Line Style Editor

Version 2.0

USER GUIDE

Pitney Bowes
Business Insight

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June 2009

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1

Using the Line Style Editor

This document contains installation and use instructions for the Line Style Editor (MILISTED), which you can use with MapInfo Professional.

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What is the Line Style Editor?

The MapInfo Line Style Editor (MILISTED) allows you to create custom line styles and modify existing line styles to enhance the look of your MapInfo Professional maps. This works by modifying the line style definition file(s) from which MapInfo Professional reads the definitions. Using the Line Style Editor, you can open any valid MapInfo Professional line style definition file, modify it and create new line styles of your own.

A line style definition file (like Samples.Pen, which we use for this document) can contain one or more line styles. Using the Line Style Editor you can add, modify, delete, and reorder the line style definitions within the file. Each line style definition displays in the Line Style and the Region Style dialog boxes in the order they appear in the line style definition file.

There can be multiple line style definition files, but the file MapInfo Professional primarily uses is named MAPINFOW.PEN. The line styles you create or edit are available only when you re-open your MapInfo product, because that is what prompts the program to read the mapinfow.pen file.

Installing the Line Style Editor

To install the Line Style Editor from the Installation CD:

1. Click the **Install Products** and the **Free Utilities** option to display the Free Utilities list.
2. Click the **Install Line Style Editor** option to display the Installshield Selfextracting EXE dialog box.
3. Click **OK** to begin the installation.
4. At the Welcome screen, click **Next** to display the Software License Agreement.
5. Click **Yes** to display the Choose Destination Location dialog box. Do one of the following:
   - Click **Next** to accept the default file destination location and continue
   - Click **Browse** and select the path to which you would like to install the Line Style Editor.

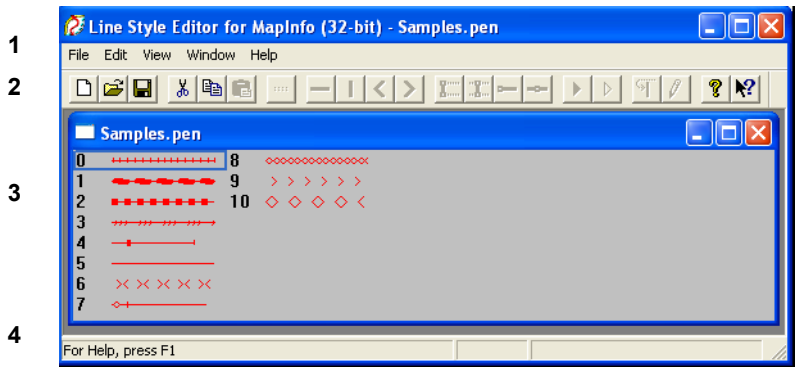
     To install this product on the network or to select another drive click the **Network** button. When you have finalized the path in the Path field, click **OK** to return to the Choose Destination dialog box. Click **NEXT** to continue.
6. In the Select Program Folder dialog box, choose the MapInfo folder or type in a new folder name in the Program Folders field. Click **Next** to begin the installation.
7. Click **Finish** to close the Setup Complete dialog box.

Understanding the Line Style Editor

To start the Line Style Editor, do one of the following:

- Double-click the **MILISTED** icon,
- From the **Start** menu, select **All Programs > MapInfo > MapInfo Line Style Editor**. Using either method, the Line Style Editor window displays.

Figure: Figure: Line Style Editor Main Menu, Toolbar and Status Bar



1) menu, 2) toolbar, 3) line style definition file, 4) status bar

Note Line style definition files have the extension .pen.

Understanding the Layers and Objects

Before you try to create your own line style definition, it is important to understand the Line Style Editor's concept of layers and objects. Each line style definition can consist of one or more layers. Layers control the order line objects are drawn in. Lines and tick marks drawn in an upper layer cover those drawn in lower layers. Using the Line Style Editor utility, you can add, modify, delete, and reorder the layers in a line style definition.

Each layer in a line style definition can contain one or more objects. Objects are the elements that make up a line, such as straight line segments, perpendicular line segments, angles, etc. Objects can be grouped into two types:

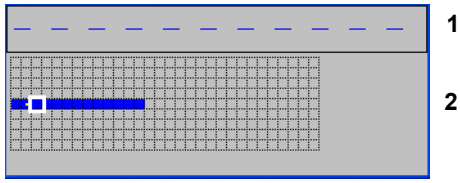
- Visible Objects – Determines how the line looks
- Control Objects – Determine how the line behaves in MapInfo Professional You can use the Line Style Editor to add, modify, move, and delete objects from a layer.

Working with Visible Objects

Visible objects are the objects that you see when you build and display a line style definition. You create the visible objects and are repeated to create the look of the line. A preview line displays above the line you are creating to show you how the line looks as you create it. The visible objects include:

- **Draw line** – Creates a horizontal line in your line style definition. You can control the length and width of the line using the line options. You can only draw a line in one layer at a time. You can double-click a **Draw line Object** to review and edit the line's properties.

Figure: Figure: Draw Example

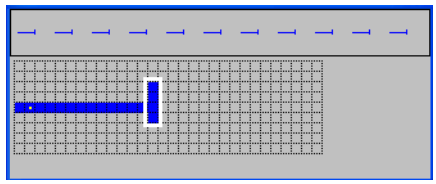


1) line style preview, 2) line style definition

- **Tick mark** – Creates a vertical line that runs perpendicular to the draw line. You can specify the starting point, the width, and the distance from the center of the line in either direction. You can double-click a **Tick Mark Object** to review and edit the mark's properties.

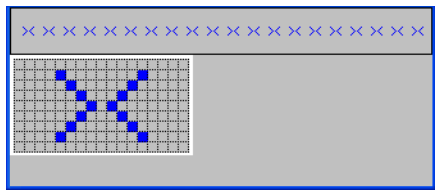
  Note You can specify the color in the Line Style Editor or you can pick a color later using the line style commands in MapInfo Professional.

  Figure: Figure: Draw with Tick Mark Example



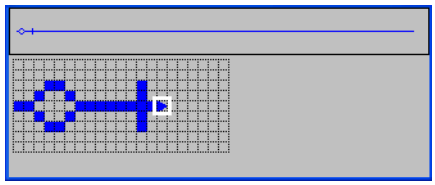
- **Angle tick mark** – Creates left and right pointing angle marks that run perpendicular to the draw line. You can directly specify the angle tick mark's starting point and how far from the center of the line it extends in either direction. You can double-click an **Angle Tick Mark** object to review and edit the mark's properties.

  Figure: Figure: Angle Tick Examples



- **Draw line to end** – Extends the draw line to the end of the specified line. You can directly specify the starting point and width of the line with a display attribute object. You can double-click a **Draw line to End Object** to review the line's properties.

  Figure: Figure: Draw to End Example

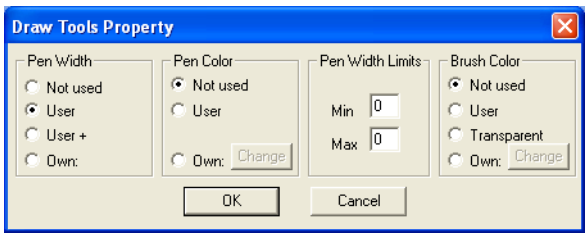


Working with Control Objects

Control objects manage how and where MapInfo Professional draws the visible objects. Control objects include:

- **Skip** – Whenever there is a gap between one object and another in a layer, the Line Style Editor automatically inserts a skip object for that gap. You must insert **Skip to End Objects** explicitly when you want one. The Line Style Editor uses the skip objects implicitly.
- **Skip to end** – Displays the visible object in the current layer once, at the beginning of the line and prevents that object from repeating.
- **Loop** – Inserts a moveable vertical line that specifies where the line should begin repeating. All objects to the left of the line are static and display only at the beginning of the line. All objects to the right of the line repeat until the end of the line style. To edit the position of this loop line, double-click the line and enter a new position.
- **Draw Tools Property** – Allows you to specify the pen properties for the layer.

Figure: Draw Tools Property



Draw Tools Property attributes control how the line style in the current layer is drawn. It is considered an object and not just a place holder for the attributes of other objects. A pen property object placed before a loop object only affects those objects drawn before it encounters another pen property object which can have different attributes. This is how you create different colors in your line style. By default, MapInfo Professional draws the objects in a layer in the order they appear and then repeats them from the beginning until the end of the line. Then it does the same with any additional layers defined.

Working with the Line Style Definition File

The line style definition file (the file that ends in .PEN) contains the line styles that have been created for use in MapInfo Professional maps. Using the instructions below, you can create and edit a line styles file. It is important to remember that any changes you make to a line style must be saved not only within the line style itself but also to the line style definition file.

Adding a New Line Style to the Definition File

When you open a line style definition file (with a .PEN extension), the Line Style Editor displays a numbered list of the defined line styles in it. You can add new line styles to the end of the list.

To add a new line to a file:

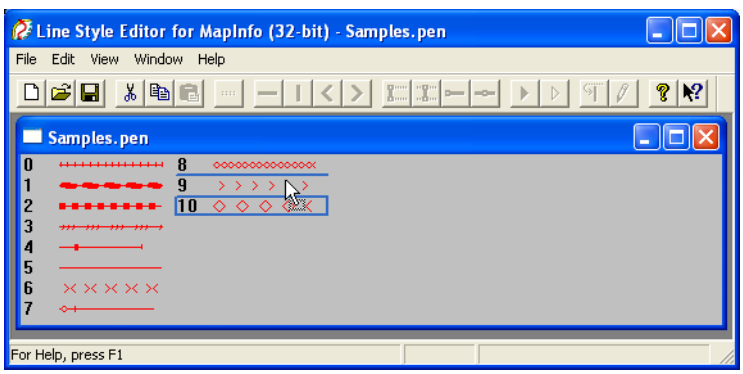
1. Open the line style file to which you want to add a line style.
2. In the **Edit** menu, select the **New Line** option. The Line Style Editor creates a new, blank line and adds it to the end of the file. It also opens a new window for the new line style.

Moving a Line in a Line Style Definition File

You can move a line style within a definition file to a new position in the line style list. To move an object:

1. Click the line style in the list.
2. Drag it to a new position in the list.

Figure: Figure: Moving a Line Style in a Line Style Definition File



Note MapInfo Professional displays the line styles in the Line Style dialog box in the same order that the Line Style Editor shows them here.

3. Click the Save tool to save the Line Style Definition file.

Deleting a Line Style from the Definition File

You can remove a line from a line style definition file.

1. In the Line Style Definition File window, click the line style you want to delete.
2. Do one of the following:
   - Press the **Delete** key
   - In the **Edit** menu, select **Delete**. The Line Style Editor removes that line style from the line style definition file.
3. Click the Save tool to save the Line Style Definition file.

Copying a Line Style to a Different Position in the Definition File

You can copy an existing line and paste it to the end of the file.

1. In the line style definition file window, click the line you want to copy.
2. In the **Edit** menu, select **Copy**.
3. To paste the line in a new position, in the **Edit** menu, select **Paste**. The Line Style Editor pastes a copy of the line you selected at the end of the file.
4. Click the Save tool to save the Line Style Definition file.

Working with Line Styles

Creating and Opening a Line Style

When you start the Line Style Editor, it displays an empty window. You can either create a new line style definition file or open an existing one.

- To create a new line style definition: From the **File** menu, select **New**, or
- To open an existing line style definition: From the **File** menu, select **Open** and specify the name and location of an existing line style definition file. The Line Style Editor shows the contents of a line style definition file in a child window. You can

open more than one line style definition file at a time; the Line Style Editor displays each one in a separate window.

Saving a Line Style

The changes you make do not exist in the line style definition file until you explicitly save them.

To save a file:

1. Select the line style definition file window that you want to save.
2. In the **File** menu, select **Save** or **Save as** and type a name for the file in the field provided. The Line Style Editor writes all your changes to the line style definition file you specify.

MapInfo Professional only reflects the changes if that file is named MAPINFO.PEN and is located in the appropriate user directory.

Note Line style definitions you save are available to you in the Line Style and the Region Style dialog boxes the next time you open MapInfo Professional. If you create or modify line styles while MapInfo Professional is open, the changes do not display.

Editing a Line Style

You can modify the layers and objects that make up a line style definition.

1. In the line style definition file (.PEN) window, click the line you want to modify.
2. Press the **Enter** key or in the **Edit** menu, select **Modify**. The Line Style Editor displays a new window with the contents of that line.
3. Click the Save tool to save the Line Style Definition file.

Working with Objects in a Line Style

Objects are the visible and control features that make up a line style.

Adding a New Object to a Line Style

You can add new objects to any layer of a line style definition.

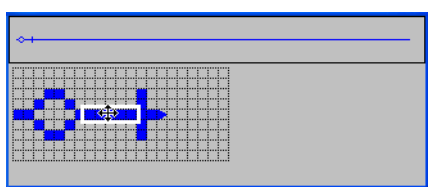
1. Click the layer to which you want to add an object.
2. Optionally, click the existing object after which you want the new object inserted. If you do not click an existing object, the Line Style Editor inserts the new object as the first object in the layer.
3. In the **Edit** menu, select **New Object** and choose an object type.
4. Click the Save tool to save the Line Style Definition file.

Moving an Object in a Line Style

You can move objects from side to side in a layer.

1. Click the object you want to move.
2. When the Line Style Editor draws a white rectangle around the object, move the cursor to the center of the object until it changes into a four-headed arrow.

Figure: Figure: Moving an Object Example



3. Click there and drag the object to the left or the right. You cannot move some objects past others. For example, you cannot pass a tick mark object over a draw line object.

Deleting an Object from a Line Style

You can delete an object from any layer.

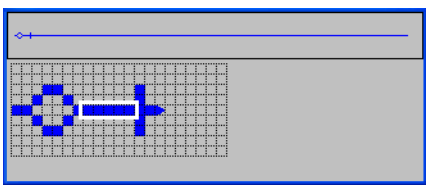
1. Click the object you want to delete.
2. Press the **Delete** key or in the **Edit** menu, select **Delete**. The object you selected is deleted. There is no prompt and the change is saved automatically.

Resizing an Object in a Line Style

You can change the size of an object. Most objects can only be changed along one axis.

1. Click the object you want to resize.

   Figure: Figure: Resize Object Example

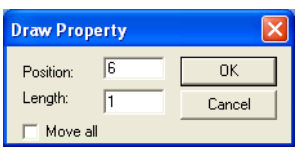
   The Line Style Editor draws a white rectangle around the entire object.
2. Move the cursor to the edge of the object until it changes into a two-headed arrow.
3. Click there and drag the edge of the layer to the desired length. You can make draw line objects longer or shorter. You can make tick marks taller or shorter.
4. Click the Save tool to save the Line Style Definition file.

Changing an Object's Properties

You can explicitly set an object's position and size.

1. Click the object whose properties you want to change.
2. Press **Enter** or in the **Edit** menu, select **Property**.

   Figure: Figure: Draw Property

The Line Style Editor displays a dialog in which you can enter the object position, length or height and width.

1. Make your selections and entries and select **OK** to confirm the changes.
2. Click the Save tool to save the Line Style Definition file.

Working with Layers

You can enhance the look of a line style by adding layers. Layers can add color and depth to a line style.

Adding a New Layer to a Line Style

You can add new layers to a line style definition.

1. Select the line style definition window.
2. In the **Edit** menu, select **New Layer**. The Line Style Editor draws a new layer grid in the line style definition window.

Moving a Layer in a Line Style

You can move layers within a line style definition window to change the order in which MapInfo Professional displays them.

1. Click the layer you want to move.
2. Drag it to the new position.
3. Click the Save tool to save the Line Style Definition file.

Deleting a Layer from a Line Style

You can delete a layer so that it is no longer a part of the line style definition.

1. Click the layer you want to delete.
2. Press the **Delete** key or in the **Edit** menu, select **Delete**.
3. Click the Save tool to save the Line Style Definition file.

Copying a Layer to a Location in a Line Style

You can copy an existing layer and paste it to the end of the line style definition window.

1. Click the layer you want to copy.
2. In the **Edit** menu, select **Copy**.
3. To paste the layer in a new place, choose the **Edit** menu and select **Paste**. The Line Style Editor pastes a copy of the layer you selected at the end of the line style definition window.
4. Click the Save tool to save the Line Style Definition file.

Changing the Length of a Layer

You can change the length of a layer. Different layers in the same line style definition do not need to be the same length. The length of a layer defines how frequently MapInfo Professional repeats the objects in that layer when drawing the line. The Line Style Editor adds an implicit skip object after the last object in a layer to reach the length of that layer.

1. Click the layer whose length you want to change.
2. When the Line Style Editor draws a white rectangle around the entire layer, move the cursor to the right edge of the layer until it changes into a little two-headed arrow.
3. Click there and drag the edge of the layer to the right or the left.

Changing the Width of a Layer

You can change the width of a layer. This merely gives you more room to draw objects in the Line Style Editor. MapInfo Professional is only concerned with the width of visible objects.

1. Click the layer whose width you want to change.
2. When the Line Style Editor draws a white rectangle around the entire layer, move the cursor to the top or bottom edge of the layer until it changes into a two-headed arrow.
3. Click there and drag the edge of the layer up or down.

Changing the Properties of a Layer

You can explicitly set a layer's width and height.

1. Click the layer whose properties you want to change.
2. Press **Enter** or in the **Edit** menu, select **Property**.
3. The Line Style Editor displays a dialog in which you can enter the layer height and width. Make your entries and select OK to complete the changes.

Frequently Asked Question

Can I use maps with custom lines styles in other copies of MapInfo Professional?

The actual line-style definition resides in the MAPINFOW.PEN file. MapInfo Professional only stores an index number in the tables to indicate which lines style to use. If you create a map that refers to styles in a custom mapinfow.pen, a different copy of MapInfo Professional that does not have that MAPINFOW.PEN file cannot draw those custom line styles. Instead, it uses the line style it finds in the MAPINFOW.PEN file with the specified index number. If there is no line style with that index number, MapInfo Professional uses a simple solid line.

To import a custom MAPINFOW.PEN file to a new computer, copy the custom file to the same location as the existing MAPINFO.PEN file in the current user's Application Data directory. If the current .PEN file also contains custom line styles, it may be a good idea to rename the existing MAPINFO.PEN file so that nothing is lost.

Note It is necessary to close and re-open MapInfo Professional to make new custom styles available.

2

Line Style Menus

Use the following topics as a reference for the menus used in the Line Style Editor.

In this chapter

- File Menu Options 18
- Edit Menu Options 18
- Objects Menu Options 19
- Options Menu Options 19
- View Menu Options 19
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File Menu Options

Menu Option	Description
New	Creates a new .PEN file.
Open	Opens an existing .PEN file.
Close	Closes an opened .PEN file.
Save	Saves an opened .PEN file using the same name.
Save As	Saves an opened .PEN file using a name you specify.
File 1, 2, 3, 4	Quick opens one of the four most recently opened .PEN files.
Exit	Exits the Line Style Editor.

Edit Menu Options

Menu Option	Description
Cut	Deletes selected data from the current window and moves it to the clipboard.
Copy	Copies selected data from the current window to the clipboard.
Paste	Pastes data from the clipboard into the end of current window.
Delete	Deletes selected object.
New Line	Adds line style to the last position of current window.
New Layer	Adds layer to the last position of current window.
New Object	Adds a new object into layer.
Modify	Modifies selected line style.
Property	Displays Property dialog box of selected object.

Objects Menu Options

Menu Option	Description
Next	Selects next object.
Previous	Selects previous object.

Options Menu Options

The Options menu options do not affect the contents of .PEN file. These options are used to change the appearance of the line styles in the Line Style Editor with user width and user color. The Options Menu is only active when there is an open .PEN file.

Menu Option	Description
Line Width	Selects the width of the line.
Line Color	Selects the color of the line.
Background Color	Selects the color of the background.

View Menu Options

Menu Options	Description
Toolbar	Shows or hides the toolbar.
Status Bar	Shows or hides the status bar.

Window Menu Options

Menu Options	Description
New Window	Creates a new window that views the same .PEN file.
Cascade	Arranges windows in an overlapped fashion.
Tile	Arranges windows in non-overlapped tiles.

Menu Options	Description
Arrange Icons	Arranges icons of closed windows.
Window 1, 2, ...	Goes to specified window.

Help Menu Options

Menu Options	Description
Index	Offers you an index to topics on which you can get help.
Using Help	Provides general instructions on using help.
About	Displays the version number of this application.