

# Printing Guide

The purpose of this guide is to assist you in getting the best possible output from your MapInfo® Pro software. We begin by covering the new print, import, and export features and continue with preferences and printing options available in MapInfo Pro. 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 Pro.

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

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## Printing in MapInfo Pro

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Before you start printing your map, you may want to create a new layout so you can arrange your maps, legends, titles for the best effect. On the **HOME** tab, point to **Window**, and click **Layout** 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 or layout from MapInfo Pro:

1. When you have your map or layout the way you want it, on the **HOME** tab, in the **Output** group, click **Print** to open the **Print** dialog box.

**Note:** When you print a layout, the **Options** and **Advanced** buttons do not display.

The **LAYOUT** tab has commands for **Page Setup**, **Print**, **Create** and **Save** operations. If an embedded window frame is active in the **Layout** window, then the entire layout in the **Layout** window prints.

2. Select the printer or plotter you want to use for this workspace from the **Name** 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 overrides the selections made in the preferences for the current print session.

3. If printing a map, select the print range of your output and the number of copies you want.
4. To set more print options, click the **Options** button to open 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.

### Setting How Layout Contents Print

The **Layout** window can contain maps, browsers, legends, images, text, and shapes. Many of the printing options necessary to print a **Map** window are automatically set when printing a **Layout** window. What you see in your printout will look the same as what you see in the layout on your screen. Most of the contents of a layout print as vector or text, and not as raster.

When the **Layout** window is active, you can print by clicking **Print** or **Create** on the **HOME** tab.

Only the contents of a layout that are within the margins (shown as grid lines on the layout) print. The grid lines, guide lines, and frame selections that you see on a layout do not print.

The print operation uses the printer, page, and margins set on the **Print** dialog box. If you change the printer settings on this dialog box when printing, then the layout canvas size changes after the print completes to match the new settings. To see how changing the printer settings will affect your printout before you print, use **Page Setup** to set page size, margins, orientation, and resolution.

### Printing Map Frames in a Layout Window

When printing a **Layout** window, map frames have some printing considerations. Each map frame in the layout is independent of the other map frames in the same layout.

## What You See is What You Get

When printing a layout, the map in the printout looks identical to the map in the layout on the screen (this includes how the labels look).

## Print OSBM

Off-Screen Bitmap (OSBM) automatically applies when printing a map frame that contains items or options that require OSBM to preserve their appearance in print. Using OSBM processes each print tile as a raster. This is an automatic setting that you cannot control when printing from a **Layout** window. Using OSBM applies when the Map has enhanced rendering turned on, and one or more visible layers with:

- Translucent vectors.
- Images (such as raster, grid, WMS, or tile server) with transparency, translucency, or image smoothing.

Printing to a layered PDF does not use the Print OSBM method.

## Subdivide Printing

You can turn on subdivide printing as a preference. On the **PRO** tab, point to **Options**, and click **Output Settings**. On the **Printing** tab, select the **Subdivide Printing** check box. When subdivide printing is turned on and Print OSBM is not being used, then each map in a **Layout** window divides into smaller tiles while printing. This reduces the amount memory required to process the print job, especially when the map frame is large. When subdivide printing is off, then each map frame prints at once.

## Translucent Images

If your map contains translucent images (usually raster, grid, WMS, or TileServer images) and **Enhanced Rendering** is turned off, then it may not print as translucent. To make it print with translucency, on the **MAP** tab, point to **Options**, and click **Map Options**. In the **Map Options** dialog box, check the **Enable Enhanced Rendering** check box.

## Printing of Items Other Than Map Frames

The non-map content in a **Layout** window should be printed as vector and/or text. It should not be rasterized.

The legend sample swatches convert to raster during print or export. Even though TrueType point symbols are rendered as text on the screen, they convert to raster during printing or exporting.

## Setting How Layout Content Exports

Normally, what you export looks identical to what is in the **Layout** window. However, some graphics and text may become blurry when you export a layout. To correct this, on the **PRO** menu, point to **Options**, and click **Output Settings**. In the **Output Preferences** dialog box, under the **Exporting** tab, select the **Clarify Text** check box. This corrects the issue, but may cause some labels on the map to look slightly different in the export from what is in the layout.

## Setting How Map Contents Print

In the **Map Print Options** dialog box, you can select how the map contents will print; the options are **Same as Window** and **Centered on Window**. (To go there, on the **HOME** tab, in the **Output** group, click **Print**. In the **Print** dialog box, click **Options**.)

- **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 Pro assumes you want to select the **Fit to Page** radio button and selects this for you.

## Setting Advanced Print Options

In the **Advanced Printing Options** dialog box, you can refine your print settings. (To go there, on the **HOME** tab, in the **Output** group, click **Print**. In the **Print** dialog box, click **Advanced**.)

**Note:** You cannot select these options for a layout in a **Layout** window.

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** dialog box for the current print session.

### Output Method

There are three output methods.

- **Print Directly to Device** – Use this option to print your image file directly from MapInfo Pro. 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 Pro 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 Using Offscreen Bitmap (OSBM)** – Use this option to generate an offscreen bitmap of your MapInfo Pro image before sending it to the printer. This option depends on the type of translucent content in the map and enhanced rendering state of the window.

### 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.

### 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, select 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.

## 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 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.

## Dither Method

Click this drop-down list to convert a 24-bit image into 256 colors, using either Halftone or Error diffusion.

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

## Printing to a File

To print a map or a layout to a file:

1. From the **HOME** tab, point to **Output > Print** or **Create** to open the **Print** dialog box.
2. Select the **Print to File** check box.
3. Click **OK** to open the **Print to File** dialog box.
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.

## Printing to a Layered PDF File

PDFs are capable of holding multiple pages of information in the same space through the use of Optional Content Groups (OCG), which are more commonly known as layers. Layers in PDFs are very similar to MapInfo Pro map layers.

Each layer may hold any portion of the document's objects and layers may be made visible or invisible, showing or hiding their contained objects, in any combination. By selectively hiding layers, you reduce distractions to concentrate on particular areas or types of objects. Layers can be organized into groups and the visibility option can apply to all layers within a group as one step.

To print a map or a layout to a layered PDF:

1. From the **HOME** tab, point to **Output > Print** or **Create** to open the **Print** dialog box.
2. From the **Name** list, select **MapInfo PDF Printer**. This is the PDF driver that installs with MapInfo Pro.

**Note:** The Layered PDF option is only available when using the MapInfo PDF Printer.

Optionally, click **Properties** to set any printing preferences.

3. Click **PDF** to open the **PDF Preferences** dialog and check the **Layered PDF** check box.

**Note:** It may take some time to process a large map with many layers.

When printing a layout in a **Layout** window to a layered PDF, each frame (such as map, browser, legend, image, text, and shapes frames) becomes a layer in the PDF. You can also use a different PDF driver, not the MapInfo PDF Printer. Doing so creates a static PDF map without layer information, so you do not have the ability to turn on or off particular map layers.

Labels in a **Map** window save to a separate layer in the PDF with a name that includes the parent layer name. Adornments save as a separate Adornments layer in the PDF. An empty Cosmetic layer does not save to the PDF.

## General Printing Tips and Tricks

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

If you are seeing issues in your PDF, then try another printer, such as the Microsoft XPS Document Writer (MXDW). If the issue is only happening in PDF, then try selecting and unselecting the **Layered PDF** option (see [Printing to a Layered PDF File](#)).

### Seeing Black Boxes Instead of Symbols when Printing to PDF?

If you are printing to the MapInfo PDF Printer, try turning on Enable Postscript Simulation. In the **Print** dialog box (on the **HOME** tab, in the **Output** group, click **Print** or **Create**), click the **Properties** button. In the **MapInfo PDF Printer Properties** dialog box, select the **Advanced Options** tab and then select the **Enable Postscript Simulation** check box.

### Compress the Size of Raster Maps when Printing to PDF Tip

Use one of the image compression options with the MapInfo PDF Printer to select how to compress black and white or color images, or select to remove duplicate images, downsample high resolution images, and disable PNG/JPEG printing. On the **Print** dialog box (on the **HOME** tab, in the **Output** group, click **Print** or **Create**), click the **Properties** button. In the **MapInfo PDF Printer Properties** dialog box, select the **Image Compression** tab.

### Save New Defaults and Save Time Printing to PDF

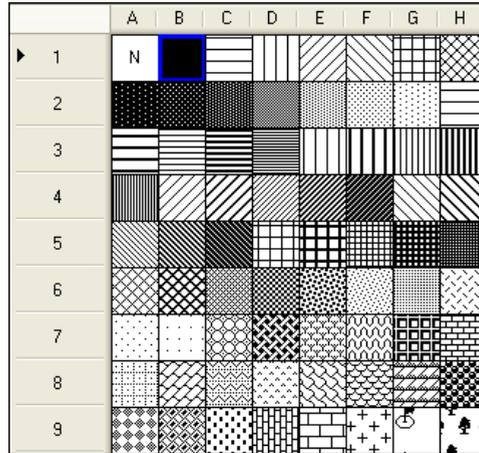
Don't select the same setting over and over again when printing to PDF. Save your setting once as the default setting. From the **Start** menu, select the **Control Panel**, and click **Printers and Faxes**. In the **Printers and Faxes** screen, right-click **MapInfo PDF Printer** and select **Printing Preferences**. Make your favorite setting and click **OK** to apply it as a default when you print to PDF. As an example, turn on **Enable Postscript Simulation** in the MapInfo PDF printer.

### Embedding MapInfo Pro Graphics Tip

When you embed a MapInfo map in another application (such as Word or PowerPoint), click outside the map 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 you are printing.

### 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**.

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.

### Translucent Raster Maps?

If your map contains translucent layers, then the output converts to a raster image to maintain the translucency during the printing process. This also converts vector graphics and text to raster. To maintain text and raster in the output, you must disable the translucency in the map. However, if you wish to maintain translucency while printing, ensure the map has **Enhanced Rendering** turned on.

### 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.

### Disk Space an Issue?

Make sure you have plenty of temporary disk space, particularly if you are printing large or complex maps or layouts, and especially if they contain raster images and/or translucency.

### Printing 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, on the **Start** menu, point to **Settings, Control Panel**, and click **Printers**.
2. Right-click the printer and choose **Properties** to display the printer's properties.
3. Click the **Advanced** tab to display the advanced property options.
4. 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.

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

### Want to improve on what you see in Adobe Acrobat?

Adobe Acrobat has display settings that may affect how you see text, images, lines, and translucency in your PDF. You can change these settings in Acrobat on the **Edit** menu, by pointing to **Preferences** and then selecting **Page Display**. Experiment by selecting and unselecting the **Smooth line art**, **Smooth images**, and **Enhance thin lines** settings to see how they affect your printout.

## Enhancements Added in Different Versions

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### MapInfo Pro 12.5

#### New Layout Window

MapInfo Pro 12.5 has a new **Layout** window. Printing and exporting layouts from this window has much better quality and it supports working with labels. How labels look in the output is now identical to what you see in the layout, so labels in the embedded map frames within a **Layout** window look the same on the screen, in printouts, and in exported files. The **Layout** window maintains text and vector whenever possible, which minimizes rasterization and improves the output quality.

### MapInfo Pro 11.0

#### Saving Preferences for Georegistration Coordinate Units

You can select to store the bounds and coordinate systems of the map or layout view in your PDF file. This type of file is called a Georegistered PDF. You can save preferences to set the georegistration coordinate units to either **Use Map Units** or **Use Degrees**. For more information and instructions on how to do this, see *Saving Preferences for Georegistration Coordinate Units* in the *Help System*.

### MapInfo Pro 10.5

New in this release are polygon mode printing, printing to an offscreen bitmap (OSBM), subdivide printing, and printing to a PDF file.

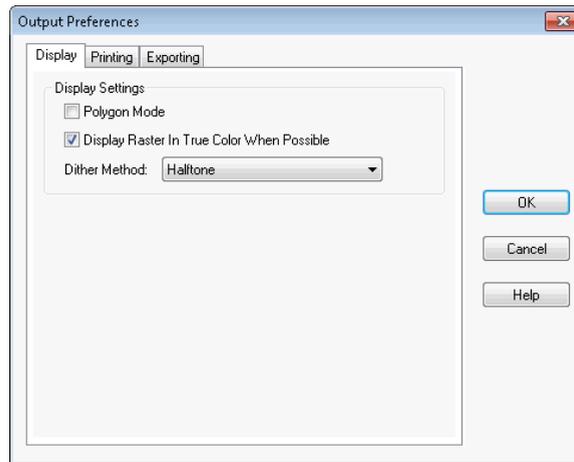
#### Polygon Mode Printing

This release of MapInfo Pro introduces a new way of drawing complicated polygons, such as those containing holes or many nodes through a User Interface. This was due to an issue with printing such objects using an Adobe PDF printer driver. It left visible seams and gaps in the image when the PDF was printed. These seams and gaps were not visible on screen nor when printed using other printer drivers.

Printing with the new method means that large polygons are now rendered as-is not broken into smaller polygons, as the older method does. Additionally, the new method uses different calls that specifically support drawing polygons with holes. The older method manipulates the polygon with holes to draw as a single polygon, which caused seams and gaps to appear in the PDF

**Note:** Because this issue does not affect all users of MapInfo Pro who print maps, we continue to provide the original polygon drawing method.

**Polygon Mode** may be set for each of three types of drawing: on-screen, printing, and exporting. On the **MAPINFO** tab, point to **Options** to open the **Output Preferences** dialog box. Select the **Polygon Mode** check box on any of the **Display**, **Printing**, and **Exporting** tabs.



**Note:** The setting is independent to output method and is not saved on per window basis. This setting will not affect any other option's User Interface.

### Printing to an Offscreen Bitmap (OSBM)

The **Print using Offscreen Bitmap (OSBM)** printing method renders a print job to offscreen bitmaps prior to sending it to the printer or plotter. It is used when printing maps and layouts containing translucency and/or anti-alias content, particularly for raster images. When printing, on the **HOME** tab, in the **Output** group, click **Print** to open the **Print** dialog box. Click **Advanced** to open the **Advanced Printing Options** dialog box. Select the **Print using Offscreen Bitmap (OSBM)** check box.

This printing process generates an Offscreen bitmap of your MapInfo Pro image before sending it to the printer. Offscreen bitmap is invoked depending upon the type of translucent content in the map and enhanced rendering state of the window. However, setting OSBM from this window means that while printing Offscreen bitmaps (OSBM) will be selected regardless of the translucency and anti-alias settings.

### Setting Print to an Offscreen Bitmap as your Default

You can set this option as a default on the **MAPINFO** tab, point to **Options**, and click **Output Settings** to open the **Output Preferences** dialog box. On the **Printing** tab, select **Print using Offscreen Bitmap (OSBM)** to sets the default for all new windows.

### Subdivide Printing

In earlier versions of MapInfo Pro, there was an optional registry setting, called **SubdividePrinting**, to allow print jobs to be broken into multiple, smaller print requests. This was especially useful if printing large raster/ translucent maps to large paper sizes. Now that option has been added as a preference. The preference is initialized using the registry setting if it existed.

On the **MAPINFO** tab, point to **Options**, and click **Output Settings** to open the **Output Preferences** dialog box. On the **Printing** tab there is a check box for **Subdivide Printing**. If checked, the print job is broken into multiple smaller print request. If unchecked, the print is done in a single request.

### Printing to PDF

Professional lets you save a map to a layered PDF file. Since Acrobat 6.0, PDFs are capable of holding multiple pages of information in the same space through the use of Optional Content Groups (OCG), which are more commonly known as layers. Layers in PDFs are very similar to MapInfo Pro map layers.

Your PDF now displays layers in the same order as shown in the MapInfo Pro **Layer Control** window, and it displays translucency. The MapInfo PDF Printer supports GeoRegistration, which stores the bounds and coordinate systems of the map view in the PDF file. The PDF file also stores the attribute data of the records on the map.

New in this release when saving to a PDF file:

- **Print to PDF** – On the **HOME** tab, in the **Output** group, click **Print to PDF** to save your map, browser, or layout to a PDF file. This option is similar to **Save As**, and gives you the option to concatenate PDF files.
- **MapInfo PDF Printer tool** – The Main menu includes a new MapInfo PDF Printer  tool, which is the same as on the **HOME** tab, in the **Output** group, clicking **Print to PDF** to save your map, browser, or layout to a PDF file.
- **Translucency** – You can create a layered PDF that includes translucent layers in MapInfo Pro 10.5.
- **PDF Preferences** – The MapInfo Pro **Print** dialog box (on the **HOME** tab, in the **Output** group, click **Print**) now includes a **PDF** button that displays after selecting MapInfo PDF Printer from the Name list. This button opens the **PDF Preferences** dialog where you can make the following settings:

### Layered PDF

Select to save layers for a map, as shown in the MapInfo Pro **Layer Control** window, to the PDF file. When saving a **Layout** window, each frame, such as map frame and legend frame, becomes a layer in the PDF.

### Georegistered PDF

Select to store the bounds and coordinate systems of the map or layout view in the PDF file.

### Add Attribute data to PDF

Select to store the attribute data of the records on the map in the PDF file.

### Automatically open the PDF

Select to have the PDF file open after it is generated.

Selecting the Layered PDF option in the **PDF Preferences** dialog box enables the Direct to Device option, and disables using OSBM and EMF.

If you select the Print using EMF or Print using the Offscreen Bitmap (OSBM) output method and later on select the Layered PDF from the **PDF Preferences** dialog box, then the output method forcibly sets to Direct to Device. However, disabling the Layered PDF option resets the print output method back to your original selection, EMF/ OSBM.

- **Context Sensitive Help for the MapInfo PDF Printer** – This version of the MapInfo PDF Printer includes documentation in the form of a help system. To access this help system, on the **HOME** tab, in the **Output** group, click **Print**. In the **Print** dialog box, click **Properties**. This opens the **MapInfo PDF Printer Properties** dialog box, which has a **Help** button on each tab.

## MapInfo Pro 10.0

MapInfo Pro lets you save a map to a layered PDF file, see [Printing to a Layered PDF File](#) on page 5.