

Chapter 3

Using InterMapper

You experience InterMapper through the [Map List Window](#), where you view a list of available maps. When you open a map, it appears in a [Map Window](#).

If you are using [InterMapper RemoteAccess](#), you may be viewing more than one map list in the Map List window; one for each server.

You can customize InterMapper by defining [Helper Applications](#) and by specifying what actions should be taken when you [double-click an object on a map](#). You can also set [user preferences](#) for InterMapper and InterMapper RemoteAccess.

Creating Maps

Use this section to find out how to [start your map](#), to [use Autodiscovery](#) to find and map each device on your network, and to [add devices](#) and [networks](#) manually. Once you are familiar with what maps are and how you can use them, you can add devices to your map by [importing them](#), and can [export data from maps](#) for use in spreadsheets and databases.

You can even [place a physical map image in the background](#) of your map, and [use geographic coordinates](#) as you import to place devices automatically at specific locations in relation to the background image.

Use InterMapper's [different probe types](#) to query your devices in specialized ways to give you more accurate information about the states of those devices.

As you become more familiar with what InterMapper can do, you can [add networks](#) and [scan them](#). You can [create sub-maps](#), allowing you to view large networks through an overview map, "drilling down" to see more detail as needed.

Arranging Your Map

Once you have created your map, you may want to [rearrange devices into logical groups](#), [change the appearance of devices](#), change the [device labels](#), or [add text](#) or a [background image](#). For maps with large switches, you may want to [hide some detail](#). For tips on arranging your map, see [Arranging Tips](#).

Notifiers and Alerts

You can [set up devices to alert you to problems](#) in a number of ways. When a device goes the specified state, a notifier is triggered, and alerts you to the problem.

You can [create your own notifiers](#) and [configure them](#) to send an [E-mail message](#), page (through a modem or [network](#)), [send a text message](#) to a cell phone, or [execute a script or system command](#). You can also [open a WinPopup window](#) on a Windows machine, [send an entry to a Syslog server](#), or [send an SNMP trap](#).

For each map, you can [define a default set](#) of notifiers to be attached to a device. You can also [attach one or more notifiers](#) to one or more specific devices. You can also create [groups of notifiers](#) and assign them to a device all at once.

If a device goes down, and other devices are attached to that device, you can [set a Vantage Point](#). InterMapper can then determine that the attached devices are dependent on the down device, and will not send notifications for those devices.

Monitoring Your Network

InterMapper begins polling devices as soon as you create your map. A great deal of information is immediately available by viewing the [Status window](#) for a device, network, or link. You also view and edit a device or network's information from its [Info window](#). For routers, switches, or other devices with interfaces, you can view status or other information about specific ports through the [Interfaces window](#).

You can set thresholds for [packet loss](#) or [network traffic](#), and InterMapper alerts you when a behavior is out of range. You can [create strip charts](#) that graph one or more data values associated with a device. You can also [view a detailed Event log](#) and [Outage log](#) to help you troubleshoot problems accurately. You can even [create new log files](#) for logging specific data.

If a device goes down, you can [acknowledge the problem](#), which prevents InterMapper from continuing to send notifications. There are several options for acknowledging problems that allow you to control the resumption of notifications after acknowledgement.

You can [collect data from devices](#) and save it in the [InterMapper Database](#), through the InterMapper DataCenter. The data can then be retrieved for use in reporting and analysis. You can [set policies](#) to specify how much data is retained and how long it is retained.

Server Settings

Use the [Server Settings panel](#) to view [information about InterMapper](#), to [set preferences](#), and to [configure](#) InterMapper's [Remote](#), [Web](#), [Telnet](#), and [Authentication](#) servers. You can also maintain InterMapper's [firewall](#) and [user](#) list, [enable and disable](#) or [control access to maps](#), and [create notifiers](#).

InterMapper Reference

Use the InterMapper Reference to view comprehensive lists of [menu commands](#), details about the available [device probes](#), [file and folder locations](#), and learn [advanced data import and export techniques](#). You can also learn how to use and customize the [InterMapper web server](#), and how to use the [InterMapper Telnet server](#).

Troubleshooting InterMapper

Use the Troubleshooting section to help you learn about [IP addresses](#), [Domain Name Servers](#), [SNMP](#), [WINS Names](#), and view a number of frequently-asked questions.

The Toolbar

The Toolbar contains buttons to toggle the map's edit mode and to switch from one view to another.



Icon view

Shows the map as individual icons, with their interconnections.



List view

Shows the devices on the map as a list, with columns for the device's status, name, address, probe type, and current and previous condition.

- Click a column heading to sort by that column.
- Click again to sort in reverse order.

It is convenient to sort by the severity so the most serious conditions appear at the top of the list.



Notifier view

This view lets you see which notifiers are attached to each device on a map. Another way to think of it is as a "responsibilities" view - what devices apply to a certain notifier.

- Select a particular notifier from the dropdown menu; you can see the checkboxes for all its recipients.
- To set a value for all devices, hold **Alt** or **Option**, and set a value. The value you changes to the selected value for the entire column. This works on all check boxes, as well as on the **Delay**, **Repeat**, and **Count** columns.



Chart list view

Shows the list of charts for the map.

- Double-click a chart name to open the chart.
 - Right-click the button to open a particular chart without switching the view.
- Click the pencil icon at the left end of the tool bar to switch the map between Monitor mode and Edit mode:



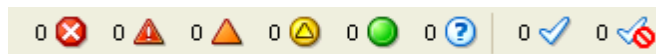
In Monitor mode - The map is not editable, and status windows appear when you click and hold a device, link, or network.



In Edit mode - The map is editable. Status windows can be opened with menu commands.

The Map Legend

The Map legend to the right of the toolbar shows the different states of the map and the number of devices in each state. It also acts as a filter in list view.



Badge	Color	Meaning
	Red (Flashing)	Down - No response has been received from the device within the specified timeout period.
	Red (Solid)	Critical - The specified threshold for critical state has been met
	Orange	Alarm - The specified threshold for alarm state has been met.
	Yellow	Warning - The specified threshold for warning state has been met.
	Green	Up - The device is working below the specified thresholds.
	Gray	Unknown - The device is not being polled, so its state is unknown.
	Purple	Searching - The device is searching for adjacent routers (during auto-discovery) or is tracking down unnumbered interfaces.
		Acknowledge - Timed or Indefinite - The device's problem has been acknowledged and notifications are being suppressed, either indefinitely, or for a specified period of time.
		Acknowledge - Basic - The device's problem has been acknowledged, and notifications are being suppressed until the device comes back up, at which time the checkmark is cleared.
		List Acknowledged Devices - (Filter button) List all devices that have been acknowledged.
		List Un-Acknowledged Devices - (Filter button) List all devices that have not been acknowledged.

- Click a legend icon to view a list of devices that currently in that state.
- Click the icon again to go back to the previous view.
- Shift-click icons to view devices in more than one state.

Example: Shift-click the Alarm and Warning icons to see any devices in either of those states.

- Click one of the Acknowledge Filter buttons (to the right of the legend) to list only acknowledged or un-acknowledged devices.

Note: The filter buttons work in concert with the legend icons - clicking a Filter button shows only the devices in the selected state that are acknowledged or un-acknowledged. It is possible to click a filter button and see no devices.

The Map Area

The Map area is the "canvas" on which you create your map. To get started, take a look at [Creating Maps](#). It is full of information about [starting your map](#). The Creating Maps section is full of information for [creating](#), [arranging](#), and making your map look [just the way you want](#) it to look. You'll also find a quick reference of [editing shortcuts](#).

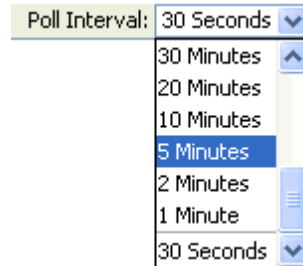
For an in-depth explanation of the elements that appear in the map window, what they mean, and how to use them, see [Monitoring Your Network](#).

The Status Bar

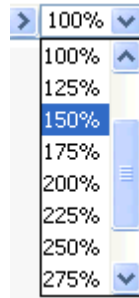
The Status bar contains controls for switching in and out of map edit mode, setting the polling interval, and zooming the map.



The **Poll Interval** drop-down menu sets the polling interval for the map.



The **Map Zoom** drop-down menu sets the zoom factor for the map. If you choose **Auto**, the map zooms automatically when you resize the window.



The Map List Window

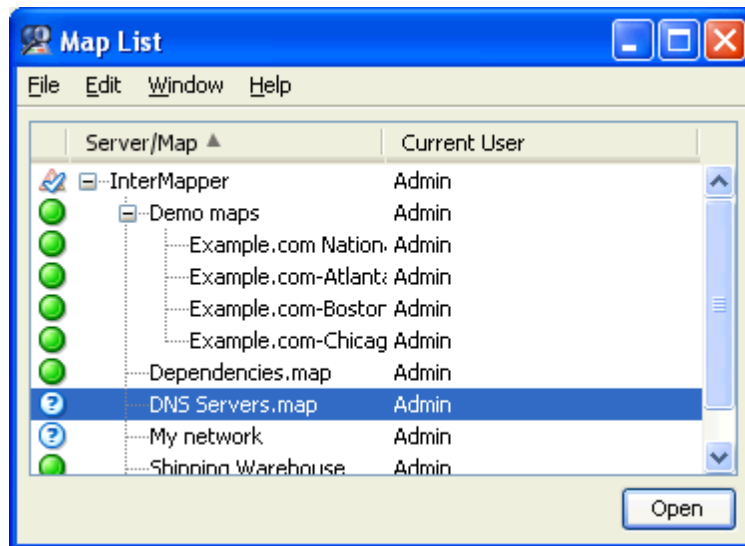
Use the Map List window as the primary interface to InterMapper.

- With InterMapper, you can control all aspects of the InterMapper server running on your local machine. You can also disable a map by right-clicking it and choosing **Disable Map**.
- With InterMapper RemoteAccess, you can access multiple InterMapper Servers from the same machine. If you have administrator access, you can edit all server settings on a remote server. You can also disable a map by right-clicking it and choosing **Disable Map**.

The menu items available in the File menu differ slightly between InterMapper and InterMapper RemoteAccess. For more information, see the [File Menu](#) reference.

The Map List Window

Use the Map List window to view a list of maps. If you have InterMapper RemoteAccess, you can also view a list of other available InterMapper servers, to log into one or more servers, and to view a list of maps currently running on each server.



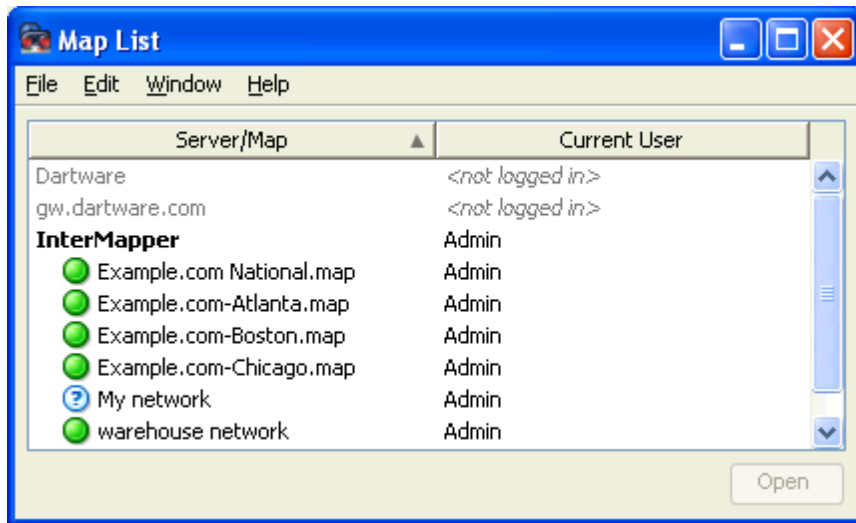
The Map List Window showing the example maps. Position the mouse cursor over a map in the list to view its DNS Name and/or IP address, and the port on which it's listening for InterMapper RemoteAccess connections.

Arranging your Maps into Folders

You can arrange your maps into folders as shown above, using the Server Configuration>Enabled Maps pane of the Server Settings window. For more information, see [Enabled Maps](#).

Using InterMapper RemoteAccess

InterMapper can make its maps available to people who are away from the server. They can use a program called [InterMapper RemoteAccess](#) to view and configure the server.



InterMapper RemoteAccess's Map List window

InterMapper RemoteAccess is a Java program that can run on Mac OS X, Windows NT/2000/X-P/Windows Server 2008, or various flavors of Unix/Linux.

InterMapper RemoteAccess is capable of configuring every aspect of InterMapper. For more information about enabling the Remote server, and a description of how to set up access permissions per-map or by IP address, see [The Remote Server](#).

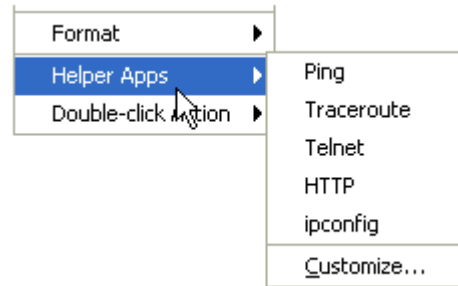
Note to Windows users: By default, XP SP2 and Vista both have significant firewalling turned on. You will need to create exceptions ("poke holes") in the firewall in order to use the remote server, web server, telnet server, or DataCenter server as well as to monitor SNMP traps. For detailed information, see http://dartware.com/support/tech_notes/WindowsXP.html.

Using Helper Applications

You can use helper applications to get information for creating maps or to troubleshoot problems. These programs are available through a contextual popup menu.

To invoke a helper program:

Control-click or right-click on a device. Select one of the helper applications to launch it using the device as its target. For example, the 'Ping' helper application invokes the system's ping utility: generally `/sbin/ping` on Unix, Linux or MacOS X, or `ping` on Windows. Including a URL as the helper application will invoke the system's tool configured to handle the URL.



The Helper apps context menu

Notes:

- You can specify the same helper application for several devices at the same time if more than one device is selected. The helper app is invoked for each selected device.
- The helper application that is invoked is platform-dependent: generally, InterMapper will open a terminal program and issue a command to run the helper.

Editing Helper Applications

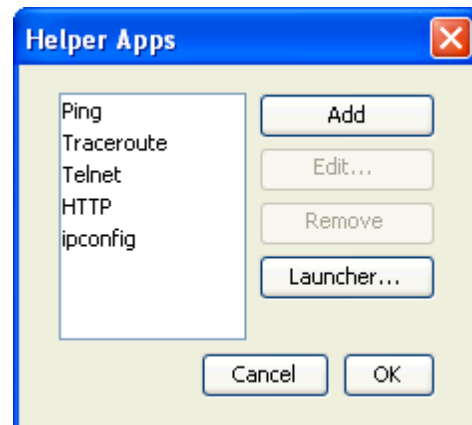
Use the Helper Applications Customize window to modify the built-in helper applications, and add new ones.

To view the Helper Applications Customize window:

Right/control-click a device. A drop-down menu appears. From the Helper Applications submenu, choose **Customize...**

or

From the Monitor menu's Helper Apps submenu, choose **Customize...**



The **Helper Apps** window appears.

This window shows the list of built-in helper apps as well as any user-added helper applications. To add, edit, or remove a helper application, see *Adding or Editing Helper Apps* below. It also describes the *Launcher* that is a platform-specific tool that is used to launch a helper app.

Adding or Editing Helper Apps

To add a new helper application:

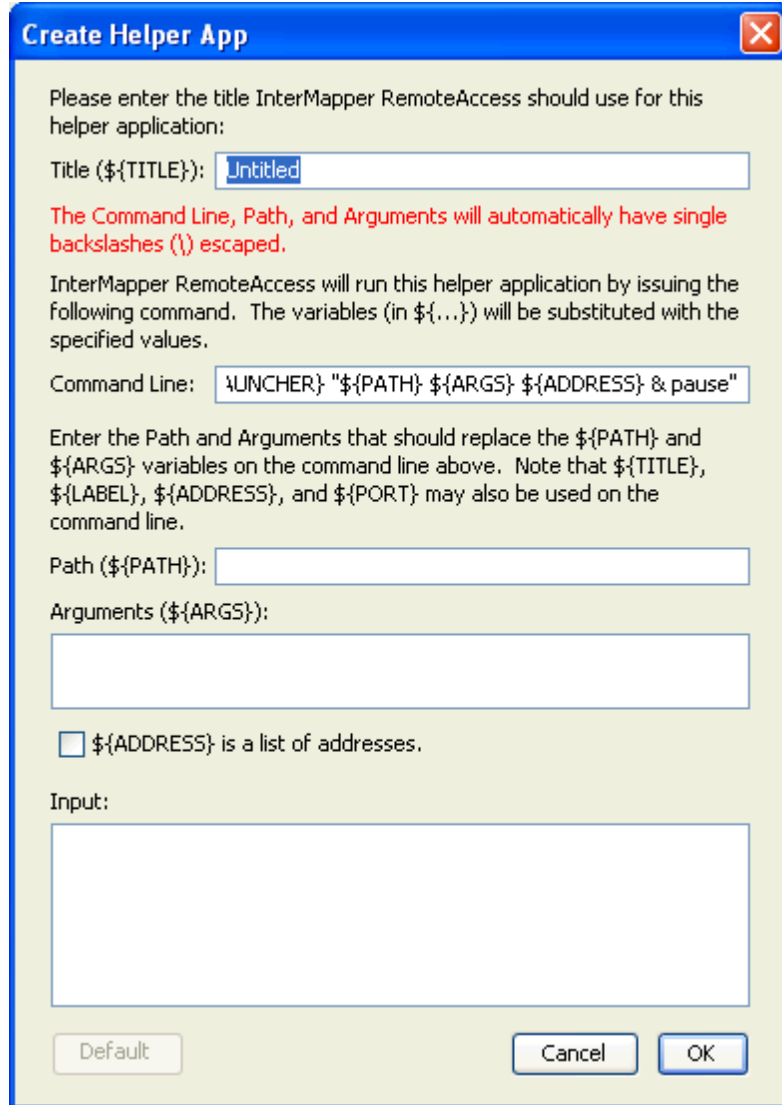
Click **Add...** The Edit window appears, showing default values for the new helper.

To edit an existing helper:

In the Helper Apps window, click the helper you want to edit. Click **Edit...** The Edit window appears, showing the current values for the selected helper.

Enter values as follows:

Title is the human-readable name that appears on the Helper Applications sub-menu.
Path is the full file path name for the helper application
Arguments that will be passed along to the helper application.



Finally, the **Command**

Line is the actual string that will be invoked. You can configure this string using the `{$TITLE}`, `{$PATH}`, `{$ARGS}`, and `{$LAUNCHER}` macros that will be substituted when the command is invoked. In addition, you may use `{$ADDRESS}` and `{$PORT}` macros to represent the address and port specified for this device.

Removing a Helper Application

You can remove any helper application definition you have created. Built-in helper apps cannot be removed.

To remove a helper app definition:

1. In the Helper Apps window, click the helper you want to remove.
2. Click **Remove...**

The Launcher

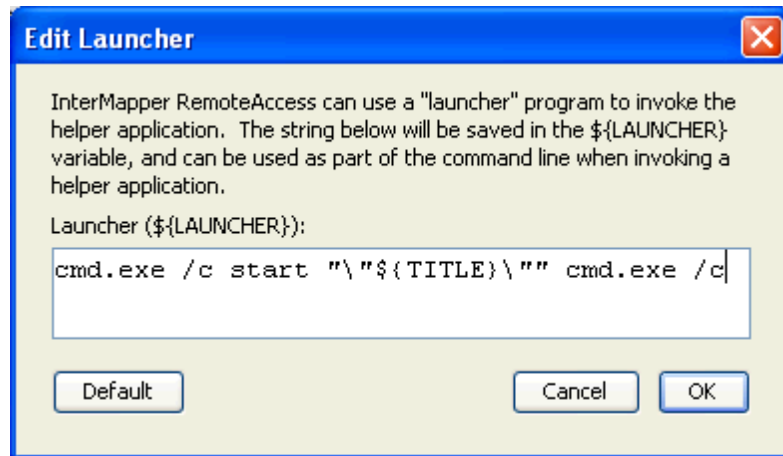
The *Launcher* is a platform-specific program that allows you to invoke another program from InterMapper.

How does the Launcher invoke an application?

The method of launching an application is platform-dependent.

On Windows, InterMapper uses a command shell. On OSX, InterMapper opens a Terminal window.

- On Unix/Linux, InterMapper invokes the shell.



Using Default Values

For each platform, there is a default value for each built-in helper app. You can reset a helper app to its default values.

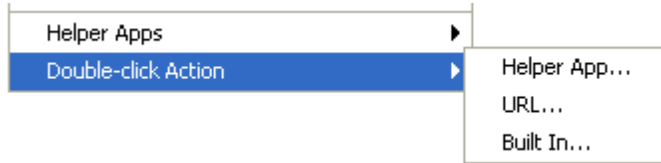
To reset a helper app to its default values:

- Click the **Default** button. The launcher string is reset to the default value for that platform.

Note: You don't have to use the launcher for any helper, but it's often the easiest way to invoke another program on your computer.

Using Double-Click Actions

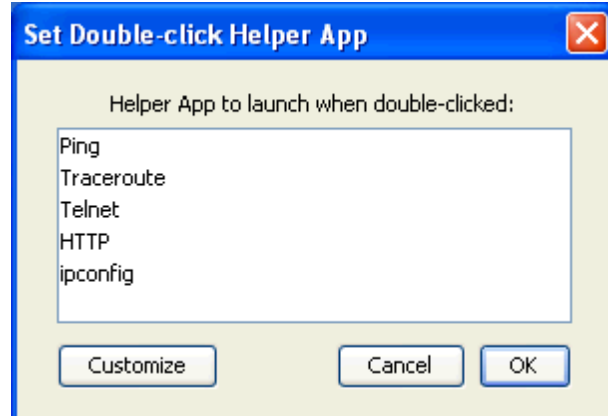
InterMapper defines *Double-click Actions* that it will perform when a device is double-clicked. Many probes have a pre-defined double-click action, but this can be overridden.



To change a double-click action, right-click on the device, and select the proper choice from the sub-menu:

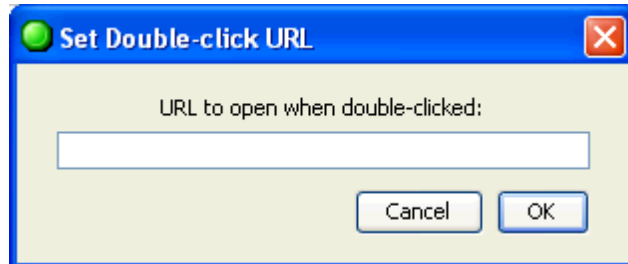
Helper App

Double-clicking will invoke a specified [helper application](#). This helper application runs on the same machine as the InterMapper client. Select the helper application from the current list of helpers.



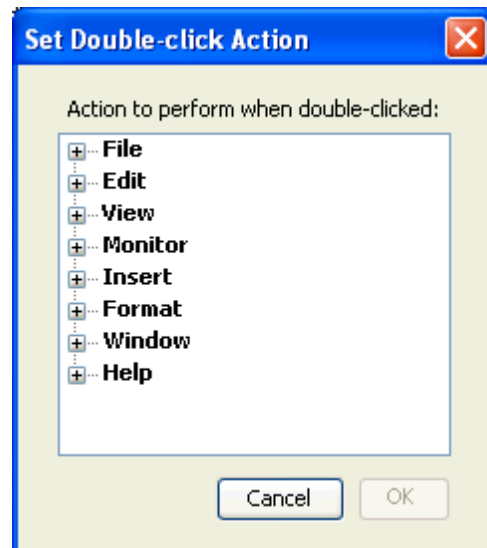
URL

You may supply a URL (http, ftp, telnet, etc.) and InterMapper will invoke it when the device is double-clicked. Enter a URL to be invoked when the device is double-clicked. You may use the following macros: `#{address}`, `#{port}`.



Built In

InterMapper can invoke nearly any of the menu commands as a result of a double-click. Select the desired item from the hierarchy of menu items.

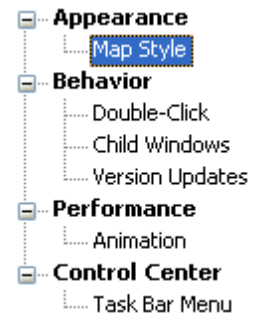


InterMapper User Preferences

Use the **Preferences** command, available from the Edit menu, to set user preferences for the InterMapper user interface. These settings affect only the copy of the InterMapper or InterMapper RemoteAccess you are running - it does not affect other users' settings.

To view and edit InterMapper's preferences:

1. From the Edit menu, choose **Preferences...** The Preferences window appears.
2. In the left pane, click the name of settings you want to change. If necessary, expand a section to view the more settings. The selected settings panel appears in the right pane.



Appearance

The Appearance section controls various appearance parameters. There is currently one panel in this section, **Map Style**.

Map Style

Use the Map Style panel to set your preference for the style in which your maps are displayed and your preference for whether to use anti-aliasing functions to display graphics or text.

- **Use 3-D map style** - (checked by default) Check this box to use the current three-dimensional display style, with gradient colors, rounded rectangles, and status icons.
- **Anti-aliasing** - Choose from this dropdown menu to select the elements of the map to which you want to apply anti-aliasing functions. You can choose **Default**, **Graphics and Text**, **Graphics only**, or **None**.

Behavior

Use the Behavior section to specify your preferences for double-clicking map elements and for how you want child windows, such as strip charts and status windows, to behave when a map is inactive.

Double-Click

Use this panel to specify a default action to take for a device or network that doesn't have an action assigned. Use the **Action** dropdown menu to choose from these options:

- **Helper App...** - Choose a helper application to launch.
- **Open URL...** - Enter a URL in the **Action** text box.
- **Built In...** - Choose an InterMapper menu command from the menu tree. By default, the Info window opens.

Child Windows

Use this panel to specify whether charts and status windows are hidden when a map becomes inactive.

- **Hide charts and status windows when Map is inactive** - Click to select this check box to hide strip charts and status windows for any map that is not the active window. If the box is not checked, any open strip charts and status windows remain open.

Version Updates

Use this panel to enable or disable the Automatic Update function by selecting or clearing the **Automatically check for updates** box and select **Daily**, **Weekly**, or **Monthly** from the drop-down menu. This function is also available from the [InterMapper Control Center](#). To check for updates immediately, use the **Check Now** button on the InterMapper Control Center.

Performance

Use this section to specify your preferences for animation rate.

Animation

Use this panel to specify your preference for animation. Faster animation looks better, but may use more CPU power than you would like, if you are running a slower CPU or have some very large maps.

- **Animation rate** - Choose an animation rate by moving the slider left for slower rates or right for higher ones. The selected rate appears in the upper right above the slider.

Control Center

Use this section to specify your preferences for the InterMapper Control Center.

Task Bar Menu

Use this panel to specify whether to show a task bar icon for the InterMapper Control Center.

- **Show status in task bar** - Select this checkbox to show the status icon in the task bar (Windows) or menu bar (Mac).

Chapter 4

Creating Maps

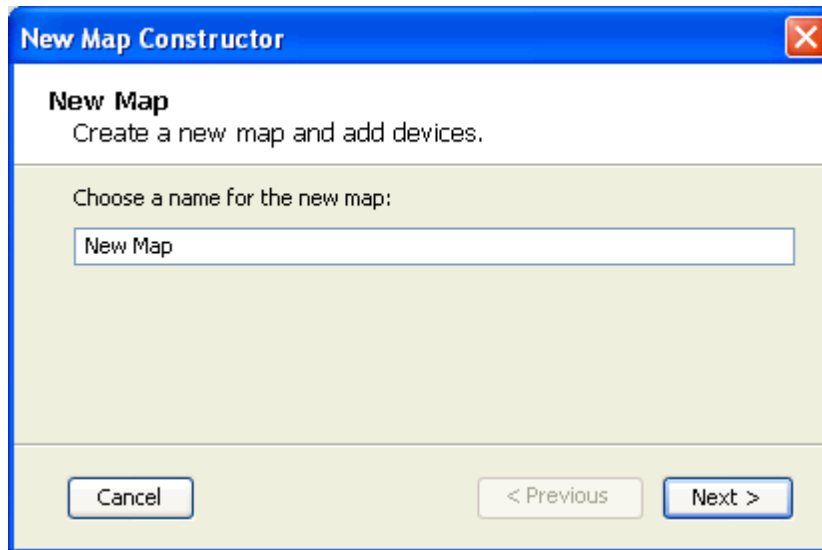
Starting Your Map

When you launch *InterMapper*, a Map List window appears. It contains several demo maps, which show examples of network maps, and contains brief descriptions of the elements appearing on the maps. Double-click a map to open it.

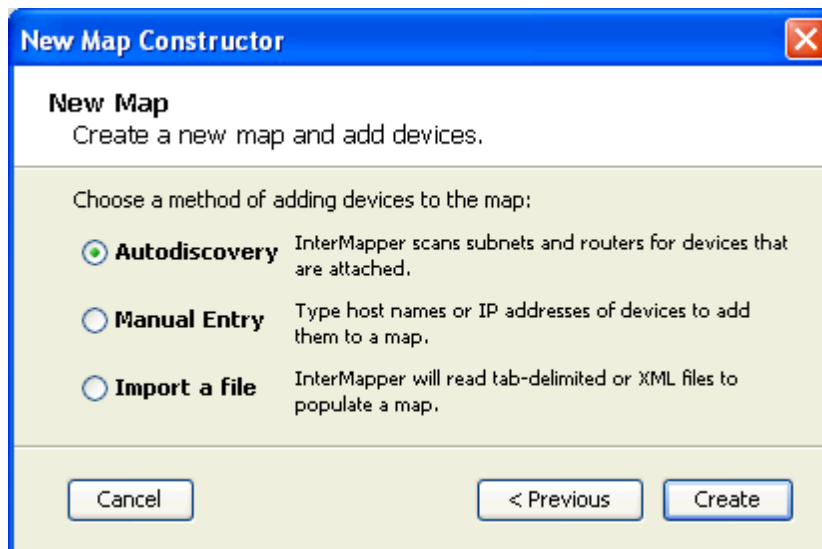
After you have explored the demo maps, you are ready to use the Auto-discover function to create your first map.

Creating a New Map

To create a new map, choose **New Map...** from the File Menu. The New Map Constructor window appears:



Enter a map name, and click **Next >**. The second page of the New Map Constructor appears.



- **Autodiscovery** - InterMapper's Auto-discover function automatically scans your network, looking for network devices to add to your map. It uses several heuristic techniques (including SNMP probes, ICMP and AppleTalk echo packets, and DNS and NBP queries) to discover