Ortelius User Guide

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Getting Started with Ortelius®

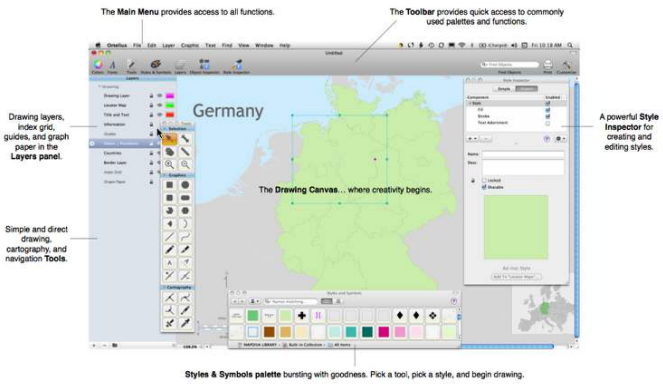
What is Ortelius?

Ortelius is cartography software for map design. Whether you need to show your location, study area, service territories, neighborhood or world, Ortelius' vector drawing tools are specially designed for cartography so you can draw your own custom maps.

Ortelius software is named after one of history's most prominent cartographers, Abraham Ortelius.

Ortelius User Interface

Ortelius provides a clean user interface consisting of a drawing canvas, toolbar, and layer list. Functions are accessed through the main menu located along the top of the screen. In the main window, the toolbar provides quick access to commonly used palettes and functions. The Toolbar can be customized and function icons added or removed by right-clicking and choose "Customize" from the contextual menu. The layers list shows four default layers (Drawing Layer, Guides, Index Grid and Graph Paper) when opening a new empty drawing file. Additional layers can be added by the user.



Tools are used in combination with the Format Bar, Styles Inspector, Geometry pane, Object Inspector and Styles & Symbols palette. The Styles & Symbols palette delivers with hundreds of editable map symbols and styles organized into Collections and Categories.

To draw with Ortelius

Choose a drawing tool, choose a style from the Styles & Symbols palette or create your own, and draw. To change styles, select a new style from the Styles & Symbols palette, or click "New" to create a new style, or "Clone" to create a new style based on the one currently in use.

Basic Principles

The 10 basic principles of Ortelius:

1. **Drawing Setup** – set canvas size, drawing units, map scale, index grid and graph paper
2. **Drawing Objects** – use Ortelius's simple and direct drawing tools in combination with the built-in Styles & Symbols library and styles you create
3. **Cartography Tools** – custom cartography tools, such as Connectable Tracks, Linear Select, smart labels, map symbols, and more, to make map creation easier than in any other vector drawing program
4. **Layers** – keep your drawing objects organized in logical layers
5. **Shared Styles** – objects can share styles for efficient drawing and editing; to break the style-link and change styles without affecting other objects, click "Reset" to create a new style; click "Clone" to create a new style based on the one currently in use; or choose a different style in the Styles & Symbols palette and continue drawing
6. **Symbols & Styles** – Ortelius delivers with hundreds of editable vector symbols and styles, plus a library to store your own!
7. **Expert Styles** – Ortelius stands apart with its expert "stacked" styles, including gradients, tapered strokes, pattern and hatch fills, and more
8. **Image Editing** – add images to your drawing; clip and mask using Boolean intersection of shapes; adjust image scale and positioning, exposure, saturation, image effects, and more
9. **Opening and Importing Files** – drag-and-drop multiple image formats from the Image Browser, including TIFF, JPEG, GIF, PNG, image-PDF, and PICT; import SVG 1.1; open Ortelius and SVG 1.1 files
10. **Save, Print & Export** – single page and "poster-tiled" printing; export to vector PDF (AI); JPEG, PNG, and TIFF image formats; print and export your whole drawing, or export just selected objects!

How To Use It

Drawing Setup

Ortelius includes a selection of pre-designed map templates. Choose a template, or open **File > New** for a new blank document.

Choose **File > Map Size & Units…** to set your canvas size, map scale, and drawing units (millimeters, centimeters, inches, pixels/points). Optionally, add a background color or texture. Your personal settings can be saved as the default setup for new documents. Graph Paper and Index Grid settings, including grid line spacing and color scheme, can also be adjusted.

Optional guide lines are added to your drawing by dragging them to and from the Rulers. Guide lines are placed on their own layer, which can be shown, hidden, and adjusted; after adding

guides, click back onto one of your drawing layers and continue drawing.

To setup your drawing to print to a specific paper size, enter the paper dimensions and check "subtract paper margins." This will allow the drawing canvas to be sized to fit within the printable area of your paper. Before printing, make sure the printer "Page Setup…" has your paper size and page orientation. Note, your drawing canvas can be larger than your actual printer paper size – if it is larger you can either "poster-tile" print your drawing over multiple sheets, or "shrink-to-fit" when printing.

Drawing Objects

Use Ortelius' simple and direct drawing tools, including special shapes such as Round Rectangles, Arcs, Wedges, Regular Polygons/Stars, smooth Bezier Paths, Text, and Text On Path. All shapes and paths have simple, direct controls to move points, curve handles, resize, rotate, change corner radius, and more – all with a single Select tool!

Choose a drawing tool, choose a style from the Styles & Symbols palette or create your own, and draw. To change styles, select a new style from the Styles & Symbols palette, or click "Reset" to create a new style, or "Clone" to create a new style based on the one currently in use. *HINT: For "quick pick-up" of styles that are already in use, hold the CMND-key while drawing and click on an existing object to pick-up its style and keep drawing.*

Hold the SHIFT-key to constrain angles and maintain the aspect ratio while drawing and resizing shapes. Hold the CMND-key to draw shapes out from center. Double-click any shape to convert it to path (and vice-versa) for "quick edit mode." While editing paths, you have full control to add, move, rotate, and nudge path points and handles. Create complex objects by adding or subtracting two or more shapes using the Union, Intersect, Difference, Append and Cookie Cutter commands.

Get precise control for object width, height (or length), and position using Ortelius' Geometry panel. For special objects (such as Round Rectangles and Stars) corner radius, arc angle, tips, valleys, radius, diameter, and more are precisely controlled. Opacity for image shapes is supported.

Add beautifully rendered text with the Text Box tool. Drag the text box object handles to resize text boxes. Use Text On Path tool for elegantly curved text paths. Double-click text with the Select [s] tool to edit. The Fonts panel offers font selection and custom effects, including outline, shadow, and mask. Align, kern, change case and baseline are available options. Font effects and options can be applied to blocks of text, individual words, and and even individual glyphs! For full creative control, including applying styles and distortion, you can convert text to shapes, shape groups, and paths.

Cartography Tools

Ortelius' exclusive Cartography Tools are vector drawing tools made specifically for map design.

Connectable tracks have special cartographic properties that allow intersecting lines to form smooth junctions, accept adornments, termination styles, feature labels, special overlay styles, and more. Tracks are used in combination with the Linear Select tool to insert special objects, such as bridges and tunnels. You can even seamlessly insert different line styles along the same path.

Ortelius' Cartography Tools work in conjunction with map styles, object attribute priorities, map symbols, and feature labels.

The Ruler tool takes real-world measurements and enables users to interactively set map scale within their drawing.

Layers

Ortelius uses layers to keep your drawing organized. Click a layer name to make it active and work with objects on that layer. Layers are discrete – multiple objects are not selectable across different layers. Add new layers and layer groups as desired. For example, you can place an image on one layer, then use another layer on top to draw features. Move objects among layers using the Layer menu commands.

Shared Styles

Ortelius places a central focus on “shared” styles that cascade across objects. Create three objects in a row, and they will share the same style; adjust the style and it will automatically cascade across all three. You can break the style link between successive objects by clicking “New” to create a new style, or "Clone" to create a new style based on the one currently in use.

If you edit a shared style, the changes are applied across all instances of the style – in other words you will see the changes on all objects where the style has been used. In this way, you can draw in Ortelius without having to reset the style each time you draw an object, and changes to styles can be made very quickly and efficiently.

The Format Bar provides quick access to simple fill and stroke style editing. (Advanced “expert” styles, such as arrowed paths and gradient fills, are created using Ortelius’ powerful Style Inspector and should be edited with the Style Inspector.)

Use the Style Dropper tool to pick-up and drop styles from one object onto another.

Styles & Symbols

Ortelius delivers with hundreds of built-in styles and fully editable styles and symbols, organized into Collections and Categories. Each category can contain either symbols or styles, or both. The Styles & Symbols palette toolbar drop-down menu lets you view the collections by category.

To draw using the built-in styles:

- Choose a drawing tool, choose a style from the palette, and begin drawing
- To apply a different style to an object, select the object in your drawing and double-click a style from the palette
- Alternatively, drag styles directly from the palette onto shapes, paths, and tracks

To add symbols to your drawing, use the Stamp tool with symbols, or drag symbols directly from the palette on to your drawing canvas. Symbols can be labeled, moved, resized, rotated, and completely edited. *Note, s*ymbols must be detached from their symbol master and *may need ungrouped in order to be edited. All symbols except country flags are fully editable.*

Any art work that you create can be saved as symbols to your User Library. As needed, make sure objects are grouped before adding to Library. Choose **Edit > Add Symbol To Library** from the main menu. Use the Library Manager to keep items organized. Here you can add new collections, organize styles and symbols into categories, and more. Built-in styles and clip art are locked to prevent changes to the originals, but can be used as-is, cloned, copied, and made your own.

Expert Styles

Ortelius stands apart with powerful "stacked styles" that go way beyond simple fill and stroke, providing a wide range of spectacular effects. Open the **Style Inspector** and have fun experimenting with expert styles. Click "Reset" to create a new style; click "Clone" to create a new style based on the one currently in use. Create awesome style combinations, such as multi-stroked paths; tapered, rough, and arrowed paths; gradients, patterns, and hatched fills; filter effects groups; and more.

As desired, name and save your styles to "My Library" for later use.

Image Editing

Drag and drop images form the Image Browser onto your drawing. Double-click an image to adjust its properties, such as exposure and saturation, or choose from a variety of image preset effects. Mask or clip images with a vector shape using the traditional Intersect Boolean operator.

Opening and Importing Files

In addition to its native Ortelius file format, Ortelius also opens editable vector Artboard (ARTB) files and editable vector SVG 1.1 files. SVG files are converted into Ortelius files upon opening and can be saved as such. Note, some SVG files that include filter extensions may not open properly.

Ortelius imports PNG, JPG, non-editable PDF, and TIFF images as well as vector SVG files. Drag images from the **Image Browser** directly to your drawing canvas. If an image is larger than the Ortelius canvas size, it will be scaled to fit the canvas (though can be rescaled in the Geometry

panel). You can even drop pictures directly onto Ortelius shapes to fill the shape with the image. The Image Browser provides quick access to your iPhoto, Pictures folder, and Smart folders, and you can attach other folders as desired.

Save, Print & Export

Ortelius is optimized for Mac OS 10.8+ "Mountain Lion", including Retina graphics, full screen, share, resume, autosaving and versions. Lion will periodically save your work for you. Choose **File > Save** to manually save your file. Choose **File > Duplicate** to create a new file that is a copy of the current file. You can also save any document as a template file for later use. Choose **File > Save Copy As Template…** Note, if you prefer not to use Autosave and Versions you can disable it under **Ortelius > Preferences > Options**.

Ortelius' flexible layout offers single page and "poster-tiled" printing. Choose **File > Print** to open the print dialog. Click **Show Details** to reveal the print options, including "Fit to Single Page," "Graph Paper," and "Crop Marks." Your drawing canvas can be larger than your actual printer paper size – if it is larger you can either "poster-tile" print your drawing over multiple sheets (default), or "Fit to Single Page" when printing. To make sure your printer is set with the proper paper size and page orientation, choose **File > Page Setup…** before printing.

Choose **File > Export…** to export for web and print using the most popular raster formats – PNG, JPG and TIFF resolutions from 72 to 600-dpi; and editable vector PDF files (the native AI file format). TIF, PNG, and PDF support alpha-transparent backgrounds. Export your entire drawing or just your selected objects. Additionally, Ortelius supports copy and paste or drag-and-drop graphics between popular productivity applications, such as iWork™ Pages and Keynote.

System Requirements

- **Qualified for OS 10.8.x Mountain Lion**
- **Mac OS X** 10.6+ (Snow Leopard) or later (10.7+ required for full screen, share, resume, autosaving and versions features; MacBook Pro with Retina display required for Retina display icons)
- Core Image supported graphics card

Recommended

- 2 GHz Intel processor
- 2+ button scroll mouse
- iSight/FaceTime Camera or Web cam (required for Picture Taker feature)
- Magic Track Pad (required for zoom gestures)

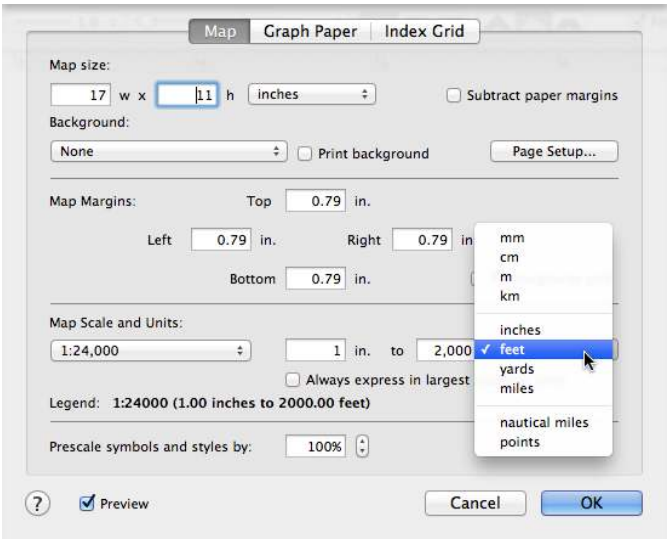
Pen Tablet Support (optional)

- Freedom to hand-draw – a simple, easy, and fun way to harness your creativity

Setting Up, Opening, and Saving a Drawing

Drawing Setup

Open the setup window by choosing **File > Map Size & Units… > Map** from the main menu.



Use **Map Size** to choose your drawing units, for example inches, centimeters, or pixels, from the drop-down list. Enter the width (w) and height (h) of your canvas size. Optionally, when creating a drawing for the printed page, enter the paper size and check "Subtract paper margins." Paper margins will automatically be subtracted based on your printer settings. You can access the printer Page Setup… from this menu to change printer paper size and orientation.

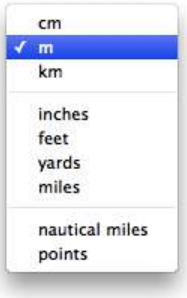
Change the **Background** to choose from a selection of textures to use as a background.

Map Area Margins

The **Map Margins** define a sub-area within your canvas within which you will draw your map and graphics. This is also the area to which graph paper and index grid will be applied if you use them. Set the top, bottom, left, and right Map Margins. For example, 0 (zero) map area margin will size the map area the same as the drawing canvas (no margin). If you will be using an index grid or have elements such as scale or map title outside of the map area, be sure to set map margins appropriately.

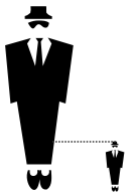
Units of Measure

Ortelius drawings use "real-world" units of measure. Choose the type of units that you want to use for measuring on-the-ground distances: imperial units, such as feet and miles, are common in the United States, metric units, such as meters and kilometers, are common internationally.



Map Scale

Whether it's your backyard or an entire continent, when you create a map you are representing features on the earth. Clearly, in order to represent the features on a map, they must be reduced – or scaled – from their true size to fit on the map.



Map scale is often defined as the ratio of a single unit of distance on the map to the corresponding distance on the ground (for example, one inch on the map may represent one mile on the ground).

To set the scale of your map:

- Set your map scale during drawing setup. Choose **File > Map Scale & Units…** from the main menu (see Drawing Setup)
- Alternatively, use the **Ruler tool** to define a custom map scale by calibrating distances of known objects that are being drawn (for example, when tracing an aerial photograph or existing map)

Map Scale and Units

To set map scale from the **Map Size & Units** window, choose from the drop-down list a selection of commonly recognized map scales, or set a custom scale by entering the ratio of drawing units to map units. Ortelius automatically calibrates the drawing scale based on these settings.

Related Topic: Using the Ruler Tool

Pre-scale Symbols and Styles

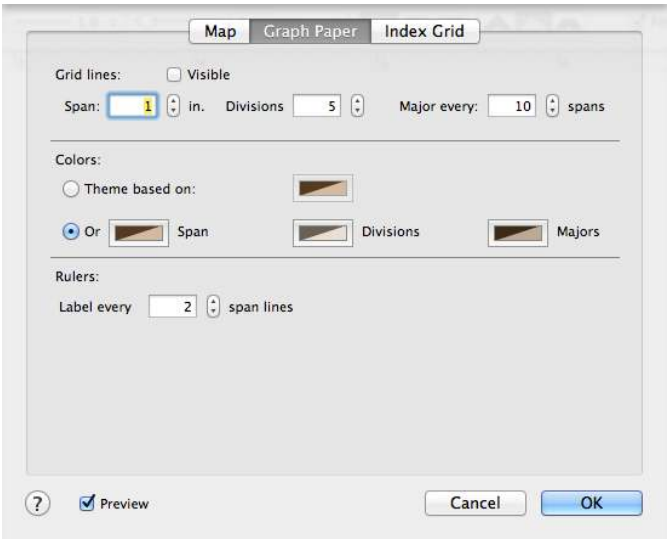
Drawing Setup allows a "pre-scale" to be set which is applied to styles and symbols when they are placed on your map The default value is 100% and typically does not need to be changed.

The value is a property of the document, and is used to work with certain mapping specifications where symbols and styles are scaled up in certain situations. For example, some mapping standards have specifications for symbol sizes depicted at a certain scale (such as 100% symbol size with 1:15,000 scale maps), and larger sizes when the scale is enlarged (such as 150% symbol size with 1:10,000 scale maps). In this instance, the pre-scale setting can be changed to 150% and will apply to the entire document.

Viewing Document Display Units

You can toggle a document's measurement display settings between Points, Drawing Units, and Map Units. This setting is persistent, is saved with the document, and affects display of all user interface-related to distances, as well as the display of dimensions. Choose **View > Display Units** from the main menu to choose the document's display units.

Graph Paper Settings



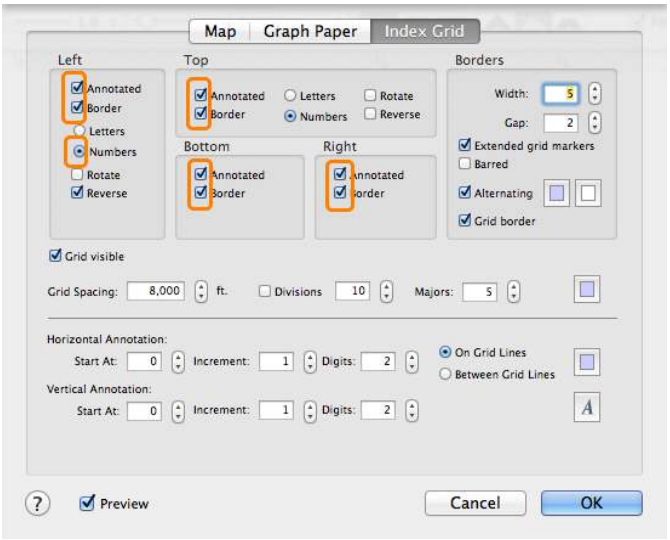
In Ortelius, the graph paper settings are based on the specified drawing units. The grid lines, number of divisions, and grid colors are adjustable under the **File > Map Size & Units… > Graph Paper** from the main menu. Graph paper is typically viewed underneath all other layers and can be printed with the map or not. The "Graph Paper" layer is included in all new drawings, and by default it is not visible. Click the “show” (eye) icon on the Graph Paper layer to make it visible.

The graph paper layer is customizable through the Graph Paper pane in the Drawing Setup dialog. Open **File > Map Size & Units…** from the main menu. Graph paper shows a Cartesian standard grid by default. Optionally, Ortelius can display an isometric grid to assist with drawing in perspective. Grid line spacing, colors, and rulers are customizable. Note, object drawing can be set to snap to graph paper grid by choosing **Graphic > Snap To > Graph Paper** from the main menu.

Note: **View > Snap To Grid** and the ruler display are linked to the Graph Paper settings, even if the layer is not visible. Open the preferences menu to enable snapping to grid automatically when graph paper is visible.

Index Grid Settings

Maps, such as city and road maps, often use an index to assist the reader in finding specific locations. An index grid is superimposed over the map and is typically annotated with letters and numbers around the edges of the map border. For example, many map readers are familiar with finding a road located in grid cell "G-4." The Ortelius Index Grid, visible on the Index Grid layer, has flexible controls for adjusting grid cell spacing, border styling, colors, and more.



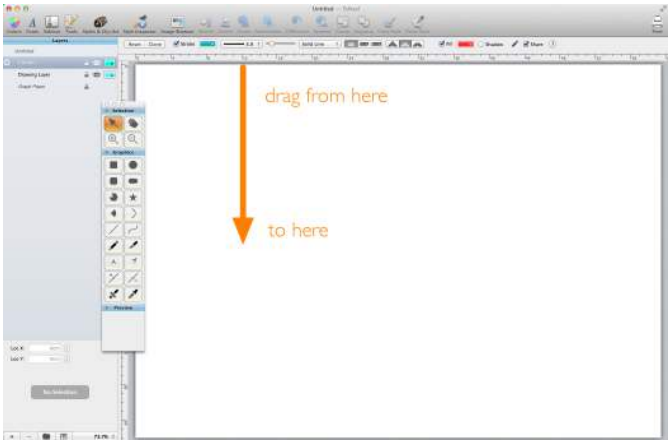
The Index Grid is visible by default when a new drawing is created. Click the Index Grid "show" (eye) icon in the Layer's list to show or hide it.

Open **File > Map Size & Units… > Index Grid** from the main menu to edit left, right, top, and bottom Index settings, turn ON and OFF annotation, borders, change from letters to numbers, and edit grid settings and color.

Note: The Index Grid is dependent on the map scale and affects other derived objects such as Scale Bars.

To Add Guide Lines

Layout is a key aspect to good design. Guides are used extensively during layout to keep objects properly aligned. Guides are placed on a Guide layer.



With the Rulers visible (**View > Show Rulers & Format Bar** from the main menu), drag from a ruler onto your drawing canvas. A guide will be placed. Multiple guides can be placed, and the layer can be made visible or hidden from the layers list. Guides are not printed.

To Move Guides Around

With the Guide layer active, click onto a guide and drag it into desired position. Constrain guides to the Graph Paper divisions by holding the SHIFT key while moving a guide. To keep objects and text aligned to the guides, choose **Graphic > Snap To Guides** from the main menu. When you are finished, click back onto a drawing layer to make it active and continue drawing.

To Delete Guides

Drag a guide off the canvas area onto a ruler to delete it.

Saving Your Ortelius Drawing

To Save Your Drawing

Ortelius is optimized for the latest Mac OS X, including "Autosave" and "Versions". The OS X will periodically save your work for you. Choose **File > Save…** to manually save your file. Choose **File > Duplicate** to create a new file that is a copy of the current file. Alternatively, hold down the Alt/Option-key and choose **File > Save As…** to save your drawing as a new file.

Note, if you prefer not to use Autosave and Versions you can disable it under **Ortelius > Preferences > Options**.

To Save a Drawing as a Template

Templates are master documents that, when opened, provide a copy of the file as a new document. Template files can be used over and over again. To save a copy of a drawing file as a template for re-use, choose **File > Save Copy As Template…** from the main menu. Next time you open **File > New From Template > My Templates** you will see your saved template files.

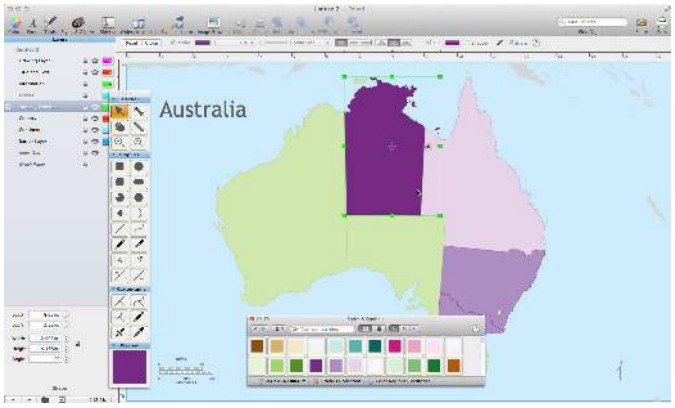
To Manage "My Templates"

To access user-created My Templates files to rename, delete, or back-up your files, they are saved to a special folder. In Mac OS 10.7 and later, first click to select your template, then right-click the template and choose "Reveal In Finder".

Alternatively, in Finder hold the OPTION-key down while choosing **Go > Library** in the main menu. Find the following folder:

~/Library/Application Support/com.mapdiva.ortelius/My Templates, where ~ is your home directory

To Use and Edit Templates



Ortelius delivers with templates for backgrounds, blank standard paper, and several world, regional, and country outline maps. The Template window is presented on first launch of the application. Alternatively, choose **File > New From Template…** from the main menu. Choose a template as desired, or "Cancel" to skip templates. Uncheck "Show this window at launch" if you do not wish to be presented with the template window. This setting can be turned on and off in **Ortelius > Preferences** in the main menu.

Open a new file from template. Within any given template, drawing objects are placed on different layers to keep objects organized. Click onto a layer to make it active. Use the **Select [s]** tool and click an object within the active layer to select it.

Edit the map template as desired. For example, to apply a new style to an object, select it and double-click a new fill style from the Styles & Symbols palette. Alternatively, choose "Reset" or "Clone" to change a style's stroke or fill color from the Formal Bar. We'll learn more about working with styles in a later section. Add or delete objects using the drawing tools. To edit text, use the **Select [s]** tool and double-click the text to edit it.

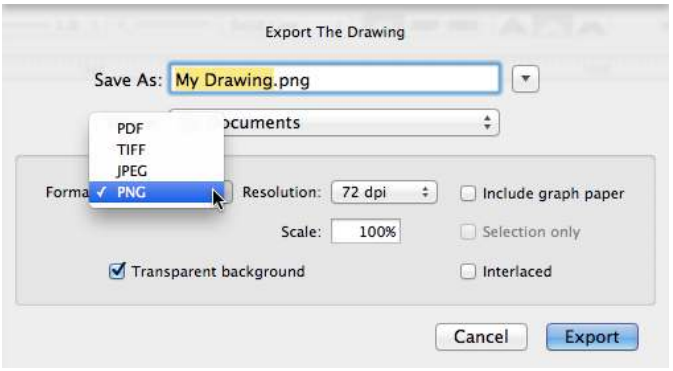
Note: Templates are of varying paper sizes, some of which are sized for poster (tiled) printing or can be shrunk to fit to a single page upon printing.

Exporting Your Drawings

Export your drawings and/or selected objects to various raster and vector formats.

To Export Raster and Vector File Formats

Your drawing files can be exported to PDF, TIFF, JPEG and PNG file formats. PDF is a vector file format created by Adobe Systems and is the native file format for Adobe Illustrator(TM) – except with a different file extension (AI). Drawings exported as PDF are saved as vector files and can be opened and edited by other vector editing software, such as Adobe Illustrator (TM).



Export your entire drawing, or limit the export to the objects you have selected in your drawing by choosing "Selection only."

File format-specific options are available, as well as the option to include the graph paper grid in your export.

To Export Selected Objects Only

When you have one or more objects selected in your drawing, the "Selection Only" option is available from the export menu. When checked, only the selected objects are exported using the designated file format and settings. Note, selected objects must be within the same layer.

To Preserve Background Transparency

TIFF and PNG file formats support preserving background alpha transparency – in other words the background areas within a drawing will be rendered transparent rather than white filled (unless the drawing has all background ares filled with graphic objects). PDF automatically preserves background transparencies.

To Export Any Size

The Export dialog features an arbitrary scaling factor when exporting to TIF, JPG, and PNG. For example, to double the size of the exported drawing, change the scaling factor to 200%. This effectively allows any desired resolution or image size to be exported from your vector drawings.

To Export for Print and Web: File Formats and Resolutions

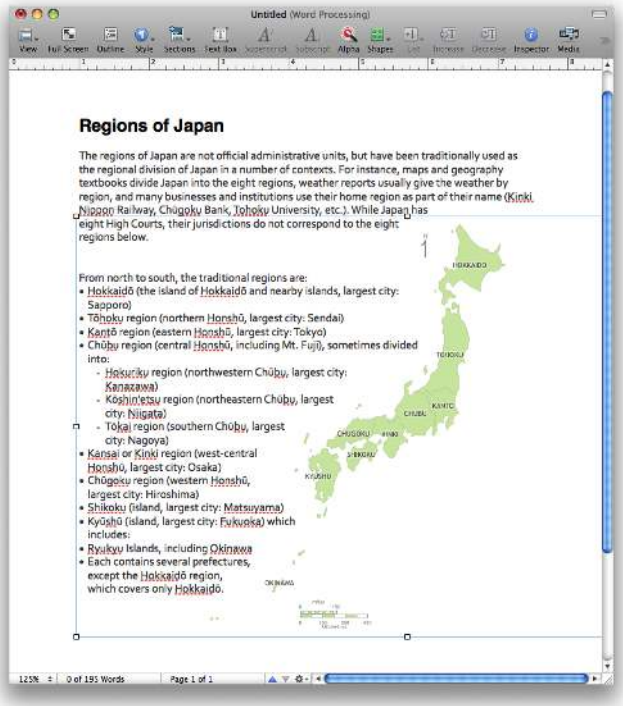
For best results, consider your purpose and what format you will need during drawing setup. On any given project, determining from the beginning what file format is required is a best practice - *particularly if you have publication standards that must be met!* In the most general terms, static web graphics require a 72 dpi resolution and will typically use JPEG or PNG formats. Printing for publication typically requires 300 dpi (dots per inch) resolution.

The file formats TIFF, JPEG, and PNG output raster-based graphics files. In general, JPEG and PNG files are useful for making a web images or graphics not intended for printing. For drawings that are primarily represented with vector graphics, PNG will typically give crisper results. 'PNG' stands for Portable Network Graphics format, a format for storing bitmapped (raster) images. Interlaced PNG files, though slightly larger file size than non-interlaced, can improve display times on slow (modem) Internet connections – perhaps less of an issue than in the old days. 'JPEG' stands for Joint Photographic Experts Group; it's great for photographs but not really intended for representing vector graphics, thus is recommended when an image (such as a photograph) is the background of your drawing. 'TIFF' stands for Tagged Image File Format and is widely supported by image-manipulation applications, by publishing, and page layout applications. TIFF alpha transparency is a supported export option.

Apple's Preview(TM) application is an excellent tool for viewing and adjusting exported graphics (and is a free application included with the OS). Several functions are available, such as clipping images, adjusting size, and matching image color profiles. A note about viewing exported graphics in Preview: The default preferences for images is to scale them to fit the document window. To view images at their actual size, set the Preview > Preferences > Images to actual size and to respect the image and screen DPI for scale.

To Export to PDF

'PDF' stands for Portable Document Format and is the only export format that produces editable vector-based graphics. Drawings exported to PDF format retain their vector properties and are therefore scalable without loss in resolution. If your drawing will be enlarged or reduced for publication, PDF is our recommended export format. PDF is also a good choice for creating a zoomable image, and for example to view with Adobe Reader(TM) or Apple Preview(TM).

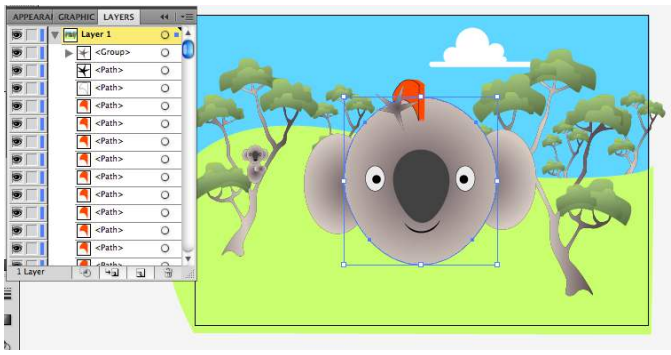


Exported PDF graphics naturally preserve their background transparency. Like other graphic formats, PDFs can be placed as graphics into other software programs, such as Microsoft Word(TM) and Apple Pages(TM), and will respect image wrapping settings. PDF graphics may also be placed into your drawings. For example, use the Image Browser to place a PDF graphic created in one drawing file, into another drawing file. Because it is vector-based, the graphic will scale without loss of resolution in your new document (though PDF files cannot be edited).

HINT: When copying a graphic to open or paste into other software, the image-PDF file format is the system default.

To Use Exported PDF Files with Other Vector Editing Programs

Exported vector PDF files can be edited in other vector drawing software that are enabled to edit PDF, such as Adobe Illustrator(TM). This example shows a drawing that was exported as a PDF file. When opened in Adobe Illustrator, each object is an editable vector graphic, represented here on individual layers.



Note, PDF is a file format created by Adobe Systems and is the native file format for Adobe Illustrator(TM) – except with a different file

extension (AI). As needed, you can change the file extension from .pdf to .ai without affecting the file contents.

To Share Your Drawing

Click the Share icon in the toolbar to share a JPEG version of your drawing with others via Email, Message, AirDrop, Twitter, Facebook and Flickr. In Mail, you can change the size to small, medium or large. *Note, file sharing must be enabled via* ***Apple > System Preferences > Sharing…***

To Print

A flexible print dialog offers single page and “poster-tiled” printing. Choose **File > Print** to open the print dialog. Click **Show Details** to reveal the print options, including “Fit to Single Page,” “Graph Paper,” and “Crop Marks.” Your drawing canvas can be larger than your actual printer paper size – if it is larger you can either “poster-tile” print your drawing over multiple sheets (default), or “Fit to Single Page” when printing. To make sure your printer is set with the proper paper size and page orientation, choose **File > Page Setup…** before printing.

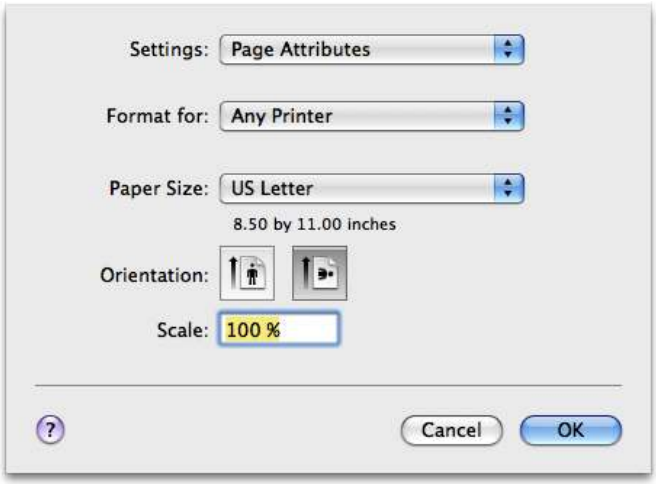
Posters! To Tile a Poster Over Multiple Printed Pages

Printed drawings come in all shapes and sizes, but you are limited by the size of paper in your printer. Drawings can be larger or smaller than the physical paper size that you have in your printer. If the drawing is larger, your drawing is automatically tiled over multiple printed sheets enabling you to print large posters, or 'shrink to fit' on a single page. If you're feeling crafty, tiled sheets can be pieced together manually after printing. Choose "Crop Marks" from the print options to show the seams between printed sheets.

For best results, consider your purpose and what size you want during drawing setup. For easy setup, use an appropriately sized blank page template by choosing **File > New From Template**. Blank templates are formatted for common paper sizes. If you need a different sized layout, change settings by choosing **File > Drawing Setup** in the main menu.

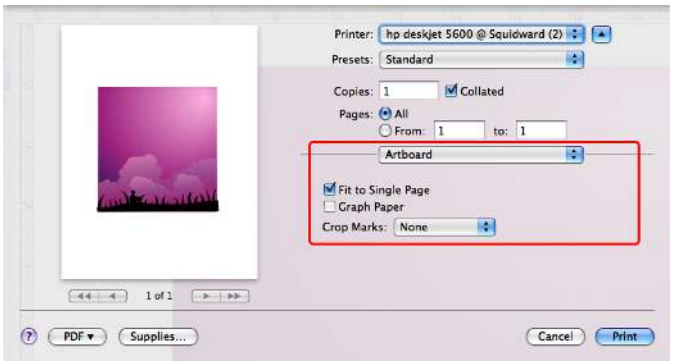
To Change Printer Page Size and Orientation Settings

Choose **File > Page Setup…** from the main menu to define your printer paper size and page orientation.



To Shrink to Fit to a Single Page for Printing

When tiling a large drawing isn't desired, you can change settings so a drawing will shrink to fit on a single page. Printing options include a simple checkbox for scaling the entire drawing to a single page by choosing **File > Print >** from the main menu, then checking **Fit to a single page** in the application print options.



When fitting to a single page, all objects including text will be shrunk to fit.

Alternatively, your drawing can be printed to PDF format. PDF format is the only export option that exports vector graphics that are fully scalable. Common PDF viewers provide various shrink to fit page printing options.

The Drawing Tools

Select, Pan, Zoom Navigation

To Select Objects and Move Around in Your Drawing

Select

Unlike other more complicated software, you can select objects, move vertices, change shapes, and more with a single direct **Select [s]** tool!

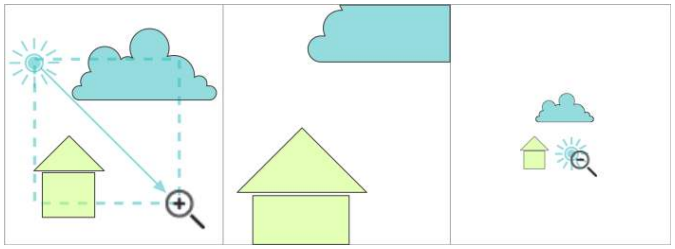
Trackpad pinch-to-zoom gesture are supported to zoom the main view. Trackpad two-finger double-tap gesture is a shortcut for "Zoom To Selection" if there is a selection, or "Zoom To Fit Window" if there isn't.

Pan

To move across the page, use the track pad or scroll mouse. Alternatively use the **Pan [h]** tool (hand) to press and drag the drawing into position.

To enable **quick-pan scrolling** while zoomed into a drawing while any tool is active, hold the Spacebar to temporarily activate the Pan tool and drag to reposition your drawing canvas. Releasing the Spacebar reverts automatically to the active tool.

To Use the Zoom Tool



- To **zoom-in**, click the magnifying glass **Zoom In** tool and click-and-drag onto your drawing over the area you want to enlarge; click once to enlarge the drawing a click at a time
- To **zoom-out**, click the **Zoom Out** tool and click once to reduce the drawing a click at a time

Zoom Shortcuts

- The shortcut for '**Fit-to window**' is to double-click the Pan tool
- The shortcut for '**Actual Size**' (100%) is to double-click the Zoom In / Out tools

Scroll-wheel mouse zooming

- Holding the Option-key while using a scroll-wheel mouse will zoom in and out of your drawing at the current mouse position
- The **Preferences > Options** let you invert the scroll-wheel zoom direction as desired

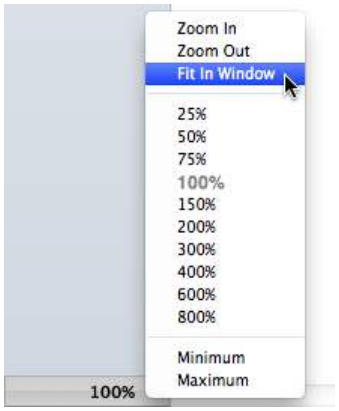
Pinch to zoom

- If your device has a magic trackpad, use standard gestures to pinch to zoom-in and -out

HINT: Shadows are automatically disabled *at very high zoom levels (over 800%) for enhanced performance. This setting can be changed in* ***Preferences > Performance*** *in the main menu.*

To Zoom to a Pre-Set Magnification

Choose a magnification level from the View pop-up menu at the bottom left of the drawing window. It's often useful to "fit to window" so that you can see your entire drawing at once.



To Zoom To the Currently Selected Object

To zoom to the objected you currently have selected, choose **View > Zoom To Selection** in the Main Menu.

Also under the main menu, choose **View > Zoom In**, or **View > Zoom Out**. To return a drawing to its actual size, choose **View > Actual Size**. To return a drawing to fit the display window, choose **View > Zoom To Fit**.

To Open the Tools Palette

To open the Tools Palette, choose the **Tools icon** on the toolbar, or choose **Window > Tools** from the main menu. This section of the User Guide focuses on the **Graphics drawing tools**.

Related Topic: Ortelius' Cartography Tools – Connectable Tracks. Linear Select, and Ruler

Graphics Drawing Tools

Selection Tools

Select, zoom, pan and navigate with the Selection tools.

Graphics Tools

Use the robust graphics tools to draw unlimited shapes, lines and smooth Bezier curves. Cut, or split, paths with the Cut Path tool using a cutting gesture. Insert text boxes or add curved text along paths. Fine-tune your drawing objects by adding or deleting points on paths. Use the Symbol Stamp tool to place symbols or clip art from the Styles & Symbols palette. Use the Style Dropper to pick up and place styles among objects.

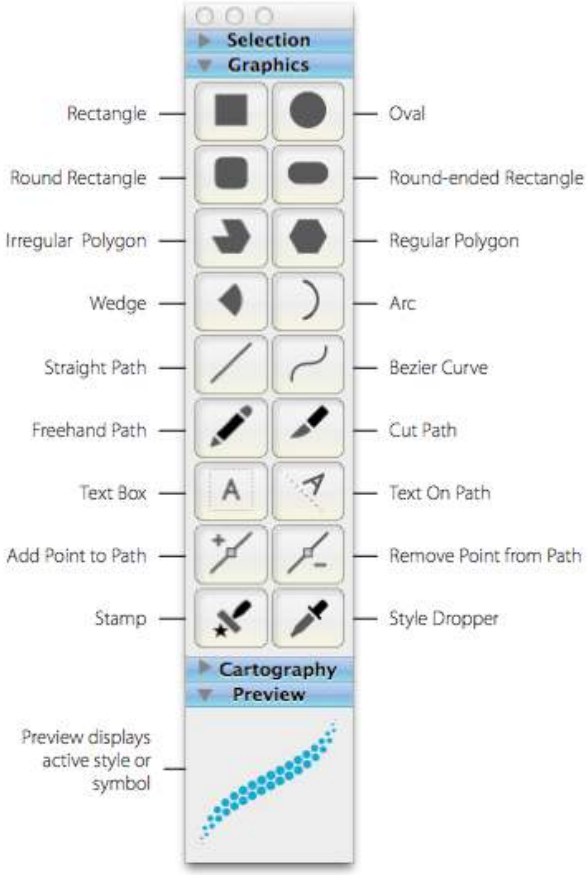
Cartography Tools

Ortelius' special tools especially for map design.

Preview

The Preview displays the style or symbol that is active for use with the graphics tools.

*Note that **drawing tools work with both fill and line styles**. For example, the Irregular Polygon can create filled areas when applying fill styles and linear objects when applying line styles.*



Tool Preferences

Ortelius provides a preference setting for how drawing tools respond with styles, offering flexibility for your preferred workflow.

Tools Remember Styles Individually (Default)
Unlike common drawing applications, in mapping it is often preferable to have each tool "remember" its last used style. By default, each tool remembers the most recently used style as it is applied. Choose a tool, choose a style, and begin drawing.

Tools Respond to Active Style
Alternatively, all tools can be set to respond to the active style. To set this preference for your workflow, choose **Ortelius > Preferences… Options** pane and uncheck "Tools remember styles individually." A style will remain active with all drawing tools until the style is changed.

*HINT: "**Quick pick-up**" another object's style while using a graphic drawing tool by holding the CMND-key to activate the Style Dropper without switching tools.*

Drawing Tool + Style = Draw

Draw using simple, direct drawing tools paired with existing Library styles or with styles that you create.

Remember the Basics: Drawing Tool + Style = Draw

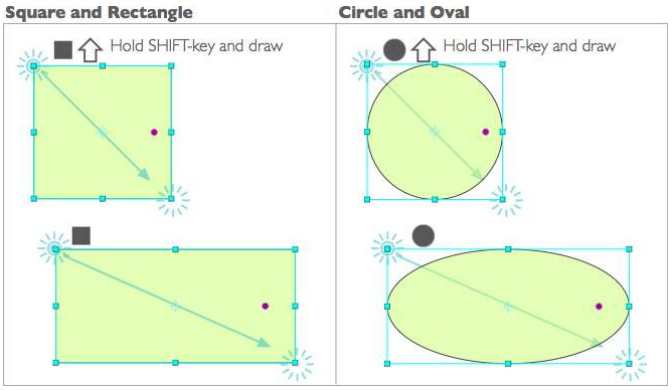
To draw with existing styles, choose a drawing tool, then choose a stroke or fill style from the Styles & Symbols palette and start drawing. To change styles, click onto a different style in the Styles & Symbols palette and continue drawing. See The Ortelius Styles & Symbols Palette for more information about drawing with extensive built-in styles.

To draw with styles you create, choose a drawing tool and start drawing. **To edit an existing style**, clikc the "Clone" button in the Format Bar, edit the style, and continue drawing. **To reset to the default style**, click the "Reset" button in the Format Bar, edit the style, and continue drawing. See The Format Bar for more information about creating simple styles.

Ortelius goes way beyond simple fill and stroke. See Using the Ortelius Style Inspector for detailed information about creating expert stacked styles.

To Draw Rectangles, Ovals, Circles and Squares

Choose the **Rectangle [r]** or **Oval [o]** tool, choose a line or fill style as desired. Press and drag the cursor to begin drawing the shape, releasing the cursor to end the shape.

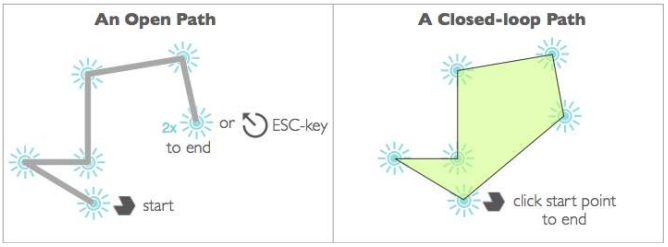


- To **make perfect circles and squares**, hold the SHIFT-key when drawing to maintain the aspect ratio
- Double-click the object to quick-**convert the shape to an editable path**

*HINT: Drawing handles can be set to large or small in **Preferences… > Options** in the main menu. The tooltip feedback window when dragging objects can be turned on or off in **Preferences… > Editing**.*

To Draw Irregular Polygons and Shapes

Choose the Irregular Polygon tool to draw any irregularly shaped object. Begin by choosing a line or fill style from the Styles & Symbols palette as desired, or use the Format Bar to create a new style.

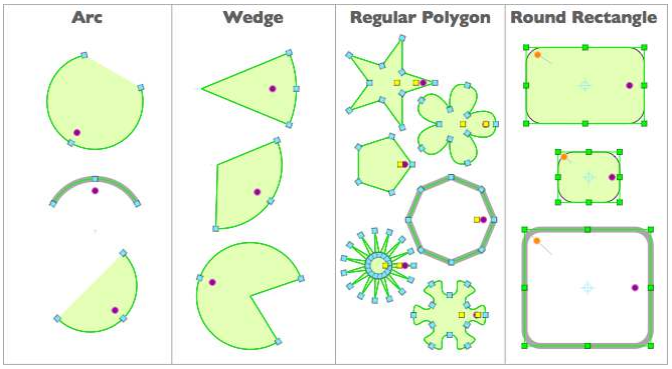


- To **draw an open path**, click onto the drawing canvas to add the first point; continue clicking to add additional points connected by straight line segments; double-click to end the path or press the ESC-key to end the path
- To **draw a closed-loop path**, click onto the drawing canvas to add the first point; continue clicking to add additional points connected by straight line segments; click onto the first drawn point to automatically end drawing the path; the coincident points will act as a single point

- To **open a closed-loop path**, with Select [s] key, hold the CMND-key and drag the last point away from the first point

HINT: If you prefer to have paths formally closed (with a straight line segment between first and last points), you can enable this behavior in the ***Preferences… > Editing*** *in the main menu; to open formally closed paths,* right–click and choose "Open" from the contextual menu or Edit > Paths (+Option–key) > Open from the main menu
HINT: If you prefer coincident first and last placed points to not act as a single point, you can disable this behavior in the **Preferences**

To Directly Adjust Arcs, Wedges, Stars, Regular Polygons, and Round Rectangles



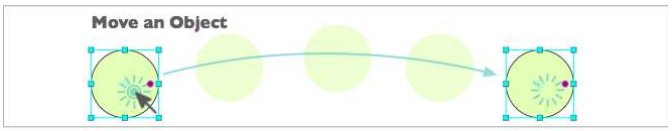
Arcs, wedges, stars, regular polygons and round rectangles are directly adjustable with special object handles. Drag handles to make adjustments on these special objects.

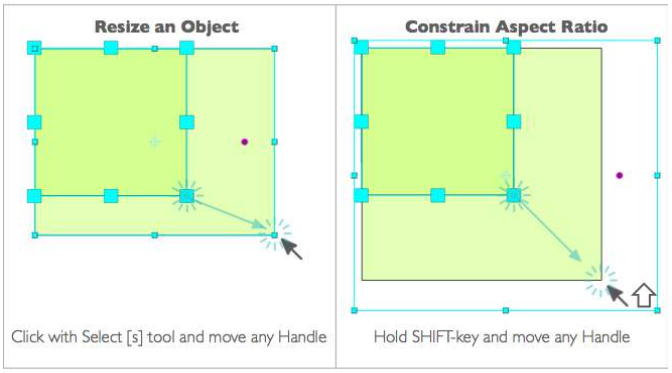
- Handles on **Arcs** directly control the object's rotation, radius, and arc angle.
- Handles on **Wedges** directly control the object's rotation, radius, and arc angle.
- Handles on **Regular Polygons/Stars** directly control the object's rotation, radius, radial ratio, tip, and valley settings. Use the Geometry pane to change the number of sides (from 3 to 16). Additionally, to instantly create perfect triangles, hexagons, octagons and more, uncheck the "Star" setting in the Geometry pane and adjust the number of sides.
- Handles on **Round Rectangles** directly control the object's rotation and corner radius.

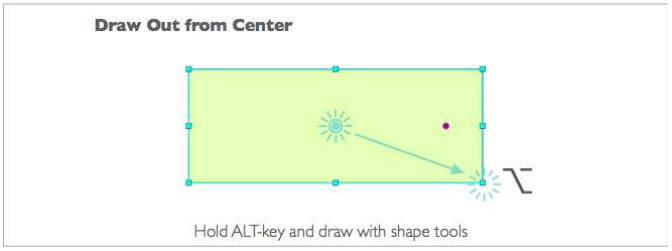
Double-click with the Select tool to convert any of these special objects to a regular shape or path for further editing.

To Reposition, Resize and Draw Out From Center

- To **reposition** objects, select and drag using the Select [s] tool, or use the Geometry panel to adjust the location x/y position
- To **resize** (scale) shapes, drag any of the object handles with the Select [s] tool, or use the Geometry panel to adjust size
- To **draw from center,** hold the Alt/Option-key when drawing



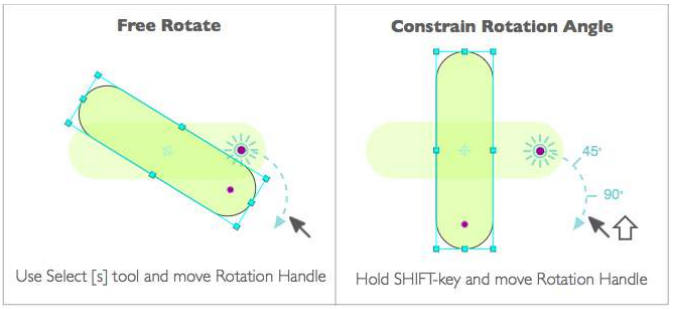


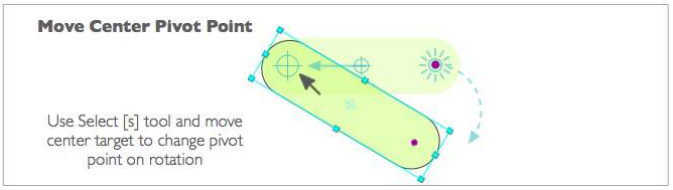


To Rotate Objects

No more digging through menus to find the rotate command. Keep your attention where it should be – on your drawing canvas.

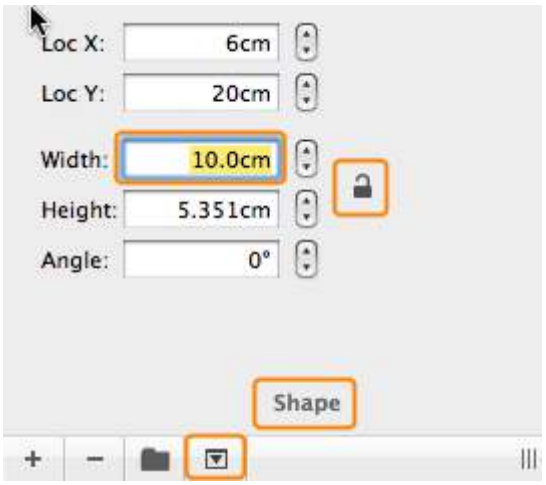
- To **rotate** object, drag its purple rotation handle with the Select [s] key
- To **constrain rotation angle to 15-degree increments**, hold the SHIFT-ket while rotating objects
- To **reposition the object pivot point** move the center blue crosshair target with the Select [s] tool and rotate
- To **rotate several objects around a common point**, group them then set the center target for the group and rotate





Use the Geometry Panel to Precisely Adjust an Object's Size and Position

In addition to being resized and repositioned directly in the drawing canvas, objects can be precisely adjusted using numeric input in the Geometry panel. The lower left panel under the Layers list is reserved for the Geometry panel.



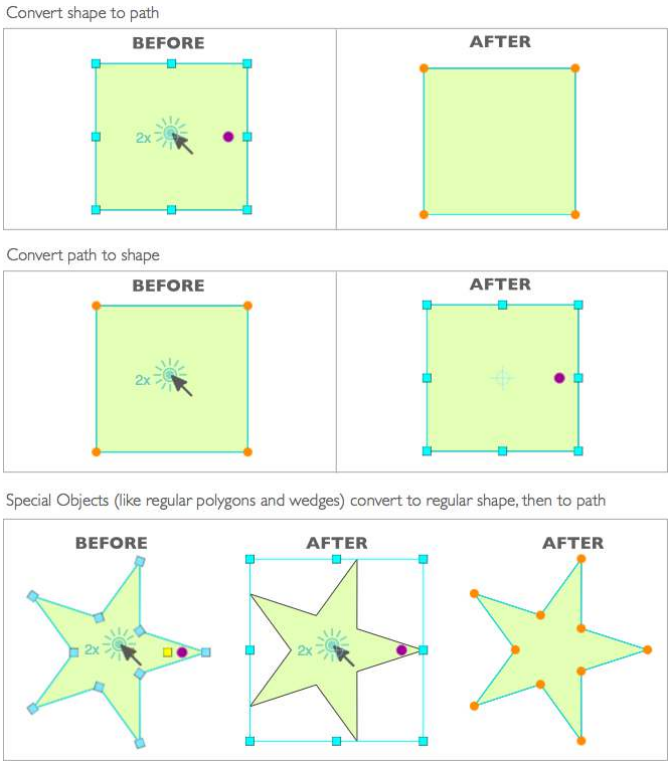
- To **edit numeric input**, highlight or double-click the existing number and type in the new number
- To **lock or unlock the object's aspect ratio** when changing object width and height, click the lock icon
- The numeric input menu is context sensitive to the current selected object and the object type is displayed

When you are finished using it, click back onto your drawing canvas to remove the focus from the Geometry panel.

Units of measurement reflect the settings in **File > Drawing Size & Units**. Additional special object settings, such as star tips and valleys will be editable when available. To hide the Geometry panel, click the Geometry panel icon in the bottom of the window.

Double-Click to Quickly Switch Between Shape and Edit Mode

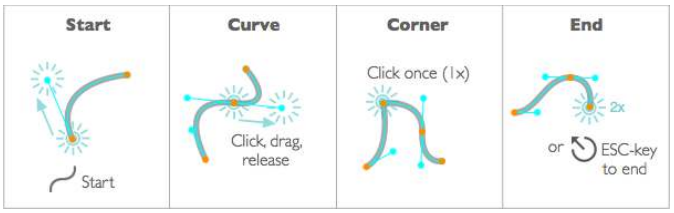
Drawing objects can be quickly converted between shape mode, in which the object has a bounding box, and edit mode, in which the shape is comprised of a path and its points.



- To **quickly convert between modes**, double-click a shape or path object
- Alternatively, choose **Graphic > Convert To** in the main menu or right-click contextual menu for expanded convert-to options
- Additionally, text objects can be converted to shape and shape groups from this menu

Arcs, wedges, regular polygons/stars, and round rectangles are converted to regular shape objects in this process; double-click again to convert to path.

To Draw Bezier Curves



To draw a Bezier path:

- To **place a point with a curve**, press and drag out it's curve handles then release
- To **place a point with it's curve handles retracted (for example, a corner)**, click once and release
- To **remove the last placed point** while you draw a path, use the **Delete-key** to step backwards each placed point
- To **end a path**, use the ESC-key or double-click to end the path
- To **draw a closed-loop path**, click onto the first drawn point to automatically end drawing the path; the coincident points will act as a single point
- To **open a closed-loop path**, with Select [s] tool hold the CMND-key and drag the last point away from the first point

Bezier curves offer some of the greatest control and flexibility when drawing. However, it may be the least familiar tool to some users. A hands-on exercise is available in **File > New From Template > Exercises & Demos** to help you quickly master Bezier curves.

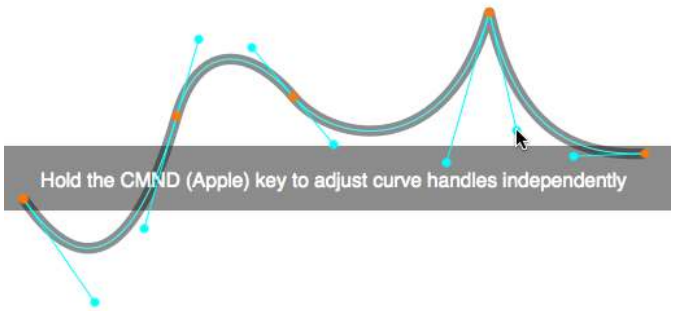
Bezier curves and freehand lines contain curve handles at points along the path. When Bezier curves are placed, their curve handles are symmetrical in length and direction. Using the Bezier Curve tool, press to place the starting point and drag to begin spreading the curve handles. release the cursor to place the curve handles. Repeat to continue drawing the path. Click to place a point (without dragging) to place a point with curve handles retracted, allowing corners and curves within the same path. If you can't see the curve handles where a point was placed, use the Select [s] tool and CMND key to drag the handles away from the center point.

Alternatively, open **Edit > Paths** from the main menu to access expanded path commands.

HINT: If you prefer to have paths formally closed (with a straight line segment between first and last points), you can enable this behavior in the **Preferences**... > **Editing** in the main menu; to open formally closed paths, right-click and choose "Open" from the contextual menu or Edit > Paths (+Option-key) > Open from the main menu
HINT: If you prefer coincident first and last placed points to not act as a single point, you can disable this behavior in the **Preferences**

Editing Paths After They are Drawn

Curves are easily adjusted after placement by dragging the curve handles, shown in blue. When adjusting curve handles, the length of the left and right ends of the handle are adjusted independently. Modifier keys provide control over curve handle adjustments.



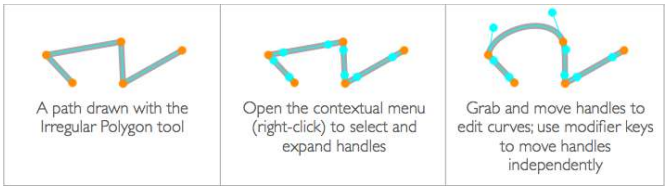
SHORTCUTS AND MODIFIER KEYS:

To modify a path after it has been drawn, use the **Select [s]** tool and select the path, then:

- To **move a point along a path**, select and move it with the cursor
- To **drag a handle away from its point**, or **to adjust curve handles independently of each other**, including length and direction, hold the **CMND-key** while adjusting the curve handles
- To **keep the length of the curve handles symmetrical** to each other when making adjustments, hold the **ALT/OPTION-key** while adjusting the curve handles
- To **temporarily toggle snapping to grid or guides** while adjusting curve handles, hold the **CTRL-key** after clicking on the handle

- To **constrain curve handles' angle** to 15-degree increments, hold the **SHIFT-key** while adjusting a curve handle
- To "**Nudge**" one or more points or curve handles, select the points and move with the keyboard arrow-keys (nudge will move in increments based on your drawing units and graph paper settings)
- To **join two paths**, make sure their end points are close and select both paths, then use the **CMND-J** keyboard shortcut (or choose **Edit > Paths > Join** from the main menu)
- To **open a closed path**, hold the **CMND-key** and drag the end point away from the start point; alternatively, right-click the path and choose "Open Path" from the contextual menu; or use the **Cut Path** tool
- Don't forget, you can also use the **Add Point To Path [+], Remove Point From Paths [-]**, and **Cut Path [u]** tools :)

Expanding and Collapsing Curve Handles

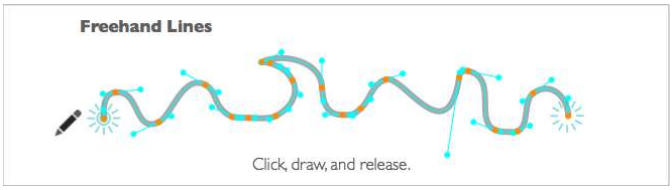


- To **expand hidden curve handles**, right-click a point and choose "Expand Handles" from the contextual menu (or hold the **CMND-key** and drag the handle away from its point)
- To **collapse one or more curve handles**, right-click a curve handle or point and choose "Collapse Handles" from the contextual menu
- To **collapse or expand all curve handles**, right-click on the path and choose "Select all Handles" and then choose the collapse or expand all option from the contextual menu
- To **open a closed-loop path**, hold the CMND-key and drag the last point away from the first point

HINT: *To **open a formally closed path** (a straight line segment connects the first and last point), hold the **CMND-(Apple) key** and drag the end point away from the start point; alternatively, right-click the path and*

choose "Open Path" from the contextual menu; or use the ***Cut Path*** *tool.* If you prefer not to have paths automatically close, you can disable this behavior in the **Preferences**... > **Editing** in the main menu.

To Draw a Freehand Line

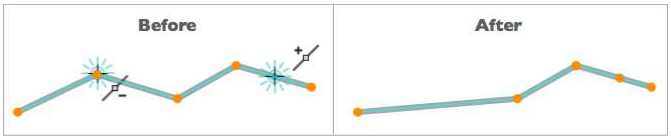


Drawing with the Freehand Line tool is much like drawing with a pen. Choose the tool, press and move the cursor begin drawing, release the cursor to end the path. Points and curve handles are added automatically as the line is drawn, enabling later adjustment as desired. Freehand line curve handles may be asymmetrical in length as the line is drawn.

To make the smoothest paths with the Freehand Path, make sure the ***Graphic > Snap To...*** *settings are all disabled (unchecked).* If a path drawn with the Freehand Line tool appears choppy or 'stair stepped', it is likely that snapping to Graph Paper, Guides, or Other Objects is on. Uncheck **Graphic > Snap To** settings in the main menu to disable snapping and continue drawing. Relative smoothness settings for the Freehand Line tool are available in the **Preferences... > Editing**.

Ending the path at your first drawn point automatically ends the path and forms a closed-loop path. To open a closed-loop path, hold the **CMND-key** and drag the end point away from the start point.

To Add and Remove Points

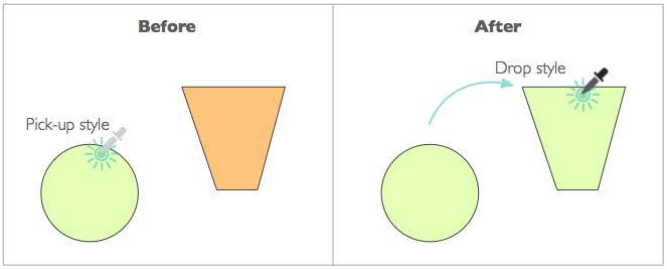


- To **add points on a path**, (with a path selected so existing points are shown) choose the **Add Point To Path [+]** tool and click onto the path where the point is to be added
- To **remove points on a path**, (with a path selected so existing points are shown) choose the **Remove Point From Path [-]** tool and click

on the point(s) that is to be removed

As needed, double-click a shape to convert it to edit mode to show points.

To Copy a Style From One Object to Another with the Style Dropper

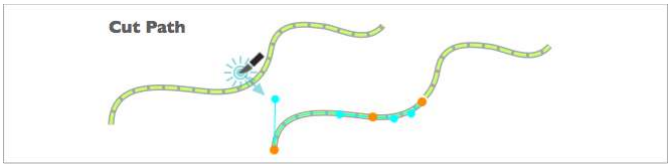


Use the Style Dropper to quickly pick up a style from an existing object and apply it to other objects, as well as pick up a style from an existing object and continue drawing. Click onto a first object to pick up the style; clicking onto subsequent objects applies the style. The style dropper cursor shows whether dropper is “full" (will drop) or “empty" (will pick up). To pick up a different style while the Style Dropper tool is active, press the OPTION/Alt key while clicking an object with the Style Dropper. The dropper can pick up styles from inside a group of objects.

To copy a style from one object in your drawing to multiple other objects, Select [s] the object and click the Copy Style icon in the toolbar, then Select [s] one or more other objects and click the Paste Style icon in the toolbar.

*HINT: "**Quick pick-up**" another object's style while using a graphic drawing tool by holding the CMND-key to activate the Style Dropper without switching tools.*

To Cut and Join Paths



- To **cut a path** into two sections, use the Cut Path [u] tool and click onto the path at the location of the cut, or use a cutting motion with the tool
- To **join two paths into one path**, move the endpoints together then choose the **Edit > Paths > Join** (CMND-J keyboard shortcut) from the main menu

To Snap To Grid, Guides, and Other Objects

Three "snap" settings control object location and enable perfect alignment. Go to **Graphic > Snap To > Graph Paper, Guides, or Other Objects** to enable these snap settings. Snap to graph paper creates an invisible set of evenly spaced invisible hot spots which make the objects subtly move in even increments. Snap to guides creates hot spots along layout guide lines, which the object handles will snap to when active.

*HINT: To enable intelligent use of snap settings when graph paper is turned-on or -off, enable "Snap to graph paper when graph paper is visible" in the **Preferences… > Editing** in the main menu.*
HINT: To avoid the Freehand Path tool producing choppy or "stair stepped" lines, make sure Snap To settings are turned off.

To Constrain an Object's Location, Angle, and Aspect Ratio

When drawing any object, it may be desirable to constrain it in various ways to keep lines perpendicular or at set angles to the page. Holding the **SHIFT-key** while drawing constrains the line angle to 15-degree increments while drawing, constrains rectangles to squares, and ovals to circles. When resizing an object or object group, holding the SHIFT-key constrains its aspect ratio.

Holding the **OPTION key** while resizing a shape or group of shapes holds the center point in place.

What are Sticky Tools?

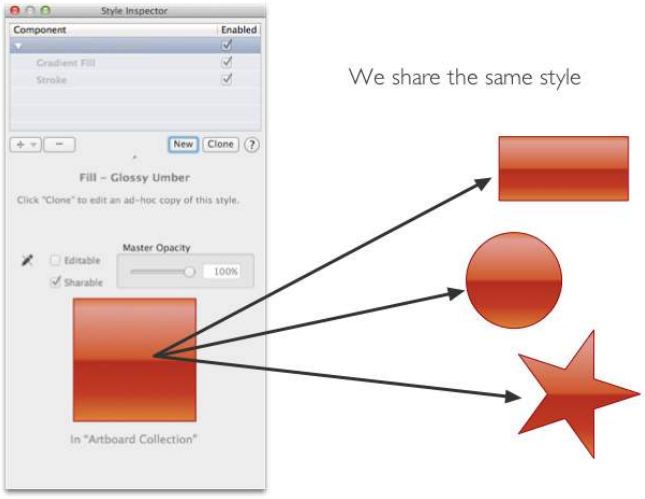
By default, tools are "sticky" – the tool will remain active until you choose a different tool (active tool will appear highlighted orange).

Depending on the task at hand, having the tools revert immediately back to the Select [s] tool after each use may be preferred. Double-click on any tool to release them from the sticky state (active tool will appear blue or graphite depending on your system 'appearance' setting). In the non-sticky state, click a tool to "turn it on" and use it once. Afterward, you'll revert back to the direct Select [s] tool.

To make non-sticky tools sticky again, double-click on any tool.

Cascading "Shared" Styles

Shared styles that cascade across objects is a very powerful concept in map design. For example, you want all your major roads to share a style, all minor roads to share a style, and all rivers to share a style. Later, you need to change the color of your major roads. No problem. Adjust the style and the change will automatically cascade across all related features.



Ortelius is smart about shared styles. When you draw several objects using the same style, they share the properties of that style. If you edit a shared style, the changes are applied across all instances of the style – in other words you will see the changes on all objects where the style has been used. In this way, changes to styles across multiple objects can be made very quickly and efficiently.

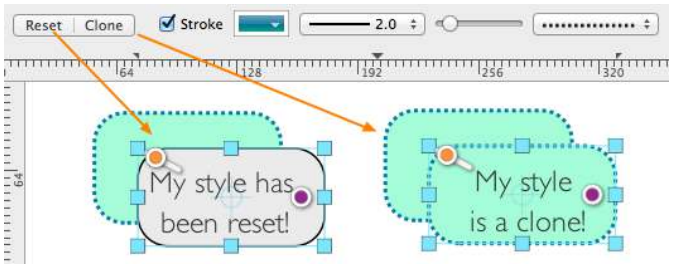
You can break the style link between successive objects by clicking “Reset” to create a new style reset to the default, or "Clone" to create a new style based on the one currently in use.

The Format Bar provides quick access to simple fill and stroke style editing. Advanced styles, such as arrowed paths and gradient fills, are created using Ortelius’s powerful Style Inspector and should be edited with the Style Inspector. Use the "**Reset**" and "**Clone**" buttons to create a new style and continue drawing without affecting the objects you've already drawn. Remember, shared styles cascade across drawing objects – if you edit a style without clicking "Reset" or "Clone" the changes will apply across all objects where the style has been used.

HINT: Styles in the built-in Mapdiva collection cannot be

over-written – to edit styles in the built-in collection, use "Clone" to make a copy of the original. Editing a shared library style can have unforeseen consequences, including if the style is in use in other documents.

What Do "Reset" and "Clone" Mean?



Use the "**Reset**" and "**Clone**" buttons in the Format Bar or Style Inspector to create a new style and continue drawing without affecting the objects you've already drawn. Remember, shared styles cascade across drawing objects – if you edit a style without clicking "Reset" or "Clone" the changes will apply across all objects where the style has been used.

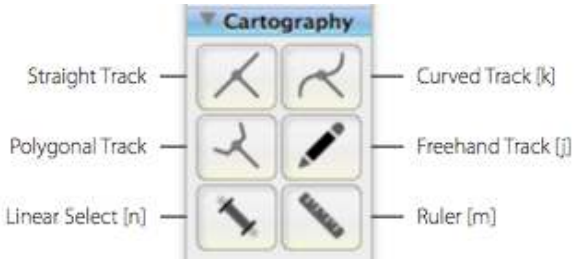
To create a new style from scratch, click the "Reset" button. Ortelius' simple default style with a black stroke and gray fill is created. To customize the style, check or uncheck the "Stroke" and "Fill" style components and adjust the colors and settings as desired. Continue drawing.

To create a style from an existing style, use an existing style and click the "**Clone**" button. Clone will make a copy of the style you are currently using so you can make changes to it and continue drawing. Use clone, for example, when you want to change the stroke width but keep all other settings the same. *Complex styles should be edited in the Style Inspector.*

NOTE: *Advanced "expert" styles should be edited within the Style Inspector. The Format Bar does not provide access to advanced style components, such as gradients, arrows, or "stacked" styles available in the Style Inspector. To create or edit complex styles, open the* ***Style Inspector****.*

The Cartography Tools

Cartography Tools

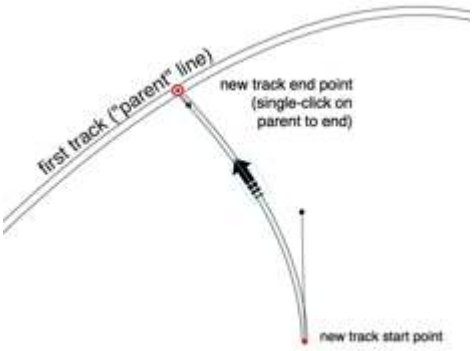


Ortelius' exclusive Cartography Tools are vector drawing tools made specifically for map design. Connectable tracks have special cartographic properties that allow intersecting lines to form smooth junctions, accept adornments, termination styles, feature labels, special overlay styles, and more. These connector tracks look similar to regular drawing objects, but they are indeed special. Straight Track, Curved Track, Polygonal Track, and Freehand Track tools are available.

Tracks are used in combination with the Linear Select tool to insert special objects, such as bridges and tunnels (these are found under **Edit > Insert Special** in the main menu). You can even seamlessly insert different line styles along the same path. Use tracks when you want to snap point symbols or add feature labels directly to a line.

The Ruler tool takes real-world measurements and enables users to unteractively set map scale within thier drawing.

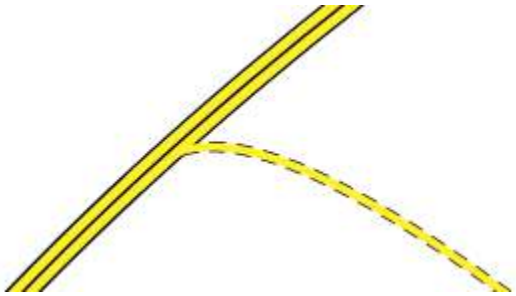
Drawing Tracks



Creating smooth and automatic junctions between styles is a hallmark of Ortelius. Choose a connectable track tool, choose a style from the Styles & Symbols pallette, and draw. This example shows how connectable tracks form a 'parent - child' relationship. Draw the first track, this is the 'parent' track. Next, draw a second track (the 'child') beginning your line away from the parent and working towards it so the end point is where you want the junction to be formed. When you click onto the parent track, the track will end automatically and the junction will be formed. Alternatively, double-click or press the Esc-key to end a track.

Network of Tracks

Once you have junctions of multiple tracks, all feeder junctions will move when you adjust the first line's curve handles (the "parent"). When junctions are made among several connectable tracks, an interconnected network of tracks is created. When one track is moved, its junction lines move with it. In particular, child lines will move together with their respective parent line.

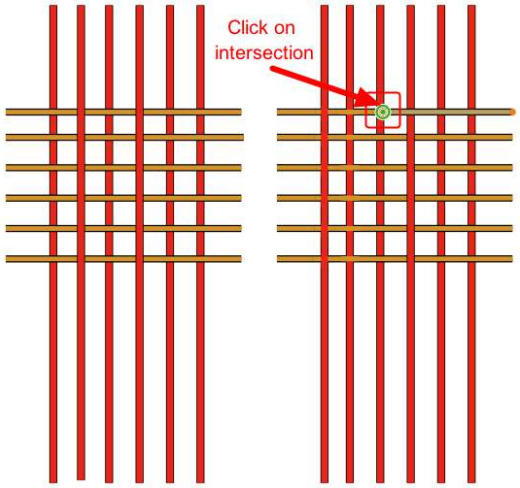


HINT: Occasionally, it may be undesirable to have junction lines in a network move with a selected track. When necessary, select the track and choose from the Object Inspector window ***Features > Disconnect All Junctions*** *to disconnect all junctions associated with the track.*

Split and Connect Tracks at Intersections

Use the **Cut Path [u]** tool to form automatic junctions at desired intersections. Sometimes roads cross over or under each other and you'll want to maintain that visual relationship. Other times, roads will intersect and you'll want your map to show nice clean, connected junctions. The example on the left shows a grid of roads, with crossing tracks overlapping each other.

On the right, the example shows how the Cut Path tool is used to automatically split the track and form the junction with the underlying track.



Track Termination Styles

Connectable tracks can have different termination styles at their start and end points. By default, the end termination style is open-ended (none).

The start and end points can also have either round-ended, closed bar, or a "turning circle" termination. Change the end termination style by selecting the track or tracks and choosing **Edit > Paths & Tracks > Terminate Start** or **Terminate End** from the main menu.

Convert Path to Track

Any regular path can be converted into a connector track by selecting it and choosing **Graphic > Convert To > Connectable Track** from the main menu. It will now be able to accept other track connectors (you will need to adjust the end point positions to "snap").

Cut Path

Tracks can be split into multiple segments using the **Cut Path [u]** tool, or by highlighting the track with the **Linear Select [n]** tool and choosing **Edit > Paths & Tracks > Split** from the main menu.

Join

Paths and tracks can be joined together when their end points are very close together or touching. Select two paths or two tracks and choose **Edit > Paths & Tracks > Join** from the main menu (or Command-J on the keyboard).

The stylizing behavior when joining paths together is slightly different than when joining tracks together.

When joining two paths, the entire new path adopts the style of the first drawn path. When joining two tracks of different styles, a transition is made between the two styles, similar to how style transitions are applied using Linear Select.

Related Topic: Using Linear Select

Buffer Distance

Buffers are new polygons that represent an area of specified distance around another object. Buffers can help map readers visualize what other features are near or far from another feature. For example, you can create a 1-mile buffer around a road.

Buffers can be created around paths or tracks. Select the linear feature to be buffered. Choose **Edit > Paths & Tracks > Buffer** from the main menu. A dialog appears. Enter the distance for the buffer (note that buffer distance is related to the scale of the drawing) and click OK. A new buffer polygon is created and can be stylized appropriately.

Reverse Paths & Tracks

When paths and tracks are drawn, they inherently have a direction, progressing from the start point (the beginning of the line) to the end point. The proper display of some styles (such as a single-ended arrow) and text labels is dependent on the direction of the path. Choose **Edit > Paths & Tracks > Reverse Path** to reverse the start and end points. Alternatively, for text labels you can just leave the path as-is and right-click the label to choose **Flip Label.** Adornments can be rotated by right-clicking and setting the relative orientation by choosing **Rotate > [angle]**.

Related Topic: Using Map Labels

Smooth

Smooth is used on paths consisting of linked straight-line segments, such as vector paths imported from shapefiles. Choose **Edit > Paths & Tracks > Smooth** to replace these segments with Bezier curves which are calculated to smoothly interpolate between the points. Smoothing a path that already consists of curve segments has no effect.

Use Linear Select to Add Bridges, Tunnels, Cuttings, Embankments and Magic Round-Abouts

Using Linear Select

Ortelius' exclusive Linear Select™ tool works like a highlighter in combination with connectable tracks to select discrete portions of tracks to insert special in-line and overlay styles, text labels, and more.

To use **Linear Select [n]**, press and drag over a connector track, highlighting as you go.

In this section, we describe the use of Linear Select to insert in-line styles, as well as bridges, tunnels, cuttings, embankments, and magic round-abouts – found in the main menu under **Edit > Insert Special**.

Related Topic: See **Linear Feature Labels** for more information about using Linear Select to add labels to tracks.

In-line Styles

In-line styles are *new styles applied in-line* with a single track, replacing the section highlighted with Linear Select with a new style. A transition is applied between one linear style and the other (see below).

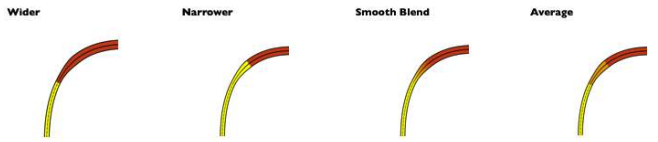
To apply an in-line style, use **Linear Select [n]** to highlight a portion of a track that will receive the new style treatment , then double-click the desired style in the Styles & Symbols palette to apply it to the selected section. Ortelius gives you "just right" positioning with in-line styles. A green knob and bar is used to indicate the boundary positions of the in-line style that can be simply dragged and repositioned. The **Object Inspector's Features** pane allows the display of these knobs to be turned off to reduce visual clutter and/or reduce the problem of having ambiguous targets for mouse clicks.

To remove an in-line style, right-click the track and choose **Remove Style 'Name'** from the contextual menu. Alternatively, use the **Linear Select** tool to

highlight the section of track with the in-line style and choose **Edit > Paths & Tracks > Unify Styles** from the main menu.

In-line Style Transitions: Width Adaptors

Ortelius creates beautifully smooth transitions between styles of varying widths using Width Adaptors. The settings for these Width Adaptors are in the **Object Inspector's Features** pane. Smooth Blend is the default for style transitions.



Tunnels

Tunnels are in-line styles. Use **Linear Select** to highlight the section of track to accept the tunnel then choose **Edit > Insert Special > Tunnel** from the main menu. The tunnel will be automatically styled to match the road style.

To delete a tunnel, right-click the track and choose **Remove Tunnel**. Alternatively, use the **Linear Select** tool to highlight the section of track with the in-line style and choose **Edit > Paths & Tracks > Unify Styles** from the main menu.

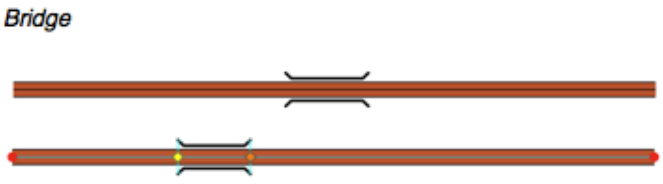
Overlay Styles: Inserting Special Features Along Tracks

Overlay styles are *style adornments applied in addition to* the existing style of a track. Bridges, cuttings, and embankments are available overlay styles. These special features are smart and will adjust certain style properties, such as line weight, according to the line style of origin.

To apply an overlay style, use **Linear Select [n]** to highlight a portion of a track that will receive the new style treatment , then choose **Edit > Insert Special >** from the main menu and choose the desired feature to be added.

Bridges

Use **Linear Select** to highlight the section of track to accept the bridge then choose **Edit > Insert Special > Bridge** from the main menu.

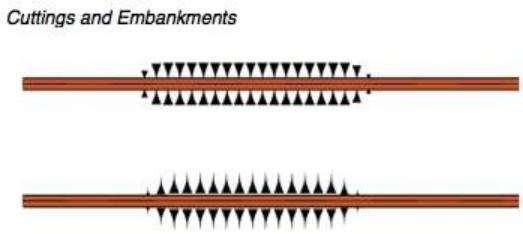


Ortelius gives you "just right" positioning with overlay features. Note that the bridge can be selected. The left handle (yellow circle) on the

bridge slides it along the line for fine-tuned positioning. The right handle (orange dot) on the bridge controls resizing the length of the bridge.

To delete a bridge, use the **Linear Select** tool to highlight the section of track with the overlay style and choose **Edit > Paths & Tracks > Delete Overlaid Styles** from the main menu.

Cuttings and Embankments



Use **Linear Select** to highlight the section of track to accept the bridge then choose **Edit > Insert Special > Cutting** or **Embankment** from the main menu.

During highway and rail construction, the land surface (for example, a hill) may be "cut through" to allow the rail surface to remain level. These features are referred to as "cuttings." Alternatively, when land subsides it may be raised to create a level rail surface, forming an "embankment." Cuttings and embankments are traditionally shown on local scale maps.

To delete a cutting or embankment, use the **Linear Select** tool to highlight the section of track with the overlay style and choose **Edit > Paths & Tracks > Delete Overlaid Styles** from the main menu.

Creating Custom Special Styles

If the predefined special styles available in the **Edit > Insert Special** menu are not to your liking, you can create new bridge, tunnel, cutting, or embankment styles. Use the Style Inspector to create a new style and add one of these 'Adornment' style components to your new style. Save your new style to your user library.

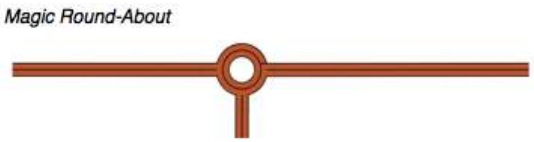
To apply a custom in-line style (e.g., tunnel) onto a track, use **Linear Select** to highlight the section of track to accept the new overlay style, then double-click the style in the Styles & Symbols palette.

To apply a custom overlay style (e.g., bridge, cutting, or

embankment) onto a track, use **Linear Select** to highlight the section of track to accept the new overlay style, then hold down the **OPTION-key** and double-click the style in the Styles & Symbols palette.

Magic Round-About

Placed at the junction of two or more connector tracks, the magic round-about places a circle in the parent track's style, sized according to the width of the line style, with junctions made fully automatically. After placement, the round-about is an editable section of track.



Using the Ruler to Measure and Set Map Scale

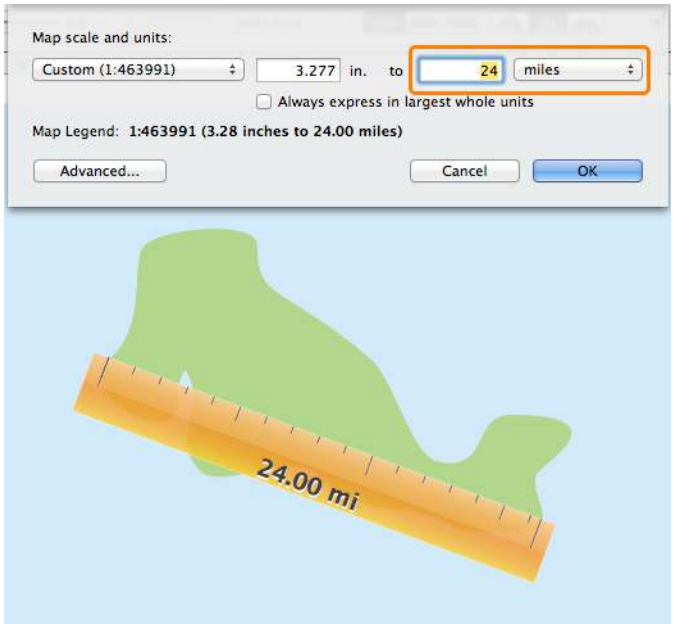
Measure Distances

Use the **Ruler [m]** tool to measure distances between two points.

To use the **Ruler [m]** tool, press and drag to place its beginning and end points. Grab either end of the Ruler to adjust its beginning and end points, or the middle of the Ruler to reposition. The ruler will display distance based on the currently defined scale and the drawing's Display Units. Choose **View > Display Units** to change units between Points, Drawing Units, or Map Units. Double-click the Ruler to open the **File > Scale…** dialog.

Calibrate a Custom Map Scale

When tracing an existing map or aerial photograph, it is often easiest to calibrate a custom map scale based on the image that is being traced.

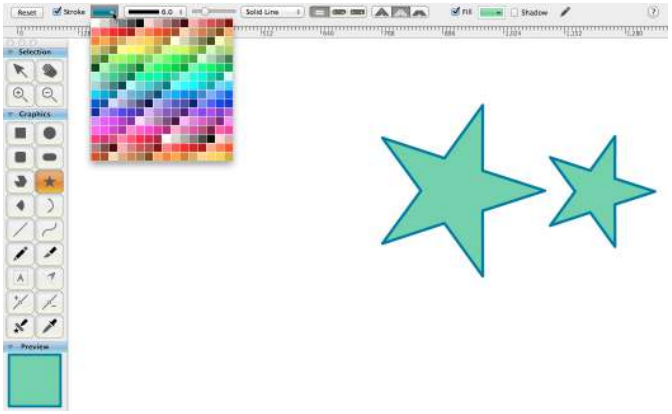


You will need a known ground-distance from the image in order to calibrate the scale (on a scanned map or photograph, this can be an existing scale bar or a recognizable feature for which you know the length).

Make the **Ruler [m]** tool sticky and drag to place it between two known points. Initially the ruler shows an arbitrary distance. Next, calibrate the drawing to the proper scale. **Double-click the Ruler to open the scale calibration window,** or choose **File > Scale…** from the main menu. Enter the ground distance of the length measured, for example 24 miles, and the scale will be adjusted accordingly. Ruler, scale bar, and drawing are now calibrated to the proper scale.

Tools and Palettes

Using the Format Bar



The Format Bar sits above the horizontal ruler and provides quick access to create and edit simple fill and stroke styles.

The Format Bar is visible by default with the Rulers. If your Format Bar is turned off, choose **View > Show Rulers & Format Bar** from the main menu. The format bar provides access to simple stroke style components: color, stroke width, dashes, end-caps and corner joints; and fill style components: color and shadow.

NOTE: *The Format Bar is designed to provide quick access to simple fill and stroke styles. Use the* ***Style Inspector*** *edit complex styles, such as those containing arrows, hatches, patterns, or gradients.*

Remember the Basics: Drawing Tool + Style = Draw

- **To draw with a style you create**, choose a drawing tool from the Tools palette and draw a shape or path.
- **To format a simple style**, click the checkmarks in the Format Bar to turn stroke and fill on or off as desired. Click and hold the color-wells to display the color array, or click once on the color-well to open the Colors panel. Set line width with the drop-down line width list or the slider. Continue drawing with the style you have defined.
- **To change styles**, edit the style properties in the Format Bar and continue drawing.
- **To reset to the default style**, click the "Reset" button in the Format Bar, edit the style, and continue drawing.

To Show and Hide the Sidebar

Click the Sidebar icon in the Toolbar to show and hide the layers list. The Sidebar can also be dragged open and closed using your cursor.

To Work with Layers

Think of Ortelius' layers like a stack of tracing paper (or transparent mylar). Just like drawing on paper, each layer can hold multiple graphics in your drawing. You can use each layer as its own "page" to organize your graphics. Within each layer, drawing objects have their own stack order and objects can be moved in front of or behind each other. Just like with a stack of tracing paper, your graphics on upper layers are shown “drawn on top” of objects in lower layers. Create your drawing with one or more layers. Use layers to stack objects in front of or behind each other, to organize for printing or exporting, and to hide or isolate objects for easy editing.

Click onto a layer name in the Layers list to activate the layer (designated by the white arrow). To keep your drawing organized, only objects in the currently active layer can be selected and manipulated. To select an object on a different layer, first click onto the layer to which it belongs to make the layer active. Note, multiple objects cannot be selected among different layers.

The active layer is highlighted and designated by a white arrow to the left of the layer name. A dot at the left of a layer name indicates that one or more objects within the layer that remain selected, even though the layer is no longer active.

Drag to re-order layers. Click the "+" and "–" icons to add or delete layers. Layers can be locked and unlocked by clicking the "Lock" icon, as well as made hidden or visible by toggling the “show” (eye) icon. Color-wells indicate the color of the selection handles when an object on that layer is selected. To set the color, click the well and choose a new

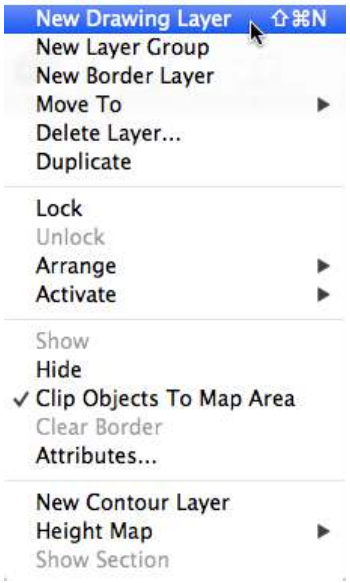
color in the pop-up menu.

To rename a layer, double click the layer name in the Layer view and enter a new layer name, or right-click in the layer view and select “Rename” to change the name of the selected layer.

A Guide layer, Index Grid layer, and Graph Paper layer are available in every drawing file. Click the "show" (eye) icon to make them visible. See "Setting Up a New Ortelius Drawing" for more information on Index Grid and Graph Paper settings.

To Use the Layer Menu

Layer behavior is also controlled in the Main Menu. Advanced layer behaviors, such as moving selected objects among new or existing layers, are available. To quickly move the selected object(s) from one layer to another, choose **Layer > Move To >** from the main menu. Moving to a new layer will both create a new layer and move objects. Only layers that are visible and unlocked will be active in the move-to list.



By default, you can select objects only within the currently active layer. To enable the ability to automatically switch active layers when selecting objects, choose **Ortelius > Preferences > Options** pane in the main menu and check **Auto-Activate Clicked Layer**. Note, multiple objects cannot be selected among different layers.

New Layer Group

Layer groups can keep multiple layers managed together. Add a layer group by right-clicking the Layers pane and choosing **New Layer Group**, or choosing **Layer > New Layer Group** from the main menu. For example, you may want to keep rivers, lakes, and wetland layers in a layer group called “water features.” Add layers to a layer group by dragging the layers into it.

A note on Layer Groups: only one layer can be active at a time. Layer Groups can be selected (and for instance, moved or deleted), but only individual layers within the group can be active, not the group itself.

CAUTION! When a Layer Group is deleted, all the layers within the group are deleted with it. Move layers out of the group first if you want to keep them.

New Border Layer

Choose **Layer > New Border Layer** from the main menu to add a new border layer to your drawing. Border layers contain backgrounds and map borders. These borders coincide with the map margins set during drawing setup. With the new Border layer active, open the Styles & Symbols palette and **drag a style** onto the map area. The style is applied as the border and/or background. Drag a new style from the palette to replace it. To clear the boarder, choose **Layer > Clear Border** from the main menu, or delete the border layer.

Related Topic: Insert a Frame Border

Clip Objects To Map Area

'Clip Objects To Map Area' visually constrains drawing objects to within the map area margins. These map margins are set during drawing setup and coincide with the Index Grid and Borders. On occasion, it may be desirable to have a map feature fall outside of the map area margins. For example, Title text and legends may be placed outside the map area. Or, for aesthetic reasons you may desire a portion of your map graphic fall outside the formal map area. This setting is controlled for each layer through the Layer menu. Uncheck this setting to allow objects to be visible outside of the map area for the active layer.

Contour Layers & Height Map

These layer features are included as demo features for users desiring to draw cross section elevation profiles and illustrative (fiction) maps. Demo features are not intended for applications that require accuracy.

To Open the Styles & Symbols Palette

Click the **Styles & Symbols** palette icon on the toolbar, or choose **Window > Styles & Symbols** palette from the main menu.

Ortelius ships with an outstanding Library of over 1700 uniques styles and custom map symbols! Plus, any styles and graphics you create can be added to the user's Library.

Recognizing How Items Look in the Palette

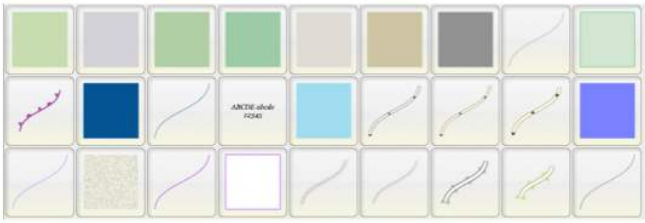
Ortelius delivers with hundreds of styles and map symbols items all combined together in the Ortelius Collection. Items are organized into categories accessible from the Library drop-down menu. You can tell an item's type by its appearance in the palette:

- Path styles are shown with a curved stroke
- Fill styles are shown in a square
- Symbols look just like their graphic

Hover your cursor over any item and its name and type (style or symbol) will appear in the tooltip.

HINT: Symbols are special objects associated with a master graphic. To edit, symbols must be detached from their master after you place them in your drawing and may need ungrouped to edit. Some items, such as legends and north arrows, are automatically detached when placed into the drawing. See Working with Ortelius Symbols

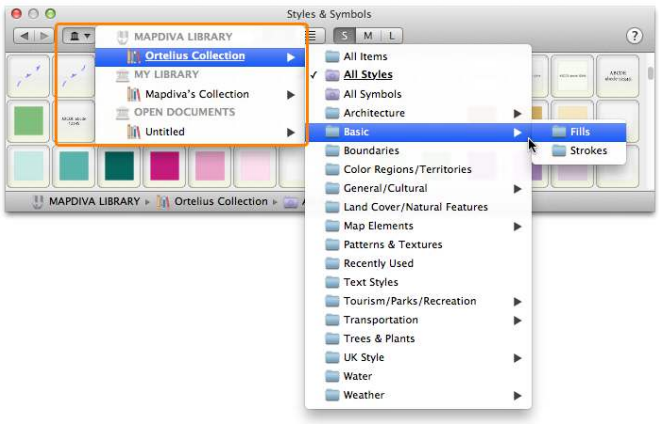
Styles: Strokes and fills.



Symbols: Shapes and graphics associated with a symbol master. May need detached from master and/or ungrouped to edit

To Draw with Styles

To begin drawing, choose a drawing tool, then choose a stroke or fill style from the Styles & Symbols palette, then start drawing. Alternatively, choose a drawing tool then create a new ad hoc style using the Style Inspector.



From the Styles & Symbols palette toolbar, choose the Library icon for a drop-down list of collections and categories. Use the forward and back buttons to navigate through previously visited categories. Search for styles and symbols from the search bar. While styles and symbols are both present in the Styles & Symbols palette, the palette is smart about the type of tool you have active. Choose your tool, then choose a style to apply to that tool while it is active. Items that can be used with the active tool are enabled and highlighted, disabled items are subtly grayed-out. For example, when you draw with the shape tools the stroke and fill styles are enabled. Symbols are enabled when the Stamp tool is being used.

All styles and symbols are enabled while the Select [s] tool is active.

To Apply a New Different Style to Existing Objects

To apply a style to one or more existing objects, use the **Select [s]** tool to select the object(s) and **double-click a style** in the Styles & Symbols palette to apply. You are asked to confirm this application to prevent accidental changes. This confirmation message is an alert that can be turned on or off and can be reset in the **Ortelius > Preferences > Advanced** pane from the main menu.

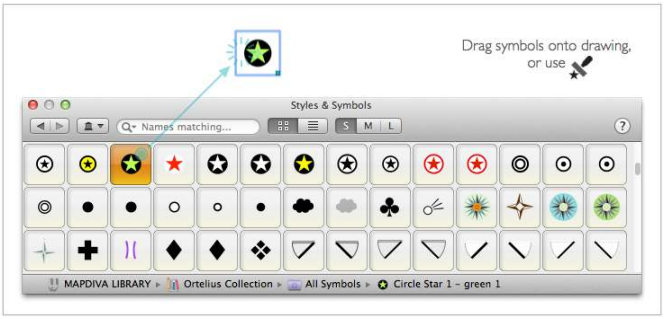
Alternatively, drag a style from Styles & Symbols palette onto and existing object to apply a new style (you can also drag styles directly from the Library Manager).

The **Style Dropper [d]** tool is another convenient way to to copy (or "pick up") a style from one object and paste it onto other objects. Click onto a first object to pick up its style; clicking onto subsequent objects applies the style. The style dropper cursor shows whether dropper is “full" (will drop) or “empty" (will pick up). Return to the Select [s] tool (or any other tool) to end the Style Dropper. To pick up a new style while the Style Dropper tool is active, press the OPTION/Alt-key while clicking an object with the style dropper tool. The dropper can pick up styles from inside a group.

Quickly pick-up a style from a previously drawn object and keep drawing using "**quick pick-up**." While any drawing tool is active, hold the CMND-key (the cursor will change to an eye-dropper) and click an object that has the style you want to pick up. The picked up style becomes active (and shown in the Preview on the Tools palette); release the CMND-key and continue drawing.

To Add Symbols to Your Drawing

Drag symbols from the Styles & Symbols palette directly onto your drawing canvas (you can also drag symbols directly from the Library Manager).



Alternatively, use the **Symbol Stamp [y]** tool to add symbols from the Styles & Symbols palette to your drawing. While the Symbol Stamp tool is active, all symbols are enabled in the palette.

- **To resize any symbol**, select it with the **Select [s]** tool and drag one the lower right handle in the symbol bounding box.
- **To replace one or more symbols with a new symbol**, use the **Select [s]** tool to select the symbol(s) and double-click a new symbol in the palette.

HINT: Symbols are special objects associated with a

master graphic. To edit, symbols must be detached from their master after you place them in your drawing and may need ungrouped to edit. Some items, such as legends and north arrows, are automatically detached when placed into the drawing. See Working with Ortelius Symbols

Using the Library Manager

The Ortelius Library Manager operates behind the scenes. It's where all styles and symbols are organized into collections and categories.

To open the Library Manager, choose **Window > Library Manager** from the main menu (note, you can add the Library Manager to the toolbar by customizing the toolbar). The Library Manager uses an interface which is very similar to other applications such as Finder and iTunes(TM), and this familiarity should make it quick and easy to learn and use. Similarly to the Styles & Symbols palette, items can be dragged directly from the Library Manager to your drawing canvas.

The Library Manager's left sidebar lists the collections and categories, and its main window displays items an icon view or list view. The Library Manager view is customizable.

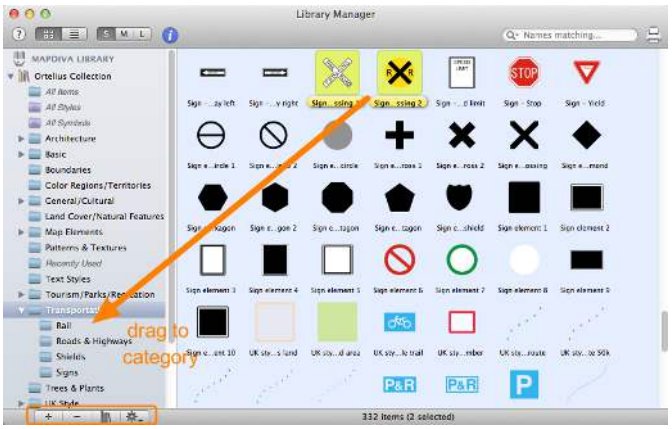
What Libraries are Available?

The Library Manager contains two libraries – the Mapdiva Library and the user's My Library.

Mapdiva Library
The Mapdiva Library contains a Built-In Collection with hundreds of custom map styles and symbols ready for making your next masterpiece. Items in this library cannot be edited, though they can be reorganized into various categories and subcategories, and also copied (cloned) to My Library for further customization.

My Library
My Library is the location of user created styles and symbols. Organize your styles and symbols into categories as desired.

To Use Categories



Categories keep your styles and symbols organized and easy to find. You can freely add categories to organize the collections, and categories can be divided into subcategories.

Adding a New Category

To add a new category, click the '+' button or choose "New Category" in the Action Menu (looks like a gear). A new "untitled category" is added to the active collection (or, if you have selected a category, a new subcategory (child) of the selected category is added). Type a name for the category. A category can be renamed at any time by double-clicking its name and typing a new one. Category names must be unique within a collection.

Deleting Categories

To delete a category, select the category and click the '-' button or choose "Delete Category…". Deleting a category does not delete the styles and symbols it contains – items remain available in the "All Items" category unless intentionally deleted – but they may be harder to find later. This operation cannot be undone.

Adding Items to Categories

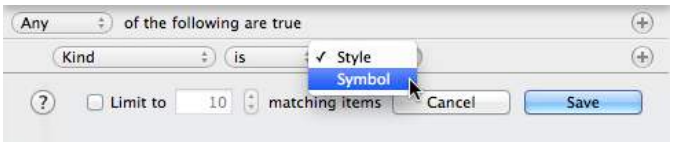
Individual styles and symbols can belong to one or more category. Items are organized into categories using drag-and-drop. Simply select the "All Items" category to show the content of the library, then drag items (shift-click to select multiple items) to the desired category in the left-hand list. To nest and unnest categories, just drag-and-drop the category where you want it.

Removing Items from Categories

To remove items from a category, select the items, right-click and choose "Remove From Category" from the contextual menu. Alternatively, select the

category and drag items out of the window to some empty space. Removing an item from a category does not delete it from its collection – it will remain available in the "All Items" category unless intentionally deleted. Items can't be removed from or directly added to any of the automatically managed categories, such as "All Items."

What Are Smart Categories?



In addition to normal categories, a special type of category exists called a "Smart Category." Smart Categories are shown having a purple-colored icon.

Smart Categories work by filtering the entire collection based on a set of criteria you establish. As such, their content is dynamic and will change automatically as items are added, removed and edited. Smart Categories are similar to Smart Folders and Smart Playlists feature in applications such as Finder and iTunes(TM).

Adding a New Smart Category

To create a Smart Category, select the collection to add it to and choose **New Smart Category…** from the Action Menu. The criteria editor is opened ready to edit the category. You can build up the desired filter by combining different criteria as you wish; click '+' to add a new criteria to the query, '-' to remove a criteria. You can also limit the content to a fixed number of results if you wish. Click 'Save' to establish the Smart Category which will immediately display the content matching the query. Double-click the name or right-click and choose "Rename" from the contextual menu to change a Smart Category's name.

Editing Smart Categories

Smart Categories are not directly editable in that you can't drag items into or out of them, but you can edit the filter criteria. To edit the filter criteria,

select the category and choose "Edit Smart Category…" from the Action Menu. The criteria editor is opened ready to edit the category.

Deleting Smart Categories

To delete a Smart Category, select the category and click the '-' button or choose "Delete Category…". Deleting a category does not delete the styles and symbols it contains – items remain available in the "All Items" category unless intentionally deleted. This operation cannot be undone.

To Edit Styles and Symbols From the Library

Editing within the List View

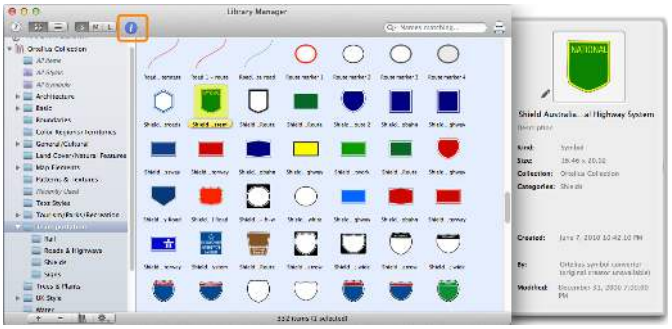
To edit an item's name, double-click it. Items can be locked and unlocked from within the list view (the Mapdiva Library cannot be edited – copy or clone items to be added to user collection and edited).

Editing within the Icon View

Double-click a style within the icon view to open the Style Inspector for further editing.

To Get More Information on Styles and Symbols

The "Get Info" drawer slides out and displays information about the selected style or symbol. This information includes the name and other item metadata.



To Import and Export Collections

If you receive a collection from another user (or from Mapdiva), you can import it by first unzipping it as necessary, then choosing "Import Collection…" from the Action Menu. The collection will be imported into My Library and displayed.

Export from My Library to create a zip file on disk of your user collection, allowing you to backup and share it with other users. Select the desired collection to export, then choose "Export Collection…" from the Library Manager – Action Menu (looks like a gear).

The Object Inspector

Opening the Object Inspector

The Object Inspector provides for close inspection and editing of all your drawing objects and map features. The Object Inspector is context-sensitive, so its function will vary based on the type of object(s) you have selected.

To open the Object Inspector, **click the Object Inspector icon** on the toolbar, or choose **Window > Object Inspector** from the main menu.

Using the Object Inspector's Geometry Pane

The **Geometry pane** displays an object's geometric and location properties. At the top of the window the object type, for example "Shape," for the current selection is displayed. If multiple different objects are selected, "Multiple Objects" is displayed. The total number of objects in the selection is listed.

You can edit one or more object(s) size and rotation angle from the Object Inspector. Width and height are displayed for the bounding box of the selected object (for linear objects, this does not represent the length).

The lock icon near the width and height settings locks or unlocks the object's aspect ratio. When unlocked, the width and height can be set independently. When locked, the width and height are resized proportionately. Note that units are displayed in the same unit of measure specified in **View > Display Units** in the main menu. Click the "Current Units" button to switch to viewing the percentage width/height of the original object.

Rotate objects and symbols by changing the Angle setting. The X,Y Location setting references a shape or symbol's centroid; it references the upper left corner of the (invisible) bounding box for linear objects.

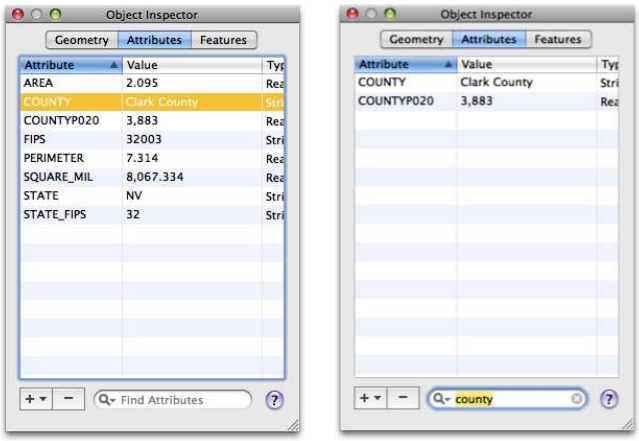
The style applied to the object(s) is displayed. If multiple different styles are applied to the selected objects, "multiple styles" is displayed.

You can individually lock graphics, as well as make them visible or hidden, or "ghosted" (a handy feature to temporarily eliminate clutter and improve performance in complex maps during the drawing process).

NOTE: *A single objects' geometry can also be edited from the sidebar Geometry panel.*

Using the Object Inspector's Attribute Pane

Attribute information, when available, is shown in the Object Inspector. The Object Inspector search bar is used to filter attribute information.



To add an attribute, such as an object name, select one or more objects and click the '**+**' button. When adding a 'string' type attribute, the attribute "NAME" with a blank value is initially added. "NAME" is the default attribute used by most text labels.

NOTE: *Shapefile support is limited in Ortelius. Though georeferencing is not supported, attribute information is retained.*

Quick-Open Attribute Editor

Connectable tracks, regular shapes, and symbols are the most common objects to associate with attribute data. Double-click these objects to automatically open the Object Inspector's Attribute Editor to quickly view and edit their attributes.

NOTE: *Double-clicking special objects, such as rounded rectangles and arcs, and regular paths will quick-convert the objects to shapes for editing rather than opening the Object Inspector. To convert regular shapes to paths for editing, choose* ***Graphic > Convert To*** *from the main menu or right-click and choose 'Convert To Path' from the contextual menu.*

Using the Object Inspector's Features Pane

The Object Inspector is context-sensitive, which means it knows what type of object or objects you have selected and responds appropriately. The following describes the various capabilities of the Features pane within the Object Inspector:

Text

When text objects are selected, the Object Inspector's Features pane provides options for formatting the text object. Options include changing font, style, color, and alignment. When placing labels over complex backgrounds, text with a colored outline (text casing) or mask can help keep text clear.

Connectable Tracks

The Features available when selecting a connectable track include setting how the line ends are terminated (they can be open-ended (default), capped off with a bar, or end with a turning circle). You can also set the type of track so that only tracks having matching types will connect with each other, for example so that roads will not connect to waterways if they reside on the same layer. You can change settings for Width Adaptors (used for transitioning between different line styles on a track). Finally, you can disconnect all junctions connecting to the track (may be used to reset a badly formed track).

Polygon Objects

Regular polygon controls are available through the Object Inspector's Features pane. Note that handles on the object are direct controls to manipulate the shape or rotate directly.

Point Symbols

Use the Object Inspector's Features pane to scale point symbols. Data Transformers can be applied to symbols for dynamic symbols based on attributes (for example, sized or colored based on the information those symbols represent).

Image Objects

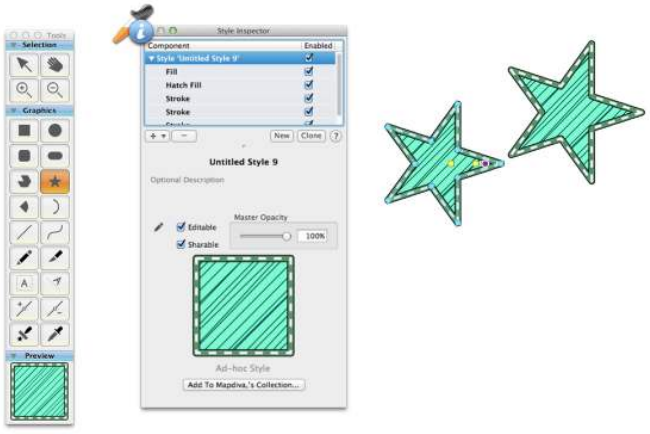
Sometimes the easiest way to start making your map will be to begin by tracing over an existing map or aerial photograph. But usually the saturation and color in the photo makes it hard to see your drawing objects. Place the image on a layer and use the Geometry panel in the Sidebar, or the Object Inspector's Features

pane to adjust the image opacity - creating a "tracing paper" effect. Move that layer to the bottom of the layer stacking order. Now in your drawing layers, start building your map.

What Is the Ortelius Style Inspector?

Ortelius goes way beyond simple stroke and fill styles with its expert "stacked" styles. The Style Inspector is used for creating and editing advanced styles, such as styles with gradients, arrows, and images adornments.

To open the Style Inspector, click the **Style Inspector icon** in the toolbar, or choose **Window > Style Inspector** from the main menu.



Remember the Basics: Drawing Tool + Style = Draw

- **To draw with a style you create**, choose a drawing tool from the Tools palette and draw a shape or path. With the shape still selected, click the "**Reset**" button in the Style Inspector to build a new style, or the "**Clone**" button to copy the style currently in use and then edit it. Use clone, for example, when you want to change the stroke width but keep all other settings the same. Click the "+" and "–" buttons in the Style Inspector to add and remove style components as desired. Drag style components to rearrange their stack order in the Style Inspector. Continue drawing with the style you have defined. When you are ready to change styles, click "Reset" or "Clone" to build a new style.

- **To change styles**, click "Reset" or "Clone" in the Style Inspector, edit the style, and continue drawing.

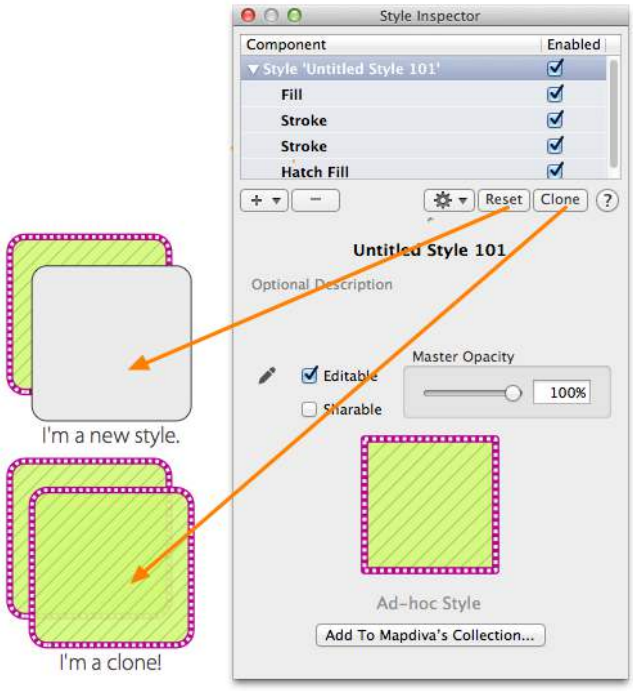
The following sections describe how to use the different style components to define expert styles.

What Do "Reset" and "Clone" Mean?

To create a new style, click the '**Reset**' button. The style will be reset to the default simple style with a black stroke and gray fill. To customize the style, add or remove any of the many available style components and adjust the and settings as desired. Continue drawing.

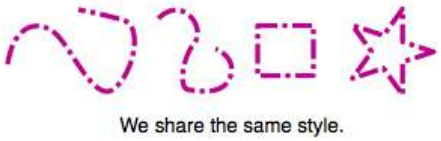
To create a style from an existing style, use an existing style and click the '**Clone**' button. Clone will make a copy of the style you are currently using so you can make changes to it and continue drawing. Use clone, for example, when you want to change the stroke width but keep all other settings the same.

HINT: Styles in the built-in Mapdiva collection cannot be over-written. To edit styles in the built-in collection, use "Clone" to make a copy of the original.



What are Shared Styles?

Ortelius places a central focus on shared styles. See Ortelius' Cascading "Shared" Styles for more information about shared styles.



NOTE: *New and built-in styles are set as "sharable" by default. To disable this behavior with a new style, uncheck "Sharable" in the Style Inspector. Styles in the built-in Mapdiva collection cannot be over-written – to edit styles in the built-in collection, use "Clone" to make a copy of the original.*

What Are Ad-Hoc and Saved Library Styles?

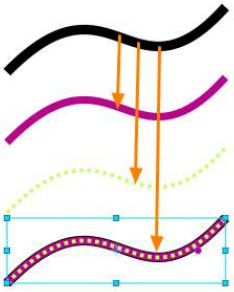
Styles you create while you are drawing are called "ad hoc" styles unless they are named and added to the user library.

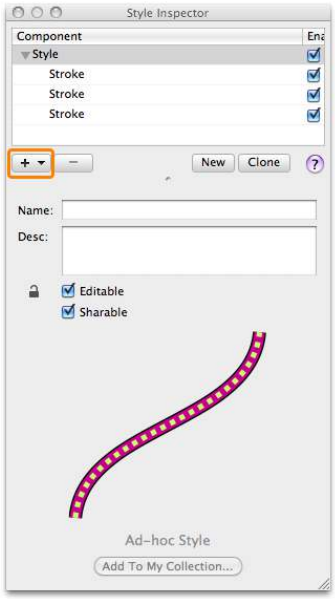
Optionally, use the Style Inspector to name your styles and click the '**Add To My Collection…**' button for future use. Saved styles are "master styles" and by default are set as not editable to prevent unintended changes. To enable editing of a user's library style, check "Editable" in the Style Inspector.

NOTE: *Styles in the built-in Mapdiva collection cannot be over-written – to enable editing of styles in the built-in collection, use "Clone" to make a copy of the original.*

To Build a Style Using the Style Inspector

Play with the Style Inspector's many style components to build "stacked" styles and you'll be an expert in no time flat.

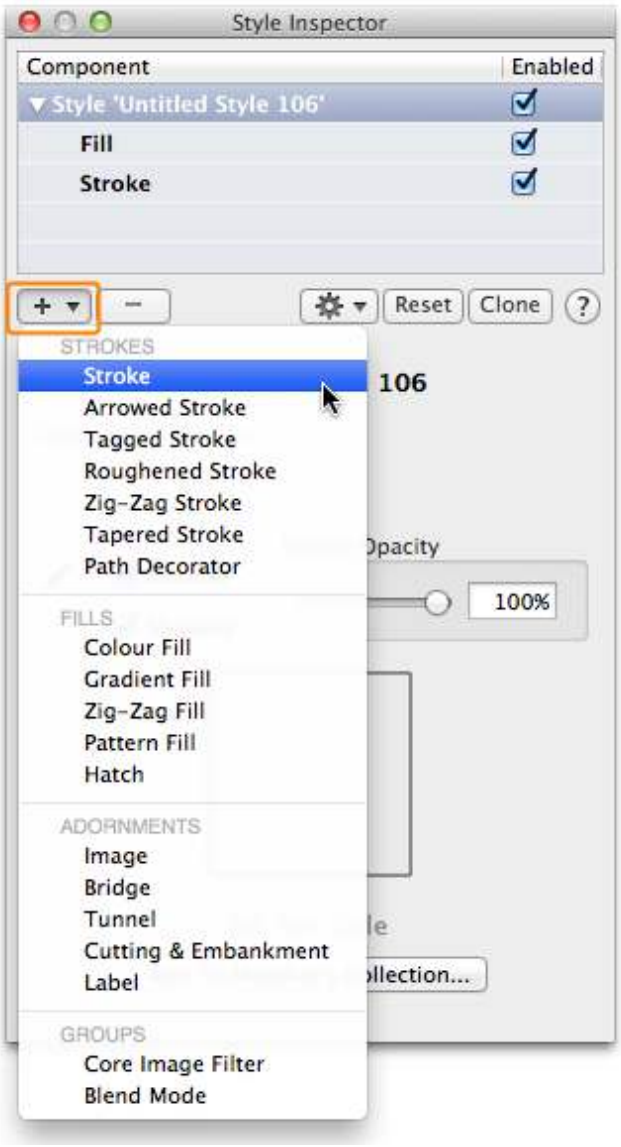




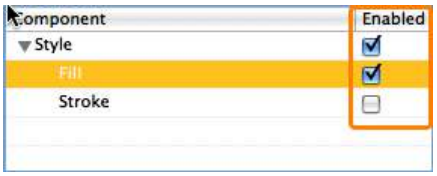
Styles are "built" by combining various style components. Click the "+" button to add a style component from the drop-down list. For example, to build this cased line with a center dash, three strokes of varying widths are defined and stacked. In this example, we combine a black solid line, a narrower magenta solid line, and a green dashed line. The black stroke is defined first, then the magenta, then the green line. The list shows the order that components are drawn, so the last item in the list is drawn last, which will appear 'on top' of components already drawn. Drag to rearrange the stacking order of style components.

Available Style Components

From the Style Inspector, you can add a wide assortment of components to create custom styles.

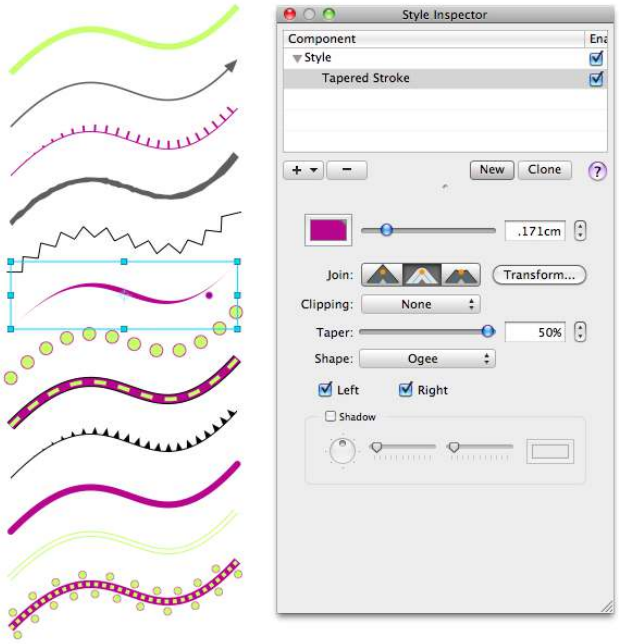


NOTE: *To edit a style component it must be enabled (check box). Disabled components can neither be edited, nor show up when the style is used to draw an object. If desired, individual components of a style can be uniquely named by double-clicking in the master list of the Style Inspector.*



Stroke Properties

In the Style Inspector, the following properties can be edited for strokes: color, width, dashes, cap and join, clipping, offset, and shadow. Note shadows will affect drawing speed and should be used sparingly for good performance while using Ortelius.

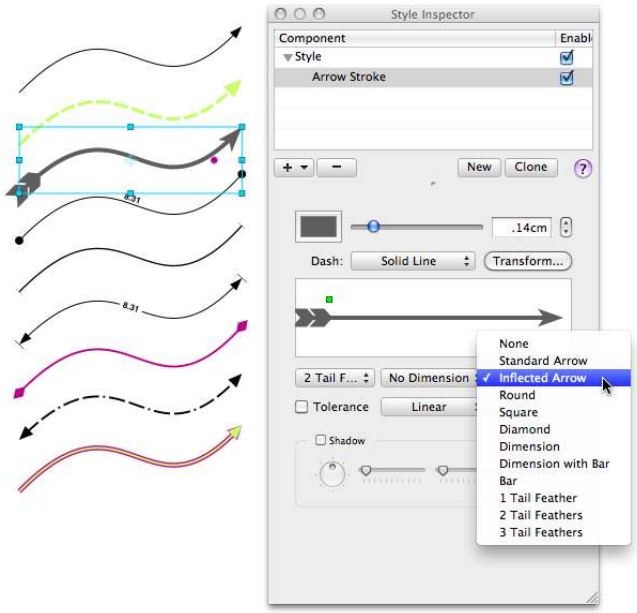


Arrows, Arrowed Stroke and Line Dimensions

An Arrowed Stroke component is easily customizable. Color, line width, and dash properties are set in the same way as a standard stroke. Linear, diameter, radius, and angle dimension settings are available.

Set the arrowhead size by dragging the knob (small square) In the arrow preview area. The Arrowed Stroke is highly flexible in that you can set arrow head style on one or both ends. Choose from these options for styling the ends of Arrowed Strokes.

Dimension lines can be created with an arrowed stroke. Choose the dimension setting, including the location along the line, tolerance, and the dimension unit (linear, diameter, radius, or angle). Edit the font appearance by clicking the *"A"* button. Dimensions will be displayed in the current drawing units.

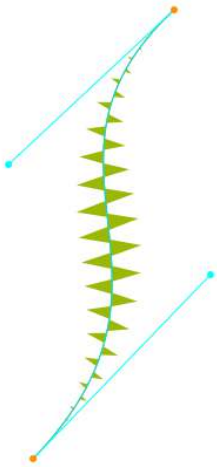


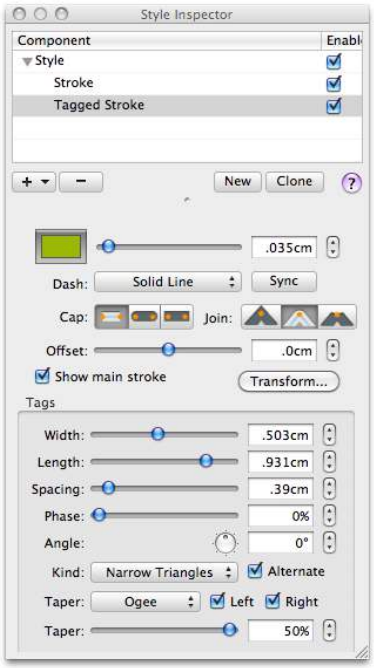
Rough Stroke

Occasionally, you may want your work to have a roughened appearance. With the Rough Stroke, you can easily mimic pencil lines or apply color and transparency to mimic markers or even watercolor. Adjust roughness properties in the Style Inspector.

Tagged Stroke

The Tagged Stroke offers an amazing flexibility for easily creating strokes with "tags" or hatches. Properties include options to define the type of tag, including lines, squares, triangles, semi-circles, circles and "v"s. Color, size, and spacing can be set, as well as the option to show or hide the main stroke and taper the tags at either end of the stroke.





Tapered Stroke

Ortelius' Tapered Stroke supplies an elegant way to form styles for such linear features. Options include tapering at one or both ends, as well as setting color, off-set, and stroke width.

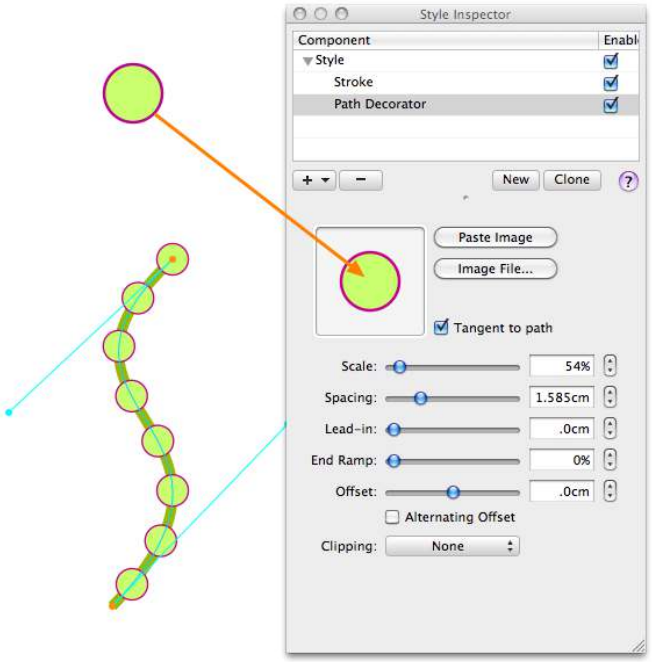
Zig-Zag Stroke

The Zig-Zag Stroke adds settings for the amplitude, wavelength, and spread of the zig-zag. Color, line width, and dash are set in the same way as a standard stroke.

Path Decorator

Add objects, symbols, or images repeatedly along a path using Path Decorator. For example, draw a circle on the drawing canvas and copy it. Paste it into the image well under Path Decorator. The circle is now added at regular intervals along the path and its scale, spacing, lead-in, end-ramp, off-set, alternating offset, and clipping can be fine-tuned as desired.

For good performance (drawing speed), the image should be small, not too complex, and not too closely spaced.

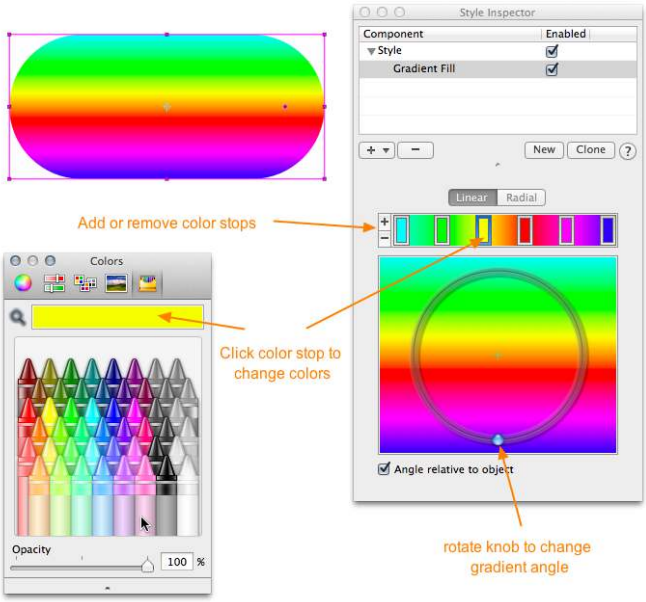


Gradient Fill

Use Gradient Fill for stylish linear and radial gradients. The color slider is the place to control the details of color and placement. The gradient well gives you the "big" picture. Gradients can have 2 or more color-stops for awesome effects.

To set gradient colors, select the color stops at each end of the gradient bar. Choose colors form the Colors panel. Add and remove color stops using the “+” and “-” on the left side of the gradient bar, or drag color stops off of the slider bar to remove them. Drag color stops to reposition along the gradient bar.

Rotate the knob on the Iris controls to set the angle of the gradient. Hold the SHIFT-key to constrain the angle of the gradient to 15-degree increments. The angle can be set relative to the object or relative to the page. The center point of a radial gradient is adjusted by moving the position



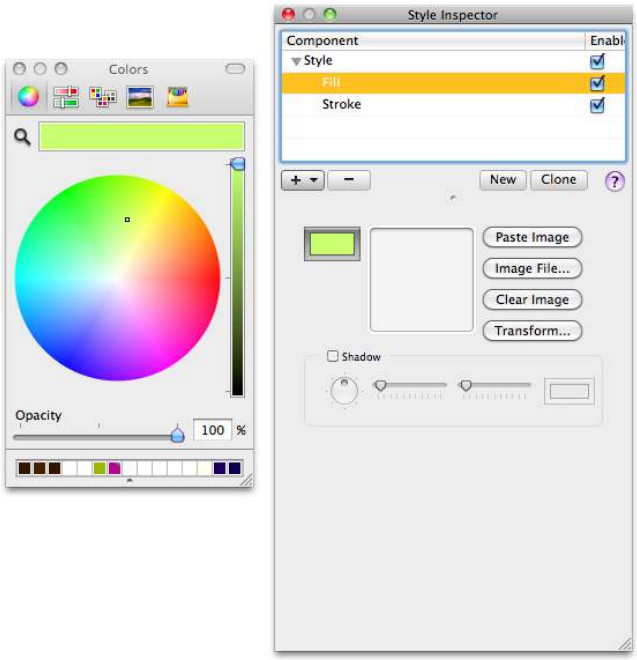
of the gradient Iris controls. Adjust the color blend between two circles of color using the Iris controls to adjust the radius and center point.

Color Fill

The color fill component lets you select the color well and choose from millions of colors using the Colors panel. From the Colors panel, transparency can also be set using the Opacity Slider.

Fill objects with tiled images using the Paste Image command (pastes from clipboard) or use Image File… to add an image from a file. Images can also be dragged-and dropped from the Image Browser into the image-well.

Shadows can be applied to fill components by checking the Shadow option and setting the shadow color, angle, distance, and blur.

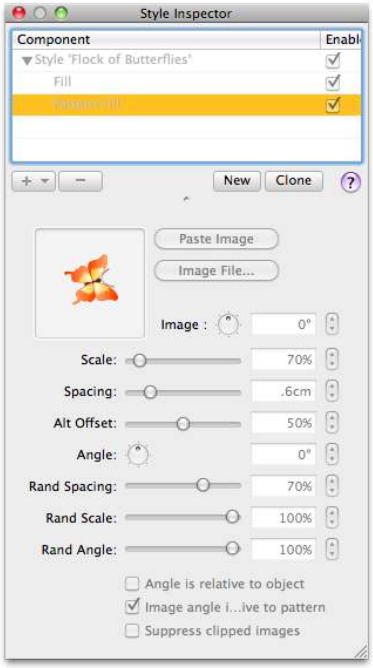


Zig-Zag Fill

Zig-zag fills can be useful for defining styles for unusual shapes. The amplitude, wavelength, and spread are adjustable in the Style Inspector.

Pattern Fill

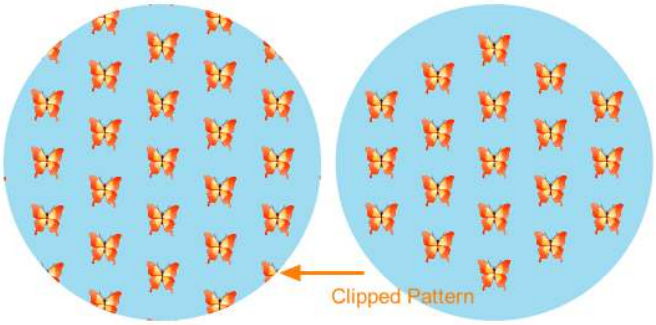
Using the Pattern Fill, objects, symbols, or images are regularly repeated within the fill area. Draw an object or add a symbol to your drawing canvas and copy it. Next, paste it by clicking Paste Image in the Style Inspector. Last, set the scale, spacing, alternating offset, and angle as desired.



Random spacing, random scale, and random angle properties allowing more stochastic pattern effects to be realized.

Keep the image small, not too complex and not too densely spaced for good drawing performance (drawing speed).

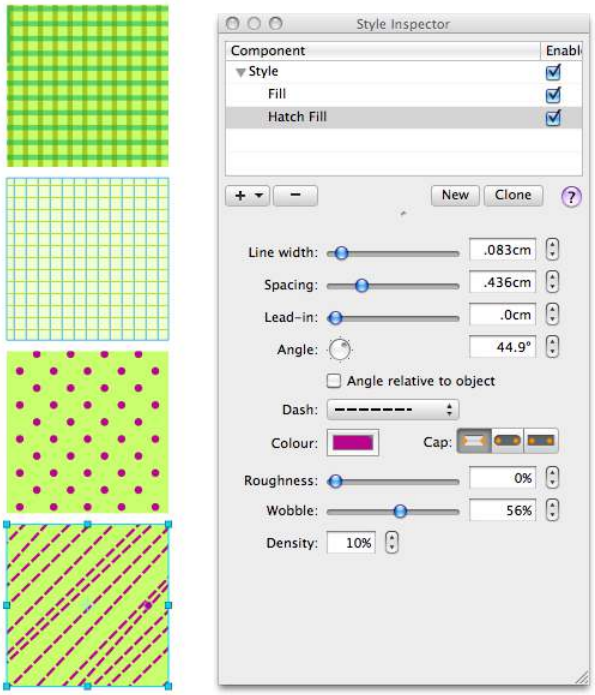
When a new object is drawn using a pattern fill style, the image objects in the pattern may appear clipped at the edges of the shape. You can use "Suppress clipped images" to hide images at the edge of a shape if they would otherwise appear as clipped.



Hatch Fill and Dot Screen

Hatch fill is used to create patterns of lines or dots. This component offers control over line width, spacing, lead-in, color, and angle. Lines can be dashed, and roughness and wobble can even be added to create a wavy pattern. Add two or more Hatch Fill components with differing angles to create grid patterns.

Adjusting the “Density” setting will automatically generate a dot pattern. Changing “Line width” with a dot pattern will adjust the dot diameter. Changing the “Angle” will adjust the orientation of the pattern.



Transform...

Several stroke and fill style components contain a "Transform…" setting enabling interesting 3-d visual effects. Based on user input, transform adds copies of the style component in a stacked fashion under the original object. The X and Y offset slide the stack in a distance and direction from the center of the object at the angle designated, whereas X and Y scale adjust the size of the copies. Finally, Blend applies a color blend from the original style component color to the color designated in the colorwell.

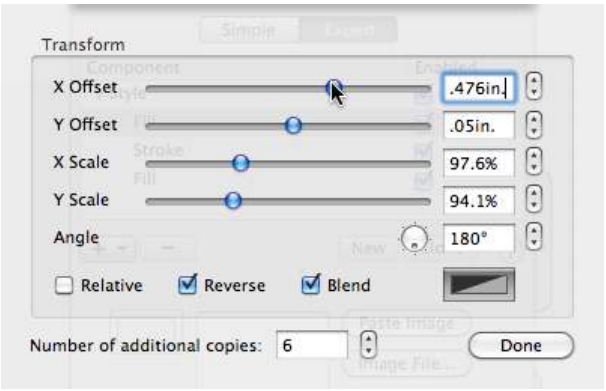
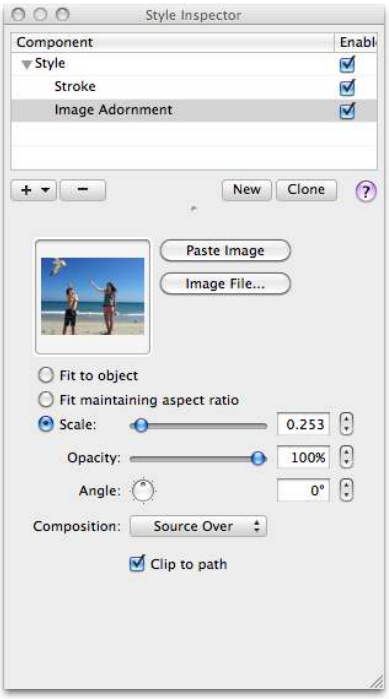


Image Adornment

Apply an image to any style using an Image Adornment style component. The Image Adornment style component enables various settings for scaling, clipping, angle and image opacity. Choose an image file or copy and paste an image into the image-well.

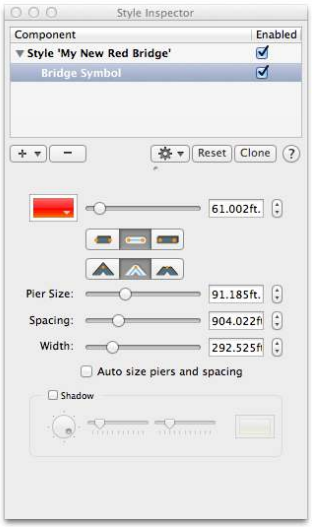


Dropping an image from the Image Browser or Finder onto any shape with a fill automatically adds the image as an Image adornment. Use the Style Inspector to adjust the Image Adornment settings.

NOTE: *Although they look similar, an Image Adornment is different from adding a regular image object to your drawing. An Image Adornment is an actual component of the style, which can be applied like any style to any shape. Whereas a regular image object (for example, added from the Image Browser) is a single object. Regular images can be clipped and modified without using them as a style component. See* Working with Images

Bridge, Tunnel, Cutting and Embankment Adornments

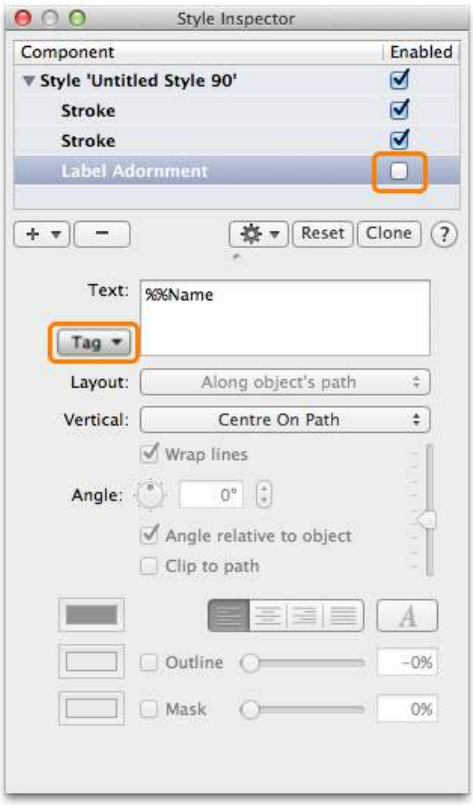
Create custom special styles using the Bridge, Tunnel, Cutting, and Embankment Adornment style components. Each of these components allows customizing color, stroke width, spacing, and more. Save your custom special styles to the user's library for future use.



Related Topic: See Use Linear Select to Add Bridges, Tunnels, Cuttings, Embankments & Magic Round-Abouts to learn how to add custom special styles to connectable tracks using the Linear Select [n] tool.

Label Adornments

A Label Adornment enables a string of text to be associated with a particular style. Labels use the underlying style from a Label Adornment as a template. Unless otherwise defined, default labels are rendered with Helvetica font and sized proportionately to the size of the object or width of the stroke on track styles. To define a custom label template, add a Label Adornment to the object's style.



1. In the Style Inspector, click the "+" button and add a Label Adornment style component.

2. Adjust layout, vertical position, text wrap, angle, font, color, outline, and mask as desired.

Recommended Label Settings for Linear Features:
If the style is being created to be used with linear features, such as roads, choose the Layout setting "Along object's path" from the drop-down menu. Adjust the Vertical setting to control vertical label placement. Use the "Variable" position and the slider bar for just-right positioning of vertical alignment.

Recommended Label Settings for Area Features:
If the style is being created to be used with area features, such as countries, choose the Layout setting "Flow text into object's rectangle" from the drop-down menu. Choose the "Align middle" Vertical setting to control vertical label placement.

3. Label Adornments can be a constant string of text, free text associated with a label, or text associated with an intelligent label.
HINT: Intelligent labels automatically detect and use a feature's attribute information using a special style component tag for Text Adornments. For example, choose the tag "Name" from the drop-down 'Tag' list to automatically add the text adornment tag "%%Name". If no attribute exists when labeling features on your map, the label template will still be applied and the new label will read "Label" ready for free-text editing.

4. To apply the Label Adornment to an object only when a

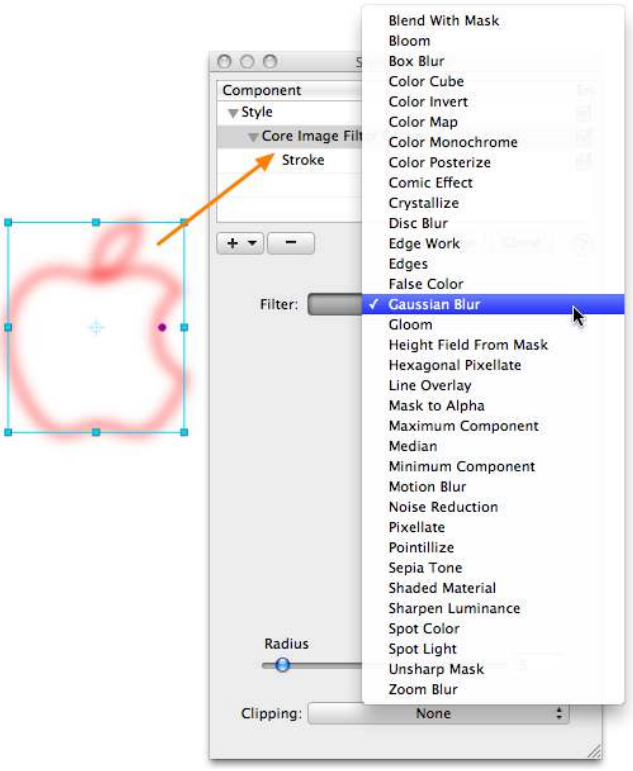
new label is added to a feature using the 'Add Label' commend, *disable (uncheck) the Text Adornment after defining it in the Style Inspector*. The font settings from the Text Adornment will be applied to the labels you add.

Related Topic: Intelligent Labeling With Attributes.

Core Image Filters

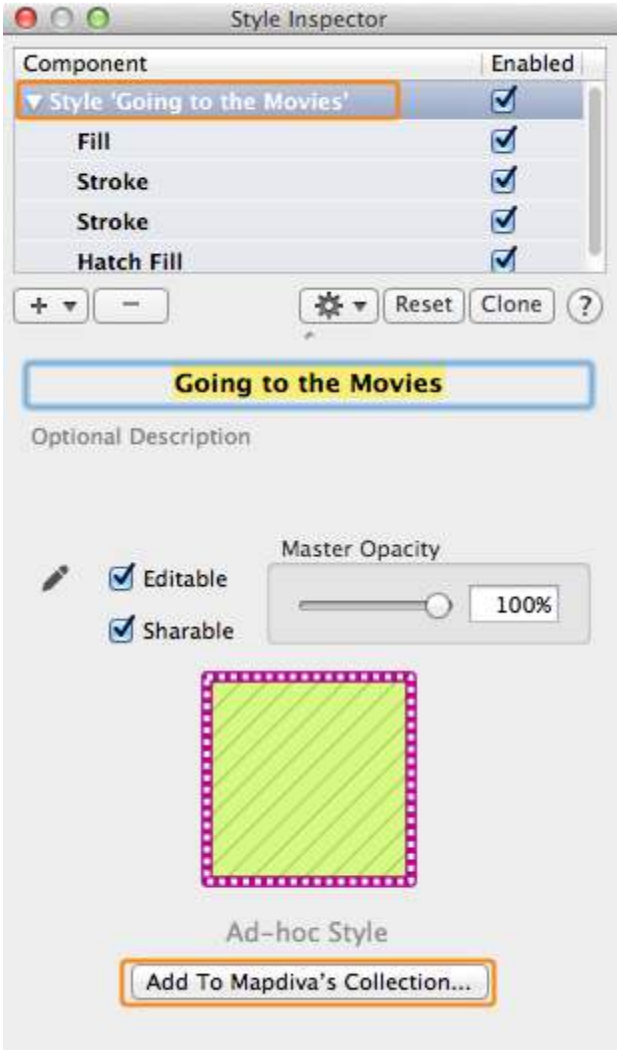
Core Image Filters are advanced style component that apply filters to other style components. A wide assortment of image filters are available.

To use them, first add a Core Image Filter style component to your style. Drag the style component to which the filter will be applied into (under) the Core Image Filter Group. Our example shows an orange stroke moved into the Core Image Filter Group. From the Core Image Filter Group, choose the desired filter from the drop-down list. Filters are well suited to work with images such as an Image Adornment style component, while a limited number of filters work with strokes and fills, such as Gaussian Blur.



To Add a Style to "My Collection"

If you want to save a style for later, you can. When you're satisfied with your new style, click back onto the "Style" heading in the component list to return to the front dialog. Enter a name for your new creation and an optional description. Click "**Add To My Collection…**" to save it into the Library Manager. By default, new styles are added to the My Library > My Collection in the Library Manager. To organize your styles and clip art, drag-and-drop them among categories. New styles are immediately available in the Styles & Clip Art Palette where you can use them for drawing. Your styles are retained in the Library Manager for future use, editing, and even sharing.



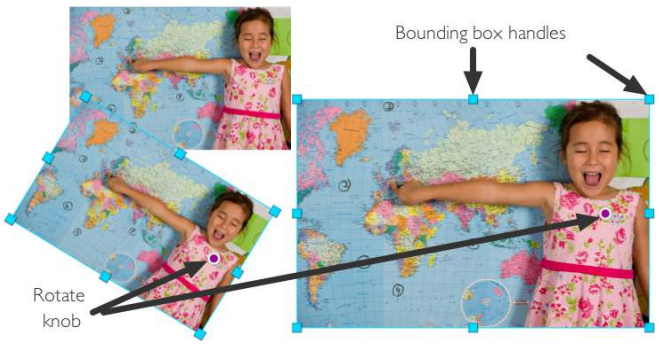
To Import Images from the Image Browser

To open the Image Browser, click the Image Browser icon in the toolbar or choose **File > Image Browser** from the menu.

Import PNG, JPG, non-editable PDF, and TIFF images as well as vector SVG files. Drag images from the **Image Browser** directly to your drawing canvas. If an image is larger than the drawing canvas size, it will be scaled to fit the canvas (though can be rescaled in the Geometry panel). You can even drop pictures directly onto any object with a fill style to fill the shape with the image. The Image Browser provides quick access to your iPhoto, Pictures folder, and Smart folders, and you can attach other folders as desired. Select a root folder or iPhoto folder to browse images. To add folders, click the "+" button and navigate the the folder to browse, or to remove a folder from the list, select it and click the '-' button.

Working with Images

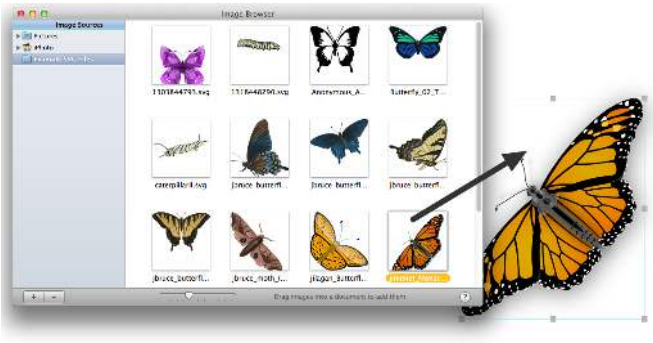
Images (like other shape objects) have sizing handles located around the outside edges of the image bounding box. The direct rotate handle is located to the right of the center point.



Images can be masked, cropped, scaled, enhanced, and more! See "Working With Images" for details.

To Import SVG from the Image Browser

Import editable SVG 1.1 vector files. Similar to images, simply drag editable vector SVG 1.1 files from the Image Browser to your drawing canvas. Imported vector graphics are fully editable vector graphics, though they may need ungrouped to edit.



Using the Fonts Panel

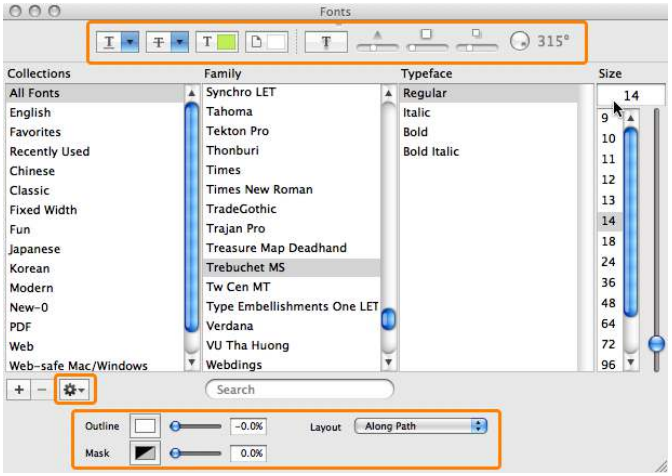
To Open the Fonts Panel

Using the Fonts panel you can change a text object or label's typeface, size, and other options.

To open the Fonts panel, choose the **Fonts icon** in the toolbar, or choose **Text > Show Fonts** from the main menu.

To Use the Fonts Panel

Choose one or more text object. Use the Fonts panel to choose typefaces, font sizes, and other font formatting, including text shadows and strikethrough.



Here is a summary of the text effects buttons, from left to right across the top:

– The Text Underline pop-up menu to choose an underline style (such as single or double).
– The Text Strikethrough pop-up menu to choose a strikethrough style (such as single or double).
– The Text Color pop-up menu to apply a color to text.
– The Text Shadow button to apply a shadow to selected text.
– The Shadow Opacity, Shadow Blur, Shadow Off set, and Shadow Angle controls affect the appearance of the shadow.

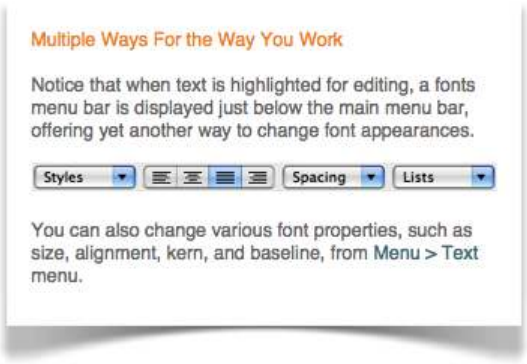
In addition, Text Outline and Text Mask controls at the bottom of the Fonts panel.

If you don't see the text effect buttons, choose Show Effects from the Action pop-up menu in the lower-left corner of the Fonts panel.

HINT: Save a Text Box as clip art to save and quickly reuse the text styles.

If you frequently use the Fonts panel, there are time-saving techniques. To quickly locate fonts you use frequently, organize them into font collections. Click the Add (+) button to create and name a font collection, and then drag the font name from the Family list into the new collection.

Choose **Add To Favorites** from the action menu to save a particular font in your Favorites collection.



Making the Most of Your Apple Color Picker

To Open the Colors Panel

Perhaps no time in history has it been easier to access such a rich array of colors and palettes.

To open the Colors panel, **click the Colors icon** in the toolbar or choose **Window > Colors** from the main menu. Note that the Colors panel is also used when changing colors in the Fonts panel and Style Inspector.

The Colors panel provides multiple ways to specify, select, and save colors for your drawing. The following sections describe each of these methods.

To Drag-and-Drop Colors

You can apply the colors you choose in the Colors panel to simple object styles on the page. Drag and drop color from the colorwell directly onto the object. Dropped colors will "bucket-fill" objects to replace a color that was previously applied. It will change the color of outlines on objects with stroke styles but no fill. It will change the top stroke color on lines with cased line styles or other multi-stroke effects. Drag and drop color can also be used on text.

In all cases, when a color is quick-dropped onto a object, the style of that object is replaced with a new ad-hoc style. This avoids unintentional changes to master styles in the Library.

To Use the Color Wheel

Across the top of the Color window are a series of icons. The first icon opens a Color Wheel that allows you to pick the hue and saturation from the wheel, the value from a slider on the side, and adjust the opacity/transparency from a slider on the bottom.

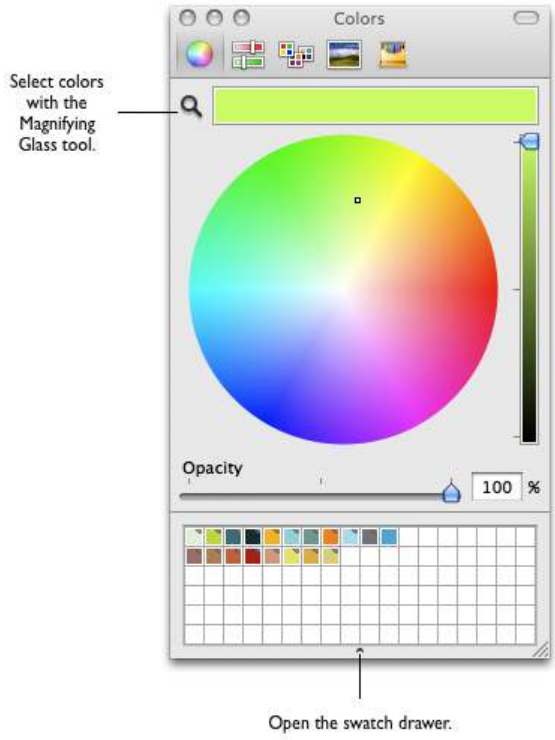
To Pick Up Existing Colors from Your Drawing with the Magnifying Glass

The Color Picker Magnifying Glass is a great color tool for accurately picking colors from an existing drawing. Choose the magnifying glass and move your cursor anywhere on your screen. It magnifies the pixels below it, and allows you to pick the color of any pixel anywhere.

Use the magnifying glass to pick colors off of existing symbols and styles, photographs, art images, inspiration maps, or other color palettes you have found.

To Save Colors in the Swatch Drawer

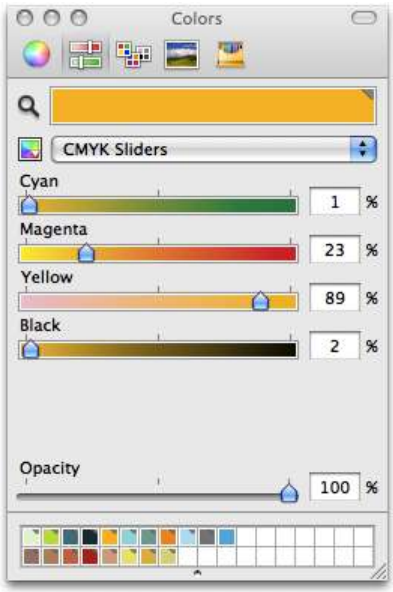
Open the Swatch drawer at the bottom of the Colors panel by dragging on the bottom drawer knob. Save colors you are working on by dragging them to the swatches. Delete swatches by dragging a white swatch over them. You can save up to 300 temporary swatches at one time (open the Colors panel and the drawer to the maximum size to see all 300 swatches.)



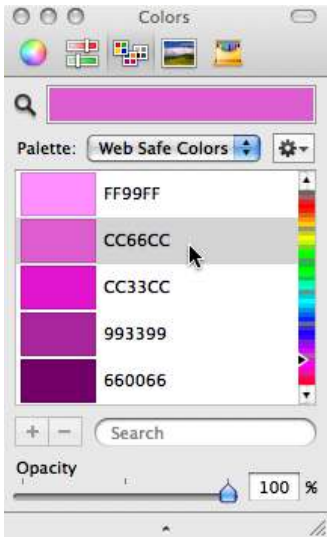
To Use Color Sliders

The second icon opens the Sliders portion of the picker, where sliders control all the normal color picking schemes: Gray Scale, RGB, CYMK, and HSB. Numeric values representing color can also be entered.

HINT: *CMYK colors are typically recommended when you are creating a graphic for print publication and want precise control over the printed colors. All colors used throughout are calibrated and subject to a color-controlled and calibrated workflow if you use one.*



To Use Color Palettes



The third icon opens the Color Palettes portion of the Color window. When considering a new color scheme or creating a new series of styles and symbols, Color Palettes is a great place to start. Color lists are presented from a drop-down palette menu. There are a few default color palette lists, including Web Safe Colors.

The strength of the Color Palettes is that you can make your own. Use the Magnifying Glass to select just the right colors. This is an excellent way to put a consistent set of colors at your fingertips. Additionally, color palettes created here can be shared with others and are available in all other applications that use the Colors panel (your List and Image Palettes are stored in the ~user > Library > Colors folder).

To create your own color list, choose New from the action menu. A new unnamed list will be opened, containing only the color currently in the large color well at the top of the window. Rename the list using the action menu.

Using any of the color selection methods described below, drag-and-drop colors from the color well or a mini-well in the bottom Swatch drawer into the list window. Alternatively, select a color and click "+" below the list window to add it to the list. Repeat selecting colors using any method, adding colors to the list.

Double-click on list items to give each of the colors a meaningful name. You can easily find colors by typing part of the name into the Search field below the List window.

To Use the Image Palette

The fourth icon opens the Image Palettes. The Spectrum Palette is loaded by default, but you aren't limited to it. You can open any picture you have, and use it as a palette, by choosing New From File or New From Clipboard from the Palette menu below the picture. You can also drag-and-drop images directly from the Image Browser into the image-well.

Once you have one, you can pick any color from within it, just by clicking. Or you can drag and watch the colors change. A tiny white square will show you exactly where you are. Drag-and-drop colors from the large color well to the bottom Swatch drawer for later use.

To Use Crayon Colors

The Crayon picker lets you quickly select from 48 basic colors. The Crayon colors are used for basic fills and strokes in the Styles & Clip Art palette.

To Customize the Toolbar

The Ortelius toolbar gives you one-click access to many of the actions you'll use when working with drawings.

As you work in Ortelius and get to know which actions you perform most often, you can add, remove, and rearrange toolbar buttons to suit your working style. To see a description of what a button does, hold the pointer over the button.

To customize the toolbar:

1 Choose **View > Customize Toolbar**, or right-click the toolbar and choose "Customize" from the contextual menu. The Customize Toolbar sheet appears.

2. Make changes to the toolbar as desired.
– To add an item to the toolbar, drag its icon to the toolbar.
– To remove an item from the toolbar, drag it out of the toolbar.
– To restore the default set of toolbar buttons, drag the default set to the toolbar.
– To make the toolbar icons smaller, select Use Small Size.
– To show only icons or only text, choose an item from the Show pop-up menu.
– To rearrange items in the toolbar, drag them to position.

3. Click Done.

Alternative Way to Customize Toolbar

You can also perform several toolbar customization activities without using the Customize Toolbar sheet:

1. Remove an item from the toolbar by pressing the Command key while dragging the item out of

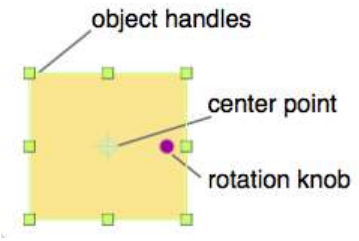
the toolbar.

2. Move an item by pressing the Command key while dragging the item around in the toolbar.

To show or hide the toolbar, choose **View > Show Toolbar** or **View > Hide Toolbar** from the main menu or click the white pill button at top right of window frame.

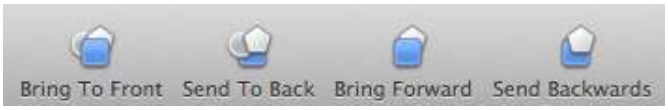
Working with Drawing Objects

Basic Move, Resize and Rotate



***Reposition** move objects by selecting with the Select [s] tool and dragging, or use the Geometry panel to adjust the object's x.y location.
***Resize** (scale) shapes by dragging any of the object handles with the Select [s] tool, or use the Geometry panel to adjust size.
***Rotate** objects around their center point by moving their purple rotation handle with the Select [s] key, or use the Geometry panel to set the rotation angle.
***Draw from center** by holding the Alt/Option-key when drawing.
***Maintain the aspect ratio** *to make perfect circles and squares* by holding the SHIFT-key when drawing.
***Reposition the object center point** move the center blue crosshair target with the Select [s] tool to move the point of object rotation.

To Change the Stack Order of Objects – Moving Forward and Back



Within each layer, objects have a stack order as they are drawn. Newer objects are drawn on top of existing objects. This is independent of layers, which control the display order of all objects among individual layers. Use the **Graphic > Bring To Front, Bring Forward, Send To Back, Send Backward** commands from the main menu to change the stack order of objects. Alternatively, right-click on a graphic for quick access to the contextual menu stack order commands. These functions are also available as toolbar icons via the Customize toolbar menu.

***HINT:** Occasionally, an object with a larger bounding box may be stacked "in front" of another object. Because of the overlap, the top object may either hide the lower object or make it difficult to select because the top object bounding box is in the way. Select the top object and use the **Tab-key** to cycle through a series of overlapping objects to select them.*

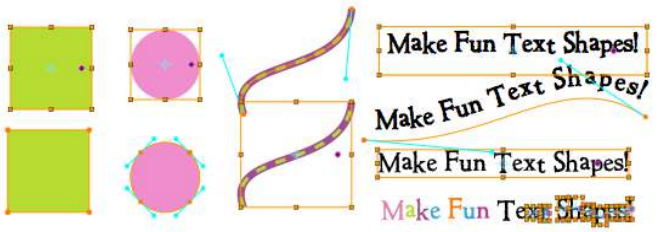
To Group Objects

Choose **Graphic > Group** from the main menu to group two or more objects, or use the **CMND-G keyboard shortcut**. Ungroup objects by choosing **Graphic > Ungroup**, or use the **SHIFT-CMND-G keyboard shortcut**. These functions are also available to the toolbar via the Customize toolbar menu.

Note that when objects are grouped, they are moved to the top of the stack order. If a style is applied to a group, all objects within the group will receive the new style. Text within a group can be double-clicked for convenient editing without ungrouping.

HINT: *When you place clip art onto your drawing canvas the clip art are composed of regular drawing objects, though they may need ungrouped to edit.*

To Convert Objects From Shape Mode to Edit Path Mode



Double-click a path or shape to quickly switch between shape mode and edit path mode. For example, a path object can be converted to a shape object and vice-versa.

Conversion can also be done through associated commands in the Main Menu. Convert a shape to a path by choosing **Graphic > Convert To Path** from the main menu, or right-clicking and choosing the command from the object's contextual menu. Conversely, choose **Graphic > Convert To Shape** from the main menu to convert a path to a shape, or right-click and choose the command from the object's contextual menu.

Paths

Path objects contain two or more points connected by a line. Points may be moved, added, and deleted. Bezier paths also have curve handles which can be moved independently, and controlled by holding either the CMND or Alt/Option keys.

Shapes

Shape objects are defined by a bounding box. Bounding box handles can be moved, and shape

objects can be resized using these handles. Hold the SHIFT-key to maintain the aspect ratio when resizing shapes. Grouped objects also take on a bounding box for the outer extent of the grouped objects. A rotation handle allows easy, direct rotation of shapes and shape groups. Objects rotate around the shape's center point, which is directly adjustable by moving the center target on the shape.

Note that special shapes, such as stars and round rectangles, will be converted into paths then back to normal shapes through this process (they cannot be converted back into special shapes).

Text

Text objects are conveniently converted to Path, Shape, or Shape Group using the 'convert to' commands. Text-box text can also be converted to Text On Path. Converting text to a Shape Group enables several glyphs to be converted into a group of individual shapes. Ungroup a shape group to render each glyph as an individual shape which can be independently styled and manipulated.

Copy and Duplicate Objects

To Copy and Paste or Duplicate Objects

Any object can be copied to the system clipboard and pasted back into the drawing or other applications such as Apple Pages(TM) or Keynote(TM). Select the object(s) and choose **Edit > Copy** from the main menu or use the **CMND-C** keyboard shortcut. Choose **Edit > Paste** or the **CMND-V** keyboard shortcut to paste objects.

Within the active layer, pasted objects will be placed with a predefined offset from the original object. When the pasted object is moved, subsequent pastes will respect the new offset of the moved object. When object(s) are pasted into a new layer they will first respect the original position, while subsequent pastes will be offset.

Alternatively, with the **Select [s]** tool active, hold the **Option-key** then press and drag an object to make quick copies.

Alternatively, use the **Edit > Duplicate Objects > Once** or **CMND-D** keyboard shortcut to quickly make single copies of the selected object(s).

To Copy and Paste an Object In Place (With No Offset)

There are several ways to accomplish duplicating an object and pasting in place. Quick copy a single object using the Option-key shortcut. Similar to dragging an object with the **Option-key** to create a copy, a simple click onto an object while holding the **Option-key** copies and pastes it in place.

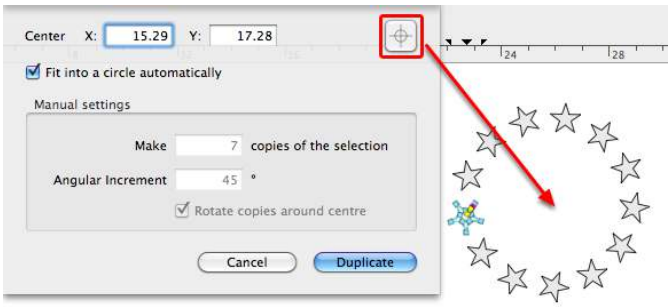
To paste an object(s) in its original position without an offset, copy the object(s) then hold the Option-key while choosing **Edit >** in the main menu. The command "**Paste In Place**" will become available (or use the **Option-CMND-V** keyboard shortcut).

Alternatively, choose **Edit > Duplicate Objects > Linear Duplicate…** from the main menu and set the X,Y offset to 0,0 to make multiple copies pasted in place.

Additionally, the **Layer > Move To** command in the main menu will cut and paste the selected object(s) in place onto a new or existing layer without offset.

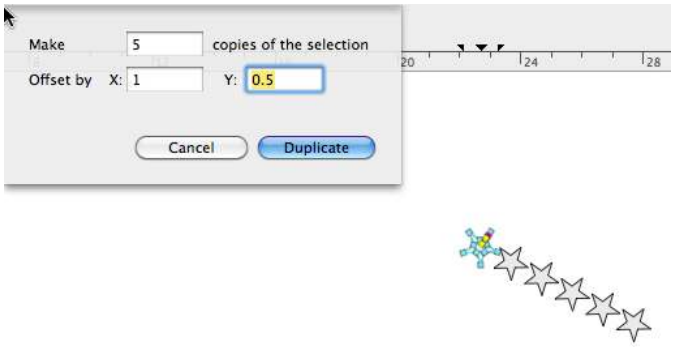
To Make Copies in a Circle Around a Point Using Polar Duplicate

Choose **Edit > Duplicate Objects > Polar Duplicate…** from the main menu to make multiple copies of an object centered around a point. Type the X/Y coordinates of the center point, or use the "Target" button to interactively set the center point by clicking the drawing with the mouse. Check the option to fit copies into a circle automatically. Alternatively, use the manual settings to designate the number of copies and angular increments.



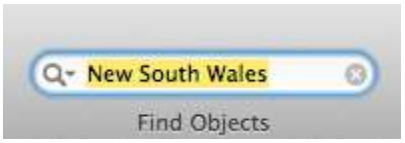
To Use Linear Duplicate

To duplicate an object several times choose **Edit > Duplicate Objects > Linear Duplicate…** from the main menu. Type in the desired number of copies and the desired X,Y offset (using the current drawing units).



Search Using Find and Advanced Find

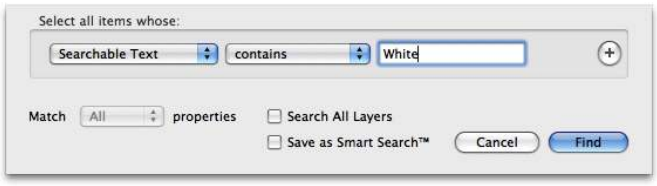
Find Objects



Find Objects on the toolbar is used to search and find objects in the active layer. Type in a search term and Ortelius will find and select any matching objects. By default, objects are searched based on: 1. visible text, such as text boxes or labels, and 2. the "searchable text" of objects, which may include their attribute values.

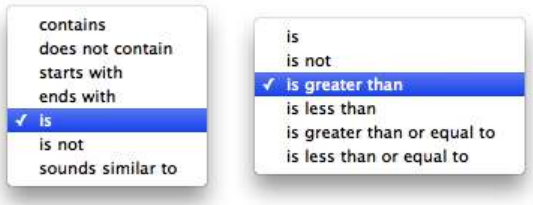
For example, open the Australia template map by choosing **File > New From Template** from the main menu and choosing **Countries > Australia** from the template chooser. Click onto "States/Provinces" in the layer list to make it the active layer. Now type "New South Wales" in the Search Bar and hit Enter. New South Wales is selected on the map.

Advanced Find



Click onto the drop-down menu on the Search Bar and choose **Advanced Find** to open the Advanced Find window. Advanced Find presents a drop-down list of the fields that are available for searching. These include object and style properties, such as style name and any available attribute identifiers. By default, the active layer is searched. As needed, check the option to search all layers. A search can be saved as a Smart Search for later use.

Advanced Find Operators

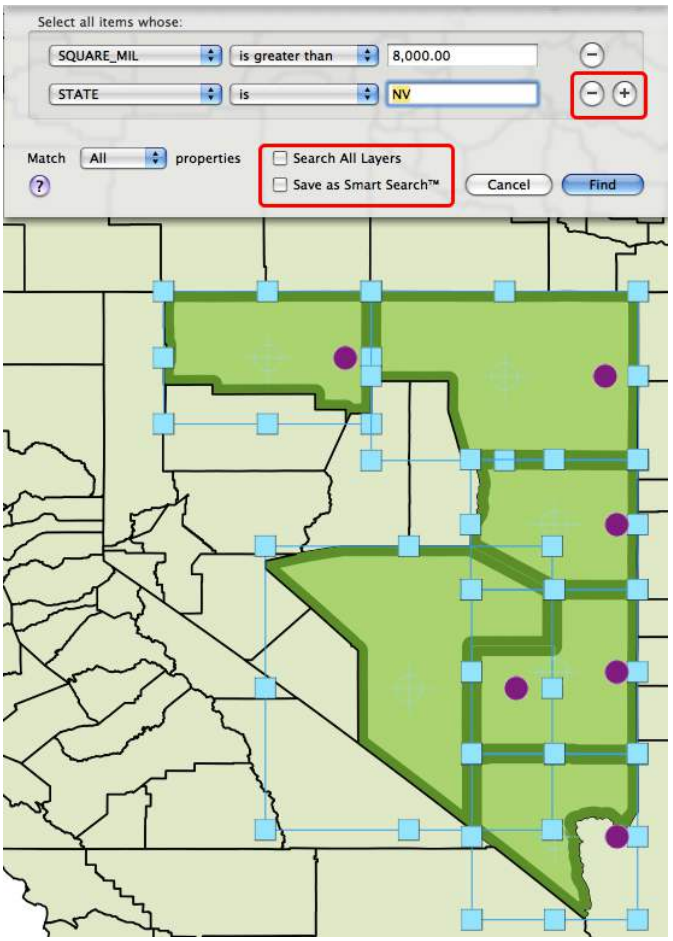


Operators available from a drop-down list are used to define the search. Operators are context sensitive depending on the data type being used in the search.

HINT: The "sounds similar to" operator finds text that sounds similar when pronounced in English – for example searching for "Fosfer" will find "Phosphor." All other searches find an exact (but case-insensitive) match based on the actual characters.

Building Complex Searches in Advanced Find

New search rows can be added to build complex search queries. In this example, counties in the state of Nevada whose area is greater than 8,000 (square miles) were selected. Searches can be saved as a Smart Search for later use.



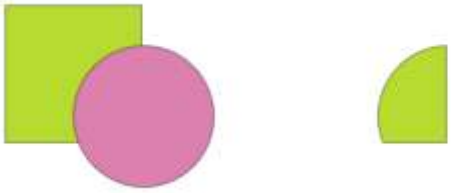
Combining and Clipping Shapes in Ortelius

To Combine Shapes with Union

Use Union to combine two or more shapes into a single shape object. Select the shapes to be combined and choose **Graphic > Combine > Union** from the main menu. Note that the new shape will adopt the style of the top object in the selection.

To Intersect Two Shapes

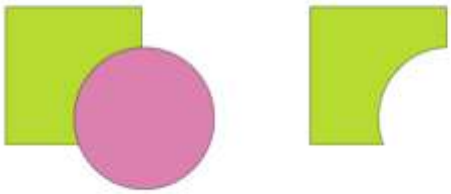
Intersecting two shapes results in a new shape that is based on the overlapping area between them. Select two shapes to be intersected and choose **Graphic > Combine > Intersect** from the main menu. Note that the new shape will adopt the style of the (lower) object being intersected.



As of Artboard 1.6, Images can be masked and cropped using non-destructive editing with the Intersect tool. See "Working with Images" for more information.

To Subtract Shapes With Difference

Use Difference when the portion of one shape (the top shape) is to be subtracted from another (bottom) shape. Select the two overlapping shapes to be subtracted from each other and choose **Graphic > Combine > Difference** from the main menu. Note that the remaining shape maintains its original style.



To Append Shapes Together

Combining like objects into single shapes can make your drawing more efficient. The Append command combines multiple shapes into a single shape object, with overlapping areas excluded from the new shape. Objects do not need to overlap to be appended together. Append is also appropriate for open paths, whereas the others work only with closed paths. Using Union, Intersection or Difference with an open

path produces undefined results (though Undo works to correct any unexpected outcomes).

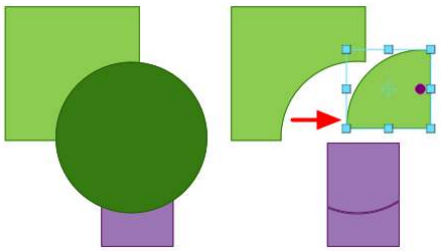
Select two or more shapes to be appended, and choose **Graphic > Combine > Append** from the main menu. Note that the new shape will adopt the style of the top object in the selection.

To Break Shapes Apart

Objects that have been appended together can be broken apart into their separate components. Choose **Graphic > Combine > Break Apart** from the main menu.

To Use Cookie Cutter

The Cookie Cutter is a valuable command for dividing shapes into separate objects. It provides easy access to intersect and cut shapes based on a top object that acts as the cookie cutter. All selected shapes that are intersected by the "cutter" (the top selected shape) are sectioned using both intersection and difference operations. The cutter is removed and the remaining pieces left in place. Alternatively, hold the Option-key while using the Cookie Cutter command to retain the original top selected shape (the "cutter").



Select the shape or shapes to be cut, including the top overlapping object to act as the cutter, and choose **Graphic > Combine > Cookie Cutter** from the main menu. Note that the new shapes will keep their original style or styles and any existing attribution information.

Alternatively, customize the toolbar by adding the Cookie Cutter icon to it for quick access.

To Add an Image to Your Drawing, Drag-and-Drop from the Image Browser

Use the Image Browser to quickly locate images from your Pictures folder or iPhoto library. **To place an image, drag-and-drop it** from the Image Browser onto your drawing canvas. To prevent large images from overwhelming small drawing areas, images are automatically scaled downward as needed when the drawing canvas is smaller than the image dimensions.

Click the iPhoto folder to expand and view iPhoto images. Attach or remove any folder by clicking the "+" or "–" in the lower left window. Drag editable SVG files from the Image Browser directly onto your drawing canvas.

Image files may also be dragged from the Finder or pasted from the computer clip board.

To Use the Image Adornment Style Component

An Image Adornment is a style component that works like a fill and can be added to a style that is applied to any shape. See "Using the Style Inspector" for more information about using Image Adornments with styles.

To Take a Picture

To add a photo snapshot to your drawing, choose **File > Take Picture...** from the main menu to open the Picture Taker window.

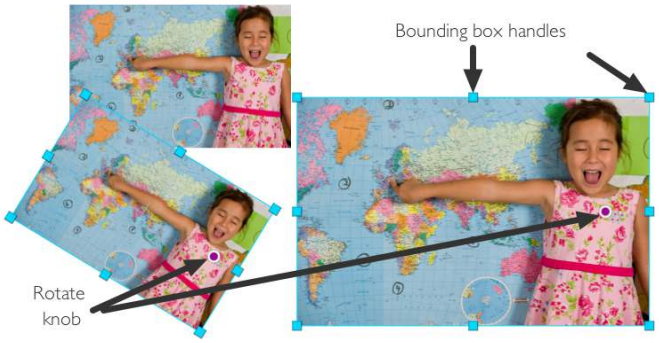
Click the camera "Take picture" button and smile! Adjust the picture scale and position as desired. Click "Done" when you're ready to place the photo into your drawing.

The Recent Pictures drop-down displays recently taken pictures and you can choose from pictures locally stored on your computer.

To Resize and Rotate Images

To resize an image, select it and grab one of the bounding box handles and drag. Hold the SHIFT-key to maintain the image aspect ratio.

To rotate an image, grab its purple rotation knob located to the right of the image center. Dragging will rotate the image around its center point. Note the center point (light blue cross-hair) can be moved to reposition the rotation centroid. Hold the SHIFT-key while rotating to constrain the rotation angle to 15-degree increments.



To Add a Border to an Image

Any line style can be added to an image to create a nice framed border effect. Select an image, then in the Styles & Clip Art palette double-click a line style to apply it to your image. For example, we've applied the "Frame - Earth Tone Matted" from the "Frame Styles" category. Note that fill styles will completely fill over the image and should not be used. Alternatively, choose a clip art border that has been designed as a frame, such as "Day at the Beach," and place it over the image resizing as necessary.

Move an Image Around Inside Its Frame

Double-click the image to make it active for editing. To **reposition an image** within its frame, grab and drag it. To **scale the image** within its frame, move the scale slider up or down.

To Mask and Crop Images (Simple)

To mask an image, double-click the image to make it active for editing. Move any of the image's bounding box handles to adjust its bounding box. Click and drag the image to reposition as needed. Click off of the image to finish editing. To return to the original image bounding box, right-click and choose "Fit To Image" from the contextual menu. To permanently crop and resample the image to fit the new bounding box, right-click and choose "Crop and Resample" from the contextual menu.

To Mask and Crop Images with Complex Shapes

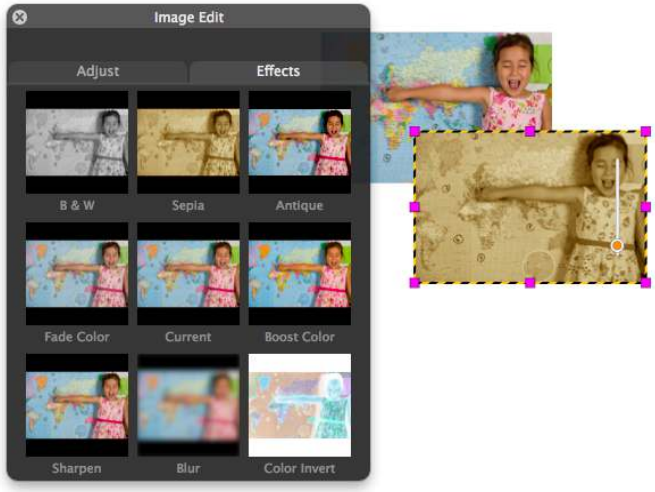
To **mask an image with another shape**, place the image then draw any shape – from a simple shape to a complex outline of the area you want to crop. Select the overlapping image and shape and choose **Graphic > Combine > Intersect.**

An image that is masked still has the original image hidden behind the mask area and is non-destructive. **To remove the mask**, right-clicking the image and choose "Remove Image clipping path" from the contextual menu.

An image with a mask can be permanently cropped to remove portions of the image that are hidden, thus reducing overall file size. Clipped images are resampled to the mask area. To **crop a masked image**, right–clicking the image and choose "Crop and resample image" from the contextual menu.

Adjust Image and Effects

Double-click an image to adjust its properties, such as exposure and saturation, or choose from a variety of image preset effects. Image adjustments and effects are permanent with your saved drawing.



Opening SVG Files

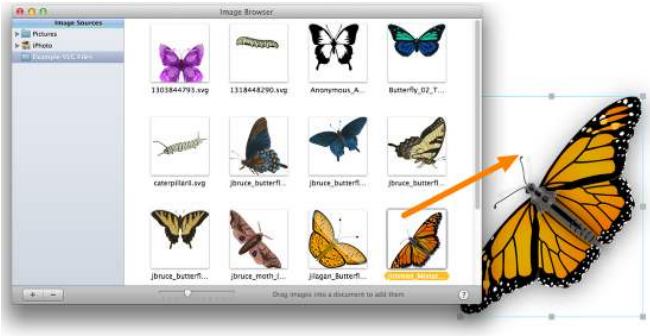
In addition to its native file format, SVG 1.1 files are now supported. SVG files are converted into native files upon opening and can be saved as such.

To **open an SVG file**, choose **File > Open** from the main menu.

Importing SVG Files

Importing SVG 1.1 files results in a fully-editable vector graphic that can be ungrouped and edited in any way you wish. Objects can be saved as clip art and/or symbols.

To **import an SVG file** into an existing drawing, drag-and-drop it from the built-in Image Browser or the Finder.



Important Notes About SVG Import

It is important to understand how the SVG 1.1 standard is implemented, since in some cases results may differ from another product.

Mapdiva's concept of graphic styles is rich and deep - substantially moreso than the classic "stroke and fill" concept of Postscript, which SVG largely mimics. Thus when importing SVG, we need to build graphic styles that match as closely as possible this simpler concept. By and large there isn't much difficulty, but in some cases results will differ, because of a mismatch between the two approaches. This is most evident with gradient fills and pattern fills. Usually, these will work as expected and the visual result will be what you expect, but as we don't strictly support the concept of SVG's "global" (user space) gradients, for example, when we encounter such a style, we do our best to translate it to something meaningful that gives similar visual results.

The SVG 1.1 standard is implemented, and ignores any and all non-standard comments that other applications frequently use to "help out" when parsing SVG. This can be another source of discrepancy between interpretation of an SVG file, and another application's. This is particularly problematic with files created by Inkscape, a popular open source application, since that heavily salts its SVG files with comments only it understands, and are not part of the SVG standard. The resulting files may fail to open entirely as expected, though in practice we find we do get good results most of the time.

Mac OS X includes an SVG parser as part of WebKit and QuickLook uses this to preview SVG

graphics in the Finder and elsewhere. We don't rely on this parser, but implement our own in order to convert SVG objects to equivalent vector objects and styles, not simply to render the graphics as an image. In some cases, the QuickLook parser fails to render an image at all, yet the file will import just fine. At other times, the small differences in rendering mentioned above may be evident.

The Image Browser uses own parser to render the thumbnail previews for SVG files, so what you see in the Image Browser is what you get when you import the file. Our parser is not just rendering the graphics however, it is converting them to objects, then creating the image. This makes it slower than a pure SVG renderer such as QuickLook. The Image Browser therefore creates each thumbnail image asynchronously using a background thread, and as each conversion is completed it "pops" into view. Subsequently the image is cached on disk and will be displayed quickly. Therefore expect a folder full of SVG graphics added to the Image Browser to take a while to process the thumbnails at first. We also recommend keeping the number of files in a folder down to something reasonable (a few hundred, say) to avoid the thumbnail generation going on for extended periods which could interfere with your workflow.

Sometimes an SVG file may fail to import. This can be for many reasons, such as bad data in the SVG, unsupported elements, missing external resources, or simply because the import takes too long due to the file being very complex. In the Image Browser, you'll see such failed imports as a file icon like this:

Such failed imports are reattempted next time the Image Browser is shown. When dragging and dropping an SVG into your drawing, a failed import will cause the drag to "spring back". When opening a file using Open…, an error message is shown.

Imports that timeout may sometimes succeed if tried again. Usually a timed-out import indicates a graphic that would be too complex to give reasonable performance subsequently. There are several possible reasons for this:

- A very large number of paths
- Paths having extremely large numbers of points
- Heavy use of blur filters
- Heavy use of shadows.

When creating SVG graphics, it is very easy to assume that objects can be duplicated and reused at will. Unfortunately that is often not the case. We have seen many cases of SVG artwork where objects have been repeatedly duplicated and yet effectively contribute nothing to the finished graphic. If such hidden objects have blur filters applied, or shadows, then a huge performance penalty is being incurred for no good reason.

Frequently, paths can be combined into a single object and have a shadow or blur applied just once in order to maximise performance. Giving performance some thought when creating graphics can make life much easier later.

An occasional source of difference between our applications and another SVG application is with text rendering. SVG does not embed the fonts it refers to, so if an SVG file references a font that is not available on your system, we will substitute Helvetica of the same size. Other SVG parsers sometimes just give up or skip the text when this font problem is encountered. While we try to plough on, obviously the results may not be what you expected. I you want to use a fancy font in a graphic, it is good practice, once you're done editing the text, to convert it to a path so that this font problem won't be an issue. Note that this does not apply to PDF export, since PDF *does* embed the fonts it references.

When we import SVG text elements, we convert them to a graphic, for best visual fidelity. That means the text can't be edited as text, though the graphical paths can be.

Working with Map Symbols

Symbols

Symbols represent points and other features on your map.

A symbol is a special object that is named and stored in a Library. Symbols help you streamline the creation and update of repetitive features across your maps. When a symbol is originally created, it is assigned as a "master" symbol which can be placed unlimited times on your map.

To place a symbol, choose the **Symbol Stamp [y]** tool and choose a symbol from the Styles & Symbols palette. Symbols are shown as available in the palette when the Symbol Stamp tool is active - line and area styles will be unavailable. Click onto the map area with the Symbol Stamp tool to place the symbol. Alternatively, drag a symbol from the palette directly onto your drawing canvas.

To replace one or more symbols on your map, select the point (symbol) feature(s) to be replaced and double-click a new symbol in the Styles & Symbols palette.

Key Concept: Master Symbols

Symbols are created from graphic objects, groups of objects, text, and/or images. When a symbol is originally created it is assigned the status of "master" and stored in the Library Manager. Each time you place a symbol on your map with the Symbol Stamp tool, an "instance" of its master is placed. The master supplies all the common properties, such as what it looks like, to all the instances of the symbol. If a master is changed, all the instances of that master (across all documents) will change as well.

Note: Symbols (and styles) in the Mapdiva built-in collection are locked and cannot be changed directly. To create an editable version of a built-in symbol, copy the symbol to a collection in "My Library."

Manually Scale a Symbol

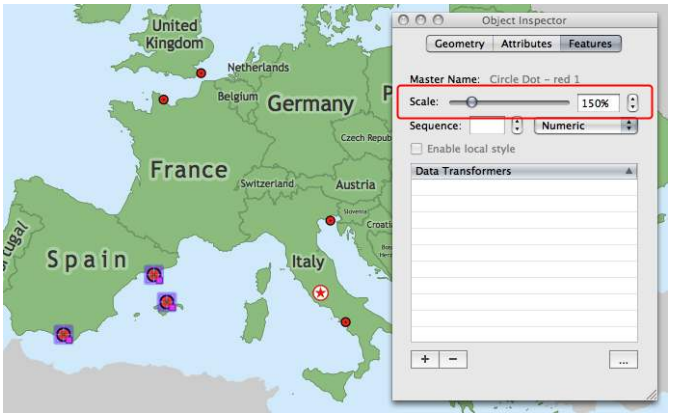
Individual symbols can be resized, or scaled, directly by grabbing the lower-right sizing handle on the symbol and dragging inward or outward.

Note, symbols in the Library are "master symbols." When you place a symbol on your map with the Symbol Stamp tool, you place a copy, or instance, of the master on your map. When you make changes to that instance, such as changing the scale of a symbol, the master symbol is unaffected by the change.

Rotate Symbol and Set Scale Factor in the Object Inspector

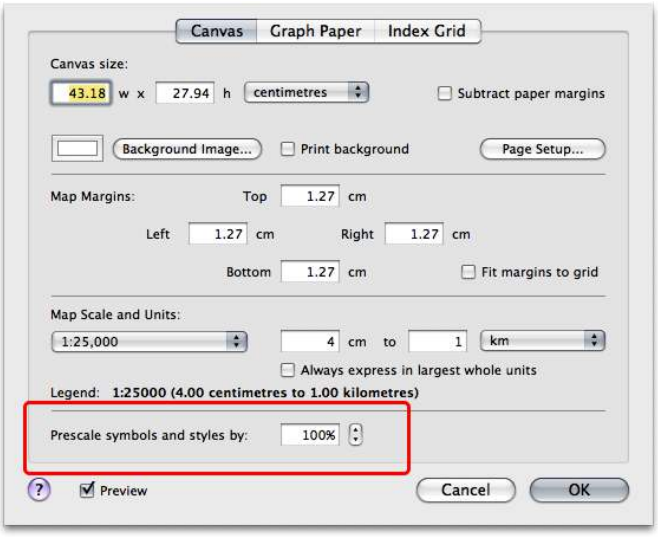
Select one or more symbol and adjust the scale factor from the Object Inspector - Features pane. Scale can be adjusted via the slider bar or by entering a percent scale factor. Multiple symbols can be scale at one time.

Rotate a symbol by adjusting the angle setting in the Object Inspector Geometry pane.



Pre-scale Map Symbols

On occasion, mappers may work with a symbol set that is based on exacting symbol specifications. For example, symbols for the International Specification for Orienteering Maps are sized according to exact specifications for viewing at a particular scale (1:15,000). Their specification allows symbols to be rendered at 150% for viewing on 1:10,000 maps. Ortelius makes it easy to pre-scale all map symbols to before they are even placed on your map. Choose **File > Drawing Setup** in the main menu to set the pre-scale factor. Note, under most circumstances this setting should remain at the default 100%.



Pick Up and Place Symbols

To make a symbol that is already part of your drawing the active symbol for use with the Symbol Stamp tool, use the Pick Up command. With the symbol selected, right-clci and choose 'Pick Up' from its contextual menu. The symbol will be picked up (removed from the drawing), the Symbol Stamp tool activated, and the picked-up symbol becomes the active symbol.

To pick up a symbol without removing the original from your drawing, hold the Option-key while using the Pick Up command. The Symbol Stamp tool is activated and the picked-up symbol becomes the active symbol without affecting the object that was picked-up (the symbol is not removed from the drawing).

Sequential Markers

'Sequence Marker' symbols are available in the Ortelius built-in library. Sequential marker symbols let you quickly place numbered markers on your map to highlight points of interest. Place Sequential Marker symbols just like any other symbol and they'll automatically number themselves 1,2,3...

Ortelius provides several ways to re-order sequence numbers to fit the way you work best:

Delete re-orders the sequence
After placing a series of Sequence Markers, if a marker in the series is deleted the remaining markers will automatically renumber so there are no gaps in the sequence.

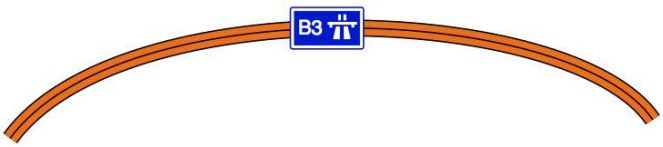
Grouping re-orders sequence
Grouping two or more markers in the sequence will automatically renumber the grouped markers, placing the grouped markers at the end of the sequence.

Use Object Inspector to re-order sequence
Change a the sequence of a marker from the **Object Inspector – Features** pane. Select a marker and use the up and down arrows under "Sequence" to edit the selected marker's sequence number.

Edit > Symbols > Sequence to re-order sequence
Changes to the sequence can be made by selecting a marker and choosing options from **Edit > Symbols > Sequence** in the main menu. Options include "Move to start," "Move to end," "Move backward," and "Move forward."

Sequence markers can be switched to different types, such as numeric (1,2,3...), alphabetical (A,B,C...), roman numeral (I, II, III...), by choosing **Edit > Symbol > Sequence >** or from the **Object Inspector - Features pane** and choosing the type.

Shields



Ortelius is loaded with road shields that can be placed onto roads with route numbers. When “snapped” to a track, shields adopt the attributes of the track as available. When the map data attribute (found in the Object Inspector) "***Route_Num***" is present for the road, the shield will automatically adopt the route number.

The symbols that support the '%%Route_Num' attribute all contain the word "Shield" in the symbol name. Open the Symbols palette and under Symbols enter 'shield' in the search bar. All the shield symbols will appear.

Route numbers can be added to linear tracks in the Object Inspector Attributes pane. Click the "+" button to add an attribute and choose "Route Number" from the drop-down list. Complete the process by entering the correct value for the route number. Note, you can select more than one track at a time to add attributes. For example, if you have several roads you can select them all and add a route number to them. Then, keeping the Object Inspector open, select each road to add the attribute value. When you place a shield onto the track, it will automatically adopt the route number. You can right-click a shield on a track to align it to the track or not.

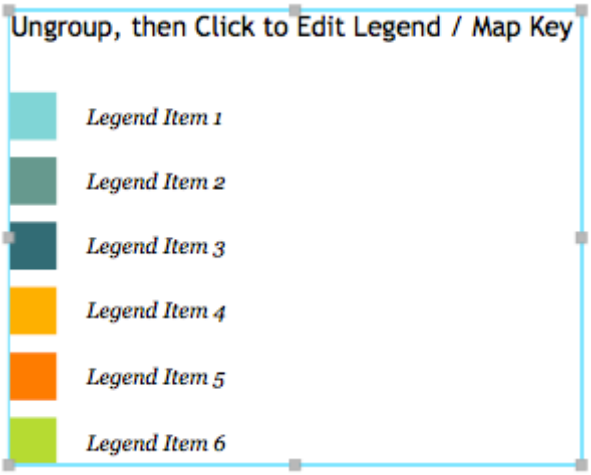
For standalone symbols (such as when showing a shield in a legend), add attributes such as a ‘Route_Num’ attribute directly to the symbol. Alternatively, add a New Label and double click the label to edit the text. Note that the label can be repositioned to the center of the symbol.

Embellishments and Legend/Key

Embellishments, such as this cartouche, are examples of special symbols. These objects are saved in the Symbols Library for convenience and when placed can accept labels or be detached from their master for additional editing.

Automatically Detached Symbols (Clip Art)

Symbols can be set to automatically detach from their master when the symbol is created. When symbols are detached from their master they become regular graphics (these can be referred to as clip art). Clip art may need ungrouped before they can be edited. Map legends are examples of automatically detached clip art available in the Ortelius built-in library.

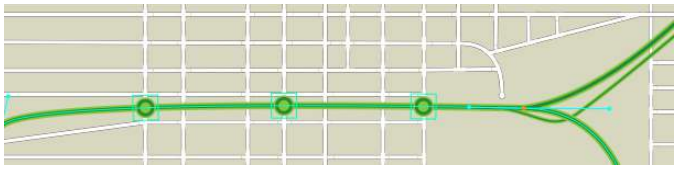


Adornments on Tracks

An adornment is any object, symbol, text, or image that is snapped to a connectable track. Once placed as an adornment, the object becomes a property of the track. By default, adornments are aligned to follow the direction of the track; alternatively, they can be set to align with the page (right-click the adornment and uncheck "Align With Track"). Adornments will move when the track is moved.

Any object can be copied (**Edit > Copy** (or Command-C)) and pasted onto a track as an adornment. Simply right-click a track and choose Paste Adornment, or choose **Edit > Paths & Tracks > Paste Adornment** from the main menu.

Place Symbol Adornments with the Symbol Stamp Tool



Use the **Symbol Stamp** tool to place symbol adornments directly onto a track. When placed, the symbol will "snap" to the track feature and become a property of the track. Special symbols, such as shields, will adapt certain attributes from their track (for example, route numbers) as appropriate.

Positioning

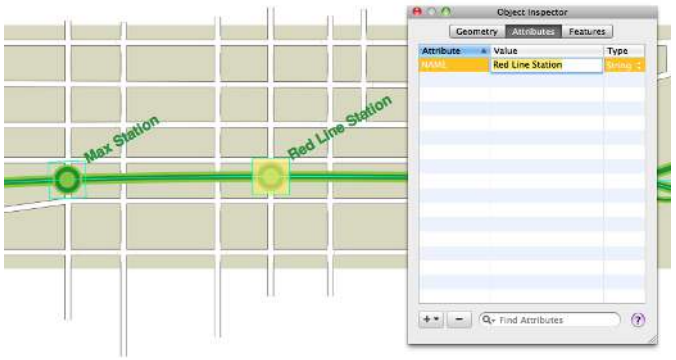
To reposition an adornment, click twice to select the adornment box then drag it along the track. By default, adornments align with the angle of the track. To keep adornments aligned with the page, right-click an adornment and disable (uncheck) "Align With Track" from its contextual menu. To adjust the angle of an adornment, right-click an adornment and choose an angle increment from its contextual menu. To move a symbol off a track, right-click an adornment and choose "Pick Up" from its contextual menu. The adornment will become an active symbol to be placed with the Symbol Stamp tool. Choose "Delete Adornment" to delete an adornment from a track. Alternatively, drag the adornment off the track and release to delete. To delete all

adornments, select the tract and choose **Edit > Paths & Tracks > Delete Adornments** from the main menu.

Distributing Adornments
To distribute three or more adornments evenly between the first and last adornment, select the tract and choose **Edit > Paths & Tracks > Distribute Adornments** from the main menu.

Related Topic: Using Sequence Markers, Shields, and Special Symbols

Editing Adornment Attributes



To access a symbol adornment's attributes while it is snapped to a track, click twice onto an adornment to make it the active object. The selected adornment will be highlighted and its attributes can be edited in the Object Inspector. Adornments will remain active until a different object type is selected. Click onto the next adornment to continue editing attributes as desired.

HINT: To have labels displayed on symbols that are track adornments, a symbol must be used that has a visible label before it is attached as a track adornment. For example, place a symbol on your drawing canvas and add a label and position it as desired. Next, copy the symbol, then right click the track and choose Paste Adornment from the contextual menu. Alternatively, create these symbols with a label added to the object's shape before the symbol creation process. Note, symbol labels cannot be selected and positioned independently once placed on a track as an adornment.

Related Topic: Creating New Symbols.

Creating New Symbols

Create Symbol

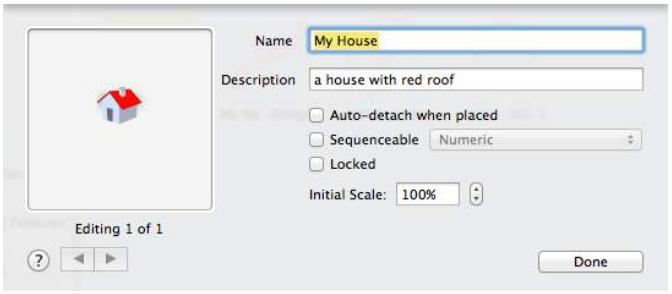
Graphics, images, and text can be used to create new symbols. Symbols cannot contain other symbols, nor can they contain tracks. A graphic containing multiple objects must be grouped before turning into a symbol.

Click onto the graphic to select it.

With the graphic selected, choose **Edit > Add Symbol To Library…** [CMND-Y] from the main menu, or click the **Create Symbol** icon from the toolbar (note, the Create Symbol icon is not in the toolbar by default and can be added by customizing the toolbar). The symbol is automatically added to the Library Manager in My Library. If no collections are available in My Library, a new collection called "My Symbols" will be added for the new symbol to be assigned. The symbol is available immediately from the Symbols Palette. A dialog appears for you to name your new symbol(s) and apply settings.

New Symbol Dialog

Name your new symbol. As desired, add a brief description for the symbol.



HINT: To make your symbols easier to use, include a brief description. The description will appear in the Object Inspector and in the Library Manager information window when a symbol is selected.

Settings

"Auto-detach when placed" enables saving ordinary graphics in the Library to be used as clip art. When auto-detach is enabled, when the symbol is detached from its master when it is placed in your drawing. This is useful for graphic elements, such as legends that you will want to edit after placement, but is not typical behavior for map symbols. The default setting is unchecked for Auto-detach symbol. For most symbols, keep the default setting.

"Sequenceable" indicates the symbol can obtain automatic numbering as it is placed on a layer. This is required for special symbols such as

Sequence Markers and unnecessary for most other symbols. It is unchecked by default.

"Locked" symbols cannot be edited without being unlocked first. It is unchecked by default.

"Initial Scale" assigns a scaling value which is applied to each symbol instance initially. When a symbol is stamped, this value multiplied by the document pre-scale value is used to set the initial scale value of the symbol. Scaling changes are not applied retroactively to previously placed symbols. The default value is 100%.

Click "**Done**" to complete the process.

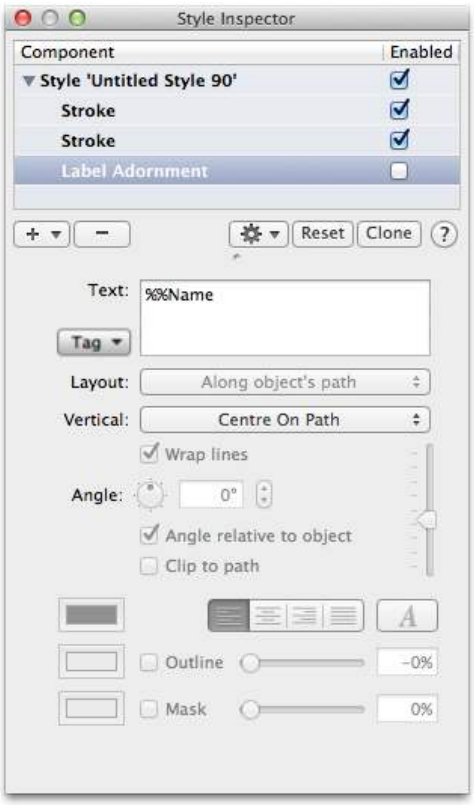
Creating Multiple New Symbols in One Session

If you have many objects to create new symbols from, select all the objects and click New Symbol. In the Create Symbol dialog, name the first symbol and add a description. Next, use the advance button to advance to the next symbol and repeat until all symbols have been added. Note you can click "Apply to all" to apply your selected settings to the symbols. Click **"Done"** to complete the process.

You can review all the settings for the selected objects by navigating through them using the arrowed buttons.

Defining a Symbol Label Template

All symbols that are placed on your map can accept labels, and the style of a symbol's label can be pre-defined with a label template. Unless otherwise defined, default symbol labels are rendered with Helvetica font and sized proportionately to the size of the symbol.



Custom label templates are defined before an object is turned into a symbol. Labels use the underlying style from a Label Adornment as a template. To define a custom label template, add a Label Adornment to the object's style before your graphic is converted into a symbol. If your graphic is comprised of a group of objects, ungroup and apply a Label Adornment to one of the object's styles (preferably the top-most shape).

In the Style Inspector, click the "+" button and add a Label Adornment style component. Adjust the font settings and color as desired.

Label Adornments can be a constant string of text, free text associated with a label, or text associated with an intelligent label. Intelligent labels automatically detect and use a feature's attribute information using a special style component tag for Label Adornments. For example, choose the tag "Name" from the drop-down Tag list to automatically add the text adornment tag "%%Name". If no attribute exists when labeling symbols on your map, the label template will still be applied and the new label will read "Label" ready for free-text editing.

In the Style Component list, disable (uncheck) the Label Adornment after defining it.

Preview Your Label

Assuming your top object with the Label Adornment is a shape that accepts labels (if not, use Graphic > Convert To Shape) select it, then right-click and choose "Add Label." A shape label will be added and you will be able to see the label style you've just defined (since it is a label on a shape, it will be placed in the center but you can grab and move it as desired).

a. If the label isn't quite how you'd like it, delete the label and return to the Style Inspector to make changes
b. Repeat as necessary

After you're satisfied, delete the shape label before creating the symbol. If the label is not deleted, it will be retained as a visible label with the symbol.

Group your objects as necessary and create symbol. The font settings from the Label Adornment will be applied to the labels you add.

Symbols with Visible Labels

Simple symbols (made from a single object) can contain a visible label by default. This can be handy, for example, for creating labeled symbol adornments for tracks.

Add a label to a shape object before creating the new symbol. Assuming your object is a shape that accepts labels (if not, use Graphic > Convert To Shape) select it, then right-click and choose "Add Label." A shape label will be added. The will assume the style properties of its Label Adornment if one has been defined. A label's style and rotation settings will be retained after converting to a symbol.

HINT: A symbol comprised of a group of objects with shape labels will reveal its labels when the symbol is detached from its master. This can be handy, for example, when creating a locator map with its areas labeled, then saved as an auto-detached symbol.

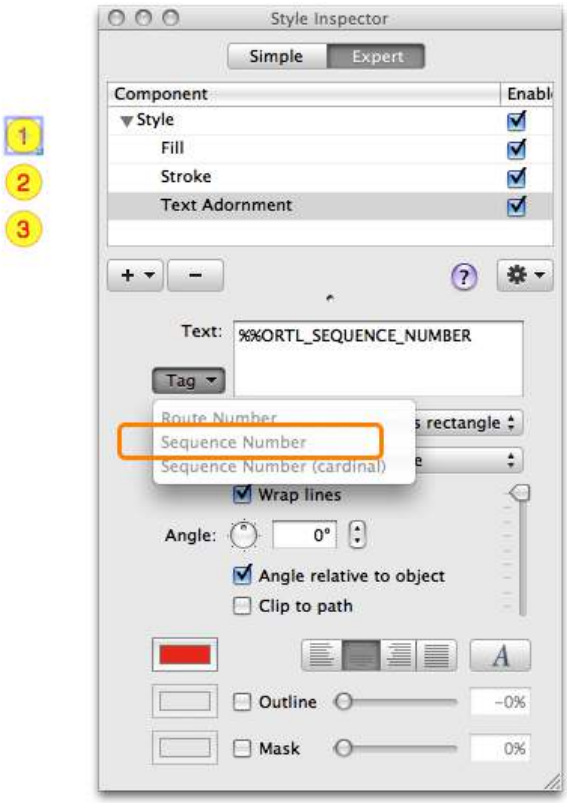
Creating Symbols from True Type Fonts

The character images, or "glyphs," from True Type Fonts (TTF) can be converted to map symbols. To create symbols, the glyphs must first be converted into individual shape objects.

1. Place TTF glyphs in the map area using the Text Box tool. Select the font you want to use, or choose **Edit > Special Characters** from the main menu to open the Special Characters window.
2. After typing one or more TTF glyphs, **right-click** the text box and choose **Graphic > Convert To > Shape Group** from the main menu (or right click and choose **Convert to Shape Group**) then **Ungroup** to obtain each glyph as a separate object.
3. To further explode and modify multi-layered objects, choose **Graphic > Combine > Break Apart** from the main menu and modify the style or re-color individual components. Regroup before creating as new symbol.
3. Select the shape(s) and choose **Edit > Add Symbol To Library…** from the main menu.

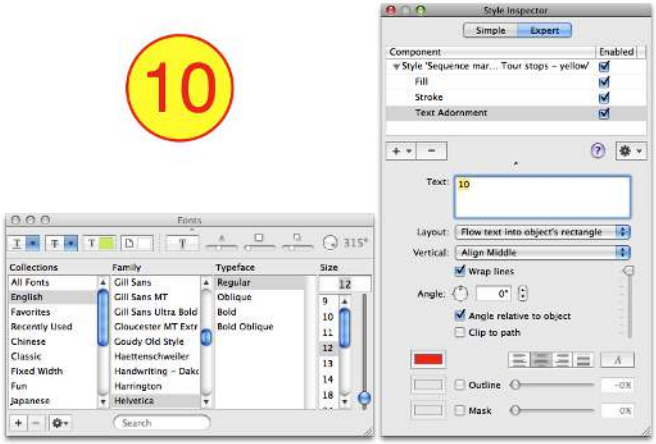
Creating Custom Sequence Markers

Sequence markers can be made from any shape, for example a circle or square, that has been styled to include the "%%ortl_sequence_number" Label Adornment tag and enabling the sequnceable setting when the graphic is turned into a symbol.



After drawing a shape, use the Style Inspector to define the style. Sequence markers rely on a special style component tag for Label Adornments when the style is defined. Choosing the tag "Sequence Number" from the drop-down list automatically adds the text adornment tag "%%ortl_sequence_number".

HINT: *To view the number while you adjust its style, type a number into the content well to temporarily see the number while applying text properties, such as color, font size, and positioning. When you are satisfied with how it looks, replace the number with the "%%ortl_sequence_number" tag.*



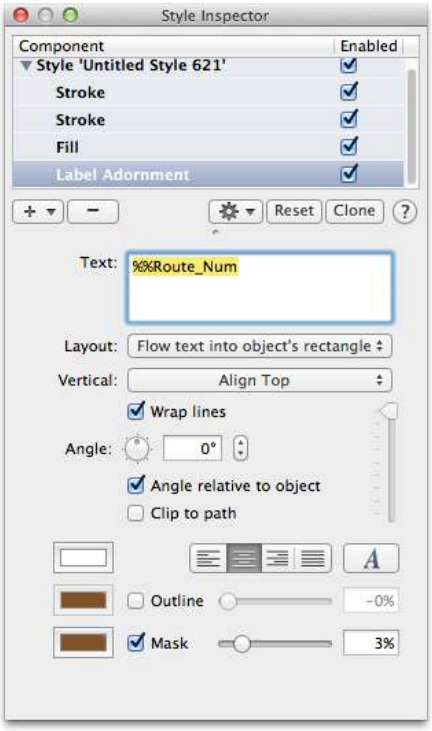
With your new marker selected, choose **Edit > Add Symbol To Library…** from the main menu to turn it into a sequence marker symbol.

*IMPORTANT: Make sure the "**Sequenceable**" option is checked in the Create Symbol dialog. As desired, choose the default initial sequence kind (for example, numeric or alphabetic) for your new marker.*

Click **"Done"** to complete the process. Your new sequence marker is now available from the Styles & Symbols palette and will be automatically numbered when placed.

Creating Shields

Much like Sequence Markers, Shields can be made from any shape, for example a circle or square, that has been styled to include the "%%route_num" Label Adornment tag and turned into a symbol using the **Edit > Add Symbol To Library…** command.



After drawing a shape, use the Style Inspector to define the style. Shields rely on a special style component tag for Label Adornments when the style is defined. Choosing the tag "Route Number" from the 'Tag' drop-down list automatically adds the text adornment tag "%%route_num".

With your new shield selected, choose **Edit > Add Symbol To Library…** from the main menu to turn it into a symbol.

Click **"Done"** to complete the process. Your new shield is now available from the Styles & Symbols palette and will automatically adopt route numbers when placed on tracks with the Route_Num attribute.

Use the Library Manager to Share Styles and Symbols

Symbols and styles that you create can be shared with others. Open the Library Manager by choosing **Window > Library Manager** from the main menu, or clicking the **Library Manager** icon in the toolbar (note, the Library Manager icon is not in the toolbar by default and can be added by customizing the toolbar).

Download Collections

The Mapdiva website now contains downloadable Collections shared by Mapdiva, LLC and other Ortelius users. Visit the Symbol Collections page to explore what's available.

Import Symbol Collections From Others

Easily import Libraries that you download into the Library Manager. Download & unzip the file as necessary, then choose "Import Collection…" from the Library Manager – Action Menu. The collection will be imported into My Library and displayed. For use with Ortelius 1.1 and later.

Alternatively, double-click the **unzipped** file in Finder to automatically launch Ortelius and install the collection.

Export Symbol Collections

Styles and symbols that you create can be exported for archive and sharing with others. Choose "Export Collection…" from the Library Manager – Action Menu. The collection will be exported as a zipped Ortelius symbol collection file with the name and to the location you specify.

Working with Text and Labels

To Add and Edit Text

NOTE: Adding text to your Ortelius drawing is slightly different than applying labels to individual map features. To add labels, see Using Map Labels and related topics.

To add text to your drawing, choose the **Text Box** tool then click on your drawing canvas to place the text box. As needed, double-click with the **Select [s]** tool to make the text active for editing. Start typing to add text. Click outside of the text box to end editing. To resize the text box, click and drag the object handles.

Alternatively, when placing a text box you can click-and-drag to place the text box at a larger size.

Double-click the text box with the **Select [s]** tool to edit existing text. Click outside of the text box to end editing.

HINT: *If you prefer to have the Return-key end editing, disable (uncheck) "Return-key inserts a new line when editing text boxes" in the* ***Preferences > Editing*** *pane; while disabled, hold the* ***SHIFT-key*** *while clicking 'Return-key' to insert a new line.*

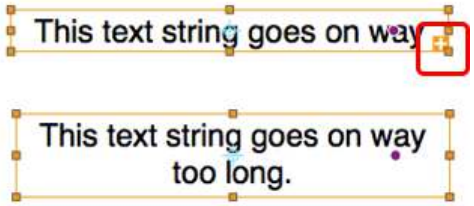
To Change Fonts or Style of Text

Text is styled directly through the Fonts panel and Text commands in the main menu. With one or more text objects selected, open the Fonts panel. As desired, choose the font and associated style elements, such as size, color, and shadow. Alternatively, colors can be dropped on text objects directly from the Colors panel.

Several text formatting options are available through the main menu. Choose **Text >** to choose from styles, alignment, case, kerning, and more. The Fonts panel offers font selection and custom effects, including outline, shadow, and mask. Align, tighten and loosen kerning, change case and baseline are available menu options and keyboard shortcuts. Font effects and options can be applied to blocks of text, individual words, and and even individual glyphs. For full creative control, including applying styles and distortion, you can convert text to shapes, shape groups, and paths.

To Expand the Text Box When Some Text is Hidden

When text extends beyond the confines of the text box an indicator "+" is shown in the lower right-hand corner of the text box prompting you to enlarge it.



HINT: *Text in a box will not be visible if the font size is larger than the text box. Use the sizing handles on the text box to make it bigger, or right-click the text box and choose "Fit To Text."*

To Add Text On a Path

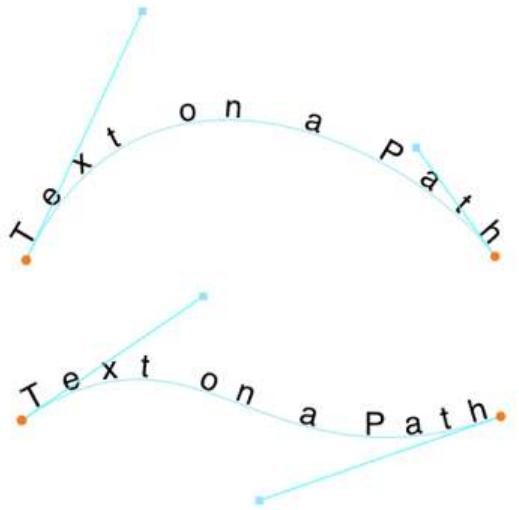
The **Text On Path [e]** tool makes curved text beautiful and easy. A bit of practice is all it takes to give your curved text an expert look. Text On Path uses curves with the same controls as the Bezier Path tool.

Choose the Text On Path tool. Press and drag to place the starting point for your text on a path, release the cursor and continue placing points along the curve. Double click (or hit ESC-key) to end. Use the curve handles to adjust the curves. Double-click the text with the **Select [s]** tool to edit (make sure you click onto a letter when double-clicking).

It is a good practice to keep your text curves simple. With only two points you can create smooth c-shaped and s-shaped curves simply by adjusting the points themselves (the orange dots) and the curve handles (the blue squares). The longer the curve handles, the steeper your curve. Experiment by moving the curve handles around and altering the shape of the curve.

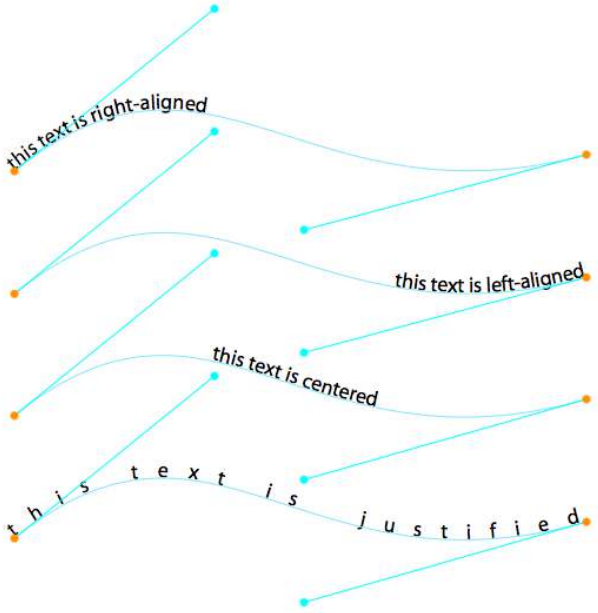
To Edit Text on a Path

Double-click the text with the **Select [s]** tool to edit (make sure you click onto a letter when double-clicking to recognize the selection). When selected, the text to be edited will float above the path and be highlighted. Type to edit text. Change the alignment as desired. Note, the "Justify" text alignment will provide an even spread across the path. Open the Font panel to change the font and appearance of text.



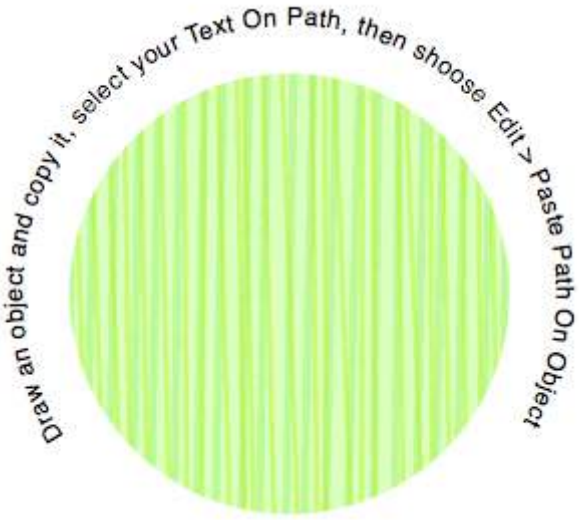
To Change Text Alignment Along the Path

Text On Path has "Justified" alignment by default, giving it a stretched appearance across the entire length of the path. Choose **Text > Align > Left / Right / Justified / Center** to change text along a path to your desired alignment.



To Fit Text to a Shape (for example a circle)

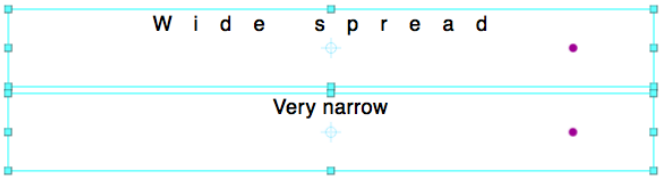
In addition to drawing a Bezier curve with the Text On Path tool, you can fit text to any shape. Use the Text On Path tool to place your text on your drawing canvas. Double-click the text with the **Select [s]** tool to edit it. Next, draw your shape. Copy the shape, then select the text and choose **Edit > Paste Path On Object** from the main menu. The text will now follow the path of the object.



HINT: *To wrap text only partially around a circle, use the Arc tool to draw an arc to the desired length and paste it onto your text using the above method.*

To Use Spreading (or Tracking) on Text

Text can be spread out across and area (called "tracking") by holding the OPTION-CONTROL keys on the keyboard and repeatedly pressing the right Arrow (end) key, or by choosing **Text > Kern > Loosen** from the main menu. Repeat as necessary to get a wide spread. Pressing the left Arrow (home) key tightens tracking.



Note that **Text > Kern > Loosen** is also used to add space (or "kerning") between letter pairs.

To Make Text Bigger, Smaller, Bold, Italic, and Underline

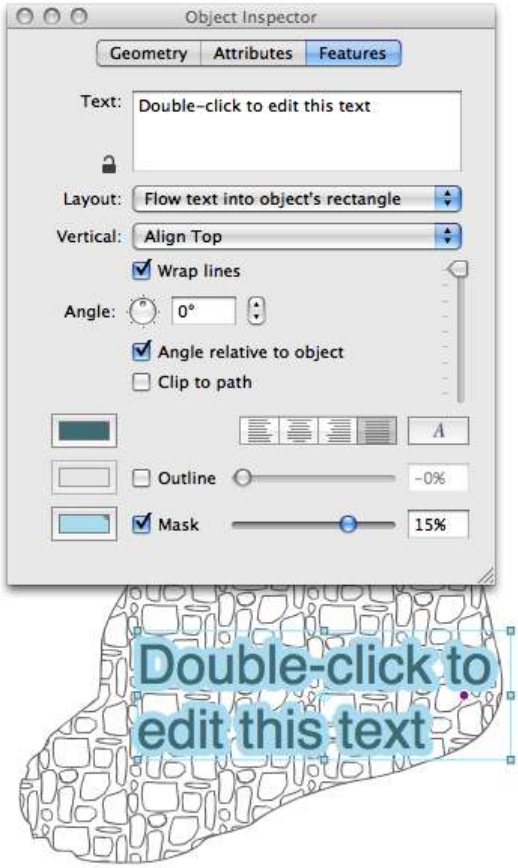
Modify text properties in the Fonts palette, or by choosing various **Text >** options in the main menu. Use shortcut keys to quickly modify text properties. For example, COMMAND"–" and COMMAND-SHIFT"+" quickly make text smaller or bigger.

Need multi-styled text? Text boxes can use multiple fonts, sizes, colors, and more in a single text box.

Editing Text and Text Properties in the Object Inspector

The Object Inspector provides a controlled environment for text box editing, styling, layout, alignment and advanced styling.

The text well in the Object Inspector shows the selected text, which can be edited directly or from this interface. Layout and vertical alignment controls are available for text-box and text on path. Note, variable vertical alignment is further controlled with the slider bar. Wrap lines is the default setting and enables a long string of text to flow to multiple lines within the text box. Angle and text justification settings are available. Click onto the color wells to change font, outline, and mask colors. The "*A*" font button opens the Fonts palette, further enabling font and font size settings from this interface. Advanced styling includes text outline and text mask.

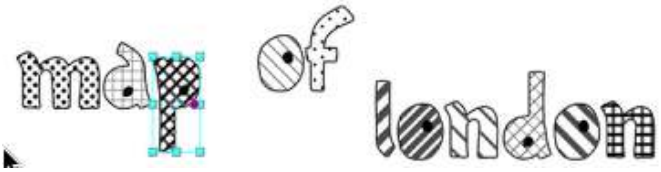


To Set Outlined and Masked Text

Use the **Object Inspector** or **Fonts** palette to add advanced styling, including text outline and text mask. Text outline and masking are particularly useful for making text stand out on top of dark, colored, or complex backgrounds. Masking can be any color as well as semi-transparent, and the size of the mask is fully adjustable.

To Make Shape Objects from Text and True Type Fonts

Text and True Type Fonts (TTF) can be converted into individual editable shape objects. These new shape objects can be further styled, grouped, and saved as clip art as desired.

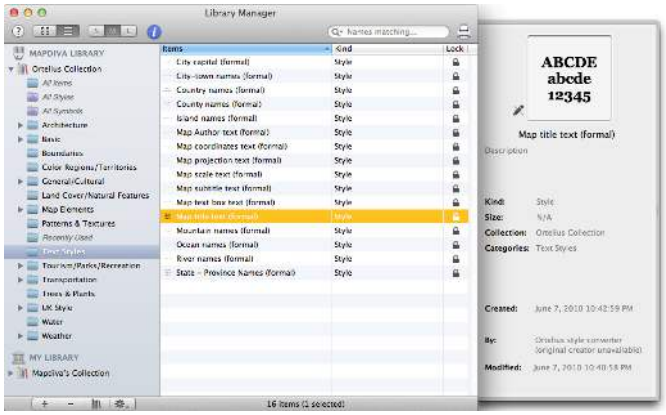


1. Place text in the drawing area using the Text Box tool. Choose the font you want to use, or choose **Edit > Special Characters** from the main menu to open the Special Characters window.

2. After typing one or more glyphs, select the text box and choose **Graphic > Convert To > Shape** or **Graphic > Convert To > Shape Group** from the main menu (or right click and choose **Convert to >** from the contextual menu). When converted to shape, the entire block of text is one shape. When converted to shape group, you can **Ungroup** to obtain each glyph as a separate object.
3. To further explode and modify multi-layered objects, choose **Graphic > Combine > Break Apart** from the main menu and modify the shape or re-color individual components.

Text Styles

Text on a map often serves the role of symbol, indicating important features and helping to distinguish features from each other. Like styles and symbols, text for features should share the same text style. For example, it is traditional to represent natural features on a map with serif fonts and cultural features with sans-serif fonts. Ortelius comes loaded with Text styles designed to work together for mapping. Text for roads, rivers, oceans and more are included.



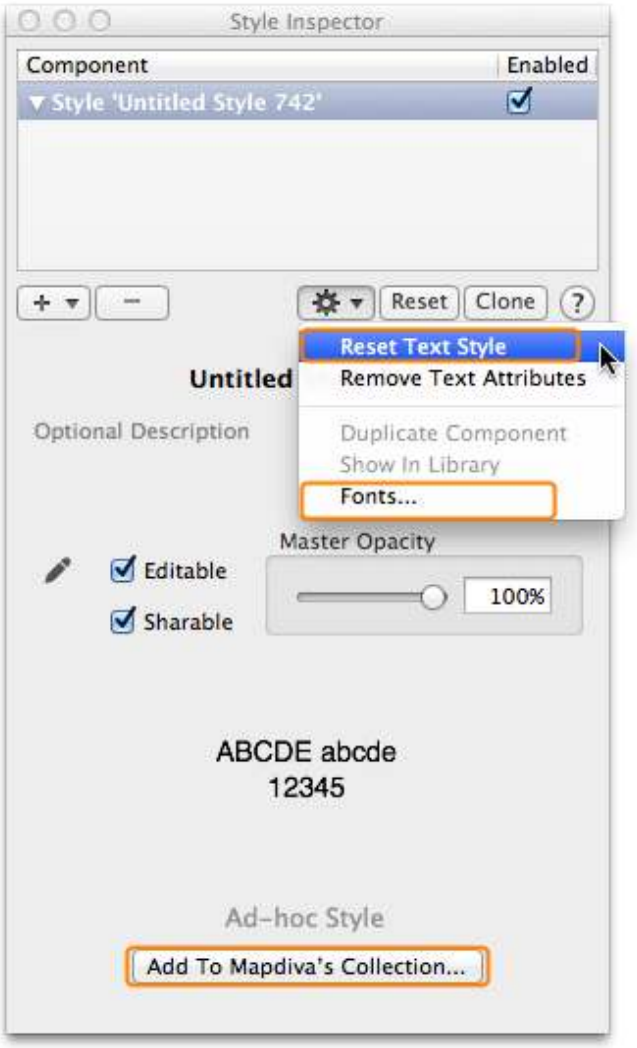
To apply library text styles, choose a Text tool, choose a text style from the Styles & Symbols palette, then place your text. Alternatively, select text that is in your drawing and double-click a text style in the Styles & Symbols palette to apply.

Creating New Library Text Styles

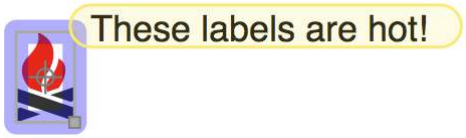
Similar to other styles, Text styles are created in the Style Inspector and saved to the Library for repeated use.

To visualize your new text style as you create it, place a text box on your drawing canvas. With the text box still selected, open the Style Inspector and choose '**Reset Text Style**' from the drop-down Action Menu (looks like a gear). Open **'Fonts…' from the Action Menu**. Set the font family, typeface, and size as desired. The name of the style automatically changes based on the in-use font and size – rename and add an optional description to the text style as desired.

When you are satisfied with your new text style, click the '**Add To User's Collection**' button. The text style will automatically be added to your collection and be available in Styles & Symbols palette User Library for immediate use.



Labeling Map Features



Labels are a key concept in Ortelius. Unlike ordinary text placed with the Text tools, labels are attached to map features. If the feature moves, the label moves with it. Labels make naming map features easy with intelligent naming, advanced styling, and just-right positioning.

Ortelius' labeling system opens a new chapter in WYSIWYG (what-you-see-is-what-you-get) feature labeling. No more going through multi-level menus and dialogs to turn on labels and change settings, only to have to repeat the process multiple times to get the right look. Direct feature labeling provides a revolutionary way to add and edit labels – directly on your map.

Note, labels can be turned on or off (visible or hidden) on your map by selecting the labeled feature(s) and choosing **Edit > Labels & Text > Hide(Show) Labels** from the main menu. Choose **Edit > Select All** and then **Hide Labels** to turn off all labels on a layer.

Label Symbols, Tracks, and Shapes

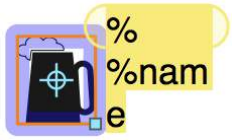
Each feature type – lines, points, and areas – has context-sensitive positioning for labels. For example, symbol labels for point features can be placed in one of nine standard positions around and at the center point (the upper-right position is the default). Track labels follow linear features and are positioned above, on, or below the line. Area feature labels are placed at the visual center of the shape.

Labels can also be moved into **any** position around the symbol by simply holding the SHIFT-key on the keyboard while moving it into the perfect position. Optional leader-lines can be added by right-clicking the label and choosing "Show Leader Line." Of course, if it is ever needed, you can always right-click the label and choose "Detach Label" to move it anywhere (the label will be completely detached from the feature and its attributes, and become an ordinary text object).

Free-text labels may be added to any point symbol, track, or shape object. Simple shapes, connectable tracks, symbols, and shapes from imported shapefiles support labeling. If you have an area object created with another drawing tool,

for instance an irregular polygon, select the object and choose **Graphic > Convert To > Shape** from the main menu, **or right-click** the object and choose Convert To Shape.

Free-Text Labels



To add a label, select the symbol(s) or shape(s) and choose **Edit > Labels & Text > New Label** from the main menu, or right-click the object to choose **New Label** from the context menu. Right-clicking opens the object's contextual menu and works only on the currently selected object. Linear feature labels are added using the **Linear Select [n]** tool.

If the feature has attribute information behind it that includes the feature's name, the label can automatically detect and label the feature with its name. Otherwise, the word "Label" will be inserted for editing. Double-click the label to select it. You will see a code starting with "%%" highlighted – ignore this tag and type a free-text label with the text you want to see. As with simple text objects, double-click the label to edit it any time.

Related Topic: Intelligent Labeling With Attributes

Labeling Multiple Features

The power of Ortelius' labeling system includes swift labeling of the features you want – all features or just a select few. Manually adding a label to each feature is not necessary. Select the features you want to label and choose **Edit > Labels & Text > New Label** from the main menu. If you want to stylize your label first, follow the steps described below, then copy and paste the label to others.

Step 1. Add a label to a feature and use the Fonts palette to style the label. Right-click your new label and choose **Copy Label**.

Step 2. Select the feature(s) you want to label and choose **Edit > Labels & Text > Paste Label** from the main menu. The label and its properties will be applied to all the features you have selected.

Step 3. There is no step 3! Can it be that easy? Yes, it can.

*HINT: To select the features you want labeled hold down the SHIFT key and click each object with the Select tool, or use **Edit > Select All** to select all features on a layer, or use Ortelius' advanced search to select specific features (for example, to select and label cities with populations over 100,000). Then choose **Edit > Labels & Text > Paste Label** from the main menu.*

Labels With Style

Labels go hand-in-hand with the map's styles and symbols, so of course we've designed them to work together. Ortelius is loaded with hundreds of styles and symbols. Styles not only define the look of lines and areas, they can also define the initial style for labels. So, when you place a river using a river style, the river's label style is already designed for you. As always, label styles are fully editable directly on the map, and you can easily create and share your own custom styles using the Style Inspector.

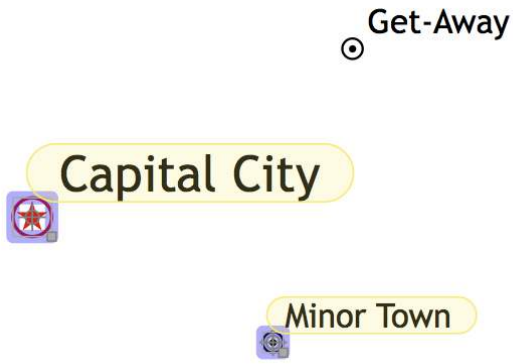
Changing a label directly will not over-write the Library style, rather these changed labels will be saved as "ad-hoc" styles unless they are created using the Style Inspector and added to the Library. Use ad-hoc styles when their use will be occasional. Use Library styles and symbols when they will be used repeatedly or need to be used later in other maps.

Changing label text styles is similar to changing them on simple text objects. Select the label(s) and edit the font in the Fonts palette. This method can be used with multiple labels at one time.

Selecting Multiple Labels

To select more than one label, SHIFT-click additional labels or COMMAND-click to select or deselect labels. Properties applied to labels, such as Fonts, apply to all labels in the selection.

Selected labels are shown using bubble-shaped highlights to distinguish the label selection from other kinds of selections in your drawing.



Copying and Pasting Labels

A label, including its style properties and content, can be copied and pasted onto any other similar object or objects (shape, symbol, or track). Right-click onto a label and choose **Copy Label** from the context menu. Select the receiving object or objects

and choose **Edit > Text & Labels > Paste Label** from the main menu, or right-click and choose **Paste Label** from the context menu.

An object can have multiple labels associated with it. For example, a symbol can have two separate labels positioned such that they do not overlap.

Hiding Labels

To temporarily hide labels on a layer, select the label(s) of interest or choose **Edit > Select All** from the main menu, and choose **Edit > Labels & Text > Hide Labels**. To show labels again, select the objects for which labels should be shown, or choose **Edit > Select All** from the main menu, and choose **Edit > Labels & Text > Show Labels**.

Alternatively, the **Show/Hide Labels** command is available from the context menu when right-clicking an object.

Deleting Labels

Select one or more objects to delete labels. Choose **Edit > Labels & Text > Delete Label** from the main menu.

Adding Labels to Tracks

To place labels on linear features, use the **Linear Select [n]** tool to highlight the connectable track where your label will be placed. Right-click the selected area and choose New Label. A highlighted label "bubble" shows where the label has been placed. Double-click the label bubble to edit the label text as desired. Linear Select and associated labels apply only to connectable tracks. To convert a path to a connectable track, select the path(s) and choose **Graphic > Convert To > Connectable Track** from the main menu.

The label will be placed in either the default style and positioned above the track, or its style and position will be based on the style that has been applied. Once placed, the label is fully editable. Labels follow the path of their associated linear features. If the path is moved, the label moves with it.

HINT: *Labels support multi-line text. Press OPTION-Return or SHIFT-Return on the keyboard to manually insert a line break.*

Note, line shapefiles features are imported as paths. If labels are desired, converting paths to tracks is a necessary step after importing. Some features, such as roads, it may be desirable to join multiple line segments.

Just-Right Positioning of Linear Feature Labels

Linear feature labels have handles for just-right positioning similar to the concept of handles with Bezier curves. To control placement, the left handle (yellow diamond) slides the label along the track. The right handle (orange diamond) controls the spread, or overall width, of the label along the line. The handle on top (blue diamond) controls the

vertical alignment of the label with respect to the line, moving the label up or down for perfect positioning.

Flip Label

Occasionally, you may want a label to run in the opposite direction along a line. Right-click on the label and choose Flip Label to change the orientation of the label relative to the line.

Detach from Feature

As with other curved text, it is good practice to keep linear text labels as simple as possible. Usually this means selecting a relatively straight section of the line to place your label. To place smoothly curved labels on lines with complex, sinuous routes, right-click the label and choose **Follow Trend Of Path** to enable basic label simplification. Alternatively, you can detach the label from the feature (right-click and choose **Detach From Feature**) and adjust its curve handles.

Copy Label to Multiple Tracks

A label can be copied and pasted onto one or more other tracks at a time. Add a track label. Position and edit style and content as desired. Right-click the label and choose **Copy Label** from the contextual menu, or choose **Edit > Labels & Text > Copy Label** from the main menu. Select other tracks. **Choose Edit > Labels & Text > Paste Label** from the main menu. The label, including its content, style, and positioning, will be copied to the other features.

Note, multiple labels can be placed along a line. Each one can have its own style and placement, as appropriate to your map.

Adding Labels to Symbols

Place a label on a point feature by right-clicking its symbol and choosing **New Label** from the contextual menu. Alternatively, select one or more symbols and choose **Edit > Labels & Text > New Label** from the main menu.

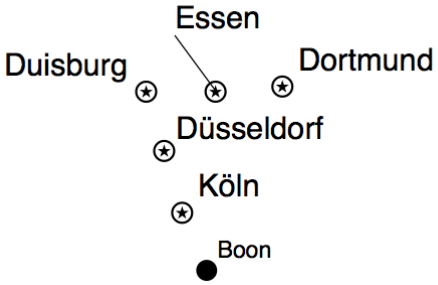
By default, labels are sized proportionately to the size of the map symbol. Custom label styles are defined in the Style Inspector before a graphic is turned into a symbol. Many of Ortelius' preloaded symbols have Text Adornment label templates defined, and labels will initially adopt the underlying text adornment style properties. Like linear and area labels, a highlighted label "bubble" shows where the label has been placed. Double-click the label to edit the label text at any time.

HINT: *Labels support multi-line text. Press OPTION-Return or SHIFT-Return on the keyboard to manually insert a line break.*

Related Topic: Creating New Symbols

Just-Right Positioning of Point Feature Labels

Just-right positioning means perfect placement every time. Initial label placement is the upper right-hand corner of the symbol. With the symbol selected, its label can be repositioned in any of eight standard positions surrounding the symbol, or positioned on center. Just grab it and move and the label will snap into position. A label can be rotated by dragging its rotation handle. Hold the SHIFT key while rotating to snap the angle to 15-degree increments.



Labels can also be moved into **any** position around the symbol by holding the SHIFT-key on the keyboard while moving it into the perfect position. Optional leader-lines can be added. Right-click the label and choose **Show Leader Line** from the contextual menu. Of course, if it is ever needed, you can always right-click the label and choose "Detach Label" to move it anywhere (the label will be completely detached from the feature and its attributes and become an ordinary text object).

Adding Labels to Shapes

Shape objects accept labels in much the same way as point features. Right click the shape and choose **New Label** from the contextual menu. A label is placed at the visual center of the shape. Labels will recognize attribute information if it has been defined. Alternatively, double-click a label to type free-text.

HINT: *Labels support multi-line text. Press OPTION-Return or SHIFT-Return on the keyboard to manually insert a line break.*

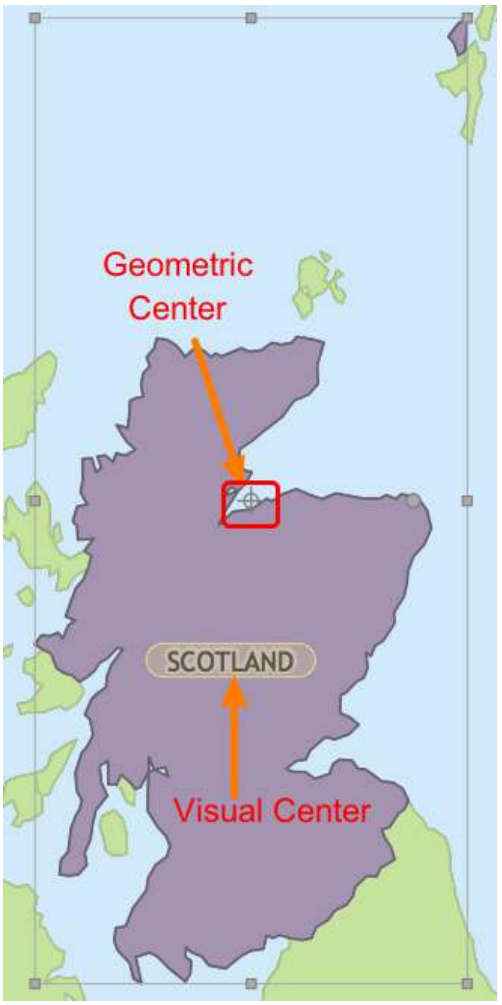
Simple shapes and shapes from imported shapefiles support labeling. If you have a special shape created with another drawing tool, for instance an irregular polygon, select the object and choose **Graphic > Convert To > Shape** from the main menu, or right-click the object and choose **Convert To Shape** from its contextual menu.

Just-Right Positioning of Area Feature Labels

Depending on a map's scale, areas can represent point-like objects such as cities or islands. Move the label into an outside position in these cases.

Label Placement

By default, labels are placed in the visual center of area features. The visual center provides for best placement when an area is irregular shaped. For example, the geometric center for Scotland is in water, the visually center places the label more where you would expect it.



When moved, labels subtly shift into ten standard click positions similar to labels on point features – eight positions around the shape, the geometric center point, and the visual center (which may be very close or the same as the geometric center). A label can be rotated by dragging its rotation handle. Hold the SHIFT key while rotating to snap the angle to 15-degree increments.

As needed, hold the SHIFT-key on the keyboard while moving the label for full placement control. Like labeling other object types, it is easy to style a label then copy and paste it onto other objects. When a label is copied and pasted to other objects, its positioning, content, and text style properties are maintained.

Spreading (or Tracking) Labels Across Area Features

Text can be spread out across and area (called “tracking”) by holding the OPTION-CONTROL keys on the keyboard and repeatedly pressing the right Arrow (end) key, or by choosing **Text > Kern > Loosen** from the main menu. Repeat as necessary to get a wide spread.

Note that **Text > Kern > Loosen** is also used to add space (or "kerning") between letter pairs.

Placing Curved Text Across Area Features

To create curved text for objects that span large areas, use the Text On Path tool. Alternatively, you can convert a label to text on path with the following steps. First detach the label from the object. Right-click the label and choose **Detach From Feature** from the contextual menu, or select labels and choose **Edit > Labels & Text > Detach From Feature** in the main menu. Note, the label will be completely detached from the feature and its attributes. Next, select and convert the text to 'text on a path' by right-clicking and choosing **Convert to > Text On Path**. Move the text path end points and curve handles into proper position. Text alignment should be "justified" to spread text across the path. As necessary, open the Object Inspector's Features pane to change the text alignment.

Bigger, Smaller, Bold, Italic, Underline

Modify label text properties in the Fonts palette, or by choosing various **Text >** options in the main menu. Use shortcut keys to quickly modify label text properties. For example, COMMAND"–" and COMMAND-SHIFT"+" quickly make label text smaller or bigger.

Intelligent Labels Use Attribute Information

One of the most useful features of Ortelius labeling system is the ability to add labels using attribute information from existing map data, such as an imported GIS shapefile data or from an Ortelius map template.

Attribute - Information that has been attributed to a feature, such as river name, forest type, population value, house number, or country name; commonly available with GIS map data.

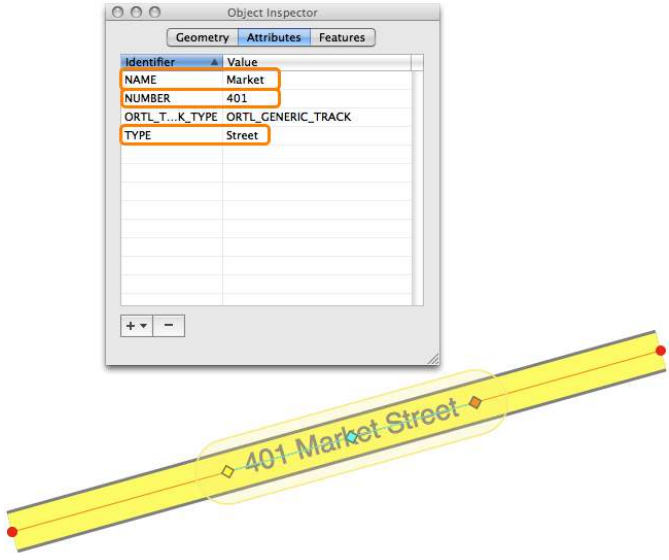
Labeling using attributes is an advanced feature. These labels are "intelligent" because they automatically use attribute information, such as road names, if that information exists behind the scenes.

Intelligent labels are placed exactly the same way as free-text labels, without any bulky menus to get in the way. Simply use a label tag (two percent signs "%%") followed by the attribute identifier as a placeholder for the label's value. For instance, "%%name" would auto-populate the label with the attribute "Name". Label tag identifiers are not case sensitive (in other words, %%NAME returns the same result as %%Name).

Note, if an attribute identifier contains a space in its name, quotation marks can be used in the attribute tag, e.g., %%"name 2" will recognize the identifier whereas %%name 2 would interpret only "name" as the identifier.

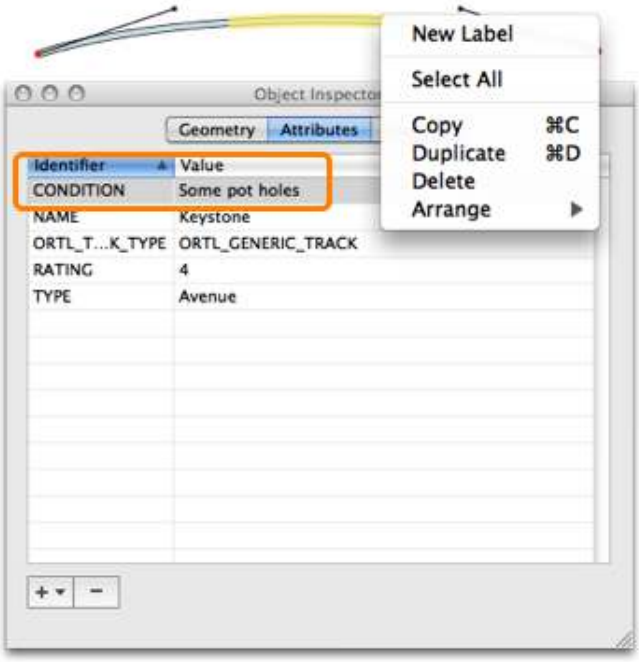
Combining Attribute Information on Labels Using Concatenate

Concatenation – it's a long word for something so easy. Creating labels that link together more than one attribute value (technically referred to as concatenation) is easily accomplished without complicated expressions. Simply write a statement using the "%%identifier" of the attributes you want in the label, where "%%identifier" is the tag for the attribute value. Use spaces or other standard characters between words just as you would write them naturally. For example, as seen in the Object Inspector, "Name" "Number" and "Type" are different attributes of the selected feature. We use these three attributes for its label by entering "%%number %%name %%type" to have the label read "401 Market Street".



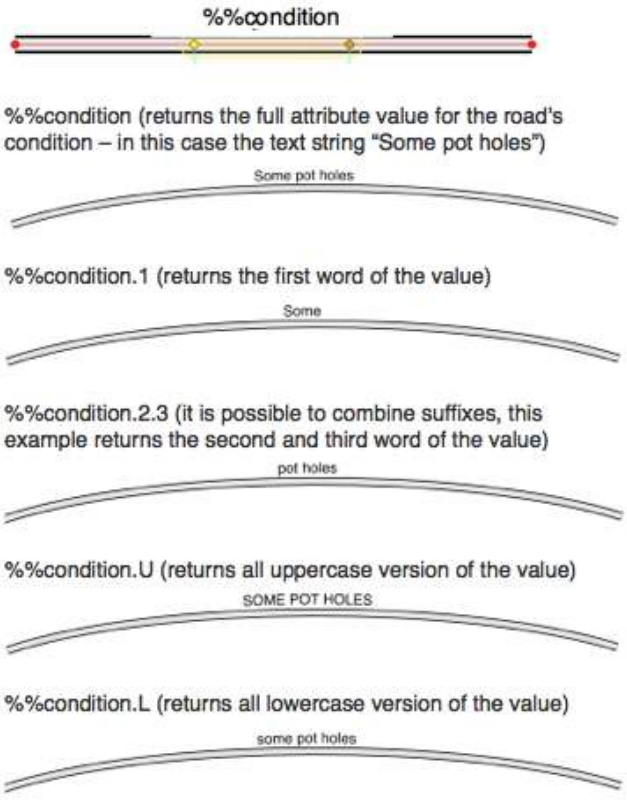
Using Label Codes

The Ortelius labeling system is so flexible that you can be very specific with just a few codes. In the following example, we demonstrate just how easy it is to use only part of an attribute phrase, as well as replacing a label with all uppercase characters.



Open the Object Inspector to see what attributes are available and their Identifier names. Use the %%identifier for intelligent labeling. In this example, the attribute for the road's condition is used for the label, so we type the attribute identifier "%%Condition" and tag it with ".1, .2, .3" (etc., up to nine), to return the corresponding first, second, or third word in a phrase. Tag with .U for an uppercase, and .L for a lowercase label.

That's it. Intelligent labeling works the same for point, line, and area labels. A simple, direct method for quick intelligent labeling with maximum flexibility.



Intelligent %% labels and label codes are an advanced feature. Using these codes keeps labeling simple and direct – and can save time and sanity!

A Real Problem Solver

Labeling the old way (with other software) can cause countless headaches when existing attribute information doesn't quite match how you want your labels to look.

For example, a highway Shapefile may have an attribute identifier called "name" whose attributes consistently read as "Interstate 465" (i.e., it has the highway type, e.g., "interstate" listed as part of the name). If the map-maker wants labels or highway shields to read just the route number, e.g., "465," they would have to write special Visual Basic code or edit the attribute table, adding a new filed and parsing out the name so the new field only contained the route numbers. This can take hours. Worse yet, it usually would need to be done in a third-party application.

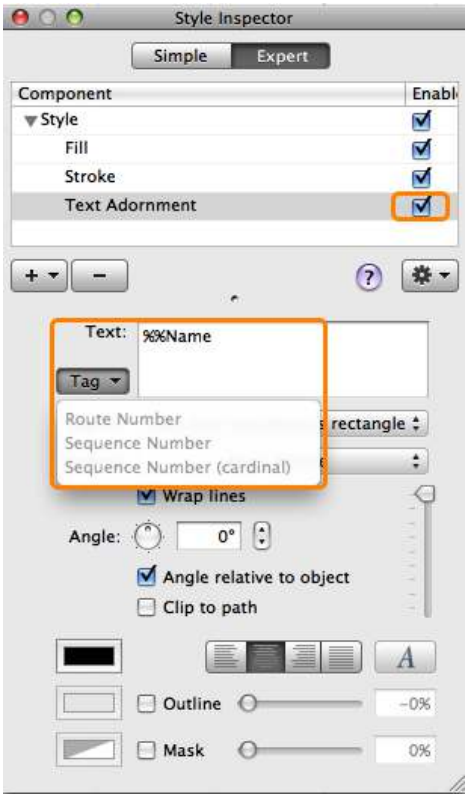
No longer. Using Ortelius, just type the label identifier to read "$$name.E" to return the end word of the attribute phrase - so "Interstate 465" (two words) and "State Road 31" (three words) both return the desired result.

Unfortunately, there are few standards regarding map data attributes. Ortelius won't solve all your problems working with existing data, but it sure will ease the sting.

Label Codes

Label Code	*Result*
.1, .2, .3, … .9	returns corresponding first, second, third, etc. word in an attribute phrase; note that it is safe to refer to words that don't exist, like %%name.4 in which case the whole original name is returned
.U	returns uppercase label
.L	returns lowercase label
.C	returns capitalized (first letter of word) label
.E	returns the last word (end) of attribute phrase for label
.S	returns a shortened (short) or abbreviated version of some common map words, including "St." for "street", "Rd." for "road", "Ln." for "lane", "St." for "saint", "Av." for "avenue", "Pk." for "park", "Cty." for "city", "pop." for "population", "R." for "river", and "Is." for "island"

Defining Intelligent %% Label Templates in the Style Inspector



Label styles go hand-in-hand with the map's styles and symbols. Unless otherwise defined, default labels are rendered with Helvetica font and sized proportionately to the size of the shape or symbol.

Custom label templates are defined in the Style Inspector (and before an object is turned into a symbol). Labels use the underlying style from a Label Adornment as a template. To define a custom label template, add a Label Adornment to the style.

In the Style Inspector, click the "+" button and add a Label Adornment style component. Adjust the font settings and color as desired.

Label Adornments can be a constant string of text, free text associated with a label, or text associated with an intelligent label. Intelligent labels automatically detect and use a feature's attribute information using a special style component tag for Label Adornments. For example, choose the tag "Name" from the drop-down Tag list to automatically add the text adornment tag "%%Name". If no attribute exists when labeling symbols on your map, the label template will still be applied and the new label will read "Label" ready for free-text editing.

In the Style Component list, **disable (uncheck) the Label Adornment** after defining it. The style settings from the Text Adornment will be applied to the labels you add.

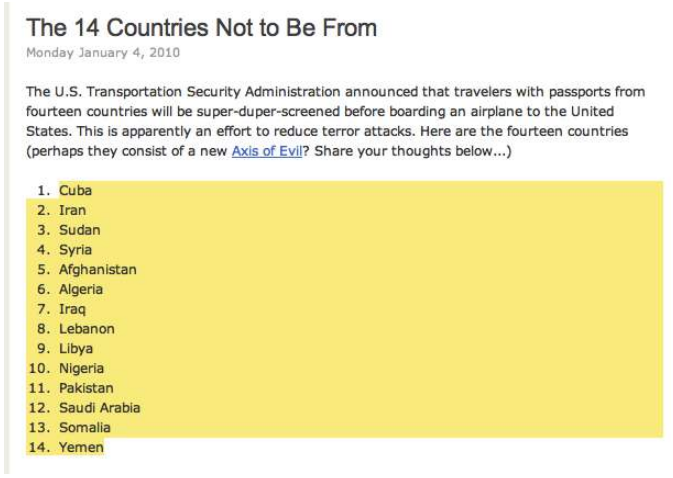
Related Topic: See Creating New Symbols for steps to define a label template for a symbol.

Lists and Tables in Your Map Layout

To add lists and tables to your map layout, add a text box to your drawing and simply copy and paste from other source documents. Alternatively, create lists and tables from scratch.

Copy & Paste Lists

Copy and pasting a list into a text box works seamlessly, retaining most formatting from the source document. For example, this list is cut and pasted directly from the geography.about.com website and pasted into Ortelius. Use the Text Box tool to add the text to your layout. With the text box selected, paste in your content (use the keyboard shortcut CMND-V or choose **Edit > Paste** from the main menu). Using the handles on the text box, resize it to fit your text (or right-click to use the context menu **Fit To Text** command). Note that Ortelius retains the numbered list settings.



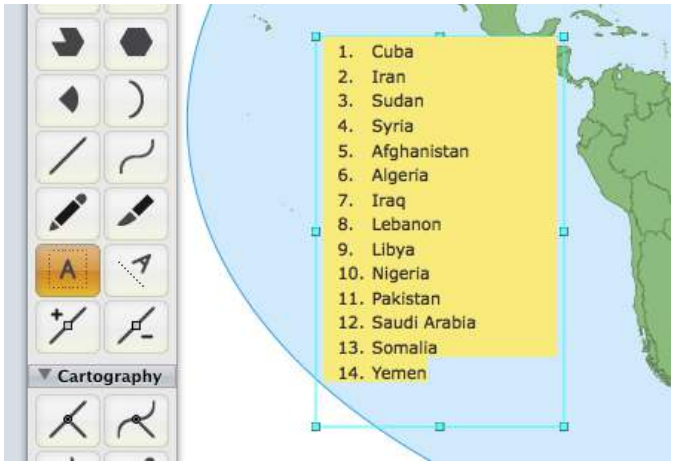
The 14 Countries Not to Be From

Monday January 4, 2010

The U.S. Transportation Security Administration announced that travelers with passports from fourteen countries will be super-duper-screened before boarding an airplane to the United States. This is apparently an effort to reduce terror attacks. Here are the fourteen countries (perhaps they consist of a new Axis of Evil? Share your thoughts below...)

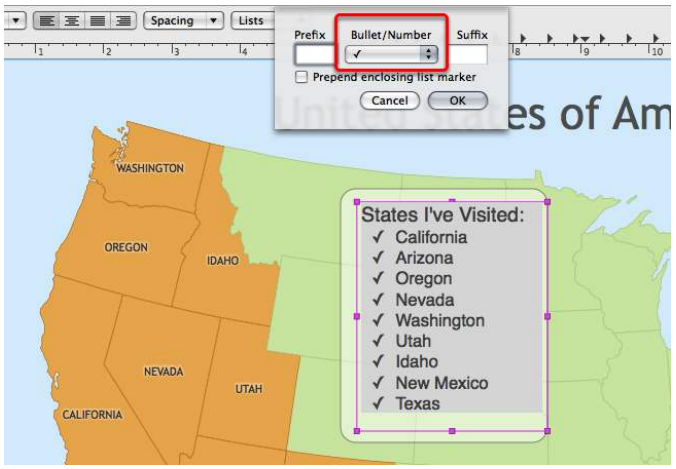
1. Cuba
2. Iran
3. Sudan
4. Syria
5. Afghanistan
6. Algeria
7. Iraq
8. Lebanon
9. Libya
10. Nigeria
11. Pakistan
12. Saudi Arabia
13. Somalia
14. Yemen

List settings are fully editable by choosing **Text > List** from the main menu. A List menu appears enabling a variety of bullet and numbering options.



Creating a New List

To create a new list from scratch, begin by adding a text box. Next, type text into the text box, using the keyboard shortcut SHIFT-RETURN (or OPT-RETURN) to insert manual line breaks. The Return key used alone ends the text box entry. As needed, use the handles on the text box to resize it to fit your text. Select the text and choose **Text > List** from the main menu to choose your list settings. Backspacing can be used to remove individual bullets.

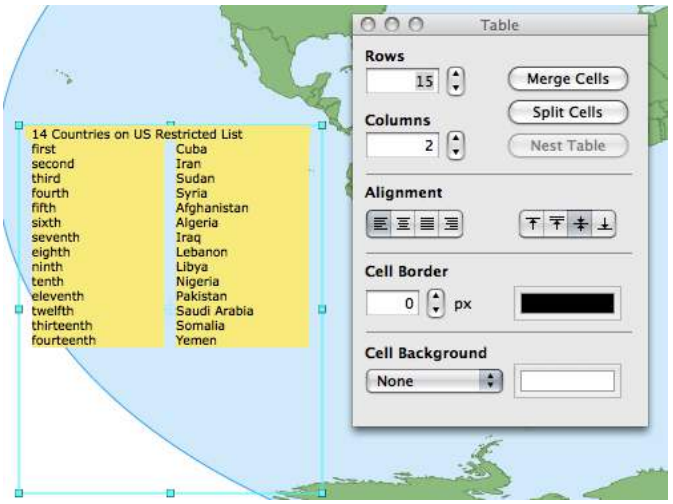


Copy & Paste Tables

Copy and pasting a table into a text box works seamlessly, retaining most formatting from the source document. For example, this table is cut and pasted directly from a spreadsheet application and pasted into Ortelius. Start by using the Text Box tool to add a text box to your layout. With the text box selected, simply paste in your content (use the keyboard shortcut CMND-V or choose **Edit > Paste** from the main menu). Using the handles on the text box, resize it to fit your text (or right-click to use the context menu **Fit To Text** command). Note that Ortelius retains the table settings, including merged cells.

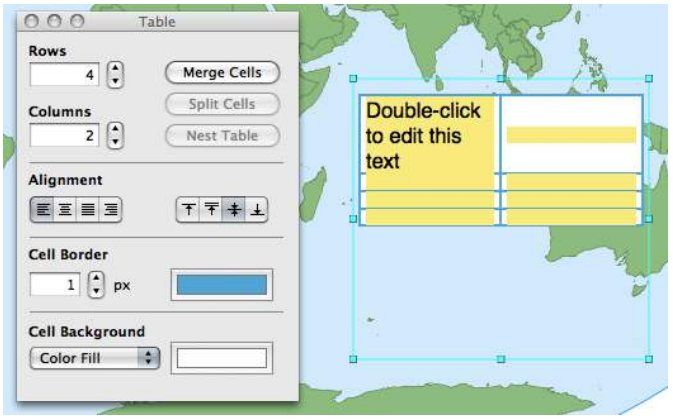
	A	B
1	14 Countries on US Restricted List	
2	first	Cuba
3	second	Iran
4	third	Sudan
5	fourth	Syria
6	fifth	Afghanistan
7	sixth	Algeria
8	seventh	Iraq
9	eighth	Lebanon
10	ninth	Libya
11	tenth	Nigeria
12	eleventh	Pakistan
13	twelfth	Saudi Arabia
14	thirteenth	Somalia
15	fourteenth	Yemen

Table settings are fully editable by choosing **Text > Table** from the main menu. A Table menu appears enabling a variety of settings for rows, merge and split cells, alignment, borders, and background.



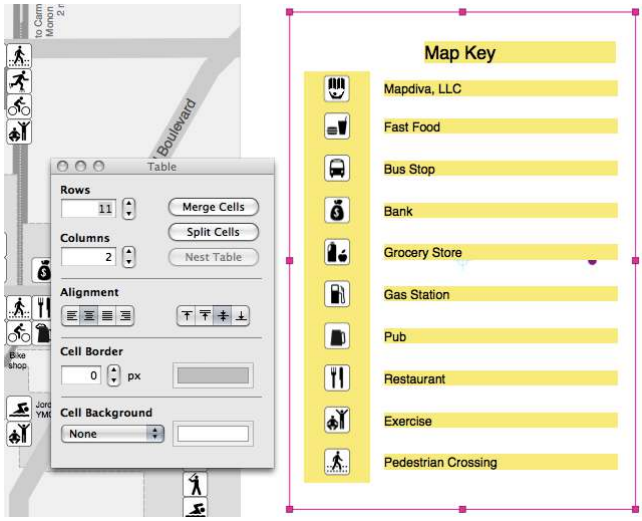
Creating a New Table

To create a new table from scratch, begin by adding a text box. Next, choose **Text > Table** from the main menu and add the desired number of rows and columns. Adjust the settings for alignment, borders, and background. Note that Ortelius supports merged cells as well as nested tables. Drag column and row borders to adjust width and height. Click within a cell and begin typing your content. All font settings can be finely adjusted using the Fonts palette. As needed, use the handles on the text box to resize it to fit your text.



Inserting In-Line Images

Images can be inserted into list and tables, for example when creating a map legend. To add images, first make sure your preferences enable images within your text box by choosing **Ortelius > Preferences - Editing** and check "Allow in-line images in text boxes." Place a text box and add a list or table with your desired settings. Copy and paste symbols from your map into the text box. Note, you cannot place symbols using the Symbol Stamp tool directly into the text box or table.



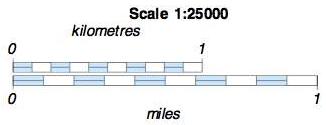
*HINT: Choose **View > Show Rulers** from the main menu to make alignment settings quickly accessible from above the rulers when making adjustments to the text box layout.*

Adding Map Elements

Insert a Scale Bar

To Insert a Scale Bar

To insert a scale bar, choose **Edit > Insert Special > Scale Bar** from the main menu. The scale bar is calibrated based on the drawing scale settings and placed on the active layer.

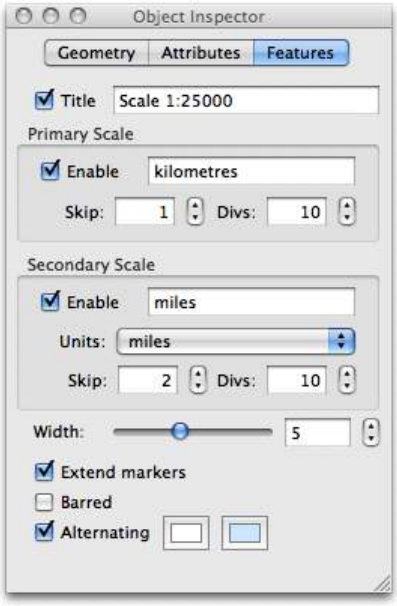


The scale bar is a dynamic object, and will adjust based on changes in scale from the Drawing Setup window.

Related Topics: Using the Ruler to Measure and Set Map Scale

To Format the Scale Bar

A scale bar is treated as a special object, and its properties are modified in the **Object Inspector > Features** pane. Options include a scale bar title, labels for the primary (top) and secondary (bottom) portions of the scale bar, and units for each. The number of divisions in the scale bar can be set along with the width, styling, and color.



Formatting Scale Bar Font

The scale bar font properties are modified through the Fonts panel. With the scale bar selected, open the Fonts panel and choose your font, color, and style as appropriate.

Add a Map Legend (Map Key)

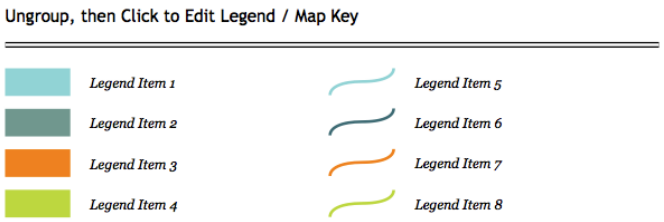
Map Legend

Legends, also called map a “key,” define the meaning of symbols and style used on a map. The choice to include a legend depends on your map's purpose and your audience. Maps do not need legends if the symbology is so common or simple as to be easily understood by the reader. However, it must be clear what the symbols represent.

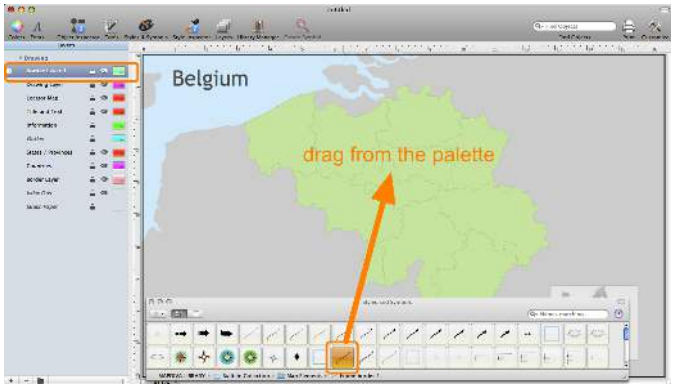
Legends are created by laying out symbols, styles and text. When creating a legend, use guidelines to keep your layout tidy.

Adding Legends from the Symbols Palette

A variety of legend layouts are available in the Symbols palette. Use the Symbol Stamp tool to add a pre-defined legend, ungroup it, and edit the symbols and text as appropriate.



Adding a Frame Border (Neat Line) and Frame Fill

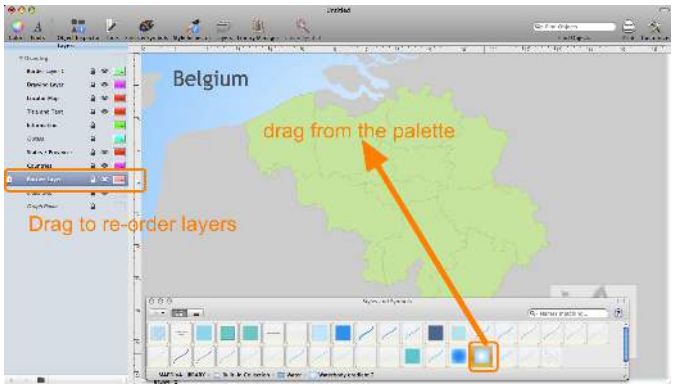


Ortelius introduces a slick way to add a frame border (or "neat line") to frame your map. Choose **Layer > New Border Layer** from the main menu to add a new border layer to your map. To apply a style to the Border layer, drag any style directly from the Styles & Symbols palette or Library Manager onto the drawing canvas. The style will be applied as a border to your map area.

To hide or remove a border, click the "show/hide" icon (looks like an eye) from the layer list, or permanently delete the Border Layer from the layer list by clicking the "-" minus sign at the bottom of the Layers list. Alternatively, choose **Layer > Clear Border** to clear the style without removing the Border Layer.

A number of suitable styles are included in the Mapdiva Library — Embellishments category: see styles with name "Frame border."

HINT: *Show or hide the Index Grid Layer as desired. The Index Grid layer can also serve as a container for borders and fills.*



Any line or fill style can be applied as a Frame Border, and multiple Border Layers can be added. Area styles, such as Color Regions, will fill in the entire map area. This can be a handy way, for example, to add an ocean background. Arrange the Border Layer to be "under" (toward the bottom of the stack on the Layer list) other layers. If desired, another Border Layer can be added for a neat line "on top" of the other layers.

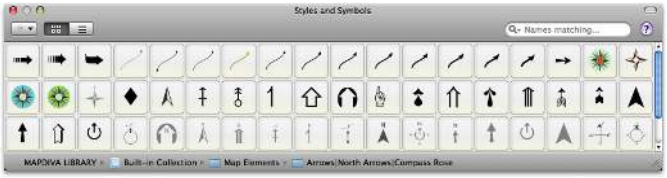
Choose **Layer > Clear Border** from the main menu to remove border styles.

Alternatively, right-click a style on the Symbols palette and choose "Copy item." With the Border Layer active, right-click onto the map area and choose "Paste style" to apply the style to the Border Layer. Remember, fill styles will fill in the entire canvas masking features on lower layers. Drag layers in the Layers list to rearrange their stack order. Multiple Border Layers can be added.

Add a North Arrow

Orientation

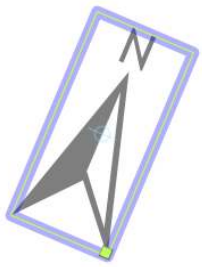
Maps typically indicate which way is north. Commonly this is done by a north arrow or compass rose. Orientation may also be shown by graticule or grid marks (e.g. lines of latitude and longitude). By convention north is towards the top of the page (thus some maps do not have north arrows), but the orientation is usually still given for a "proper" map. When north is not at the top of the page a north arrow is essential.

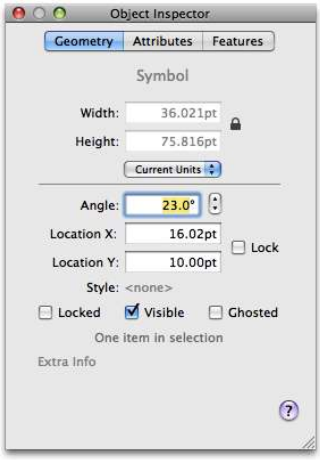


A selection of north arrows and compass roses are available in the Styles & Symbols palette 'Map Elements' category.

Rotate North Arrow

As needed, use the Object Inspector Geometry pane to set the specific angle of rotation. Alternatively, right-click on North Arrow symbol and choose "detached from master." The north arrow can now be further edited and rotated freely.



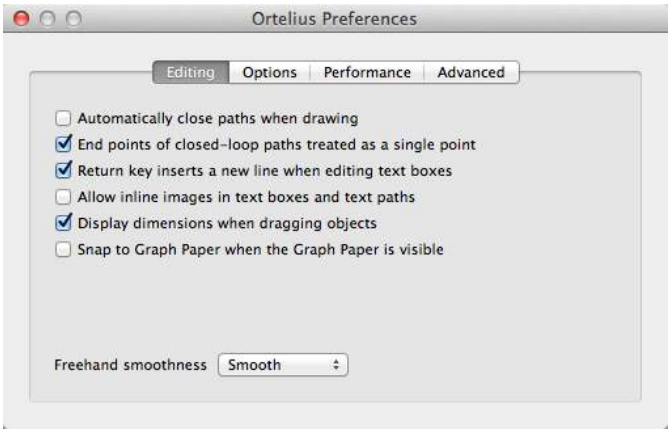


Additional Information

Open Preferences

The **Preferences** window is found under **Artboard >** in the main menu. The menu is tabbed for Editing, Performance, Options and Switches preferences.

Editing



Automatically close paths
When drawing Irregular Polygons, Bezier Paths and Freehand Paths the paths will automatically "formally" close when you finish a path at its starting point. Uncheck this setting if you prefer paths not automatically close (default – unchecked).

End points of closed-loop paths treated as a single point
Paths whose end points are coincident are treated as a single point when moving them or their control handles (default – checked).

Return-key inserts a new line when editing text boxes
Default behavior is the Return-key goes to new line when editing text boxes. Click outside of text box ends text editing (default – checked). If unchecked, Return-key will end editing; use the key combination **CMND-Shift** to go to next line.

Allow inline images in text boxes
Images can be dropped into text boxes from the Image Browser, becoming in-line with other text (default – unchecked).

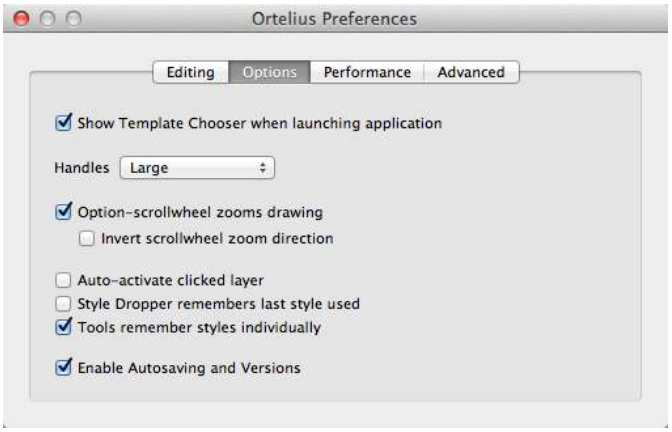
Display dimensions when dragging objects
Displays page coordinates or object dimensions as object is dragged or resized (default – checked).

Snap to Graph Paper when Graph Paper is visible
When Graph Paper layer is visible, the snap to graph paper setting will be active; when Graph

Paper layer is hidden, the snap setting will be deactivated (default – unchecked).

Freehand smoothness
Sets the smoothness of the Freehand Path tool to fine, smooth, or very smooth (smoothness is related to number of points) (default - Smooth).

Options



Show template chooser when launching application
Template chooser opens automatically on application launch (default – checked).

Handles
Curve handles and rotation knobs can be displayed a normal or large size. Large size makes selecting object handles easier when zoomed out and on large format screens (default - Small).

Option – scrollwheel zooms drawing
Allows magnification of the view to be changed using Option-key + scrollwheel (default – checked). Check to invert scrollwheel zoom direction changes sense of scrollwheel zooming.

Auto-activate clicked layer
When checked, clicking objects automatically activates the layer they belong to (default - unchecked).

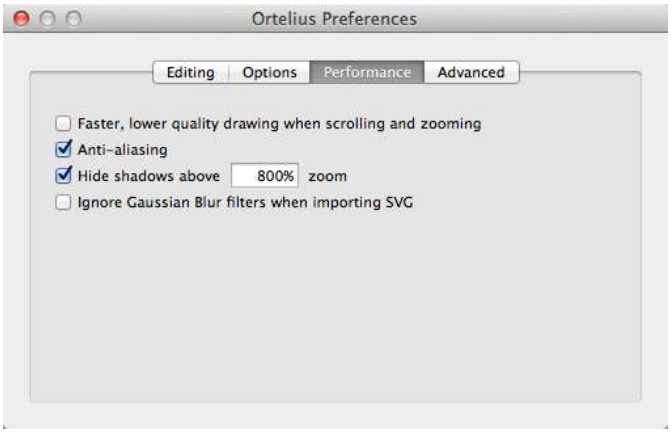
Style Dropper remembers last style used
Style dropper remembers last style it picked up (default – unchecked).

Tools remember styles individually
When switching between tools, the style will change to the last style used with the tool (default – checked).

Enable Autosaving and Versions
Enables Autosave and Versions support for Mac OS X "Lion" and higher. If unchecked, the classic

document saving methodology is used (default – checked).

Performance



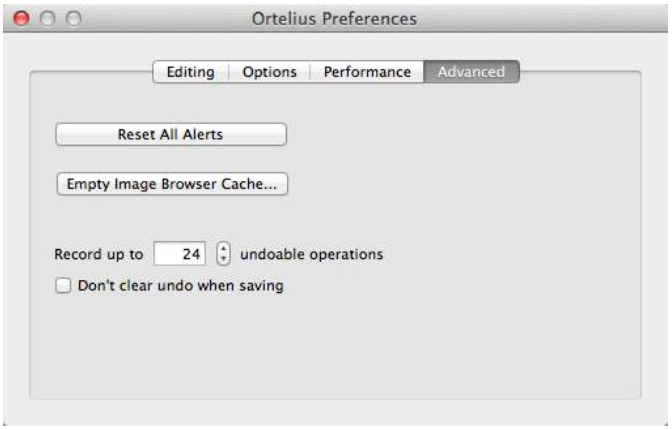
Faster, lower quality drawing when zooming and scrolling
Enables automatic use of low-quality rendering during operations that require rapid redrawing, such as zooming and scrolling, to speed performance (default – unchecked).

Anti-aliasing
Turning off anti-aliasing preference improves performance while editing large files (default – checked).

Shadows
Turning off shadows at very high zoom improves performance while editing large files; note, the zoom scale can be set by the user (above 800%; default – checked).

Ignore Gaussian Blur filters when importing SVG
Related to the software in which an SVG file was created, occasionally Gaussian Blur filters may not be efficiently imported. Turn off filters when working with such SVG files (default – unchecked).

Advanced



Reset All Alerts…

Empty Image Browser Cache…

Record up to __ undoable operations
Sets the number of undo operations available when using the Undo command (the default is 24). Optional 'Don't clear undo when saving' (default – unchecked).

Credits

Styles and Clip Art

This product includes artwork sourced from the U.S. National Park Service: TrueType Font Symbols (last updated July 2007) http://www.nps.gov/hfc/carto/map-symbols.htm
This product includes color specifications and designs developed by Cynthia Brewer http://colorbrewer.org/

Graphics and Web

Application graphics designed by Michael Norman Olson, design+
Website powered by WordPress; web development by run skip, llc and busick design
All application graphics and vector retina icons created using Artboard® by Mapdiva, LLC

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