



MapInfo Professional

Version 8.5

PRINTING GUIDE

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Note: MapInfo cannot and does not recommend one printer/plotter over another, nor verify that a particular printer works 100% of the time. There are too many variables that affect the output to be able to make a recommendation.

May 2006

Printing Guide for MapInfo Professional 8.5

The purpose of this guide is to assist you in printing the best possible map images from your MapInfo Professional 8.5 software. We begin by covering the new print, import, and export features and continue with preferences and printing options available in MapInfo Professional. Then we give you some helpful tips and tricks and finally we help you trouble shoot issues you may be experiencing with your own use of MapInfo Professional.

We have significantly updated this document with new features and new resolutions to existing issues.

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New Print/Export Features in Version 8.5

There is a new anti-aliasing export filter in this version of MapInfo Professional. Anti-aliasing is a fairly common graphics filter operation that can make the jagged lines in your map and label images appear smoother, which may improve their look in a slide show presentation or on the Web. We suggest you experiment with this feature and its settings to see what anti-aliasing combinations work best for your images. Anti-aliasing is most effective when used with map images that contain many curved lines, irregular region areas and text objects.

The benefits of anti-aliasing can include:

- Make your fonts look smoother
- Make jagged edges in maps look rounder
- Can make text can be easier to read (for some) because it looks more like printed type
- Make maps look more visually attractive

The following are enhancements for printing, importing, and exporting in MapInfo Professional 8.5:

Printing Maps to PDF Files

Setting Anti-Aliasing Options for Images

Setting Font Anti-Aliasing Options For Labels

Printing Large (D, E, and A0) Images Improved

Maximum Buffer Resolution Increased

Printing Maps to PDF Files

In version 8.5, we are redistributing a third-party tool that allows you to print your MapInfo Professional maps to PDF files for sharing and distribution. When you install this utility, you can select it as a printer in your Windows 'Print' menu.

Any customer or co-worker who has Adobe® Reader® can view and print this PDF file. Click [here](#) to go to the Adobe Reader download page or retrieve it from the installation CD.

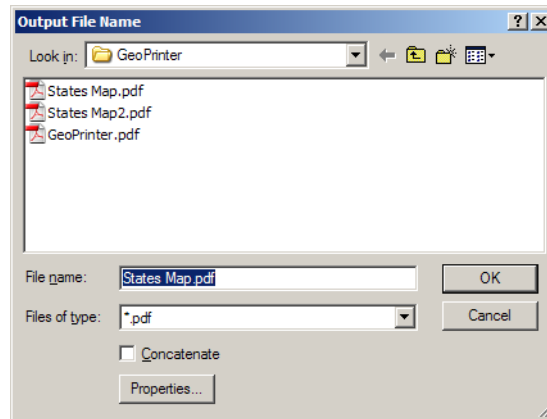
To install the print to PDF utility:

1. From the Installation CD, click **Install Products** and **Free Utilities** to display the list of options.
2. Select **Install GeoPrinter** to install the third-party product. The GeoPrinter 1.0 installation dialog box displays.
3. Click **Next** to display the **Important Information** screen. This screen promotes the printing service provided by the manufacturer of the utility. When you have completed your review of this information, click **Next** to display the license agreement.
4. Review the license agreement and click **I Agree** to display the **Installation Options** dialog box.
5. Select the **Desktop** check box and click **Install** to begin the installation process. A readme file displays before you finish.

After you complete the installation, you can use this new printer to create a PDF file.

To print the current map to PDF format:

1. From the MapInfo Professional menu, select **File** and **Print** to display the **Print** dialog box.
2. From the **Name** drop down list, select **GeoPrinter**. Click **OK**. The **Output File Name** dialog box displays.



3. Select the path and file name for this new file. Click **OK** to create it. The **GeoPrinter Viewer** dialog box displays.
4. Click **Close** in the upper right hand corner of the dialog box to close this window.

You can send or print your new PDF file as needed.

Setting Anti-Aliasing Options for Images

Some customers have asked us to give them more control over the map images when exporting MapInfo Professional maps. This is particularly important when you are saving maps created in MapInfo Professional for use in other Windows-based applications, in particular in slide presentations or for web pages.

We have added the ability to smooth or anti-alias images during the export process. You can use this capability with all types of windows such as Map windows, layouts, legends, and graphs.

Note: You cannot anti-alias images you are exporting to .EMF or .WMF format, because these are not true raster formats.

There are three smoothing options you can use to customize your raster image:

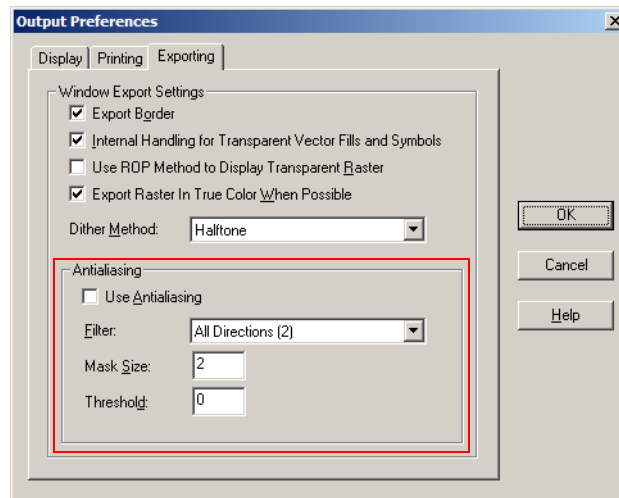
1. **Smooth using a Filter value.** You can set a flag that selects one of six filters that allow you to choose the direction the filter is applied to the image from.
2. **Smooth using a Mask value.** You can select a value that indicates the size of the area you want to smooth. For example, to create a 3x3 pixel mask value, you would enter a 3 in this field. This would limit the amount of change in the color of the pixels. Typically mask sizes would be 2-3 pixels when exporting at screen resolution. If you are exporting at a higher resolution, a larger mask might be appropriate.
3. **Smooth using a Threshold value.** You can select a threshold value to indicate which pixels to smooth. Each pixel in an image has a value based on its color. The smaller the pixel value, the

darker the color. Select this option to smooth all of the pixels above the threshold you enter in this field. When you set this value to 0, MapInfo Professional will smooth all of the pixels.

You must either set a global preference for these anti-aliasing options or set them locally during the export process (using the **Advanced** button).

To set the anti-aliasing preference for exporting images:

1. From the **Options** menu, select **Preferences** and **Output Settings** to display the newly configured **Output Preferences** dialog box.
2. Click the **Exporting** tab to display the anti-aliasing options.



3. To use anti-aliasing automatically, select the **Use Anti-aliasing** check box and select from these options:

Smooth using a Filter value

Choose a filter for the smoothing you want to use. Select from these filters:

- Vertically and Horizontally (Smooths the image vertically and horizontally)
- All Directions (1) (Smooths the image in all directions)
- All Directions (2) (Smooths the image in all directions using a different algorithm)
- Diagonally (Smooths the image diagonally)
- Horizontally (Smooths the image horizontally)
- Vertically (Smooths the image vertically)

Smooth using a Mask value

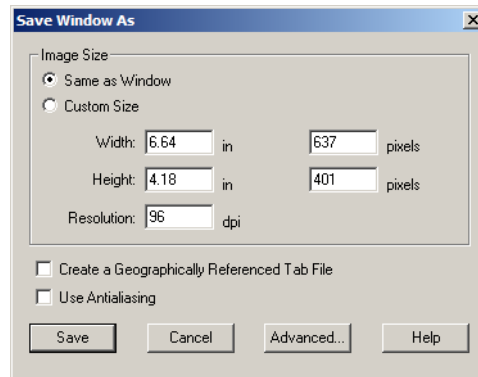
Choose the pixel size of the mask you want MapInfo Professional to use in this field. For example, to create a 3x3 pixel mask value, you would enter a 3 in this field. This would limit the amount of change in the color of the pixels to the three pixels around the basic pixel.

Smooth using a Threshold value

Select a threshold value to indicate which pixels to smooth. Colors are 0 for black and 255 for white (in an 8 bit image). Entering a low number changes the look of your map by smoothing the darker colors and the lighter colors. Choosing a higher number changes the way the lighter colors display.

To set the anti-aliasing options locally during export:

1. When you have completed your work on a window, select the **File > Save Window As** menu option. The **Save Window to File** dialog box displays.
2. Type the name and indicate the path of the file you are saving in this dialog box. Click **Save** to continue. The **Save Window As** dialog box displays.



If you are exporting an EMF or WMF image, the **Use Anti-Aliasing** check box is disabled.

3. Select the **Use Anti-aliasing** check box and do one of the following:
 - Click **Save** to use the anti-aliasing options you selected in the **Output Preferences** dialog box
 - Click **Advanced** and choose new anti-aliasing options for this particular map. Click **OK** to return to the **Save Window As** dialog box. Click **Save** to save these settings and the file.

Note: If you do not select the **Use Anti-aliasing** check box, the anti-aliasing options in the **Advanced Exporting Options** dialog box are disabled.

The next few figures should give you an idea of the types of results you can expect using the different options.

Figure: Anti-Aliasing with Filter Vertical and Horizontal, Mask 2, Threshold 100

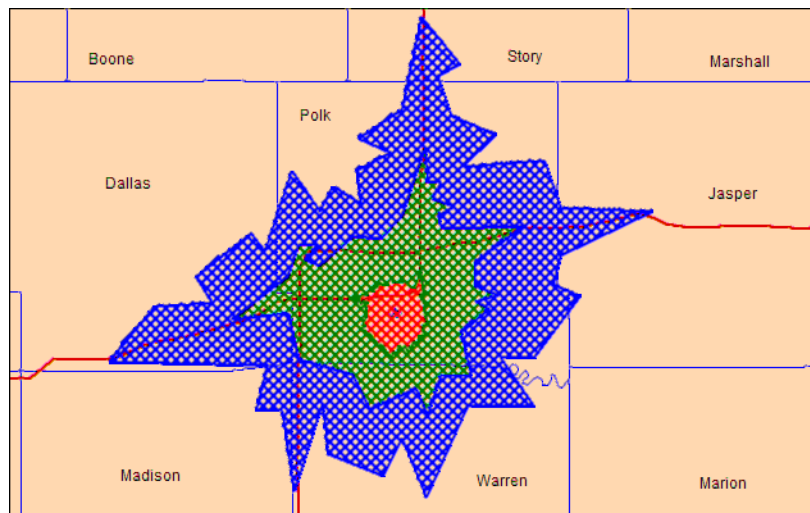
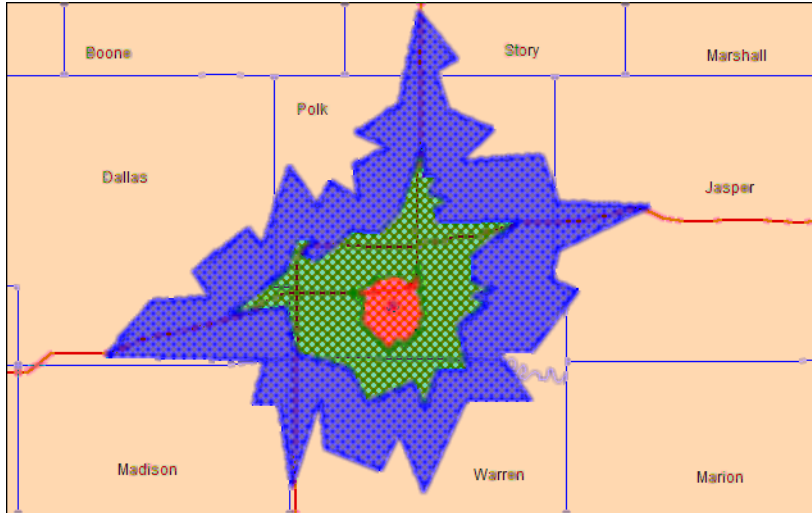


Figure: Anti-Aliasing with Filter Vertical and Horizontal, Mask 5, Threshold 100

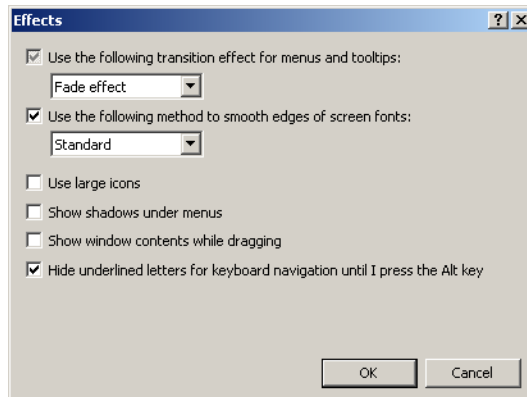


Setting Font Anti-Aliasing Options For Labels

If you have ever noticed that the edges of your text is jagged and you want to smooth those lines, you can use your system's anti-aliasing options to make this change. If you use the Windows 2003 Server, Windows XP, or Windows 2000 operating systems, you already have the ability to anti-alias your text.

To set up the anti-aliasing capability in Windows XP or Windows 2003 Server:

1. Click **Start > Control Panel > Display > Appearance > Effects** to display the **Effects** dialog box.



*This anti-aliasing option affects the way fonts are rendered on your screen. In Windows 2000 this option is **Smooth edges of screen fonts**.*

2. Select the **Use the following method to smooth edges of screen fonts** check box or the **Smooth edges of screen fonts** check box. Click **OK** to save this preference.

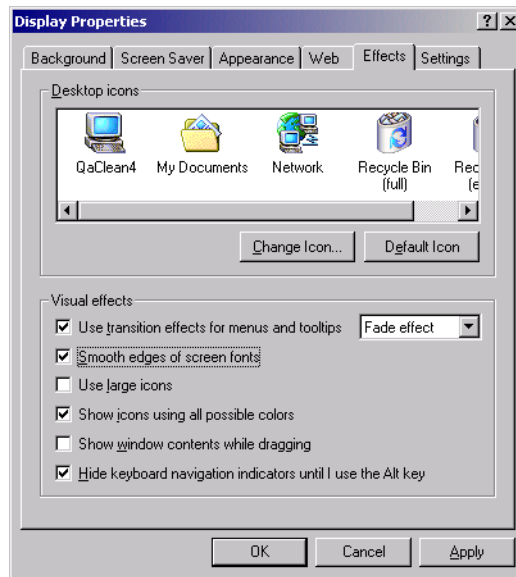
In Windows XP you have two anti-aliasing options, **Standard** and **ClearType**. The option you select in this drop-down list should depend upon the kind of computer monitor you are using. Select **Standard** if you are using a standard computer monitor.

Select **ClearType** for portable computer and other flat screen monitors.

Note: If you select **ClearType** and you are using a desktop computer monitor, your text may appear slightly blurry.

To set up the anti-aliasing capability in Windows 2000:

1. Click **Start > Settings > Control Panel > Display > Effects tab** to display the effects options.



2. Select the **Smooth edges of screen fonts** check box. Click **OK** to save this preference.

Printing Large (D, E, and A0) Images Improved

Customers printing large images (such as destination page size D, E, or A0) have reported problems using MapInfo Professional. Some of the printing problems stemmed from a 28,000 pixel limitation that we have addressed in version 8.5. We have removed this pixel limitation to allow users to print oversized plots that would have exceeded this limit in earlier versions of MapInfo Professional. MapInfo no longer supports the Windows 95 or 98 operating systems, which allowed us to remove this restriction.

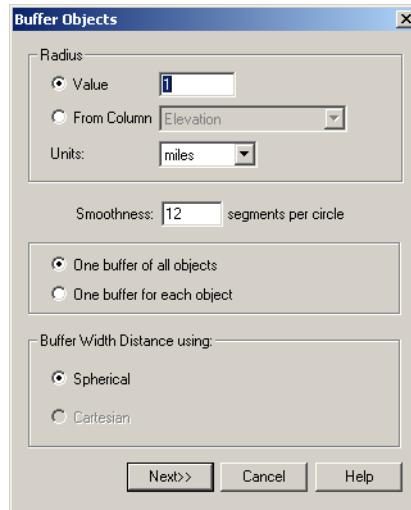
Maximum Buffer Resolution Increased

As of this release we are changing the maximum buffering resolution from 100 to 500 segments per circle. This affects the entry you can make in the Smoothness field of the Buffer Objects dialog box. This change gives you more control over the look and accuracy of the buffers you create.

To see this change:

1. Open a map window and make it editable.
2. From the **OBJECTS** menu, select **BUFFER** to display the **BUFFER OBJECTS** dialog box.

Figure: Buffer Objects



*You can now enter a buffer smoothness value up to 500 in the **SMOOTHNESS** field. Keep in mind that adding more nodes in this way may affect the speed of the buffering process.*

When using this feature remember that the greater the value in the Smoothness field, the greater the demands you are placing on your system's RAM, on disk space, and on processing power. Please take these points into consideration to avoid out of memory issues. If you do encounter memory issues however, consider one of the following:

- Use the thinning operations to reduce the resolution of your data or
- Increasing your machine's RAM may allow for more complex object processing

Print, Export, and Import Features in Earlier Versions

MapInfo Professional 8.0

The following are the enhancements for printing, importing and exporting in MapInfo Professional for this release:

- **Improved Control of WMS Image Quality When Printing**
- **Importing GML 2.1 Files**

Improved Control of WMS Image Quality When Printing

To improve your control of the image resolution for WMS map images, we have added the ability to globally and locally set the GetMap request pixel limits in MapInfo Professional. In this case, more pixels means higher resolution, but it also means slower access time. Because WMS servers are not required to specify pixel width and height limits in their capabilities documents, you will have to experiment with the pixel limits of a particular server to get the highest resolution you can. When you send a request that exceeds the server's pixel limit, the server usually issues an error indicating the maximum allowable image size. This will help you adjust the pixel limits for the server.

You can set a Web Services preference to set the pixel limits for all WMS images and you can override these limits by setting the per-server limits on an individual image basis. These options allow you to control the resolution of the WMS maps and limit the size of the maps you receive.

See Also...

[Setting the GetMap Request Pixel Limit Globally](#)
[Overriding Default GetMap Pixel Limits Locally](#)

Setting the GetMap Request Pixel Limit Globally

You can set the GetMap request pixel limit globally to affect the resolution of the WMS maps you receive. Remember that increasing the pixel limit also means the retrieval process will take longer, but will produce better quality images.

To set the GetMap request pixel limit globally:

1. From the **OPTIONS** menu, click **PREFERENCES** and then **WEB SERVICES** to display the **WEB SERVICES PREFERENCES** dialog box.
2. Select the options in this dialog box according to your needs.

WMS GetMap Pixel Limits

The **GETMAP PIXEL LIMITS** option represents the maximum number of pixels (in width/height) that a map request is limited to. The GetMap request is designed to retrieve the highest resolution map image as is necessary to render the image on the screen, for a printer, or for an export file. This option prevents the request from going higher than the specified values. Different servers have different limits, so you can set the limit that works best for your environment.

Note: You can set per-server defaults for **GETMAP PIXEL LIMITS** in the **WFS SERVER INFORMATION** dialog box.

Unfortunately, servers may not report their limits to us, so if the GetMap request fails, it means that you have entered a value that is too large for that server. Typically, large GetMap requests occur when you are printing or exporting windows containing WMS images. This happens because printing and exporting occurs at larger sizes and/or higher resolutions than on-screen display requires.

Max Width

Max Width specifies the maximum number of pixels for a GetMap request in the X direction.

Max Height

Max Height represents the maximum number of pixels for a GetMap request in the Y direction.

3. When you have completed your selections, click **OK** to save them.

Note: The WMS GetMap Pixel limits listed in the **WEB SERVICES PREFERENCES** dialog box can be overridden on a per server basis in the **WMS SERVER INFORMATION** dialog box.

Overriding Default GetMap Pixel Limits Locally

You can override the global settings for a particular server if the server's limits are different than the values you set in the **WEB SERVICES PREFERENCES**. If a particular server's limits are higher than the values you selected in the **PREFERENCES** dialog box, you may want to increase the limits for that server to get higher quality images. If a particular server's limits are lower than the values set in **PREFERENCES**, you can set lower per-server values locally to prevent errors during the GetMap request.

Remember, the server may not include the limits in its capabilities document so MapInfo Professional cannot help you determine this. You can only find these pixel limits on a trial and error basis.

To override the default pixel limit values for a WMS server:

1. Do one of the following:
 - Click the **OPEN WMS** button on the **MAIN** toolbar
 - From the **FILE** menu select **OPEN WEB SERVICE > OPEN WMS**
2. Click the **SERVERS** button on the or **OPEN WMS TABLE** dialog boxes to display the **WMS SERVER INFORMATION** dialog box.
3. Double-click the server for which you want to change the default values from the list. The **WMS SERVER INFORMATION** dialog box displays.
4. Select the **OVERRIDE GETMAP PIXEL LIMITS** checkbox to enter the new overrides (in pixels) for this particular server in the fields that display.
5. Click **OK** to save these values. Then try to retrieve the WMS image you were looking for before.

Importing GML 2.1 Files

You can now import GML 2.1 files into MapInfo Professional directly. To import successfully, the XML must contain a reference to a valid schema that MapInfo Professional can read. For example, the schema location could be a path relative to the XML file:

```
xsi:schemaLocation="http://www.mapinfo.com/wfs_XX .\mi_usa.xsd"
```

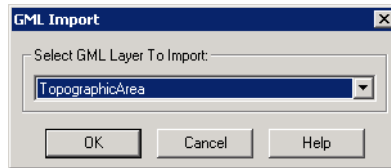
Or, it could be a URI:

```
xsi:schemaLocation="http://www.lm.se/xml/namespace/abc http://  
www2.xxx.se/xml/scheman/abc.xsd"
```

To import GML 2.1 files:

1. From the **TABLE** menu, click **IMPORT**. The **IMPORT FILE** dialog box displays.
2. From the **FILES OF TYPE** drop-down list, select **GEOGRAPHIC MARKUP LANGUAGE 2.1**.
3. Navigate to the directory in which your GML2 file is saved and select the file.
4. Click **OPEN** to display the **GML IMPORT** dialog box.

Figure: GML (2.1) Import



Here you can select either **ALL LAYERS** (if more than one exists), or a specific layer that you want to import from the GML file.

Note: If projection information is not stored within the GML file(s), MapInfo Professional prompts you for a projection to use.

5. Select the GML layer (or **ALL LAYERS**) you want to display from the drop-down list and click **OK**. The **IMPORT INTO TABLE** dialog box displays.
6. Do one of the following:
 - Choose a name for the new .tab file
 - Accept the default naming convention for this new .tab file.
7. Press **SAVE** to import the file.

You can use the file you saved in your map and layout windows. Metadata for this file is also available by opening a browser window on this file.

See Also...

[Improved Control of WMS Image Quality When Printing](#)

MapInfo Professional 7.8

There are two important enhancements to the print capabilities of MapInfo Professional in version 7.8.

New Scale Choices when Printing Maps

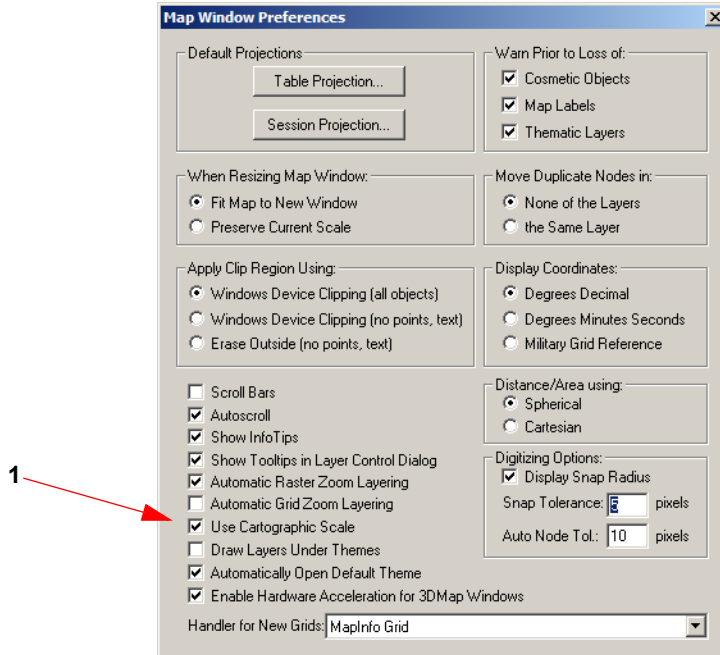
In response to customer requests, we have created a new map window preference to allow you to set the scale options for map printing. You can now set the map scale to display in Cartographic Scale automatically or you can choose your own map scale using this preference. By default, the Use Cartographic Scale option will not be set.

Note: When you select this preference, MapInfo Professional will preset your map printing scale based on the distance scale of the Earth and set the scale for the **CHANGE VIEW, MAP PRINT OPTIONS** and **FRAME OBJECT** dialog boxes.

To see the new map window preference:

1. From the **OPTIONS** menu, click **PREFERENCES** to display the **PREFERENCES** list.
2. Click the **MAP WINDOW** option to display the **MAP WINDOW PREFERENCES** dialog box.

Figure: Map Window Preferences

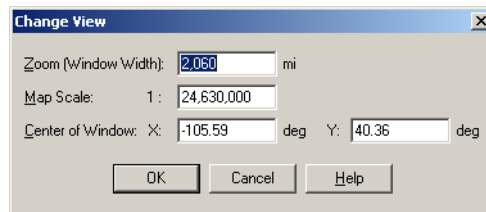


1 New Cartographic Scale option

3. Select the **Use Cartographic Scale** check box to display your maps in Cartographic Scale automatically.

When you make this change, the options that display in the **Change View**, **Map Print Options** and **Frame Object** dialog boxes use the cartographic scale on which the selected map is based. For example, the cartographic scale on which the selected map in the next figure is based is 1 : 24,630,000.

Figure: Change View (with the Use Cartographic Scale Selection in Preferences)



Printing a Window to a File

A MapInfo window can now be printed to a file. The PrintWin MapBasic command has been enhanced to make this possible. The change from the previous syntax is indicated in **bold**.

```
PrintWin [Window window_id] [Interactive] [File output_filename]
[Overwrite]
```

window_id is a window identifier

output_filename is a string representing the name of an output file. If the output file already exists, an error will occur, unless the **Overwrite** token is specified.

If the statement includes the optional **Window** clause, MapBasic prints the specified window; otherwise, MapBasic prints the active window.

The *window_id* parameter represents a window identifier; see the **FrontWindow()** and **WindowInfo()** functions for more information about obtaining window identifiers.

If you include the **Interactive** keyword, MapInfo Professional displays the Print dialog box. If you omit the **Interactive** keyword, MapInfo Professional prints the window automatically, without displaying the dialog box.

Example 1

```
Dim win_id As Integer
Open Table "world"
Map From world
win_id = FrontWindow()
'
' knowing the ID of the Map window,
' the program could now print the map by
' issuing the statement:
'
PrintWin Window win_id Interactive
```

Example 2

```
PrintWin Window FrontWindow() File "c:\output\file.plt"
```

MapInfo Professional 7.5

This document provides you with details in the use of the MapInfo Professional print options and resolves some known MapInfo Professional printing issues reported by our customers and partners.

Setting the Print Options in MapInfo Professional

The discussion that follows assumes the following:

- The printer/plotter has been installed properly
- The printer/plotter drivers have been installed correctly
- The printer/plotter is connected to the computer or to the network properly
- There is sufficient memory (on the print device and on the computer) to print the files

Any of these issues can affect your ability to print/plot your MapInfo Professional output. Our Technical Support professionals may be able to identify these difficulties, but they are not within their control.

Note: Whenever we use the terms *print* or *printer* we also mean *plotter*.

Setting Your Output Settings Preferences

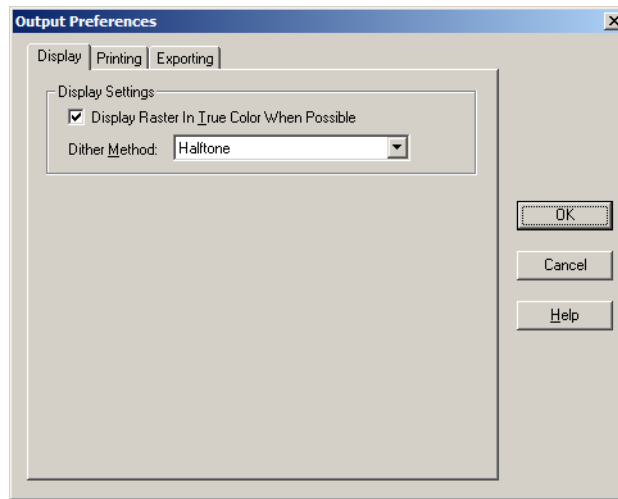
Some of the controls that preset your printer options are in the Preferences dialog box. The **Output Settings Preferences** allow you to set display, printing, and export options for MapInfo Professional. The printers preferences are specific to your printer and allow you to set a separate MapInfo preferred printer from a Windows default printer. You can reset these options in the **Print** dialog box locally when you print to override the settings you select here.

Note: There are also two printer settings in the **Startup Preferences** dialog box that allow you to save printer information to workspaces and restore printer information from workspaces. These two check boxes are selected by default.

To set the Output Settings preferences:

1. Choose **Options > Preferences > Output Settings** to display the output preferences.

Figure: Output Preferences



2. Select the desired preference settings and click **OK** to confirm them.

The entries below explain the display options, the printing options, and window export options in this dialog box. Some of the options appear in more than one tab so we have grouped all of the like explanations together.

Display Tab

Display Raster in True Color When Possible

Select this check box to display your 24-bit raster or grid file images in true color (make sure your display settings are set to greater than 256 colors). Clear this check box if you only want your images to display using 256 colors. This box is selected by default.

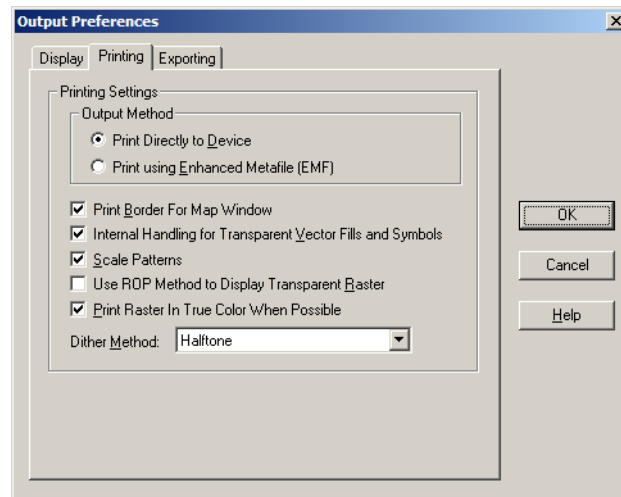
Dither Method

Dithering is a technique that blends pixels electronically to improve the look of an image. Select a dither method when you are converting a 24-bit image to 256 colors.

- **Halftone** dithering calculates a series of half tone differences in color between high-contrast elements in your image to create a smooth transition of color. This option is selected by default for display, print, and export options.
- **Error diffusion** dithering calculates an interim color between contrasting colors and shades the surrounding pixels to blend evenly toward that interim color.

Note: You can select dither method options in the display, printing, and exporting dialog boxes.

Figure: Output Preferences (Printing Tab)



Output Method/Print Directly to Device

Use this option to print your image file directly from MapInfo Professional. This is the default setting and is same printing from all versions before 6.0.

Output Method/Print Using Enhanced Metafile (EMF)

Use this option to generate an enhanced metafile of your MapInfo Professional image before sending it to the printer. This option takes advantage of current printer technology to shrink the spool size and print your file quicker without sacrificing quality.

Note: You must select this option if you are printing a map containing a translucent raster or grid layer. If you do not select this option, the image will not print translucently.

Print Border for Map Window

Select this check box to print a black border around the image you are printing. Clear this check box to leave the image unbordered. This check box is selected by default.

Internal Handling for Printing Transparent Vector Fills and Symbols

Special programming has been added to handle transparent fill patterns and bitmaps for vector images when printing or exporting. Select this check box to use this functionality or clear it to let Windows handle it. This check box is selected by default.

Note: The **Scale Patterns** check box does not affect transparent fill patterns. Transparent fill patterns are scaled for print and export when you select the **Internal Handling...** option.

Scale Patterns

Select this check box to print non-transparent fill patterns that look like what you see on your screen. This check box is checked by default. Clear this check box to let the printer driver have exclusive control over rendering the pattern fills.

Note: The **Scale Patterns** check box does not affect transparent fill patterns because transparent fill patterns are always scaled.

Use ROP Method to Display Transparent Raster

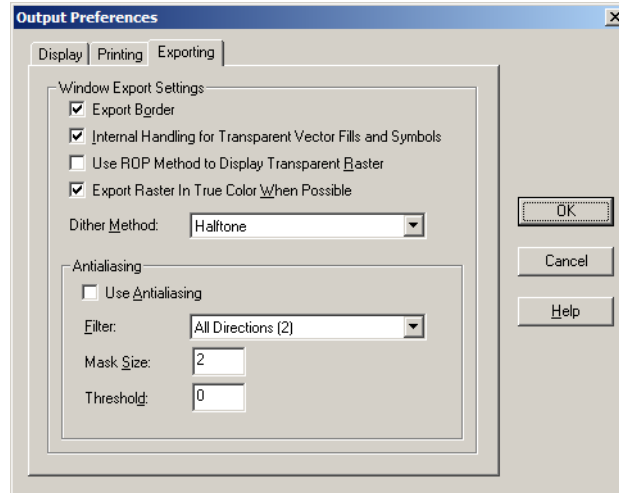
Select this check box to allow the internal ROP (Raster Overlay by Pixel) to manage the transparent pixel display and printing in raster images. Since the ROP Method is largely a display method, not all printers, plotters, and export programs can use it. We recommend that you experiment with this setting until you get the results you want when printing raster images. This setting has no effect when printing vector layers. This check box is cleared by default.

Using the ROP method may not produce problems unless you print the metafile.

Print Raster in True Color When Possible

Select this check box to print and export your 24-bit raster or grid file images in true color (make sure your printer settings are set to greater than 256 colors). Clear this check box if you are not working with a color printer. This check box is selected by default.

Figure: Output Preferences (Exporting Tab)



Window Export/Export Border

Select this check box to include a black border on images you are exporting. Clear this check box to export the image without a border. This check box is selected by default.

Use Anti-aliasing

These options are new for MapInfo Professional 8.5. Select from these options:

Filter

Choose a filter for the smoothing you want to use. Select from these filters:

- Vertically and Horizontally (Smooths the image vertically and horizontally)
- All Directions (1) (Smooths the image in all directions)
- All Directions (2) (Smooths the image in all directions using a different algorithm)
- Diagonally (Smooths the image diagonally)
- Horizontally (Smooths the image horizontally)
- Vertically (Smooths the image vertically)

Mask Size

Choose the pixel size of the mask you want MapInfo Professional to use in this field. For example, to create a 3x3 pixel mask value, you would enter a 3 in this field. This would limit the amount of change in the color of the pixels to the three pixels around the basic pixel.

Threshold

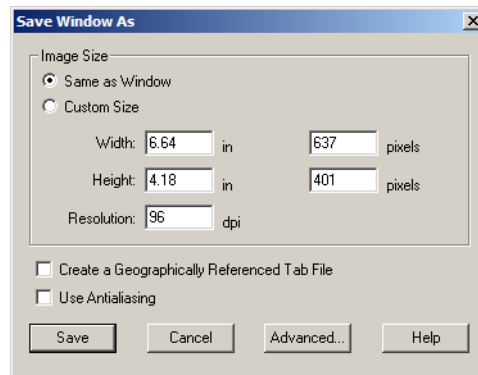
Select a threshold value to indicate which pixels to smooth. Colors are 0 for black and 255 for white (in an 8 bit image). Numeric values for larger images are higher, but black is always 0. Entering a low number changes the look of your map by smoothing the darker colors and the lighter colors. Choosing a higher number changes the way the lighter colors display.

Setting Anti-Aliasing Options Locally during Window Export

To set the anti-aliasing options locally during export:

1. When you have completed your work on a window, select the **File > Save Window As** menu option. The **Save Window to File** dialog box displays.
2. Type the name and indicate the path of the file you are saving in this dialog box and click **Save** to continue. The **Save Window As** dialog box displays.

Figure: Save Window As



*If you are exporting an EMF or WMF image, the **Use Anti-Aliasing** check box is disabled.*

3. Select the **Use Anti-aliasing** check box and do one of the following:
 - Click **Save** to use the anti-aliasing options you selected in the **Output Preferences** dialog box
 - Click **Advanced** and choose new anti-aliasing options for this particular map. Click **OK** to return to the Save Window As dialog box and click **Save** to save these settings and the file.

Note: If you do not select the **Use Anti-aliasing** check box, the anti-aliasing options in the Advanced Exporting Options dialog box are disabled.

Setting Your Printer Preferences

You can use the printer preferences to select a printer for MapInfo Professional output, which can be separate from your default Windows printer.

1. Choose **Options > Preferences > Printer** to display the **Printer Preferences** dialog box.
2. Select the appropriate preferences using the descriptions in the following paragraphs to help you.

Windows Default

This entry displays the path to the default printer specified for your operating system. This button is selected by default.

MapInfo Preferred

Click this button to select a different default printer when printing while using MapInfo Professional. This can be a printer or a plotter. After you select this option you can specify the size of the paper that is appropriate for this printer.

Size

After you select a printer, this list prefills with the appropriate paper sizes available. Select the requested paper size from this drop-down list.

Orientation

After you select a printer, you can specify the direction that the paper faces. **Portrait** indicates that the paper is taller than it is wide (as shown in the previous figure); **Landscape** indicates that the paper is wider than it is tall.

Network

Click this button to locate the printer or plotter on the network that you want to set as the default. This button only displays for users running under Windows NT 4.0, Windows 2000 and Windows XP Pro. The **Connect to Printers** dialog box displays.

3. Do one of the following:
 - Select the path of the printer you want to use as your default MapInfo Professional printer and click **OK**,
 - Double-click the printer in the list.

Using either method the **Printer Preferences** dialog box redisplay.

4. Click **OK** to confirm your selections and set your MapInfo Professional default printer options.

Note: If you selected the **Save Printer Information to Workspaces** button in the startup preferences, MapInfo Professional saves the printer information and settings to the workspace. To set this preference, choose **Options > Preferences > Startup**. If you are

planning to share these workspaces with users running versions of MapInfo Professional earlier than 6.0, do not select this preference. Alternatively, turn it off if you have already activated it.

Printing in MapInfo Professional

Before you start printing your map or your graphs, you may want to create a new layout so you can arrange your graphs, maps, legends, titles, etc. for the best effect. Choose **Windows > New Layout Window** to put together a more effective presentation. We recommend that you use layout windows for printing because it ties directly to the printer driver.

To print a map, layout, or graph from MapInfo Professional:

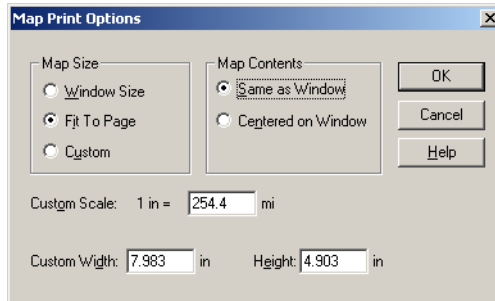
1. When you have your map or layout the way you want it, choose **File > Print** to display the **Print** dialog box.

Note: When you print a layout, the **Options** button does not display. When you print a graph, the **Advanced** button does not display.

2. Select the printer or plotter you want to use for this workspace from the **Name** drop-down list. The properties that are available for this device are printer/plotter dependent. Please check your device manufacturer's manual for property details.

Note: Any selections you make in the **Properties** options will override the selections made in the preferences for the current print session.

3. Select the print range of your output and the number of copies you want in the appropriate fields.
4. To set further map print options, click the **Options** button to display the **Map Print Options** dialog box.



Note: You cannot select these options for a layout.

5. Make your selections and click **OK** to return to the **Print** dialog box.

Map Size

Select the size of the map in this group; the options are **Window Size**, **Fit to Page**, and **Custom**. As you make selections, the **Custom Scale**, **Custom Width** and **Custom Height** entries change.

Window Size. Click this button to print the map as it displays on your computer screen.

Fit to Page. Click this button to fit the map to the page size you selected in preferences.

Custom. Click this button to enter your own custom scale, width, and height entries in the fields provided.

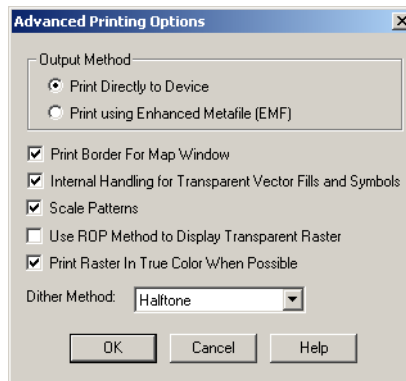
Map Contents

Select an option in this group to determine the map contents you want to print; the options are **Same as Window** and **Centered on Window**.

Same as Window. Click this button to print the map contents as it appears in the Map window, with the same proportions and content as you see.

Centered on Window. Click this button to center as much of the current map that fits on the page. When you select this option, the image may print on more than one page depending upon fit. In general when you select this option, MapInfo Professional assumes you want to select the **Fit to Page** radio button and selects this for you.

6. To set the advanced print options, click **Advanced** to display the **Advanced Printing Options** dialog box.



Note: You cannot select these options for a graph.

7. Select the appropriate options in this dialog box and click **OK** to return to the **Print** dialog box. These options are the same as those you select in the **Output Settings Preferences** dialog box. Selecting options here overrides the setting you selected in the **Output Settings** preferences for the current print session.

Output Method

There are two output methods.

- **Print Directly to Device.** Use this option to print your image file directly from MapInfo Professional. This is the default setting and is same printing from all versions before 6.0.
- **Print Using Enhanced Metafile (EMF).** Use this option to generate an enhanced metafile of your MapInfo Professional image before sending it to the printer. This option takes advantage of current technology to shrink the spool size and print your file quicker without sacrificing quality.

Print Border for Map Window

Select this check box to print a black border around the image you are printing. Clear this check box to print the image without a border. This check box is selected by default.

Internal Handling for Printing Transparent Vector Fills and Symbols

Special programming has been added to handle transparent fill patterns and bitmaps for vector images when you print. Select this check box to use this functionality or clear it to let the printer or plotter to manage this type of work. This check box is selected by default.

Scale Patterns

Select this check box to print non-transparent fill patterns that look like what you see on your screen. This check box is checked by default. Clear this check box to let the printer driver have exclusive control over rendering the pattern fills.

Use ROP Method to Display Transparent Raster

Select this check box to allow the internal ROP (Raster Overlay by Pixel) to manage the transparent pixels when printing raster images. Since the ROP Method is largely a display method, not all printers and plotters can use it. We recommend that you experiment with this setting until you get the results you want when printing raster images. This setting has no effect when printing vector layers. This check box is cleared by default.

Print/Export Raster in True Color When Possible

Select this check box to print your 24-bit raster or grid file images in true color. Make sure your printer settings are greater than 256 colors. This check box is selected by default.

8. When you have completed these selections and returned to the **Print** dialog box, click **OK** to begin printing.

Recommendations for Effective Pattern Scaling

When you are printing, find out what type of printer driver you are using. Many PCL6 and some HPGL drivers handle fill pattern scaling and give you control over this feature. Turning off their scaling may be the difference between what you see in print and what you see on your monitor. We recommend that you try turning off your driver's scaling options and try ours first, because we have enhanced our method to better meet your Map and Layout window requirements. To turn our pattern scaling options on, check the **Scale Patterns** check box in the Output Preferences dialog box. Then try turning off our scaling and turn theirs back on to see which you like better. Tests show that our scaling produces color output that more closely matches your screen's display.

If you are printing to postscript drivers using LanguageLevel 2 or 3, we find that some of the Microsoft drivers do not support pattern scaling. As a result, our scaling method may not help you. Microsoft recommended that you reset the language level of the postscript driver to LanguageLevel 1 to remove this restriction. We did find some exceptions to this condition. On Windows 2000 and Windows NT, some HP Laser Jet and Color Laser Jet postscript drivers using our scaling option printed correctly.

Printing to a File

To print the current map to a file:

1. Choose **File > Print** to display the **Print** dialog box and set your printer options.
2. Select the **Print to File** check box.
3. Click **OK**. The **Print to File** dialog box displays.
4. Type the name of the file you want to create in the field provided and click **OK**. Use the extension **.PRN** to help you identify the file as a print file.

General Printing Tips and Tricks

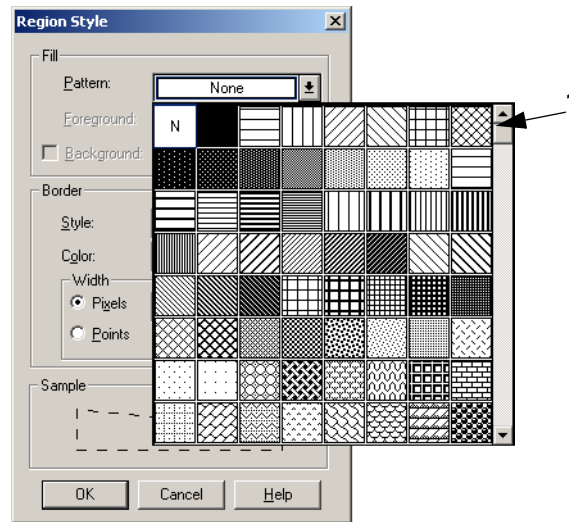
These entries are numbered but, other than the first one, they are in no particular order.

Good first steps in troubleshooting a printing problem are to make sure you have downloaded and installed the latest patch for MapInfo Professional and are using the latest printer driver for your printer/operating system. Exceptions are noted in this document.

Embedding MapInfo Professional Graphics Tip. When you embed a MapInfo map or graph in another application (such as Word or PowerPoint), click outside the map/graph before you use the **Print** or **Print Preview** commands. This allows the container application to take over previewing or printing properly. This is particularly true if you have just made changes to the map or graph you are printing.

HP 755 Driver Suggestion. If you are having difficulties printing using this plotter model, try the plotter driver for the HP 650C (C2859B) instead. In many cases, if you are having difficulty with a printer or plotter model and a similar model exists, you can substitute the similar model's driver for the current one and get good results. For example, you can use the printer driver for the HP 8500 DN Color LaserJet with the HP8550 color LaserJet driver).

Need for Speed When Using Fill Patterns? Note that fill patterns on the first row of the **Region Style** dialog box (see next figure) are Windows standard and tend to print faster. The other patterns are bitmaps MapInfo has created for your use. You might want to consider this when you are selecting fill patterns.



1 Use the fill patterns from this row for fast printing results.

Speed Still an Issue? If you want to improve printer speed, and your printer has **Fast**, **Normal**, **Best** print quality options, we suggest you select **Fast**. This will also lower your output resolution and may resolve the 28,000 pixel limitation.

Note: To support our customers with older operating systems, MapInfo Professional must enforce an internal pixel printing limitation of 28,000 pixels. You can calculate this pixel limitation by multiplying the DPI setting of printer driver by the width in inches of the output page.

If your image is large and you are printing at a resolution of 600 DPI or greater, your image may exceed this limitation. To print the image, reduce the resolution of the printout or shrink the size of the image. See Also: **Printing Maps Larger than 1.6 Meters (63 Inches) on page 33.**

Translucent Raster Maps? You cannot print a translucent raster map or grid on Windows 9X platforms or export them to EMF or WMF file formats. You need to use a non-metafile (i.e. .BMP or .TIF) format to export raster images on Windows 9X.

Old Driver Works, New Driver Doesn't. When in doubt, if an older driver worked and the new one does not, go back to the older driver. For instructions on reinstalling older versions of printer drivers, see **Hatch Patterns Printing as Black Polygons on page 27.**

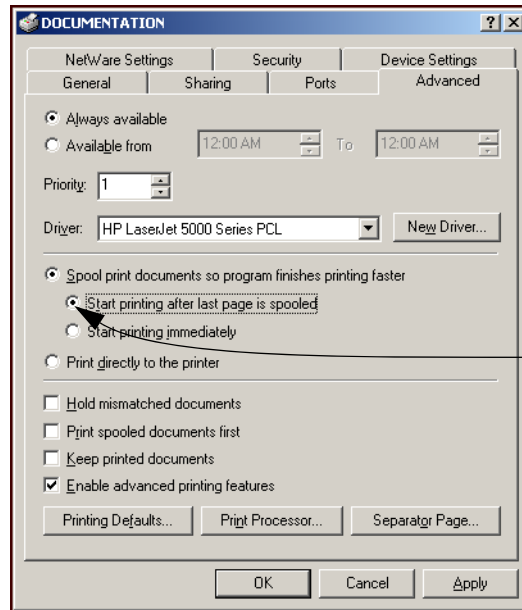
Disk Space an Issue? Make sure you have plenty of temporary disk space, particularly if you are using the Print using the Enhanced Metafile option. The system is trying to create a layered bitmap locally on disk.

Print Workspace Path with Map? In some cases, you may want to print the path to a particular workspace with your output. Here is a quick way to do this:

1. Choose **Options > Show MapBasic Window** to display the MapBasic window.
2. Open the workspace you want to print. The path and workspace name display in the **MapBasic** window.
3. Use **Ctrl C** or **Edit > Copy** to copy the path and workspace name from the **MapBasic** window.
4. Choose **Window > New Layout Window** to create a new layout window.
5. Make the new Layout window active and use **Ctrl V** or **Edit > Paste** to paste the path into the Layout window. The path may paste in the gray area of the Layout window and may be difficult to see.
6. Select and drag the path to the desired printable location.

Print Globally? Spool Locally! Try spooling print jobs locally rather than at the plotter. This allows the computer to rasterize your output rather than the printer, which can be more efficient.

1. To set up local print job spooling, choose **Start > Settings > Control Panel > Printers**.
2. Right-click the printer and choose **Properties** in the pop-up menu to display the printer's properties.
3. Click the **Advanced tab** to display the advanced property options.



1 Click the **Spool Print Documents** button and **Start printing after last page is spooled** button.

Note: If you do not have administrative rights to your computer, you may not be able to use the spooling option. Contact your IT department if you want to make this change to get their support.

4. Click **OK** to save your changes.

Resolutions to Known Printing Issues

There are many variables that affect printing and plotting with any application, and MapInfo Professional is no exception. MapInfo Professional does not provide its own printer drivers, it uses the existing ones installed under the current Windows operating system. This section addresses specific printer/plotter issues that have been uncovered by users and partners.

Platform Independent Issues

These issues occur regardless of operating system or hardware/software, except where specifically noted. Look for the issue you are working with below and refer to the resolution.

Printing a Layout Window to Multiple Pages

Printers/Plotters: HP Designjet Printers

MapInfo Professional Versions: 4.X and later

Issue: How do you print a layout window to multiple pages?

Resolution: With the layout window active, choose **Layout > Options** to display the **Layout Options** dialog box.

To make the layout page two pages wide and two pages tall, type **2** in the **Layout Size Width** and **Height** fields. Then click **OK**.

Handling the “Unable to Save Window Contents” Message

Printers/Plotters: HP Designjet 1055CM

MapInfo Professional Versions: 7.0+

Issue: This issue comes up whenever users try to print a layout window at 60 in. x 36 in. or larger due to memory issues.

Resolution: In this circumstance, print directly to the device rather than create the Enhanced MetaFile (EMF). Additionally we recommend that you use the appropriate HPGL driver for your printer and operating system. All current HP printer drivers are available at their website, www.hp.com.

Hatch Patterns Printing as Black Polygons

Printers/Plotters: HP Designjet Series Plotters

MapInfo Professional Versions: All

Issue: When you print maps with hatch patterns, some regions display as solid black.

Resolution: According to Hewlett Packard support, the new HP printer driver (4.63) handles non-Windows standard hatch patterns properly. We recommend that you download and install the new HP 4.63 driver to resolve this problem.

Hatch Patterns are Compressed when I Print

Operating System: WindowsNT 4.0/2000

Printers/Plotters: HP LaserJet Series, tested on HP LaserJet 4050 Series PCL 6

MapInfo Professional Versions: 7.0+

Issue: When you use a MapInfo hatch pattern (a pattern not on the first row in the Region Style dialog box), you may notice that the pattern may become very compressed. This is because the patterns are a bitmap that get drawn at a higher printer resolution. The standard Windows patterns do not exhibit this problem. The printer resolution affects the amount of compression.

Resolution: Some printer drivers have a new output setting called Scale Patterns (WYSIWYG) that enables the patterns to scale correctly. In the HP printer we tested, this option is available when you select the **Printing Preferences > Print Quality > Details** options.

Users should turn off either the driver's, or our scaling, as doing both scales fill patterns twice. Try both types of scaling to find the one you like better.

Platform-Specific Issues

These issues pertain to particular operating systems and/or hardware except where specifically noted. These issues are grouped by operating system.

Transparent/Translucent Raster Layers Printing Black

Operating System: Windows NT 4.0, 4.01

Printers/Plotters Tested: Epson Stylus Color 1520, HP Color LaserJet 8500N, HP Designjet 650C (C2859B), HP Designjet 750, HP Designjet 1055CM, HP Designjet 2500CM, HP Designjet 2500CP, HP DeskJet 1120C, HP DeskJet 855C, HP LaserJet 4MV, HP LaserJet 4Si, HP LaserJet 4050, HP LaserJet 5000N, Lexmark 3200.

MapInfo Professional Versions: 6.5, 7.0+

Issue: PostScript printers print transparent raster layers as black even when you select white as the transparent color. There are several issues here, including the size of the spool file, amount of printer memory, and whether the container (Word, PowerPoint, etc.) supports transparent or translucent objects.

Translucent images do not print correctly if you select the Print Direct to Device option.

Resolution: Typically, if you are working with a PostScript printer driver you should use the Enhanced Metafile approach to printing and let MapInfo Professional handle printing the transparent and translucent layers of raster or grid images. If your printer can use an HPGL\RTL driver, use that to improve the output instead.

To set up the Enhanced Metafile process, click the Advanced button in the Print dialog box and select the following options:

- Print using Enhanced Metafile (EMF)
- Internal Handling for Vector Fills and Symbols
- Use ROP Method to Display Transparent Raster
- Print Raster in True Color When Possible

This resolves the issue but the output is often slow.

Additional Recommendation: Most printers should be able to handle the MapInfo Professional generated vector fill pattern styles. However, if you are still having problems, we recommend that you use Windows vector fill patterns that are in the first row of the **Region Style** dialog box to get better results. See **General Printing Tips and Tricks on page 24** for more details.

Note: HP Designjet 1055CM users: These additional property settings have worked for some users. In the **Print** dialog box, click the **Properties** button and select the **Advanced** tab to display these options:

Process document: In Computer

Sharpen lines: Off

Select the **Options** tab to set the Quality option to **Fast** (draft) and click **OK**.

Note: HP Plotter users: Make sure you are using an HPGL/RTL driver and not a PostScript driver.

Preferred Printer Uninstalled/Reinstalled Error

Operating System: Windows NT 4.0

Printers/Plotters: Reported with HP Designjet 1055CM but applies to all

MapInfo Professional Versions: 6.0

Issue: You cannot access the printer preferences when you upgrade and install a new printer driver. Usually in these cases, you (or someone in IT) removes the printer and installs a new driver over the network. However the preferred printer setting in the **Printer Preferences** dialog box is not reset at that time and remains unchanged, which creates a version discrepancy. This causes MapInfo Professional to shut down the **Printer Preferences** dialog box.

Resolution: To reactivate the printer preferences, close MapInfo Professional and delete the MAPINFOW.PRF (Preferences) file. Do not make any changes to the file, just delete it. When you reopen the application, MapInfo Professional re-creates the preferences file and resets the entries to the MapInfo Professional defaults.

Note: You will have to re-enter your preferences when you return to the preferences dialog boxes.

After you have deleted the .PRF file, the **Print** button in the **Preferences** dialog box will re-activate. Select the desired printer as the MapInfo preferred printer.

Note: If MapInfo Professional is open when the .PRF file is deleted, MapInfo Professional retains the current preferences and creates a new .PRF file when you close the program.

Plotting 54" Layouts

Operating System: Windows NT 4.0

Printers/Plotters: HP Designjet 1055CM, HP Designjet 2500CP, HP Designjet 3500CP

MapInfo Professional Versions: 6.0, 6.5, 7.0+

Issue: Image does not print in WindowsNT but does in Windows 98. Printing results in a single page feed only.

Resolution: Cannot be corrected in current version of MapInfo Professional.

To remain compatible with Windows 9X products, MapInfo Professional has an internal hard coded limit of 28,000 pixels for printing images. This limitation is imposed by the Windows 95/98 16-bit architecture.

To print within this limitation, we suggest that you either reduce the output resolution or the image size to decrease number of pixels.

In some print drivers, you may see the output resolution referred to as "output quality". In this case, select a lower print quality such as "Draft" to lower the output resolution.

Use this formula:

$$\text{Dots per Inch} \times \text{Size in inches} = \text{Number of pixels}$$

Memory Loss in Large-Format Layers with HP Designjet Plotters

Operating System: WindowsNT 4.0/2000

Printers/Plotters: HP Designjet Series

MapInfo Professional Versions: 6.0, 6.5, 7.0+

Issue: If you are printing large-format layouts (ANSI E 34 x 44 inches) that contain complex raster (transparent / translucent) and vector layers, it is likely that you have encountered memory loss or errors.

Resolution: The following print configuration may correct the problem:

Try reducing the page size to ANSI C (17 x 22) or smaller. Once you resize the layout frame objects to fit the smaller page size, go to the Print dialog box and click the **Options** button to display the **Print Options** dialog box. Click the **Fit to this Page:** button and reselect the ANSI E (34 x 44 inches) option.

CAUTION: Use this solution as a last resort only because it could affect the clarity of your image!

Print output repeats itself every 2 to 4 cm using the HP 500, 800, 5000 Designjet plotter when printing Rasters

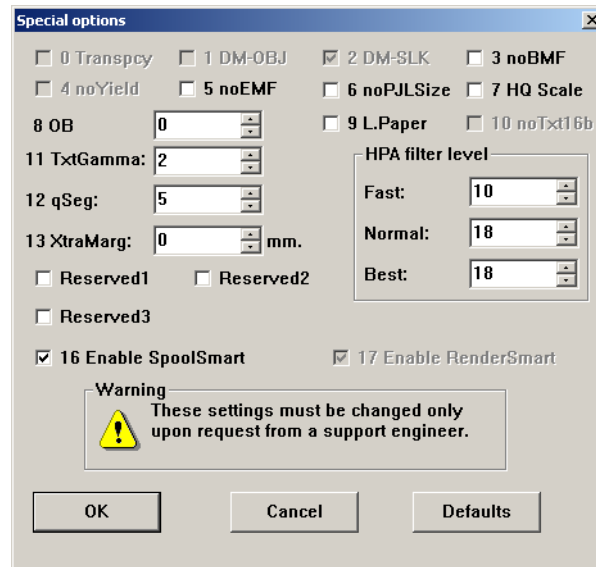
We have two suggestions to working around this problem. First, try spooling the printer locally either from the driver level or the printer level.

Note: You must have read/write rights to your printer and printer driver to resolve this issue.

To work around this problem, there is an advanced hidden setting that you can change within the properties of the driver.

To prevent the printer from repeating itself every 2-4 cm. when printing rasters with vector overlays:

1. Locate the printer driver's properties in the **Control Panel**. To get to this setting, right-click the printer icon and choose **Properties**.
2. Click the **Advanced** tab. Select the following options:
 - Select the **Avoid out of memory** option.
 - If you are using the Windows 2000 or XP operating system, select a scaling factor of 100%.
3. From this dialog box, click the **Printing Defaults** button.
4. In this dialog box, select the **About** button. The **About <Driver Name>** dialog box displays.
5. Holding down the **F8** key on your keyboard, click the **OK** button. The **Special Options** dialog box displays:



This dialog box may look slightly different if it is a version built for Windows 98.

6. Do one of the following and click **OK**:
 - If printing from Windows 98, *clear* the **Enable RenderSmart** check box.
 - If printing from Windows 2000 or XP, *clear* the **Enable SpoolSmart** check box.

CAUTION: When you modify settings in this driver option box, make sure to note the original settings in case you need to change them back. These were designed for HP Support Engineers and not for general public use.

You can save these settings as a Quick Set to ensure that they run every time you print raster files.

1. Navigate to the HP printer driver and access the driver preferences. Use one of these methods based on your operating system:
 - *Using Windows NT 4.0* — From the Windows desktop, select **Start > Settings > Printers**. Then, right-click the appropriate plotter driver icon and choose **Document Defaults**.
 - *Using Windows 95/98 and Windows Millennium Edition (ME)* — From the Windows desktop, select **Start > Settings > Printers**. Then, right-click the appropriate plotter driver icon and choose **Properties**.
 - *Using Windows 2000/XP (Classic View)* — From the Windows desktop, select **Start > Settings > Printers**. Then, right-click the appropriate plotter driver icon and choose **Printing Preferences**.
2. Set the preferences the way you want them in the hidden menu.
3. In the **Quick Sets** box, type a name for the selected settings (for example, "Raster Print Settings") and click **Save**. All current driver settings (paper type, hidden menu settings, etc.) are saved under the Quick Set name. The printer driver remembers these settings and they can be used for future print jobs.

To print a raster map later with the same settings:

1. Choose **File > Print** to display the **Print** dialog box.
2. Choose the **Properties** button. The **Properties** dialog box displays.
3. Make sure the name you entered (as in "Raster Print Settings" in our example) displays in the **Quick Sets** drop-down list and click **OK**. The **Print** dialog box redisplay.
4. Click **OK** to print.

Note: If you do not need this special setting in Quick Sets, remember to change this setting back to the default machine setting.

Cannot Print with HP Designjet Printers (Driver 5.31 or 5.32).

When you attempt to use this driver one of these things happens:

- If you select the **Maximum Performance** option, you get memory error messages and the printer prints only part of the image
- If you select the Avoid out of memory option, the computer crashes and displays both an Out of Hard Disk Space message and an Out of Virtual Memory message

The resolution of this issue is similar to the preceding issue. The dialog box is the same.

To resolve this issue:

1. Choose **File > Print** to display the **Print** dialog box.
2. Click the **Advanced** button at the bottom of this dialog box. The **Advanced Printing Options** dialog box displays.
3. Select these options and click **OK**:
 - **Print directly to the printer**
 - **Internal Handling for Transparent Vector Fills and Symbols**
 - **Use ROP Method to Display Transparent Raster**
 - **Print Raster in True Color When Possible**
 - **Select the Half Tone dither method.**

4. From the **Control Panel**, select **Printers** or **Printers and Faxes** and find the printer you want to print from.
5. Right-click the printer you want to print to and select the **Properties** option. The **Properties** dialog box displays.
6. Click the **About** button to display the **About <Printer Driver>** dialog box.
7. Holding down the **F8** key on your keyboard, click the **OK** button. The **Special Options** dialog box displays.
8. Do one of the following:
 - If printing from Windows 98, clear the **Enable RenderSmart** check box.
 - If printing from Windows 2000 or XP, clear the **Enable SpoolSmart** check box.

Printing Maps Larger than 1.6 Meters (63 Inches)

When you print a map that is larger than 1.6 meters or 63 inches in Normal or Best modes, often the image is incomplete. Only the first 1.6 m or 63" prints.

To resolve this issue, do one of the following:

- Click the **Advanced** button and in the **Print Quality** options, select a lower print resolution (from 600 to 300 DPI or from 300 to 150 DPI)
- Set the **Scale to fit** option to **100%** to divide the resolution rendering by 2

When you use one of these alternatives you can print up to 3.2 meters (10.5 feet) at 300 DPI or up to 6.4 meters (21 feet) at 150 DPI.

