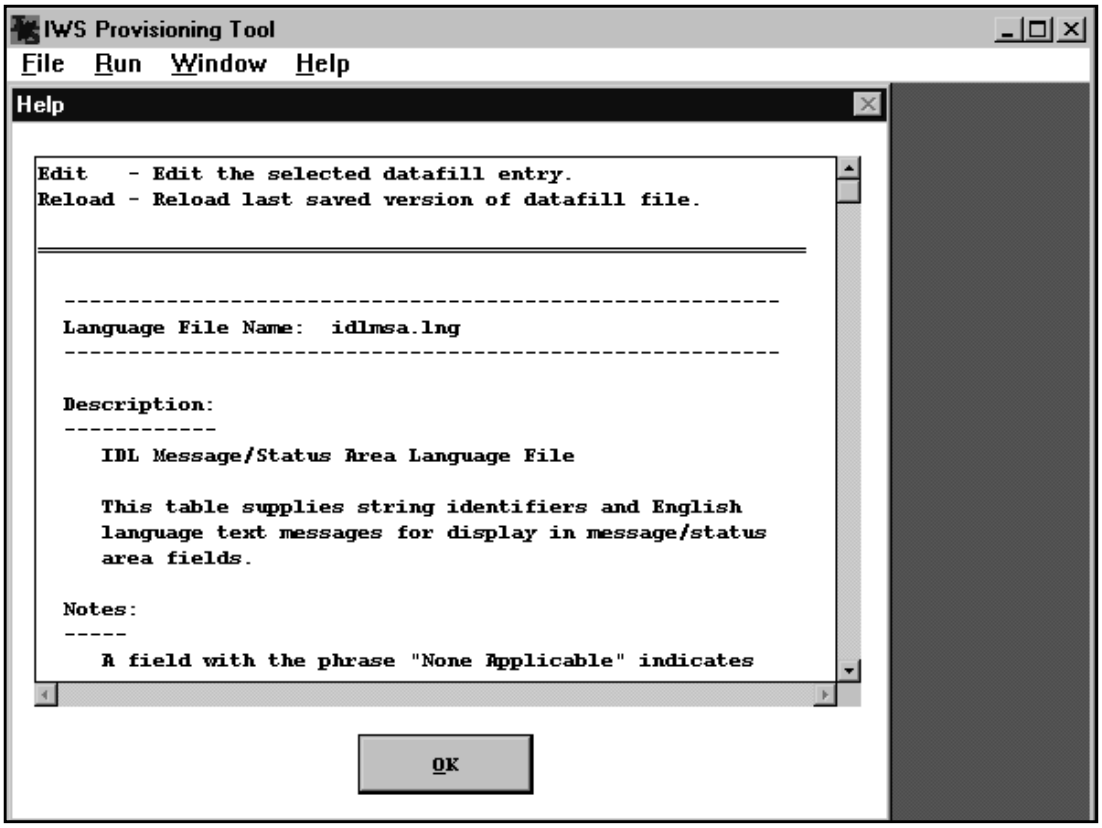


FIGURE 117. Example of Help dialog box for a language file

13.10 Datafilling the XFNCTS table file

1. From the top menu bar of the Provisioning Tool window, select File.
2. From the File menu, select New or Open.
3. If you chose Open, select Table File (*.tbl). in the List files of type box. If you chose New, select Table File.

   A list of table files displays.

4. Select file XFNCTS from the listing. (See Figure 118.)

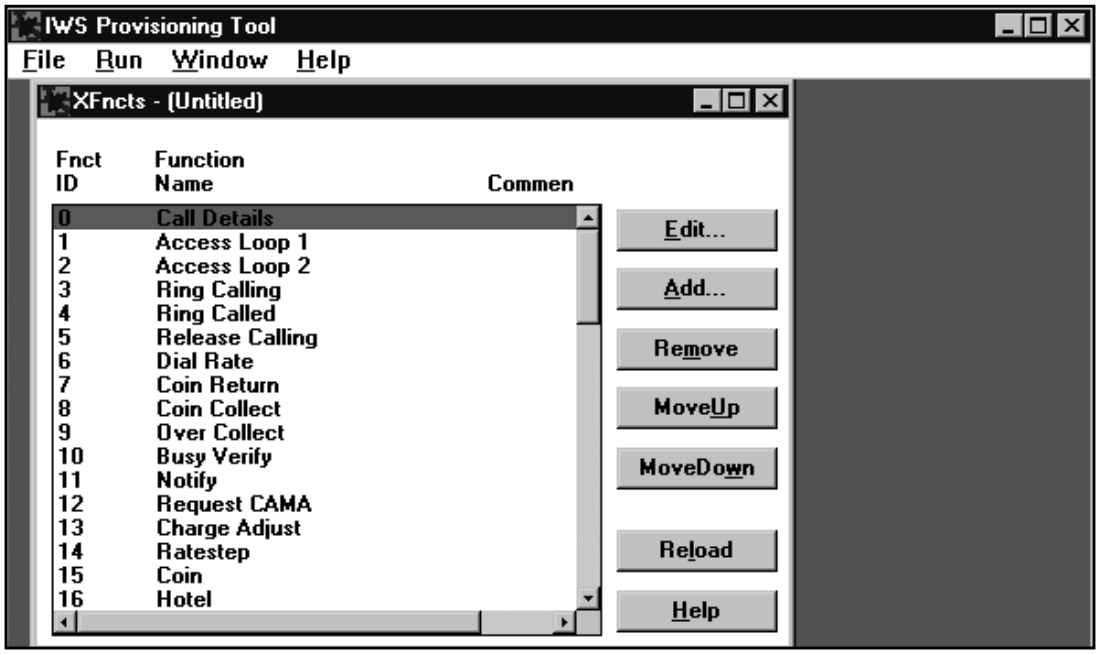


FIGURE 118. Example of an XFNCTS dialog box

5. To change data, select the function name to be changed, then select Edit. (See Figure 119.)

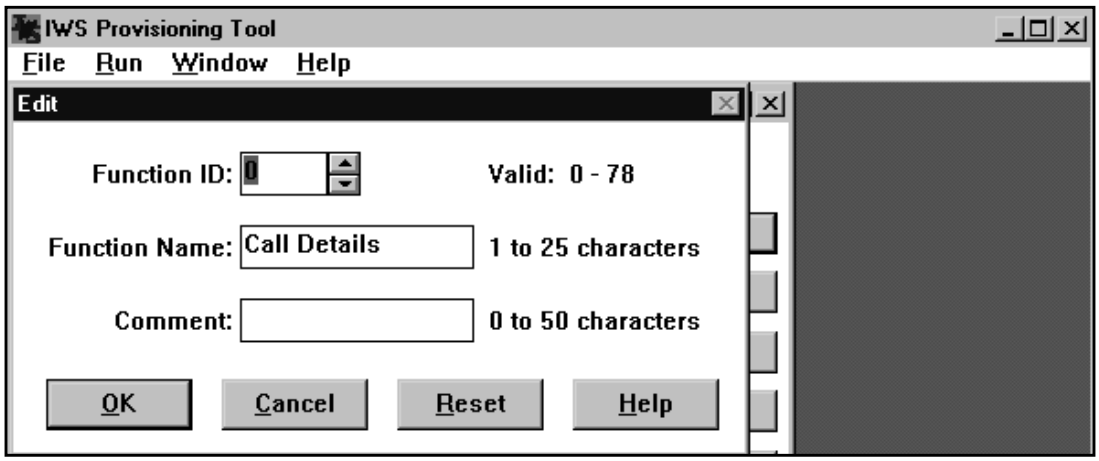


FIGURE 119. Example of Edit dialog box for XFNCTS table file

6. Select or make an entry for each entry box within the valid range indicated.

Warning: The function ID maps to an internal function number and MUST remain with its associated function name.

DO NOT separate the function ID from its function name. To facilitate adding or removing functions, you can alter the Function ID field shown in Figure 120. Thus you can change the number in the Function ID box to any value between 0-78, but selecting function ID “6” will continue to invoke the Dial Rate function.

DO NOT separate the function ID from its function name.

7. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this dialog box.
8. To add data, select Add to open the Add dialog box. (See Figure 120.)

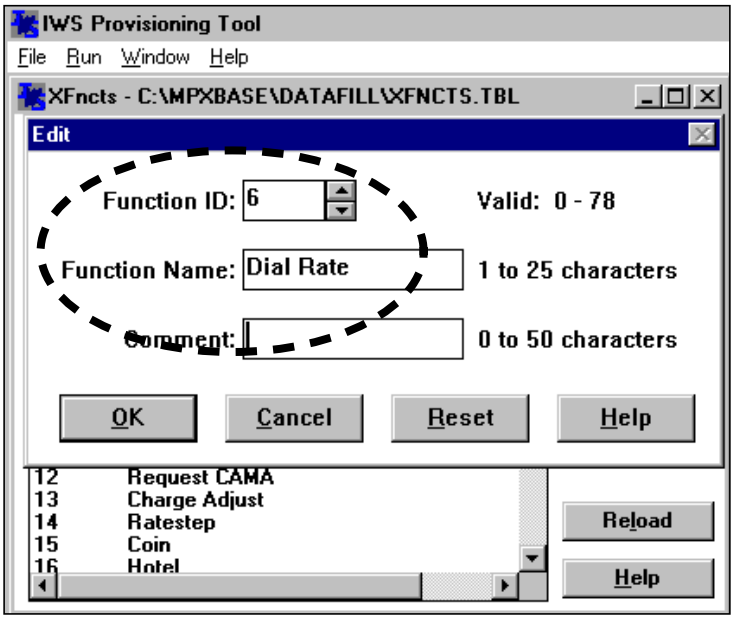


FIGURE 120. Example of Add dialog box for an XFNCTS table file

9. Select or type a value for each entry box within the valid range indicated.
10. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window. A Help button is also available in this dialog box.
11. To remove data, select the data, then select Remove. A confirmation message displays.
12. To relocate data, select the data, then select MoveUp or MoveDown.
13. To reset all the data in the file to the settings in place at the last save command, select Reload.

13.11 Datafilling the XCT4QMNU table file

To datafill the XCT4QMNU table file, follow these steps:

1. From the top menu bar of the Provisioning Tool window, select File.
2. From the File menu, select New or Open.
3. If you chose Open, select Table File (*.tbl). in the List files of type box. If you chose New, select Table File.
4. A list of table files displays. Select file XCT4QMNU from the listing. The dialog box shown in Figure 121 appears.

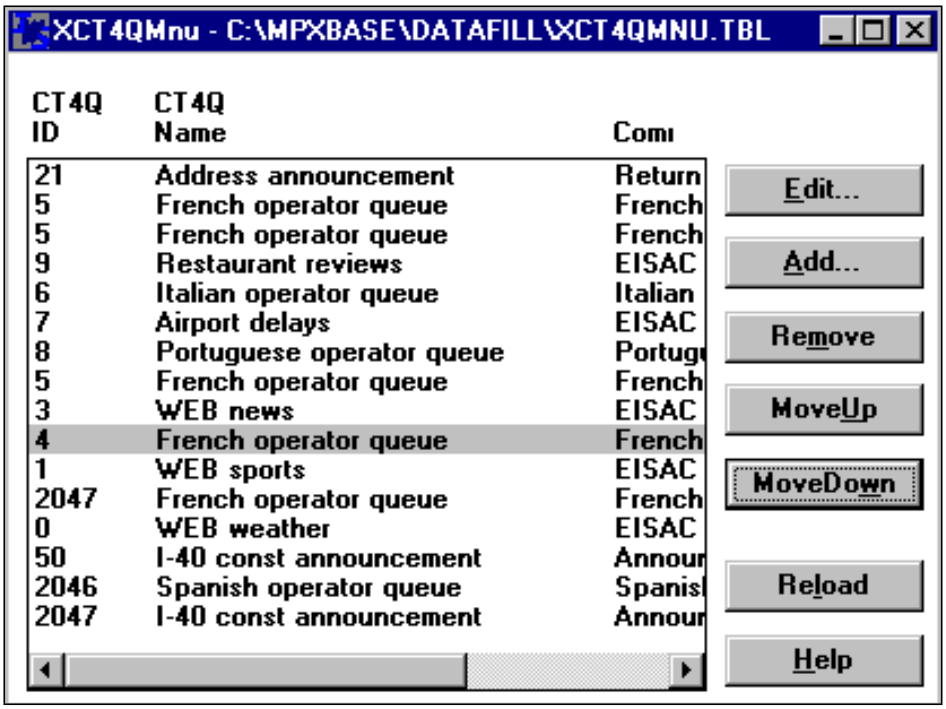


FIGURE 121. Example of an XCT4QMNU dialog box

Note that Figure 121 shows duplicate entries: CT4Q ID 5, “French Operators Queue” appears twice in the listing. The CT4Q IDs listed in table XCT4QMNU are pulled from table XCT4Q. When those IDs are referenced in table XCT4QMNU, they are allowed to be listed more than once. This enables the use of multiple entries of the NIL value (2047). In addition, operators may find it useful to have the same menu item appear on more than one page, to avoid some paging back and forth.

Note: With the exception off the NIL value (2047), the CT4Q IDs entered in table XCT4QMNU *must* be a subset of the CT4Q IDs datafilled in table XCT4Q.

13.11.1 Changing data

To change data in the XCT4QMNU.TBL file, follow these steps:

1. Select the CT4Q to be changed, then select Edit. The Edit dialog box displays, as shown in Figure 122.

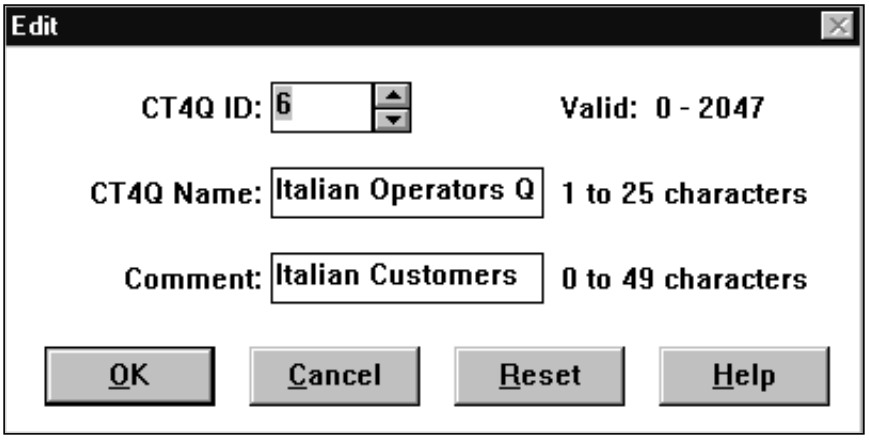


FIGURE 122. Example of Edit dialog box for XCT4QMNU table file

2. Select or make an entry for each entry box within the valid range indicated.

Warning: The CT4Q ID maps to an internal number and MUST remain with its associated name.

DO NOT separate the CT4Q ID from its name. To facilitate adding or removing CT4Q IDs, you can change the number in the CT4Q ID box to any value between 0-2047, but selecting CT4Q ID “6” will continue to invoke the CT4Q designated for it.

DO NOT separate the CT4Q ID from its CT4Q name.

3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window, or Reset to return to the previous setting. A Help button is also available in this dialog box.

13.11.2 Adding data

The order in which entries are displayed in the CT4Q menu is determined, not by their CT4Q ID numbers, but by the order in which they are datafilled in the XCT4QMNU.TBL file. Before adding data, therefore, it is important to determine the order in which you want the entries to appear in the menu listing.

Figure 123 shows a sample XCT4QMNU.TBL file, and Figure 124 shows the corresponding CT4Q menu that displays when the **CT4Q** key is pressed twice.

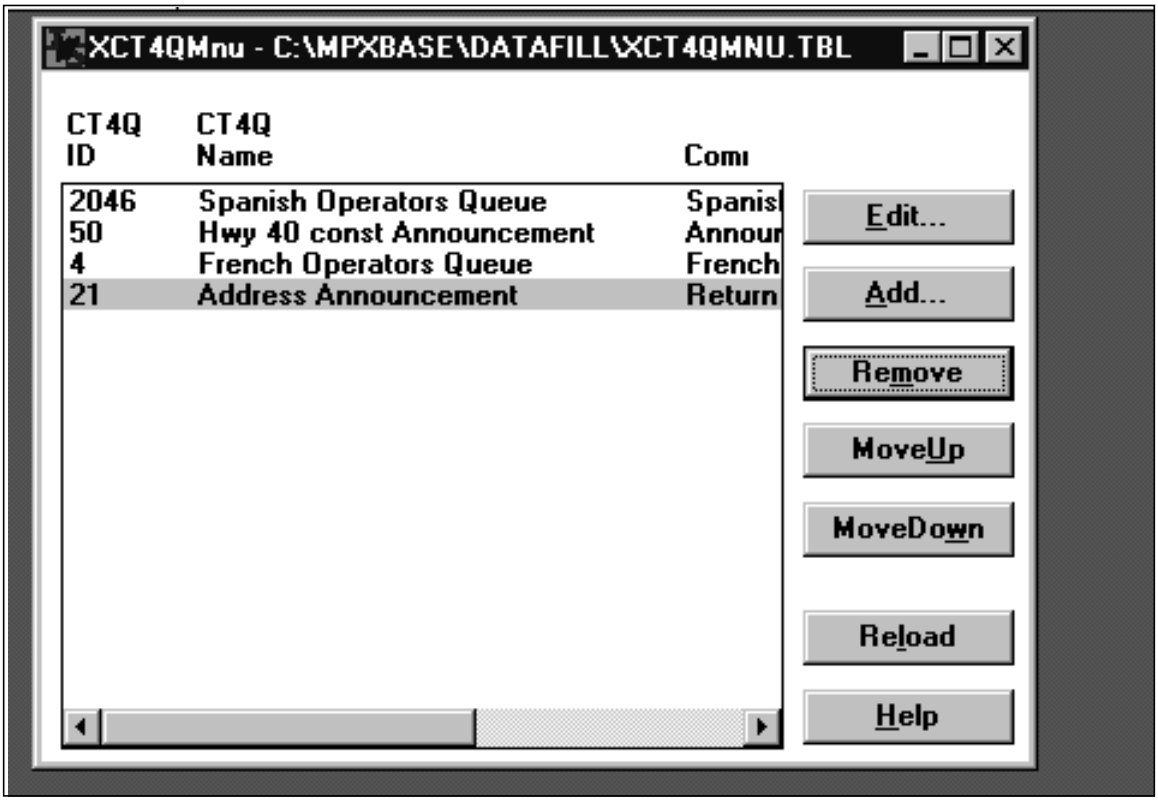


FIGURE 123. Example of XCT4QMNU.TBL file

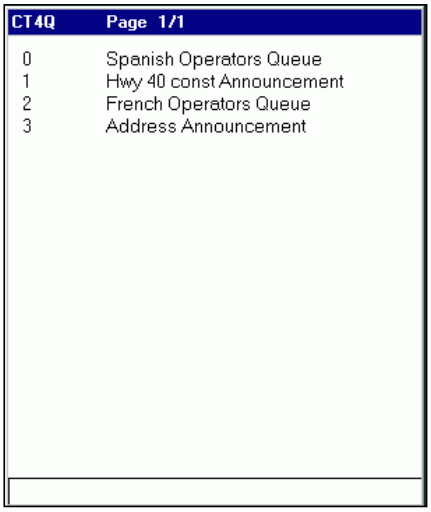


FIGURE 124. Example of CT4Q menu

To add data, follow these steps:

1. Select Add to open the Add dialog box. (See Figure 125.)

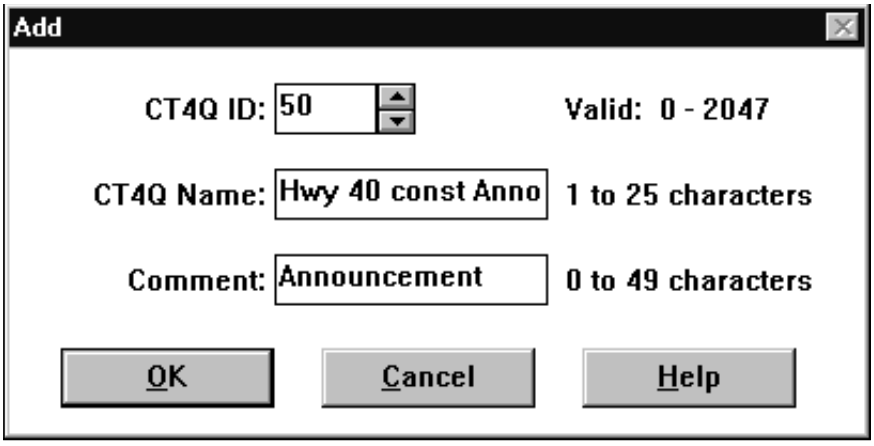


FIGURE 125. Example of Add dialog box for an XCT4QMNU table file

2. Select or type a value for each entry box within the valid range indicated.
3. Select OK to close the window and keep the settings. Alternatively, select Cancel to leave the window. A Help button is also available in this dialog box.

As explained in section 13.11 on page 147, multiple entries can be added with the same CT4Q ID.

13.11.3 Removing data

There are two ways to remove data from the CT4Q menu. One method is the same used with other IWS menus. To delete entries, select the data and then select Remove. A message displays to confirm that the entry was deleted.

The second method is unique to the CT4Q menu. In the XCT4QMNU.TBL file, the entry 2047 represents a NIL CT4Q value. When an entry is given this value, its CT4Q name is not displayed in the CT4Q menu and its CT4Q number is disabled. This arrangement allows you to retain the numbering of your menu, even when some CT4Qs listed on it become invalid.

For example, if CT4Qs 50 and 4 in Figure 123 become invalid and should no longer be used by the operator, you might choose to delete those entries. Then all the CT4Q entries following them in the XCT4QMNU.TBL file would be renumbered. For example, “Address Announcement” would be displayed as 1 in the CT4Q menu. This change in the appearance of the menu could cause confusion for operators.

Using the NIL CT4Q entry instead of deleting the old CT4Q entries avoids the confusion by retaining the same CT4Q entries on the CT4Q menu and disabling the old CT4Q entries.

Figure 126 shows an example of the XCT4QMNU.TBL file using this functionality.

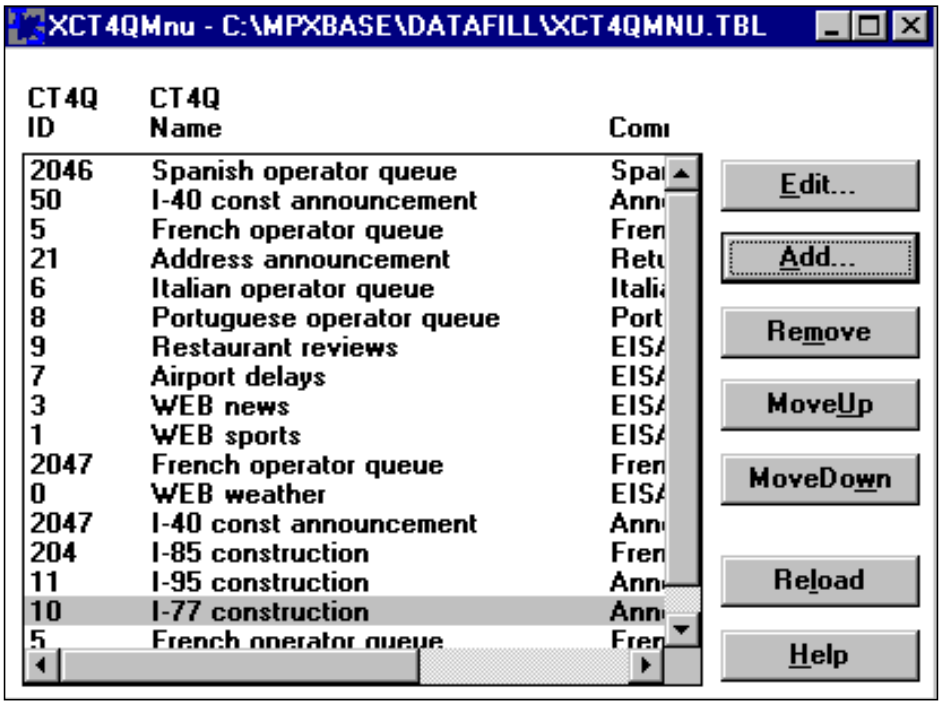


FIGURE 126. XCT4QMNU.TBL using NIL CT4Q numbers

Figure 127 shows the corresponding CT4Q menu.

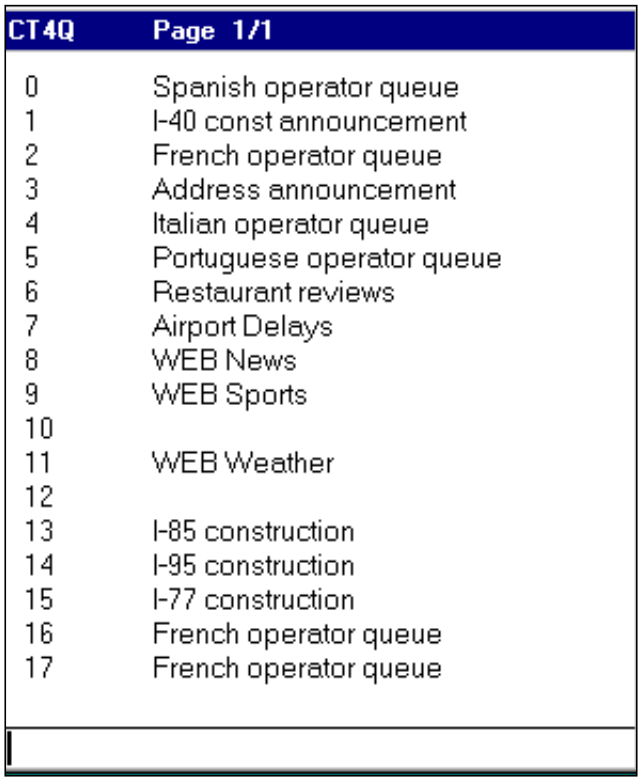


FIGURE 127. CT4Q menu

13.11.4 Relocating data

To relocate data, select the data, then select MoveUp or MoveDown.

13.11.5 Reloading data

To reset all the data in the file to the settings that were in place at the last save command, select Reload.

14.0 KeyBind

The KeyBind utility allows you to assign a specific action to a specific key at an IWS position. KeyBind is located in the KEYBIND.EXE file in directory C:\MPXBASE\TOOLS. From the KeyBind window, you can assign actions to keys and verify the keyboard layout as identified in the current IWS keyboard datafill file. For information on the following subjects, refer to *TOPS IWS Base Platform User's Guide,* 297-2251-010:

- keyboard datafill file format and field descriptions
- keyboard configuration tips

Activate the KeyBind utility by selecting KeyBind from the provisioning tool Run menu in the main RAMP window.

For information on how to move through menus and select menu actions, see section 1.4 on page 18.

By default, KeyBind uses file XKBOARD.TBL from the default datafill directory to set up the initial keyboard layout. You can apply a new keyboard layout from any other table file, but you must name that file XKBOARD.TBL and you must specify the directory path in file MPXINI.INI. Consider renaming the original file XKBOARD.TBL first, to avoid overwriting and losing it.

Besides file XKBOARD.TBL, KeyBind loads the following table files from the default datafill directory.

- XAPPL.TBL
- XCT4QMNU.TBL
- XFNCTS.TBL
- XOGTMENU.TBL
- XSERVS.TBL
- XTROUBLE.TBL

If any of these table files is corrupted or missing, KeyBind will not run.

14.1 Note for new users of Windows XP Professional

If you are upgrading to IWS release 17 or above but keeping the datafill from an earlier release of file XKBOARD.TBL, you must use the KeyBind utility to reassign key actions to three keys whose scan codes were changed with the introduction of Windows XP Professional. Figure 128 shows the assignments of scan codes for the IWS keyboard before and as of IWS release 17.

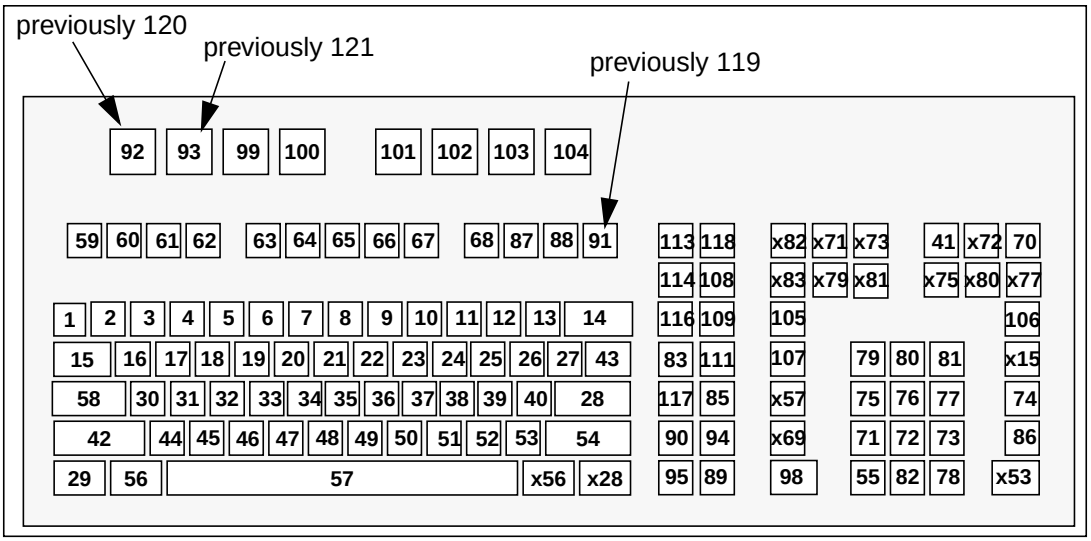


FIGURE 128. Current and past scan code assignments

14.2 Selecting an application section

Figure 129 shows the main IWS KeyBind window.

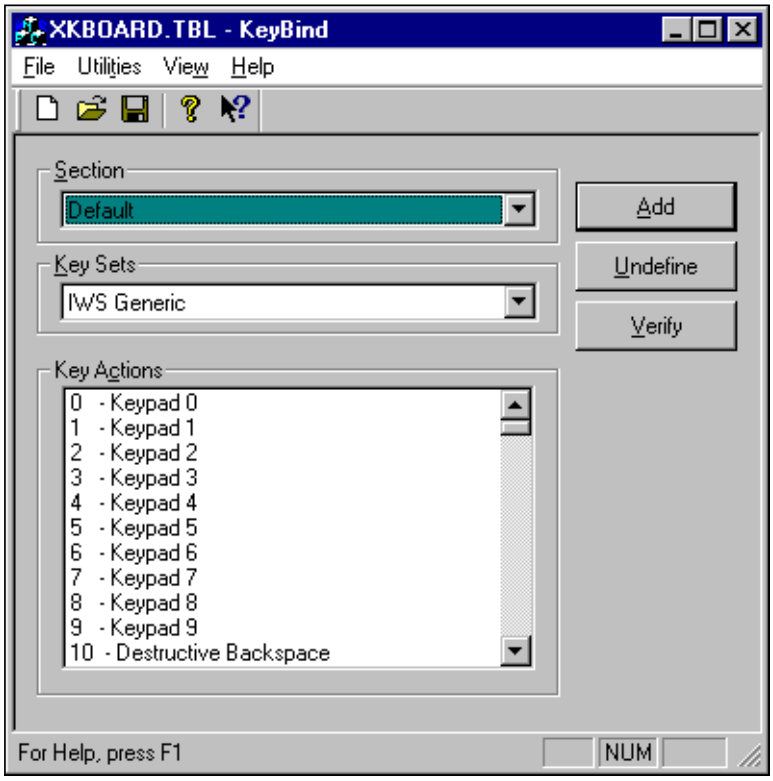


FIGURE 129. IWS KeyBind window

The IWS keyboard datafill allows a specific key to be datafilled with different key actions for different applications. To customize the keyboard on a per-application basis, the keyboard datafill table file contains both default and application-specific sections.

The default section is identified by the tag “Default.” The application-specific sections are identified by the application name (for example, NTDA).

Note: If you are using a text editor to datafill file XKBOARD.TBL, the section titles must be enclosed in square brackets (for example, [NTDA]). If these brackets are missing, the system ignores the application-specific section and applies default key mappings to the entire file.

Application-specific sections are used whenever key datafill is different for a particular application. Only keys that have different actions from those in the default section require datafill in the application-specific section. If you press a key while a particular application is running on the IWS position, the system checks that application-specific section of XKBOARD.TBL for the key. When this key is not datafilled in the particular application-specific section, the system checks the default section to determine if this key is datafilled there. Then the system takes action according to the datafilled information.

Note: In the XKBOARD.TBL file, key actions 0–9 (representing keypad 0 through keypad 9) can be datafilled only in the default section. If you try to datafill these keys in an application-specific section, the system displays the message “Number pad keys can only be defined in the Default section.”

The Section box in the KeyBind window lists section headings found in the current keyboard datafill file. Select the arrow button or press **Alt**+ the down arrow key to display the list of section choices. Use the arrow keys to highlight the desired section and press **Enter** to select it.

Once you have selected a section, all commands within KeyBind (for example, Add, Undefine, and Verify) perform their actions in the context of the selected section in the current datafill file.

14.3 Key set

From the Key Sets box in the KeyBind window, you can view the choices by selecting the arrow button or pressing **Alt**+the down arrow key. Then you can use the arrow keys to highlight the desired key set and press **Enter** to select it.

After the selection, the key actions in the selected key set display in the Key Actions box. When an application-specific key set is chosen, KeyBind locates a key action description file for the current application section in the datafill directory.

Any application that provides application-specific keys has a key action description file. The file lists the available key actions and descriptions of keys for these actions. The system displays the text from this key action description file in the Key Actions list box.

When the system cannot find the file, a message box displays to indicate there are no application-specific keys available for that section. The IWS Generic key actions display in the Key Actions window.

For third-party applications that provide application-specific key actions, consult the application vendor for a key action description file.

When no key action description file is available for the application, the application-specific key actions can be assigned to physical keys by using a text editor to datafill the actions in file XKBOARD.TBL.

14.4 Assigning action to a key

When you use the Assign Key GUI, you create an association between one of the key actions listed in the current IWS keyboard file and a physical key. The link between the action and the key is the scan code that is assigned to the physical key.

To assign an action to a key, follow these steps in the KeyBind window:

1. Select a key set.
2. Select the key action you wish to associate with a physical key.
3. Select the Add button to open the Assign Key window.

   The Assign Key window displays. The title bar of the window contains the name of the currently selected section. (“Default” in Figure 130.) The selected key set (Action Set) and key action (Action) display.

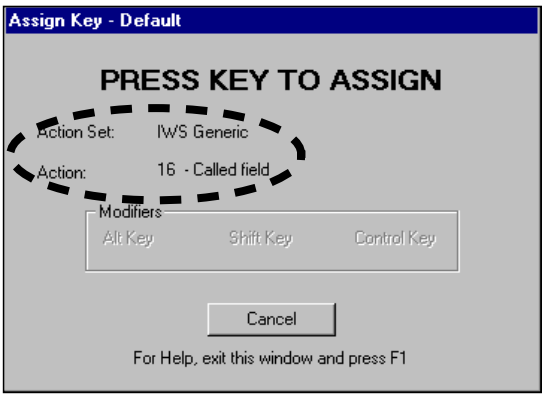


FIGURE 130. Assign Key window

4. On the keyboard, press the key you wish to assign to the selected key action. The window closes, and for the action set (IWS Generic) you selected in step 1, that physical key will perform the action you selected. You can verify your selection by following the steps in section 14.6 on page 158.

   If you press the **Enter** key instead of the key you want to assign, a message box displays to confirm or deny that the **Enter** key is the choice for this key assignment.

   When you select a key to which an action has already been assigned, a message box displays asking you to confirm or deny overwriting the previous assignment. If you do not want to overwrite the previous assignment, select Cancel.
5. To exit from the Assign Key window without assigning an action, select Cancel to return to the KeyBind main window.

A key can be assigned in combination with the modifier keys (**Shift**, **Ctrl**, **Alt**). When a modifier key is pressed, its color changes from gray to black in the Assign Key window. The **Tab** key and the following modifier keys and combinations are not available for assignment:

- **Shift+Shift**
- **Ctrl+Ctrl**
- **Alt+Alt**
- **Shift+F10**
- **Alt+F6**

However, the **Tab** key can be assigned to an IWS key action by using a text editor to datafill the key in file XKBOARD.TBL.

Do not assign any key action to the **Caps Lock** key. When datafilling NTDA keys, do not assign any key action to the period (**.**) or comma (**,**) keys. NTDA key action assignments are discussed in *TOPS IWS NTDA Application Guide*, 297-2251-017.

The following cursor movement key actions from the IWS Generic key set must not be datafilled on any of the modifier keys (**Shift**, **Ctrl**, **Alt**). Neither can they be datafilled as a key combined with a modifier key (for example, **Ctrl**+<a key listed below>):

- right arrow
- left arrow
- up arrow
- down arrow
- **Delete**
- **Home**

For more detail, refer to the Keyboard Configuration Considerations section in the XKBOARD table description section in the *TOPS IWS Base Platform User's Guide*, 297-2251-010.

14.5 Removing an assigned key action from a key

To remove an assigned key action from a key, follow these steps:

1. Select an application section as described in the previous section.
2. Select the Undefine button.

   The Undefine Key window displays. The title bar contains the name of the currently selected section. ("Default" in Figure 131.)

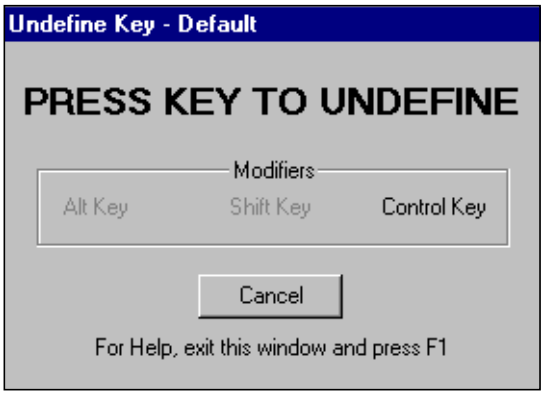


FIGURE 131. Undefine Key window

3. Press the desired key and any combination of the modifier keys **Shift**, **Ctrl**, or **Alt**. The window closes.

   Note that when a modifier key is pressed, the color of that modifier key changes from gray to black. (See “Control Key” in the figure above.)

4. To exit from the Undefine Key window, select Cancel to return to the KeyBind main window.

14.6 Verifying a key assignment

To verify the assignment of keys, follow these steps:

1. Select an application section.
2. Select the Verify button.

   The Verify Key window displays. The title bar contains the name of the currently selected section. (“Default” in Figure 132.)

FIGURE 132. Verify Key window

3. Press the desired key and any combination of the modifier keys (**Shift**, **Ctrl**, **Alt**).

   When you press a key in the verify window, the system checks the application-specific section for that key assignment. Then this assignment displays in the Verify Key window. If that key assignment is not in the application-specific section, the system checks the default section.

4. To exit from the Verify Key window, select the Close button to return to the KeyBind main window.

14.7 File menu options

The KeyBind file menu options are similar to those of a standard text editor, except that only keyboard files can be opened. The path and name of the currently opened file display in the title bar of the KeyBind main window. KeyBind begins with XKBOARD.TBL as the current file. Only one file can be opened at a time.

The file menu options follow:

New	This option opens a new file with no key definitions. The window title bar indicates that the file is untitled. When you enter changes and save the file, the system prompts you for a file name.
Open	This option activates an Open dialog box, from which you can select a keyboard file to open and display with the KeyBind GUI. The title bar of the Open File dialog box indicates the name of the opened file. If a file is already opened and changes are made to that file, the system prompts you to save the changes before opening another file.
Save	This option saves changes made to the opened file. For a new file that is untitled, the system prompts you for a file name and location.
Save As	This option activates the Save dialog box. When a file is saved, the KeyBind title bar is changed to reflect the name of the new file.
Revert	This option reloads the latest saved version of the currently opened file into the system. For changes made to this file, the system prompts you to verify whether you want to abandon the changes made since the last save command was implemented.
Exit	This option exits KeyBind. For changes made to the current file, the system prompts you to save the changes before exiting.

Note: When you save key assignments in a file with a name other than XKBOARD.TBL, you do not change the keyboard layout that is understood by the IWS applications. To

change the keyboard layout, you must save the key assignments in the XKBOARD.TBL file, and the file must be in the default datafill directory. You can verify this directory by using the provisioning tool to open the MPXINI.INI file, and selecting Datafill Path.

14.8 Utilities menu options

The Utilities menu contains the options for accessing the key macro utility, adding or deleting a section from the keyboard file, and viewing the key bindings.

14.8.1 Key macros

Key macros link multiple key actions and perform them as a single keystroke. Key macros are similar to hot keys, but they provide more flexibility because they can be created for any application that accepts keystrokes on the IWS position through the API/SDK. A key macro can be defined, for example, so that just one keystroke replaces those that otherwise are necessary to invoke an action (for example, Svc, 4, Start). When you press the key that triggers a given key macro, you see in rapid succession the screen displays that an operator would see while pressing each key separately. The difference is that the screen displays occur very quickly.

Up to 25 key actions can be combined into a single macro, and up to 25 key macros can be defined.

KeyBind is used to set up and edit key macros for use on the IWS position. The following sections describe key macros in detail.

Warning: Thorough testing must be done by the operating company personnel who define the key macros BEFORE they are used on a live operator position. Operators should be trained to use key macros on demo positions before they execute them on live positions.

The real-time action of a key macro may not be what was intended by the macro designer, owing to the effect of one or more of the guidelines discussed in the following section.

14.8.1.1 Key macro guidelines

The following list contains guidelines to consider when you are defining key macros. Some of these guidelines arise from the interactions between various applications on the IWS position and the interaction of these applications with external sources such as databases or the DMS switch. Others arise from the design of the feature. Read all the guidelines and remember to heed the warning in the box above. Do not use a key macro on a live IWS operator position before you have thoroughly tested it.

- When defining a key macro with a key action (or more than one key action) that sends a message to the DMS switch or other external source (such as a calling card database), consider the delay that is associated with the message. Such a pause could lead to a loss of effect, or possibly alteration of intent, of one or more subsequent key actions. Be sure to test the key macro thoroughly before you use it on a live IWS operator position.
- All key macro definition must be done in KeyBind. (See section 14.8.1.2 on page 162.) No other editor is allowed.
- Modifiers (**Alt**, **Shift**, **Ctrl**) are not allowed as key actions in key macros. Neither are modifiers allowed when they are linked with other keys to create key actions (for example, **Shift+F10**, **Alt+F6**).
- Define key macros within the application-specific section that corresponds to the intended application. Observance of this guideline will reduce the chance of unpredictable outcomes from the execution of a key macro in an application for which it was not intended.

  For example, if NTDA is the application that currently has focus on the IWS position, then each key action in a key macro will be checked first against the NTDA section in file XKBOARD.TBL, so long as the section application name is identical to the application name listed on the registering line in file MPXINI.INI. Thus the same key action mapped to the “tab” action in IWS Billing may be mapped to the “clear field” action in NTDA. A key macro defined for NTDA would have a different outcome if executed in the IWS Billing application.

  Extra entry menu key macros are the only key macros that can be defined reasonably in the Default section of KeyBind, because they can be implemented independently of any application.
- In general, do not define a key macro to contain a context change key action. If such a macro is defined, however, observe the following guideline:

  Operating company personnel must define key macros that contain a context change key action within the appropriate application-specific section. A macro cannot be expected to achieve the desired result if it is executed in an application other than the one for which it was defined.

  For example, an operator working in the NTDA application can switch to the billing application by pressing the **CLD** key. The IWS position then displays the IWS Billing application screen. If the operator presses **CLD** while the IWS Billing application has focus, the cursor moves into the called field and no context change takes place. So including the **CLD** key action in a key macro defined to work in IWS Billing will make that macro behave unexpectedly if it is executed in NTDA.
- Application-specific keystrokes, menu hot keys, and previously defined key macro keystrokes are not allowed in key macros.

  Application-specific keystrokes are key actions that have been specifically defined and mapped in an application-specific section. For example, the application-specific section for NTDA contains over a hundred key actions. Not all of these key actions may be in use at your site; however, be aware of those that have been mapped to specific keys and avoid them in defining key macros.

- KeyBind permits you to bind one key action to a physical key in one default or application section, and a different key action to the same physical key in another application section. Binding different key actions to the same physical key in different application sections, however, has the potential to cause problems with key macros. If the key action is included in a key macro, the key macro will not work the same way across all applications.

  For example, suppose you bind the OGT menu key action to the **r** key in the default section of KeyBind, while binding the Trouble menu key action to the **r** key in the NTDA section. In that case, an OGT key macro (such as **OGT** + **1** + **0** + **START**) will not work properly in NTDA. To prevent this kind of problem from happening, be careful when binding different key actions to the same physical key in different sections and then using those key actions in key macros, because it may cause unexpected behavior in different applications.

- Do not include adjacent tabs in a key macro. A key macro may contain more than one tab, but one tab must not immediately follow another.

14.8.1.2 Defining a key macro

Each macro can have a maximum of 25 key actions, and a maximum of 25 key macros can be defined. The key macros are stored in file XKEYMAC.TBL. The procedure for assigning a key macro is similar to that for assigning a single key action, as discussed earlier in this section. (See the KeyBind discussions beginning on page 153.)

Note that any macro you define must be thoroughly tested before being put into use on live operator positions. In addition, the operators must be thoroughly trained to use key macros.

All macros must be created with the key macro utility. To define a key macro, select Key Macros from the pulldown Utilities menu in the KeyBind main window. (See Figure 133.)

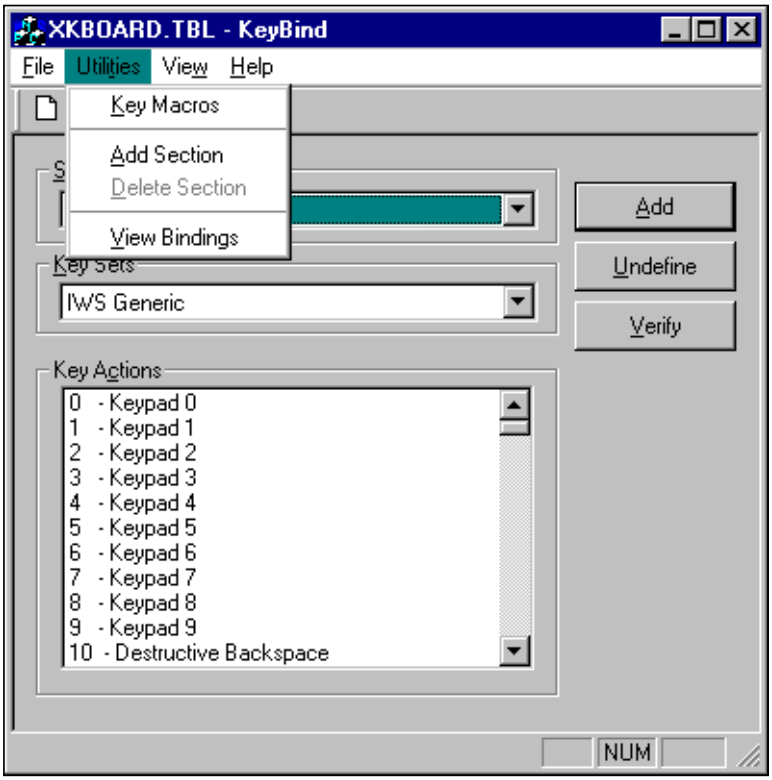


FIGURE 133. Key Macros selected in the Utilities menu

The Key Macro Configuration Screen appears. (See Figure 134.)

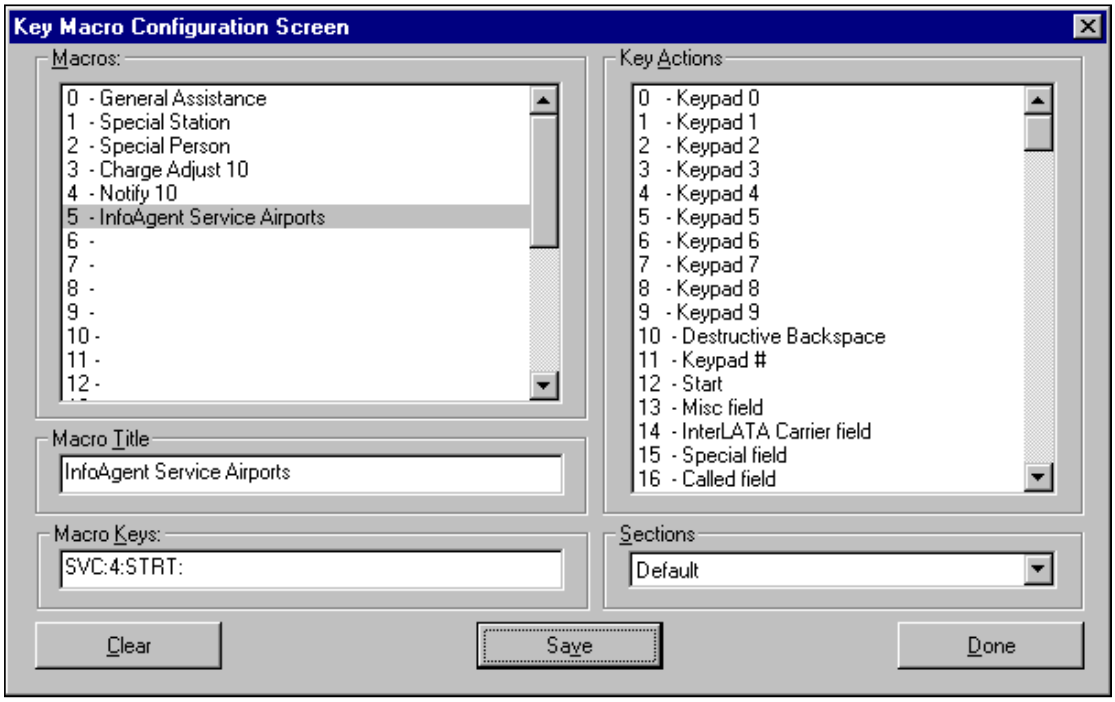


FIGURE 134. Key Macro Configuration Screen

The Macros list box contains a short list of default key macros; however, these may not apply to the specific needs of your site. In any case, you can create new macros by following these steps:

1. Select an undefined (unnamed) macro from the Macros list box. In the above figure, #5 is the next available undefined macro. Using the mouse or the **Tab** key, move the focus to the Macro Title field. Type the name or description of the macro, up to 30 alphanumeric characters and spaces. You must provide a title and the key actions that make up the macro before you can save it.
2. Select the section in which you want to place the key macro from the pulldown list in the Sections field.
3. Select the Macro Keys field and press the keys you wish to include. Alternatively, you can select the Key Actions list box and then select the key actions from the list. Use the spacebar or click the mouse to add the highlighted key to the macro key list.

   If you add key actions to the macro by pressing keys, each key action is looked for and taken from the XKBOARD section that is specified in the Sections list box in the lower right corner of the Key Macro Configuration Screen. Key actions are taken from the last saved version of file XKBOARD.TBL. If a key action is not found in the specified section, it is searched for in the Default section. If the key action is not listed at all, then the keystroke will be interpreted to match the action of the physical key on the keyboard.

   If you select an action from the Key Actions list with the spacebar, the action is added to the Macro Keys list, but focus remains in the Key Actions window. If you wish to press a key to enter a new key action, you must **Tab** to the Macro Keys window to activate the cursor and provide focus.

   Note: The **Tab** key moves focus from one field or button to another in KeyBind, so you cannot press that key to add “Tab” to a macro. If your macro includes “Tab,” select it from the bottom of the IWS Generic Key Actions list. The **Fncts** key also moves focus from one field or button to another in KeyBind, so you cannot press that key to add “Functions menu” to a macro. So if your macro includes “Fncts,” select it from the IWS Generic Key Actions list.
4. Select Save. The macro will be listed in the selected empty space in the Macros list box.
5. Select Done to return to the KeyBind main window, or return to step 1 to add another macro.

14.8.1.3 Editing an existing key macro

If you want to edit an existing macro, follow these steps:

1. In the Macros list box, select the macro you wish to edit. The macro title and key actions display in the appropriate fields.

2. Use the backspace key to move about in the list of key actions. Each time you press the backspace key, the cursor retreats one complete keystroke. Thus you can remove the word “START” by pressing the backspace key just once, because the start key action is expressed with just one keystroke.
3. Make your changes, and select Save.

If you select Done at any time during either of these operations, you are prompted to save or ignore the current work. To delete a macro from the list, select it from the Macros list box and select Clear and Save.

14.8.1.4 Assigning a key macro

After you define a key macro, you must assign it to a physical key. Follow the instructions found earlier in this section. (See “Assigning action to a key” on page 156.) When you open the Key Sets list box in the KeyBind main window, you will find a key set reserved for key macros.

14.8.2 Add Section

Selecting the Add Section menu item from the Utilities menu in the KeyBind main window opens a dialog box so you can enter the name of a new section into the current IWS keyboard datafill file. (See Figure 135.)

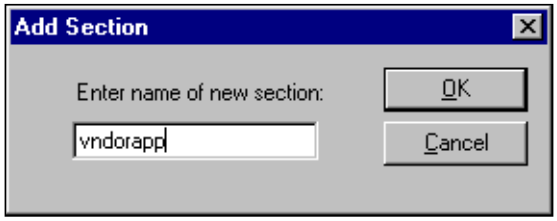


FIGURE 135. Add Section window

Once a name is entered, select OK or press the **Enter** key. A message box displays to ascertain that you want to add a section. (See Figure 136.) Alternatively, you can select Cancel or press the **Esc** key to close the window and cancel the action.

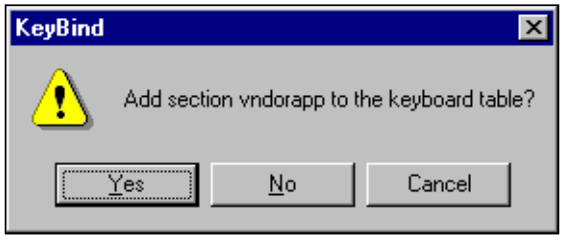


FIGURE 136. KeyBind add section verification window

The section name is limited to eight characters. You cannot add duplicate sections to the current IWS keyboard file.

Once you have added a new application-specific section, you can assign application-specific key actions for the application and re-assign key actions to other keys.

14.8.3 Delete Section

Selecting the Delete Section menu item from the Utilities menu opens a dialog box so you can delete the section displayed in the Section field of the main KeyBind window. (See Figure 137.)

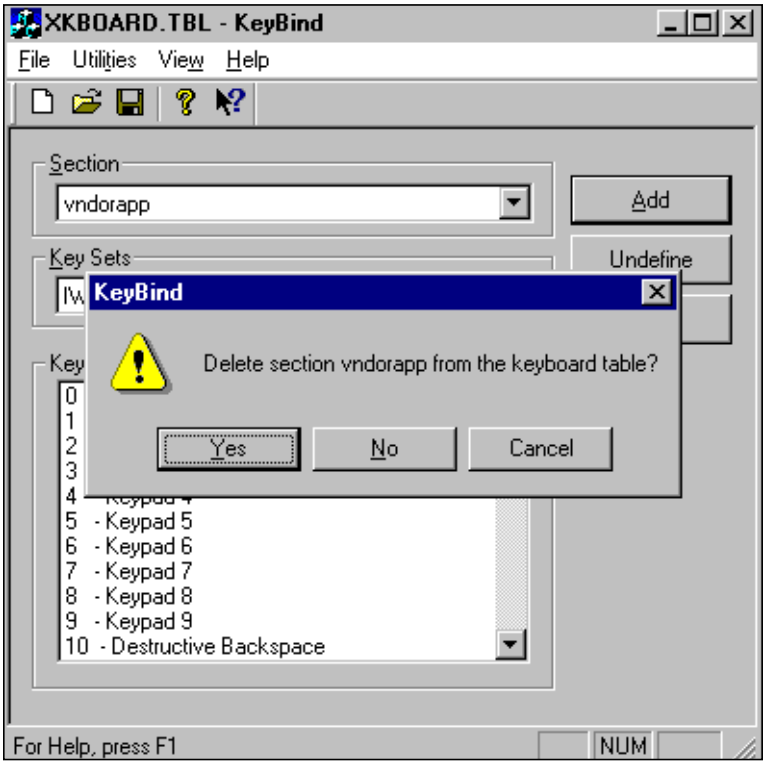


FIGURE 137. Delete section choice and dialog box

If you select Yes or press **Enter**, all key assignments and the section heading in the current IWS keyboard file are deleted.

You cannot delete the Default section. Note that while Default is displayed in the Section field, the Delete Section menu item is disabled.

14.8.4 View Bindings

Selecting the View Bindings menu option from the Utilities menu opens a window that shows the status of key assignments, sorted by scan code or by key action. The title bar of the window indicates the section for which the bindings are shown. The list box in the window contains keys and their assignments based on what boxes in the window have been checked. You can press **Esc** or **Enter**, or select the Close button, to close the window.

Following are descriptions of the choices you can make to configure the window:

- Modifiers (**Alt**, **Shift**, or **Ctrl** key, or extended scan code)–Checking any of these boxes causes the window to display all the key assignments that combine a key with the chosen modifier(s).

- Display Settings (Show Assigned, Show Unassigned)–You can check either or both of these boxes. If you check both, all keys are displayed (by scan code or by key action) whether or not they are assigned to a key set. If you check Show Assigned, the keys and their key set assignments are displayed. If you check Show Unassigned, the keys that have not been assigned in any section display.
- View Key Bindings (By Scan Code, By Key Action)–You can check one of these two boxes to display the list of keys sorted either by scan codes or by key actions, along with their associated assignments.

  Figure 138 shows all assigned and unassigned key bindings sorted numerically by scan code. If no key is assigned to a particular scan code (and thereby to a physical key), the entry in the Key Set column reads “Unassigned.” Use this window in combination with the keyboard graphic on page 154 to learn which physical keys are without assignment for the section shown in the title bar (in this example, Default). If you uncheck the Show Unassigned box, the status window displays all the scan codes (and thereby the physical keys) that have assigned key actions.

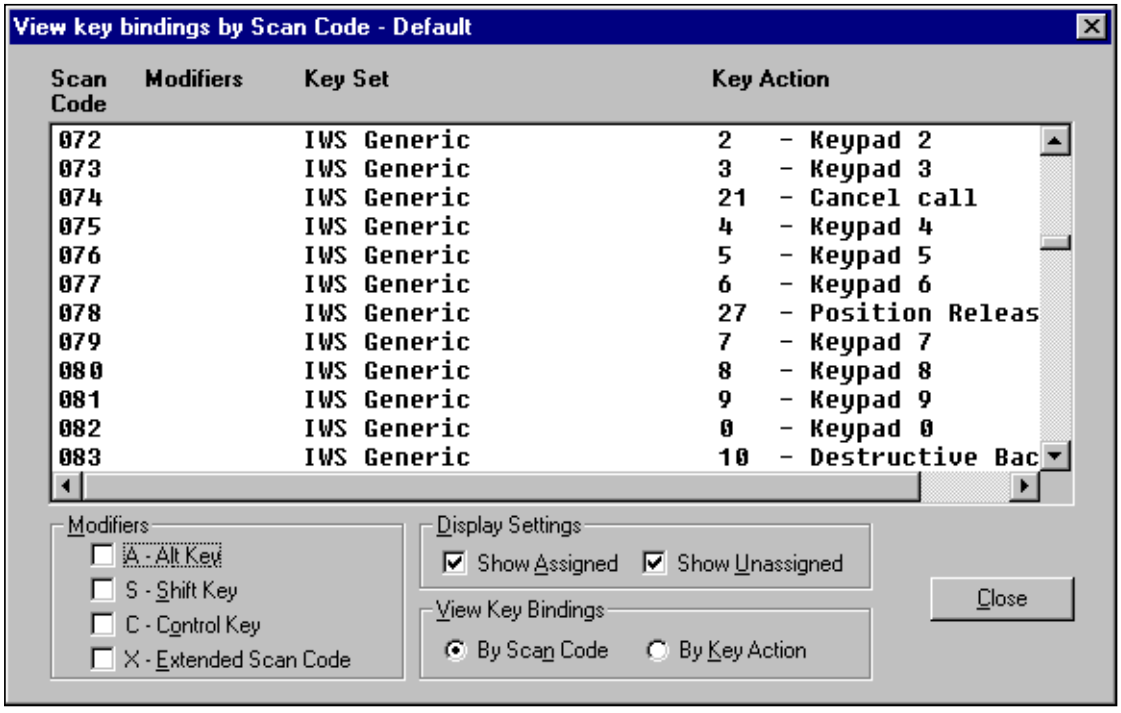


FIGURE 138. View key bindings by Scan Code window

Figure 139 shows all assigned and unassigned key bindings sorted numerically by key action within each key set. The list order first displays all the key actions for a particular key set, and then all the key actions for another key set, and so on until all key actions in all key sets are shown. In this status window, the assigned or unassigned designation in the Display Settings box conveys whether a key action is assigned to a scan code (and thereby to a physical key).

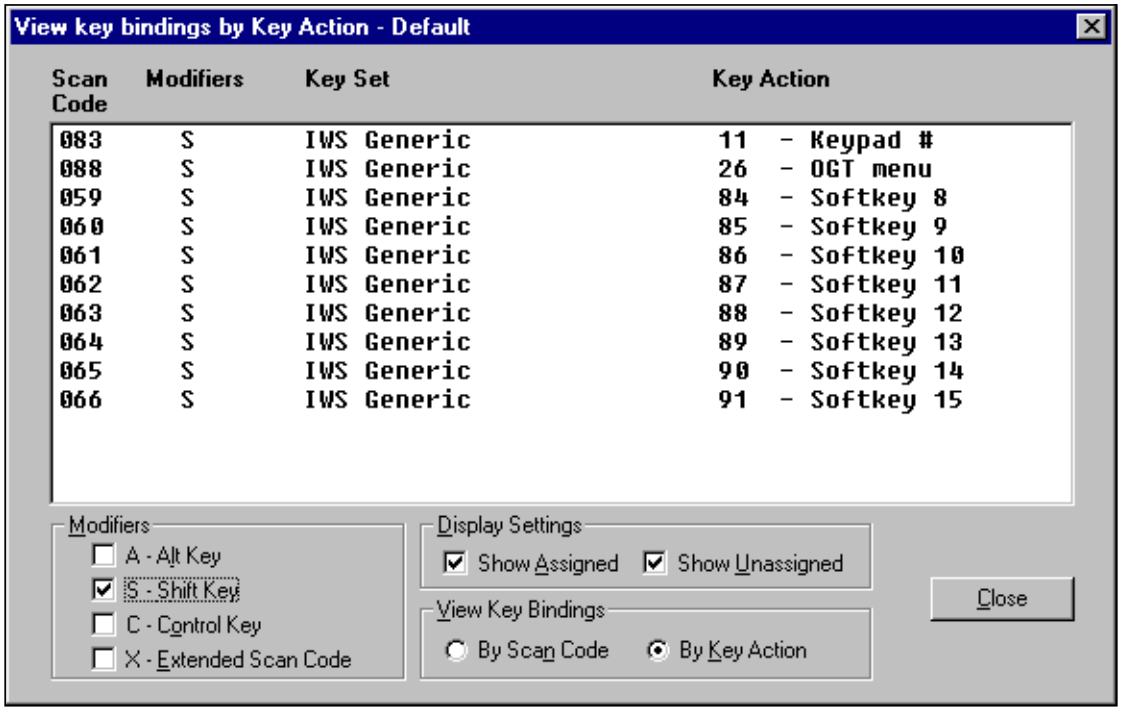


FIGURE 139. View key bindings by key action window

14.9 View

The view menu has two options, Toolbar and Status Bar. By default, both are turned on. To toggle an option off, select the option you wish to change and press **Enter**. Alternatively, press the associated accelerator key to toggle the option off or on.

14.9.1 Toolbar

You can toggle the toolbar option to display or hide the Microsoft Windows file icons shown below.

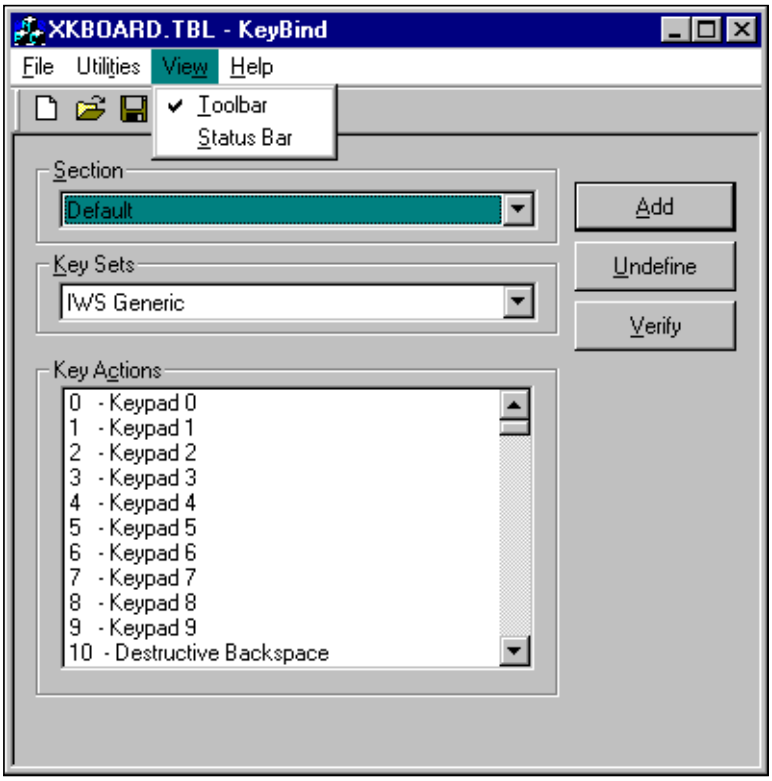


FIGURE 140. Toolbar display toggled on, status bar toggled off

14.9.2 Status Bar

You can toggle the status bar option to display or hide the Microsoft Windows status messages at the bottom of the window.

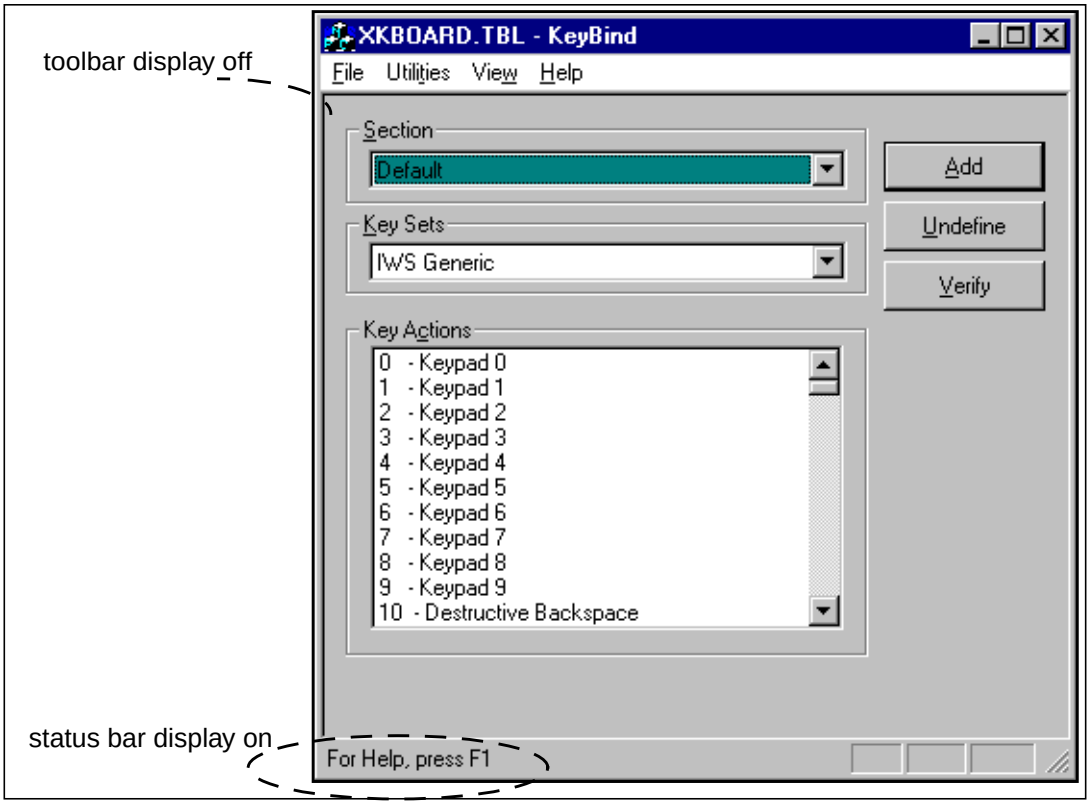


FIGURE 141. Status bar display toggled on, toolbar display toggled off

14.10 Help

You can access the Microsoft Windows-type help index in several ways. You can select a menu option, press F1, or select the arrow-question mark icon on the toolbar.

15.0 Revisions

15.1 Release 17.0/17.1 revisions

- The following datafill (.INI, .TBL, .LNG) files were added, altered, or deleted:
  - **New files:**

    no new files
  - **Altered files:**
    SCRPTINI.INI
    MPXINI.INI
    MPXNET.INI
    NTDAINI.INI
    HOSTS.TBL
    PDCALLD.LNG
  - **Deleted files:**

    no deleted files
- Microsoft Windows XP Professional has replaced Windows 95 as the operating system.
  - IWS IP Positions available. (See *TOPS IWS Base Platform User's Guide* for more information.)
- The hosts. file moved from c:\windows to c:\windows\system32\drivers\etc.
- Updated section "IP Audio Device command button" on page 105 for the Plantronics headset.

15.2 Release 15.2 revisions

- The following datafill (.INI, .TBL, .LNG) files were added, altered, or deleted:
  - **New files:**

    no new files
  - **Altered files:**

    MPXINI.INI
    SCRIPTINI.INI
  - **Deleted files:**

    no deleted files
- The provisioning tool window for SCRIPTINI.INI has a new option: "Give Scripting Window Focus at Call Presentation." The old option "ScriptVisible During Call" has been removed.

15.3 Release 15.0 revisions

- The following datafill (.INI, .TBL, .LNG) files were added, altered, or deleted:
  - **New files:**

no new files

— **Altered files:**

MPXINI.INI

— **Deleted files:**

no deleted files

Parameter WavDeviceSupported is added to the MPXINI.INI file to support the audible alert feature.

15.4 Release 14.0 revisions

- No revisions to the RAMP application for this release.
- No revisions to the provisioning tool for this release. However, a new section (page 147) describes how to use the provisioning tool to datafill the new CT4Q menu. Two new IWS base files support this new menu: XCT4QMNU.TBL and CT4QMENU.LNG.

15.5 Release 13.0 revisions

Note: As of IWS release 13.0, the NTOA/NTOA Plus application is renamed the IWS Billing application.

- The following datafill (.INI, .TBL, .LNG) files were added, altered, or deleted:

  — **New files:**

  no new files

  — **Altered files:**

  no altered files

  — **Deleted files:**

  no deleted files

- **KeyBind rewrite:** The KeyBind utility has been rewritten to conform with IWS 32-bit architecture. The KeyBind main menu has changed. The five previous menu items are consolidated into four. The Key Macros, Add Section, Delete Section and View Bindings items are now found under the utilities menu. The Help now uses a Microsoft Windows-type GUI and covers various KeyBind topics. (See page 153.)
- **CCDB Timer name change:** The CCDB Timer control button is now called the DB Timer control button. (See page 130)
- **Documentation improvement:** Section 8.0, “File transfer tool,” was updated again after Gate 3 to explain in more detail how to use the RAMP for upgrading other IWS positions and to how to manage customized datafill during software distribution.

15.6 Release 12.0 revisions

- No revisions to the RAMP application for this release.

15.7 Release 11.0 revisions

- The following datafill (.INI, .TBL, .LNG) files were added, altered, or deleted:
  - **New files:**

    no new files
  - **Altered files:**

    MPXINI.INI

    XFNCTS.TBL

    XKBOARD.TBL
  - **Deleted files:**

    SCRSINI.INI
- The RAMP dial-up connection enables a PC equipped with Windows 95 and configured as an off-ring RAMP to dial-in to an on-ring RAMP. Once the two RAMPs are connected, the off-ring RAMP can perform maintenance to the LAN that the on-ring RAMP is residing. All functionalities of an off-ring RAMP are supported when RAMP dial-up is used. (See page 23.)
- A key macro can record multiple key actions and perform them as a single keystroke. Up to 25 key actions can be recorded in a key macro, and up to 25 key macros can be defined. The KeyBind utility is used to set up and edit key macros for use on the IWS position. (See page 160)
- NTDA no longer supports the DA router system configuration. The button labeled “Make NT-DA Gateway” has been removed from the Nonregistering Applications dialog box of the MPXINI.INI configuration window in ProvTool. If you are upgrading to the release IWS110 version of NTDA, but keeping the datafill in file MPXINI.INI from any release prior to IWS110, use the provisioning tool to remove FT router from the list of nonregistering applications. Failure to remove this line from file MPXINI.INI results in an error at startup of the IWS position.
- Added Allow Automation to file XFNCTS.TBL to support the No Automation feature.
- Windows 95 supplies a new virtual keyboard driver, which sends three new scan codes. If you are upgrading to IWS release 11 but keeping the datafill from an earlier release of file XKBOARD.TBL, you must use the KeyBind utility to reassign key actions to the three keys whose scan codes were changed. Refer to the XKBOARD.TBL section of the *TOPS IWS Base Platform User’s Guide*, 297-2251-010. (See page 153)
- Manual file transfer can be done by using Windows 95 File Manager. This is the commercial application used by RAMP for file transfer. The user interface is Windows Explorer. (See page 45)

- The previous IWS custom screen saver is replaced with Windows-compliant screen savers. This change makes file SCRSINI.INI obsolete. Use the Windows 95 Control Panel—Display GUI to select and configure a screen saver.
- Follow the steps below to enable the use of a mouse with a RAMP:

  1. If already at the Windows 95 desktop, proceed to step 7. If the IWS base application is running, press **Ctrl+Alt+Delete** to obtain the Close Program window.
  2. Use the down arrow key to highlight MPX BASE Application.
  3. Use the **Tab** key to highlight End Task. Press **Enter** to close the IWS base application.
  4. If the RAMP application is running, press **Ctrl+Alt+Delete** to obtain the Close Program window.
  5. Use the down arrow key to highlight Remote Access Maintenance Position.
  6. Use the **Tab** key to highlight the End Task button and then press **Enter** to end the RAMP application.
  7. To detect new hardware, the mouse must be plugged into the position. If the mouse is not already plugged in, do so now.
  8. Press **Ctrl+Esc** to open the Start menu.
  9. Select Shut Down by pressing **U**.
  10. In the Shut Down Windows dialog box, use the arrow keys to select Restart the computer and then press **Enter** to restart the computer.
  11. Upon restart, the IWS base application is running. Press **Ctrl+Alt+Delete** to obtain the Close Program window.
  12. Use the down arrow key to highlight MPX BASE Application.
  13. Use the **Tab** key to highlight End Task. Press **Enter** to close the IWS base application.
  14. Press **Ctrl+Esc** to open the Start menu.
  15. Select Run from the Start menu by pressing **R**.
  16. At the Open text box, type:
      ```
      c:\win95tmp\mouseins
      ```
  17. Press **Enter**. The Finished–mouseins dialog box will appear. Ignore it and proceed to the next step.
  18. Modify the C:\AUTOEXEC.BAT file. Press **Ctrl+Esc** to open the Start menu.
  19. Select Program from the Start menu by pressing **P**.

20. Use the arrow keys to select MS-DOS Prompt from the Program menu. Press **Enter**.

21. From the C:\WINDOWS prompt type:

    ```
    edit C:\AUTOEXEC.BAT
    ```

22. Press **Enter**. In the AUTOEXEC.BAT file, locate the line that says “rem MOUSEON=1.” Remove “rem” from the line.

23. Press **ALT+F**, then press **X** to exit the editor. A Save File dialog box will appear. To save the changes, press **Y**.

24. Type EXIT to close the DOS shell window.

25. Press **Ctrl+Esc** to open the Start menu.

26. Select Settings from the Start menu by pressing **S**.

27. Select Control Panel from the Settings menu by pressing **C**.

28. Use the arrow keys to select Add New Hardware. Press **Enter**.

29. The Add New Hardware Wizard will now run. Press **Enter** to continue.

30. To allow the Wizard to search for new hardware, select Yes (Recommended) by pressing **Y**. Then press **Enter** to continue.

31. At the next window, press **Enter** to continue with the new hardware detection. The Wizard now will begin to detect new hardware.

32. After Windows has finished detecting new hardware, press **D** to see what new hardware components have been detected. If the mouse has not been detected, an error has occurred. Repeat these steps. Remember to attach the mouse to the position. Also note any additional hardware that may have been detected, such as extra ethernet or token ring network adaptors. These may need to be removed so the IWS position can restart correctly.

33. **Tab** to the Finish button and press **Enter**.

34. The Windows mouse drivers will then be automatically installed. When complete, a System Settings Change dialog box appears. To finish installing the mouse, the position must be rebooted. Select YES by pressing **Y**.

15.8 Release 10.0 revisions

- **Software distribution enhancements** are as follows:
  - — Capabilities of including software distribution configurations in configuration sets. (See page 48 and page 50)
  - — Schedule Manager for scheduling tasks to be executed at a certain time. Currently software distribution is the only available task for scheduling. (See page 71)

- **Special field editing** Parameter SPL Field Editing is added to file NTOAINI.INI so the service provider can enable editing of a confirmed special number using the Edit key. (See page 138)
- **NTOA ECC enhancements** NTOA Plus is upgraded to provide new services for enhanced calling cards. (See page 137)

  The length of ECC PINs can now be datafilled in file NTOAINI.INI with parameter NumPINCodeDigits.

  One string (string ID 0018) is changed and two strings are added (string IDs 0041 and 0042) to file PCCCINFO.LNG as labels for the different types of billing represented in the special field.

  Two new strings (string IDs 0043 and 0044) are added to file PCCCINFO.LNG to provide a message in the MSA about the status of CCDB validation. The operator can press the Thr/CC key to turn CCDB card validation on or off.

  If the operator enters only the PIN in the special field, these digits are appended to the called number and sent to the CCDB for validation as a complete enhanced calling card number.The length of ECC PINs can be datafilled with parameter Num PIN Code Digits in file NTOAINI.INI.
- **OIA HMI enhancements** File OIACIW.LNG is reorganized. New text strings for the new fields in the OIA application are added to file OIACIW.LNG.

  These strings replace existing strings:

  IC: string ID 0005

  CLGNme: string ID 0006

  CLGNum: string ID 0007

  Txt: string ID 0008

  CLDNme: string ID 0009

  CLDNum: string ID 0010

15.9 Release 9.0 revisions

- **Clock and Call Timer** A new command button (Clock and Call Timer) is added to the MPXPARM configuration window for the new IWS Customizable Clock/Timer feature. The MPXPARM configuration window, which is used to datafill file MPXPARM.INI, can be accessed through the provisioning tool. (See page 113)

  A new cross reference table, XCOTHSD.TBL, is added for datafilling a threshold (in minutes and seconds) for each call type for the call timer feature. (See *TOPS IWS Base Platform User's Guide*)
- **Print/Save Screen** This new feature enables an operator to capture screen displays during call processing for problem reporting purposes. These screen captures are saved as files in directory SCRNCAPT on the operator position.

Each screen capture generates a log that can be observed in the logs observation window of the RAMP. (See *TOPS IWS Base HMI Application Guide*). Table file, XTROUBLE.TBL, includes an additional new field named ScreenCapture. IWS Generic key set includes an additional new key named Screen capture.

File Transfer tool at the RAMP can be used to collect screen capture files from the operator positions to a common location at the RAMP (C:\RAMP\SCRNCAPT directory). There is a PrintScreenCapture option under Tools in the main menu of the RAMP. This can be used to print the screen capture files selectively at the printer connected to the RAMP. (See page 43)

- **SPID/trunk group simultaneous display** This new feature is implemented in the NTOA application (See *TOPS IWS NTOA/NTOA Plus Application Guide*). For NTDA application, either SPID information or trunk group can be displayed (See *TOPS IWS NTDA Application Guide*).

  In the MPXPARM.INI file, new variables (DisplayBoth, Priority) are added to the [TrunkGroupSPID] section. (See page 114)

- **Scripting Enhancement** added the following changes:

  — SPID as an attribute to the current ones (Call origination type, CT4Q, Reason Code for NTOA and NTOA Plus) that control the display in the Scripting window at call arrival in NTOA, NTOA Plus and NTDA. New cross reference table files (NTDASPID.TBL for NTDA and XSPIDXSC.TBLfor NTOA and NTOA Plus) are added and existing cross reference table files CORGNTDA.TBL and CT4QNTDA.TBL are renamed. (See *TOPS IWS Base Platform User's Guide*)

  — Allows the scripting hierarchy, which determines which attribute has what priority for display in the Scripting window, to become datafillable by the customers in the SCRPTINI.INI file. This can be done via the SCRPTINI configuration window through the provisioning tool. (page 121)

  Also see Scripting window in the *TOPS IWS NTDA Application Guide and* Scripting utility in the *TOPS IWS NTOA/NTOA Plus Application Guide.*

  — For NTOA and NTOA Plus, the Scripting window can be displayed during call processing. The operator can switch between the application window and the Scripting window by using the Script Window Display key and call processing keys. (See Scripting Window in *TOPS IWS Base HMI Application Guide*)

  — In file SCRPTINI.INI, in NTOA and NTDA sections, the following new datafillable variables are added: SPIDPriority, CT4QPriority, COPriority, VisibleDuringCall (NTOA only) and RCPriority (NTOA only). (See page 121)

- Additional Hardware Requirements

— Printer with capabilities for Bitmap printing, attached to the RAMP

— Label for the new screen capture key

15.10 Release 8.0 revisions

- The NTDA file NTDAMSA.LNG can now be datafilled by using Provtool.

  Note: File NTDAMSA.LNG replaced MSA.LNG.

- The NTDA datafill files CT4QNTDA.TBL and CORGNTDA.TBL are no longer datafilled through the NTDA setup tool;, they are now datafilled through Provtool.

- The NTDA files TASKON.BAT and TASKOFF.BAT replaced files UNLOCK.BAT and LOCK.BAT. The new files TASKON.BAT and TASKOFF.BAT are located in directory C:\RAMP\INSTALL\MPXBASE.

  Note: For positions other than RAMP, the new files TASKON.BAT and TASKOFF.BAT are also located in directory C:\MPXBASE\TOOLS.

15.11 Release 7.0 revisions

- Added the DMS Position number to the Profile, File Transfer, Trace, and Reboot Windows where a list of available positions is displayed. If the DMS position is not available, the display will show “Position ????” along with the network cluster and position numbers.

- Added the description for the File Types box in the SWD Script Editor Edit window. Described the System Files and Non-System Files radio buttons.

- RAMP file transfers now use file renaming if the SWD files are “system” files. This will allow applications and DLLs to be replaced while they are running in memory, and not be “loaded” until the position is rebooted. See section 8.2, “Software distribution,” on page 47.

- Removed the restriction that new SWD files had to be created by using a text editor instead of the new menu command.

- Updated screens and text to reflect the IWS070BF load.

- Added the updated Debug Options screen and corresponding text to reflect addition to file MPXINI.INI.

- Added Text Flashing and Colorblind Support screens and corresponding text to reflect additions to file MPXPARM.INI.

- Changed PCCINI.INI references to NTOAINI.INI.

- Removed file MPX.INI and placed pertinent parameters in file CLNTTCPI.INI.

- Added Encrypt Method, Custom AMA Layout, Acct Code Min Digits, Acct Code Max Digits, and Num PIN Code Digits screens and corresponding text to reflect additions to file NTOAINI.INI.
- Eliminated all README files.

15.12 Release 6.0 revisions

- Removed capability to selected positions from the LAN status window. This was redundant activity. Before this change, positions had to be selected in the LAN status window before the user could access any of the RAMP tools. Then, once the RAMP tool was accessed, positions had to be selected again in the tool. After this change, the RAMP tools may be selected as long as at least one position is communicating with RAMP. If at least one position is communicating with RAMP, the RAMP tools may be accessed, and the user then specifies the positions which will be effected by the tool from the dialog boxes and other user interface elements of the tool in use.
- Added new command button to the MPXPARM Configuration window, and the Time Out Values dialog box to the IWS provisioning tool. These are used to provision the Make Busy/Withhold Calls timeout value in MPXPARM.INI.
- RAMP can now control other LANs that are connected through commercial routers.
- Added a status bar to the main RAMP window to provide various user information.
- Added a capture to file option in the file menu of RAMP. This allows trace data to be saved in a file in addition to being displayed in the trace window. A capture button is added to the software distribution configuration window to capture the contents of the RAMP software distribution observation window.
- Added the RAMP Software Distribution Script File Editor. This tool is used to edit and create SWD files, listing software and datafill files for transfer, for use with RAMP software distribution.
- Added the ability to change the detail level of the information displayed in the RAMP Software Distribution window during a software distribution.
- Added a Select All Positions command button to the Define Software Distribution Configurations dialog box to select and highlight all positions listed in the Available Positions list box.
- Added the ability to edit and view SCRPTINI.INI, XCORGXSC.TBL, XCT4QXSC.TBL, and SCRPTLNG.LNG files with the provisioning tool.
- Addition of the **Edit** and **Clear Memo** keys to the KeyBind utility.

15.13 Release 5.0 revisions

- Not applicable. This is the first release of this document.

16.0 List of terms

AMA

See automatic message accounting.

American Standard Code for Information Interchange (ASCII)

The widely used coding method used by small computers to convert letters, numbers, punctuation, and control codes into digital format. There are 128 defined ASCII characters.

API

See application programmer's interface.

ASCII

See American Standard Code for Information Interchange

application programmer's interface (API)

A layer of TOPS IWS base software that provides an open interface enabling applications from different vendors to communicate with system software.

automatic message accounting (AMA)

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

BSY

See busy.

Busy (BSY)

The message BSY is sent to the DMS switch to indicate that the operator position is not accepting calls.

calling card database (CCDB)

A database that stores cardholder profiles for an enhanced calling card. Information from the CCDB determines whether restrictions apply to an enhanced calling card call, and it can help detect potentially fraudulent calls.

call type for queueing (CT4Q)

Part of a system for organizing and assigning call queues. Instead of mapping call origination types directly to a call queue, table QMSTOPS provides a CT4Q. A series of tables then refine the CT4Qs to allow the traffic office to divide incoming traffic into separately manageable categories based on different call attributes, according to office-specific criteria.

CBSY

See C-side busy.

CCDB

See calling card database.

C-side busy (CBSY)

The message CBSY displays on the MAP when a file transfer occurs through both DMS gateways at the same time, with no operator logged on. This busy condition generates alarms on the MAP display of the DMS switch.

CT4Q

See call type for queueing.

Digital Multiplex System (DMS)

A central office switching system in which all external signals are converted to digital data and stored in assigned time slots. Switching is performed by reassigning the original time slots.

Disk Operating System (DOS)

An operating system for computer systems that use disks and diskettes for auxiliary storage of programs and data.

DMS

See Digital Multiplex System.

domain name system (DNS)

The name and address used by the internet. The IWS positions are identified by their IP address separated by "x" (for example, 47x142x225x217). The DNS could also be "www.nortelnetworks.com."

DNS

See domain name system.

DOS

See Disk Operating System.

ECC

See enhanced calling card.

enhanced calling card (ECC)

A calling card that can be datafilled to provide customers easy access to a variety of card services, including speed dialing, sequence dialing, message delivery, and others, fully automated, with operator backup available.

file transfer protocol (FTP)

A protocol used to transfer files, such as load files and patch files, across the Ethernet local area network facility.

FTP

See file transfer protocol.

gateway (GTWY)

In the time division multiplexing (TDM) configuration of IWS only, the DMS gateway position provides the data connection between the DMS switch and the other positions in the cluster. The Internet Protocol (IP) configuration does not use gateway positions.

graphical user interface (GUI)

Hardware and software that allows an operator to interact with and perform actions at a TOPS IWS position.

GTWY

See gateway.

GUI

See graphical user interface.

HMI

See human machine interface.

human machine interface (HMI)

Hardware and software that allows an operator to interact with and perform actions at a TOPS IWS position.

Intelligent Workstation (IWS)

The Nortel Networks programmable operator workstation for traditional and non-traditional operator services.

Internet Protocol (IP)

Along with Transmission Control protocol (TCP), one of the two main parts of the TCP/IP protocol suite. IP enables information to be routed from one network to another. It is used in the public internet and in private intranets.

IP

See Internet Protocol.

IP address

A unique numeric address used by a computer on a TCP/IP network (for example, 48.192.008.012).

IWS

See Intelligent Workstation.

LAN

See local area network.

LIDB

See line information database.

line information database (LIDB)

An external database developed by the Bell operating companies and used for validating alternate billing requests and potentially used for other applications that must reference an external database, such as originating line number screening.

local areal network (LAN)

A network that permits the interconnection and intercommunication of multiple computers, primarily for the sharing of resources such as data storage devices and printers.

maintenance and administration position (MAP)

A group of components that provide a user interface between operating company personnel and the DMS-100 Family of switches. A MAP consists of a visual display unit and keyboard, a voice communications module, test facilities, and MAP furniture.

MAP

See maintenance and administration position.

Nortel Networks Directory Assistance (NTDA)

The TOPS IWS application that supports operators who provide telephone numbers and intercept services for subscribers.

NTDA

See Nortel Directory Assistance Application.

OIA

See Open Information Access.

Open Information Access (OIA)

The TOPS IWS application that provides reference data such as emergency number information, rate and route information, phraseology, and city name through an external database. The IP configuration of IWS does not support the OIA application.

open position protocol (OPP)

The procedures required for communication between the DMS switch and the TOPS IWS position.

OPP

See open position protocol.

personal computer (PC)

A workstation that has computational capability and that can be programmed to perform user-determined functions.

PC

See personal computer.

personal identification number (PIN)

A unique identifier specific to a particular user.

PIN

See personal identification number.

RAMP

See remote access maintenance position.

remote access maintenance position (RAMP)

A TOPS IWS position on a token ring or Ethernet LAN that allows support personnel to update all other positions on the same ring.

software distribution (SWD)

Software distribution.

special (SPL)

A a third-party or credit card number.

service provider identification (SPID)

The actual operating company of the subscriber, which may be different from the trunk group.

SPID

See service provider identification.

SPL

See special.

SWD

See software distribution.

TCP

See Transfer Control Protocol.

TOPS

See Traffic Operator Position System.

TOPS position controller (TPC)

A control unit that functions as an operator position-based microcomputer with networking capabilities.

TPC

See TOPS position controller.

Traffic Operator Position System (TOPS)

A call processing system made up of a number of operator positions, each consisting of a monitor, a controller, a keyboard, and a headset.

Traffic Operator Position System Intelligent Workstation (TOPS IWS)

A personal computer consisting of a controller, a video display, keyboard, headset jack, and software for monitoring call details and entering routing and billing information for operator assistance, directory assistance, and intercept calls.

Transfer Control Protocol (TCP)

A connection-oriented protocol that is part of the TCP/IP suite of protocols. TCP adds reliability through sequencing, timeouts, and retransmissions. It provides acknowledgments and checks for missing, out-of-sequence, and duplicated packets.

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DMS-100 Family

TOPS IWS

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