APPENDIX B

MWTM FAQs

This appendix provides answers to the following frequently asked questions about MWTM:

What is MWTM?

MWTM provides a powerful, easy-to-use solution that enables network administrators to manage and troubleshoot Radio Access Network—Optimized (RAN-O) networks. For a more detailed description of MWTM, see the "What is MWTM?" section on page 1-1.

Does MWTM require any other NMS applications?

MWTM is functionally a standalone product and does not require any other products. However, you can integrate MWTM with other products to provide added value.

For example, you can integrate MWTM with CiscoWorks, which provides access to the full suite of CiscoWorks products, including the Device Center, the CiscoView Element Manager, Resource Manager Essentials (RME), the Internetwork Performance Monitor (IPM), and the Access Control List Manager.

You can also integrate MWTM with the HP OpenView SNMP manager to enable MWTM to receive traps via HP OpenView.

You can also forward MWTM events to other hosts, in the form of SNMP traps. This enables MWTM to integrate with high-level event- and alarm-monitoring systems such as the Cisco Info Center (CIC), HP OpenView, and Micromuse's Netcool suite of products. These systems can provide a single high-level view of all alarm monitoring in your network, making it easier to detect and resolve problems. For more information, see the "Forwarding Events as Traps to Other Hosts" section on page 5-35.

What workstation and network devices do I need to run MWTM?

MWTM comprises two distinct pieces of functionality.

- The MWTM server application runs on Solaris/Linux only.
- The MWTM client application, including the user interface, runs on Solaris/Linux, Windows 2000 Professional, and Windows XP Professional. For Solaris/Linux, the MWTM client can run on the same system as the MWTM server, or on a different system.

Note The Linux client is unsupported.

For further hardware and software requirements, see the "Preparing to Install MWTM" chapter of the *Cisco Mobile Wireless Transport Manager Installation Guide*.

Can RAN-O devices send traps to MWTM and to another process on the same device?

Yes. You can configure your RAN-O devices to send SNMP traps to more than one process (such as MWTM and HP OpenView) on a single device. Each process receives traps on a different port number. However, to do so, you must configure a different community string for each process.

For example, your RAN-O network configurations could include the following lines:

```
snmp-server host 1.2.3.4 public udp-port 162
snmp-server host 1.2.3.4 otherCommunity udp-port 44750
```

where:

- The first line configures the HP OpenView trap receiver, with community string **public** and UDP port number **162**.

- The second line configures the MWTM trap receiver, with community string **otherCommunity** and UDP port number **44750**.

You would then configure MWTM to receive traps on port number 44740. For information about how to configure the MWTM port number, see the "Enabling SNMP Traps (Server Only)" section on page 11-27.

Can I run MWTM on my Windows PC?

You can run the MWTM client on Windows 2000 Professional or Windows XP Professional on your PC. However, the MWTM server must run on a Solaris/Linux system.

How do I install the MWTM client?

You can install the MWTM client either from the CD distributed with MWTM, or by using a Web browser to download the MWTM client from an MWTM server. See the *Cisco Mobile Wireless Transport Manager Installation Guide* for full details.

What are the names of the MIBs used by MWTM?

You can find the complete list of MIBs that MWTM configures and queries in the "MWTM MIB Reference" section on page D-1.

You can obtain the latest versions of these MIBs from one of the following locations:

- The Zip file *mibs.zip*, located at the top of the MWTM CD Image, contains these MIBs.
- You can download these MIBs from the Cisco Website:

  http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml

Why can't my remote workstation access MWTM on my local workstation?

Keep in mind that performance is always better if you access MWTM by installing the MWTM client on the remote workstation.

However, if you want to enable a remote Solaris/Linux workstation to access MWTM on a local workstation, enter the **xhost +** *remote_workstation* UNIX command on your local workstation, where *remote_workstation* is the remote device you are enabling to access your local workstation.

To enable a remote Windows workstation to access MWTM on a local workstation, you can use an X-Window system emulator such as eXceed or Reflection X, but be aware that there may be display problems. For example, the window borders might disappear, or the keyboard focus might be missing.

X Performance Enhancer (AntiAliasing Off)

Checkbox used to specify whether antialiasing is on in the topology map. Antialiasing, which is on by default, improves the appearance of the icons and connections in the map.

You can improve the performance of the MWTM client on a remote workstation by turning off antialiasing in the topology map. For more information, see the "Turning Off Antialiasing to Improve Performance" section on page 8-27.

What is a super user?

A super user is an MWTM user who has been enabled to perform most of the MWTM functions that otherwise require the user to be logged in as the root user.

For a complete description of the functions that a super user can and cannot perform, as well as instructions for enabling a super user, see the "Specifying a Super User (Server Only)" section on page 10-19.

Why did MWTM not discover all of my RAN-O nodes?

After you discover the network, examine the Discovered Nodes table to verify that MWTM discovered all of the nodes in the network. If you suspect that MWTM did not discover all of the nodes, verify the following conditions:

- Verify that the MWTM server can ping the nodes.
- Verify that the nodes are running IOS images that are compatible with the MWTM server.
- Verify that the SNMP is enabled on the nodes.
- Verify that MWTM is configured with the correct SNMP community name. See the "Configuring SNMP Settings" section on page 2-3 for details.
- Verify that you selected **Entire Network** when you ran Discovery. If you suspect that you did not, run Discovery again with **Entire Network** selected.

I moved the server on which I had installed MWTM and now I can't start the MWTM client or server. Why?

If you change the IP address of the server on which you installed MWTM, or if you move the server to a new network, you must reboot the server to prevent MWTM connection problems.

To reboot the server, use the following procedure:

Step 1 Log in as the root user, as described in the "Becoming the Root User (Server Only)" section on page 3-3.

Step 2 Enter the following commands:

 # cd /opt/CSCOsgm/bin

 # ./mwtm reboot

If you change the server's Solaris/Linux host name, you must reset the default host name on the MWTM server and client, using the following procedure:

Step 1 Log in as the root user, as described in the "Becoming the Root User (Server Only)" section on page 3-3.

Step 2 Enter the following commands:

 # cd /opt/CSCOsgm/bin

 # ./mwtm evilstop

MWTM stops all MWTM servers on the local host.

Step 3 Enter the following command:

 # ./mwtm servername *hostname*

where *hostname* is the new default host name. Make sure the new name is valid and is defined in your */etc/hosts* file.

MWTM resets the default host name for the MWTM server and client and automatically restarts the MWTM server.

How often does MWTM poll the RAN-O nodes?

By default, MWTM polls the nodes in the network every 15 minutes. However, you can initiate a poll for one or more nodes at any time by selecting the nodes in the Discovery panel of the Discovery Dialog and clicking **Poll Node**.

You can also change the default poll interval for one or more nodes in the SNMP Configuration Dialog. You must be logged in as the root user or as a super user to access this dialog.

Finally, the Node Details Window polls the displayed node and its adjacent node every 15 seconds, but you can change that poll interval, too.

If I select the Clear Event Icon menu option, does that delete the event from the MWTM database?

No. When you select the **Clear Event Icon** menu option for an object, MWTM does not delete the actual event from its database. MWTM only deletes the event icon (an orange triangle) from its displays for the object, and only for the MWTM client on which you are currently working.

Can I add my own sounds to the Event Sound Filter?

Yes. You can add sound files to an MWTM client. MWTM clients can play the following sound file formats: AIFC, AIFF, AU, SND, and WAV.

MWTM client sound files are stored in the MWTM client's *sounds* directory:

- If you installed the MWTM client for Solaris/Linux in the default directory, */opt*, then the sound file directory is */opt/CSCOsgmClient/sounds*.
- If you installed the MWTM client for Windows in the default directory, */Program Files*, then the sound file directory is *C:\Program Files\SGMClient\sounds*.
- If you installed MWTM in a different directory, then the sound file directory is located in that directory.

If for some reason MWTM cannot play a specified sound file, MWTM plays a default beep. For example, MWTM cannot play a sound file if one of the following conditions exists:

- The file has been moved or deleted from the *sounds* directory
- The *sounds* directory has been deleted or cannot be found
- Some other application is using all of the sound resources
- There is no sound card present

How does "zoom in on an area" work in a topology map?

"Zoom in on an area" enables you to zoom in on a selected area of the topology map in the Topology Window. To do so, click the **Zoom in on an area** button, or select **Topology Tools > Zoom > Area** from the MWTM Main Menu, then click in the topology map and drag a rectangle around the area you want to zoom in on. MWTM expands the selected area to fill the topology map.

Can I add my own icons to the topology map?

No. To ensure that icons on the topology map can be resized cleanly, they are drawn as special vector-based images. Raster images, such as GIF files, do not resize cleanly.

Why did I receive a "cannot connect to server" message?

When you launch the MWTM client or the Event Configurator, or when you connect to a new server (whether manually or automatically as the result of a server failure), you might receive the following message:

```
This client is not allowed to connect to the server or the server is listening on a port
the client does not know about or cannot reach. Click the help button for a more detailed
explanation.
```

If you receive this message, one of the following situations has occurred:

1. An MWTM administrator has prevented your MWTM client from connecting to the MWTM server, using the **mwtm ipaccess** command.

To resolve this problem, contact the MWTM administrator and ask to have your client's IP address added to the *ipaccess.conf* file. See the "Limiting MWTM Client Access to the MWTM Server (Server Only)" section on page 10-32 for more information.

2. The MWTM server has more than one IP address, but the MWTM server's default host name is set to an IP address that your MWTM client cannot access.

   To resolve this problem in Solaris/Linux, use the **mwtm servername** command to reset the MWTM server's default host name to an IP address that your client can access and restart the server. See the "mwtm servername" section on page C-43 for more information.

   To resolve this problem in Windows, select **Start > Programs > Cisco MWTM Client > Modify Default MWTM Server Name**, then you can enter the **mwtm servername** command.

Note Using the **mwtm servername** command to reset the MWTM server's default host name does not affect communication between the MWTM server and the RAN-O devices.

3. A firewall is installed between the MWTM server and your MWTM client that only allows traffic to pass through to the MWTM server's port numbers 1774 (the MWTM Web Server port) and 44742 (the MWTM Naming Server port), but communication between MWTM servers and clients requires additional ports.

   To resolve this problem, set up the firewall correctly. See the "Firewall Communication" section on page F-3 for details.

Does the MWTM Java RMI use TCP or UDP?

MWTM's two-way RMI communication between Java-based GUI clients and Java-based server processes uses TCP sockets.

What does this message mean: MessageLoggerProxy:setMessageLogger(): Could not resolve.

One of the following conditions has occurred:

- The host or port number of the Message Log Server is configured incorrectly. Verify that the host or port number is valid.
- MWTM cannot reach the Message Log Server, probably because it is restarting. MWTM recovers the connection when the Message Log Server restarts.

What does a status of Deleted, Uninhibited, or NoShutdown mean?

A status of Deleted, Uninhibited, or NoShutdown indicates a possible problem with MWTM. If you see one of these status settings, contact Cisco TAC or your Cisco Account Team.

Will the MWTM server processes restart automatically after a system reboot?

Yes. When you install the MWTM server, MWTM modifies your system startup scripts to ensure that the MWTM server processes start up again after a system reboot. To accomplish this, MWTM adds the following lines to your system startup scripts:

/etc/init.d/sgm

/etc/rc0.d/K99sgm

/etc/rc1.d/K99sgm

/etc/rc2.d/K99sgm

/etc/rc3.d/K99sgm

/etc/rc3.d/S99sgm

These lines ensure that the MWTM shutdown and startup scripts run in the correct order for each system initiation state.

Linux Only

Note that for Linux only, the following lines are modified as well:

/etc/rc5.d/S99sgm

/etc/rc6.d/K99sgm

Some of my MWTM windows are showing up with small, unusable text entry fields. How can I correct this?

Depending on your system, as well as other factors, MWTM windows can sometimes display so small that text is illegible, and columns and text entry fields are very narrow and unusable. If this happens, resize the window and widen the individual columns until the information is again legible and the columns and text entry fields are usable.

To make a column wider or narrower, click the column divider in the header and move the divider to the right or left while holding down the right mouse button.

Sometimes my MWTM display seems to lock up. Why?

In MWTM, events might cause message popups to remain in the background of your display, preventing you from interacting with other windows. If you suspect that your display has locked up, perform the following tasks:

- Make sure you are running MWTM on a supporrted operating system. For more information about supported operating systems, refer to “Preparing to Install MWTM” in the *Cisco Mobile Wireless Transport Manager Installation Guide*.

- Minimize windows and look for an MWTM message popup in the background.

After a failed uninstall of the Windows client, I'm prompted to uninstall again, but the procedure does not work. Why?

If for some reason the Windows MWTM client uninstall procedure fails before the client is completely uninstalled, MWTM prompts you to uninstall the client again. However, this might not be possible using the standard **Add/Remove Programs** icon in the Windows Control Panel, or from the Windows Start menu.

If you cannot uninstall the MWTM client using the standard procedure, use the following procedure:

Step 1 Delete the MWTM client installation directory and its contents:

- If you installed the MWTM client in the default directory, *C:\Program Files*, then the installation directory is *C:\Program Files\SGMClient*.
- If you installed the MWTM client in a different directory, then the installation directory is located in that directory.

Step 2 Delete the following directory: *\Program Files\InstallShield Installation Information\{FB2CF81B-4F3C-4326-8130-5270116372E2}*.

Note This directory might be hidden.

Step 3 Delete the **Cisco SGM Client** registry key and its contents:

HKEY_LOCAL_MACHINE\SOFTWARE\Cisco Systems, Inc.\Cisco SGM Client

Step 4 Delete the MWTM Client entries from the Windows Start menu and desktop.

Why do I see strange character strings when I install MWTM?

The setting of the LANG environment variable can cause syntax errors in the MWTM setup scripts, which can result in messages that contain strange character strings such as **?y?d@O**. To correct this problem, unset the LANG environment variable in the workstation from which you are installing MWTM, using one of the following commands:

- If you are running sh, enter the **unset LANG** command.
- If you are running csh, enter the **unsetenv LAN**G command.

Then install MWTM again.

Why doesn't my browser launch when I select a Web page menu option from the MWTM Main Menu?

If your browser is not already running on Solaris/Linux, and you select a menu option that displays a Web page, MWTM might not be able to launch the browser.

To avoid this problem, make sure the following conditions are met:

- You are running a supported browser (Netscape Navigator 7.1 or later; Microsoft Internet Explorer version 6.0 (SP1) or later; or Mozilla 1.6 or later, including Firefox 1.0).
- Your browser is already running before selecting a menu option that displays a Web page.
- The MWTM Web browser path is correct. For more information about setting the browser path, see the "mwtm browserpath" section on page C-9.

What is the difference between in-band and out-of-band management?

Devices located at the cell site are usually accessible only over the same path that is used to transport voice traffic. Collecting management information over this path is called in-band management and has an impact on backhaul utilization.

MWTM can reduce the amount and frequency of collecting mangement information when information is collected in-band. MWTM does not create reports for in-band accessed routers. Also, MWTM relies on the information in traps received from an in-band router instead of scheduling a poll to get the updated router status.

The following cell-site device configuration statements provide MWTM with information required to optimize data collection:

```
conf t
 ipran-mib location cellSite
 ipran-mib snmp-access inBand
```

Devices located at the aggregation site are managed using different paths than those used by voice traffic. Collecting management information in this configuration is called out-of-band management and has no impact on backhaul utilization.

Statistical reports are created for routers that are managed out of band. Also, when traps are received, the router is polled to get the latest information.

The following aggregation-site device configuration statements provide MWTM with information required to optimize data collection:

```
conf t
 ipran-mib location aggSite
 ipran-mib snmp-access outOfBand
```

The following example shows the range of options that are available for the **ipran-mib** command:

```
ems1941ka#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
ems1941ka(config)#ipran-mib ?
  backhaul-notify-interval  Interval for backhaul utilization
  location                  Location of device
  snmp-access               Specify type snmp connectivity
  threshold-acceptable      Acceptable utilization threshold
```

```
  threshold-overloaded      Overloaded utilization threshold
  threshold-warning         Warning utilization threshold

ems1941ka(config)#ipran-mib location ?
  aggSite    Located at BSC or RNC site
  cellSite   Located at BTS or Node B site
  undefined  Undefined location

ems1941ka(config)#ipran-mib snmp-access ?
  inBand     In Band SNMP connectivity
  outOfBand  Out of Band SNMP connectivity
  undefined  Undefined connectivity
```

How does the MWTM server communicate to the BTS MWR at the remote cell site?

The MWTM server must communicate to the cell site (BTS) router using IP routing. If the BTS router is reachable only through the backhaul interface, add a static route on the MWTM server to point to the BTS router. Use the IP address of the BSC router IP address as the next-hop address.

The following examples of static routing for Solaris and Linux platforms are based on the diagram in .

To create a static route on a Solaris MWTM server, use the following procedure:

Step 1 Log in as the root user, as described in the "Becoming the Root User (Server Only)" section on page 3-3.

Step 2 Enter the following command:

 # /usr/sbin/route add host 10.1.1.1 20.1.1.1

To create a static route on a Linux MWTM server, use the following procedure:

Step 1 Log in as the root user, as described in the "Becoming the Root User (Server Only)" section on page 3-3.

Step 2 Enter the following command:

 # route add -host 10.1.1.1 gw 20.1.1.1

How do I change the default status polling interval?

The MWTM polls the MWR node for status information (for example, interface up or down) every 15 minutes. The size of this poll depends on the number and type of interfaces that are enabled on the MWR.

To change the default polling interval of 15 minutes, open the SNMP Configuration Dialog by selecting **Network > SNMP Configuration** from the MWTM Main Window. You can use this dialog to change the default polling interval to any number of minutes from 5 to 1440.

Note The status information in the GUI is only as good as the most recent poll.

Why are the age of my alarms always 0 minutes?

If the server clock is ahead of the client clock, the value will be 0 until the client clock catches up to the server clock. To get accurate values, use a time service such as Network Time Protocol (NTP) or similar, which keeps server and client clocks in sync.