Viz World Classic User Guide

Version 24.1

Disclaimer

Vizrt provides this publication "as is" without warranty of any kind, either expressed or implied. his publication may contain technical inaccuracies or typographical errors. While every precaution has been taken in the preparation of this document to ensure that it contains accurate and up-to-date information, the publisher and author assume no responsibility for errors or omissions. Nor is any liability assumed for damages resulting from the use of the information contained in this document. Vizrt's policy is one of continual development, so the content of this document is periodically subject to be modified without notice. These changes will be incorporated in new editions of the publication. Vizrt may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time.
Vizrt may have patents or pending patent applications covering subject matters in this document. The furnishing of this document does not give you any license to these patents.

Antivirus Considerations

Vizrt advises customers to use an AV solution that allows for custom exclusions and granular performance tuning to prevent unnecessary interference with our products. If interference is encountered:

- **Real-Time Scanning:** Keep it enabled, but exclude any performance-sensitive operations involving Vizrt-specific folders, files, and processes. For example:
    - C:\Program Files\[Product Name]
    - C:\ProgramData\[Product Name]
    - Any custom directory where [Product Name] stores data, and any specific process related to [Product Name].

- **Risk Acknowledgment:** Excluding certain folders/processes may improve performance, but also create an attack vector.
- **Scan Scheduling:** Run full system scans during off-peak hours.
- **False Positives:** If behavior-based detection flags a false positive, mark that executable as a trusted application.

Technical Support

For technical support and the latest news of upgrades, documentation, and related products, visit the Vizrt web site at www.vizrt.com.

Created on

2025/10/13

Contents

1   Viz World Classic Introduction

This is the user guide for Viz World Classic (previously known as Viz Curious Maps). It is designed to fit people with no or little experience in using the Viz World Client and Server. The purpose of this document is to help new users become familiar with the client; to illustrate the client's editor, and to show the available options.

This guide provides reference information about the program's more advanced features. These include selecting map details, working with style sheets, importing and working with street data, adding text and graphics, creating drawings from vector shapes, adding effects with lighting and effects, and controlling animation.

1.1   Document Structure

Title	Content
Quick Tour	Provides a complete introduction to using Viz World Classic on the PC, and is the recommended starting point for anyone learning to use the program. It provides a series of short worked examples, each of which takes you on a quick guided tour of the program's key features to show what it can achieve and help you become familiar with the user interface.
Working with Maps	Explains the options for creating and working with map layers, including using the Properties panel to define the projection, and using the Contents panel to select countries and places for incorporation into the map.
Working with Styles	Explains how to use the style sheets to make it easy to set up a series of house styles, and convert projects between house styles with a single click. It also explains how style sheets help to establish consistency across projects, or between designers.
Reusing Design Elements	Explains how you can easily reuse styles, layers, and colors created in earlier projects and gives recommended techniques for setting up and sharing style sheets, templates, and projects between users.
Working with Street Maps	Explains how to import street data and draw it on your maps to create maps from the whole world, down to a single street corner or building.
Adding Text to a Project	Explains how to incorporate text into projects, and describes how to control the appearance of the text and the way it is animated.
Working with Images and Movies	Explains how to incorporate bitmap images and movies into animations, and describes the controls available for altering their appearance, and controlling the way they are animated.

Title	Content
Working with Shapes	Explains how to add drawings to a map by creating vector shapes, either using separate shape layers or by adding shape details to map layers. It also explains how you can create and edit shapes, and change their appearance to achieve exactly the effect you want.
Working with ESRI Shape Files	Describes how to import map data in ESRI Shape File Format, and configure it for use with Viz World Classic.
Lighting and Effects	Explains how to use the lighting and effects features, to enable you to add shading and depth to your map animations and give them a unique and distinctive appearance.
Controlling Animation	Explains how to use the time slider to control the progress of an animation. It also describes how to use the tool to set up impressive animations with a few simple clicks, and the Keybars panel to provide individual control over each component of a project.
Rendering a Project	Explains how to render your animation as a preview, or as a finished movie. It also describes the options for exporting an image or a 3D model from a project.

1.2   Related Documents

For complementary information, see the following documents:

- *Viz Artist User Guide*: Information on how to create graphics scenes in Viz Artist.
- *Viz World User Guide*: Information on how to use Viz World Client and Server to setup a map server solution and build map template graphics for newsroom and control room systems.

For more information about all of the Vizrt products, visit:

- www.vizrt.com
- Vizrt Documentation Center
- Viz University

1.3   Feedback and Suggestions

We encourage suggestions and feedback about our products and documentation. To give feedback and/or suggestions, please contact your local Vizrt customer support team at www.vizrt.com.

2 About Viz World Classic

Viz World Classic, formerly called Viz Curious Maps, is the standalone edition of Viz World that allows designers to create branded, animated 2D maps.

Viz World Classic is ideal for designers, program researchers, and producers who need to create high-quality map animations for news, documentary, promotional videos, and the World Wide Web.

It is designed to be simple and intuitive to use, so that users with no specific training in computer graphics or video editing can create professional maps on demand and at short notice.

This section contains information on the following topics:

- Comprehensive Map Database
- Street Data Configured Ready for Use
- Projects, Layers and Other Elements
- Establish House Styles for Consistency Across Projects
- Shapes
- Rotoscoping with Shapes
- Animation
- Compositing and Animation
- Painting and Effects
- Sophisticated Lighting and Filtering Effects
- High-quality Output

2.1 Comprehensive Map Database

At the heart of Viz World is the comprehensive Collins Bartholomew database of the world, defining countries, towns, and other features such as lakes, rivers, roads and railways. You can choose between a range of alternative projections for each map, with control over the scale and viewpoint.

Individual items can be selected from the database and incorporated into the project with complete control over their appearance.

You can also combine maps at different scales, such as to include an inset showing an enlarged view of one region from another map.

The Viz World database also include height information, from satellite images, giving you the option of displaying mountain ranges in relief to give physical information about the area being displayed, or simply for an impressive visual effect.

2.2 Street Data Configured Ready for Use

In addition to the database, Viz World Classic can also import street data in its own street data format. This provides a wide range of roads, railways, rivers and lakes, parks, buildings, and other municipal features, labeled and configured ready for immediate use, so you can create maps and animations that take you down to the level of towns, street corners, and single buildings.

2.3   Projects, Layers and Other Elements

Viz World Classic offers an integrated paint, rotoscoping, effects, compositing, and animation system. Designed around a powerful multi-layer approach, Viz World Classic is equally applicable to the creation of still images and movies.

When working in Viz World Classic, you are always working on a project. The resolution, bit depth, frame rate, and duration of the output movie are all settings of the project. These are set at the start, but may be changed at any time.

A project can be built up from an unlimited number of layers. There are five different types of layer: image layers (still images), movie layers, text layers, rotoshape layers, and map layers. All layer types have two components: the RGB image itself, and an alpha channel which determines how the layer is composited.

Image layers and movie layers also have an associated mask. The mask is essentially an additional single-channel image which can be painted and processed using the same tools as for the main image. Image layers have a single mask, while movies have a mask for each frame of the movie.

Masks can be used in several different ways: to protect portions of the image from change during painting or image processing operations, to define the arbitrary shape of an element to be cut from a layer (a cutout), to control the way in which the layer is composited, or to protect portions of the layer from change by other layers composited above.

Various other types of elements can be created and used within Viz World Classic. These are collectively referred to as overlays. There are three types of overlay: text, shapes, and cutouts (from an image, often using the mask to define the form). Overlays are not associated with any particular layer. They are retained as floating objects and may be stuck down at any time onto any image or movie layer. Alternatively any overlay can be converted to a layer for animation, and cutouts can also be converted into brushes for painting.

2.4   Establish House Styles for Consistency Across Projects

The Viz World Classic style sheets make it a simple matter to create map animations to a specific house style, and once you have created an animation changing it to a different house style is simply a matter of loading in the appropriate style sheet. Style sheets control all the important aspects of a map animation, including the color schemes, typefaces, line weights, and lighting or relief effects. The style sheets also maintain consistency across projects or between designers.

You can also create template files containing predefined elements, such as background maps, standard graphics, logos, and titles for reuse in a range of related animation projects.

2.5   Shapes

Viz World Classic includes a complete range of drawing tools to allow you to create and edit drawings directly within the program. You can create drawings by combining shapes in one or more shape layers, with complete control over the animation and appearance of each shape in the drawings. You can also add shape overlays to map layers, to allow you to highlight or annotate any features of the map, with a powerful tracing tool to allow you to construct shapes by tracing map features.

2.6   Rotoscoping with Shapes

Viz World Classic allows you to create, edit, and animate vector shapes. These may be polygons, B-Spline or Bezier curves, or freehand shapes. They can be used to create masks, rendered directly into images, or exported for use at a later time.

Shapes can be animated using a combination of key-framing of individual points and the movement, rotation, and scaling of complete shapes. This gives great flexibility when using shapes to create rotoscoped mattes for moving elements. The underlying movement of a feature can be captured by setting a few key-frames for complete shapes and then the shapes can be refined at any frame by editing individual points.

You can also soften specified edges of each shape, which is invaluable when making mattes to match something that is moving quickly and has motion blur on each frame.

2.7   Animation

Viz World Classic provides an Auto Animate feature that lets you add animation to your project by selecting a few simple options. You can fade objects in or out of view, and slide objects in or out of frame, with acceleration or deceleration to give a natural appearance.

For more sophisticated effects Viz World Classic gives you complete control over each component of your animation, allowing you to animate objects along an arbitrary animation path with complete control over their shape and position.

2.8   Compositing and Animation

Straightforward compositing is simply at matter of arranging the layers in the order in which they are to be composited, by dragging and dropping. Sophisticated composites can also be created very easily by using masks and alpha channels, and their associated controls, to determine how layers interact.

All layers remain separate and editable right up to the point of generating the final artwork. Layers can be moved, scaled, rotated, and filtered independently, can have any number of animated effects applied. They can also have independent transparency settings, drop shadows, and lighting.

Every image and movie layer has a selection of built-in Keyers available for direct compositing using either luminance, chroma, or color keying. The quality of the edges can be carefully controlled to achieve the most convincing

results possible.

Every image and movie layer also has an integrated Roto Matte which allows you to add rotoshapes directly to the layer to cut out selected features. The results are displayed dynamically as you adjust the shapes, and the same flexible range of editing and animation options as for shape layers is available.

You can change the source material or content of any layer in a single operation at any time, without losing any of the animation or other control settings. This makes it easy to set up templates and then generate a series of images or movies

based on the same underlying design, but with varying content.

2.9   Painting and Effects

Viz World Classic provides a large range of painting, graphic, and image processing tools for use on image and movie layers. These are ideal for the freehand origination of artwork, or for retouching and editing existing material.

In contrast to the animatable transformations, lighting, and effects which can be applied to all layers, painting work explicitly changes the actual content of an image or movie layer.

A wide range of built-in and user-definable brushes are provided for work on images or masks, including color, offset merge, clone, drag, blur, and other effects. The brushes are pressure sensitive with user-definable profiles, and optional onion skinning facilitates accurate cloning, merging, and wire or rig removal.

Many tools are provided for creating, editing, and applying text, shape, and cutout overlays, and a very large number of different filters and effects can be applied. Any operations can be repeated over multiple frames using macros.

The changed material created by painting operations is stored independently, leaving your original materials unaffected. At any stage you can render a finished version, incorporating all your edits, or revert to your original material if you want to discard changes.

2.10   Sophisticated Lighting and Filtering Effects

Viz World Classic allows you to add lighting effects to each layer in your project to add realistic shading and highlighting to the images, or to emphasize specific features. You can also add one of a range of effects to the animation to blur images, or adjust the brightness or contrast.

2.11   High-quality Output

As you create your animation the frame you are working on is rendered complete with anti-aliasing to show you the quality of the finished result. At any time you have the option of previewing the complete animation, or rendering it at high quality as single frames or as a movie file to create a finished broadcast quality video.

With suitable video output hardware the animations can be played out as broadcast-quality PAL or NTSC sequences. The following video hardware is supported: DPS Reality Studio Digital Disk Recorder, and video output boards capable of playing QuickTime or AVI movies, or accepting single-frame-per-file output. Contact your local Vizrt representative for updated information about supported hardware configurations.

3 Installing Viz World Classic

Viz World Classic is installed in two steps; first the database and then the actual design application.

This section contains information on the following procedures:

- To Download the Software
- To Install Viz World Data
- To Install Viz World Classic
- To Add the License File
- To Add the License File Using Viz World Classic

3.1 To Download the Software

While you have an active map support contract, you have a personal login to the Vizrt FTP server. Download the software from the Vizrt FTP at http://download.vizrt.com/ or ftp://download.vizrt.com/ under the Viz World folder.

Please use the FTP server to find the latest Vizrt software releases, documentation, help files, drivers and more. You can also use the FTP to upload and exchange files with Vizrt.

3.2 To Install Viz World Data

1. Start the Viz World Data installer.
2. Click **Next.**
3. Click **Install** to begin the installation.
4. Click **Finish.**

3.3 To Install Viz World Classic

Before Viz World Classic is installed, you have to install the Viz World Data.

> ⚠️ **Note:** Exit all Windows programs before running the Setup Program.

1. Start the Viz World Server installer *VizWorld24.1.0.msi*.
2. Click **Next.**
3. Read the End-User license agreement and accept it.
4. Click **Next.**
5. Select destination directory, and click **Next.** Default installation directory is: *C:\Program Files\vizrt\Viz World*
6. Click **Install** to start the installation.
7. Click **Finish.**
8. *Optional*: Install QuickTime if it is not previously installed. If a newer version of QuickTime is installed the installation is stopped.

> ✅ **Tip:** If you do not already have QuickTime installed you can download the installer from the Apple website.

3.4   To Add the License File

Once Viz World Classic is installed, drop the supplied license into your license folder: *C:\ProgramData\vizrt\Viz World\Licenses\curiousmaps.lic*.

3.5   To Add the License File Using Viz World Classic

When starting Viz World Classic without a license, a window appears telling that no license can be found.

1. Start the Viz World Classic application.
2. Click the **License** button to open the Software License window.
3. Click the **Edit License File ...** button to open the Edit License window.
4. Click the **Add License from a File...** button to browse for the License file (**.lic*).
5. Select the License file and click **Open.** The license becomes visible in the Edit License window.
6. Click **OK** to save the License. The license is saved to the License folder.
7. Exit the application and run Viz World Classic.

4   Quick Tour

This section provides a quick tour of the key features of Viz World Classic, including the components of the Viz World Classic window, and an explanation of how they are used in the creation of map animations.

This section contains information about the following topics:

- Getting Started with Viz World
- Toolbar
- View Options
- Viewer
- User Interface Font
- Layers List
- Using the Content Manager
- Controlling Layer Compositing
- Animation Controls
- Move and Pan Tool
- Path Tool
- Text Tool
- Zoom Tool
- Map Rectangle Tool
- Browse Map Tool
- Browse Street Shape Data Tool
- Ruler Tool
- Pick Color Tool
- VWC Navigator
- Panels

4.1   Getting Started with Viz World

This section contains information about the following topics:

- Creating a New Project
- Changing the Project Settings

4.1.1   Creating a New Project

When you run Viz World Classic the following Welcome dialog box is displayed to allow you to open an existing project, create a new default project, or use a project template:
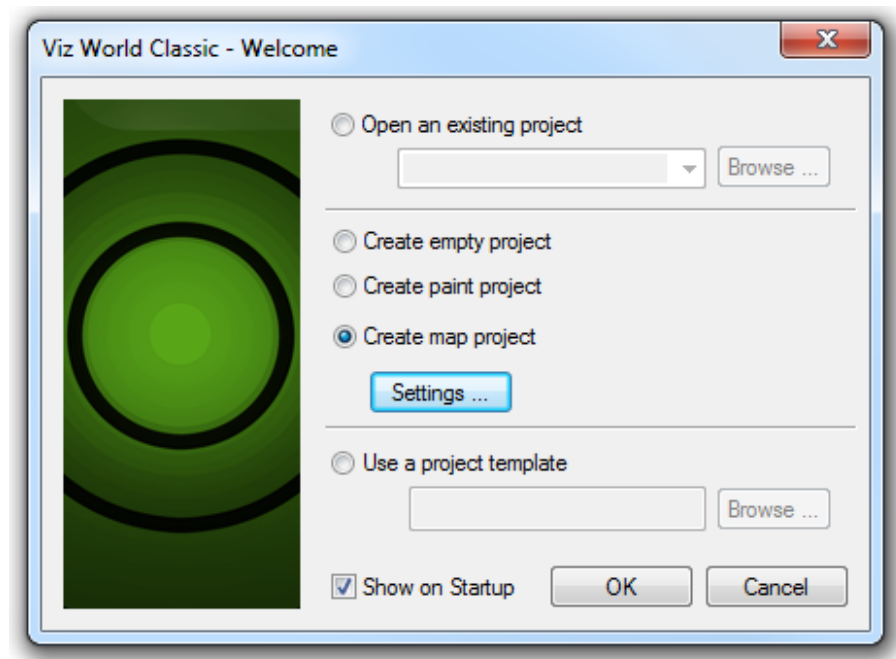
- Select **Create map project** and click the **OK** button to continue.

4.1.2   Changing the Project Settings

When you create a new project it is created with the frame size, frame rate, and map database you last used; initially these default to:

- **Frame size:** PAL 768 x 576
- **Rate:** 25 frames per second
- **Database:** World Database

To Change the Project Settings

1. On the **File** menu, click **Project Settings**.... The **Project Settings** dialog box allows you to specify the frame size, frame rate, and duration for the animation, in addition to several other more advanced settings associated with the project:
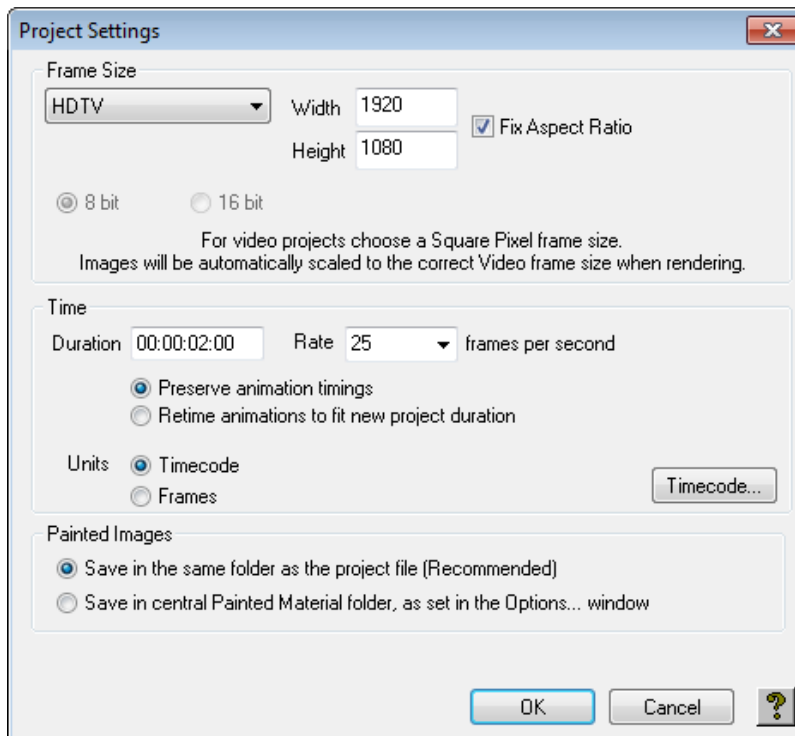
2. Choose the settings as required and click the **OK** button to save the changes. The first time you create or open a project there is a short delay while the map database you have selected is loaded. The **Viz World Classic** window is then displayed, initially showing a map layer containing the world in a default globe projection, scaled to fit in the project area.

The following image shows the key features of the Viz World Classic window:
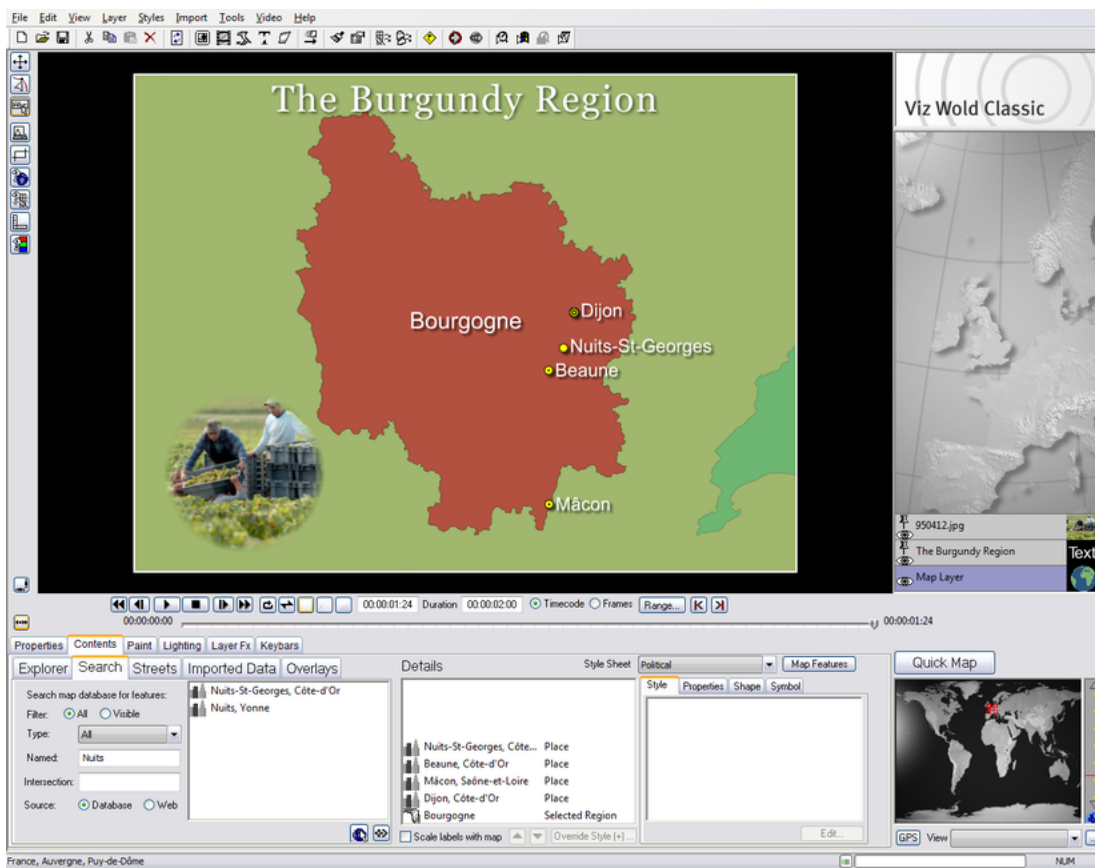
Each component is described in greater detail in the following sections.

4.2 Toolbar

The toolbar provides toolbar button equivalents to the most frequently used menu commands.

The toolbar options, from right to left, are:

- New
- Open
- Save project
- Cut
- Copy
- Paste
- Delete selection
- Refresh
- Load image
- Load movie
- Add map
- Add text layers
-
- Auto animate
- Styles editor
- Project Settings
- Street data
- Import map data
- Symbols
- Render project
- Render preview
- Movie player
- Windows media player
-

4.3   View Options

Viz World Classic allows you to choose whether or not to display the Layers list, Panels, Navigator, and Animation controls. You can also turn the Layers list, panels, or Navigator into floating palettes, so you can position them where you like on the screen. These options are particularly useful if you are working on a screen with a resolution of less than 1280x1024 pixels.

4.3.1   To Turn the Layers List, Panels, or Navigator into a Floating Palette

On the View menu, point to Layers, Panels, or Navigator as appropriate, and then click **Floating**.

4.3.2   To Hide the Layers List, Panels, or Navigator

On the View menu, point to Layers, Panels, or Navigator as appropriate, and then click **Hidden**. You can also hide a floating palette by clicking its close box.

4.4   Viewer

Displays the currently selected frame of the animation. You can display Viewer controls to allow you to scale or scroll the image displayed in the Viewer.

4.4.1   Keyboard Shortcuts

The following keyboard shortcuts can be used in the Viewer:

- **Pan:** Hold down **SPACE** and drag with mouse.
- **Zoom In:** Press **CTRL + ARROW UP**, or hold down **ALT + SPACE** or **CTRL + SPACE** and click or drag with the mouse.
- **Zoom Out:** Press **CTRL + ARROW DOWN**, or hold down **SHIFT + SPACE** and click or drag with the mouse.
- **Zoom 1:1:** Press **CTRL + ENTER**.
- **Next Frame:** Press **CTRL+ ARROW RIGHT**.
- **Previous Frame:** Press **CTRL + ARROW LEFT**.

To Show or Hide Viewer Controls

- Click the Viewer controls button to the left of the Viewer.

The following Viewer controls are provided:
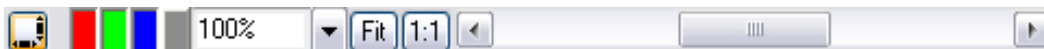
- **Viewer Controls:** Enables and disables the viewer controls bar and scroll bars.
- **RGB and Gray:** Enables and disables the RGB values and grayscale value.
- **Scale:** Scales the map according to the viewer.
- **Fit:** Fits the map according to the viewer's available space.
- **1:1:** Fits the map according to the project's frame size settings (the defined aspect ratio).

To Scale the Image in the Viewer

Edit the value in the scale box, or choose a predefined scale from the drop-down menu.

To Fit the Image to the Viewer

Click the **Fit** button.

To Restore the Scale to 100%

Click the **1:1** button. The scale is also restored to 100% if you hide the Viewer controls.

4.5   User Interface Font

Viz World Classic allows you to select the font used throughout the user interface. You should only need to do this if you are using international characters, such as accented characters, and they are not displayed correctly.

4.5.1   To Change the User Interface Font
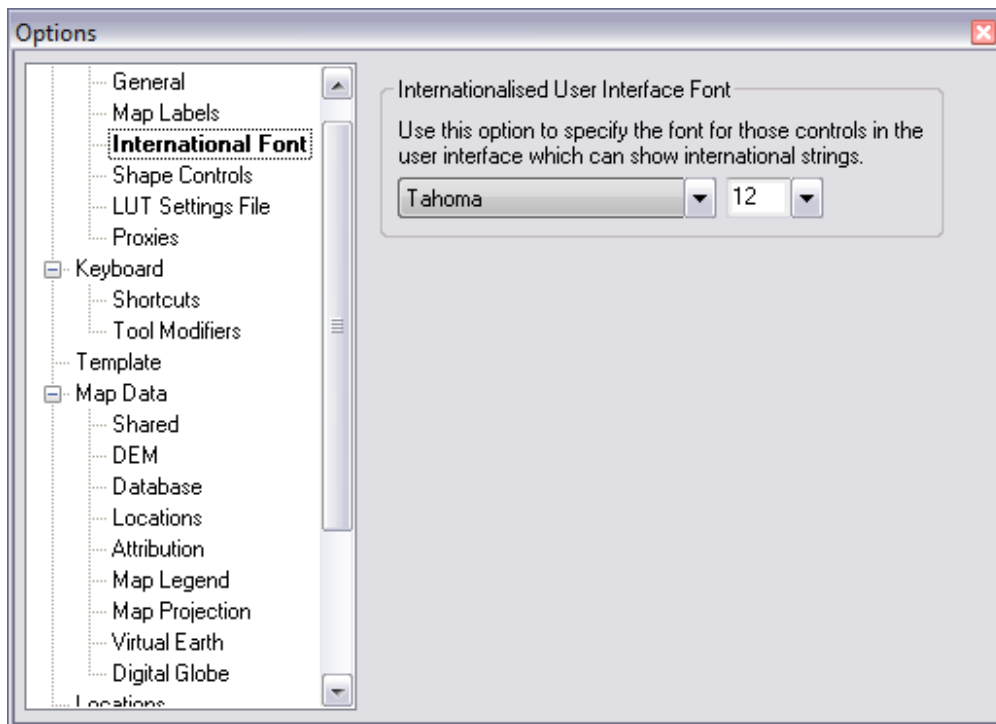
1. On the *View* menu, click **Options...**
2. In the *Display* section select *International Font*.
3. Select the font and size you want to use.

4.6   Layers List

ach of the layers in the project is shown in the Layers list to the right of the Viewer. For each layer this shows whether the layer is visible, the name of the layer, an icon representing the composite mask options, and a thumbnail image of the layer. For map and image/movie layers, a thumbnail image of the contents of the layer is shown.

A selected layer is highlighted, and the panels, controls, and tools all operate on the currently selected layer.

The order of the layers in the Layers list determines the order in which they are composited in the Viewer.

The displayed names for layers are as follows:

- **Layer type:** Name displayed.
- **Map:** Map layer.
- **Image/Movie:** The filename of the image.
- **Text:** The text on the layer.
- **Shape:** Shape.

For text, image, or shape layers a pin icon to the left of the name shows whether the layer is pinned to the map layer below it.

For map layers, a lock icon is displayed if the layer is locked to another map layer below it.

This section contains information about the following procedures:

- To Display the Composite of All Layers
- To Display an Individual Layer
- To Show or Hide a Layer
- To Create a New Layer
- To Select a Layer
- To Rearrange the Order of Layers
- To Cut or Copy a Layer
- To Paste a Layer
- To Delete a Layer
- To Duplicate a Layer
- To Pin a Layer to a Map
- To Lock Two Map Layers Together
- To Rename a Layer

4.6.1   To Display the Composite of All Layers
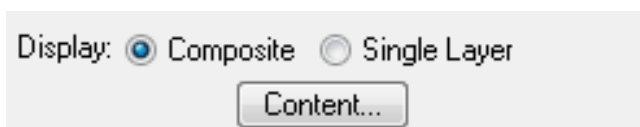
Select the **Composite** display option above the Layers list. This displays the result of compositing all the layers in the project, taking into account the layer mask options for each layer.

4.6.2   To Display an Individual Layer

Select the Single Layer option above the Layers list. The Viewer then shows only the currently selected layer. This is convenient if you want to work on a single layer without seeing the effect of other layers within the project.

In single-layer mode the Layers list shows an eye-dropper icon to indicate which layer is used as the background layer, for operations such as onion skinning and the merge brush. Click the eye-dropper icon to change the background layer.

4.6.3   To Show or Hide a Layer

Click the eye icon to the left of the layer name.

4.6.4   To Create a New Layer

On the Layer menu, point to Add Layer, and then click the appropriate option. See the appropriate chapter Working with Maps, Adding Text to a Project, or Working with Images and Movies, or Working with Shapes for information about adding a map, text, image, or shape layer respectively.

4.6.5   To Select a Layer
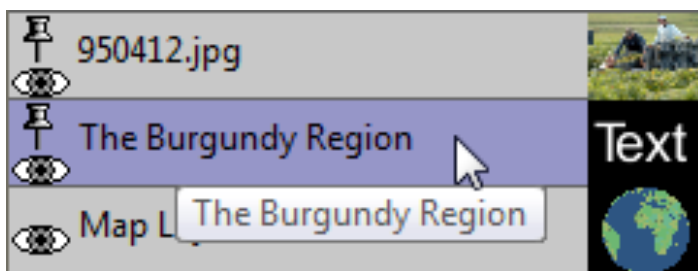
Click the layer in the Layers list. The currently selected layer is shown highlighted in the Layers list.

4.6.6   To Rearrange the Order of Layers
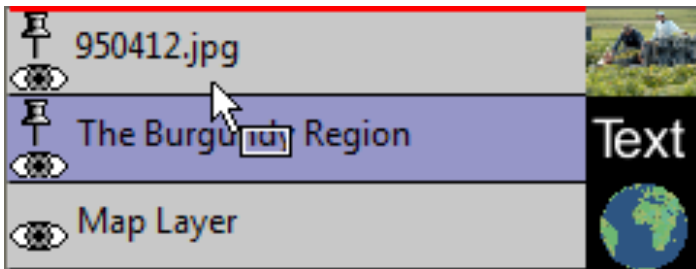
Drag the layer to the new position in the Layers list.

4.6.7   To Cut or Copy a Layer

Either:

1. Select the layer.
2. On the **Edit** menu, click **Cut** or **Copy**, or click the **Cut Selection** or **Copy Selection** button on the toolbar.

Or:
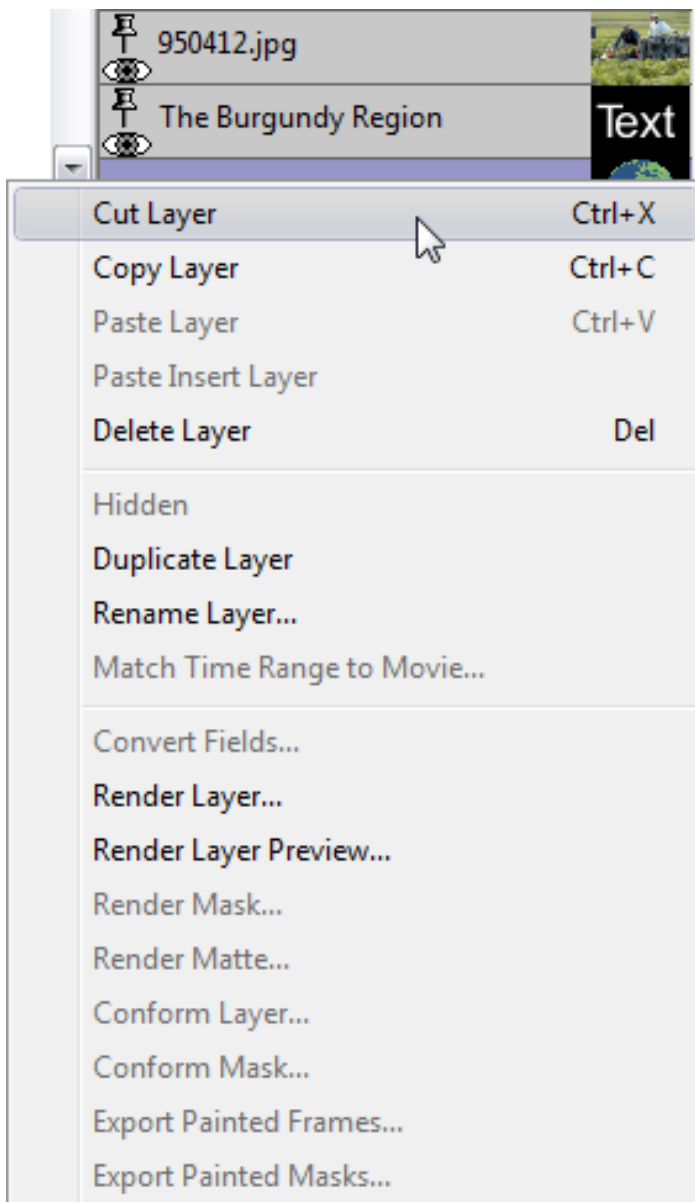
- Right-click the layer and from the appearing context menu select **Cut Layer** or **Copy Layer**.

4.6.8   To Paste a Layer

Either:

1. Select the layer.
2. On the Edit menu, click Paste or Paste Insert, or click the Paste button in the toolbar.

Or:

- Click the layer with the right mouse button, and click Paste Layer or Paste Insert Layer on the pop-up menu.
  - **Paste Layer:** Adds the layer to the top of the Layers list.
  - **Paste Insert Layer:** Adds the layer above the currently selected layer.

4.6.9   To Delete a Layer

Either select the layer, then in the Edit menu, click **Delete Selection** , or click the **Delete Selection** button in the toolbar. Alternatively, you can click the layer with the right mouse button, and click **Delete Layer** on the pop-up menu.

4.6.10   To Duplicate a Layer

Hold down **CTRL** and drag the layer you want to duplicate to the appropriate position in the Layers list.

4.6.11   To Pin a Layer to a Map
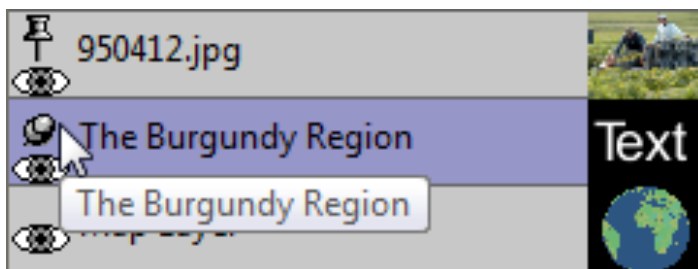
Click the **pin** icon to the left of the layer name. The text or image then moves (and optionally scales) with the map layer below it. To unpin the layer click the pin icon again.

4.6.12   To Lock Two Map Layers Together
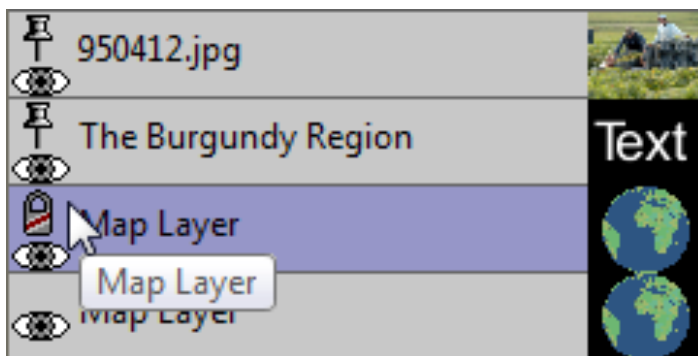
Click the **lock** icon to the left of the layer in the Layers list. Locking a map layer fixes it at the same size, scale, and projection as the base map. This is useful for drawing selected regions of a map using a different style sheet from the main map. For more information see the chapter Working with Maps.

4.6.13   To Rename a Layer

1. Either:
   a. Select the layer.
   b. On the Layer menu, click Rename.
2. Or:
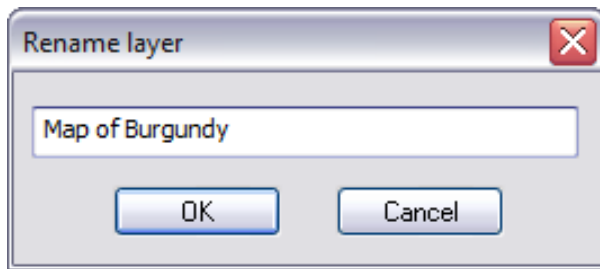
      a. Right-click the layer and from the appearing context menu click **Rename Layer**. The above dialog
         box allows you to enter a new name for the layer.
3. Then enter the name and click **OK**.

4.7   Using the Content Manager

The **Content Manager** displays an entry for each layer in the project, showing the image associated with the layer, the alpha channel, and the paint mask. The Animation controls in the lower right corner of the **Content Manager** allow you to select which frame is displayed.

4.7.1   To Display the Content Manager

Either:

- On the **Tools** menu, click **Content Manager**.

Or:

- Click the **Content...** button above the **Layers** list.

4.7.2   To Copy Content

You can copy any image, alpha channel, or mask within a layer or to another layer, by dragging and dropping it within the **Content Manager**.

1. Select **Current Frame** to affect only the current movie frame, or **Multiple Frames** to copy multiple frames.
2. Select the appropriate **Destination** option to determine how the dragged cell is combined with the destination cell.
3. Drag the required cell and drop it onto the required destination cell:
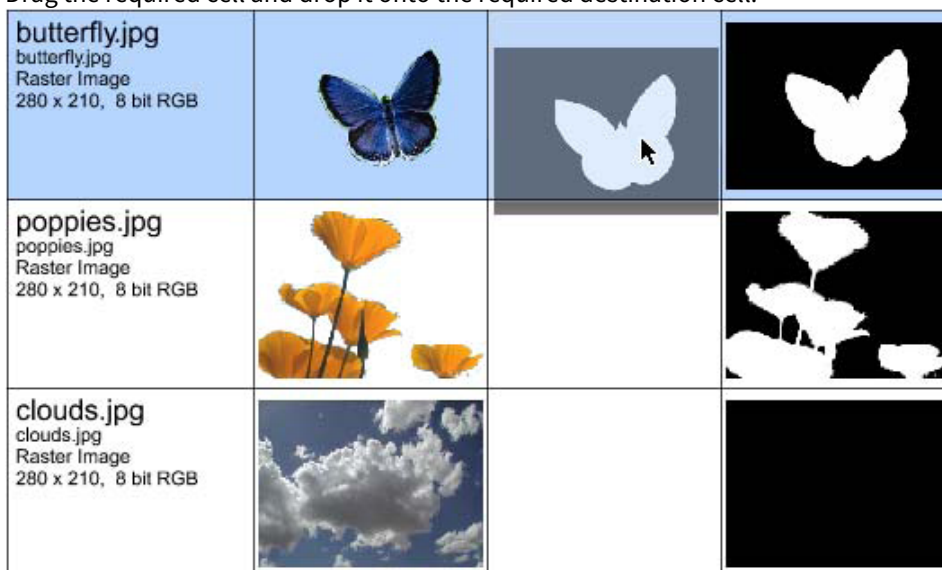
   If you selected **Multiple Frames** the **Copy Content** dialog box is displayed to allow you to specify which frames to change.
4. Specify the **range** you want to change and click the **OK** button.
5. Click the **Close** button to close the **Content Manager**. You can perform a range of useful functions within the **Content Manager** simply by dragging a cell and dropping it onto another cell. The following sections describe some typical operations:

4.7.3   To Create a Luminance Mask

1. Set the **Destination** option to **Replace**.
2. Drag an **Image** cell and drop it onto a **Mask** cell.

4.7.4   To Key an Image Using a Mask

Drag a **Mask** cell onto the **Alpha Channel** cell for the image you want to key.

4.7.5   To Create a Composite

1. Set the **Destination** option to **Composite**.
2. Drag an **Image** cell and drop it onto another **Image** cell.

The image you dragged is superimposed on the destination image, using the dragged image's alpha channel as a key.

4.8 Controlling Layer Compositing

By default, layers are simply composited one over the other using only their own alpha channel to determine which parts are visible in the finished composite, and which are not.

More sophisticated levels of compositing can be achieved using the blend mode, opacity, and composite mask.

4.8.1 To Specify the Compositing Options

Each layer provides compositing options to allow you to specify how the layer is combined with the other layers in the project, and its opacity.
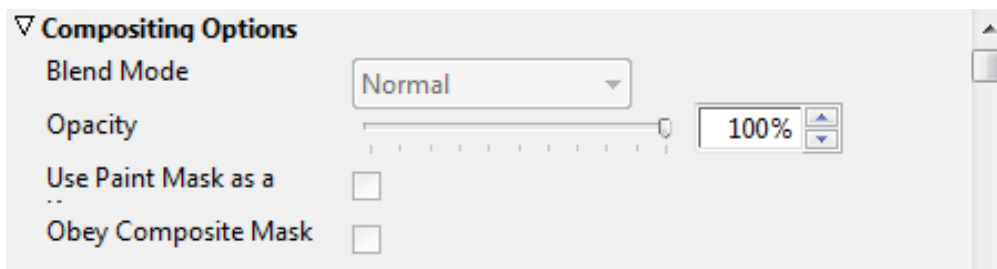
1. Select the layer in the **Layers** list, and click the **Properties** tab to display the Properties panel for the layer.
2. Click the right arrow button to the left of the **Compositing Options** heading to display the compositing options for the layer:

Blend Mode specifies how the layer is combined with the other layers, and can be one of:

Normal, Add, Subtract, Difference, Multiply, Darken Only, Burn, Color Burn, Screen, Lighten Only, Dodge, Color Dodge, Hue, Saturation, Value, Color, Overlay, Soft Light, Hard Light, Pin Light, Exclusion, or Negation.

The **Opacity** determines the layer opacity, and can be animated.

Use Paint Mask as a Key (image layers only) and **Obey Composite Mask** are equivalent to the same options in the **Composite Mask** dialog box; see below.

4.8.2 To Specify the Composite Mask Options

The composite mask allows you to make one layer appear to pass in front of some parts of a layer below, but behind other parts.

For example, if you want to insert a character into a forest scene, you can make it appear behind some trees, but in front of others.

The composite mask is generated layer by layer as a composite image is built up, and can be used to protect parts of a layer from change by layers above in much the same way as the paint mask is used to protect images from paint operations.

For each layer, you can specify:

- Whether the layer's paint mask is used as a key for the layer.
- Whether the layer makes any changes to the composite mask which is passed on for use by layers above.
- Whether the layer obeys the composite mask (whether the composite mask is used to protect the layers below from change by this layer).

You set options for each layer using the **Composite Mask** dialog box which is displayed by clicking the mask icon to the right of the layer name in the **Layers** list. This allows you to set the compositing options for the layer.

4.8.3   To Use the Layer's Paint Mask as a Key

This provides a quick way of cutting out a feature in an image.

1. Use the paint tools to create the mask:

2. In the **When Compositing this Layer** section select **Use the paint mask as a key**. The layer's paint mask is added to the alpha channel, and used to key the image:

4.8.4 To Specify whether the Current Layer Obeys the Composite Mask

In the **When Compositing this Layer** section: Select **Obey the Composite Mask.** To use the composite mask at least one layer should have this option selected. This option is irrelevant for the lowest layer in the Layers list.

4.8.5 To Specify whether the Current Layer Affects the Composite Mask

In the **After Compositing this Layer** section: Select **Create new Composite mask** to update the composite mask with the new composite mask.

To use the composite mask at least one layer should have this option selected. The default action is for the layer's paint mask to replace the existing composite mask, making those elements of the layer that are covered by the mask appear in front of layers above that obey the mask.

Alternatively, you can specify that the paint mask is combined with the composite mask as described below. This option is irrelevant for the highest layer in the Layers list.

4.8.6 To Specify How the Current Layer Affects the Composite Mask

Click the right arrow button to the left of the **Advanced Options** to show the advanced options.

Once a layer has been composited, you can use either its alpha channel or, in the case of an image or movie layer, its paint mask to modify the composite mask. You can also choose to invert the mask or alpha channel before use:

In the **Use this layer's...** section:

- Select **Paint Mask** or **Alpha** channel.

- Select **Inverted** to invert the paint mask or alpha channel before using it.

The composite mask can also be affected in different ways. You can either replace the existing composite mask, or combine the composite mask with the mask or alpha channel of the current layer.

In the **To...** section:

- Select **Replace the existing mask** to create a new composite mask which is a copy or inverted copy of the layer's paint mask or alpha channel.
- Select **Add to the existing mask** to add the layer's paint mask to the existing composite mask.
- Select **Intersect with the existing mask** to create a new composite mask which is an intersection of the existing mask and the layer's paint mask or alpha channel If you do not select **Create new Composite mask**, the existing mask is left unchanged and may be used to protect the composite image from change by any number of layers above.

4.8.7 To Make an Image Go behind Selected Features in a Scene

The following example illustrates one of the most powerful uses of layer compositing to control how one image interacts with components of another image. In this example, we use composite masks to make a butterfly go behind the front most poppy in an image of several poppies.

In this example, both the images have alpha channels, to allow a background image to show through. The first step is to create a mask defining the foreground image; in this case the front most poppy:
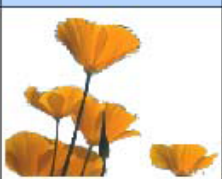
This can be done using the mask extract tools on the **Mask** panel, followed by painting on the mask using the brushes on the **Brushes** panel.

1. Load the butterfly image, and create a mask for the butterfly.
2. Position the butterfly layer above the poppies image.
3. Load the clouds image, and move it to the bottom of the Layers list. The composite image reflects the order of the individual images in the Layers list:

You can view the components of the project in the **Content Manager**:

4. Click the mask icon, to the right of the layer name on the poppies image layer in the Layers list, and select **Create new Composite mask**:
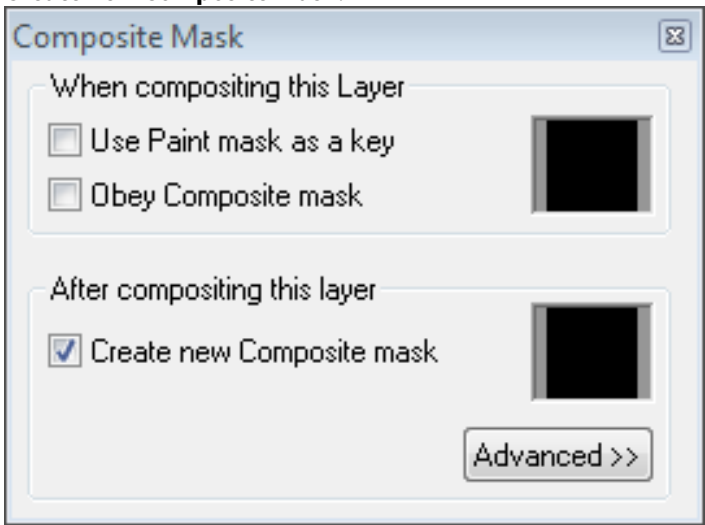
5. Likewise, click the mask icon for the butterfly layer and select **Obey the Composite Mask**:
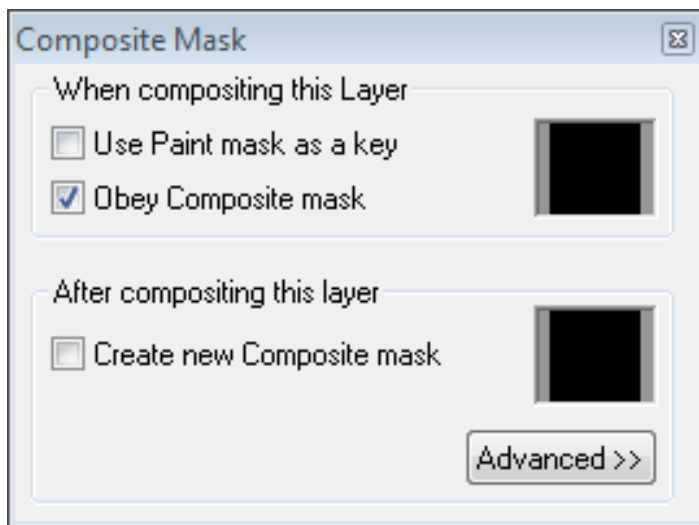
The composite mask is a copy of the mask on the poppies layer. This can then be used to protect the front most poppy from change by layers above. Since the butterfly is composited obeying the composite mask, the effect is that the area of the butterfly corresponding to the front most poppy is masked out, so the butterfly appears to go behind the poppy:

The **Composite Mask** options can be animated, so a butterfly could be made to fly behind the poppy in one part of the movie, and in front of the poppy in another part of the movie.

4.9 Animation Controls
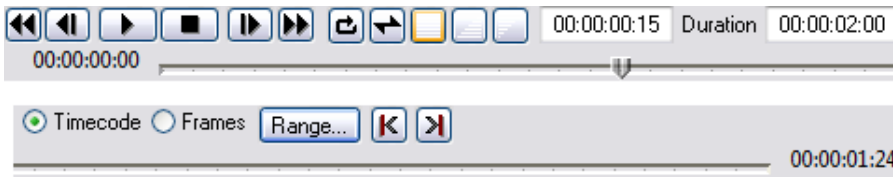
The Animation controls allow you to select which frame of the animation you are working on in the Viewer, and preview the animation.

The following animation controls are available:

- Start, step back, play, step forward, and end.
- Show full frame, lower/odd and upper/even fields.
- Current time, duration, display formats (timecode or frames).
- Slider range.
- Previous and next key.
- Time slider and last frame.

You can hide the Animation controls to give more space for the Viewer when working on a single frame of an animation.

This section contains information about the following procedures:

- To Show or Hide the Animation Controls
- To Specify the Time Display Format
- To Move to a Specific Frame
- To Move to the Next or Previous Key
- To Expand the Slider Scale
- To Show the Whole Project

4.9.1 To Show or Hide the Animation Controls

Click the **Animation Controls** () button to the left of the Animation controls.

4.9.2 To Specify the Time Display Format

Choose the format as follows:

- **Timecode:** `Hour:Minute:Second:Frame`
- **Frames:** Frame number.

4.9.3 To Move to a Specific Frame

Either edit the *Current frame* field or drag the time slider.

4.9.4   To Move to the Next or Previous Key

Click the **Next** key or **Previous** key button in the Animation controls.

A key is a frame in which one or more properties have been edited; for more information see the chapter Controlling Animation.

4.9.5   To Expand the Slider Scale
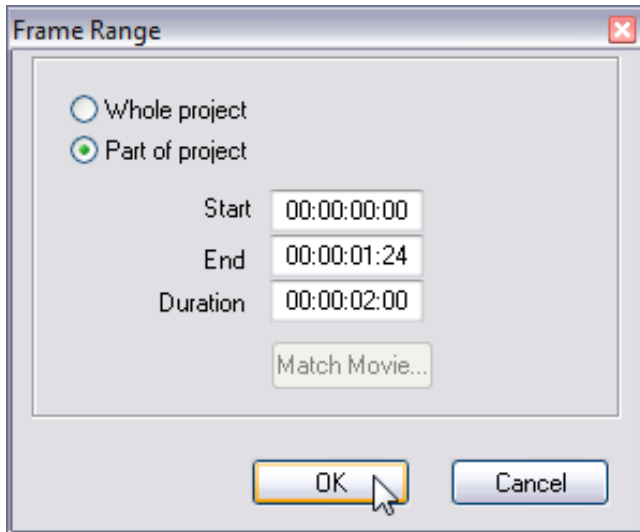
1. Click the **Slider Range** button. Either select Part of project, and specify the *Start time*, and the *End time* or *Duration*, of the section of the project you want to work on, or click the **Match Movie...** button to match the slider range and/or project settings to the movie in the currently selected layer.
2. Click the **OK** button.

4.9.6   To Show the Whole Project

1. Click the **Slider Range** button.
2. Select **Whole project** and click the **OK** button.

See Also

- Controlling Animation

4.10   Move and Pan Tool

- **Map layers:** Allows you to drag the map layer.
- **Image, text, and shape layers:** Allows you to move, resize, or rotate the image, text, or drawing.

In a map layer, clicking the right mouse button displays a pop-up menu that allows you to add a country or region to the map, fit the map to a country or region, center the map on a country or region, add a new label to the map, or clear the selection:
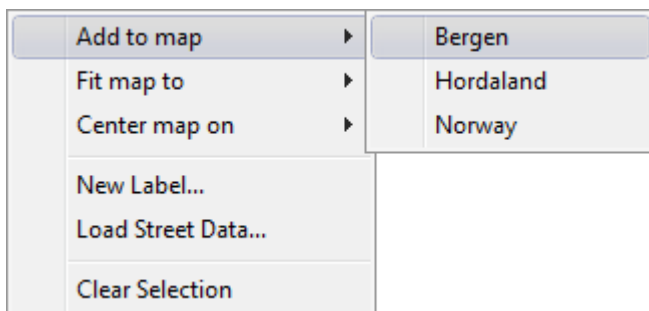
In an image/movie, text, or shape layer clicking the right mouse button displays a pop-up menu:
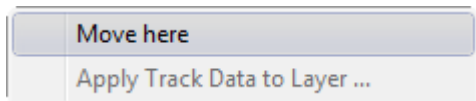
This section contains information about the following procedures:

- To Resize an Object
- To Rotate an Image, Text Item, or Drawing
- To Temporarily Select the Zoom Tool
- To Move the Pin Position

4.10.1   To Resize an Object

1. Drag one of the yellow handles at the corners or midpoints of the image or text item. The image or text item is resized about the pin position specified in the Transformation dialog box for the image or text layer.
2. To keep the aspect ratio fixed hold down **CTRL** while resizing.

4.10.2   To Rotate an Image, Text Item, or Drawing

1. Point to the rotation handle, which is a yellow square to the right of the pin position. The cursor changes to a rotation symbol.
2. Drag the handle to rotate the image, text item, or drawing about its pin position.

4.10.3   To Temporarily Select the Zoom Tool

- Hold down **CTRL** until the cursor changes to the Zoom cursor to zoom in, or hold down **SHIFT** until the cursor changes to the Zoom cursor, and click to zoom out.

4.10.4   To Move the Pin Position

- Hold down **SHIFT + CTRL** and drag the mouse pointer.

See Also

- Working with Maps
- Working with Street Maps

4.11 Path Tool

Allows you to edit the animation path along which a map layer, image, text item, or drawing is animated.

4.11.1 To Change the Animation Path

1. Point to a point on the animation path. The cursor changes to a triangle.
2. Drag the point with the mouse pointer.

4.11.2 To Change the Curvature of the Animation Path

Hold down **CTRL** and drag from a point on the animation path to extend tangent handles from that point.

4.11.3 To Move the Tangent Handles Independently

Hold down **CTRL** and drag one tangent handle.

4.11.4 To Move the Tangent Handles Symmetrically

Drag one tangent handle.

See Also

- Controlling Animation

4.12   Text Tool

- **Map layers:** Allows you to move, resize, or rotate the label of a map detail.
- **Text layers:** Allows you to edit the text in a text item, or resize the box.
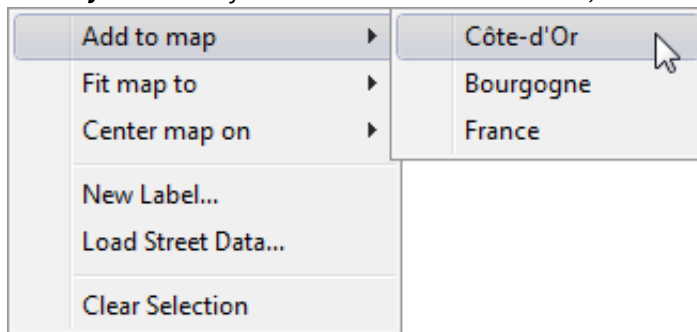
Right-clicking the layer displays a context menu that allows you to add a country or region to the map, fit the map to a country or region, center the map on a country or region, add a new label to the map, or clear the selection.

See Also

- Working with Maps

4.13   Zoom Tool

Map layers: Allows you to change the scale of a map layer.
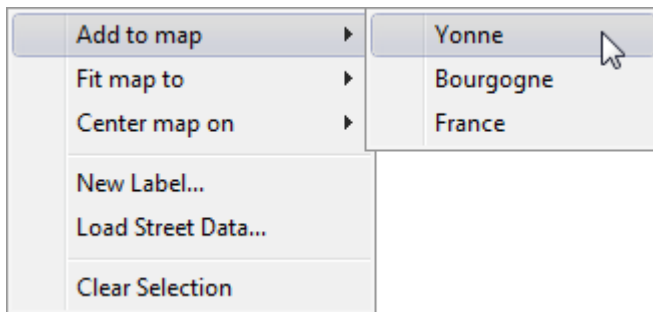
Right-clicking the layer displays a context menu that allows you to add a country or region to the map, fit the map to a country or region, center the map on a country or region, add a new label to the map, or clear the selection.

4.13.1   To Zoom in

Either click with the Zoom tool to zoom in by a factor of two, or drag with the Zoom tool to select an area to fill the map rectangle.

4.13.2   To Zoom out

Hold down **SHIFT** and click with the Zoom tool to zoom out by a factor of two.

4.13.3   To Temporarily Select the Move/Pan Tool

Hold down **CTRL** and drag the mouse pointer.

4.13.4   To Move the Pin Position

- Hold down **SHIFT + CTRL** and drag the mouse pointer.

See Also

- Working with Maps

4.14 Map Rectangle Tool

Map layers: Allows you to move or resize the map rectangle.

Right-clicking a map layer displays a context menu that allows you to move the center of the layer to the position of the mouse pointer:
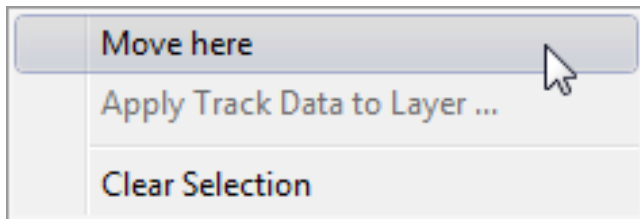
See Also

- Move and Pan Tool

4.15   Browse Map Tool

Map layers: Allows you to display the names of countries and regions in the map layer by pointing at them, and optionally add them to the Details list.
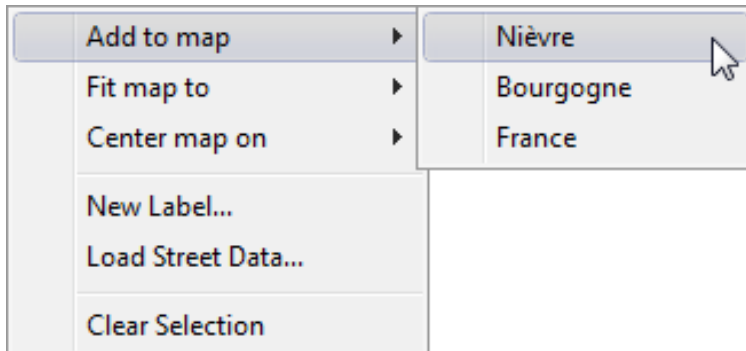
Add to map	▶	Nièvre
Fit map to	▶	Bourgogne
Center map on	▶	France
New Label...		
Load Street Data...		
Clear Selection		

Right-clicking the layer displays a context menu that allows you to add a country or region to the map, fit the map to a country or region, center the map on a country or region, add a new label to the map, or clear the selection.

See Also

- Working with Maps

4.16   Browse Street Shape Data Tool

Map layers: Allows you to display the names of features in imported data by pointing at them, and optionally label them or add them to the Details list.

As you move this over the map the tool tip shows you the name of each imported data feature.
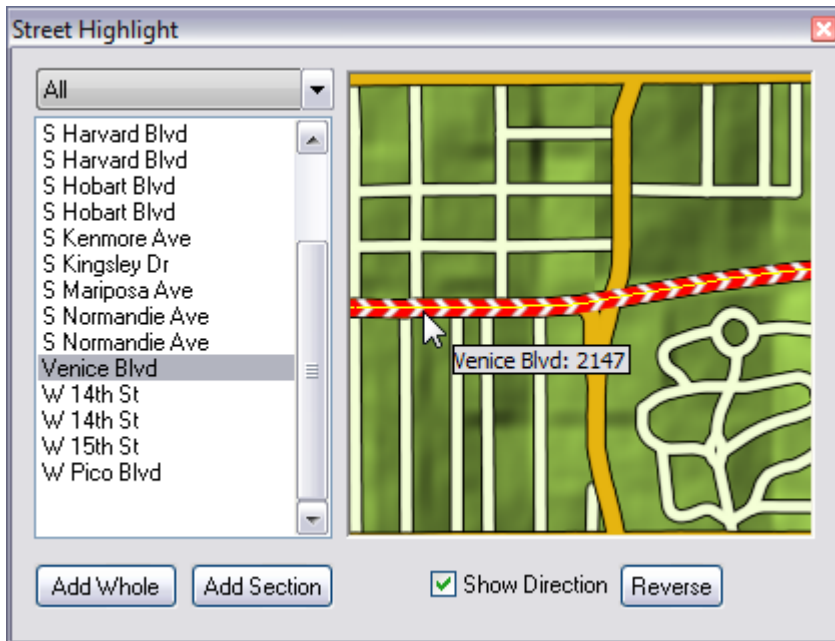
Right-clicking the map layer displays a context menu that allows you to filter the data, add a new label to the map, add the feature to the Details list, or label the feature:
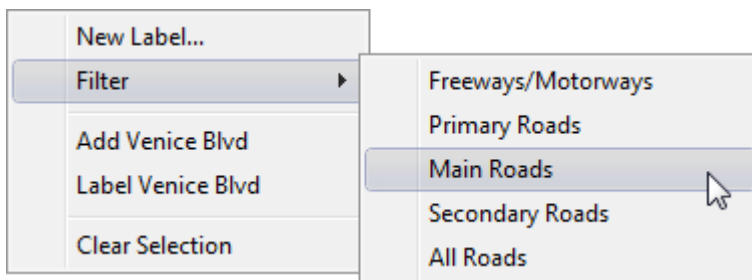
If you are labeling a street the label is drawn aligned with the direction of the street. You can use the Text tool to move or rotate the label as desired.

4.16.1   To Add a Section of a Street

1. Click the **Browse Street/Shape Data** button.
2. Left-click the map layer to display the Street Highlight tool.
3. Select the street and click the **Add section** button.

4. Left-click the street on the map to set **start** and **end points** for your section. The street section is added to the Details list.
5. Close the Street Highlight tool.

4.17   Ruler Tool

- **Map layers:** Allows you to measure distances on maps, and displays other useful information.
- **Image and movie layers:** Allows you to measure distances on images and movies.

4.17.1   To Measure a Distance

Drag from the start point to the end point of the distance to be measured. The display shows the location and height above sea level of the end point, and the distance between points:
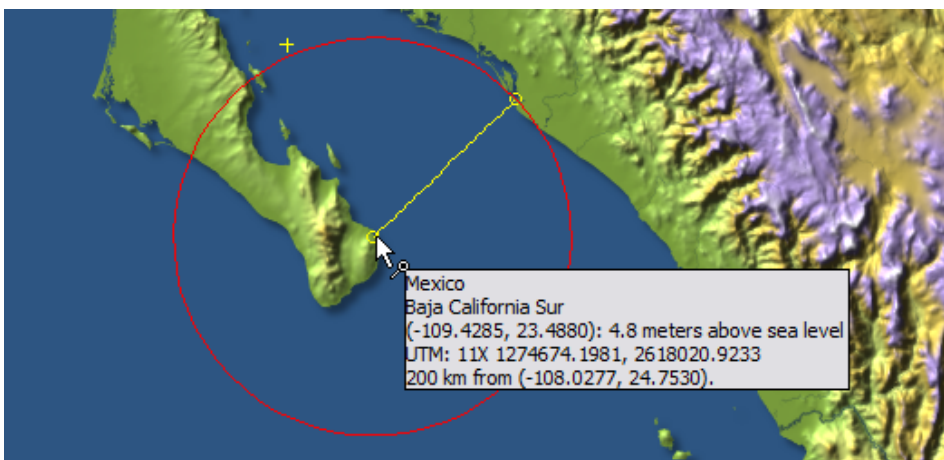
4.17.2   To Specify the Distance Units
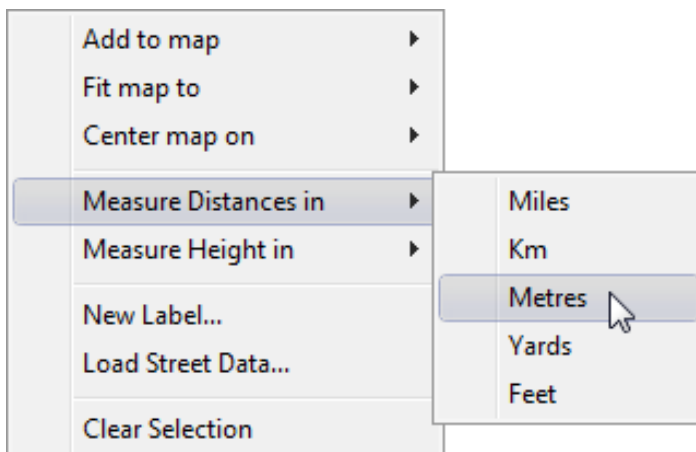
Right-click the map, point to **Measure Distances in** or **Measure Height in** on the context menu, then click the appropriate unit on the submenu.

4.18 Pick Color Tool

Displays a window showing the color of the layer, and composite project, under the mouse pointer:
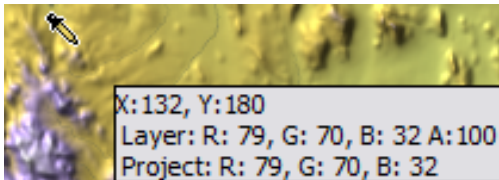
Clicking the mouse pointer copies the current color to the palette.

4.19   VWC Navigator

Allows you to select which part of the map is displayed in the map rectangle. The view drop-list contains all defined preset views and the possibility to add Custom preset views.

See Also

- Working with Maps

4.20   Panels

Allow you to control the characteristics of the object on the currently selected layer. The following panels are provided.

This section contains information about the following topics:

- Properties
- Contents
- Lighting
- Layer Fx
- Keybars

4.20.1   Properties

Shows settings affecting the entire layer including compositing options, transform options, drop shadow, frame, and trail.

4.20.2   Contents

Shows information about the contents of the layer. On a map layer it allows you to locate and select features from the map database or from imported street data, or add shape overlays. On a text layer, it allows you to add and edit text items. On a shape layer it allows you to draw and edit shapes.

4.20.3   Lighting

Allows you to add lighting effects to a layer. For more information see the chapter Lighting and Effects.

4.20.4   Layer Fx

Allows you to add image effects to a layer. For more information see the chapter Lighting and Effects.

4.20.5   Keybars

Allows you to control the animation of each feature of the currently selected layer that can be animated. For more information see the chapter Controlling Animation.

5   Working with Maps

This section explains the options for creating and working with map layers. It describes how to use the Properties panel to define the projection, with advice on choosing the appropriate projection for specific applications.

It also explains how to use the Contents panel to select countries and places for incorporation into the map, and control their appearance using the style settings.

This section contains information on the following topics:

- Creating a Map Layer
- Map Rectangle
- Setting the Map Properties
- Locating Features by Name
- Adding Map Details
- Adding Features to the Map Database
- Locating Features in Street Data
- Locating Features in Imported Data
- Adding Shape Overlays to Map Layers
- Adding Satellite Imagery
- Adding Symbols
- Defining the Style of Details
- Setting the Properties for Details
- Setting Map Features
- Displaying Disputed Regions
- Using the Navigator
- Measuring Distances on the Map
- Locating Features by Country or Region

5.1   Creating a Map Layer

Most Viz World Classic projects contain at least one map layer, containing the regions, countries, and other details you want to feature in the animation. You can include more than one map layer to show two areas of the world, or one area at two different scales, in the same animation. You can add a map layer when you create a new project, or using the appropriate option on the Layer menu.

The map layer will show the region detailed by the map database using the Globe projection.

This section contains information on the following procedures:

- To Create a New Project with a Map Layer
- To Add a Map Layer
- To Insert a Map Layer between Existing Layers

5.1.1   To Create a New Project with a Map Layer
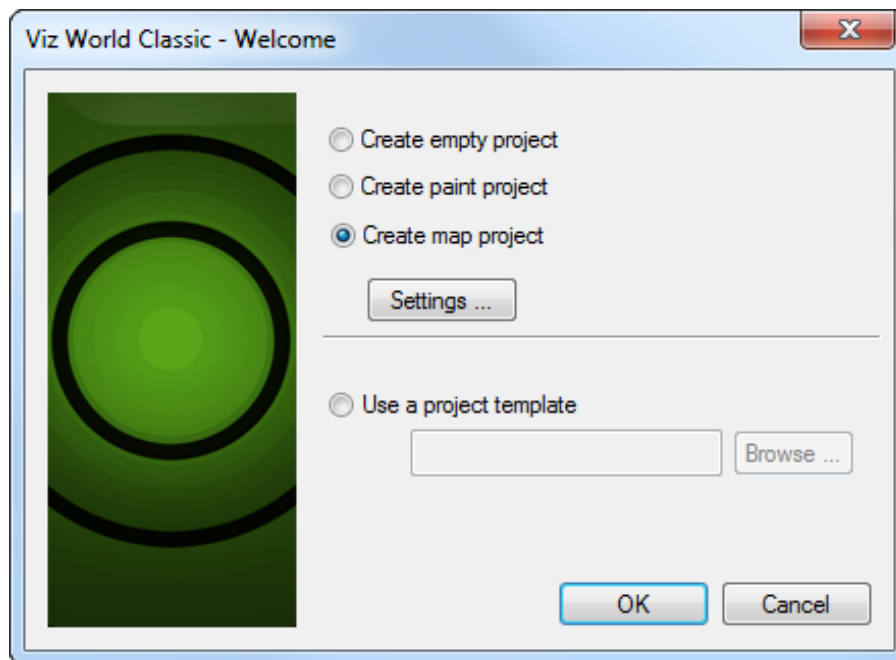
When you start Viz World Classic, or create a new project by clicking **New** on the **File** menu, you can choose to include a map layer:

1. Select **Create map project**.
2. Choose the map database you want to use from the drop-down menu.
3. Click the **OK** button to create the project.
   - The first time you load a new map database there will be a delay while the data is loaded. All the map layers in one project use the same map database.
   - Earlier versions of Viz World Classic (Viz Curious Maps) supported having access to databases of the World, Europe, and USA, and a Combination database which combines these into a single database. More recent versions of Viz World Classic are only installed with the combination database; however, you can change this under **View > Options… > Map Data > Locations**.

5.1.2   To Add a Map Layer

- On the **Layer** menu, point to **Add Layer**, and then click **Map**. The new layer is added above the existing layers.

5.1.3   To Insert a Map Layer between Existing Layers

1. Select the layer in the Layers list above or below which you want to add the map layer.
2. On the **Layer** menu, point to **Insert Above Selection** or **Insert Below Selection** as appropriate, and then click **Map**.

5.2   Map Rectangle

The map is drawn in a rectangular window called the map rectangle. You can change the size and position of the map rectangle to create inset maps in larger animations.

5.2.1   To Display the Map Rectangle

Select the **Map Rectangle** (⬚) tool: Handles are displayed on the edges of the map rectangle.

5.2.2   To Resize the Map Rectangle

Drag one of the handles.

5.2.3   To Move the Map Rectangle

Drag anywhere within the map rectangle. The above example uses a second map layer as an inset by resizing and moving the map rectangle to a corner of the main map.

5.3   Setting the Map Properties
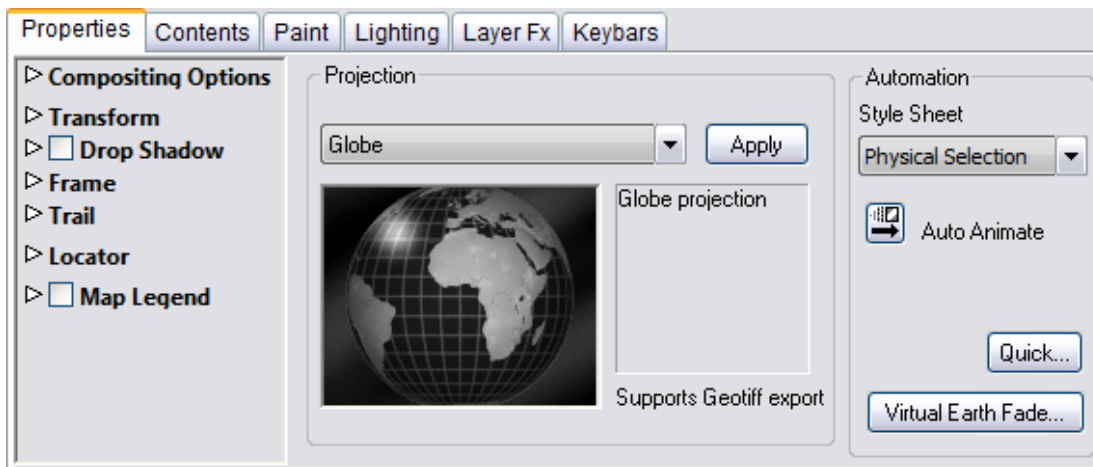
The options in the Properties panel allow you to specify the position and scale of the map, choose the map projection, and specify the style sheet.

This section contains information on the following topics:

- Compositing Options
- Transform Options
- Drop Shadow Options
- Frame Options
- Trail Options
- Locator
- Map Legend
- Projection
- Automation

5.3.1   Compositing Options
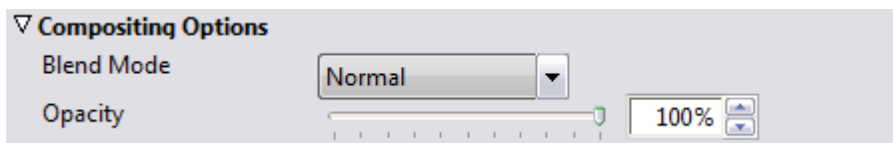
Blend Mode specifies how the layer is combined with the other layers, and can be one of:

Normal, Add, Subtract, Difference, Multiply, Darken Only, Burn, Color Burn, Screen, Lighten Only, Dodge, Color Dodge, Hue, Saturation, Value, Color, Overlay, Soft Light, Hard Light, Pin Light, Exclusion, or Negation.

The **Opacity** determines the layer opacity, and can be animated.

5.3.2   Transform Options
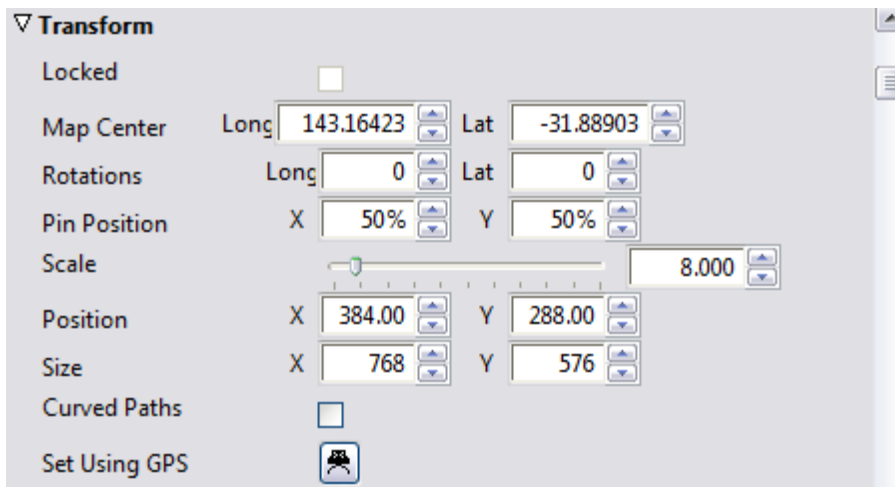
Allows you to specify the position, scale, rotation, and origin numerically. The following fields are provided:

Option	Description
Locked	When selected, this map layer is locked to the position and zoom setting of the map layer below it; see Setting the Map Properties#To lock the map layer to the map layer below it.
Map Center	The longitude and latitude at the pin position, in degrees.
Revolutions	The number of globe revolutions in each direction, to create an animation that spins the globe.
Pin Position	The point, relative to the map rectangle, about which the map is centered, where X=0%, Y=0% corresponds to the bottom left-hand corner of the map rectangle.
Scale	The zoom ratio, where 1.00 corresponds to showing the entire globe.
Position	The position of the center of the map rectangle, where X=0, Y=0 corresponds to the bottom left-hand corner of the project area.
Size	The size of the map rectangle in pixels.
Curved Paths	When selected, moves the camera in a smooth curve between keys when panning the map.

Option	Description
Set Using GPS	Displays the **GPS Position** dialog box to allow you to center the map at a specific longitude and latitude. See To Enter a GPS Location.

Longitude and latitude values can either be entered in decimal degrees, such as 20.175, or in degrees, minutes and seconds, such as 20d10m30s.

To Lock the Map Layer to the Map Layer below

- Select **Locked** in the **Transform** options.

Locking a map layer fixes it at the same size, scale, and projection as the base map. This is useful for drawing selected regions of a map using a different style from the main map.

In the above example, the upper map layer has all styles other than Selected Region set to a Fill color of *None*, and no relief. The lower map layer has Relief and Ocean Contours selected.

To Change the Pin Position

The map is centered on the pin position, which is drawn as a **+** symbol on the map when you select one of the map manipulation tools. Initially, the pin position is centered in the map rectangle, but you can change it to create an off-center globe in the map rectangle.

Either:

1. Select the Move/Pan or Zoom tool.
2. Hold down Sc and drag in the Viewer.

Or:

- Edit the **Pin Position** values in the **Transform** options.
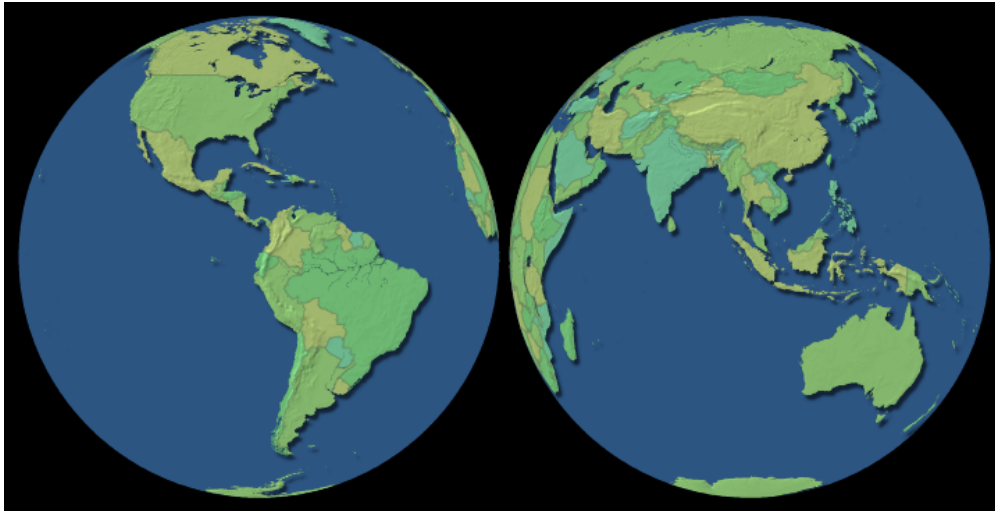
The above example was created using two map layers, each with a different pin position.

5.3.3   Drop Shadow Options

Allows you to add a drop shadow which is cast by the map layer onto other layers.

The following parameters are provided:

Parameter	Description
Offset	The offset of the drop shadow, in pixels.
Opacity	The opacity of the shadow. 0% gives no drop shadow.
Softness	Blurs the drop shadow to smooth the edges. Values in the range 0-5 are recommended.
Color	The color of the drop shadow.

5.3.4   Frame Options
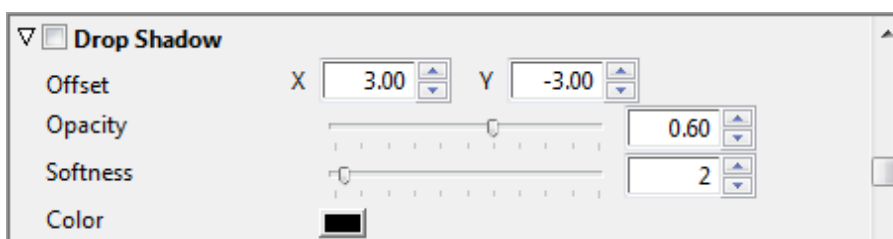
The following options allow you to define the frame:

Parameter	Description
Fill Color	The fill color, for areas outside the globe if the edges of the globe are visible.
Border and Border Color	The frame border color, and its shape: Rectangle or Circle.
Border Width	The width of the frame border in pixels.
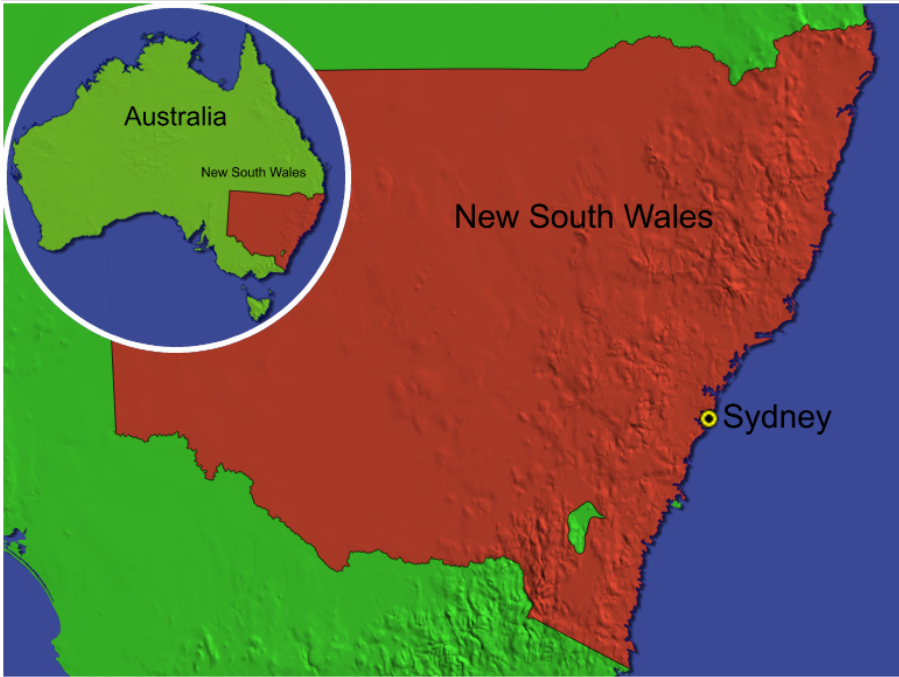
For example, the above inset map uses a circular frame with a white 5-pixel border.

5.3.5   Trail Options
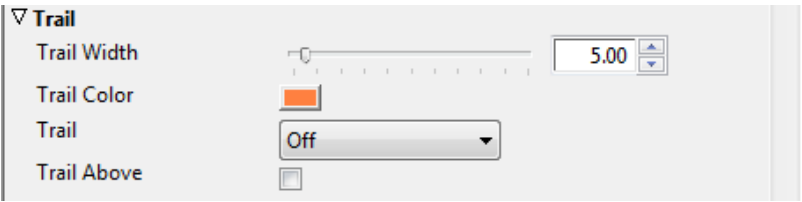
- Use **Trail Width** and **Trail Color** to define the width and color of the trail.
- Choose **Behind**, **Ahead**, or **Full** from the **Trail** drop-down menu to leave a trail behind, ahead of, or on both sides of the path.
- Select **Trail Above** to display the trail above the layer.

5.3.6 Locator
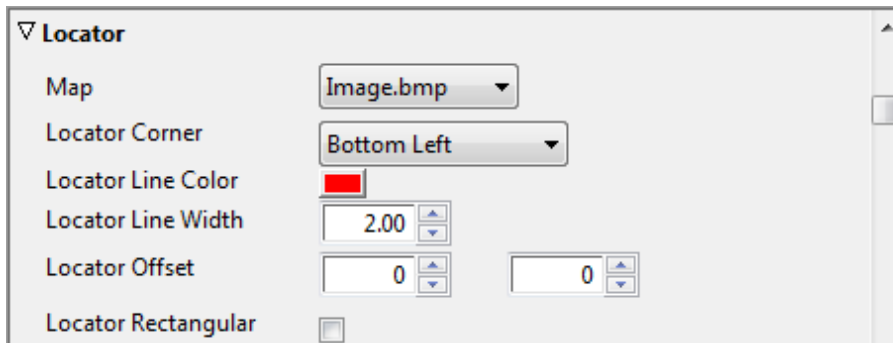
The map locator enables you to create a map that can be used to highlight the location of your main map.

To Create a Locator Map

1. From the main menu click **Layer**, and select **Create Pre-rendered Map** and then **Locator...**
2. From the **Export Locator Map** dialog box you can name the file, set format, image format/quality options, frame size and alpha options
3. Click Render to render the locator image to disk
4. In the Locator options select the locator image from the Map drop-list
5. Set the parameters for the locator and save the map project

5.3.7 Map Legend

Map legend allows you to add a legend to the map, position and customize its design.
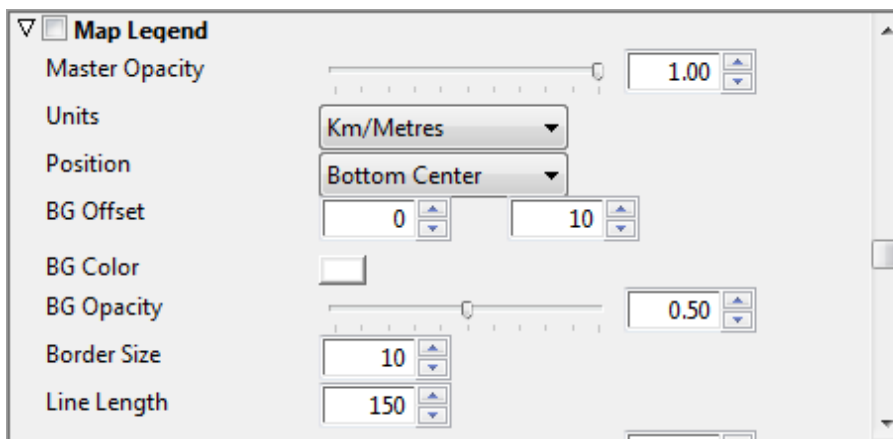
- **Master Opacity:** Sets the opacity of the legend.
- **Units:** Defines the legend's units in kilometers/meters, miles/yards and miles/feet.
- **Position:** Defines the position of the legend. Available options are bottom and top left, right and center.
- **BG Offset:** Defines the offset of the legend's background.
- **BG Color:** Defines the legend's background color.
- **BG Opacity:** Defines the opacity of the legend's background.
- **Border Size:** Defines the legend's border size (in pixels).
- **Line Length:** Defines the legend's length (in pixels).
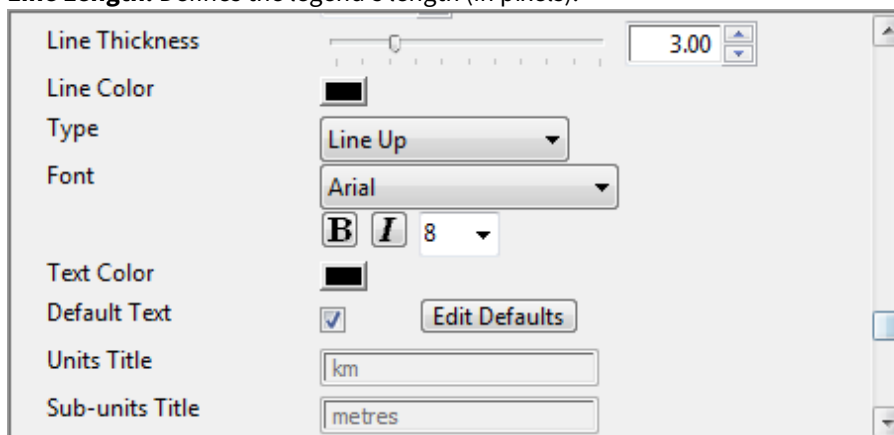
- **Line Thickness:** Defines the thickness of the legend's line (in pixels).
- **Line Color:** Defines the legend's line color.
- **Type:** Defines the type of line. Alternatives are line up/down, alternate filled and open and staggered open/filled.
- **Font:** Defines the font and the font parameters.
- **Text Color:** Defines the color of the text.
- **Default text:** Allows you to enable and define the default unit text (for example, setting Km to km, kilometers, kilómetros, etc.).
- **Units Title:** Allows you to manually enter the units title text instead of using the default text.
- **Sub-units Title:** Same as for Units Title.
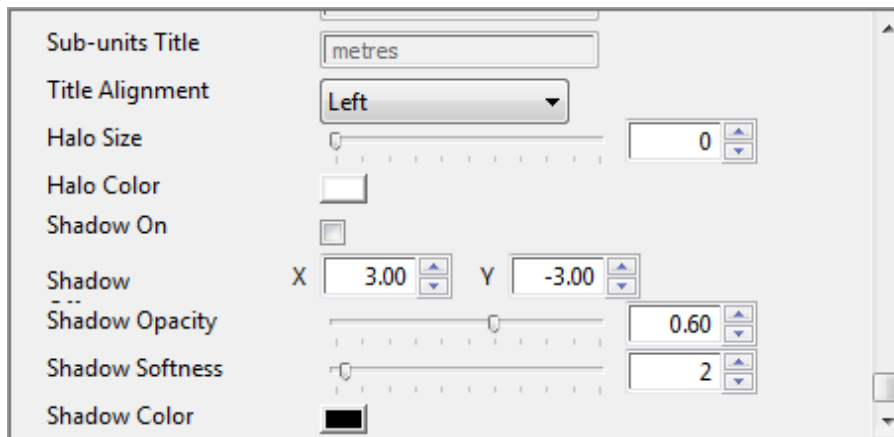
- **Title Alignment:** Aligns the unit titles. Available options are Left, Center and Right.
- **Halo Size:** Defines the size of the legend's halo. Note that the halo only has an affect on the legend itself and not the legend's background (use shadow).
- **Halo Color:** Defines the color of the legend's halo.
- **Shadow On:** Enables the legend's shadow.
- **Shadow Position:** Defines the (X and Y) position of the legend's shadow.
- **Shadow Opacity:** Defines the opacity of the legend's shadow.
- **Shadow Softness:** Defines the softness of the legend's shadow. The higher the softness, the wider the shadow spreads.
- **Shadow Color:** Defines the color of the legend's shadow.

To Create a Map Legend
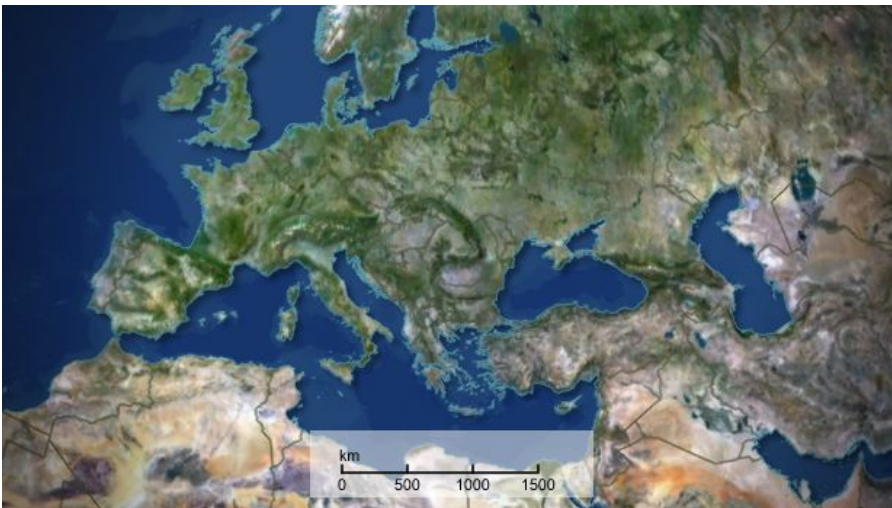
1. Open the **Properties** panel.
2. Enable the **Map Legend** and set the parameters.
3. Save the map project.

5.3.8 Projection

To Choose the Projection

- Choose the projection from the drop-down menu. Selecting a projection previews it in the window below the drop-down menu.
- Click the **Apply** button to apply the projection to the map layer. Which map projection you choose depends on what you are using the map for, the part of the globe displayed, and the type of animation.

In the majority of cases the **Globe** projection is most suitable as it is ideal for zooming in animations, and land shapes look familiar when in the middle of the picture. Its chief disadvantages are that shapes get distorted near the horizon, and only half the world can be seen at any one time.

The other projections are divided into four main groups:

- **Cylindrical projections:** Have shapes that look familiar for certain latitudes, but is more distorted at other parts.
- **Equal Area projections:** Show the relative size of countries more accurately but the shapes can look unusual.
- **Conical projection:** Is really only useful for maps of the Continental USA.
- **Stereographic projections:** Have familiar shapes at the center of the image, but is very distorted at the edges. They can be useful for combining with satellite images.

5.3.9 Automation

To Change the Stylesheet

Choose a style sheet from the **Style sheet** drop-down menu.

To Auto-animate the Map Layer

Click the **Auto Animate** ( ) button:

See Also

- Working with Styles
- Automatically Animating a Layer

5.4   Locating Features by Name

The Search tab in the Contents panel is used for searching the entire map database for a feature, using a string or sub string typed in the Named text box. Search results can be filtered by using the radio buttons and the drop down list.

Searching is instant (after the first three characters) and optimized according to relevance; hence, if you search for `Paris` your result shows all places named *Paris*, but if you search `Paris TX` you will get *Paris, Lamar County* which is in Texas, USA.
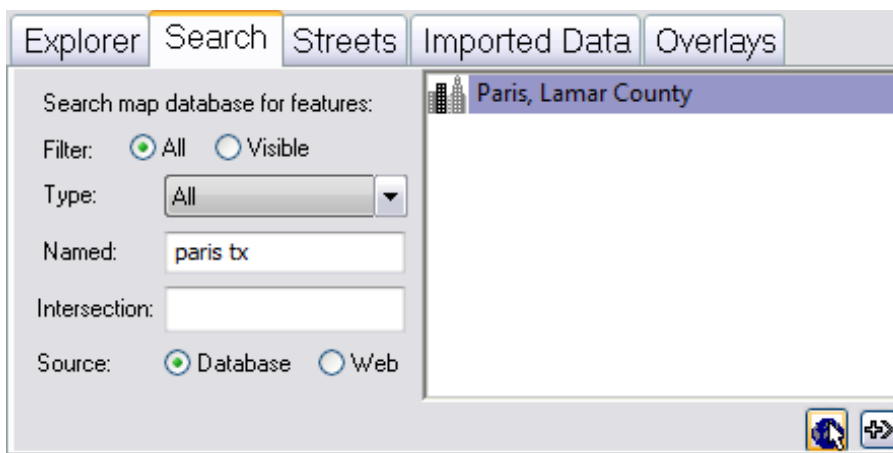
1. Select **All** or **Visible** to search all of the features of specified type in the database, or only those visible in the current map view.
2. Choose the type of feature you want to search for from the **Type** drop-down menu.
3. Enter the text you want to search for in the **Named** field. The text can include the wildcards `?` or `*` to match any single character, or any sequence of characters, respectively. For example, typing `*erest` finds all features containing `erest` :
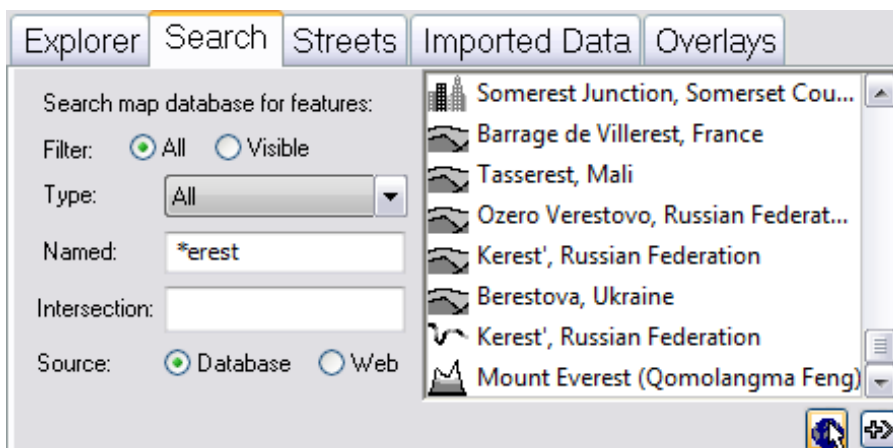
If you have street data (see Locating Features in Street Data) you can also search for crossroads using AND or & (for example, E Tudor RD AND Lake Otis Pky):
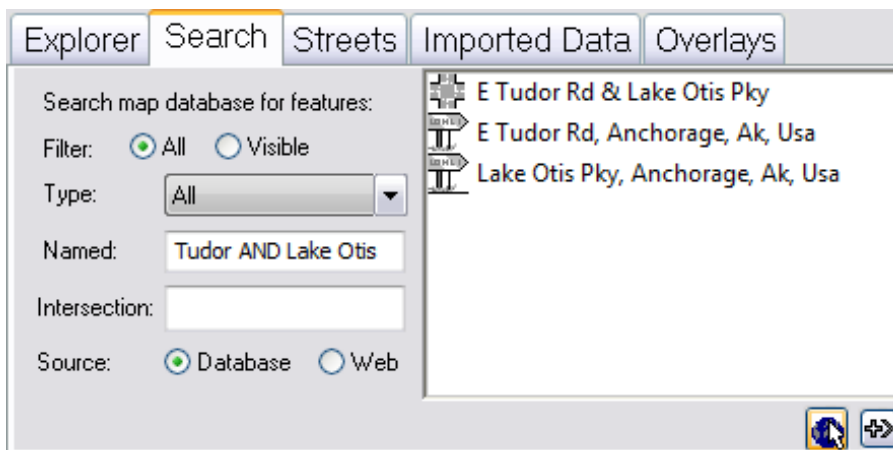
5.4.1   Search Parameters

- **Find All:** Displays all matching entries in the database when selected.
- **Find Visible:** Displays only the matching entries visible in the current map when selected.
- **Addr and Cross st.:** Enables the user to search for specific addresses.
- **Type:** Limits the result list according to the selected Type. For example, region, capitals, tourist attraction, and so on.
- **Named:** Text box for entering search criteria. Can also use AND or & to search for crossroads/intersections.
- **Intersection:** Searches for an intersection of the street entered in the Named field. This is an alternative to the search option described for the Named field.
- **Source:** Searches the Viz World database.

> ⚠ **Note:** Searching for addresses requires licensed street data installed on the server.

5.4.2   To Display the Currently Listed Features

Click the **Locate Features** () button: The currently selected features are labeled on the map, and you can click on one to select it in the Search list.

5.5   Adding Map Details

The **Details** list on the **Contents** panel shows a list of all the details currently selected for incorporation in the current project:
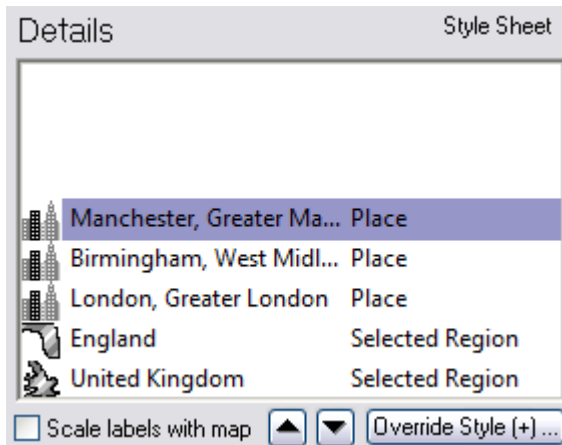
Each entry shows an icon representing the type of feature, the name of the feature, and the name of the style applied to the feature. The icons are as follows:

Icon	Description
	Country
	Region
	Town
	Place
	River
	Mountain

The **Details** list also includes any area or line shapes drawn on the map layer:

Icon	Description
	Area shape
	Line shape

This section contains information on the following procedures:

- To Specify How Labels Scale with the Map
- To Reorder the Map Details
- To Remove a Map Detail
- To Add a Feature from the Explorer or Search Panel to the Details List
- To Add a Country or Region from the Map to the Details List
- To Redraw the Map to Fit a Feature
- To Center the Map on a Map Detail

5.5.1   To Specify How Labels Scale with the Map

Select **Scale labels with map** below the **Details** list to cause the labels of map details to remain the same proportion relative to the map's scale. If you deselect this option the labels will remain fixed size irrespective of the map scale.

> ⚠️ **Note:** This option affects all labels on the map layer.

5.5.2   To Reorder the Map Details

Entries in the **Details** list are drawn on the map from the bottom of the list upwards, and you can change the order to determine how features overlap.

Either:

1. Select the detail you want to move.
2. Click the arrow buttons (▲▼) to move it up or down in the list:

Or:

- Drag the detail to the required position in the list:

Or:
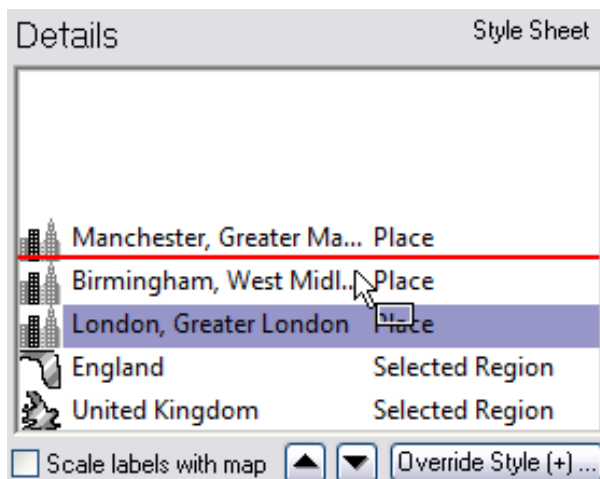
Click the detail with the right mouse button and click the appropriate **Ordering** option on the context menu.

5.5.3   To Remove a Map Detail

Either:

1. Select the detail you want to remove.
2. Press **D**.

Or:

- Click the detail with the right mouse button and click **Remove** on the context menu.

5.5.4   To Add a Feature from the Explorer or Search Panel to the Details List

Either:

1. Select the feature in the **Explorer** or **Search** lists.
2. Click the **Add Feature to Details** () button:

Or:

- Click the detail with the right mouse button and choose **Add to map** from the context menu.

5.5.5   To Add a Country or Region from the Map to the Details List

Click the **Browse Map** () tool.

As you move the pointer over the map, the name of each country and region is displayed:

Click the map with the right mouse button and point to **Add to map** on the context menu, and click the feature you want to add:
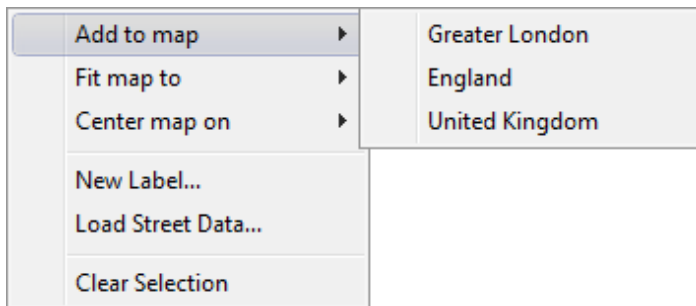
5.5.6   To Redraw the Map to Fit a Feature
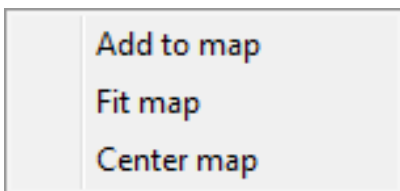
Click the feature in the **Explorer**, **Search** panel, or **Details** list with the right mouse button and click **Fit map** on the appearing context menu.

5.5.7   To Center the Map on a Map Detail

Click the feature in the Explorer, Search panel, or Details list with the right mouse and click **Center map** on the appearing context menu.

See Also

- Working with Shapes

5.6 Adding Features to the Map Database

Viz World Classic allows you to add user-defined features to the map database. You can share user map details with other users; see the Sharing Databases section.

This section contains information on the following procedures:

- To Define a New Feature on the Map
- To Define a New Feature from the Explorer

5.6.1 To Define a New Feature on the Map

You can define a new feature at a specified map position and add it to the map database, associated with the country and region you clicked on.

1. Select any tool except the Path tool or the Map Rectangle tool.
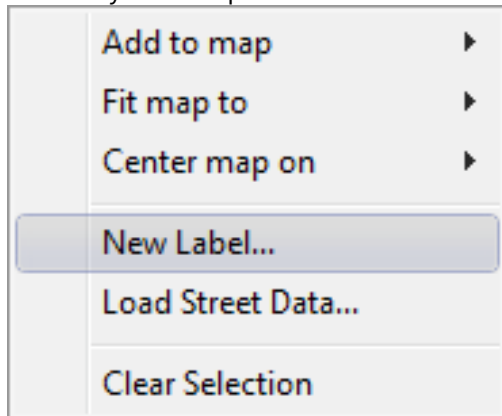
2. Click the map where you want to add the feature with the right mouse button and click **New Label...** on the context menu. The following dialog box allows you to define the new feature:
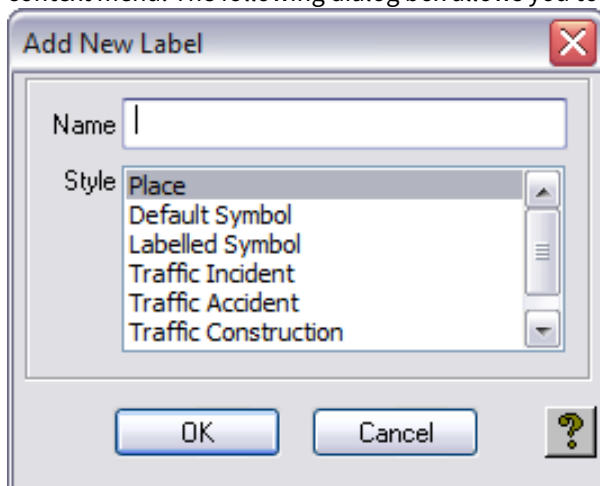
3. Enter a name for the feature, and specify the style.
4. Click the **OK** button to add the new feature to the user map details database and **Details** list.

5.6.2   To Define a New Feature from the Explorer

You can define a new feature of any type and add it to the map database associated with a specific county and region.

1. Click the New Feature button in the top right corner of the **Explorer** panel. The following dialog box allows you to define the new feature:

2. Enter a name for the feature, and specify a category and style.
3. Enter the latitude and longitude, if you know them, or use the Text tool to move the new feature to the correct position after you have defined it. The **Region** list is identical to the left list in the **Explorer** and you can use the **Find** box to scroll to an entry, and the *Visibleregions* checkbox to show only regions visible in the image window.
4. Click the **OK** button to add the new feature. The feature is added to the user map details database and to the **Details** list.

See Also

- Reusing Design Elements

5.7 Locating Features in Street Data

The **Streets** tab on the **Contents** panel allows you to explore imported street data, and add selected features to the **Details** list:
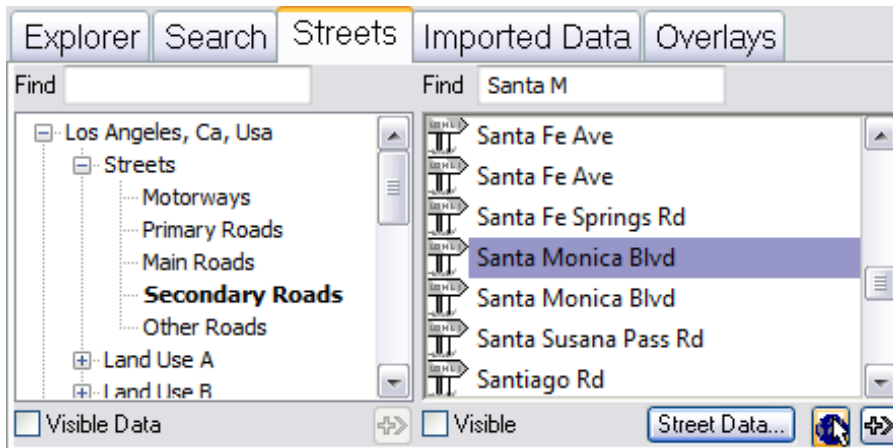
It works in a similar way to the **Explorer**.

See Also

- Working with Street Maps

5.8 Locating Features in Imported Data

The **Imported Data** tab on the **Contents** panel shows imported third-party map data in the widely-used ESRI Shape File Format, and allows you to explore it by data set, data layer, and subset:
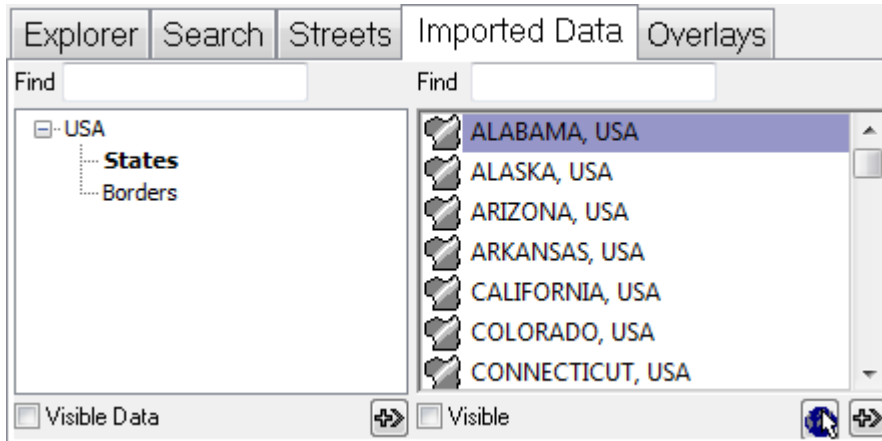
It works in a similar way to the **Explorer**.

See Also

- Working with ESRI Shape Files

5.9   Adding Shape Overlays to Map Layers

The **Overlays** tab on the **Contents** panel allows you to add shape overlays to the map layer, either by drawing them, or by tracing map features:

See Also

- Working with Shapes

5.10 Adding Satellite Imagery

You can add geo-referenced satellite imagery to your base map. Other features like street data appear on top of it.

5.10.1 To Add Satellite Imagery to the Base Map
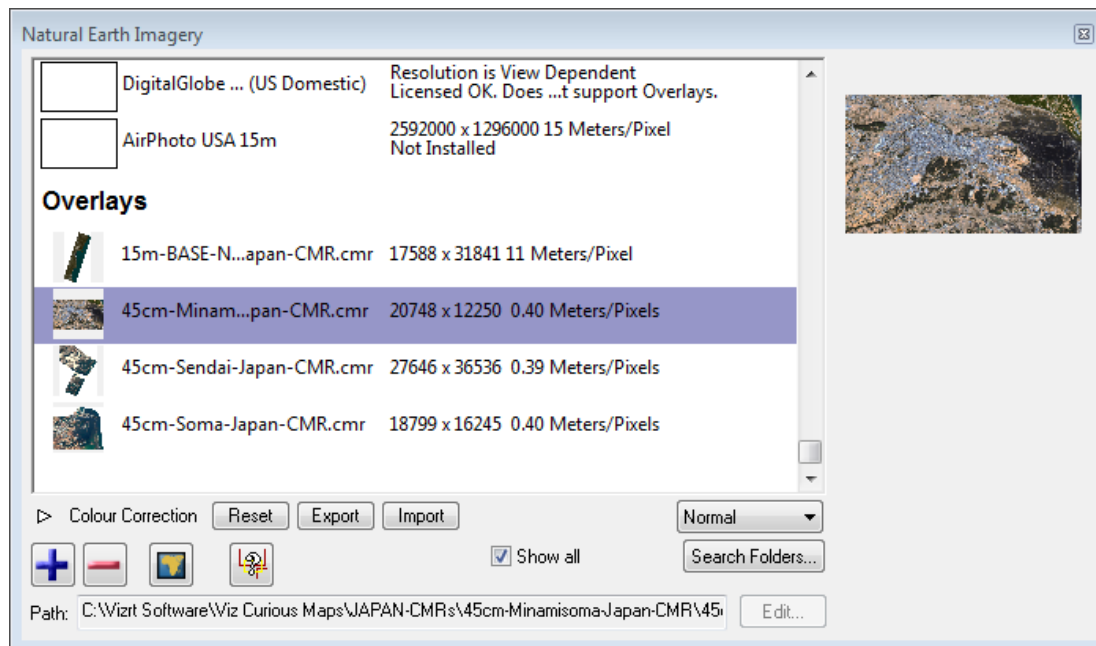
1. From the **View** menu select **Options….**.
2. Select **Locations** and click **Installed Imagery…**.
3. Click the **+** button and open the CMR files.
4. Click the **Fit images to selected map** button and close the window.
5. From the **Styles** menu select **Styles Editor…**.
6. Select the **Topography** tab.
7. Select your style sheet and set it to **Natural Earth.** All satellite images appear as part of your map; however, they only appear if you use style sheets based on Natural Earth.
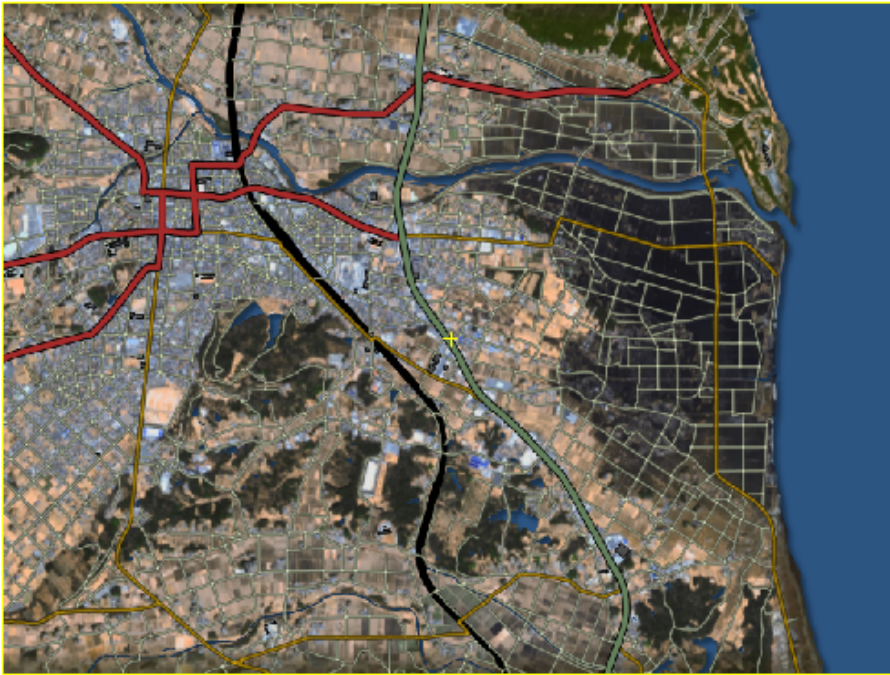
8. *Optional*: From the **Contents** tab select the **Streets** tab and load the street data for your region to see how streets are overlaid.

See Also

- [Working with Images and Movies](#)

5.11 Adding Symbols
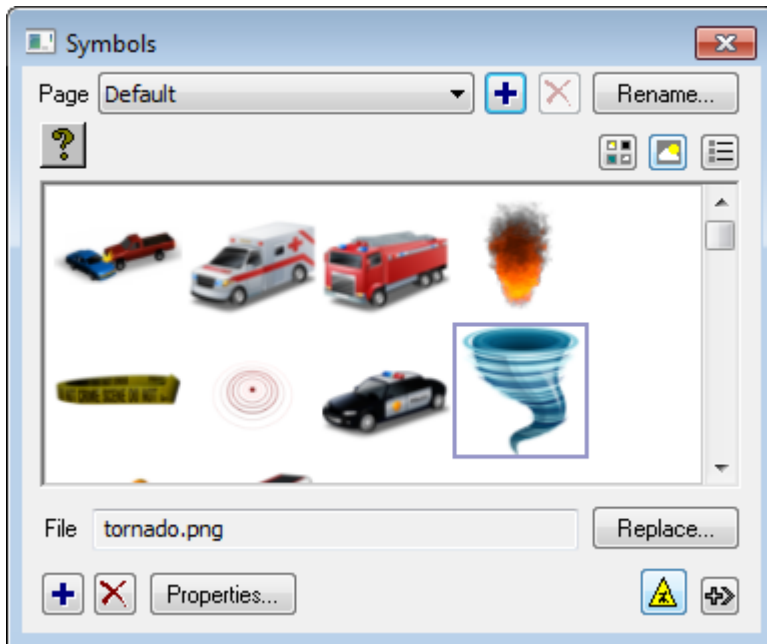
Symbols can be added to map layers.

5.11.1 To Add Symbols

1. Click the **Symbols** button on the toolbar, or click Symbols on the Tools menu.
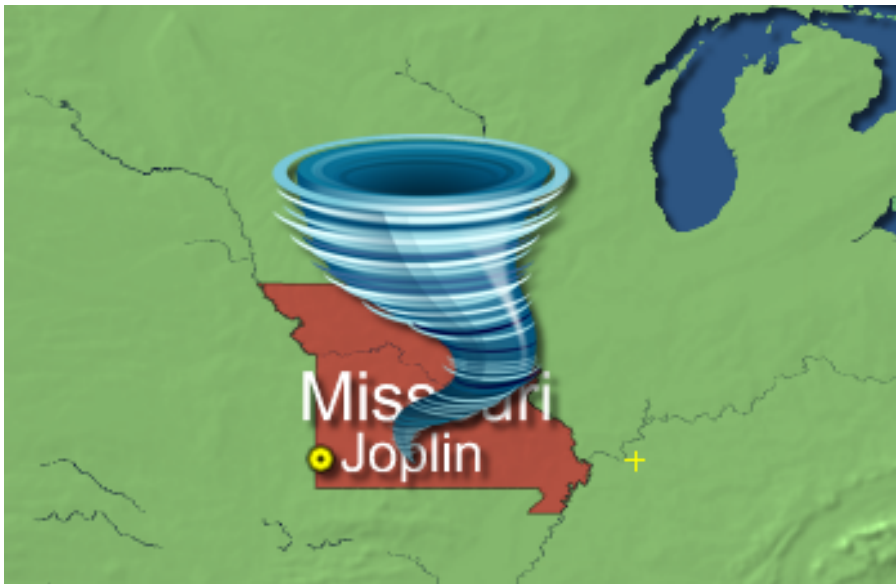
2. In the Symbols dialog box select the symbol and click the **Add to Layer** button or **Drop Symbols** button. All symbols are visible in the **Details list**.

5.11.2   To Manage Symbols

1. Click the **Symbols** button on the toolbar, or click Symbols on the Tools menu.
2. Add a page to categorize symbols. Pages can also be renamed.
3. Click the **Replace...** button to replace the symbol.
4. Add symbols to the page by clicking the **+** button.
5. Delete symbols from the page by clicking the **Delete** button.
6. Set properties by clicking the **Properties** button. The Properties dialog box allows you to set the scale, fix the aspect ratio, set default text, set preferred style name, add and set drop shadow properties and set it to loop.

5.12   Defining the Style of Details

The **Style, Properties** and **Shape** panels on the **Contents** panel allow you to define the individual appearance of each of the map details and shape details you have added to your project.

Each detail is initially drawn using the style defined in the **Styles Editor** for the corresponding type of object. These include:

- Sea.
- Unselected Land.
- Selected Region.
- Place.
- Latitude/Longitude.

You can redefine these styles in the **Styles Editor**, to change the appearance of all details of the corresponding type. You can also create your own named styles, and apply these to specific details to draw them in a specific style.

Finally, you can override the style of any selected detail to modify its appearance from that specified in the **Styles Editor**.

This section contains information on the following procedures and topics:

- To Apply a Predefined Style to a Detail
- To Redefine the Style Applied to a Map Detail
- To Override the Style of a Map Detail
- Color Panel
- Text Panel
- Strap Panel
- Texture CC Panel

5.12.1   To Apply a Predefined Style to a Detail

1. Select the detail in the **Details** list.
2. Click the **Style** tab and choose the style name from the **Style** list:
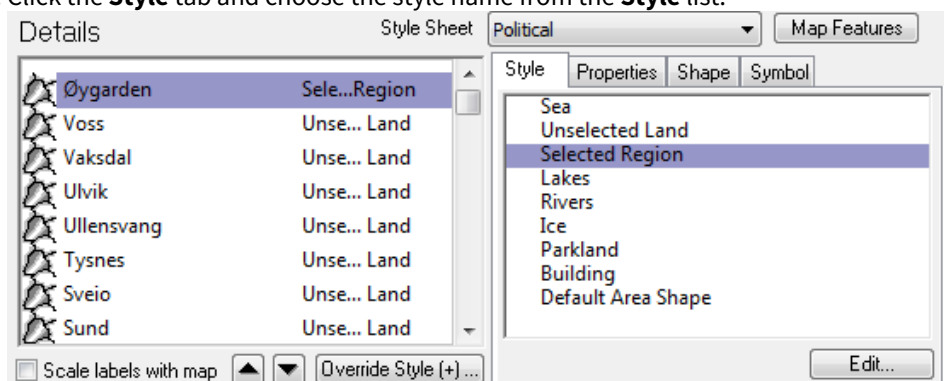
5.12.2   To Redefine the Style Applied to a Map Detail

1. Click the **Style** tab and select the style in the **Style** list.

2. Click the **Edit...** button.

The **Styles Editor** is displayed to allow you to edit the style. For more information see the **Styles Editor.**

5.12.3   To Override the Style of a Map Detail

1. Select the detail in the **Details** list.
2. Click the **Override Style (+)**… button.

The **Settings** dialog box displays to allow you to override the style:
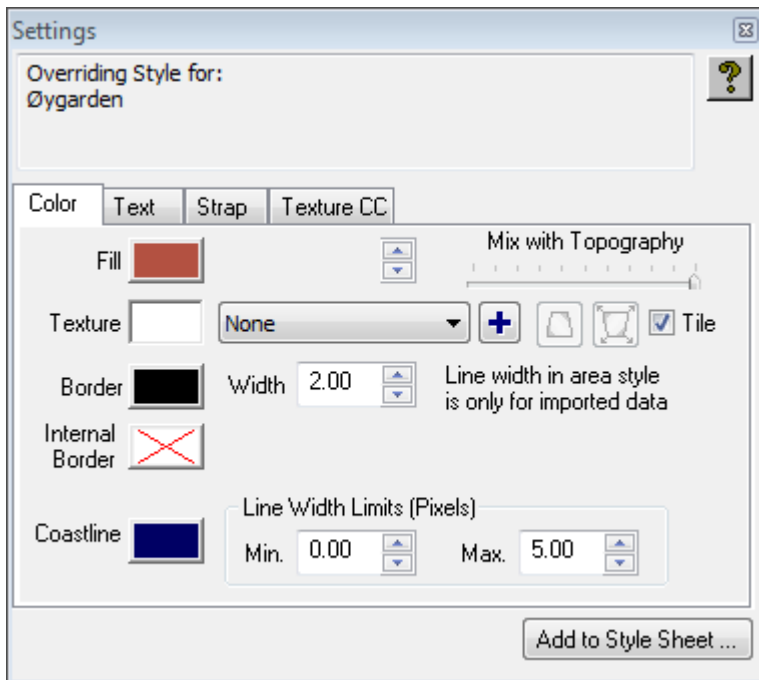
If the style has been overridden a **+**, it is displayed after the style name in the **Details** list. After overriding a style you can click the **Add to Style Sheet...** button to add the new style to the current style sheet, so you can use it for other details.

The following dialog box displays to allow you to name the new style:
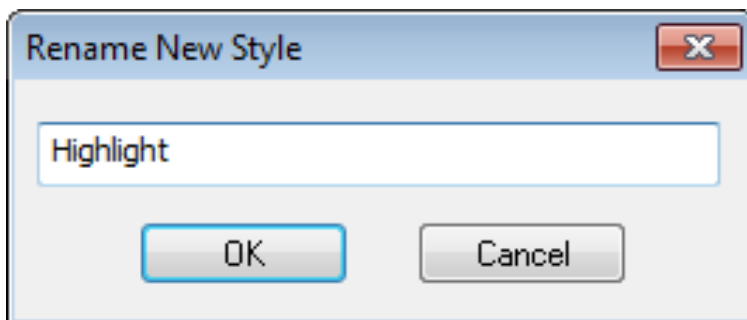
5.12.4   Color Panel
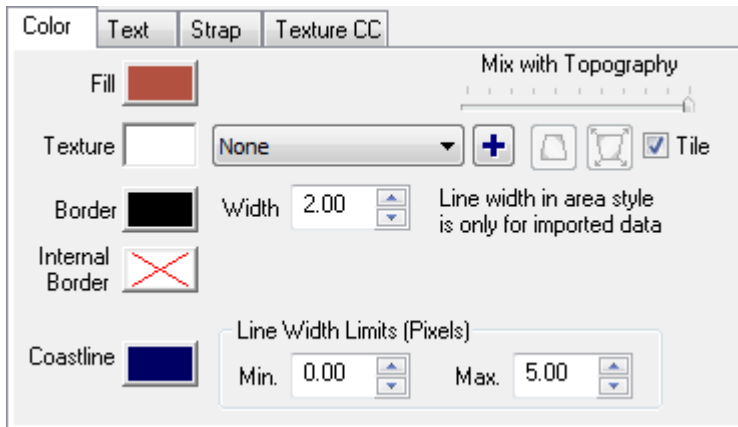
Allows you to specify the fill, border and coastline colors for the object, the width and line width limits, and an optional texture.

For more information see the Color Panel when Working with Styles.

5.12.5   Text Panel
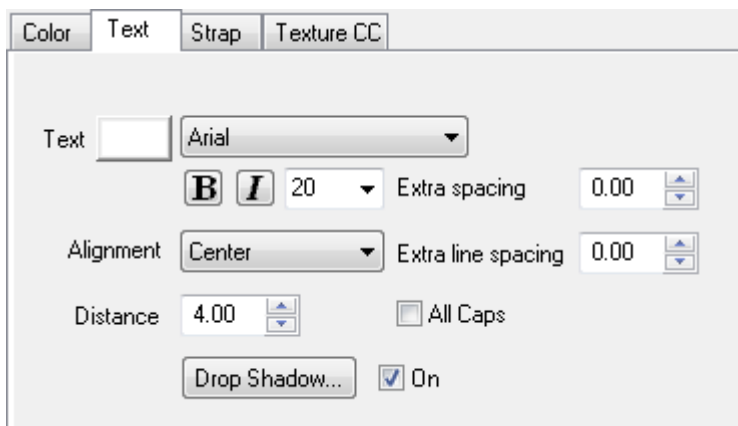
Allows you to specify the color, font, size, style, alignment, and opacity of the feature's label. For point styles it also allows you to choose the marker which is drawn at the location of the feature.

1. Select **On** to apply a default drop shadow.
2. Click the **Drop Shadow...** button to define the characteristics of the drop shadow:
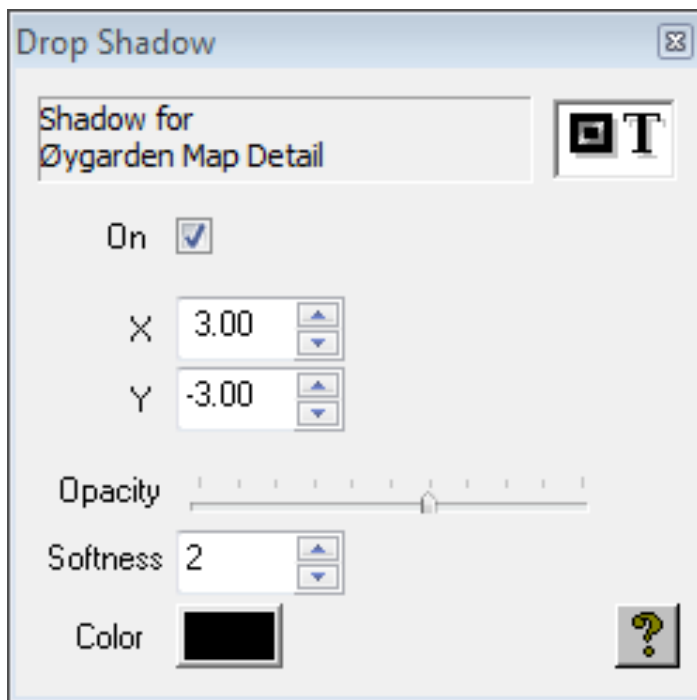
For more information see Text Panel when Working with Styles.

5.12.6 Strap Panel
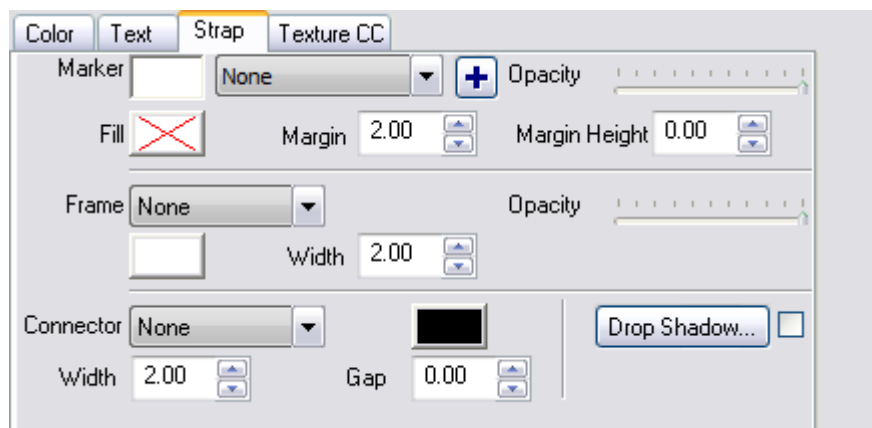
Allows you to draw a marker at the label position, and a background (strap) for the label with an optional frame and connector. You can also add a drop shadow to the strap in the same way as for the label.

After defining a strap with a connector you can move the end of the pointer using the Text tool.

For more information see Strap Panel when Working with Styles.

5.12.7 Texture CC Panel
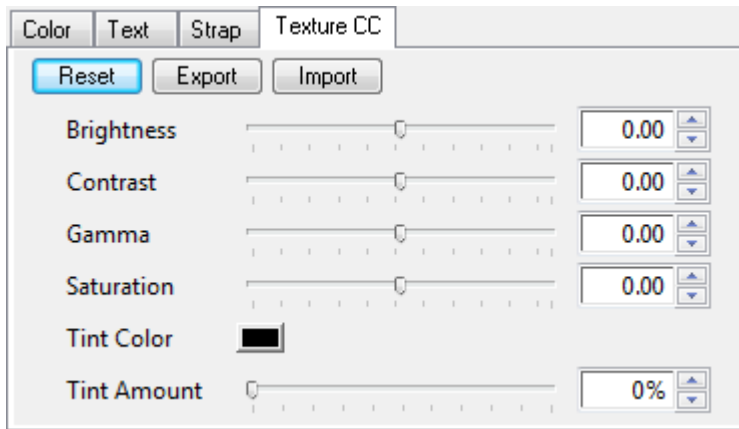
Allows you to color correct textures.

See Also

- Texture CC panel when Working with Styles

5.13 Setting the Properties for Details

The **Properties** panel on the **Contents** panel allows you to change individual properties of a detail not defined by its style:
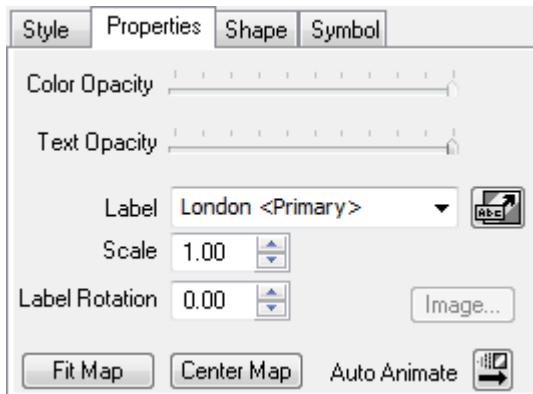
This allows you to specify the color and text opacity for the detail, and edit its label.

If the label for the feature is outside the project area you can make it visible by clicking the **Make Label Visible** ( ) button.

- Set the size and angle of the label using the **Scale** and **Label Rotation** fields.

Alternatively you can scale and rotate a label using the Text tool.

- Click the **Fit Map** or **Center Map** buttons to fit or center the currently select feature to the map.
- Click the **Auto Animate** button to auto animate the feature.

5.13.1 To Create Multi-line Detail Labels

You can include a \ (backslash) character in the label for map details to split the label onto two or more lines:
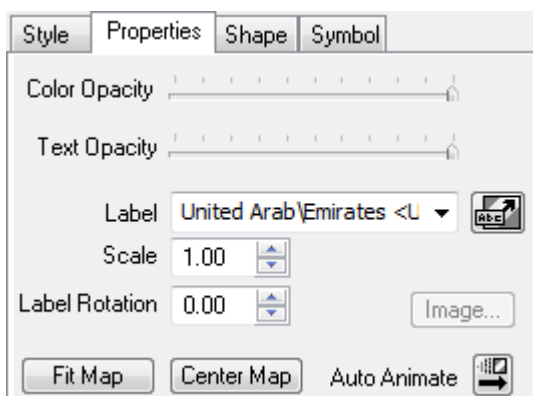
This gives greater flexibility in labeling small features on the map:

5.13.2 To Select an Alternative Label

Some features provide alternative labels; for example, Beijing (Peking). Select the alternative you want from the **Label** drop-down menu. You can also add your own alternative names; these get saved in an alternate names database so they are always available.

5.13.3 To Specify the Order of Alternative Place Names

You can specify the order in which alternative place and region names are shown.

1. On the **View** menu, click **Options…**.
2. In the **Display** section click **Map Labels**:
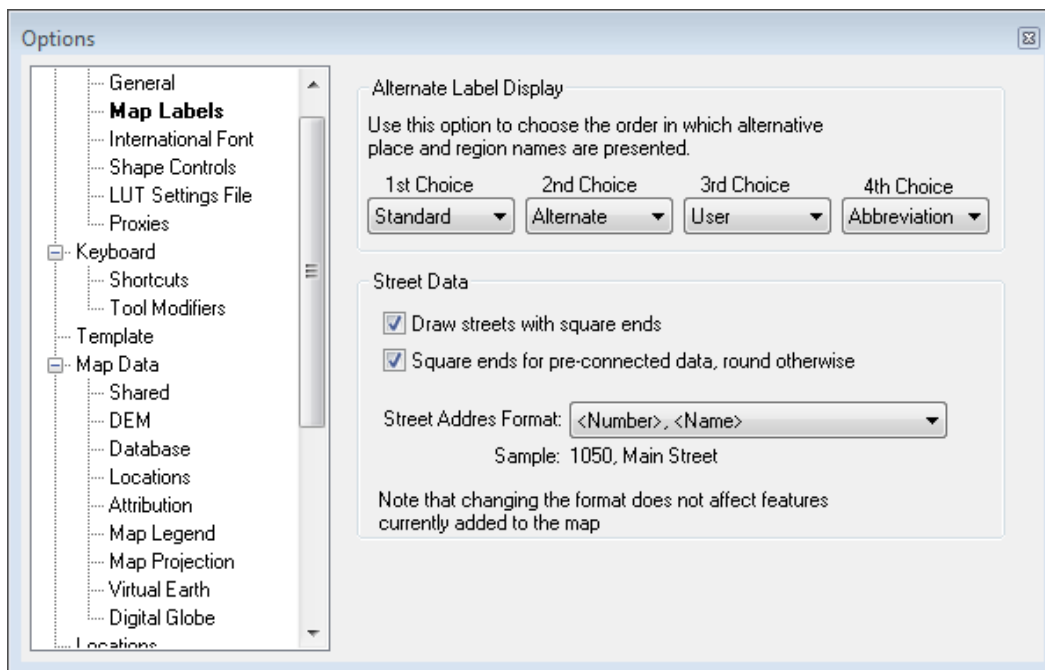
The **1st Choice**, **2nd Choice**, and **3rd Choice** drop-down menus can each be set to one of the following options:

Option	Description
Standard	The standard name provided in the map database.
Alternate	The alternate name provided in the map database.
Abbreviation	The abbreviated version of the name in the map database.
User	The user-defined alternate name defined on the Details Properties panel. It always uses the last entered name.

Map details are listed in the Explorer and Search panel as: First Choice (Second choice). The First Choice is selected by default for new map details.

5.14   Setting Map Features

The style sheet selected for a map layer specifies a number of general settings. You can override these using the **Map Features** dialog box.
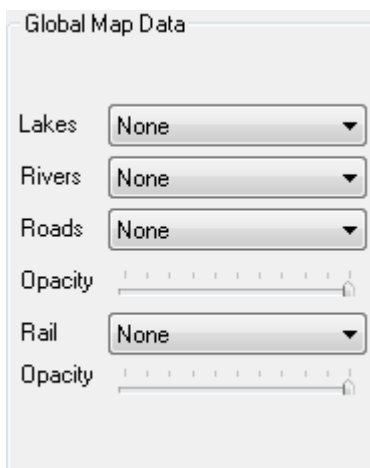
This section contains information on the following procedure and topics:

- To Display the Map Features Dialog Box
    - Global Map Data
    - Local Street Data
    - Scale Roads/Rail with Map and Rivers Master Scale
    - Physical Feature Animation

5.14.1   To Display the Map Features Dialog Box

Click the **Map Features** button in the top right corner of the map layer **Contents** panel. This provides the following sections:

Global Map Data

Allows you to specify the following settings for the selected map layer:

Parameter	Description
Lakes, Rivers	Allows you to specify which lakes and rivers are visible.
Roads	Allows you to specify which roads are visible.
Rail	Allows you to specify which railways are visible.

Local Street Data

Allows you to specify which lakes, rivers, roads, and railways are visible in street data, and the opacity of roads and railways. The options are the same as for **Global Map Data** opposite.

Enable allows you to choose whether or not street data is displayed in the map layer.

The **Street Data...** button displays the **Street Data Directory** dialog box and is equivalent to the **Street Data...** command on the **Import** menu.

For more information see Working with Street Maps.

Scale Roads/Rail with Map and Rivers Master Scale
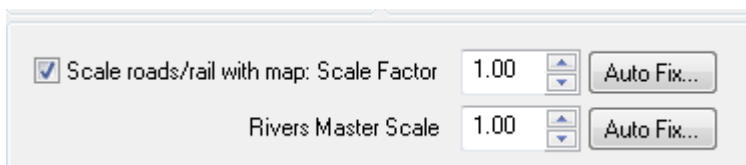
Determines how roads, railways, and rivers are scaled as the map is scaled.

The **Scale Factor** setting is used to scale all line features, such as road, rail, and rivers. You can adjust the value to achieve particular effects; for example, reduce it below `1.00` to make all line features thinner.

For line features, such as roads and rivers, a minimum and maximum line width is specified in the **Styles Editor** dialog box **Styles Color** panel to ensure that the features have an appropriate appearance at extreme zoom settings. However, it can look unnatural if a line feature reaches its maximum width before you get to the closest zoom point as you zoom in to a map.

To solve this problem, choose the closest zoom setting in your animation and click the appropriate **Auto Fix...** button. This automatically sets the corresponding scale value to scale the maximum line width so it only reaches its maximum width at the closest zoom point.

Physical Feature Animation
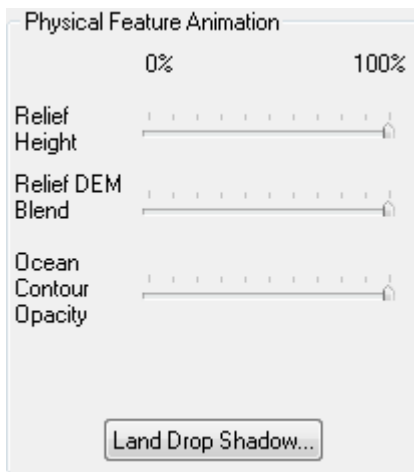
Allows you to animate the relief height, relief DEM blend, ocean contour opacity, and land drop shadow.

- **Relief Height:** Typically used to reduce the amount of relief at close zoom settings, when full scale relief can appear distracting.
- **Relief DEM Blend:** Imported DEM (Digital Elevation Model) relief data does not always match up exactly with the built-in relief. As a result, seams may be visible where they meet. This control allows you to hide imported relief data until you are zoomed in far enough for the seams to fall outside the display window. For more information about importing relief data see how To Import Relief Data.
- **Ocean Contour Opacity:** Allows you to animate the intensity of ocean contours.
- **Land Drop Shadow:** Allows you to animate the land drop shadow over time.

5.15   Displaying Disputed Regions

Viz World Classic allows you to choose how several disputed regions in the world are displayed and assigned to the appropriate countries. Any changes made to this setting applies to all projects.

5.15.1   To Change the Assignment of Disputed Regions

> ⚠️ **Note:** You cannot make any changes to the disputed regions if your project contains map layers, so if necessary delete any map layers in your project.

1. On the **View** menu, click **Options…**.
2. Click **Map Data**, then the **Database** option, then click the **Disputed Regions…** button to display the **Disputed Regions** dialog box.
3. Choose the region you want to configure from the **Region** drop-down menu.
4. Choose one of the available configurations from the **Configuration** drop-down menu. As you select a configuration the map shows how the regions are displayed.

5.16   Using the Navigator

The Navigator allows you to select which part of the map is displayed in the image area.

This section contains information on the following procedures:

- To Choose a View
- To Change the View
- To Choose a Preset View
- To Define a Preset View
- To Edit the Name of a Preset
- To Delete a Preset
- To Enter a GPS Location

5.16.1   To Choose a View

Drag across the Navigator to draw a rectangle enclosing the area of the world you want to display.
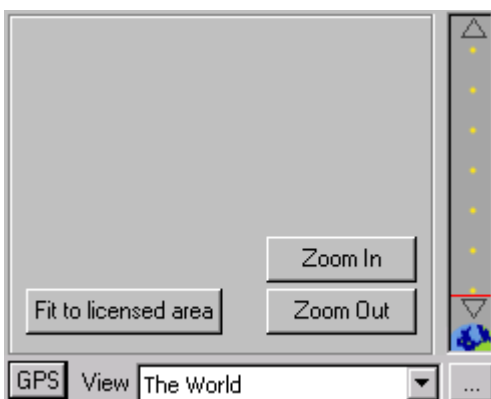
5.16.2   To Change the View

1. Drag a corner of the rectangle to resize it.
2. Hold down **CTRL** and drag the rectangle to move it.
3. Move the scale control, to the right of the Navigator, to enlarge or reduce the size of the rectangle.

5.16.3   To Choose a Preset View

Choose a preset view from the **View** context menu.

5.16.4   To Define a Preset View

1. Define the view you want to save.
2. Click the **...** button to the right of the Navigator **View** menu. The **Presets** dialog box displays:

3. Click the **+** button. A new preset is created with a default name, such as *Preset0*.

5.16.5   To Edit the Name of a Preset

1. Select the preset in the **Presets** list.
2. Click the **Rename...** button.

5.16.6   To Delete a Preset

1. Select the preset in the **Presets** list.
2. Click the **X** button.

5.16.7   To Enter a GPS Location
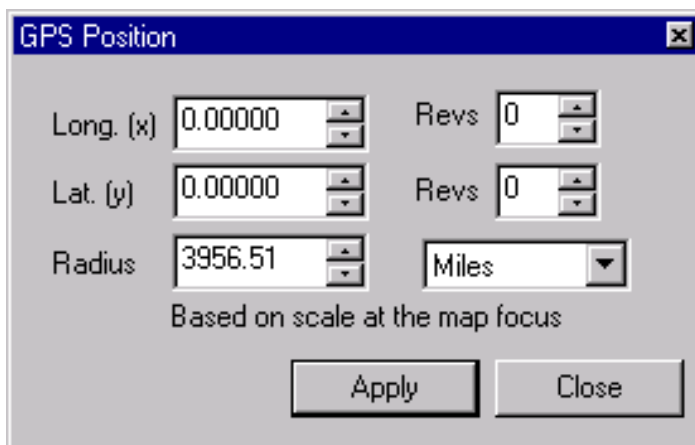
1. Click the GPS button below the Navigator. The GPS Position dialog box (depicted above) is displayed to allow you to specify that the map should be centered at a particular longitude and latitude.
2. Enter the longitude and latitude in the Long. and Lat. fields. Longitude and latitude values can either be entered in decimal degrees, such as 20.175, or in degrees, minutes and seconds, such as 20d10m30s.
3. Optionally enter the amount of the Earth's surface you want to display in the Radius field. For creating animations of a revolving globe you can optionally enter a number of revolutions in the Revs fields.

5.17   Measuring Distances on the Map

The Ruler tool provides a convenient way of measuring distances on maps, and displaying other information.

5.17.1   To Measure a Distance

1. Select the **Ruler** () tool.
2. Drag from the start point to the end point of the distance to be measured.

The display shows the location and height above sea level of the end point, and the distance between points:

5.17.2   To Specify Distance Units
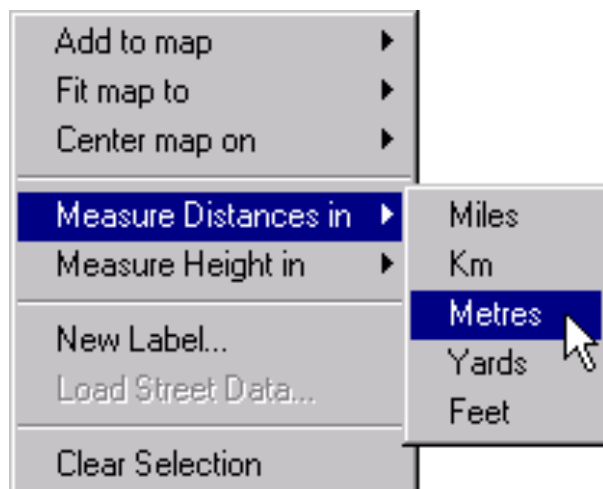
Right-click, point to **Measure Distances in** or **Measure Heights in** on the context menu, then click the appropriate units.

5.18   Locating Features by Country or Region

The **Explorer** tab on the **Contents** panel allows you to explore the map database hierarchically, by country or region:
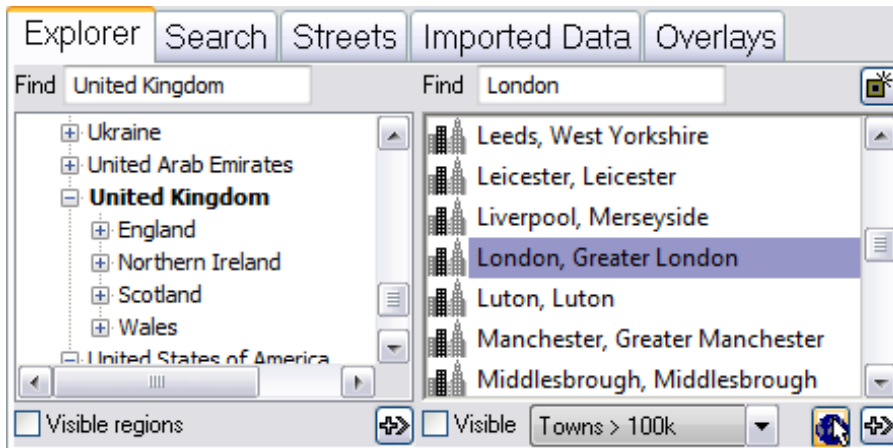
The left list displays an alphabetical list of countries, and regions within each country. The right list displays specified features within a selected country or region, or a message explaining how to narrow the search to find an item of interest.

This section contains information on the following procedures:

- To Scroll to Any Country in the List
- To List Only Countries Visible in the Current Map View
- To Show/Hide Regions
- To Display a List of Features Contained in a Country or Region
- To Display the Currently Listed Features on the Map
- To Scroll Directly to a Feature

5.18.1   To Scroll to Any Country in the List

Type the first few letters of its name in the **Find** box above the list.

5.18.2   To List Only Countries Visible in the Current Map View

Select **Visible regions**.

5.18.3   To Show/Hide Regions

Countries shown with a **+** to the left of their name in the list are divided into regions.

- Click the **+** to expand the list and show the regions.
- Click the **-** to collapse the list and hide the regions.

5.18.4   To Display a List of Features Contained in a Country or Region

1. Select the country or region in the left list.
2. Select the type of features you want to list from the drop-down menu below the list. By default, **Towns > 100k** is selected, to show towns with a population greater than 100,000, but you can select from a range of alternative options.
3. Select **Visible** to show only features visible in the current map view.

5.18.5   To Display the Currently Listed Features on the Map

1. Click the **Locate Features** ( ) button. The currently selected features are labeled on the map:

2. Click a feature with the right mouse button and point to **Add to map** on the pop-up menu, and click the feature:
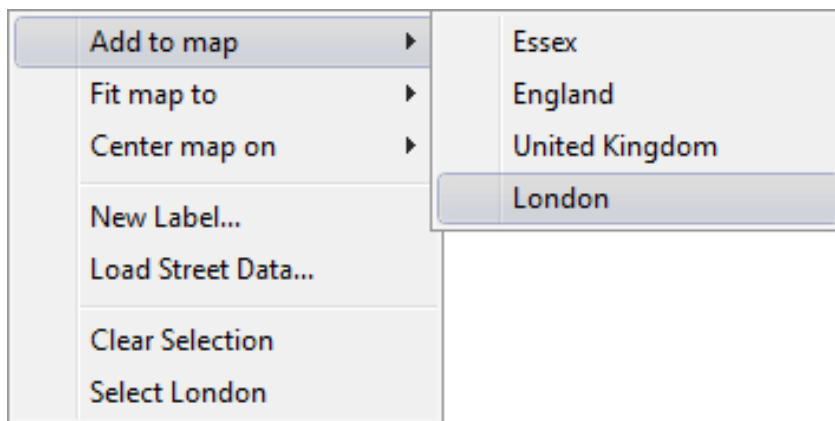
5.18.6   To Scroll Directly to a Feature
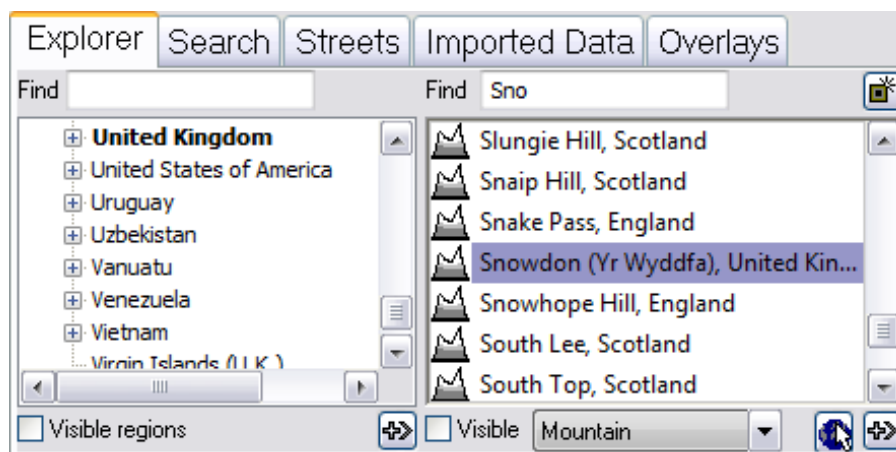
1. Select United Kingdom as the region.
2. Select Mountain and check the adjacent Visible check-box.
3. Type the first few letters of a British mountain (for example, Snowdon) in the **Find** box above the list.

⚠ **Note:** Searching for features in any country by selecting **The World** may give too many results. Try narrowing down the search by selecting a specific country or region, or by checking one or both of the *Visible* check-boxes.

6 Working with Styles

This section explains how to use style sheets to make it easy to set up a series of house styles, and convert projects between house styles with a single click. It also explains how style sheets help you establish consistency across projects, or between designers.

This section contains information on the following topics:

- How Stylesheets Work
- Creating, Saving, and Loading Stylesheets
- Styles Panel
- Topography
- Markers Panel
- Textures Panel
- Lighting Panel
- Map Features Panel
- Options Panel
- Using Imported Relief Data

6.1   How Stylesheets Work

A stylesheet defines all the properties and design conventions used to draw a map. Each map layer has a stylesheet associated with it which determines its appearance.

The stylesheet defines:

- The predefined styles, and any additional user-defined styles.
- The markers used to identify map details.
- The textures available for use as textures for regions.
- One or more default lights for the map layer.
- Additional properties of the map including land shadow, relief, and line widths.

Once created, a finished project can be changed to a different set of design conventions simply by loading in a different stylesheet.
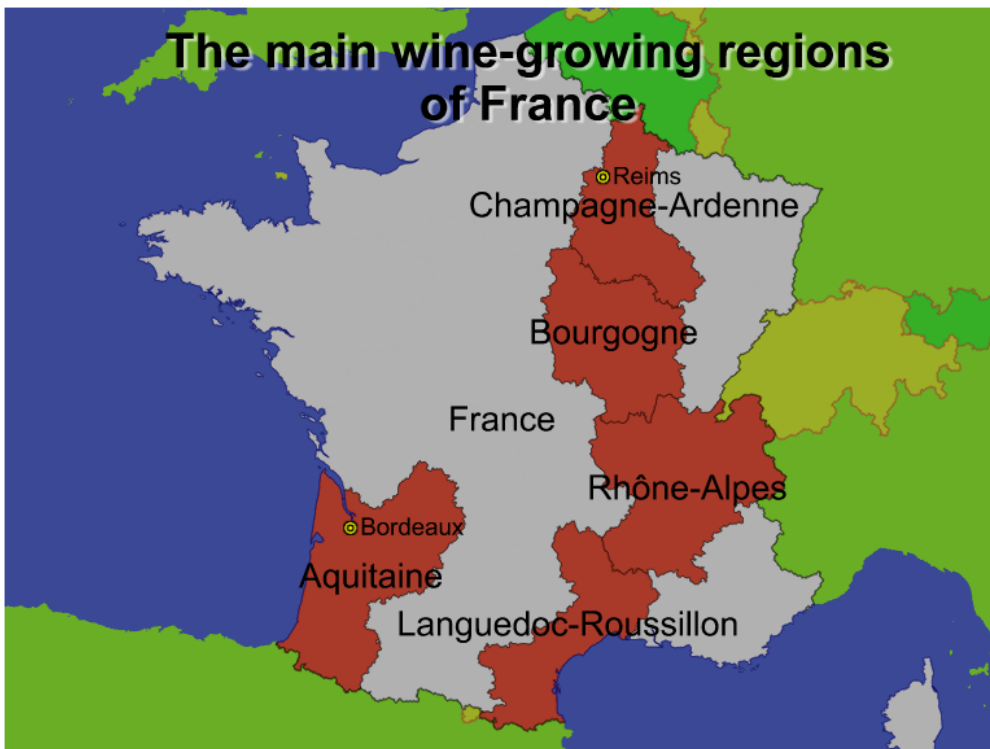
The above project was created using the default stylesheet. The project can then be instantly converted to a totally different house style simply by loading in a different stylesheet.

One stylesheet could include texturing and lighting effects.
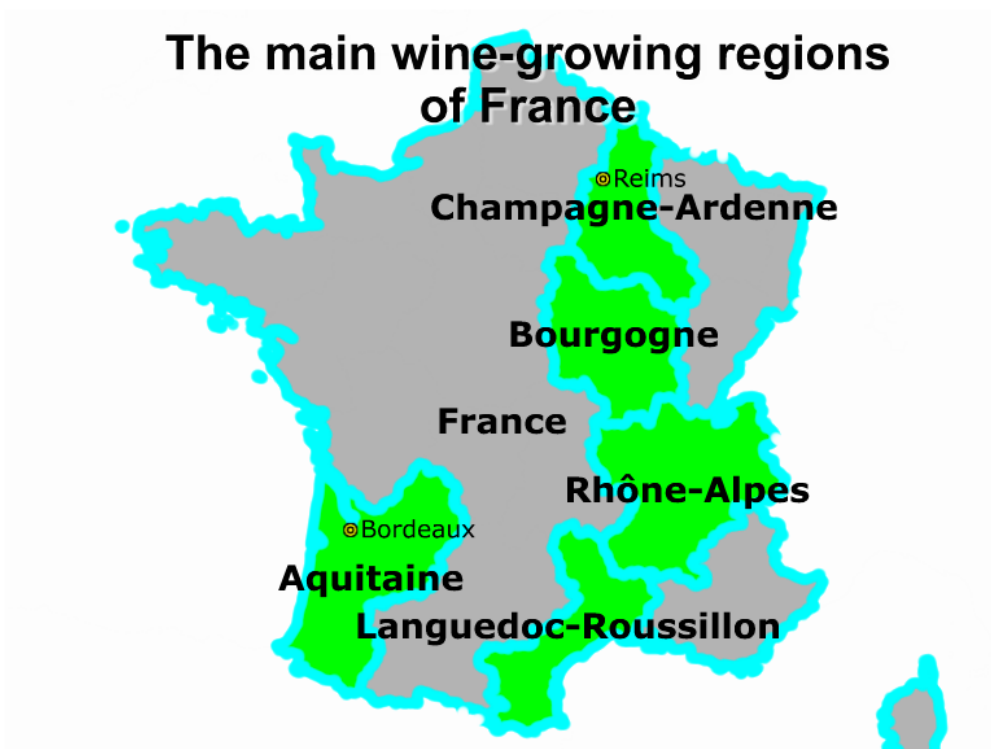
For another project loading a stylesheet could create a much simpler appearance with flat lighting and thick line widths.

6.1.1 Multiple Stylesheets

If your project includes more than one map layer you can apply a different stylesheet to each map layer. For example you might have one house style for the main map in a project and another house style for an inset map.

6.2   Creating, Saving, and Loading Stylesheets
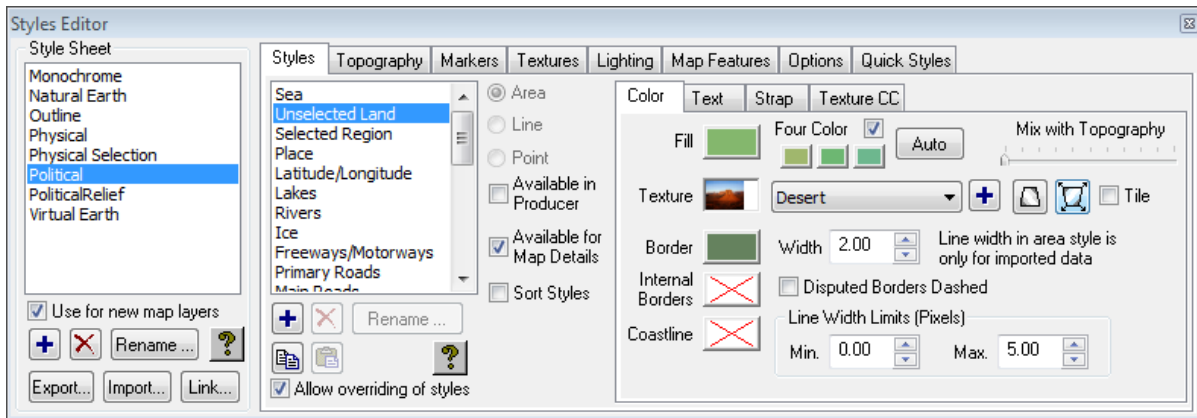
Styles are created and edited using the **Styles Editor.** You can leave the **Styles Editor** open while you work with the project and any changes you make in the **Styles Editor** are immediately reflected in the current map layer.

This section contains information on the following procedures:

- To Display the Styles Editor
- To Create a New Stylesheet
- To Rename a Stylesheet
- To Delete a Stylesheet
- To Copy Stylesheets from Another Project
- To Export an Individual Stylesheet
- To Import a Stylesheet

6.2.1   To Display the Styles Editor

In the **Styles** menu, click **Styles Editor...**. When you create a new map layer it initially uses the stylesheet defined by the default project template. If there is no project template the stylesheet called Political is used. For more information about creating a default project template containing your own choice of styles see Reusing Design Elements.

You can create any number of new stylesheets, and modify the styles in those stylesheets to establish the design conventions you want to use. Stylesheets are saved with the project, and you can import stylesheets from another project. You can also save individual stylesheets in separate files.

6.2.2   To Create a New Stylesheet

1. Select the stylesheet you want to base the new stylesheet on in the **Style Sheet** list.
2. Click the **+** button.

> ⚠ **Note:** By default the style sheet is called *StyleSheet*, *StyleSheet1*, etc.

6.2.3   To Rename a Stylesheet

1. Select the stylesheet you want to rename.
2. Click the **Rename...** button.

6.2.4   To Delete a Stylesheet

1. Select the stylesheet you want to delete.
2. Click the **X** button.

6.2.5   To Copy Stylesheets from Another Project

1. On the **Import** menu, click **From Project...**.
2. Select the project file you want to import from. The following dialog box then allows you to specify the features of the project you want to import:
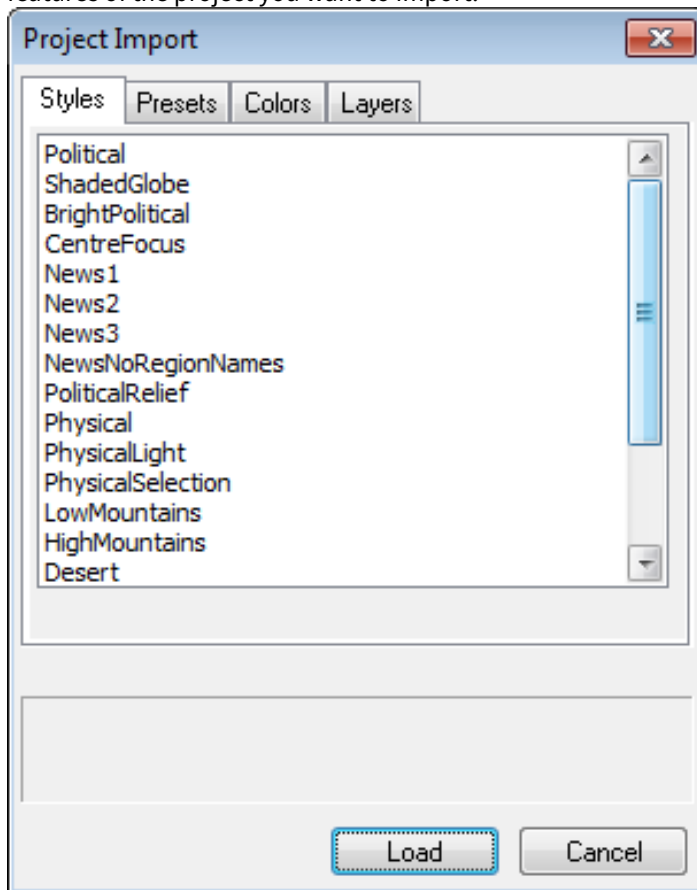
3. Click the **Styles** tab.
4. Select the stylesheets you want to import from the project, using **SHIFT** to select contiguous items, and **CTRL** to select non-contiguous items.
5. Click the **Load** button to proceed. The stylesheets are added to the list of stylesheets, replacing any existing stylesheets of the same name where appropriate.

6.2.6　To Export an Individual Stylesheet

1. In the **Styles Editor** click the **Export...** button. You are prompted to give the stylesheet a name.
2. Enter a suitable name and click the **Save** button.

6.2.7　To Import a Stylesheet

1. In the **Styles Editor** click the **Import...** button. An **Open** dialog box displays to allow you to select a stylesheet to open.
2. Select the style sheet and click the **Open** button. The stylesheet is added to the list of stylesheets in the project. If there is already a style of the same name the stylesheet is renamed.

6.3　Styles Panel
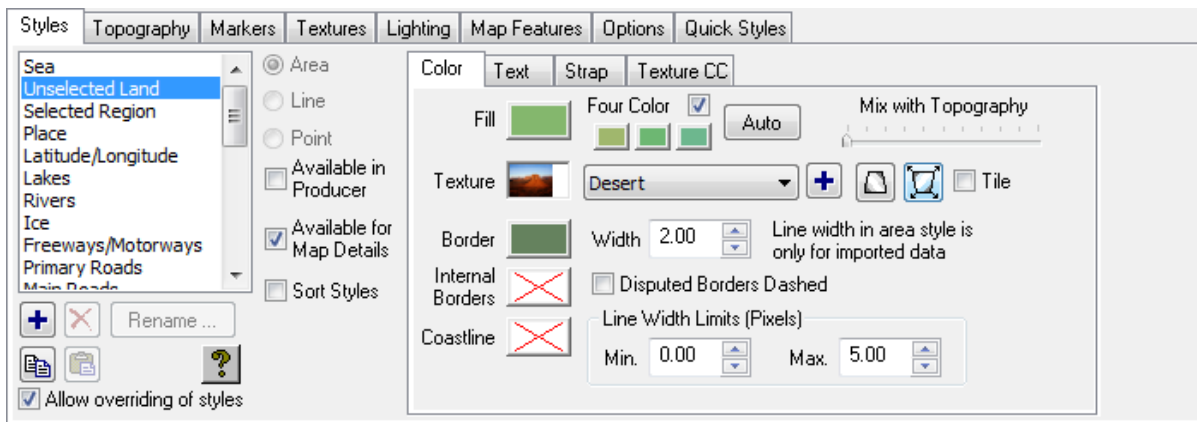
The **Styles** panel allows you to edit the styles in the currently selected style sheet.

This section contains information on the following sections:

- Predefined Styles
  - To Edit the Attributes of a Built-in or User-defined Style
  - To Create a New Style
  - To Edit the Name of a Style
  - To Delete a Style
  - Color Panel
  - Area Styles
  - Line Styles
  - To Use a Texture
  - To Transform a Texture
  - Text Panel
  - Drop Shadow
- Strap Panel
- Texture CC Panel

6.3.1　Predefined Styles

Each style is identified by a name, such as **Region**, and specifies attributes such as fill color, border color, coastline color, marker color, text color, text typeface, and size. Applying a style to a map detail then sets its attributes to those defined by the style.

Viz World Classic provides a set of predefined styles for each of the different types of feature in the map database. These include: **Sea**, **Unselected Land**, **Selected Region**, **Place**, **Latitude/Longitude**, and a number of default styles for use with street data.

This section contains information on the following procedures:

To Edit the Attributes of a Built-in or User-defined Style

1. Select the style you want to edit in the **Styles** list. The attributes of the style are shown on the **Color**, **Text**, **Strap** and **Texture CC** (color correction) panels:
2. Edit any attributes you want to change.

All objects in the selected style are updated to reflect the changes you have made.

Each predefined style is of type **Area, Line,** or **Point** as appropriate, and this determines the attributes displayed in the **Color, Text,** and **Strap** panels.

When you create a user-defined style you specify whether it is an **Area, Line,** or **Point** style, and this determines which features you can apply it to.

To Create a New Style

1. Select the style you want to base the new style on in the **Styles list**.
2. Click the **+** button. A new style is created with a default name; for example, **Style1**.
3. Select **Area**, **Line**, or **Point** to specify what the style applies to. This determines which options are available in the **Color, Text,** and **Strap** panels.
4. Edit the attributes of the style as required.

To Edit the Name of a Style

1. Select the style in the **Styles list**.
2. Click the **Rename...** button.

> ⚠️ **Note:** You cannot edit the names of built-in styles.

To Delete a Style

1. Select the style in the **Styles list**.
2. Click the **X** button.

> ⚠️ **Note:** You cannot delete the built-in styles.

Color Panel

The options available on the **Color** panel depend on the selected style.

This section contains information on the following topics and procedures:

Area Styles
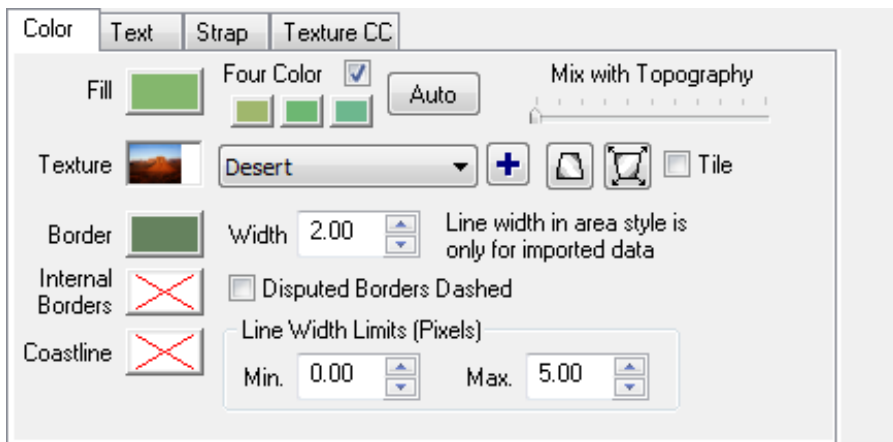
Provides some or all of the following options:

Attribute	Description
Fill	The fill color for the object.
Four Color	Cycles between four different colors for the fill color so that adjacent regions can easily be distinguished. The **Auto** button automatically sets the alternative fill colors based on the current Fill color.
Mix with Topography	Moving the slider to the right adds a proportion of the style color to land colored with topography.
Texture	An optional texture for the object; see *Using textures* below.
Border	Specifies the border color.
Width	Sets the line width for the borders of imported map features.
Internal Borders	Displays the internal borders of the country in the specified color.
Disputed Borders Dashed	Displays disputed borders dashed.
Coastline	Specifies the coastline color.
Line Width Limits	Restricts the range of line widths when zooming.

Line Styles

Provides the following options:

Attribute	Description
Inner color and Width	Color and width of the body of the line feature.
Outer color and Width	Color and total width of the edges of the line feature.
Line Width Limits	Restricts the range of line widths when zooming.

To Use a Texture

- To fill the area with a texture select an existing texture from the drop-down menu, or use the **+** button to load a new texture from a file.
    - Any image can be used as a texture, including images in the CMR (Curious Multi-Res) format; this is ideal for using large files, such as satellite images, as textures. For more information see Working with Images and Movies.
    - The buttons to the right of the **Texture** drop-down menu can be used to determine how the texture is displayed:

Button	Name	Description
	Add Texture	Displays the **Open** dialog box to allow you to add a texture from a file.
	Position Texture	Click to position the texture on the map. You can then move or scale the texture in the same way as for images.
	Position Texture (Arrows)	Allows you to move and scale the texture by specifying how two points on the texture should be aligned with the map; see below.
	Tile	Specifies whether the texture should be tiled.

To Transform a Texture

1. Click the **Position Texture** (Arrows) button.
2. Drag the circles to indicate which points on the texture you want to use as the reference points.
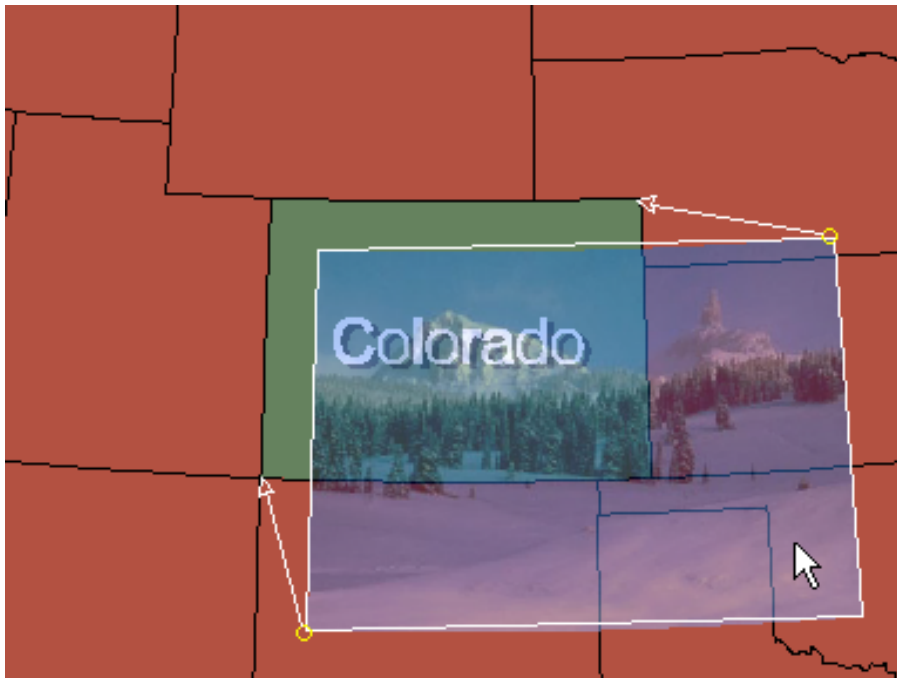
3. Drag the arrow heads to indicate where those points should be positioned on the map:
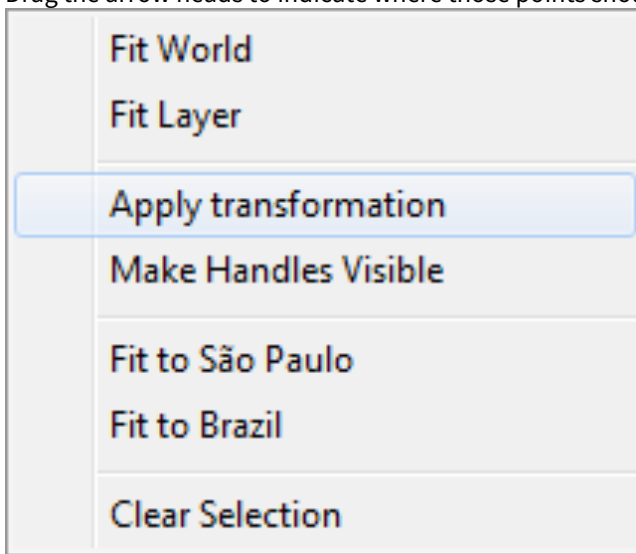
4. Click with the **right mouse** button and click **Apply transformation** on the context menu to transform the texture.

5. Click the **Position Texture** (Arrows) button again to see the transformed texture. The **Make Handles Visible** option on the pop-up menu is useful if the handles are outside your current view.

Text Panel

The text panel provides the following options:

Attribute	Description
Marker	Point styles only: The image file used for the point. Select an existing marker from the drop-down menu, or click the + button to load a new marker.
Text	Specifies the text color, font, size, and style (bold, italic) for labels.
Extra spacing	Varies the character spacing to compress or expand the text.

Attribute	Description
Extra line spacing	Adds extra line spacing.
Alignment	Specifies the position of the label relative to the marker.
Distance	Sets the distance.
All Caps	All letters are written in upper case.
On	Adds a default drop shadow.
Drop Shadow...	Displays the **Drop Shadow** dialog box to allow you to define the characteristics of the drop shadow; see opposite.

Drop Shadow
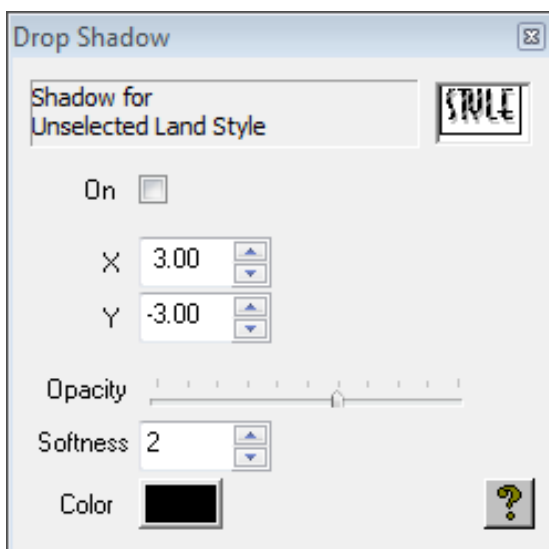
Provides the following options:

Attribute	Description
On	Turns the drop shadow on.
X,Y	Defines the drop shadow displacement, in pixels.
Opacity	Specifies the drop shadow opacity.
Softness	Allows you to blur the drop shadow.

Attribute	Description
Color	Specifies the drop shadow color.

6.3.2   Strap Panel
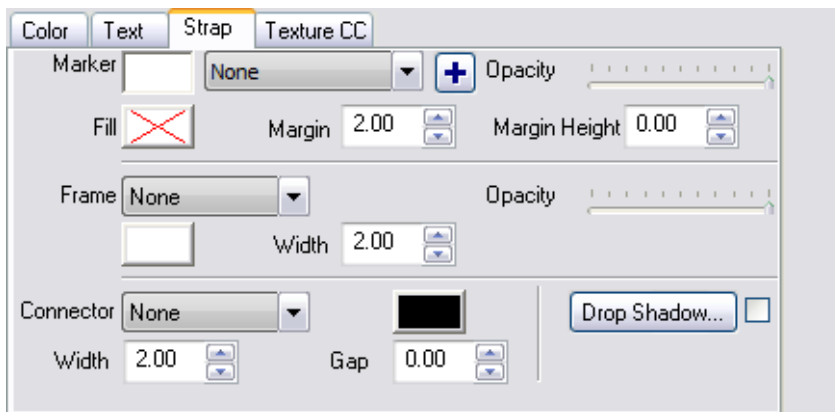
The **Strap** panel allows you to add a background, frame, and/or connector to the label of a feature.

Provides the following options:

Attribute	Description
Marker	The image file used for the marker. Select an existing marker from the drop-down list, or click the **+** button to load a new marker.
Opacity	The opacity of the body of the strap.
Fill, Margin, Margin Height	The fill color, margin and margin height of the strap.
Frame	The type, color, width, and opacity of the frame of the strap.
Connector	The type, color, width and gap (to the marker) of the connector.
Drop Shadow	Adds a drop shadow to the strap.

After defining a strap you can move the end of the pointer with the Text tool.

The following illustrations below show some examples of straps. **Fill** white and **frame** black, **connector** set to **pointed border**, and marker to image:

6.3.3 Texture CC Panel
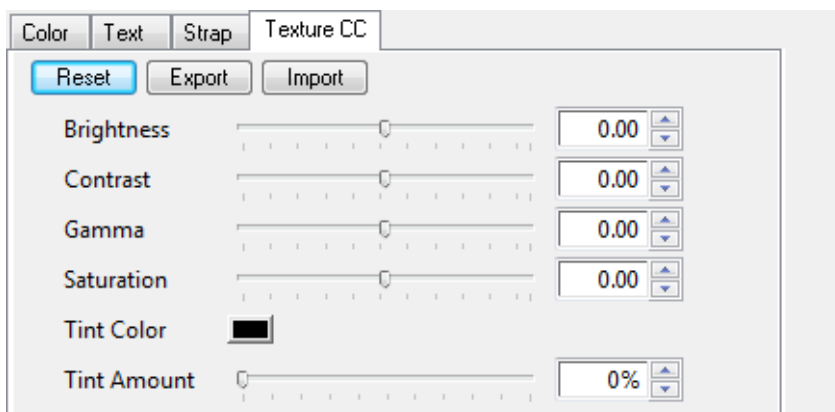
Allows you to color correct textures.

See Also

- Texture CC panel when Working with Maps
- Working with Images and Movies

6.4   Topography
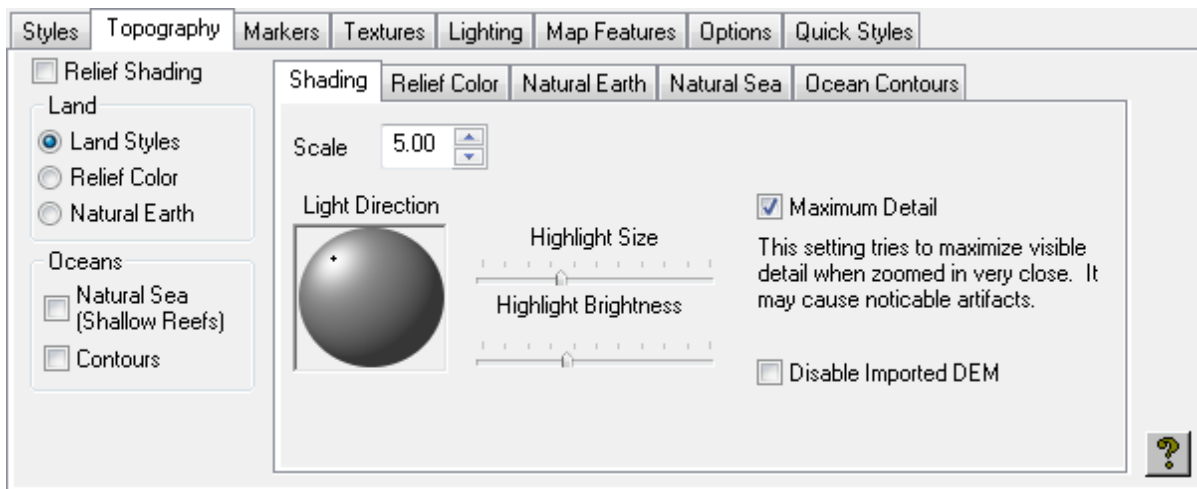
The Topography panel allows you to add relief shading to give a three-dimensional appearance to the map, and color the land and/or sea using natural colors.

6.4.1   To Specify the Topography

1. Select **Relief Shading** to apply relief shading to the land.
2. In the **Land** section select **Land Styles**, **Relief Color**, or **Natural Earth** to specify how the land should be colored. If *Relief Color* or *Natural Earth* is selected, you can blend in a proportion of the land style color using the *Mix with Topography* slider on the *Styles Color* panel.
3. In the **Oceans** section select **Natural Sea** and/or **Contours** to specify how the sea should be colored.

The options are illustrated in the following examples:

Land Styles, no **Relief Shading and Relief Shading:**
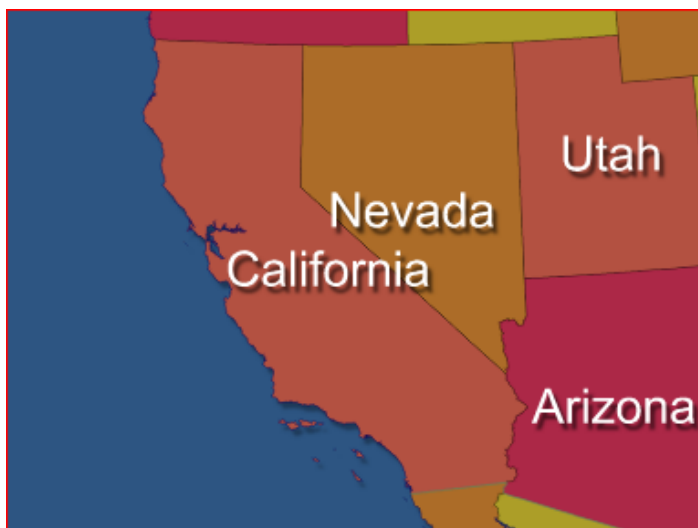
Relief Color and **Ocean Contours, and Natural Earth** and **Natural Sea:**
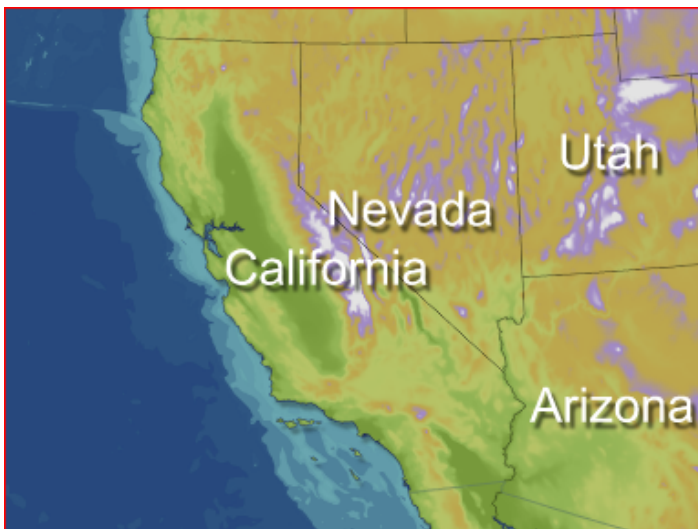
The following sections give more information about each of these options:

- To Specify the Topography
- Shading Panel
- Relief Color Panel
- Natural Earth Panel
- Natural Sea Panel
- Ocean Contours Panel

6.4.2 Shading Panel
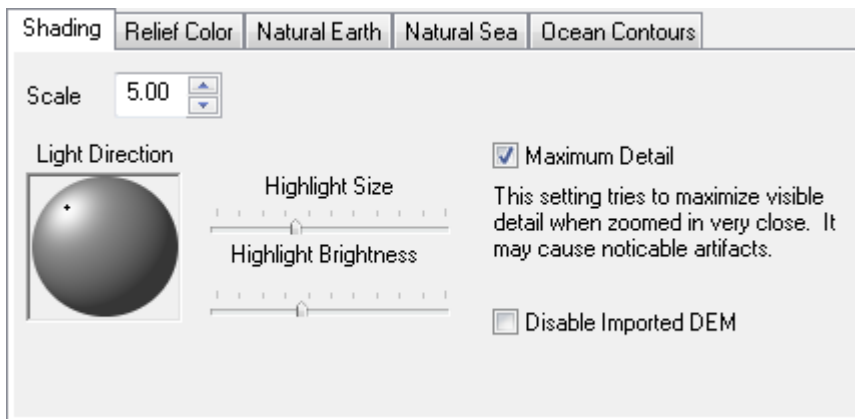
The Shading panel allows you to define the scale of the relief effect and the light direction for the relief. The following image shows the map with and without maximum detail:
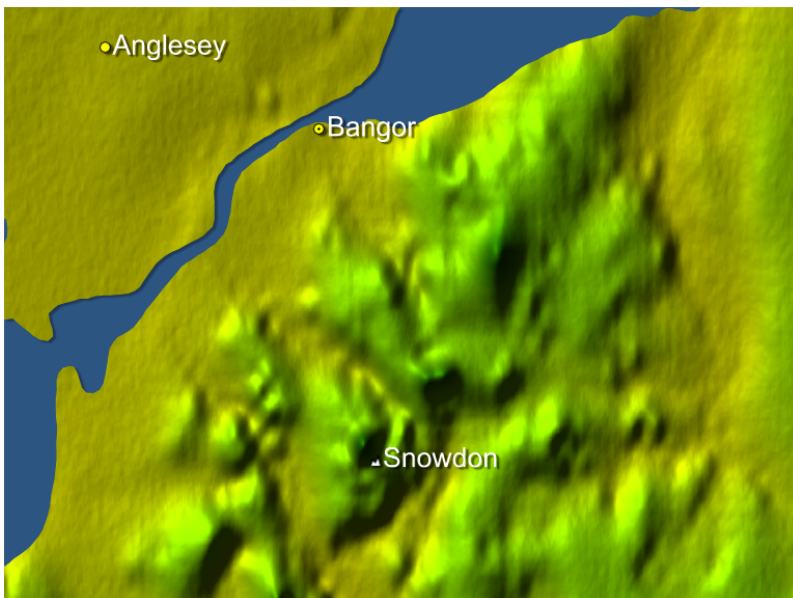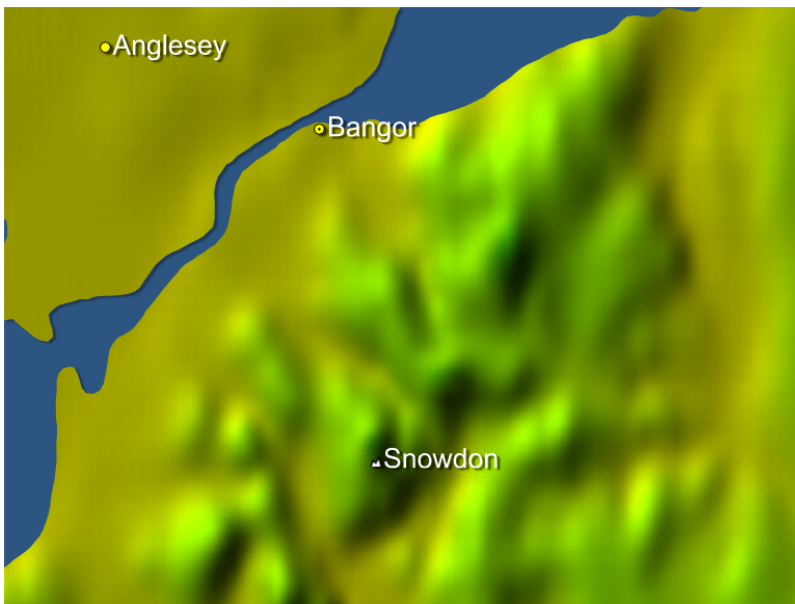
Maximum Detail relief rendering is selected by default, and gives improved sharpness and detail, especially when zoomed in very close. However, in some situations the **Maximum Detail** option can produce images with a noticeable grid pattern, in which case you may prefer to deselect it.

The **Highlight Size** and **Highlight Brightness** settings allow you to control the appearance of the relief texturing on your maps.

The following illustrations give examples of the effect of each setting. Minimum highlight size, normal settings, and maximum highlight brightness:
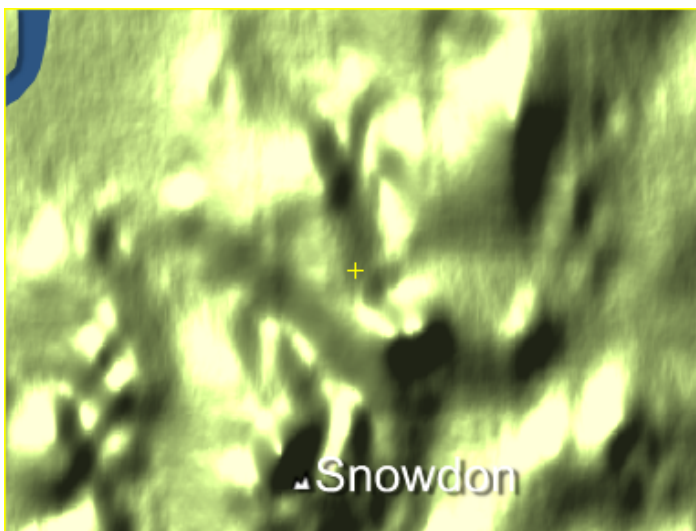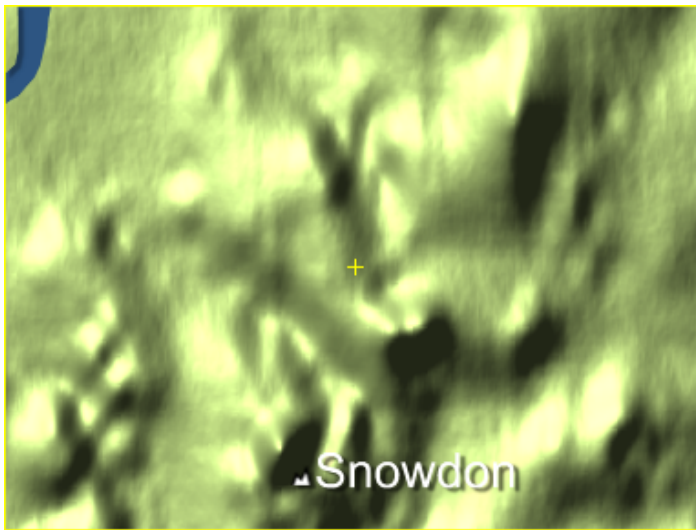
The **Disable Imported DEM** checkbox allows you to choose whether to use any DEM Relief data you have loaded in place of the built-in relief data.

6.4.3   Relief Color Panel
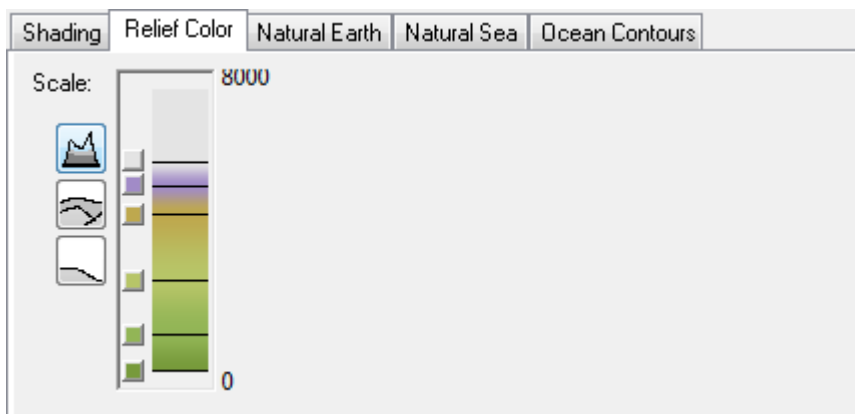
The **Relief Color** panel allows you to define the colors used for different terrain heights. Click the appropriate **Scale** button to change the color gradient scale to show heights from *0 to 8000m*, *0 to 800m*, or *0 to 80m*. To adjust the terrain height corresponding to a color, drag the dividing line next to the color square. To change a color, click on the corresponding color square and a color chooser is displayed. To add or remove colors, click on the color gradient with the right mouse button and click **Add Point** or **Delete Point** on the context menu:
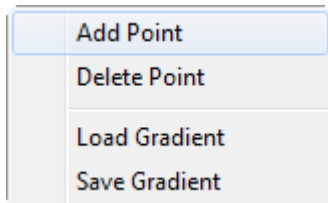
You can save a gradient, or load a gradient saved on a previous occasion, using the Save Gradient and Load Gradient options on the color gradient context menu.

6.4.4   Natural Earth Panel

The Natural Earth panel allows you to control natural earth land coloring, which shows the Earth with natural coloring determined from high resolution satellite imagery; for example, deserts are colored yellow, forests green, and ice caps white:
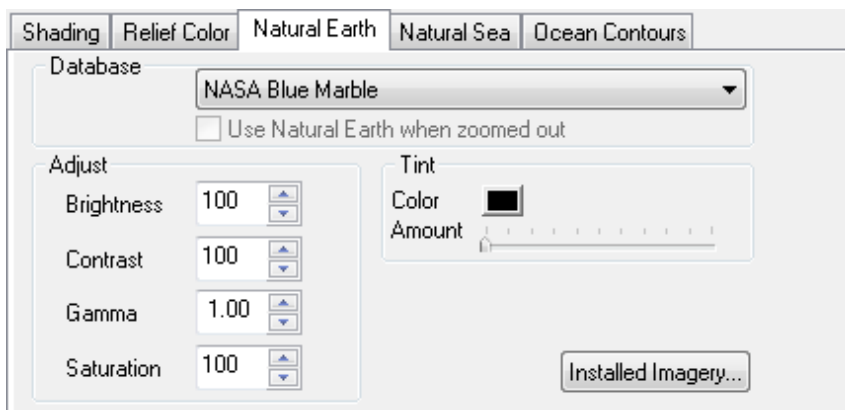
The Database option allows you to select different types of natural earth databases. The Brightness, Contrast, Gamma, and Saturation controls allow you to adjust the appearance of the natural earth coloring. Tint Color and Tint Opacity allow you to add a tint, such as to simulate sunset coloring. A Natural Earth stylesheet is provided with natural earth and natural sea styles already set up.

> ⚠️ **Note:** Natural Earth is an optional feature that requires a separate license; ask your local Vizrt representative for more details.

6.4.5　Natural Sea Panel
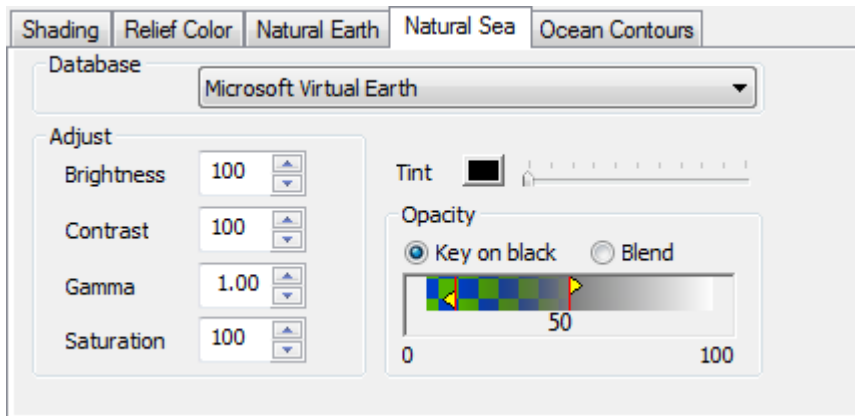
The Database option allows you to select different types of natural sea databases (for example, Digital Globe).

The Natural Sea panel allows you to control the appearance of the sea when colored with the Natural Sea option, which uses satellite imagery of shallow seas and reefs.

6.4.6　Ocean Contours Panel
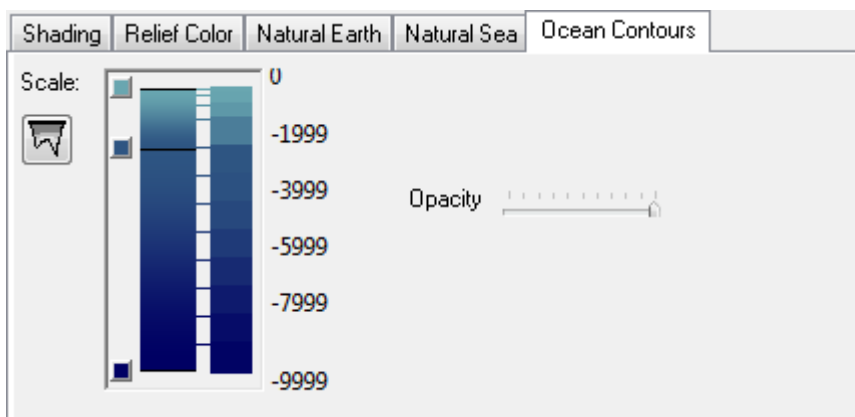
The Ocean Contours panel allows you to define the ocean depths corresponding to each color.

The left ramp works in exactly the same way as the **ReliefColor** ramp. The right scale shows how the color ramp is applied to the ocean depth steps.

See Also

- Setting Map Features

6.5   Markers Panel

The **Text** panel allows you to choose a marker to identify each point feature, and the **Strap** panel allows you to choose a marker to be drawn alongside the label.

The **Markers** panel allows you to display and edit the available markers, and specify the scale and position of each marker.
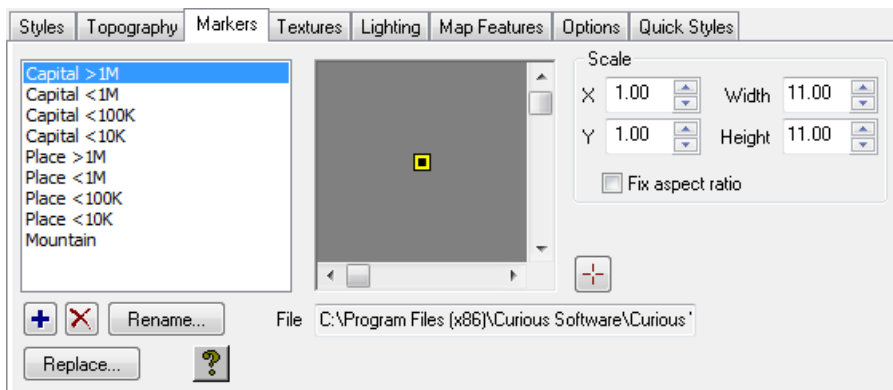
6.5.1   To Load an Image for Use as a Marker

Click the **+** button and select the image file you want to load.

6.5.2   To Edit the Name of a Marker

1. Select the marker in the **Markers list**.
2. Click the **Rename...** button.

6.5.3   To Delete or Replace a Marker

1. Select the marker in the **Markers list**.
2. Click the **X** or **Replace...** button.

6.5.4   To Edit a Marker

1. Select the marker in the **Markers list**. The marker is displayed in the preview window to the right of the **Markers** list.
2. Specify the scale by editing the **X, Y, Width**, and **Height** fields, as required.
3. Select **Fix aspect ratio** to keep the aspect ratio fixed.
4. Click the **+** button and click on the preview window to set the origin for the marker.

6.6   Textures Panel

The **Color** panel allows you to choose a texture to color an area feature.
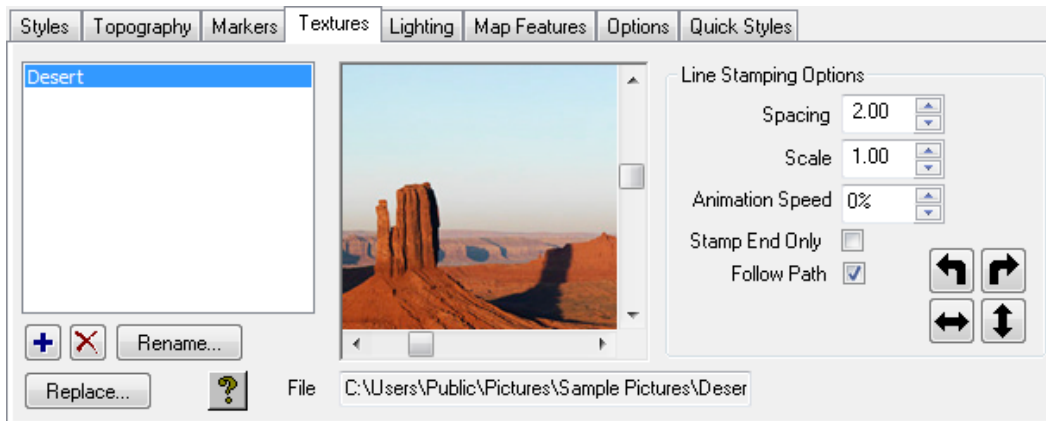
The **Textures** panel allows you to display and edit the available textures.

6.6.1   To Load an Image for Use as a Texture

Click the **+** button and select the image file you want to load.

6.6.2   To Edit the Name of a Texture

1. Select the texture in the **Textures list**.
2. Click the **Rename...** button.

6.6.3   To Delete or Replace a Texture

1. Select the texture in the **Textures list**.
2. Click the **X** or **Replace...** button.

6.6.4   To Display a Texture

Select the texture in the **Textures list**. The texture is displayed in the preview window to the right of the **Textures** list.

6.7   Lighting Panel

Every style sheet can contain one or more lights, called style lights, which are used in addition to any lights you have added directly to an individual map layer. Since the lights are in the style sheet itself, they are applied to any map layer using the style sheet.

The **Lighting** panel allows you to define style lights, and specify their characteristics:
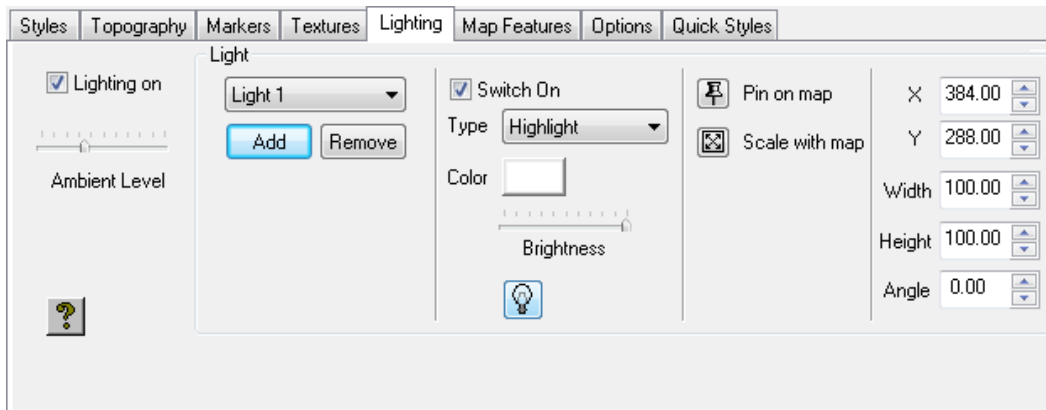
You can use the Light tool on the **Lighting** panel to edit style lights in exactly the same way as lights within the layer.

See Also

- Lighting and Effects

6.8   Map Features Panel
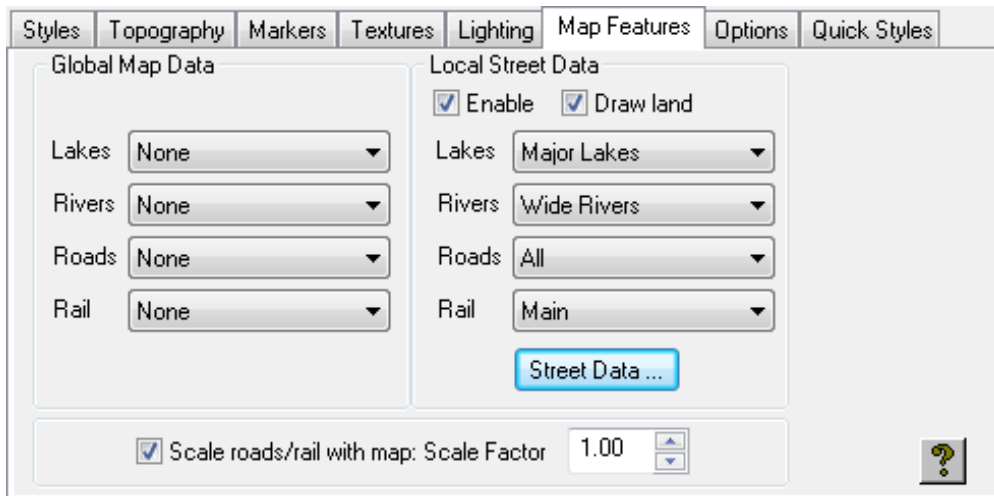
The **Map Features** panel allows you to define the map and street data to be included in the map layer, and the scaling of road and rail features.

You can override these for a particular map layer using the **Map Features** dialog box. See the Setting Map Features section.

6.8.1   Global Map Data

Allows you to specify which lakes, rivers, roads, and rail features are displayed by choosing the appropriate option from the corresponding drop-down menu.

6.8.2   Local Street Data

Allows you to specify which lakes, rivers, roads, and rail features are displayed in street data by choosing the appropriate options from the corresponding drop-down menu.

The **Enable** option allows you to specify whether or not street data is displayed in the map layer.

The **Street Data...** button displays the **Street Data Directory** dialog box, and is equivalent to choosing **Street Data...** from the **Import** menu.

For more information about working with street data see the Working with Street Maps section.

6.8.3   Scale Roads/Rail with Map

Determines how roads and railways are scaled as the map is scaled.

The **Scale Factor** setting is used to scale all line features, such as road, rail, and rivers. You can adjust the value to achieve particular effects; for example, reduce it below `1.00` to make all line features thinner.

6.9 Options Panel
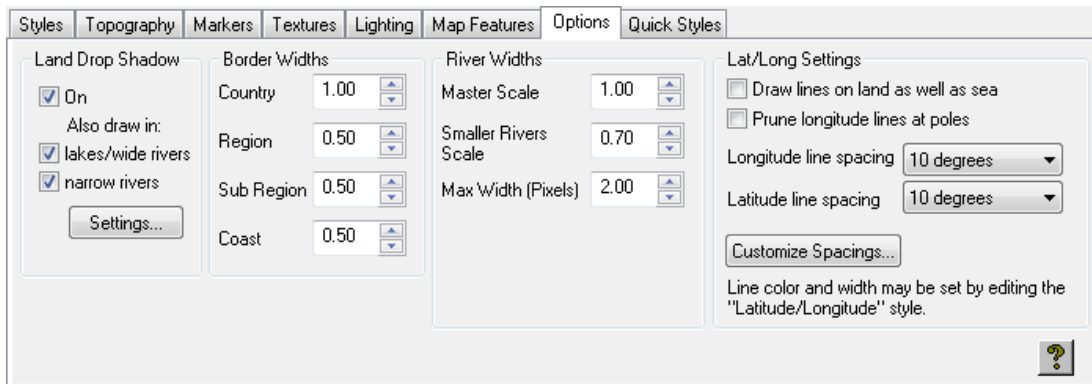
The **Options** panel allows you to control the land drop shadow, line widths, and the appearance of latitude and longitude lines.
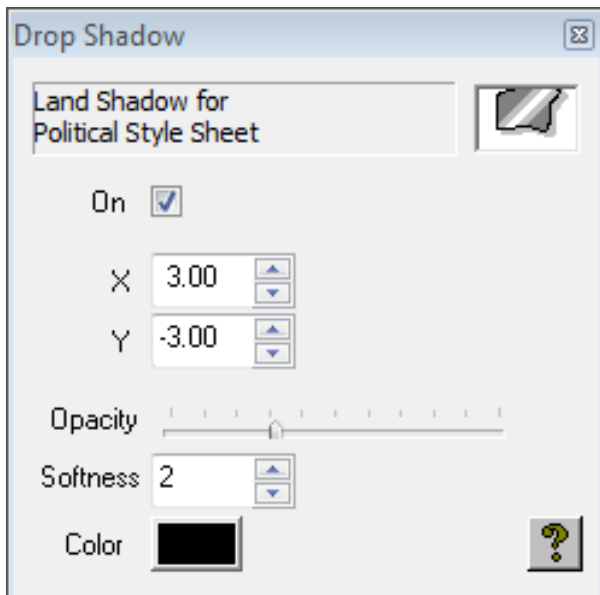
- **Land Drop Shadow:** Allows you to specify whether land is displayed with a drop shadow, and whether a drop shadow is also displayed for lakes/wide rivers and/or narrow rivers. Click the **Settings...** button to define the shadow.
- **Border Widths:** Allows you to specify the line widths for country, region, sub region, and coast outlines.
- **River Widths:** Allows you to control the width of lines used to draw rivers that are not wide enough to be drawn as area shapes.
  - **Master Scale:** Affects the width of all rivers drawn as lines.
  - **Smaller Rivers Scale:** Affects the width of rivers which are classified as minor rivers.
  - **Max Width (Pixels):** Determines the maximum line width at which rivers are drawn. This is useful if you wish to prevent rivers being drawn as very thick lines as a map zooms in.
- **Lat/Long Settings:** Allows you to control the appearance of the latitude and longitude lines, drawn in the **Latitude/Longitude** style.

- To draw lines on both land and sea, select **Draw lines on land as well as sea.** If unchecked, the lines are drawn on the sea only.
- To prevent longitude lines from drawing at the poles, where they are very close together and eventually meet, select **Prune longitude lines at poles**.
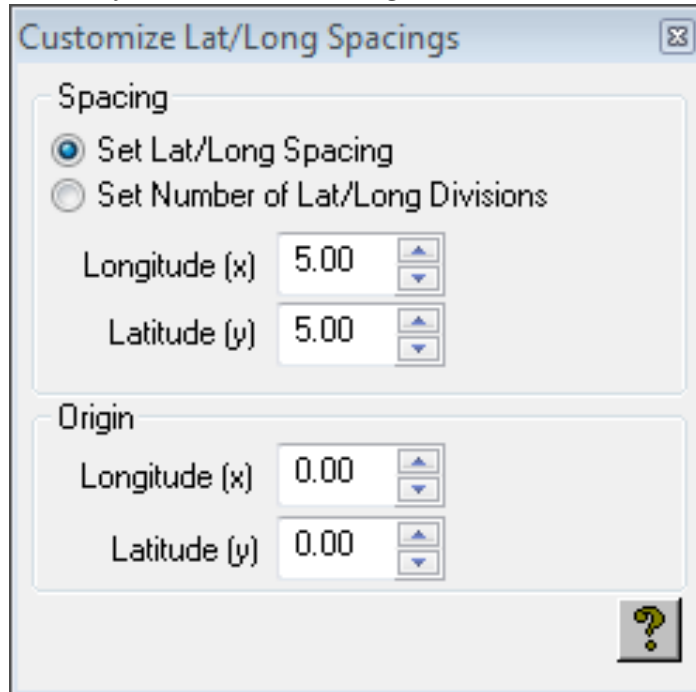
- To alter the spacing of the longitude and latitude lines, choose an option from the appropriate **line spacing** pop-up menu, or choose **Custom** and click the **Customize Spacings...** button to specify the spacing or number of divisions and origin explicitly:
- The color and width of the lines can be changed by choosing the **Latitude/Longitude** style on the **Styles** panel.

6.10 Using Imported Relief Data

Viz World Classic allows you to import additional detailed relief data. A wide range of data is available directly from Vizrt and from third parties. Supported file formats include:

- CDM (Curious DEM) from Vizrt.
- Some types of DEM and SDTS from USGS, who provide data for most of the US and a number of other areas of the world.
- Some BIL images from Global Terrain.
- Some types of SRTM and DTED format data.

Please contact your local Vizrt representative for a full list of supported file formats and data products.

This section contains information on the following procedures:

- To Import CDM Relief Data
- To Import Relief Data
- To Obtain DEM Data
- To Undo DEM Imports
- To Use Multiple DEM Databases

6.10.1 To Import CDM Relief Data

1. On the **Import** menu, select **Curious CDM DEM Data** ....
2. Choose where the data is to be installed and click the **Copy New Data...** button.

For each set of CDM data you want to use you need to add a license in the usual way. To show a list of the CDM data you have installed, and its license status, click the **Check existing data for bad files or licenses** button.

6.10.2 To Import Relief Data

On the **Import** menu, click **DEM Digital Elevation Model...**. The **Import Digital Elevation Model** dialog box is displayed.

This shows the contents of the relief database, and allows you to add new files to the database. The **Import DEM...** button allows you to import DEM files from external sources.

You can undo the most recent imports using the **Undo Imports** button, or fit the map to the selected imports using the **Fit Map To Imports** button.

Because imported DEM data does not always match exactly with the data provided as standard with Viz World Classic, seams sometimes are visible at the edges of imported data. To avoid this, you can animate the amount of imported relief to be used, so that the imported relief is only visible when zoomed in enough that no such edges are visible, using the **Imported Relief Blend** control in the **Map Features** dialog box; for more information see the Setting Map Features section.

6.10.3 To Obtain DEM Data

Because DEM data for the whole world would occupy literally thousands of gigabytes, the data usually comes in tiles. You need to obtain several such tiles to cover the area you require.

For information about obtaining DEM data contact your local Vizrt representative.

6.10.4 To Undo DEM Imports

Because of the sheer amount of data involved with DEM files, and the unfortunate fact that DEM tiles need not actually have straight sides, providing a facility for undoing imports requires significant amounts of disk space.

Viz World Classic allows you to choose how much disk space to be allocated for undo information in the Options dialog box. You can only undo the most recent imports from the bottom of the import list, and it may not even be possible to undo these if there was insufficient disk space to hold the required undo information.

6.10.5 To Use Multiple DEM Databases

You can change the directory that Viz World Classic uses to store DEMs in the **Options** dialog box. Using several different directories allows you to have multiple DEM databases, each of which holds detailed relief data for a particular area. This can be useful if you need high-resolution relief data for a particular project, but do not want to keep using that imported data in your normal day-to-day work.

7 Reusing Design Elements

This section explains how you can easily reuse styles, layers, and colors which you have created in earlier projects. It also describes recommended techniques for setting up and sharing style sheets, templates, and projects between users.

This section contains information on the following topics:

- Importing from a Project
- Reusing Style Sheets
- Using Templates
- Reuse Design Elements
- Using Color Palettes
- Sharing Databases

7.1 Introduction

From the outset Viz World Classic has been designed to allow you to separate the design of the appearance and house style of your map animations from the creation of the individual maps themselves:

- You can import styles, presets, color palettes, or layers from another project, to allow you to use them in a new project.
- Style sheets record all the essential information describing how a map should look, and can be reused in different projects.
- Templates allow you to set up blank projects containing selected styles, layers, and settings ready to be used for the creation of new projects.
- User map details and alternate names databases allow you to standardize alternative spellings for place names and user added places.

Each of these features is a powerful tool for standardizing maps developed by a group of users, and they can be shared between users by saving them into a directory accessible by all users and machines.

7.2 Importing from a Project

The Project Import dialog box allows you to import styles, presets, colors or layers from another project.

7.2.1 To Import from a Project

1. On the **Import** menu, click **From Project...**. The Open dialog box allows you to select another project to import from:
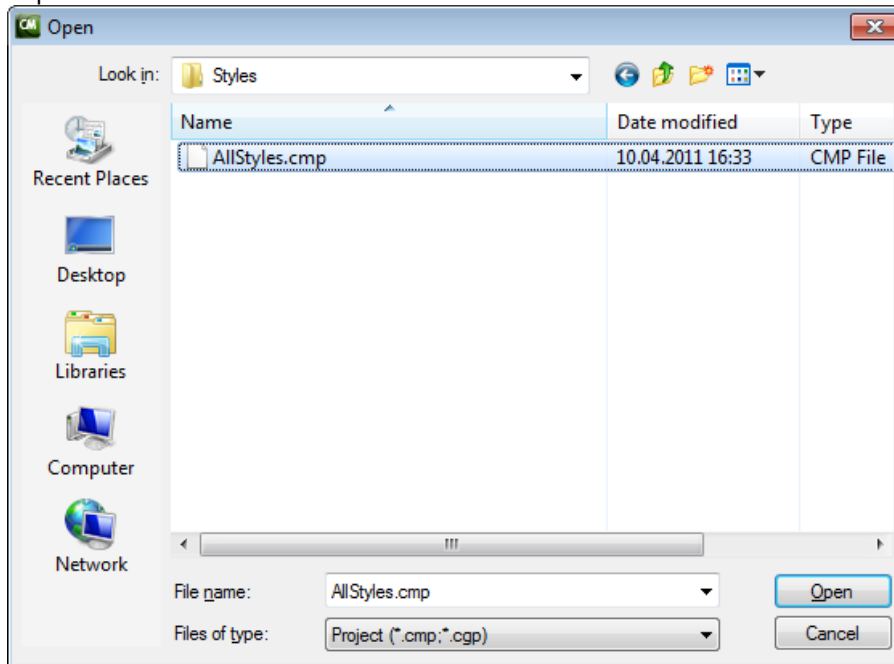
2. Select the project you want to use and click the **Open** button. The Project Import dialog box shows the reusable features in the project, and allows you to select which features you want to import:
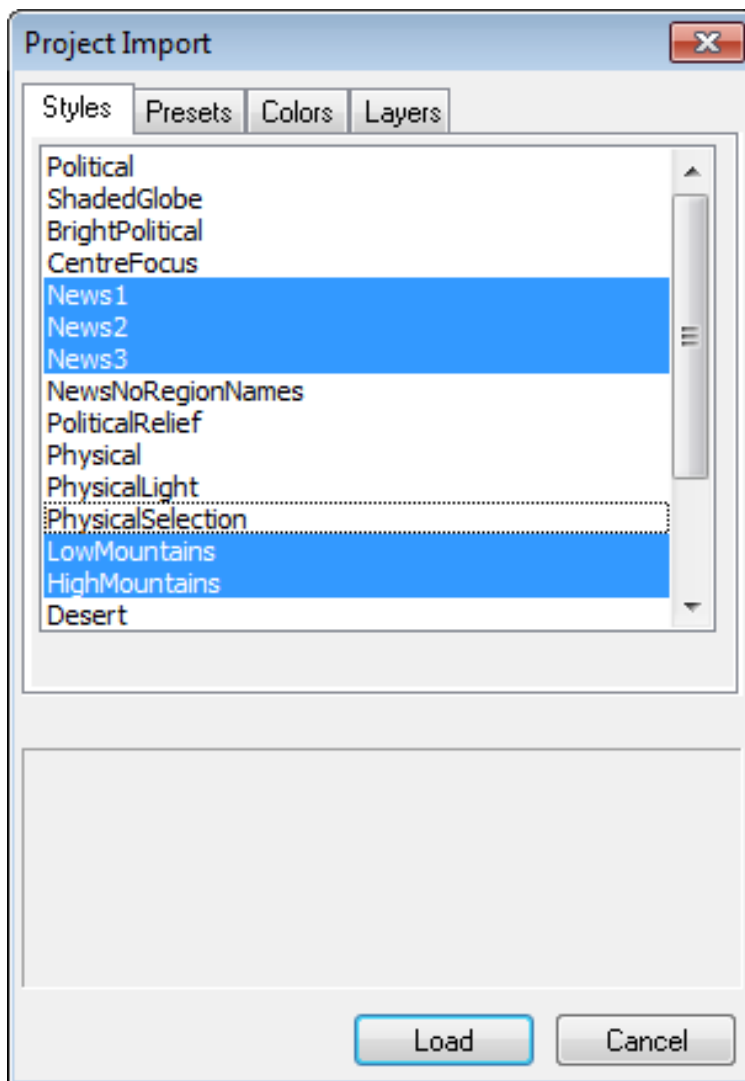
3. Click the Styles, Presets, Colors, or Layers tab as appropriate and select the features you want to import.
4. Hold down **SHIFT** to select multiple contiguous items, and **CTRL** to select multiple non-contiguous items.
5. Click the **Load** button to import the specified features into the current project.

7.3   Reusing Style Sheets

Careful design of the styles you wish to use can greatly increase the speed at which high-quality maps can be created by a group of users. Users just need to select the correct style, and they can then create maps without having to be concerned with the design or appearance.

A number of sample style sheets are included with the software. You can import these as described below.

7.3.1   To Share a Stylesheet between Projects and Users

Once you have designed a style sheet that you would like to use in other projects, or make available to other users, you can save it to disk as follows:
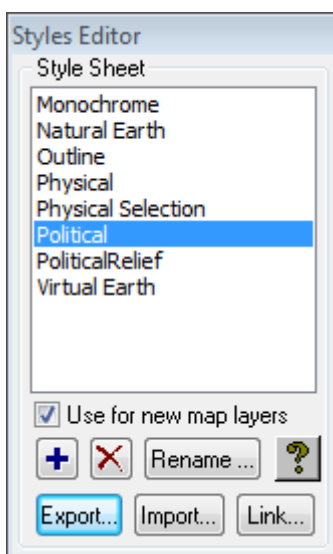
Click the **Export...** button in the **Styles Editor** dialog box to save a copy of the style sheet in a shared directory.

> ⚠ **Note:** Each user can then import styles from the style sheet file using **Import...** in the **Styles Editor**.

7.4   Using Templates

When you create a new project you can choose to base it on a project template which defines the default styles, style sheets, color palettes, and predefined layers and settings to be included. You can save any project as a template file and then use it as the basis for new projects.

If you create a new project without selecting a template, a default project template is used. A simple default project template is supplied and automatically used by Viz World Classic, but you can create a new default template of your own, containing all the settings you want to use on a regular basis.

This section contains information on the following procedures:

- To Create a Project Template
- To Specify a Template as the Starting Point for a Project
- To Set the Default Project Template
- To Share Project Templates

7.4.1   To Create a Project Template

1. Create a new blank project.
2. Define or import all the styles, color palettes, Navigator presets, and layers you would like to have in the template.
3. On the **File** menu, click **Save As…**.
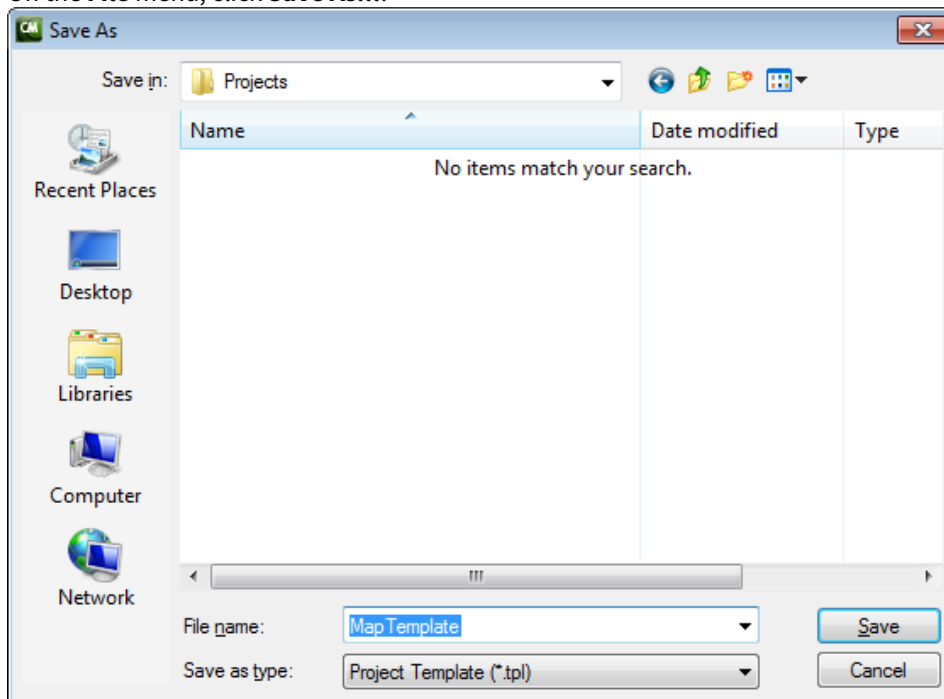
4. In the **Save As** dialog box choose **Project Template** from the **Save as type** (PC) or **Format** (Mac) drop-down menu.
5. Enter a name for the template and click the **Save** button. Opening the template then creates a new untitled project containing the contents of the project you saved, and you are prompted to give it a new name when you save the file.

7.4.2 To Specify a Template as the Starting Point for a Project

Select **Use a project template** in the **Welcome** or **New Project** dialog box, and select the particular template you want to use.

7.4.3 To Set the Default Project Template
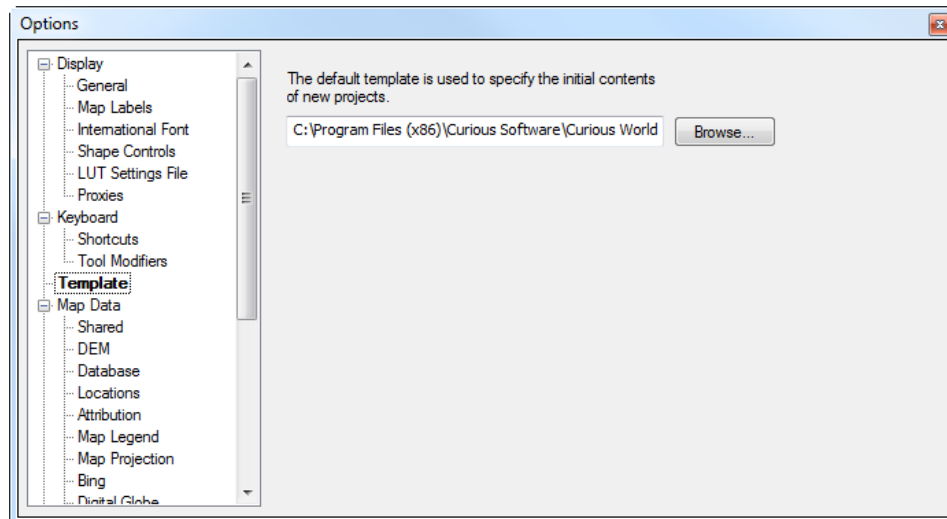
1. On the **View** menu, click **Options...**.
2. Click the **Template** option to display the Template panel.
3. Click the **Browse...** button and select the appropriate template file. The default project template is used whenever you create a new project by selecting Create map project in the Welcome or New Project dialog box.

7.4.4 To Share Project Templates

To share project templates put them into a shared directory. All users can then use the same styles, colors, Navigator presets and layers by default.

7.5   Reuse Design Elements

7.5.1   Reuse of Stylesheets

Careful design of the styles you wish to use can greatly increase the speed at which high-quality maps can be created by a group of users. Users just need to select the correct style, and they can then create maps without having to be concerned with the design or appearance.

7.5.2   Reuse of Layers

You can use templates to provide users with an initial set of layers for use in the maps they are creating. For example, if the users are creating maps, all of which contain the same logo and headline text, you could create a template containing the appropriate image and text layers.

7.5.3   Reuse of Navigator Presets

Templates include the Navigator presets, which are a quick way of defining a map's position and scale. If you frequently use a small number of set map settings you can save these as a preset in a project template and make them available to all users.

7.6   Using Color Palettes

Templates include color palettes, which are selections of user-defined colors in the **Color** dialog box:
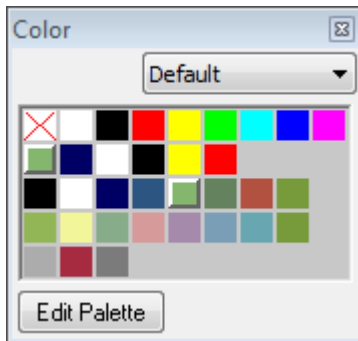
You can create several palettes and select the one you want to use from the pop-up menu above the palette.

This section contains information on the following procedures:

- To Edit the Color Palette
- To Select a Color
- To Pick a Color from the Viewer
- To Add the Current Color to the Palette
- To Delete a Color from the Palette
- To Create a New Palette
- To Save or Load Palettes

7.6.1   To Edit the Color Palette
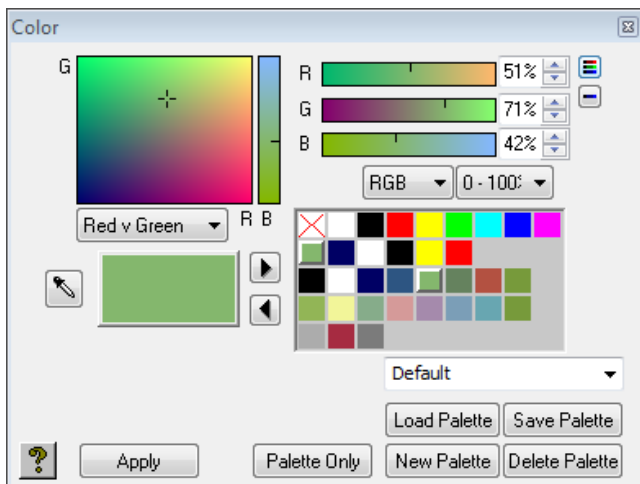
Click the **Edit Palette** button in the **Color** dialog box. The full **Color** editor is displayed (see above).

> ✅ **Tip:** To cancel the operation / close the palette editor click **Palette Only**.

7.6.2   To Select a Color

Either:

- Click in the color space in the top left corner of the **Color** chooser.

Or:

- Click the color sliders in the top right corner of the **Color** chooser.

Or:

- Enter the color values in the fields to the right of each color slider.

You can change the color space displayed in the **Color** chooser by choosing an option from the pop-up menu. You can change the values shown on the color sliders, and the range of each value, using the two pop-up menus below the color sliders.

7.6.3   To Pick a Color from the Viewer

Click the **Pick Color** ( ) tool. Click in the **Viewer** to select that color.

7.6.4   To Add the Current Color to the Palette

Click the **Add Color** ( ) button.

7.6.5   To Delete a Color from the Palette

Click the color to select it. Click the **Remove Color** ( ) button.

7.6.6   To Create a New Palette

Click the **New Palette** button below the palette. The new palette becomes the current palette.

7.6.7   To Save or Load Palettes

Use the **Save Palette** and **Load Palette** buttons. This is useful for exchanging palettes between different users, archiving them for future reuse, or copying them from one style sheet or project to another.

7.7   Sharing Databases

New features, defined using the **Add New Label** or **Add New Feature** dialog boxes, are stored in a user map details database; for more information see how To Define a New Feature on the Map or how To Define a New Feature from Explorer.

Alternate names, defined using the **Properties** panel on the **Contents** panel, are stored in the alternate names database; for more information see the Setting the Properties for Details section.

The user map details, alternate place names and abbreviations databases can be shared between users by placing them in a shared directory. This allows users to benefit from any user map details and new names added to the database.

This section contains information on the following procedure and topic:

- To Share User Map Details, Alternate Place Names
- Editing User Map Details or Alternate Place Names

7.7.1   To Share User Map Details, Alternate Place Names

User map details and alternate place names are stored in text files, and can be shared among users by placing them in a shared directory. To modify the location of these files:

1. On the **View** menu, click **Options...**.
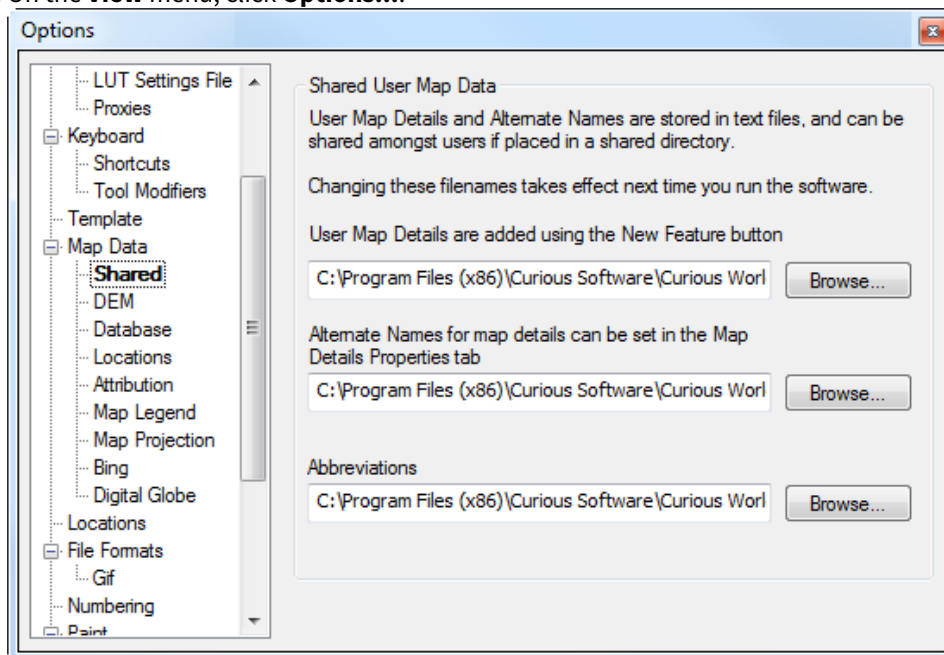
2. In the **Options** dialog box select **Shared** in the **Map Data** section.
3. Click the **Browse...** button and specify the new location for the appropriate file.

7.7.2 Editing User Map Details or Alternate Place Names

You can edit the user map details, alternate place name and abbreviations files using a simple text editing application such as Notepad, Notepad++ or SimpleText. This can be useful if places or names have been added incorrectly and need to be deleted or modified. You can find the path and filename of each file as described above.

8   Working with Images and Movies

This chapter contains information on the following topics:

- Moving, Resizing, or Rotating an Image
- Specifying the Contents of the Image
- Using the Keyer
- Image Rotoscoping
- Setting the Image Properties
- Importing an Image or Movie

Viz World Classic supports a wide range of alternative image and movie formats, summarized in the table below.

> ⚠️ **Note:** Viz World Classic 64-bit version does not support movies added as layers.

Extension	Format
.avi	Video for Windows movie
.bmp	Windows bitmap
.cin	Kodak Cineon image
.cmr	Curious Multi-Resolution bitmap image
.exr	OpenEXR image
.dpx	DPX image
.gif	Graphic Interchange Format
.iff	Alias/Wavefront Paint Image
.jpg or *jp2*	JPEG compressed image
.mov	QuickTime movie
.ntf	National Imagery Transmission Format
.sid	MrSID multi-resolution image (PC only)
.psd	Adobe Photoshop image (supports transparency)
.pct	Macintosh PICT

Extension	Format
.png	Portable Network Graphics (supports transparency, paletted, grayscale, and true-color images)
.sgi or *.rgb*	Silicon Graphics Image (supports transparency)
.tga	Targa bitmap
.tif or *.tiff*	Tiff bitmap format
.qtif	QuickTime image

8.1   Curious Multi-Resolution Format

Viz World Classic provides the proprietary CMR (Curious Multi-Resolution) image format, which allows very large images to be included in maps without the memory overhead normally associated with images in the standard file formats. CMR formatted images can be used in any context where an image file can be specified, including in image layers and as textures for maps. For example, satellite images and high-resolution photographs can be used to fill a region of a map. When you zoom in close, an appropriate high-resolution tile of the image is loaded, avoiding the need to have the whole high-resolution image loaded at all times.

An optional Convert Large Images tool allows you to convert an image into CMR format from any of the common file formats including Photoshop, TIFF, and BMP.

8.2   Cineon Files

Viz World Classic includes support for Cineon files, which use a logarithmic color space to provide a better representation of dark colors. Because Viz World Classic works in a linear color space, it allows you to specify how Cineon files are handled on loading and saving.

- On the **View** menu, click **Options…**.
- In the **Preferences** dialog box select **Cineon** in the **File Formats** section. The following options are provided:
  - **No conversion:** The images are left in logarithmic space, so loading them and saving them again makes no alteration to the pixel values in the files. You can use the **Viewer LUT Controls** option to compensate for the darker appearance of Cineon files when working with them in the Viewer.
  - **Convert to/from linear :** Converts Cineon files from the logarithmic color space to the linear color space on load, and back again on save. An **allow headroom** option varies the conversion so that overexposed images retain more detail in the very bright overexposed regions.

8.3 Moving, Resizing, or Rotating an Image

The **Move/Pan** tool ( ) button allows you to move, scale, or rotate an imported image or movie.

This section contains information on the following topics:

- To Move an Image
- To Resize an Image
- To Rotate an Image

8.3.1 To Move an Image

Position the mouse pointer within the image and drag the image to the required position.

8.3.2   To Resize an Image

1. Move the mouse pointer to one of the eight handles on the corners or midpoints of the edges.
2. Drag to resize the image.
3. Hold down **CTRL** to constrain the image to its original aspect ratio.

8.3.3   To Rotate an Image

1. Point to the rotation handle, which is a yellow square to the right of the image center. The cursor changes to a rotation symbol.
2. Drag the handle to rotate the image about its center.

8.4   Specifying the Contents of the Image
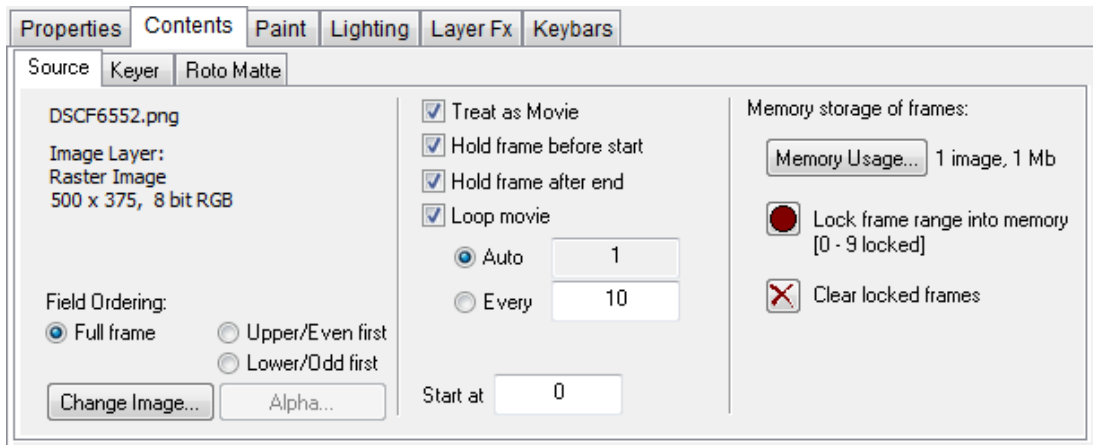
The **Contents** panel displays information about the image or movie, and provides options to allow you to change the contents.

This section contains information on the following topics:

- Controlling Image Transparency
- To Set the Start Time and Looping

8.4.1   Controlling Image Transparency

Images and movies used in an image layer may contain an alpha channel (or matte) which defines transparent areas of the image. You can specify how the alpha channel is interpreted to give greater control over the appearance of matted images.
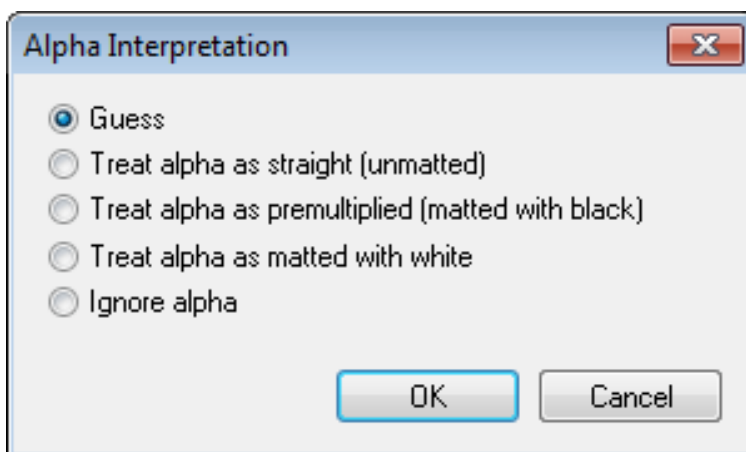
Click the **Alpha...** button to display the Alpha Interpretation dialog box. By default *Guess* is selected, which automatically selects the best option in most situations. Choosing the correct option should produce an image without noticeable banding, fringes, or speckling around the edges. You can choose one of the other options if *Guess* does not give the results you expect, or *Ignore alpha* to treat the image as if it had no transparency.

The following illustrations show the effect of the options:. Correct (unmatted), incorrect (premultiplied) and alpha ignored:
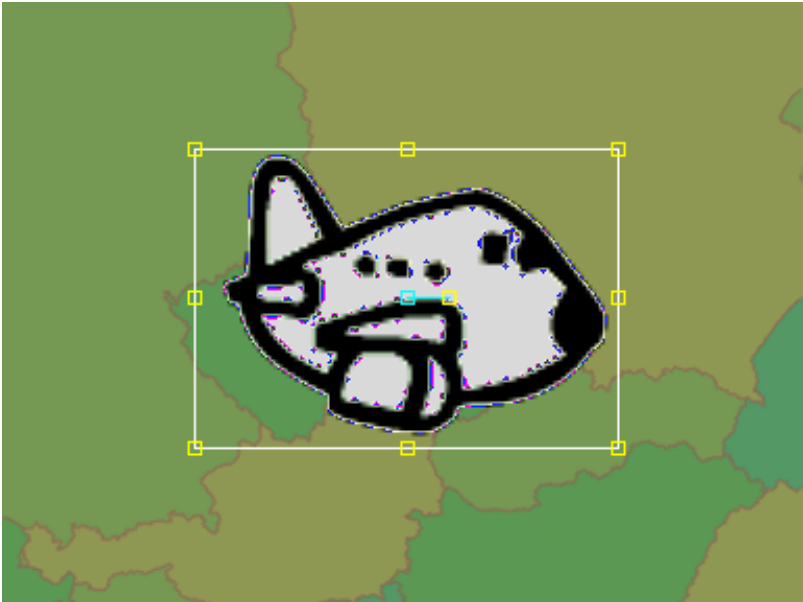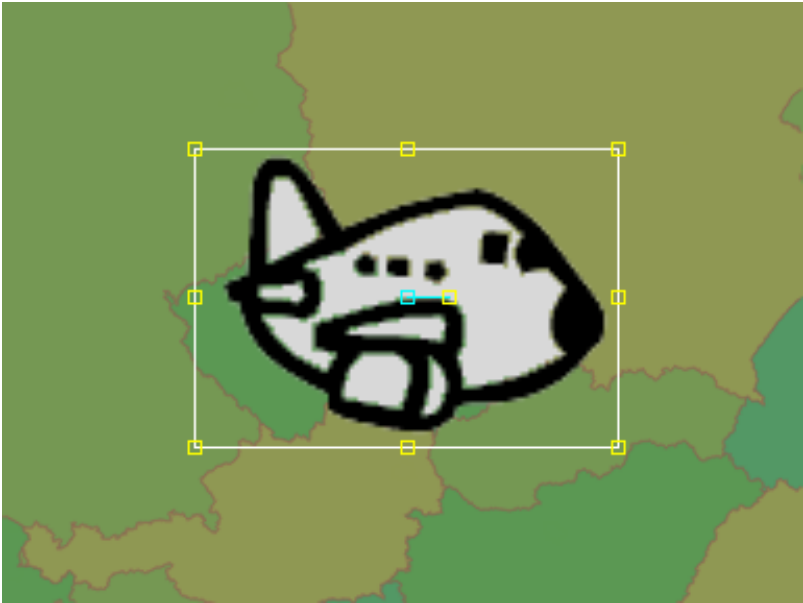
8.4.2   To Set the Start Time and Looping

1. Use the Hold frame options to specify what is displayed before the start time and after the end time.
2. Select **Loop movie** to play the movie in a loop.
    - **Auto:** Loops the entire movie, between its start and end frames.
    - **Every:** Allows you to specify the loop frequency.
3. Edit the Start at time value to determine the start time of a movie.

8.5 Using the Keyer
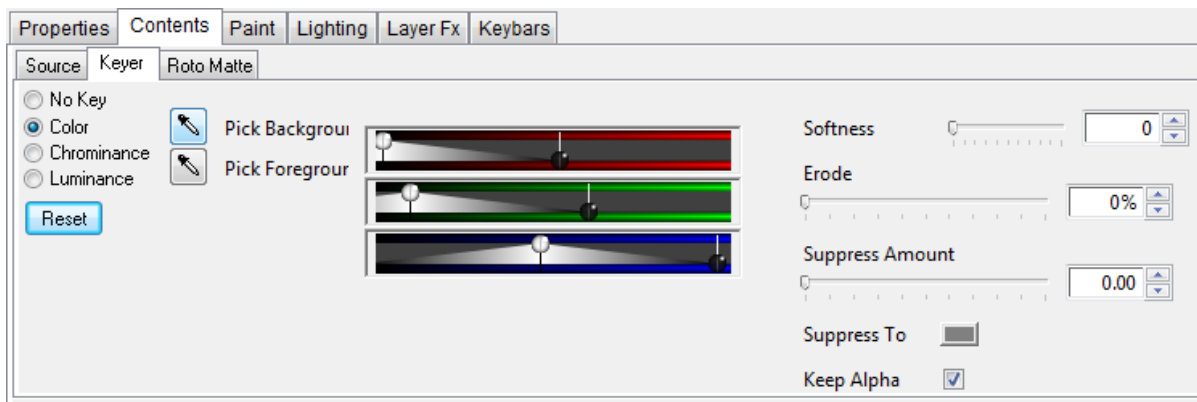
The Keyer creates a matte which is used to cut out the foreground from the background. Mattes created with the Keyer can be saved and reused in other projects or applications.

8.5.1 To Key an Image or Movie

1. Click the **Contents** tab, to display the **Contents** panel for the image or movie.
2. Click the **Keyer** tab, to display the Keyer.
3. Select **Color**, **Chrominance**, or **Luminance** to determine how keying is performed.
4. Select the **Pick Background** or **Pick Foreground** tool, and click appropriate parts on the image to add the corresponding colors to the range defined as background or foreground.

You can drag to define a rectangle to average the colors in the rectangle.

The sliders provide an alternative way of adjusting the components you have selected.

Each slider has four handles:

The white handles specify the range of colors treated as background, and the black handles specify the range of colors treated as foreground. Between each black handle and the corresponding white handle there is a smooth transition between foreground and background.

- Drag the **Erode** slider to reduce the size of the masked area, to hide edge effects, and add a softness to blur the edge of the image.
- Use the **Suppress Amount** and **Suppress To** controls to reduce the amount of the keyed color from the image.

This is useful for hiding reflections from the blue or green screen.

8.5.2 To View the Effect of the Keyer

The paint controls to the right of the Keyer allow you to choose whether the Viewer shows the keyed image, Keyer matte, or both:
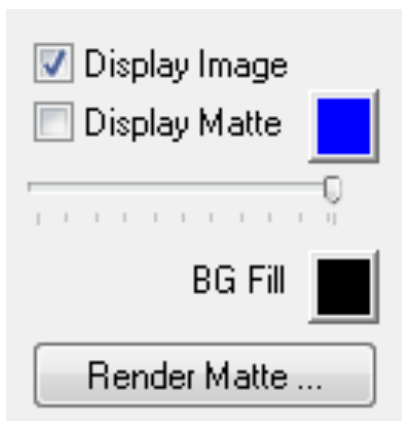
8.5.3 To Render the Keyer Matte
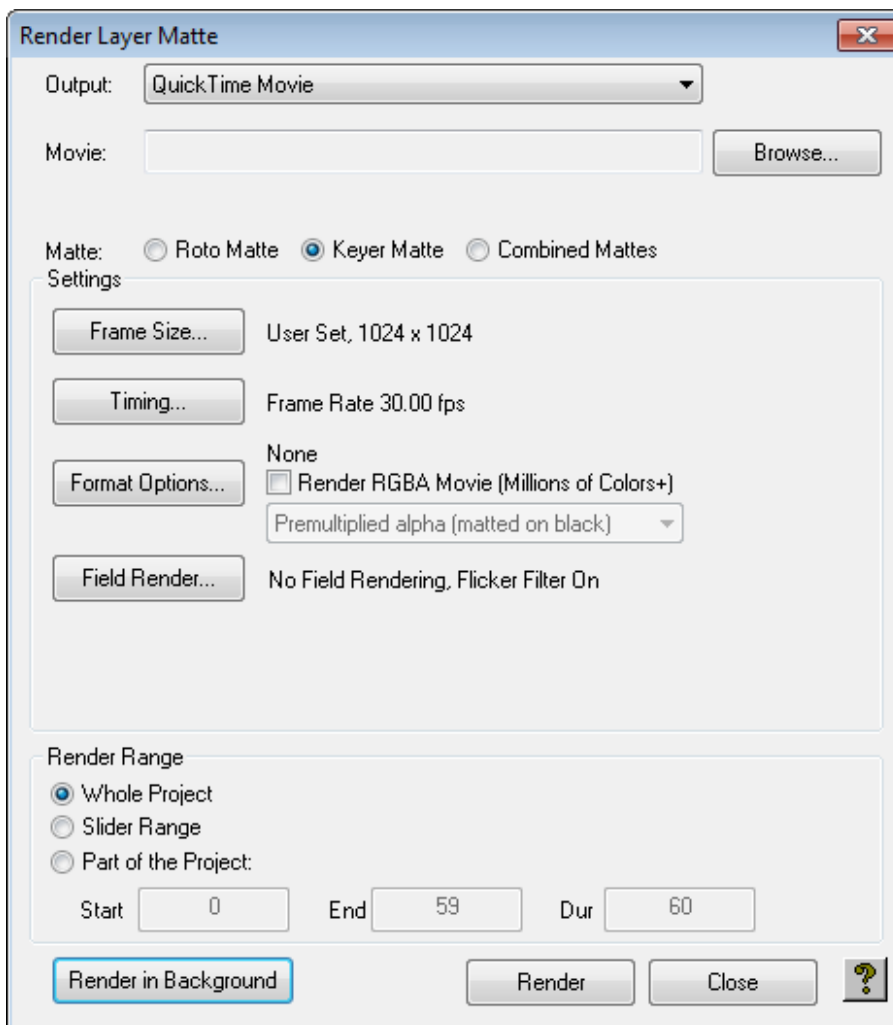
- Click the **Render Matte...** button in the paint controls.

This is equivalent to the **Render Matte...** command on the **Layer** menu, and displays the **Render Layer Matte** dialog box to allow you to render the Keyer matte and/or the roto matte as a separate movie.

8.5.4   To Cut an Image from a Blue Screen

The following example illustrates a typical application of the Keyer, to cut out a subject filmed against a blue-screen or green-screen background, so it can be superimposed on another background.

1. Load the image or movie into a new image or movie layer.
2. Click the **Keyer** tab to display the Keyer.
3. Click the **Contents** tab, to display the **Contents** panel for the image or movie.
4. Select **Color** to key on a specified color range.
5. Select the **Pick Background** tool and drag to define a rectangle enclosing the blue-screen background:

When you release the mouse button the keyed image is displayed.

You can refine the keyed area by clicking or dragging with the **Pick Background** tool to increase the areas of background removed, or by clicking or dragging with the **Pick Foreground** tool to reduce the areas of background removed.

Alternatively you can adjust the key using the color, chrominance, or luminance sliders.

8.5.5   To Remove the Color Cast

Subjects filmed against a blue-screen or green-screen typically have a blue or green cast. The **Suppress** option enables you to remove this.
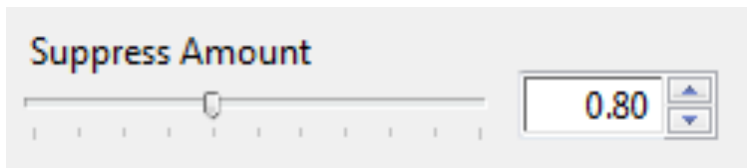
1. Drag the **Suppress Amount** slider until the cast is removed. Too high a value introduces a contrasting cast.
2. Optionally change the **Suppress To** color to suit the replacement background.

You can then superimpose the subject onto an alternative background:

8.6   Image Rotoscoping
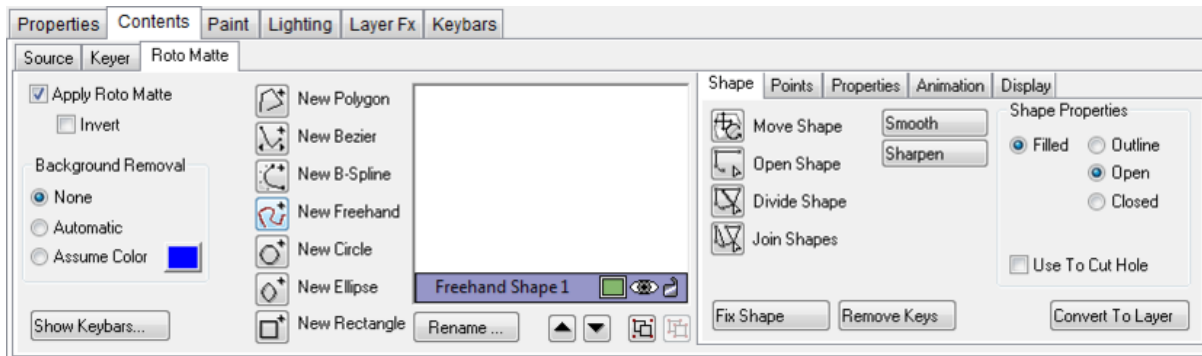
The Roto Matte panel on the Contents panel allows you to add one or more shapes to an image or movie layer to mask dynamically, tracking them as they move in successive frames. This is often referred to as a roto matte or rotoshape.

For more information about creating and editing shapes see Working with Shapes.

8.6.1   To Create an Animated Shape

1. Move to the first frame of the movie.
2. Create one or more shapes using the shape tools to outline the feature in the movie that you want to process.
3. Move to the last frame in the movie, and adjust the shape so that it matches the feature.
4. Check the intermediate frames, and make any necessary adjustments to keep the shape tracking the feature.

8.6.2   To View the Effect of the Roto Matte

- Select **Apply Roto Matte**. The roto matte dynamically cuts out the image to reveal the background:

- The paint controls to the right of the **Roto Matte** panel allow you to choose whether the Viewer shows the keyed image, roto matte, or both:
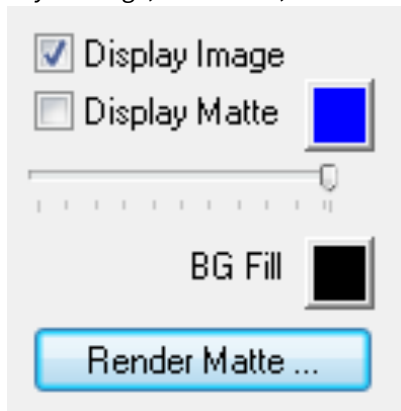
8.6.3   To Render the Roto Matte

Click the **Render Matte...** button in the paint controls. This is equivalent to the **Render Matte...** command on the **Layer** menu, and displays the **Render Layer Matte** dialog box to allow you to render the Keyer matte and/or the roto matte as a separate movie.

8.7   Setting the Image Properties
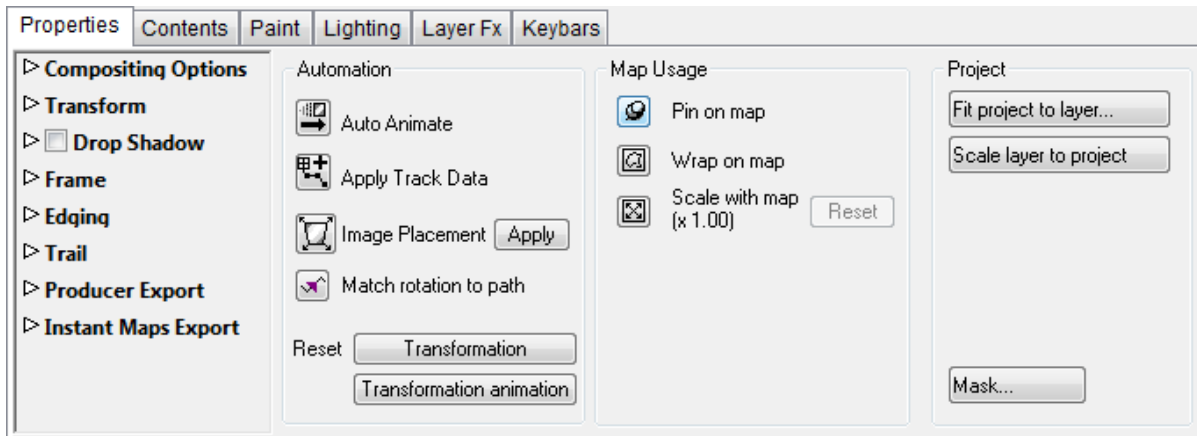
The options on the **Properties** panel allow you to specify the compositing options for the image or movie, transform it, and add a drop shadow, frame, edging, or animation trail. It also provides several animation options.

This section contains information on the following topics:

- Compositing Options
- Transform Options
- Drop Shadow Options
- Frame Options
- Edging Options
- Trail Options
- Export Producer Options
- Instant Maps Export Options
- Automation Options
- Mask Options

8.7.1   Compositing Options
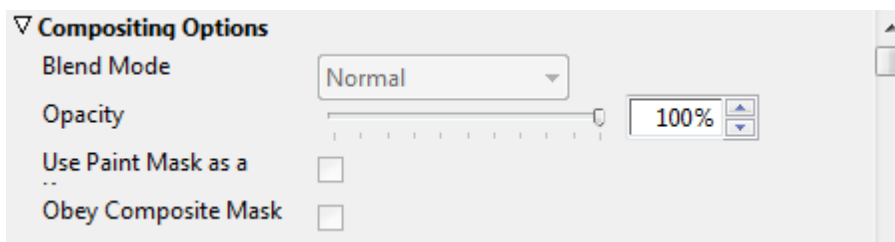
Blend Mode specifies how the layer is combined with the other layers, and can be one of.

Normal, Add, Subtract, Difference, Multiply, Darken Only, Burn, Color Burn, Screen, Lighten Only, Dodge, Color Dodge, Hue, Saturation, Value, Color, Overlay, Soft Light, Hard Light, Pin Light, Exclusion, or Negation.

The **Opacity** determines the layer opacity, and can be animated.

Animating the opacity from 0% to 100% can be used to cause the image to fade in smoothly over a specified period of the animation.

8.7.2   Transform Options

These options allow you to specify the position, scale, rotation, and origin numerically.

The **Set Using GPS** button is used to position the image using UTM coordinates, which are normally supplied with aerial photographs and satellite imagery, or using latitude/longitude coordinates.

Latitude and longitude coordinates can either be entered in decimal degrees, such as 20.175, or in degrees, minutes and seconds, such as 20d10m30s.

For images provided by Global Terrain Inc., the **Use Metafile...** button reads the UTM coordinates directly from the metafile provided with the image.

The **Pinned on Map**, **Wrap on Map**, and **Scale with Map** options duplicate the options in the *Map Usage* section of the *Properties panel*; for more information see how To Choose How the Image Moves Relative to the Map.

To Change the Origin of the Image

The origin determines the point about which the image is rotated or scaled, and defaults to the center of the image. Edit the **Origin** values to specify the position in pixels relative to the lower left corner (south-west) of the image, or choose one of the predefined options from the **Origin** drop-down menu.

8.7.3   Drop Shadow Options

Select **Drop Shadow** to turn on a drop shadow for the layer. The following parameters are provided:

Parameter	Description
Offset	The offset of the drop shadow, in pixels.
Opacity	The opacity of the drop shadow. `0%` gives no drop shadow.
Softness	Blurs the drop shadow to smooth the edges. Values in the range `0-5` are recommended.
Color	The color of the drop shadow.

The following example shows a drop shadow with offset X=3, Y=3, and Softness=2:

8.7.4   Frame Options
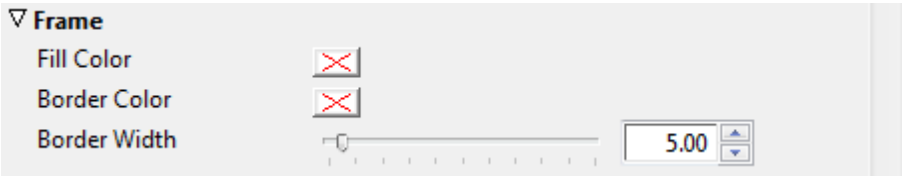
Allows you to add a colored fill, and/or border to the layer. **Border Width** specifies the width of the border in pixels.

8.7.5   Edging Options
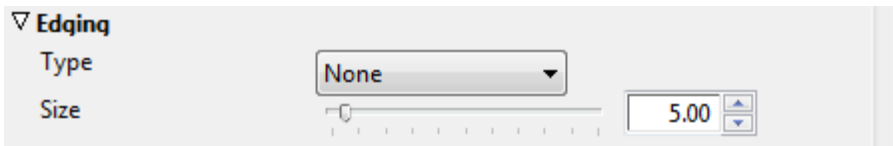
The **Edging** options allow you to add a vignette to the image or movie.

- Choose **Rectangle** or **Circle** from the Type pop-up menu to vignette the image with a soft border of the corresponding shape.
- Use the **Size** control to adjust the size of the shape.

This option is especially useful when superimposing one image on another, to hide the edges of the top image.

The following example shows a circular vignette with a size of 100:

8.7.6   Trail Options
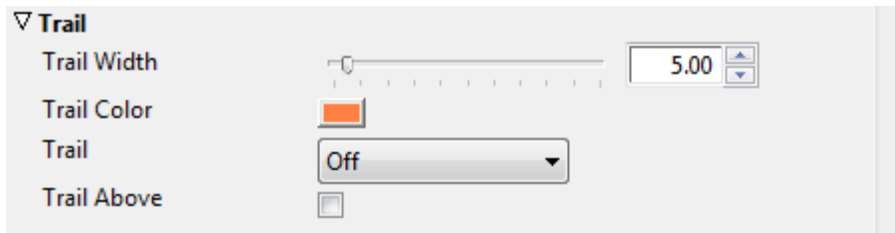
The **Trail** options allow you to leave a trail as the image animates. For more information see the Leaving an Animation Trail section.

8.7.7   Export Producer Options
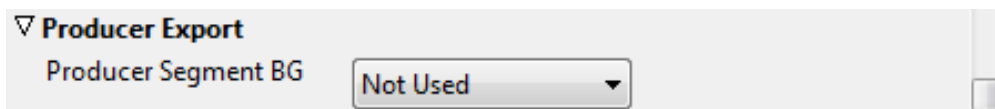
> ⚠️ **Note:** No longer supported.

8.7.8   Instant Maps Export Options
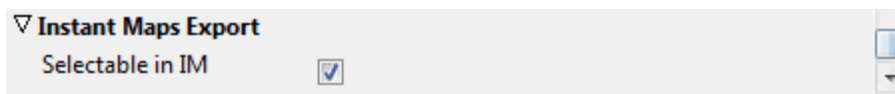
Allows you to make maps available to the Viz World Instant Map tool.

8.7.9   Automation Options

The **Properties** panel includes an **Image Placement** tool, to help align images accurately to positions on another image.

- Click the **Image Placement** tool in the **Automation** section of the **Properties** panel.

Two arrowhead controls are displayed in the Viewer to allow you to indicate the transformation you want.

- Position the circles on two appropriate points on the image.
- Position the arrowheads on the background to indicate where the points should be mapped to.
- Click the **Apply** button.

The image is transformed to align the points on the image with the points on the background you have specified.

To Choose How the Image Moves Relative to the Map

Viz World Classic provides several options that allows you to control how the image moves relative to the map layer.

By default the image position is independent of the map position. **Pin on map** keeps the image at the same latitude and longitude as the map moves. **Wrap on map** projects the image onto the map, according to the map projection.

Only available if **Pin on map** is selected. Alternatively, Scale with map scales the image as the map is zoomed. Only available if Pin on map is selected.

These options are selected in the Map Usage section of the Properties panel.

The images below show a map with default, pin, wrap and scale modes:

8.7.10   Mask Options

See Controlling Layer Compositing.

See Also

- **Auto Animate** and the Automatically Animating a Layer section.
- **Match rotation to path** and how To Align the Image, Text Item, or Drawing to the Angle of the Animation Path.
- Controlling Layer Compositing

8.8   Importing an Image or Movie

This section contains information on the following topic and procedures:

- To Import an Image or Movie
- To Convert an Image to a CMR Format
- To Convert Multiple Geo-referenced Images to a Single CMR Image
- Using Geo-referenced Images
- To Add Geo-referenced Images
- To Add Satellite Images

8.8.1   To Import an Image or Movie
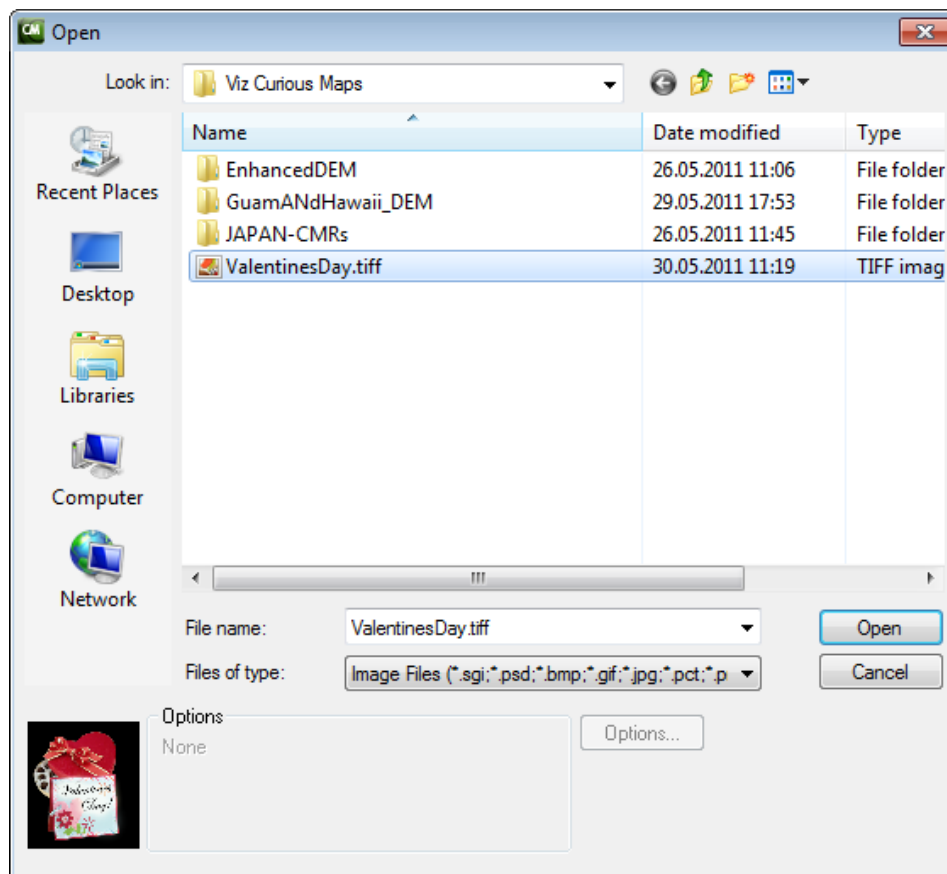
1. On the **Layer** menu, point to **Add Layer**, and then click **Image** or **Movie**.
   - The following dialog box allows you to select an image to import, and optionally preview it.

⚠ **Note:** Viz World Classic 64-bit version currently do not support movies added as layers.

2. Select the image or movie file and click the **Open** button to import it.
   - A new image layer is automatically created for the imported image or movie. Note that each image or movie is contained in a separate layer.

- If you open a project that uses images, or movies, that are no longer available they are displayed as a red cross.
- If you import a movie the **Match Time Range to Movie** dialog box appears. This allows you to adjust the time slider's range and/or the project's frame size, rate and duration to match the clip you are importing.
- If they have moved you can use the **Change Image...** button on the **Contents panel** to locate them.

8.8.2 To Convert an Image to a CMR Format
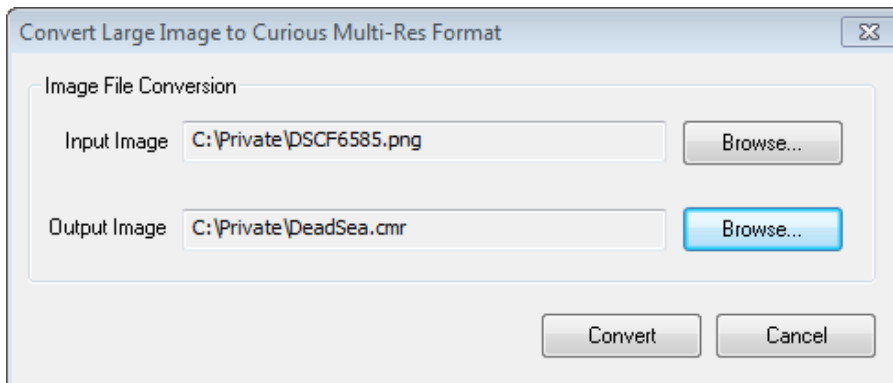
1. On the **Tools** menu, click **Convert Large Images...**. The following dialog box allows you to specify the image to convert, and a filename for the CMR (Curious Multi-Res) image:
2. Browse for and select the input image to be converted.
3. Browse for and select the location for the output image and specify a filename for the CMR image, which can be the same as the input image.
4. Click the **Convert** button to convert the image to the CMR format. You can then select the CMR image just as you would any other image in Viz World Classic. You can also make a compressed version in the following dialog box.

⚠️ **Note:** The Convert Large Images tool makes a copy of the original image; it therefore requires at least as much available disk space as the size of the original image.

8.8.3   To Convert Multiple Geo-referenced Images to a Single CMR Image
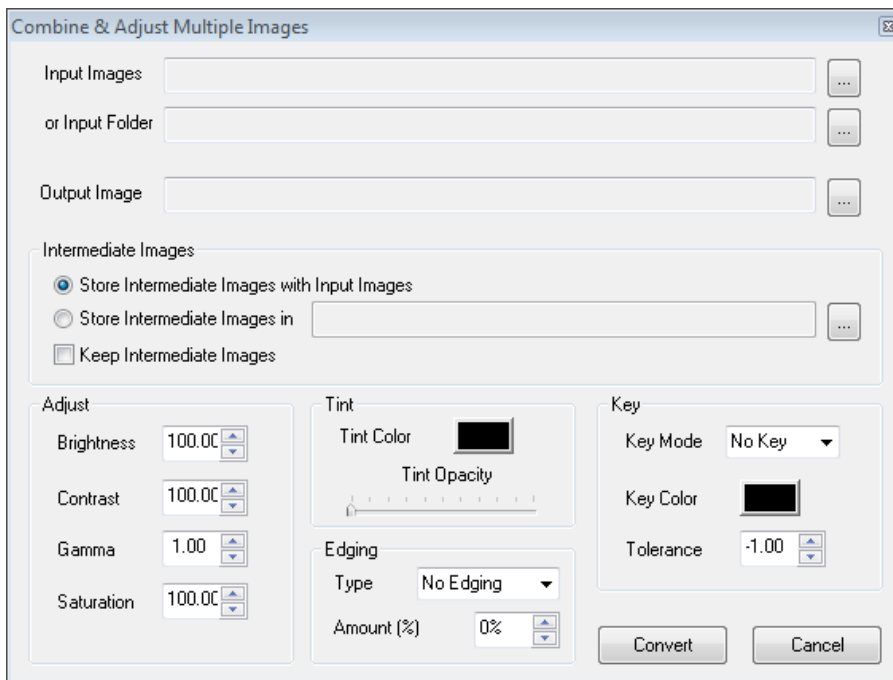
The Convert Multiple Images tool allows you to convert a number of adjacent geo-referenced images into a single large image, in CMR (Curious Multi-Res) format.

- On the **Tools** menu, click **Convert Multiple Images**. The Combine & Adjust Multiple Images dialog box allows you to specify the input and output images.
    - **Intermediate Images**: Allows you to specify where the intermediate CMR files should be stored, and whether they should be kept after the conversion is finished.
    - **Adjust, Tint**: Provides color correction options to allow you to make the resulting CMR file match other images you are already using.
    - **Edging**: Uses a soft edge when joining the individual tiles to obscure any seams that may arise.
    - **Key**: Allows you to key out, or remove from the image, areas of a particular color with a specified tolerance. For example, this allows you to make the sea transparent in the finished CMR image by specifying blue as the key color.

8.8.4   Using Geo-referenced Images

Much satellite and aerial photography is now available in a geo-referenced format, which includes the precise location of the image on the Earth's surface. Viz World Classic supports the following geo-referenced formats:

- **GeoTiff:** Data is embedded in a TIFF file.
- **Tiff World:** Data is in an accompanying text file.
- **Geo-referenced NITF**

It is recommended that you convert large geo-referenced images to a CMR format before importing them.

8.8.5 To Add Geo-referenced Images

Either:

1. On the **Layer** menu, point to **Add Layer**, and then click **Image or Movie**.
2. Select the geo-referenced image file.

> ⚠ **Note:** Viz World Classic 64-bit version currently do not support movies added as layers

Or:

- Add the image as a texture to an existing style in the **Styles Editor.**

The following dialog box allows you to pin the image to the correct location on the map:
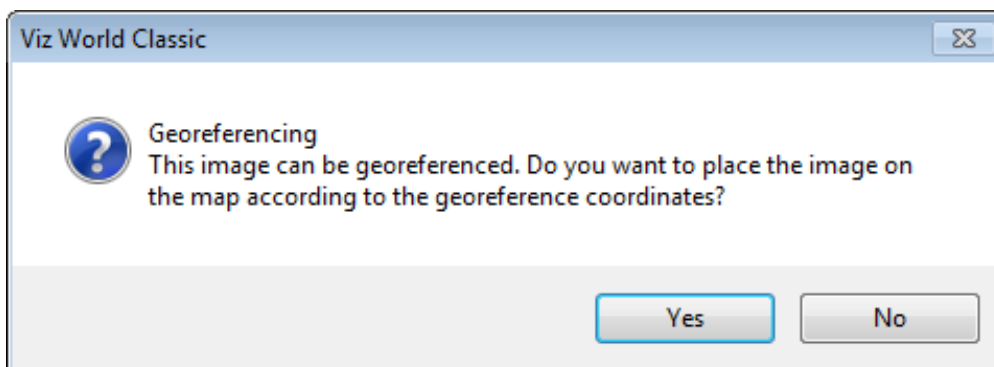
- Click the **Yes** button to pin the image using the georeference information.

8.8.6 To Add Satellite Images
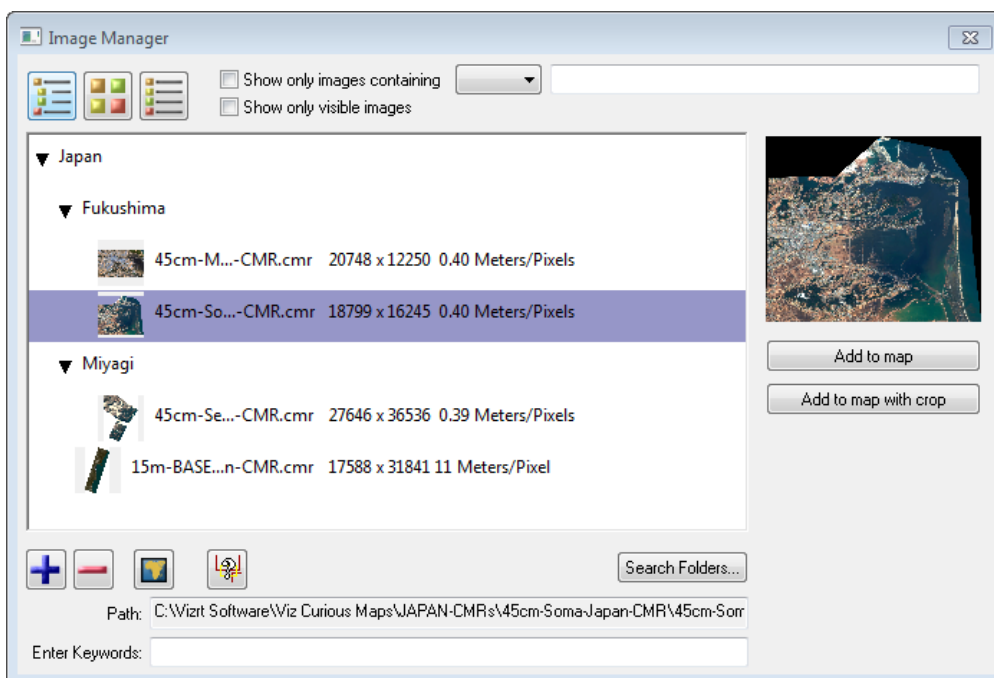
1. Select a map layer.
2. Select the **Contents** tab and then the **Overlays** tab.
3. Click the **Add Satellite Image** button.
4. In the **Image Manager** click the **+** button to browse for and add your image/CMR.
5. Click the **Add to map** button.
6. **Close** the Image Manager.

⚠️ **Note:** The imagery is not a part of the base map (see Working with Maps).

9 Painting

This section explains how to use the paint and image processing tools on the Paint and Graphics panels to paint directly onto image/movie layers, for retouching or enhancing an existing image, masking areas of an image, or creating original freehand artwork.

This section contains information on the following topics:

- Painting onto an Image
- Adding Graphics to Images
- Paint and Image Processing Tools

9.1 Painting onto an Image
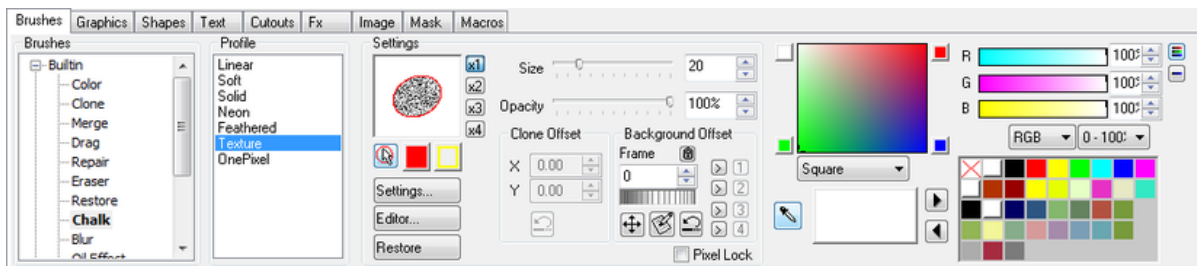
The brushes on the **Brushes** panel allow you to paint directly onto an image or movie layer. You can paint onto the image, mask, or simultaneously onto both. Alternatively you can protect the image with the mask while you are painting onto the image.

In the case of a movie, painting affects the current frame of the movie, and the mask associated with the current frame, only. Painting can be applied automatically to multiple frames of a movie by recording and playing back a macro; see Automating with Macros.

A brush applies color, an image, or a filter directly onto the image or movie through a profile, which defines its shape.

9.1.1 To Paint the Image or Mask

1. Select the **Paint brushes** ( ) tool. This tool is automatically selected when you display the Brushes panel.
2. Select the brush you want to use in the **Brush** list.
3. Select a color for painting from the palette on the right of the **Brushes** panel.

4. Click on the image and drag to paint.

You can adjust the opacity of the paint with the **Opacity** slider. If you are using a pressure-sensitive input device, such as a tablet, the brush strokes respond to the pressure of your pen.

9.1.2 To Choose How the Mouse Cursor Displays while Painting

You can choose to hide the mouse cursor while painting, or display a colored circle or ellipse indicating the size of the brush:

The images above depicts a normal cursor, hidden cursor and outlined cursor.

1. On the **View** menu, select **Options...**
2. In the **Preferences** dialog box select **Brush Display** in the Paint section:
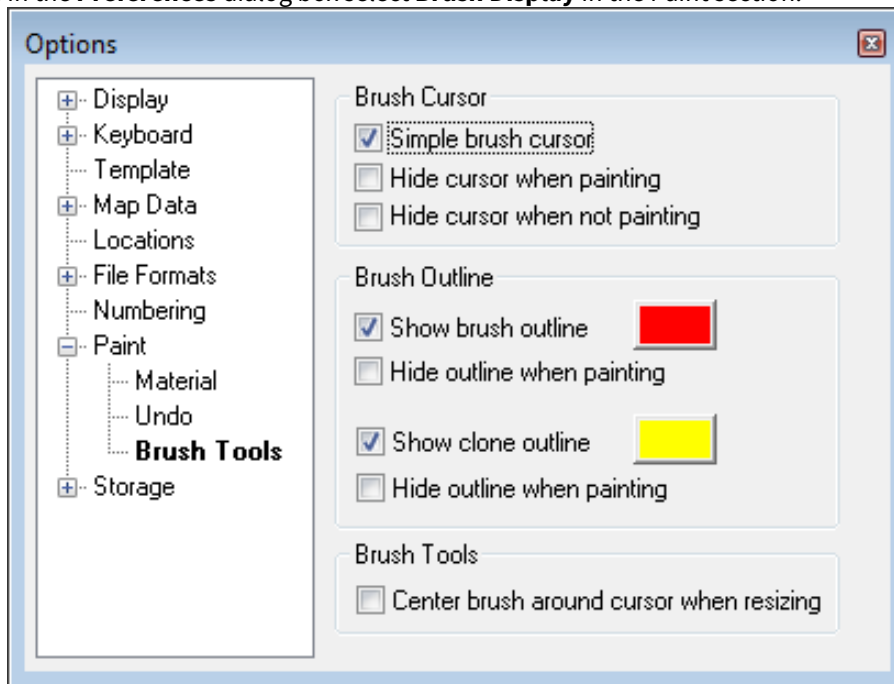
You can set separate options for the **Clone** brush.

You can also turn the outline on or off, and specify its color, by clicking the buttons on the **Brushes** panel:

This section contains information on the following topics:

- Specifying the Brush Settings
- Creating and Editing Brushes
- Defining the Brush Source
- Defining Brush Filter Effects
- Defining Brush Profiles
- Managing Painted Materials

9.1.3   Specifying the Brush Settings

The **Profile**, **Size**, **Opacity**, and **Settings** are set to default values specified for the brush, but you can adjust them in the controls to the right of the Brush list.

To Define the Brush Profile

The brush profile defines the shape of the brush stamp. It is either a circle or an ellipse, with a falloff defined by a graph, or an arbitrary shaped cutout. There are also the special options: **Texture**, which creates a brush with a

random fill pattern, and **OnePixel**, a one pixel solid brush. Select a profile from the **Profile** list. This gives a list of profiles defined in the **Brush Editor**.

To Define the Brush Size

Either:

- Drag the **Size** slider.

Or:

- Enter the size in the **Size** box:
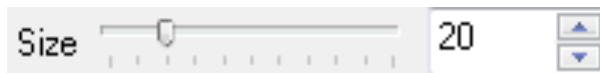
Or:

- Hold down **CTRL** and drag in the Viewer, or in the brush preview on the **Brushes** panel, to draw a circle defining the brush size.

To Define an Offset

Brushes that take paint from the image or background, such as the Clone and Drag brushes, allow you to define an offset.

Either:

- In the Clone Offset section enter appropriate values in the X and Y fields:
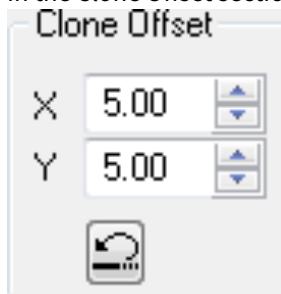
Or:

1. Hold down **SHIFT** and drag in the **Viewer** to draw a line from the source to the destination to define the offset interactively.
2. Click the **Reset** button to reset the offset to zero.

To Define the Background Transformation

Brushes that take paint from the background, such as the **Merge** brush, allow you to transform the background before using it for painting.

1. Set the **Display** option to **Single Layer**.
2. Select the image layer from the **Layers** list.
3. Click the image layer's **eye-dropper** icon.
4. Click the **Background Transformation Tool** (⊕) button in the **Background Offset** section to display an outline of the background image in the Viewer with handles so you can move, scale, or rotate it:
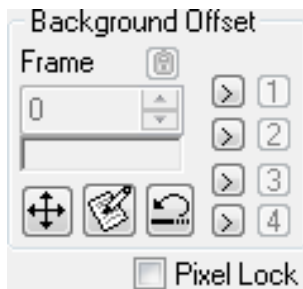
Once you have transformed the background close the Edit Merge Transformation to continue painting. You can store up to four transformations by clicking one of the **>** buttons and restore the transformation by clicking the **1**, **2**, **3**, or **4** button.

To reset the transformation click the **Reset** button.

To Define other Brush Settings

Click the **Settings...** button to display more advanced settings for the brush. The brush settings are described in greater detail in the later sections of this chapter.

To Reset the Brush Settings to Default

Click the **Restore Defaults** button.

Built-in Brushes

The following pre-defined brushes supplied with Viz World Classic:

- **Color:** Paints in a selected color.
- **Clone:** Picks up paint from one area of the image and paints it to another position on the image, as defined by the offset.
- **Merge:** Copies paint from a background image on to the current image.
- **Drag:** Drags paint on the image, causing a smudge effect.
- **Repair:** Picks up color from the image and paints with it; useful for painting over scratches and blemishes in an image.
- **Eraser:** Erases pixels from the image, making them transparent. Equivalent to painting with the non-color.
- **Chalk:** Paints with a textured brush.
- **Blur:** Blurs the image.
- **Oil Effect:** Creates the effect of layered color in an oil painting.
- **Posterise:** Similar to Oil Effect, but more severe.
- **Smooth:** Similar to Blur but more dramatic.
- **Marble:** Mixes up the pixels giving a marbling effect.
- **Black And White:** Convert pixels to monochrome.

To Use the Clone Brush

1. Hold down **SHIFT** and drag in the Viewer to draw a line from the source point to the destination point:

The X Offset and Y Offset fields are set to the appropriate values.

2. Paint to create a clone of the image:

To Use the Merge Brush

The **Merge** brush allows you to copy paint from a background image onto the current image. For example, it can be used to paint out unwanted features of a scene by using a photograph of the background from the same position, called a clean plate.

1. Load the background image onto one layer:

2. Load the foreground image onto the current layer.
3. Set the **Display** option to **Single Layer**.
4. Click the **eye-dropper** icon in the **Layers** list to indicate which layer you want to merge from
5. Use the **Onion Skinning** control in the paint controls to reduce the opacity of the foreground, if desired:

6. Use the **Merge** brush to paint the background over the unwanted feature:

The **Merge** brush also allows you to scale or rotate the background image you are merging from.

7. Click the **Background Transformation Tool** (⊕) button to transform the background.
8. Click the **Reset** button to reset the background to the original scale and position.

To Protect Artwork with a Mask

1. You can use a mask to protect parts of an image while painting. For example, you could use a mask to protect the butterfly in the following image while painting over its shadow:

2. Create the mask by using a brush tool. Alternatively, you could mask the butterfly by drawing shape overlays and then sticking them onto the mask; for more information about creating shape overlays see Working with Shapes:

3. Set the paint controls to **Protect with mask**, **Paint Image**, and **Display Image:**
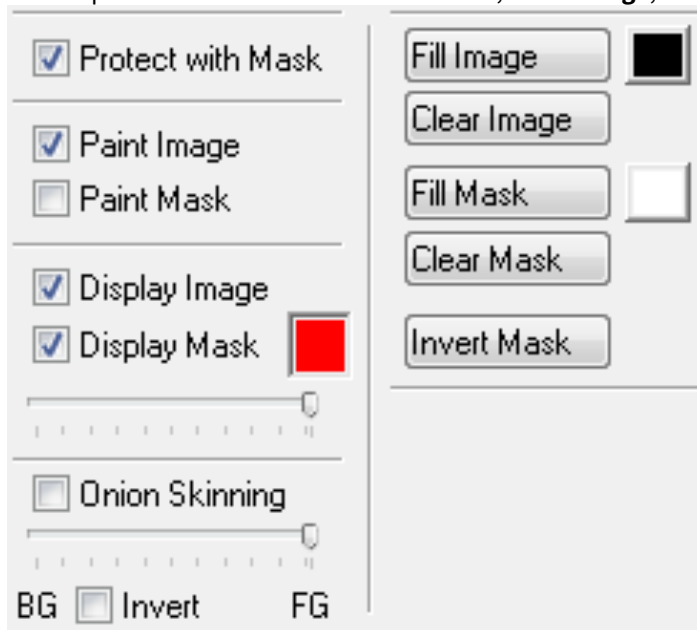
4. Paint the image as required; for example, use the **Clone** brush to paint over the shadow on the leaf by copying texture from the other side of the leaf:

5. Deselect **Display Mask** to show the final result:

9.1.4 Creating and Editing Brushes
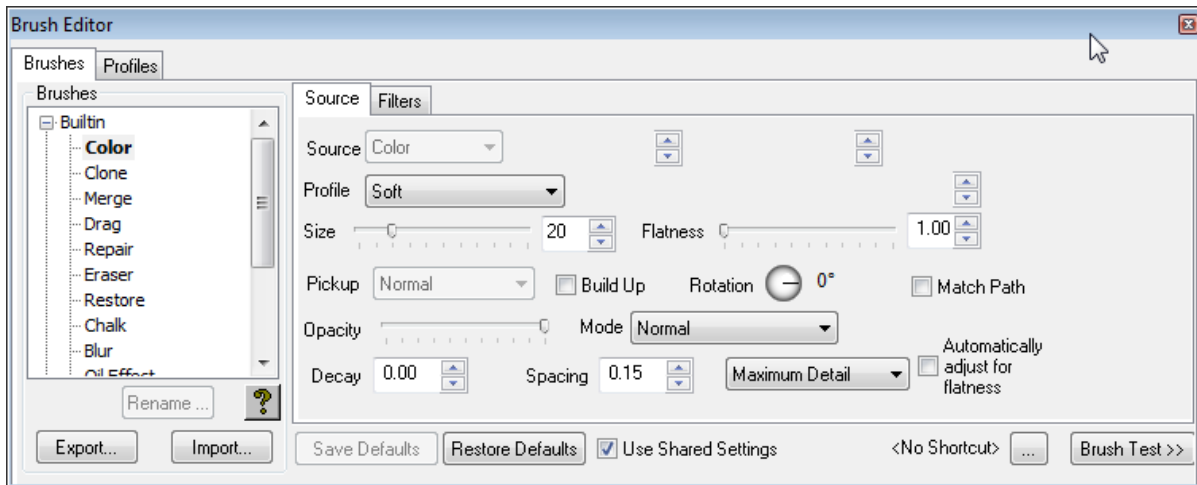
Viz World Classic is supplied with a range of pre-defined brushes. You can edit some aspects of these brushes, or you can create your own completely editable brushes using the **Brush Editor**.

A Brush Test window allows you to try out the effect of the brush you are designing as you edit its parameters.

How Brushes Work

Brushes work by performing the sequence of operations: **Pickup > Filter > Stamp**. These steps can be customized to determine the precise behavior of the brush, and are explained in greater detail in the following sections:

Pickup

The brush picks up paint from the specified source, which can be the current color defined in the **Color Chooser**, the image or background, or an image cutout. When picking up paint from the image or background, an offset can be added to the current brush position to clone one part of the image to another part. The paint is picked up through the selected profile, which determines the size of the brush, and the softness of its edges.

Filter

The paint is optionally filtered by a specified filter, such as to add noise or soften the image.

Stamp

The paint is stamped onto the image according to the decay and spacing parameters. If Protect with mask is selected, painting takes into account the density of the mask.

To Display the Brush Editor

Either:

- On the **Tools** menu, click **Brush Editor**.

Or:

- Click the **Editor...** button on the **Brushes** panel.

The **Brushes** list shows a list of the currently loaded brushes. Selecting any brush in the list shows its definition on the **Source**, **Profiles**, and **Filters** panels and allows you to edit it.

To Create a New Brush

1. Select the brush in the **Brushes** list that you want to base the new brush on.
2. Click the **+** button.

The new brush appears under the **User** heading and by default has **Copy** appended to its name, but you can rename it using the **Rename...** button below the **Brushes** list.

To Assign a Keyboard Shortcut to a Brush

You can assign up to ten keyboard shortcuts to the brushes you use most frequently so that you can select them with a single keypress.

1. On the **View** menu, click **Options...**.
2. In the **Options** dialog box select **Shortcuts** in the **Keyboard** section.
3. In the Paint section of the **Keyboard Shortcuts** list, select one of the entries labelled **Brush Named**, enter the name of the brush in the Brush field, and enter the keyboard shortcut you want to use or click the **Type Key...** button and press the key combination on the keyboard:
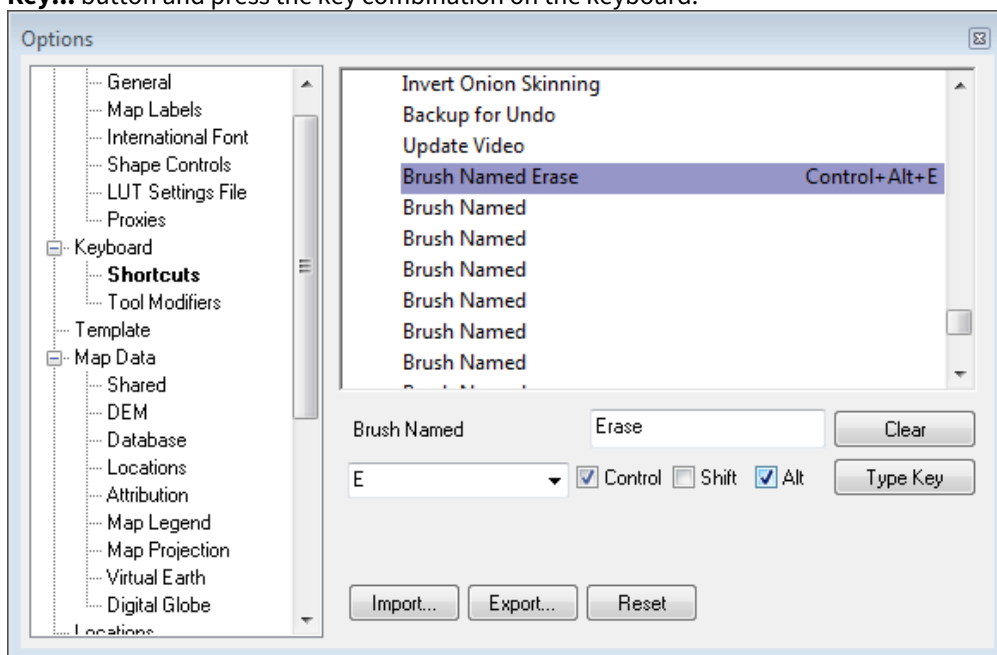
If you assigned a keyboard shortcut to a brush it is displayed on the bottom line of the **Brush Editor** window.

To Test a Brush

While you are editing a brush in the **Brush Editor** you can test it in the Viewer, or in the Brush Test window. To display the Brush Test window, click the **Brush Test** button in the bottom right corner of the **Brush Editor**.

The Brush Test window displays. This includes a palette editor, to allow you to change the color of the brush, and controls to clear or change the image displayed in the brush test window:
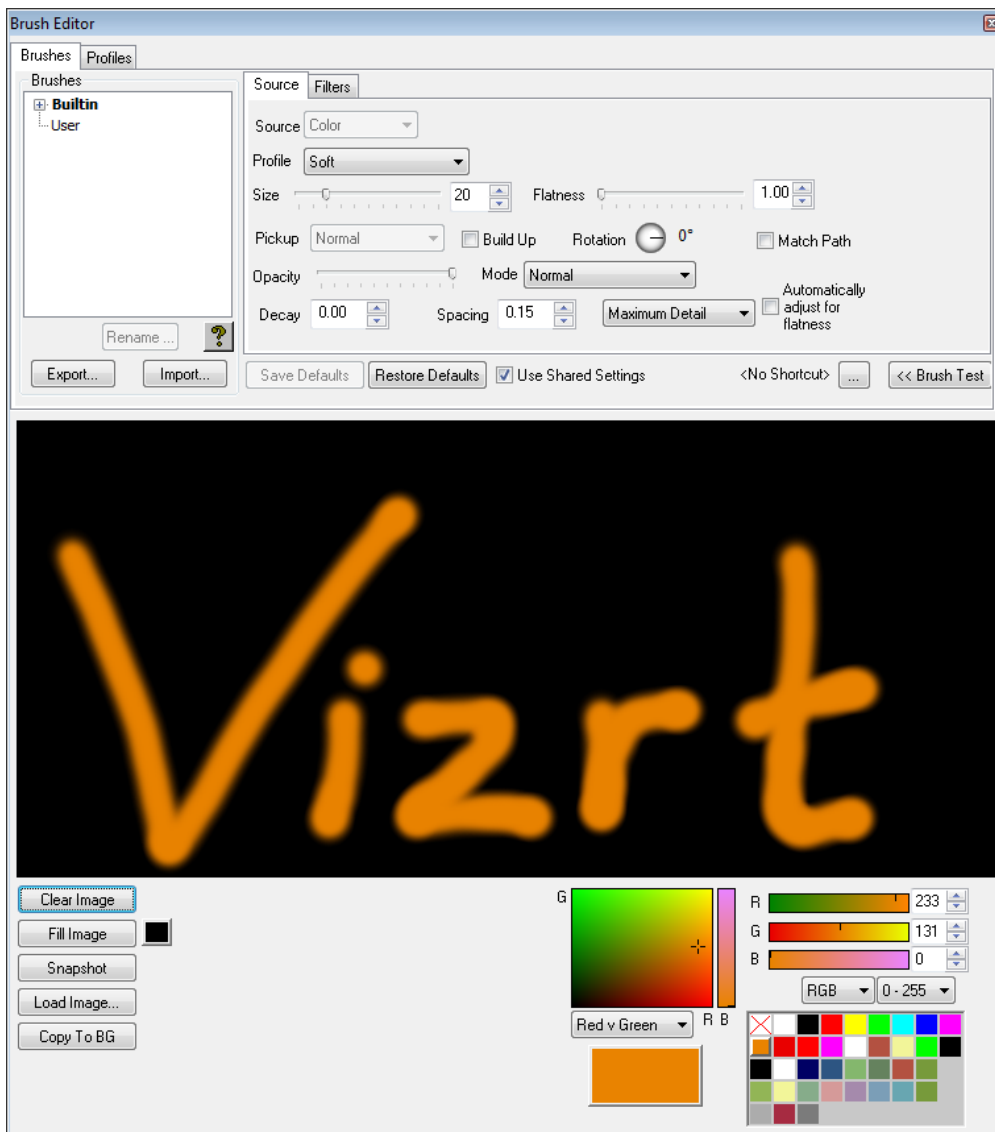
To hide the brush test window: Click the **Brush Test** button again.

To Save a Brush

1. Click the **Export...** button below the **Brushes** list. The following dialog box allows you to browse a place to export the brush file to and name the brush file:
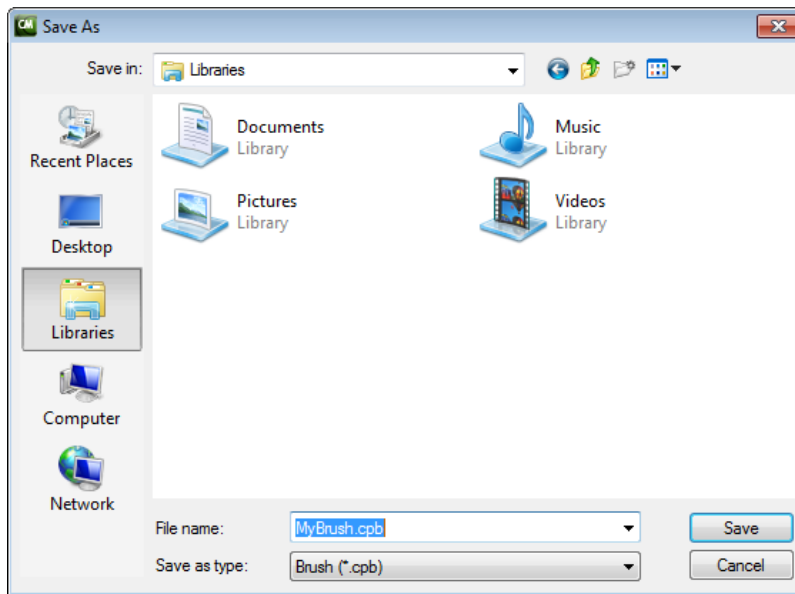
2. Enter a suitable name for it and click the **Save** button.

To Load a Brush

1. Click the **Import...** button below the **Brushes** list. The following dialog box allows you to select the brush file to import:
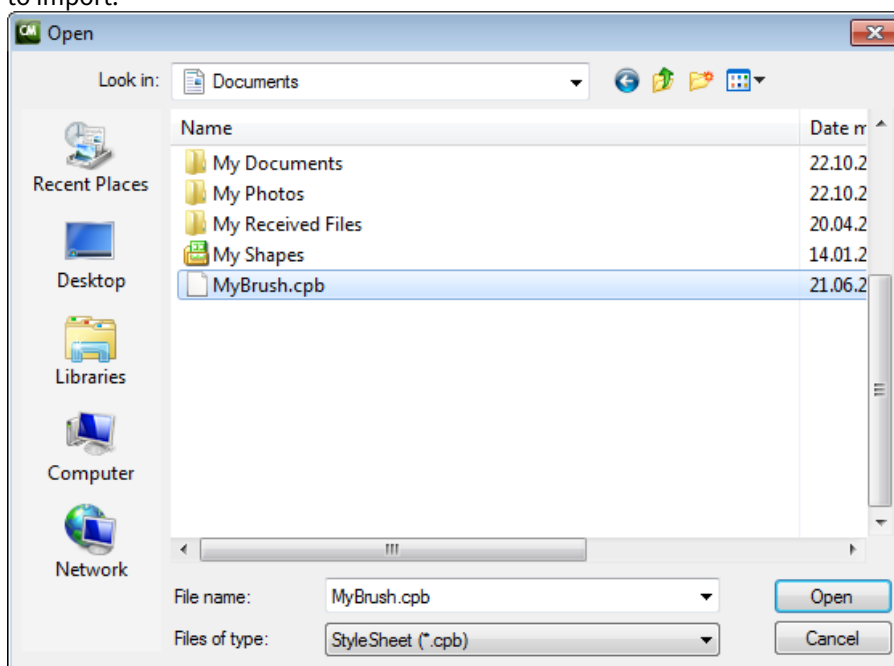
2. Select the brush file and click the **Open** button. The brush is added to the list of brushes in the **Brushes** list.

9.1.5 Defining the Brush Source
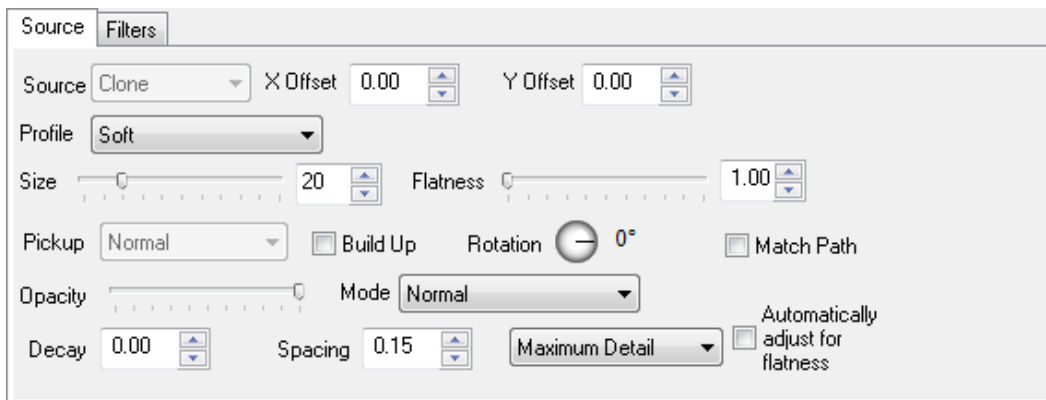
The options on the **Source** panel in the **Brush Editor** allow you to define the source of color for the brush, and associated options.

To Define the Paint Source

Specify the source for the paint by choosing an option from the **Source** pop-up menu. The options are explained in the following table:

- **Color:** The brush paints in the currently selected color.
- **Clone:** The brush takes the color from the image being painted. Useful in conjunction with an offset for cloning one part of the image to another part.
- **Background:** The brush takes color from the composite background (Composite mode), or specified background layer (Single layer mode). Useful for copying from one image onto another image.
- **Image File:** The brush paints with an image loaded from disk. Useful for painting with copies of a small image (for example, leaves).
- **Image Center:** Colors the whole brush with the color at the center of the stamp.
- **Eraser:** Makes pixels transparent by painting on the alpha channel.
- **Image:** Takes color from the image.

The **Image** and **Background Source** options allow you to define an offset in the X Offset and Y Offset fields. This allows you to pick paint up from one position on the image or background and paint it in another position.

To Define the Brush Profile

Choose an option from the Profile pop-up menu. The profile determines how the paint fades away from the center of the brush to the edge of the brush, as defined by the **Size** parameter. You can define new profiles using the **Profiles** tab of the **Brush Editor**.

To Specify the Image Pickup

You can specify how the image is picked up by the brush using the **Pickup** options:

- **Normal:** The image is picked up before each stamp.
- **Once:** The brush is loaded once on the first stamp.

- **After Stamp:** The image is picked up after the previous stamp.

To Define the Opacity and Decay

The **Opacity** and **Decay** define the density of the paint stamped by the brush, and the rate at which it decays as you drag. A **Decay** of `0` gives a brush that never dries out; larger values dry out faster.

To Define the Mode

The **Mode** pop-up menu allows you to specify how the paint is combined with the image; it provides the same options as the **Blend Mode** compositing option for layers.

To Define the Spacing

The **Spacing** determines the spacing between brush stamps as a percentage of stamp size. A large **Spacing** gives visible gaps between stamps. A small **Spacing** gives a smooth stroke.

Choose **Fixed** from the pop-up menu to make the spacing independent of your stroke speed, **Constant Density** to increase the spacing as you drag faster, and **Maximum Detail** to ignore the spacing and paint with full detail.

To Paint with an Image

Any image file, preferably with an alpha channel, can be used as a brush; for example:

1. Choose **Image File** from the Source context menu.
2. Click the **Browse...** button and select the image file you want to use.
3. Select **Match Path** to automatically rotate the image to match the angle of your stroke.
4. Set the **Spacing** to an appropriate value to determine the distance between stamps. Choose **Fixed** for a fixed spacing irrespective of your speed of stroke:
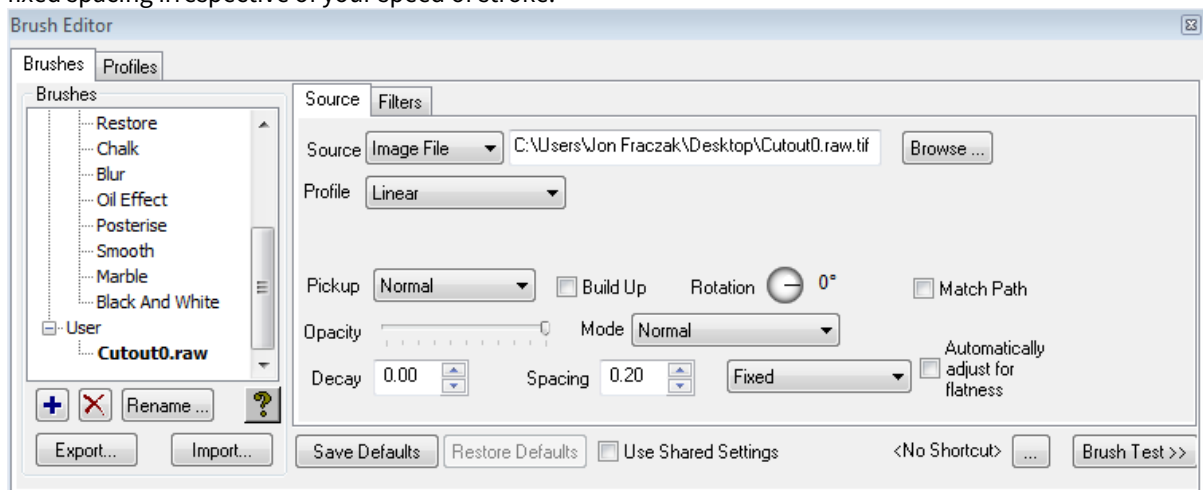
5. Drag the brush to paint with the image you have loaded:
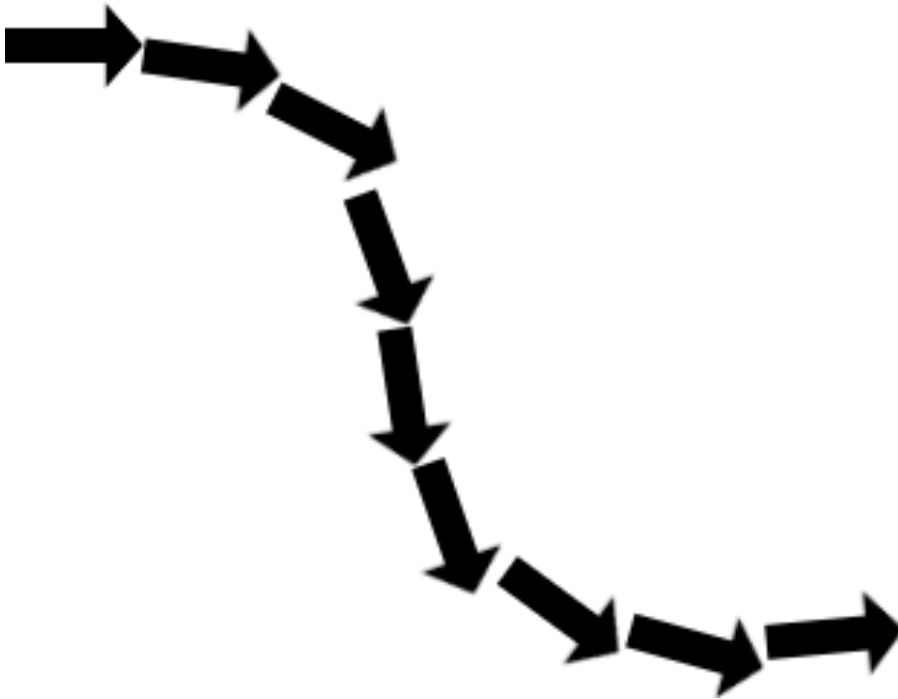
6. Use the Jitter filter to add variations to each stamp.

To Load a Cutout for Use as a Brush or Profile

You can use a cutout as a brush; this works in exactly the same way as painting with an image.

Alternatively you can use a cutout as the profile for painting; the cutout defines the outline of the brush.

1. On the **Cutouts** panel click the **Layout** tab to display the **Layout** panel.
2. Select the cutout you want to use in the **Overlay** list. For more information about creating a cutout see Working with Cutouts.
3. Click the **Use for Brush** or **Use for Profile** button:
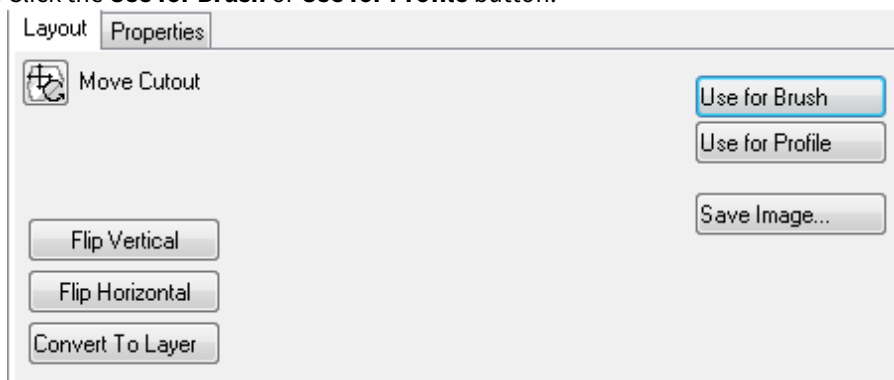
Use for Brush saves the cutout as a TIFF image which you can load in using the **Image File** option in the **Brush Editor**.

Use for Profile saves the alpha channel of the cutout as an image file which you can load in using the **Create from Image** button in the Profiles panel of the **Brush Editor**.

9.1.6   Defining Brush Filter Effects

The options on the **Filters** panel allow you to create brushes that selectively color correct, filter, or add an effect to the image as you paint:
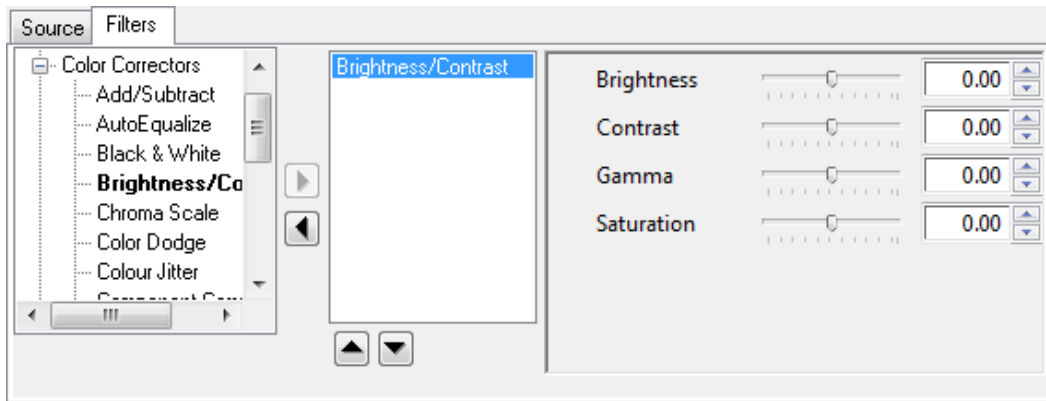
The filters are divided into the following categories:

- **Blurs:** Soften or blur the image.
- **Color Correctors:** Allow you to do local color correction to parts of an image.
- **Distort:** Apply marble, jitter, or turbulence effects to the image.
- **Effects:** Provide image effects, including noise and emboss.
- **Filters:** Process the image according to the values of the pixels.
- **Multiple:** effects are applied in the order they are specified in the list. To change the order:
- Select an effect, and click the **Up** or **Down** arrow buttons to change its position in the list.

To Create a Brush That Applies a Filter

1. On the **Source** panel, set the **Source** to **Image**, the **X Offset** and **Y Offset** to 0 and the **Pickup** to **Normal**.
2. On the **Filters** panel, add the effects you want to include in the brush, and for each effect set the parameters.
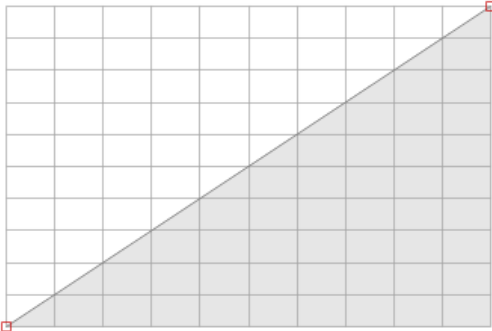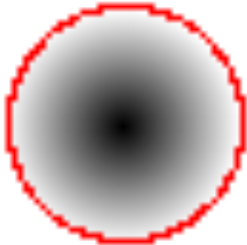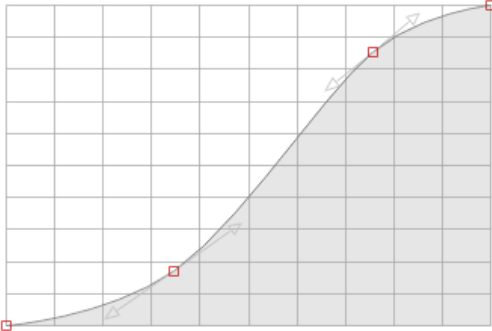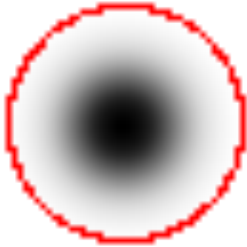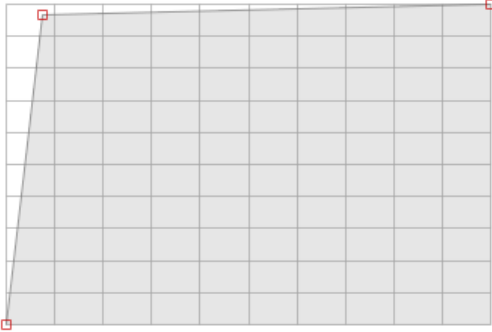
9.1.7   Defining Brush Profiles
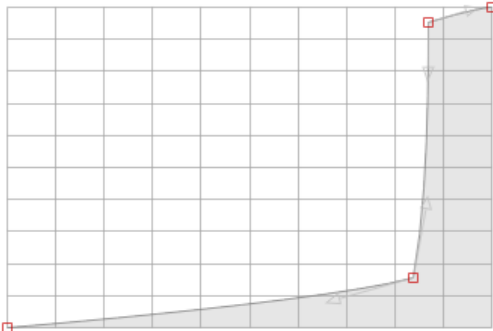
The **Brush Editor Profiles** panel allows you to define a number of preset profiles, and then select these when you are using or defining a brush:

The profile determines how the paint dies away from the center of the brush to the edge of the brush, as defined by the brush size parameter.

The horizontal axis defines the radius of the brush (center on the right), and the vertical axis is the opacity of the brush stamp.

The following table shows some sample profiles together with the corresponding spread of paint they create:

Description	Profile	Effect
Linear		
Soft		
Solid		

Description	Profile	Effect
Neon		

The **Create from Image...** button allows you to load in an image and use its alpha channel as the profile.

You can also create a profile from a cutout; for more information see Moving and Transforming Cutouts.

To Create a New Profile

1. Click the **+** button below the **Profiles** list.
2. Edit the profile curve as required.

The profile you have defined is displayed in the Profile list on the Brushes panel, and the Profile pop-up menu on the Brush Editor Source panel.

To Adjust the Profile Graph

1. Drag the point from the profile curve.
2. Click on the curve to add a new point to the curve.
3. Hold down **CTRL** and drag to extend tangent handles from a point on the curve.
4. Hold down **CTRL** to adjust one tangent handle independently of the other one.

To Rename a Profile

1. Select the profile in the **Profiles** list.
2. Click the **Rename...** button.

9.1.8   Managing Painted Materials

Working on a project often involves importing a number of images or movies and then making changes to the images, or to one or more frames in the movies, before rendering out a composite of the resulting project.

Changes you make to images or movies never affect the original source materials. Instead, a copy of every image is saved, and every modified movie frame, in a painted materials folder on your hard disk. Actions that cause painted materials to be saved include: painting on an image or its mask using the tools on the **Brushes** panel, drawing shapes using the tools on the **Graphics** panel, sticking shapes, text, or cutouts from the **Overlay** list, and applying image effects from the **Image** panel.

You can conform an image or movie layer, or its mask, to incorporate all the changes painted onto that layer and create a new image or movie that reflects those changes. You can then incorporate the conformed image or movie, or the mask, into another project without requiring the saved painted materials.

You can also export, as an image sequence, just those frames of a layer that have been painted on. By default painted materials are stored in a **PaintedMaterial** folder, but you can change this to any desired location.

To Conform an Image or Movie Layer

Viz World Classic never changes original files on disk as they are painted. You can conform a layer to produce a new complete movie or sequence incorporating all the painted frames. The layer is then updated to use the conformed material.

1. Select the layer you want to conform.
2. On the **Layer** menu, click **Conform Layer...**. A warning confirms the **Conform Layer...** action.
3. Click the **OK** button to continue. The **Conform Layer** dialog box then allows you to give a name to the movie and specify the format:
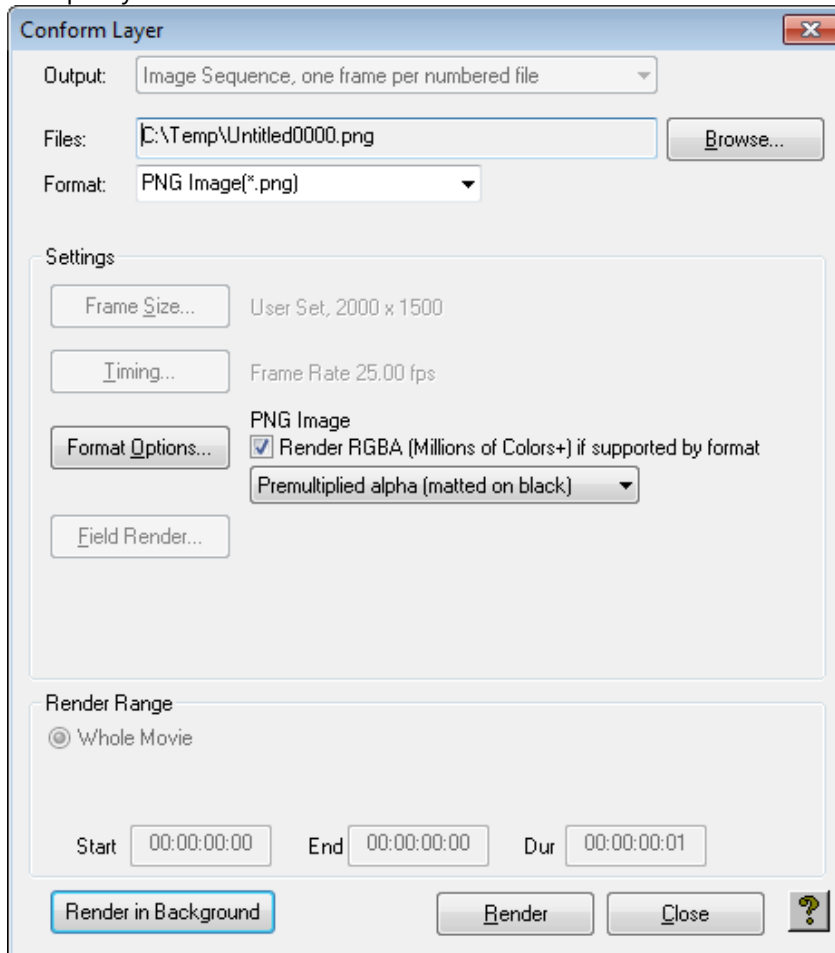
4. Check Render **RGBA (Millions of Colors+) if supported by format** to include the alpha channel in the conformed layer.
5. Click the **Render** button to render the layer.

The movie layer is updated to use the new conformed movie, eliminating the need for the painted materials.

To Conform a Mask

You can also conform the paint mask of an image or movie layer to create a movie or sequence on disk containing the paint masks for the layer. The mask is output at the size of the original material for the layer, without transformations or filters applied to the layer.

1. Select the layer whose paint mask you want to conform.
2. On the Layer menu, click **Conform Mask...**.

A warning confirms the Conform Mask... action.

1. Click the **OK** button to continue.
2. Proceed as described for conforming a layer.

To Export the Painted Frames from a Layer or Mask

1. On the Layer menu, click **Export Painted Frames...** or **Export Painted Masks...**.
   The **Export Painted Frames** dialog box then allows you to specify the filename for the image sequence, and the file format:
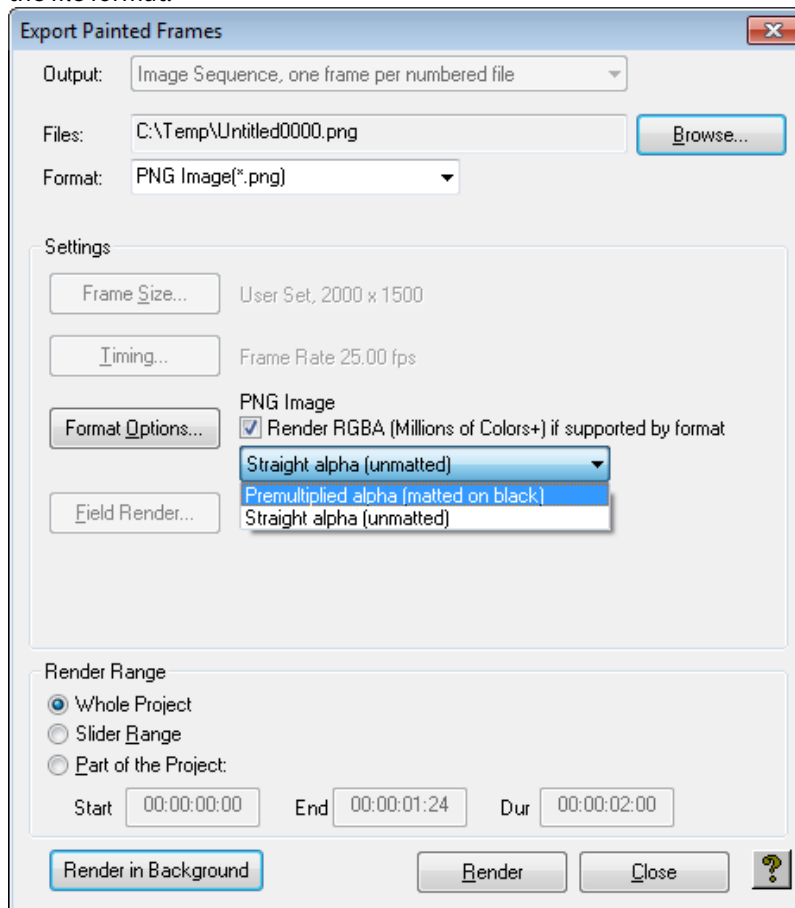
2. In the **Render Range** section specify the range of the project that you want to render.
3. Click the **Render** button to continue.

An image is created for each of the painted frames, numbered with the frame number.

To Specify the Location of the Painted Material

1. On the View menu, click **Options…**.
2. In the **Preferences** dialog box select **Material** in the **Paint** section.

This allows you to change the location of the **PaintedMaterial** folder, and allows you to display the **Painted Material Manager** by clicking the **Manage painted Material…** button:
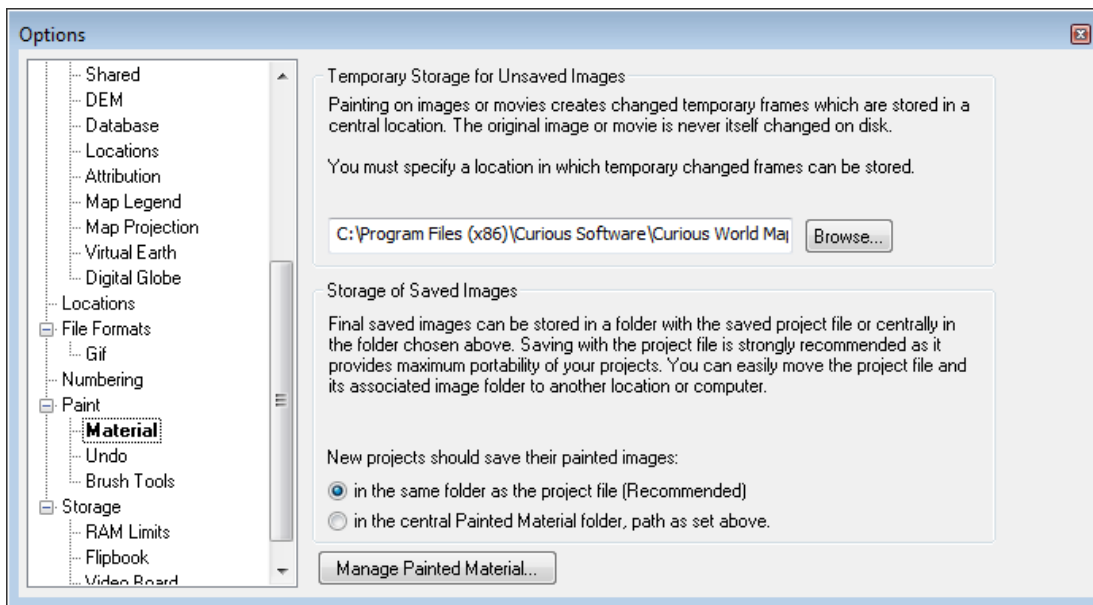
To Display the Painted Materials

The **Painted Material Manager** displays all the material saved for the different projects you have worked on, and allows you to delete material you no longer need. It also allows you to rescue material, in the event that the original project has been accidentally deleted. On the **View** menu, click **Paint Material Management…**. The **Projects** list displays a list of the projects with saved painted material.

To Display the Materials for a Project

Select the project name in the **Projects** list. The **Painted Material Manager** shows the full path name of the project file, together with a list of the painted materials used by the project. Material that is no longer referenced by a layer in the project is drawn in red to indicate that it is in the trash.

To Delete Specific Material

Select the material in the **Painted material** list and click the **Delete Selected** button.

To Rescue Material from a Lost Project

If a project file is lost, the material it referenced is not available until it has been copied into a new project. Select the material in the **Painted material** list and click the **Rescue Selected** button. The original source material and any painted frames are copied into the current project.

To Remove Material from a Project That Is No Longer Referenced by a Layer

Click the **Empty Trash** button.

To Delete All the Material in a Project

Click the **Delete All** button. You are not allowed to delete material in use by the current project.

> ⊗ **Warning:** Do not delete materials in any project you still need, or you are not able to load the project in its last saved version.

9.2   Adding Graphics to Images
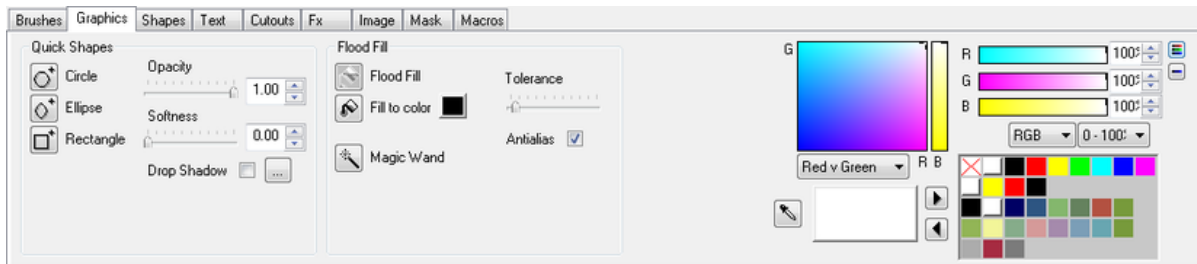
The **Graphics** panel allows you to draw simple geometric shapes directly onto an image, or a frame of a movie. These tools provide a convenient way of creating a solid area of color in an image or a simple mask, where you do not need the flexibility and editability provided by the options on the **Shapes** panel.

Like the tools on the **Brushes** panel, the tools on the **Graphics** panel affect the image immediately, without needing to be stuck to the image. If you want to create editable shape overlays use the options on the **Shapes** panel instead.

9.2.1   To Draw a Quick Shape

1. Use the paint controls to specify whether the shape is drawn into the image and/or mask, and whether it is protected by the mask.
2. Use the **Color Chooser** to specify the shape color.
3. Select the **Circle**, **Ellipse**, or **Rectangle** tool in the **Quick Shapes** section:
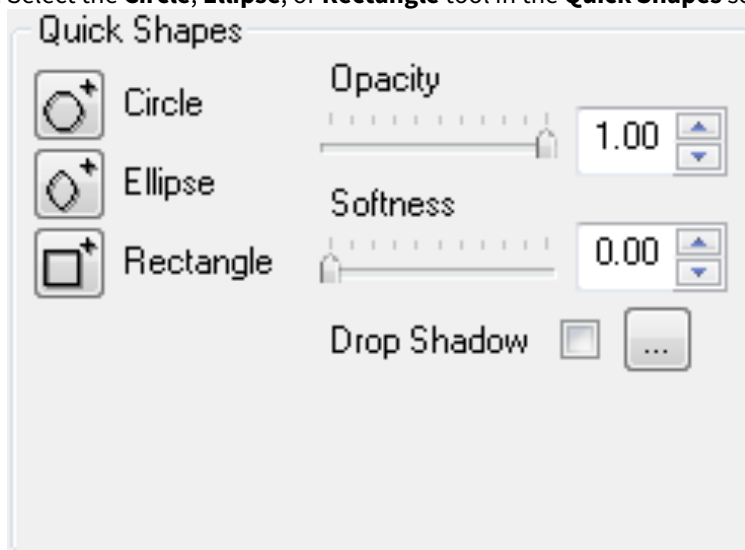
4. Drag to draw the shape. You can hold down **CTRL** to constrain the shape to a circle or square respectively.
5. Release the mouse button to draw the shape.

9.2.2   To Define the Drop Shadow

1. Click the **ellipsis** (...) button to the right of the **Drop Shadow** checkbox. The following dialog box allows you to define the drop shadow:
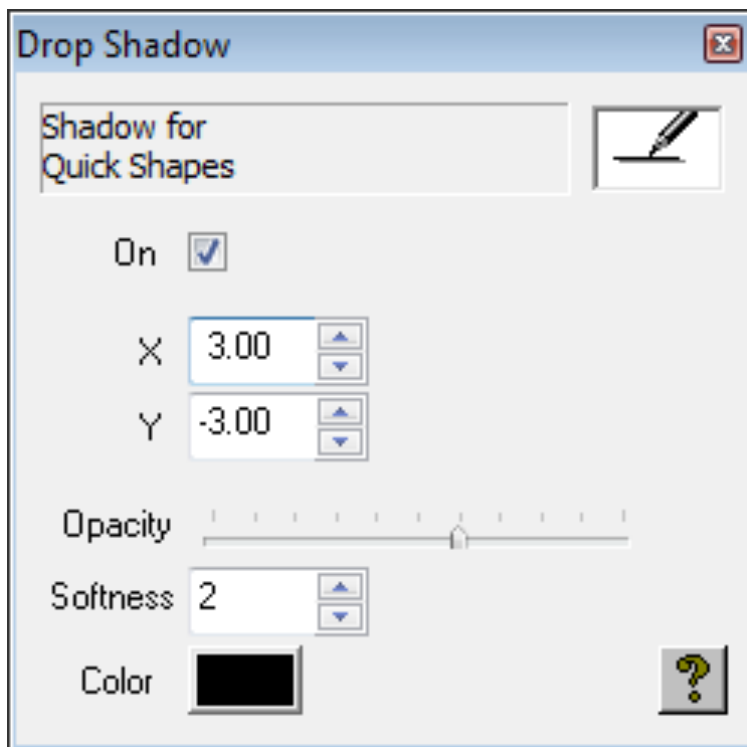
> ⚠️ **Note:** This only affects shapes you subsequently draw.

9.2.3　To Flood Fill Areas of the Image or Mask

The **Flood Fill** tools allow you to fill a contiguous area of pixels with the current color:

1. Use the **Color Chooser** to specify the color to fill with.
   The tools are described as follows:
   - **Flood Fill:** Flood fills areas of uniform color in the image.
   - **Fill to Color:** Flood fills the image up to the color specified by the Fill to Color box.

- **Magic Wand:** Flood fills the paint mask based on areas of uniform color in the image.
2. After selecting the appropriate tool: click on a color to start filling from that color.
3. Move the **Tolerance** slider to the right to flood a larger range of colors around the color you first clicked on.
4. Select **Antialias** to blur the edges of the filled area.

With the **Magic Wand** tool you can click additional areas to add to the mask, or click with **SHIFT** to remove areas from the mask. The **Magic Wand** tool is particularly useful for making cutouts; see Creating Cutouts.

Transforming Images
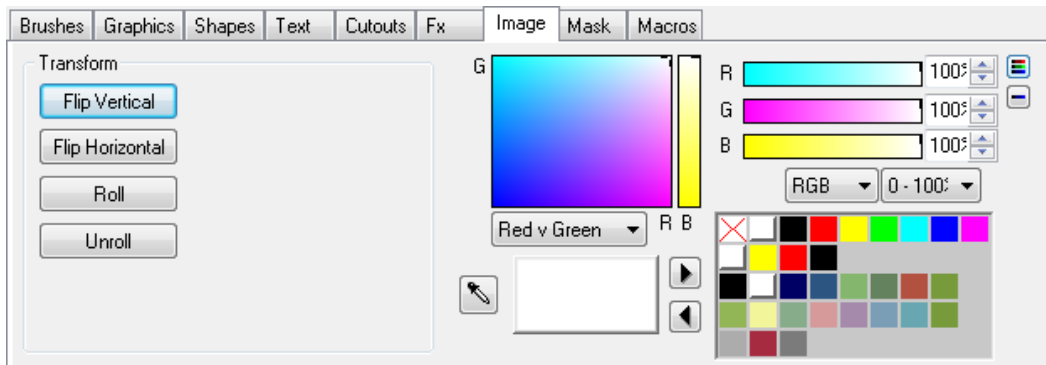
The options on the **Image** panel on the **Paint panel** allow you to transform an image or movie. The **Roll** operation is designed to assist in creating textures that tile seamlessly.

To Flip the Image about a Vertical or Horizontal Axis

Click the **Flip Vertical** or **Flip Horizontal** button.

To Create a Seamlessly Tiling Image

The following example shows how to create a seamlessly tiling texture from an image.

1. Load the image into a new layer:

2. Click the **Roll** button. This exchanges opposite quadrants of the image:

3. Use the painting tools, such as **Blur** and **Clone**, to make the joins look invisible:

4. Click the **Roll** button again to create the image:

5. This image can then be used to tile seamlessly, without any visible joins:

9.3   Paint and Image Processing Tools
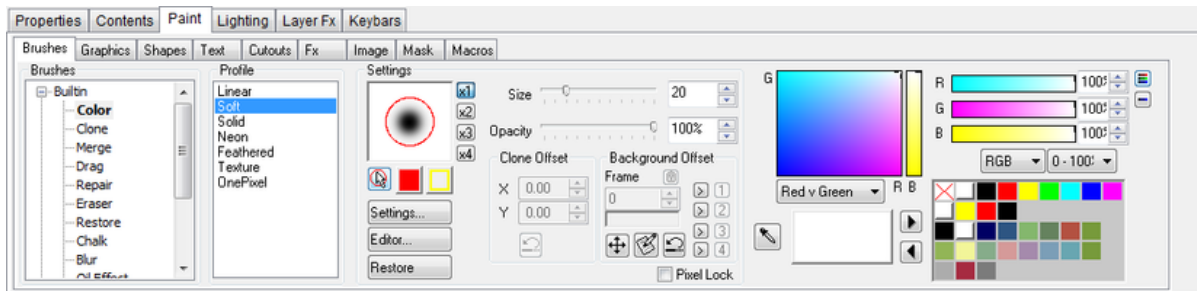
Viz World Classic provides a wide range of paint and image processing tools divided into eight categories.

The **Paint** panel provides a selection of options for each category of paint and image processing tools. You can select a category by clicking the icon to the left of the Viewer, or by clicking the corresponding tab on the Paint panel. The following table describes the functions available within each category of paint and image processing tools:

- **Brushes:** Provides a selection of brushes to allow you to paint directly onto an image or movie, or its mask.
- **Graphics:** Paints geometric shapes onto an image or movie, or its mask.
- **Shapes:** Adds drawings to the project by creating editable vector shapes.
- **Text:** Adds text to an image or movie, or to the mask.
- **Cutouts:** Cuts out part of an image to create a floating image overlay called a cutout.
- **Fx:** Provides a range of paint effects for color correction, filtering, keying, or procedural effects.
- **Image:** Provides image transformations.
- **Mask:** Provides a range of options for extracting a mask from an image based on the parameters of the image.
- **Macros:** Records a series of actions, and then replays them on several frames in a movie or in different projects.

This section contains information on the following topics:

- Paint Controls
- Overlays
- Undo and Restore Options for Painting

9.3.1   Paint Controls

The paint controls, displayed to the right of each of the Paint panels, allow you to specify how operations using the brushes, shapes, and text affect the current image and its mask:
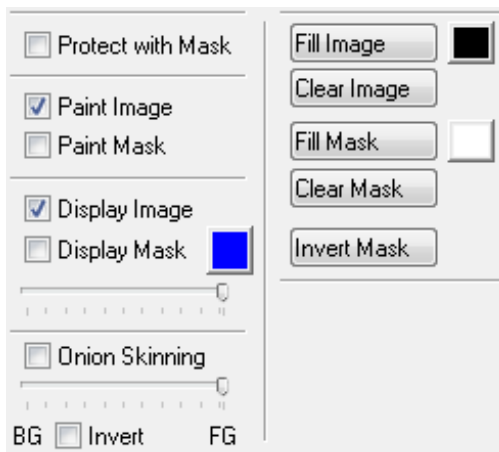
The mask can be used to protect the image from changes when painting on the image using the brushes or graphics tools, and sticking shapes or text on the image.

At any pixel where the mask is at full density, the image is not affected by any operation. At pixels where the mask is completely transparent, operations are applied in full. Intermediate values result in a blend between the original image color and the changes.

To Protect the Image with the Mask

Select Protect with mask.

To Specify What is Affected by Painting Operations

Painting operations can be applied either to the image or to the mask or to both simultaneously: Select Paint Image and/or Paint Mask to affect the image and/or mask respectively.

To Specify Whether the Image or Mask Are Displayed in the Viewer

1. Select Display Image and/or Display Mask to display the image and/or mask respectively.
2. Use the slider below the Display Mask checkbox to change the opacity of the mask displayed on the screen.

> ⚠️ **Note:** This only affects the screen display, not the actual density of the stored mask.

To Use Onion Skinning

The **Onion Skinning** control allows you to reduce the displayed opacity of the foreground image in the Viewer to allow you to see the background while working on the foreground. A typical use is in wire removal when merging portions of a background image to replace unwanted elements in the foreground.

- In **Composite** display mode, the background is the composite of the other layers.
- In the **Single Layer** display mode, you can specify which layer to use as the background: Click the **eye-dropper icon** in the **Layers list** to indicate which layer you want to use as a background.
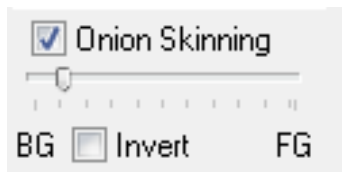
Selecting Invert allows you to invert the background, which is useful for highlighting the differences between two very similar frames.

> ⚠️ **Note:** This only affects the display, not the stored image.

To Fill or Clear the Image or Mask or Invert the Mask

The **Fill Image** and **Fill Mask** buttons allow you to fill the image or mask with a solid color. You can set the fill color by selecting a color and then clicking in the square to the right of the **Fill Image** or **Fill Mask** button.

The **Clear Image** and **Clear Mask** buttons clear the image or mask to transparent, and the **Invert Mask** button inverts the mask level at each point.

9.3.2   Overlays

The **Shapes**, **Text**, and **Cutouts** panels on the Paint panel allow you to create overlays as an intermediate step in constructing artwork. They are available to any of the image and movie layers in your project, and at any stage you can paint them onto an image or its mask; this is called *sticking* the overlays.
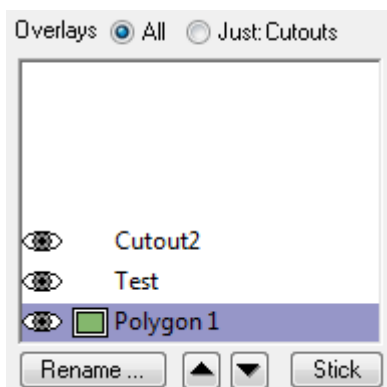
For more information about creating shape overlays see Working with Shapes.

To Show or Hide an Overlay

Click the eye icon to the left of the shape name in the **Overlay** list. The icon changes to show whether the shape is hidden:

- 👁 Shown
- 👁 Hidden

To Rename an Overlay

1. Click the **Rename…** button below the **Overlay** list.

2. Enter a name for the overlay and click the **OK** button:

Rename Overlay

Cutout

OK | Cancel
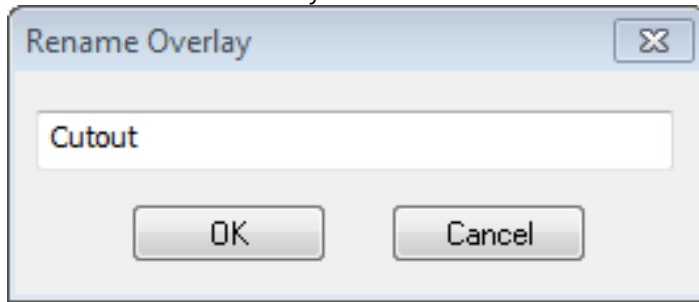
To Change the Order of Shapes in the Overlay List

Either:

1. Select the overlay you want to move.
2. Click the **up** or **down** button below the **Overlay** list.

Or:

- Click the overlay you want to move with the right mouse button and select one of the **Ordering** options from the appearing context menu.

Or:

- Drag the shape to the new position in the **Overlay** list.

To Delete an Overlay

Either:

- Select the overlay you want to delete and press the **BACKSPACE** button.

Or:

- Click the overlay you want to delete with the right mouse button and click **Remove** from the appearing context menu.

To Copy an Overlay

You can cut, copy, and paste Overlays between layers or between projects. You can also export one or more shapes, and then import them into another layer or another project, using the **Export...** and **Import...** options from the **Overlay** list's context menu.

9.3.3   Undo and Restore Options for Painting

Viz World Classic allows you to undo brush strokes while painting, and you can also restore the image or its mask to the last saved version or to the original frame.

To Restore the Image or Mask

On the **Layer** menu, click **Restore Image** or **Restore Mask**, then click **To Last Saved** or **To Original Frame** on the submenu.

To Select the Paint Undo Options

By default, Viz World Classic allows you to undo each brush stroke while painting, to a limited undo depth, to minimize the amount of work you need to redo in the case of a mistake. However this level of undo control is memory intensive, and may cause noticeable delays when painting complex images. Viz World Classic gives you the option of reducing the degree of undo control for greater performance.
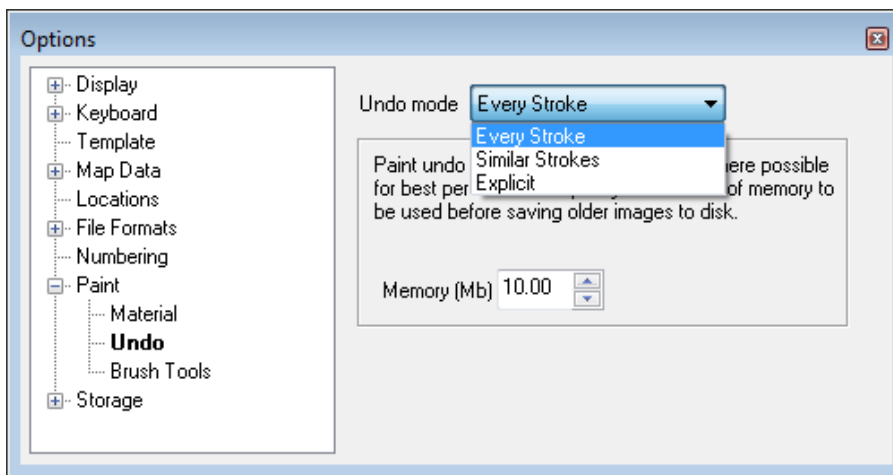
- On the **View** menu, click **Options...**.
- In the **Preferences** dialog box select **Undo** in the **Paint** section.

The **Undo** drop-down menu lets you specify the degree of undo control provided. The options are explained as follows:

- **Every Stroke:** Undo affects the previous painted stroke.
- **Similar Strokes:** Undo affects all strokes made with the same brush and color settings.
- **Explicit:** A **Backup for Undo** button appears in the paint controls, and Viz World Classic stores a snapshot of the painting each time you click it. Selecting **Undo** restores the previous snapshot.

The **Memory** setting allows you to allocate more memory to undo, which allows you to increase performance if you have sufficient memory available on your computer.

10   Adding Image Effects

Viz World Classic provides a wide range of image effects, including color correctors, filters, and procedural effects. You can apply effects to any layer using the options on the Layer Fx panel, and these effects can be animated. Alternatively, the Fx options on the Paint panel allow you to apply fixed paint effects to an image or movie layer.

This section contains information on the following topics:

- Adding Image Effects to a Layer
- Adding Paint Effects
- Image Effects

10.1   Adding Image Effects to a Layer
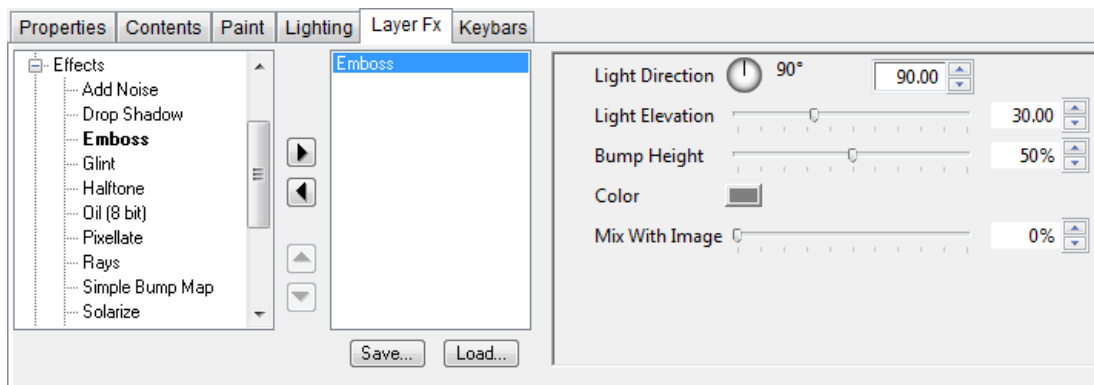
10.1.1   To Apply One or More Image Effects to a Layer

1. Select the layer.
2. Click the **Layer Fx** tab to display the **Layer Fx** panel for the layer. Every parameter of an effect can be animated. For more information see Using the Keybars Panel.

10.1.2   To Add an Effect to a Layer

1. Click the arrow symbol to the left of a heading in the effects list to expand the list, and show the effects under that heading.
2. Select the filter and click the **>** button to add it to the right-hand list of effects to be applied to the layer. Each effect displays a set of controls to allow you to adjust its parameters.

10.1.3   To Determine the Order in which the Effects Are Applied

The order of effects in the list determines the order in which they are applied. Select an effect in the right-hand list and click the **up** or **down** arrow buttons to move it up or down in the list.

10.2 Adding Paint Effects
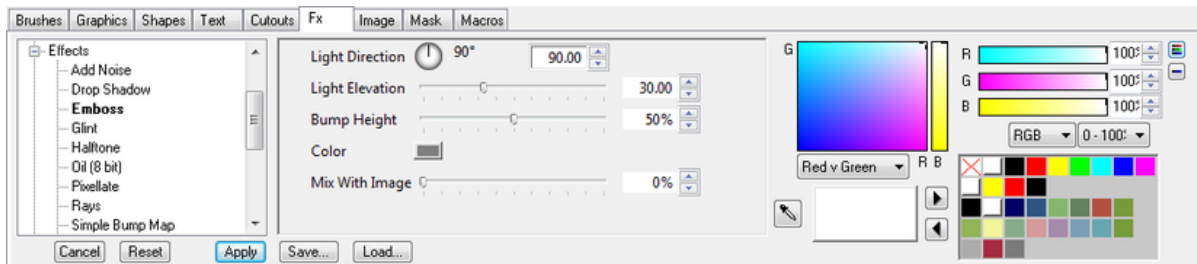
10.2.1 To Preview a Paint Effect

1. Click the **Fx** tab on the **Paint** panel to display the paint effects.
2. Select the effect in the list. Each paint effect displays a set of controls to allow you to adjust its parameters, and these are displayed to the right of the effects list.

The effect is previewed in the Viewer as you change the parameters.

10.2.2 To Apply the Paint Effect Permanently to the Image Layer

Click the **Apply** button. To apply one or more paint effects to every frame of a movie you can record a macro. See Automating with Macros.

10.2.3 To Restore the Image to its Previous State

Click the **Cancel** button.

10.2.4 To Reset the Paint Effect Parameters to their Default Settings

Click the **Reset** button.

10.3 Image Effects

The image effects are divided into the following sections:

10.3.1 Backgrounds

Provides options for creating textured and patterned background images such as gradients or clouds.

10.3.2 Blurs

Allows you to blur or soften an image.

10.3.3   Color Correctors

Provides controls for adjusting the color balance of the image, adding/subtracting colors, or correcting the image in any of the alternative color models.

10.3.4   Distort

Provides options for transforming or distorting an image.

10.3.5   Effects

Provides artistic effects including emboss, crystallize, motion blur, ripple, solarize, and stained glass.

10.3.6   Filters

Provides image effects such as edge detection, erode, and threshold.

10.3.7   Grain

Provides filters for removing or simulating film grain.

10.3.8   Sharpen

Provides options for sharpening images.

10.3.9   Transition

Provides wipes which can be animated to give a transition between two images or movies.

10.3.10   Video

Provides filters for broadcast video use.

10.3.11   Adobe After Effects Plug-ins

If you have Adobe After Effects-compatible plug-ins installed on your system, some of these can be used and are listed in the effects list.

For details on which plug-ins can be used with Viz World Classic please contact your local Vizrt representative.

11 Extracting Masks

This chapter describes the options in Viz World Classic for extracting a mask automatically from an image based on its colors. With certain images, where the foreground is very distinct from the background, this can provide an extremely quick way of creating a finished mask. With more difficult material it can often provide a useful starting point for painting a mask manually.

This section contains information on the following topics:

- Introduction
- Mask Extract Tools

11.1 Introduction
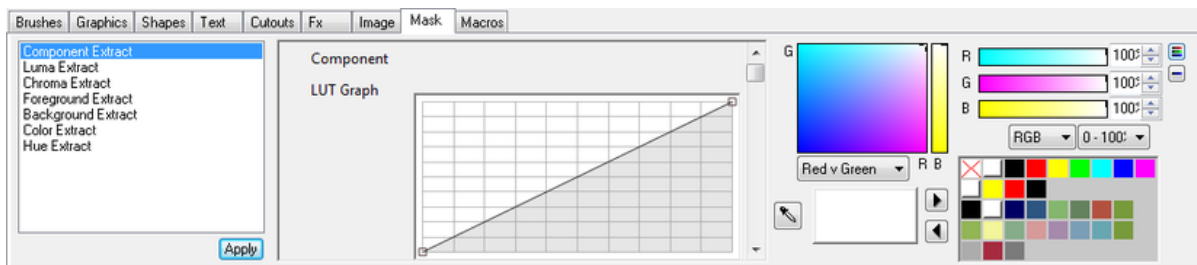
The mask extract tools are provided on the Mask panel on the Paint panel. Each tool includes its own set of controls to allow you to adjust its parameters, and these are displayed to the right of the mask extract tools list.

11.1.1 To Extract a Mask

The following image contains yellow poppies against a predominately blue background, and so is an ideal candidate for extracting a mask:

1. Select **Component Extract**, and choose **Yellow** from the **Component** drop-down menu to mask yellow areas of the image.
2. Adjust the LUT graph to achieve an optimum mask:
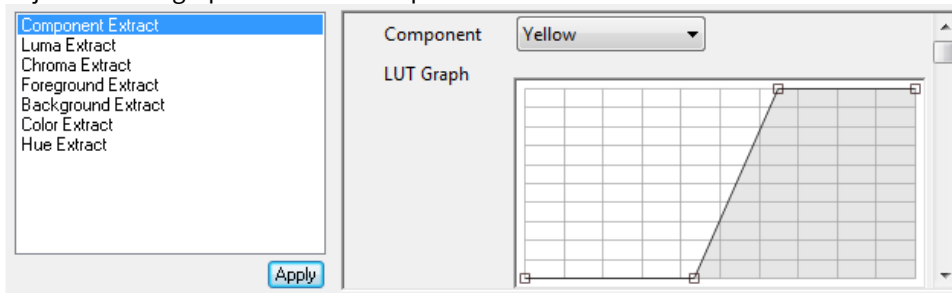
The masked areas are displayed in the mask color:

3. Click the **Apply** button to apply the mask permanently.

11.2   Mask Extract Tools

11.2.1   Component Extract

Extracts a mask based on the level of a specified component: Red, Green, Blue, Cyan, Magenta, Yellow, Alpha, or Max:
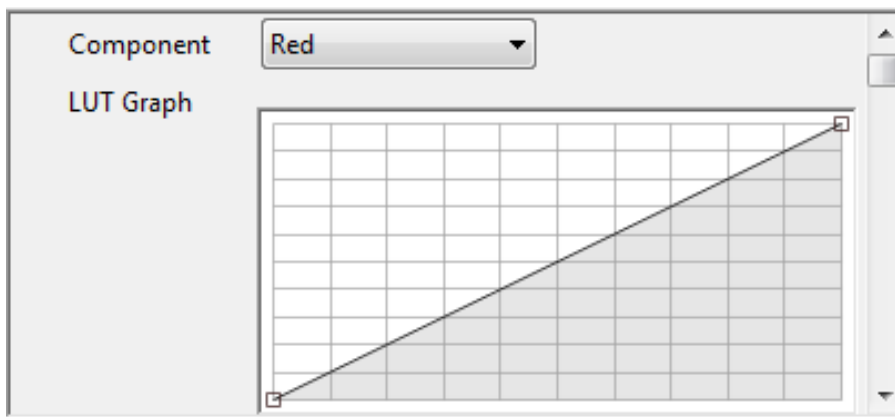
11.2.2   Luma Extract

Extracts a mask based on the luminance value of each pixel. The graph allows you to define the mapping between the luminance value and the output mask value.

11.2.3   Chroma Extract

Extracts a mask based on the minimum and maximum chroma levels.

11.2.4   Foreground Extract

Extracts a mask based on the predominance of the chosen component, red, green, or blue, in the foreground. The graph allows you to define the mapping between the raw values extracted and the output mask value.

11.2.5   Background Extract

Extracts a mask based on the predominance of the chosen component, red, green, or blue, in the background. The graph allows you to define the mapping between the raw values extracted and the output mask value.

11.2.6   Color Extract

Extracts a mask based on a specified color level.

11.2.7   Hue Extract

Extracts a mask based on the proximity of the color at each pixel to a specified source color:
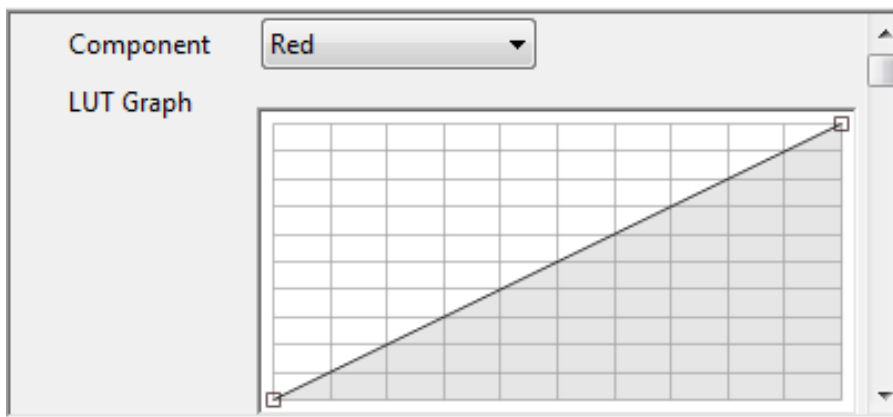
See Also

- Painting

12   Automating with Macros

Macros provide a convenient way of recording actions, such as painting or image processing, and then applying them to several frames of a movie. They also allow you to repeat the same sequence of actions in a series of different projects.

12.1   Using Macros
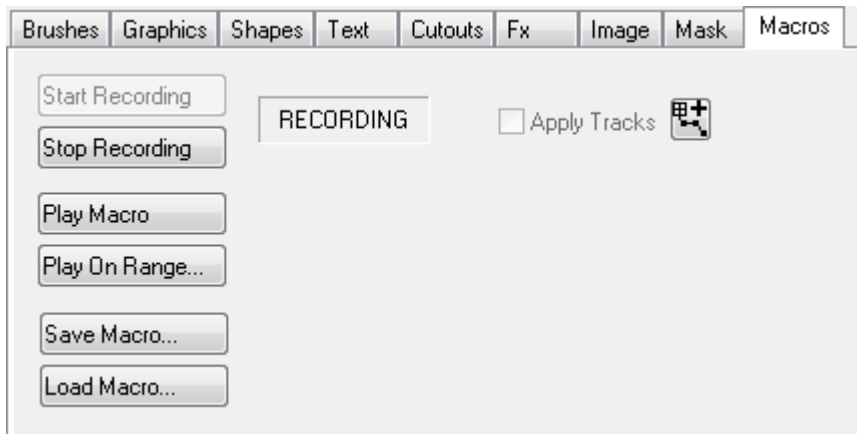
Macros allow you to record any of the painting or image manipulation actions, including painting with brushes, and then replay them on another image or each frame of a movie.

Features of the movie that should not be affected can first be masked using rotosplines.

12.2   To Record a Macro

The following example illustrates recording a macro, applying an image processing operation to one frame of the movie, and then replaying it on all frames.
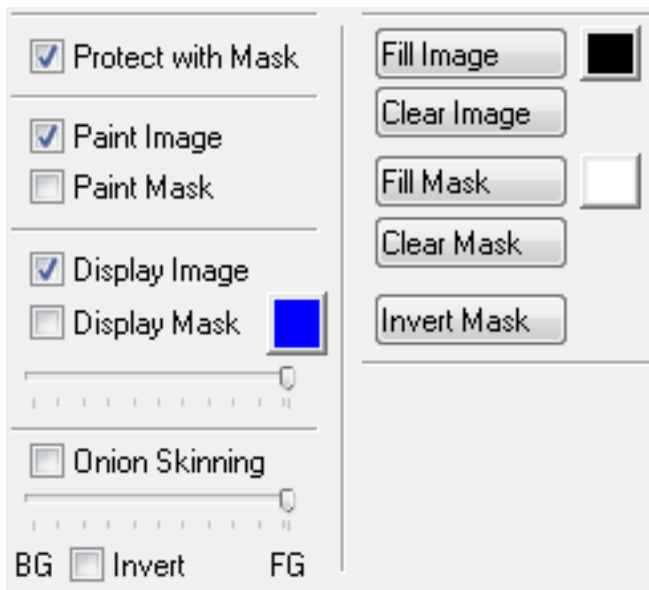
1. Select **Protect** with mask in the paint controls, to use the mask to protect the image.
2. On the **Macros** panel click the **Start Recording** button. The panel displays *RECORDING*.
3. On the **Image** panel select the image processing function, such as **Black and White**, and click the **Apply** button. The current frame will be converted to black and white outside the masked area:

4. On the **Macros** panel click the **Stop Recording** button.

12.3   To Replay a Macro

1. Click the **Play On Range...** button. The following dialog box allows you to specify which frames are affected:
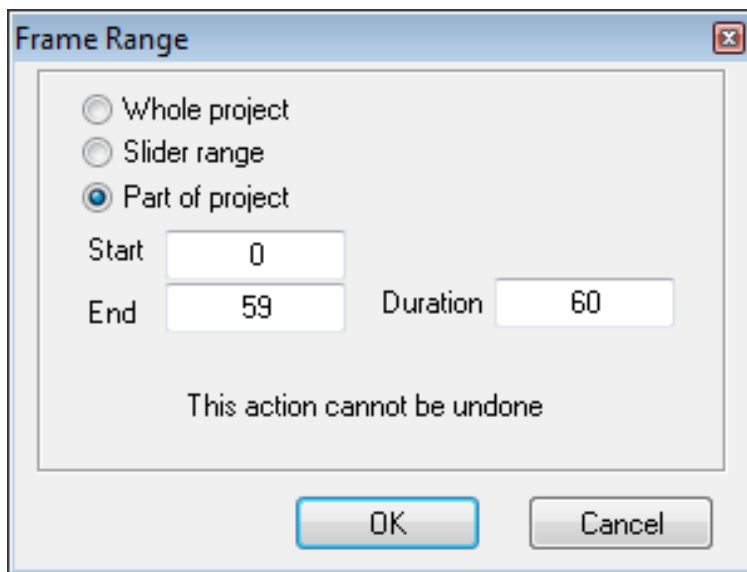
2. Select **Part of Project**, enter the range omitting the first frame, and click the **OK** button.

You can now preview the movie to confirm that the operation has succeeded. Any number of different paint and image processing operations can be recorded into a single macro.

12.4   To Save a Macro

After creating a macro you can save it, and then reload it for use in another project.

1. Click the **Save Macro...** button.
2. Enter an appropriate name and click the **Save** button.

12.5   To Load a Macro

1. Click the **Load Macro...** button.
2. Select the macro you want to load and click the **Open** button.
3. Click the **Play Macro** or **Play on Range...** button to replay the macro.

13 Working with Shapes

This section explains how to add drawings to your map by creating vector shapes, either using separate shape layers or by adding shape overlays to map layers. It explains how you can create and edit shapes, and change their appearance to achieve exactly the effect you want.

This section contains information on the following topics:

- Introduction to Shapes
- Creating Shapes on a Shape Layer
- Creating Shape Overlays
- Cutting and Pasting and Exporting and Importing Shapes
- Editing Shapes
- Editing Points
- Defining the Appearance of Shapes
- Animating Shapes
- Specifying How Shapes are Displayed
- Setting the Shape Layer Properties
- Adding Shape Overlays to a Map Layer
- Animating Shape Layers
- Shape Tools

13.1   Introduction to Shapes

Each shape consists of a number of points joined by straight lines or smooth curves. A range of shape tools is provided to enable you to draw shapes point by point, by drawing a freehand curve, or by drawing a precise rectangle or ellipse.

Each shape has a start point and an end point, displayed as circles; the intermediate points are displayed as squares. In a closed shape, the start and end points are joined:
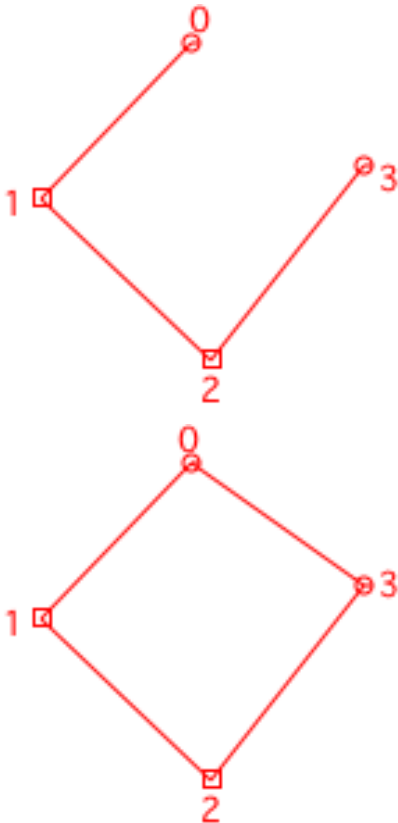
You can control the appearance of shapes by changing the border and fill colors, border thickness, opacity, and blur. Shapes can be edited or transformed after you have created them, and a series of tools are provided to allow you to move, edit, divide, or join shapes. You can also use a shape to cut a hole in the currently selected layer.

You can animate the entire drawing on the shape layer, the individual shapes in the drawing, and the individual points of each shape. So for example, a shape could be used to show the path of a hurricane, with the shape changing in size as it moves across the land.

13.1.1   Shape Layers

You can create shapes in one or more shape layers. Each shape layer can be animated as a single unit, pinned to a map layer, wrapped to the map, and scaled to the map. Typically you would create a new shape layer for each drawing consisting of several shapes. This makes it easy to transform the complete drawing as a unit, such as animating its position or fading it in by changing the opacity. Shapes can also be used to create holes in other shapes.

13.1.2   Shape Overlays in Map Layers

You can also add shape overlays to a map layer. Shape overlays are always wrapped to the map, and can be displayed in the same style as other map details. Shape overlays in map layers can be constructed by automatically tracing an existing map detail.

13.2 Creating Shapes on a Shape Layer
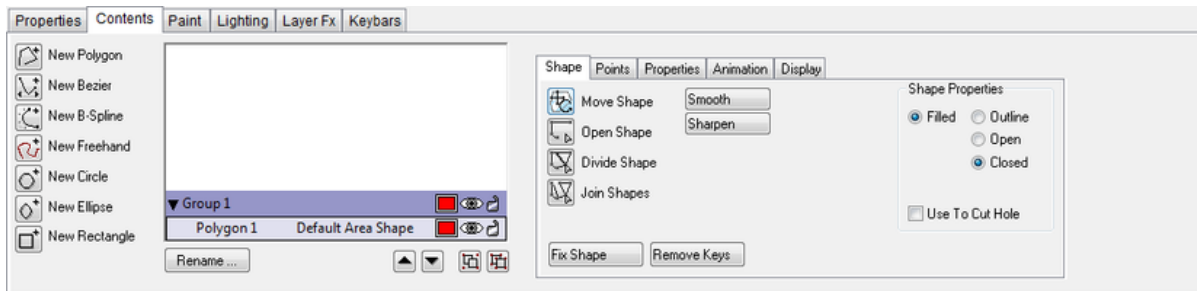
This section contains information on the following products:

- To Create Shapes on a Shape Layer
- To Show or Hide a Shape on a Shape Layer
- To Edit a Shape on a Shape Layer
- To Rename a Shape on a Shape Layer

13.2.1 To Create Shapes on a Shape Layer

1. On the **Layer** menu, point to **Add Layer**, and then click **Shape**. A new empty shape layer will be created at the top of the **Layers list**:

2. Click the **Contents** tab to display the shape tools. The **New Polygon** tool is selected to allow you to create a shape.
3. As you add shapes to the shape layer they will be shown in the **Shapes list** on the **Contents** panel for the layer.

13.2.2 To Show or Hide a Shape on a Shape Layer

 Click the eye icon to the left of the shape name in the Shapes list.

13.2.3 To Edit a Shape on a Shape Layer

1. Select the shape you want to edit in the **Shapes list**.
2. Use the options on the **Shape**, **Points**, **Properties**, **Animation**, and **Display** panels to edit the characteristics of the shape as required.

13.2.4 To Rename a Shape on a Shape Layer

1. Select the shape layer in the **Layers list.**
2. Click the **Rename...** button below the **Shapes list**.
3. Enter a name for the shape and click the **OK** button:
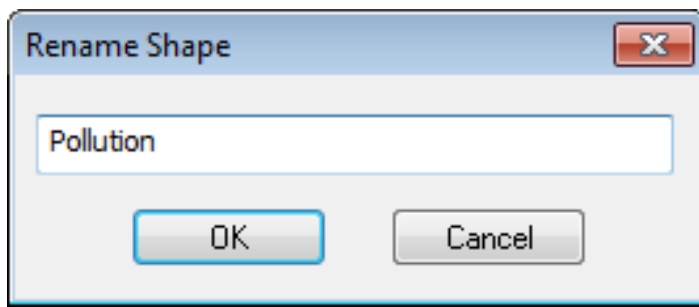
13.3 Creating Shape Overlays

This section contains information on the following products:

- To Create Shape Overlays
- To Rename a Shape
- To Change the Order of Shapes
- To Delete a Shape
- To Copy a Shape
- To Edit a Shape Overlay

13.3.1 To Create Shape Overlays

1. Select a map layer in the **Layers list**.
2. Click the **Overlays** tab on the **Contents panel** to display the shape tools. As you add shape overlays they are shown in the **Details list** on the **Contents panel**.

13.3.2 To Rename a Shape

1. Select a layer (not a shape layer) in the **Layers list.**
2. Select a shape from the **Details list.**
3. Click the **Properties** tab and edit the **Label** field.

13.3.3 To Change the Order of Shapes

Either:

1. Select the shape you want to move from the Details list.
2. Click the **UP** or **DOWN** arrow button below the Shapes list or Details list.

Or:

- Right-click the shape you want to move and click one of the **Ordering** options on the pop-up menu:

Or:
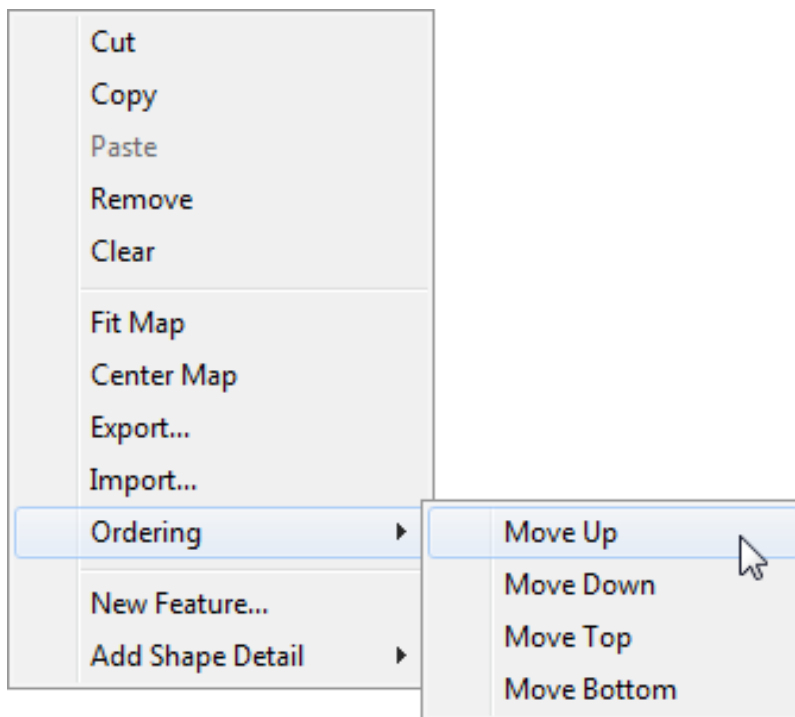
- Drag the shape to the new position in the **Details list.**

13.3.4   To Delete a Shape

Select the shape you want to delete and press the **BACKSPACE** key, or Right-click the shape you want to delete and click **Remove** from the appearing context menu.

13.3.5   To Copy a Shape

You can cut, copy, and paste shapes between layers or between projects using the Cut, Copy, and Paste options on the **Edit** menu or the **Shapes list** or **Details list** context menu. You can also export one or more shapes, and then import them into another layer or another project, using the **Export...** and **Import...** options on the **Shapes list** or **Details list** context menu.

13.3.6   To Edit a Shape Overlay

Select the shape you want to edit in the **Details** list and then use the options on the **Shape panel** to edit the characteristics of the shape as required.

13.4 Cutting and Pasting and Exporting and Importing Shapes

Several options are available to help you reuse shapes within a project, or between projects. You can cut, copy and paste shapes within a shape layer, between shape layers, or between shape layers and shape overlays, to make multiple copies of a shape or use one shape as the starting point for another shape.

You can also export shapes to a file and then import them into a different project, to reuse artwork you have created on a previous occasion.

13.4.1 To Cut or Copy a Shape

Either:

- Click the shape in the Shapes list or **Details** list with the right mouse button and select **Cut** or **Copy** from the appearing context menu.

Or:

1. Select the shape in the Shapes list or **Details** list.
2. On the **Edit** menu, click **Cut** or **Copy**.
    - **Cut** deletes the original and puts it onto the clipboard.
    - **Copy** makes a copy of the original on the clipboard leaving the original unaffected.

13.4.2 To Paste a Shape

1. Select the shape layer or image/movie layer on which you want to paste the copy.
2. On the **Edit** menu, click **Paste**.
    - If you pasted onto a shape layer the shape is added at the top of the Shapes list for the layer.
    - If you pasted onto an image or movie layer the shape is added to the top of the Shapes list or Details list for the layer.

13.4.3 To Export a Shape

1. Right-click to select the shape in the **Shapes** list or **Details** list and click **Export**... from the appearing context menu. The following dialog box allows you to give a name to the shape file:
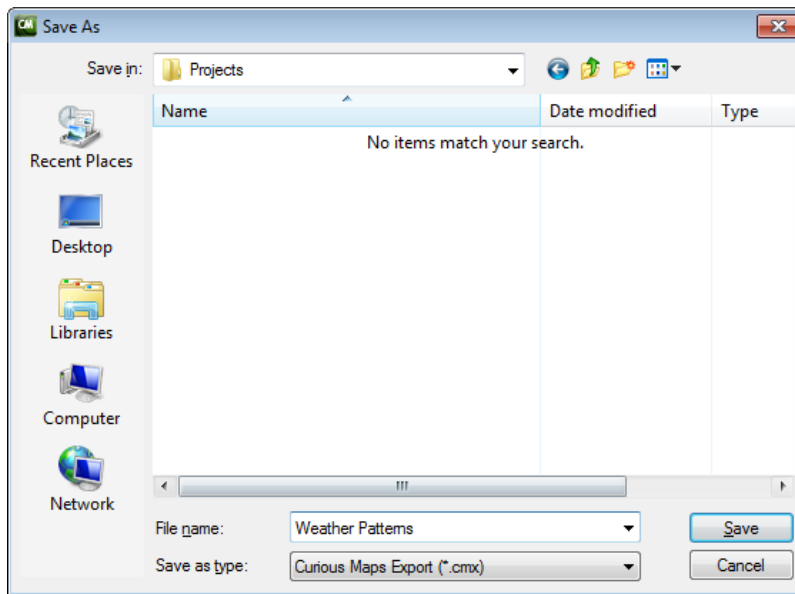
2. Enter an appropriate name and click the **Save** button to save the shape.

13.4.4   To Import a Shape

1. Right-click in the **Shapes** list or **Details** list and click **Import...** from the appearing context menu. The following dialog box allows you to select the shape you want to import:
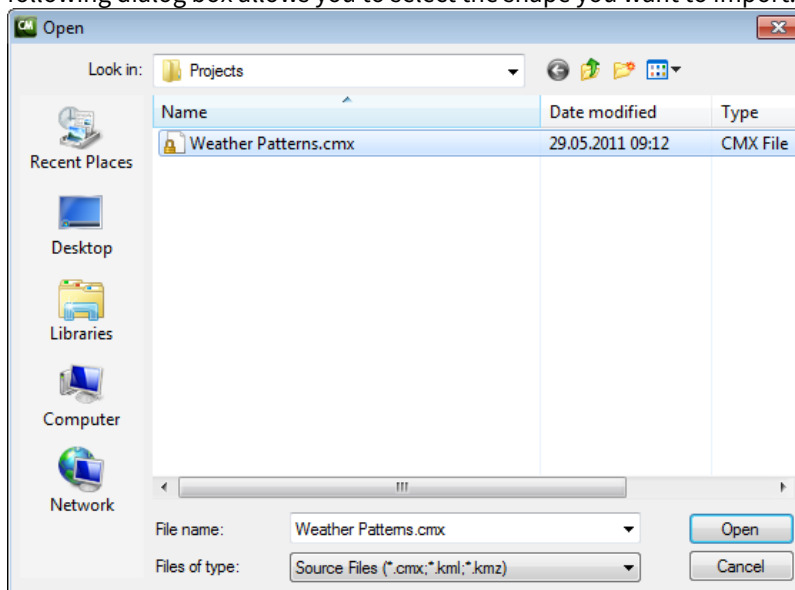
2. Select the shape file and click the **Open** button to import it.

13.5 Editing Shapes

The options on the Shape panel allow you to edit the entire shape:
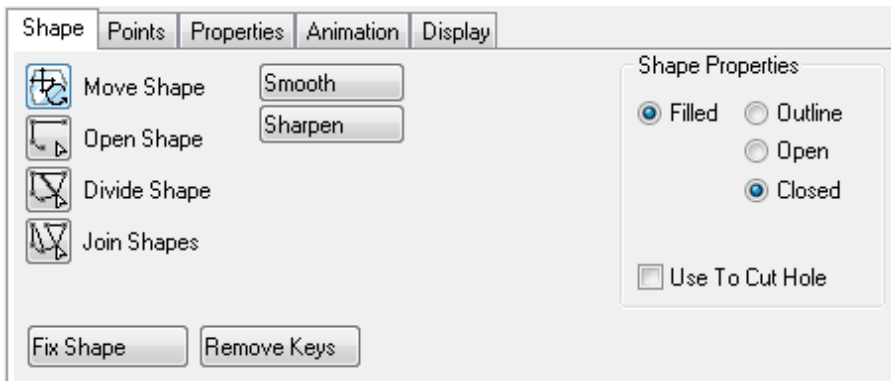
It provides the following options:

- **Move Shape:** Allows you to move, stretch, or rotate a shape.
- **Open Shape:** Opens a shape at a selected segment or point.
- **Divide Shape:** Divides a shape into two shapes.
- **Join Shapes:** Joins two shapes.
- **Smooth:** Converts all the points on a shape from corner points to curve points.
- **Sharpen:** Converts all the points on a shape from curve points to corner points.
- **Filled/Outline:** Specifies whether the shape is filled.
- **Open/Closed:** Specifies whether the segment between the endpoints should be drawn.
- **Use To Cut Hole:** Makes the shape cut a hole in shapes below it in the Shapes list.
- **Fix Shape:** Adds a keyframe (for example, to an animated path).
- **Remove Keys:** Removes a keyframe. Use **Next Shape** and **Prev Shape** keys to jump between the keyframes.

These options are described in greater detail in the following procedures:

- To Move a Shape
- To Resize a Shape
- To Rotate a Shape
- To Move the Pin Position
- To Open a Shape
- To Divide a Shape
- To Join Two Shapes into One

13.5.1 To Move a Shape

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab, and then the **Shape** tab.
3. Select the **Move Shape** tool. The shape is shown with a dotted bounding rectangle.

Either drag the shape by a point within the rectangle to move it to a new position or right-click at the destination and click **Move here** from the appearing context menu:

Move here	
Apply Track Data to Shape...	
Align	▶
Space Evenly	▶
Clear Selection	
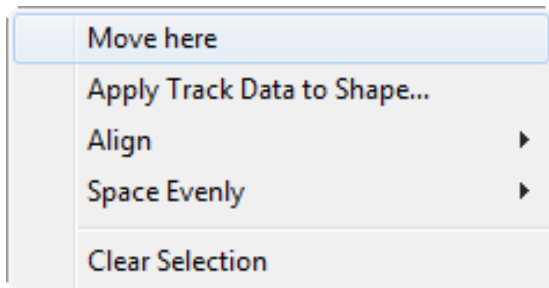
13.5.2   To Resize a Shape

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab, and then the **Shape** tab.
3. Select the **Move Shape** tool.
4. Move the mouse pointer to one of the eight handles on the corners or midpoints of the bounding rectangle.
5. Drag to resize the shape:
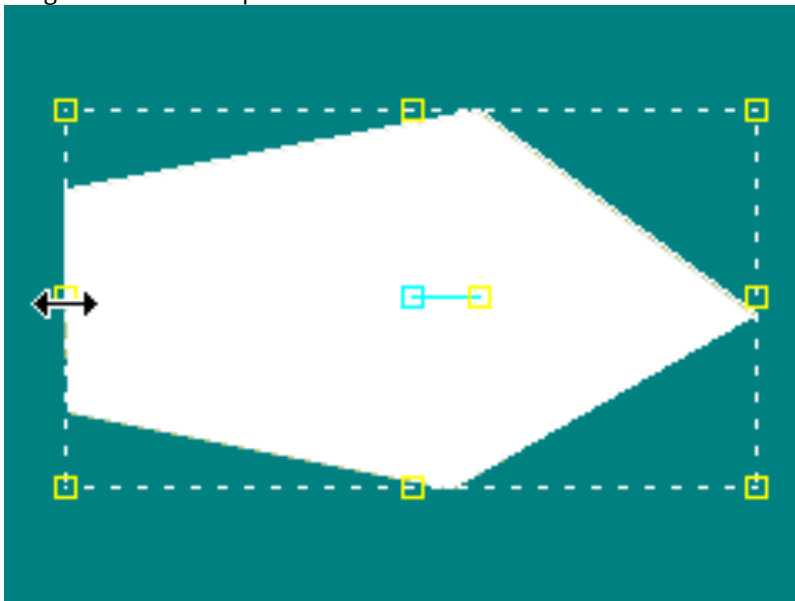
6. Hold down **CTRL** to constrain the shape to its original aspect ratio.

13.5.3   To Rotate a Shape

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab, and then the **Shape** tab.

3. Select the **Move Shape** tool.
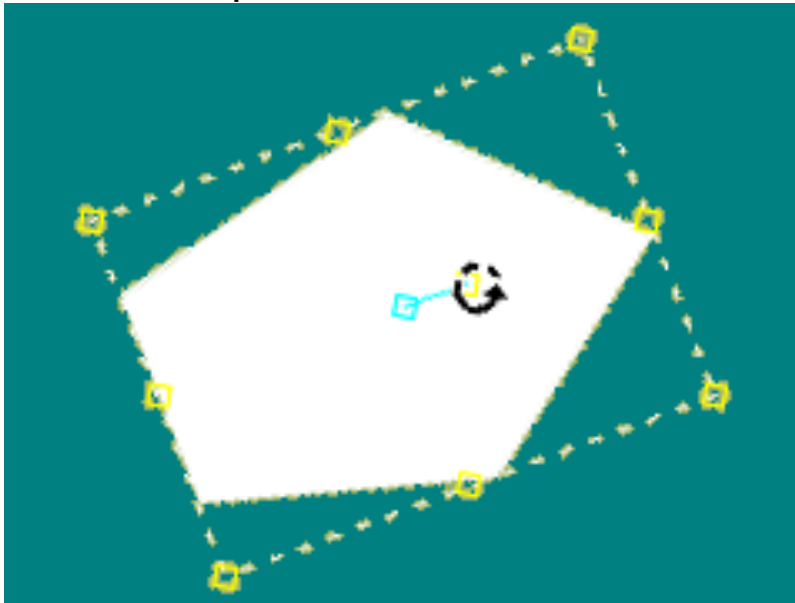
4. Point to the rotation handle, which is a yellow circle to the right of the pin position. The cursor changes to a rotation symbol.
5. Drag the handle to rotate the shape about its pin position.

13.5.4   To Move the Pin Position

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab, and then the **Shape** tab.
3. Select the **Move Shape** tool.
4. Point to the pin position, which is initially at the center of the shape. The cursor changes to a pin symbol.
5. Drag the pin position to move it.

13.5.5   To Open a Shape

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab and then the **Shape** tab.
3. Select the **Open Shape** tool.

Either click the border of the shape to open the shape with the start and end points either side of the corresponding segment:
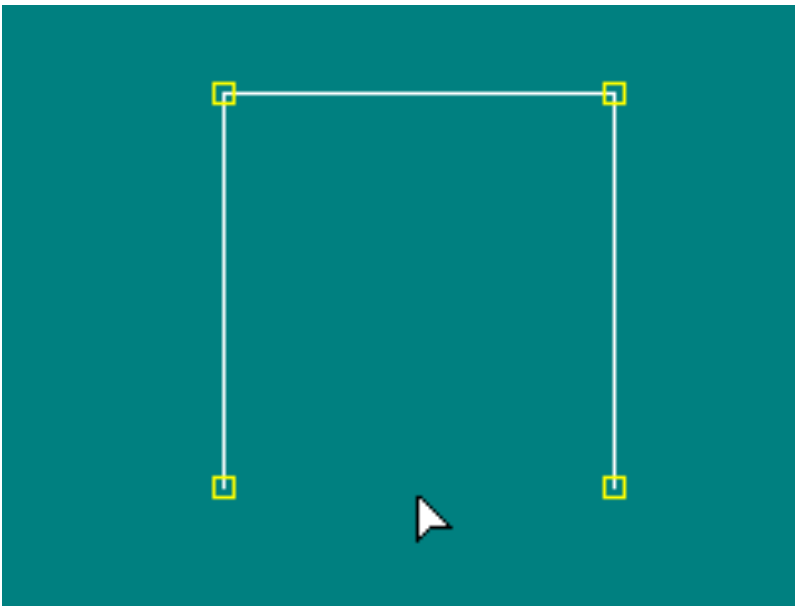
Or:

1. Click a point to open the shape using that point as the start point.
2. Click the point a second time to use that point as the end point.

13.5.6   To Divide a Shape

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab and then the **Shape** tab.
3. Select the **Divide Shape** tool.
4. Drag between two non-adjacent points on the border of the shape.

The shape is split into two shapes along the line joining the points.

13.5.7   To Join Two Shapes into One

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab and then the **Shape** tab.
3. Select the **Join Shapes** tool. The start and end points of each shape are displayed.
4. Click the start or end point on the first shape. A line extends to the cursor.
5. Click the start or end point on the second shape. The selected endpoints are joined to combine the two shapes into a single shape.

13.6   Editing Points
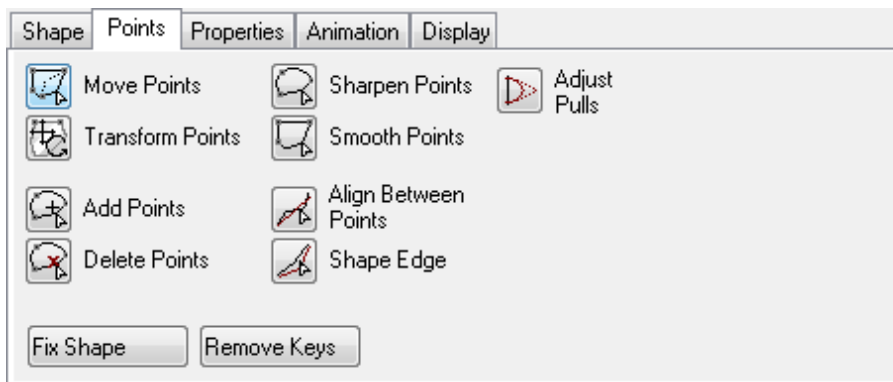
The options on the Points panel allow you to adjust individual points on a shape, and provides the following options:

- **Move Points:** Allows you to move points, or adjust their tangent handles.
- **Transform Points:** Lets you rotate one or more selected points as a unit.
- **Add Points:** Allows you to add points to a shape outline.
- **Delete Points:** Click a point to delete it from the shape outline.
- **Sharpen Points:** Click a point to convert a curve point to an angle point.
- **Smooth Points:** Click a point to convert an angle point to a smooth curve point.
- **Align Between Points:** Click two points to align intermediate points into a straight line.
- **Shape Edge:** Allows you to soften the edge of a shape.
- **Adjust Pulls:** Allows you to adjust each point by pulling each point's handle.
- **Fix Shape:** Adds a keyframe (for example, to an animated path).
- **Remove Keys:** Removes a keyframe. Use **Next Shape** and **Prev Shape** keys to jump between the keyframes.

When any of the tools on the Points panel are selected you can also right-click and select an option from the appearing context menu:
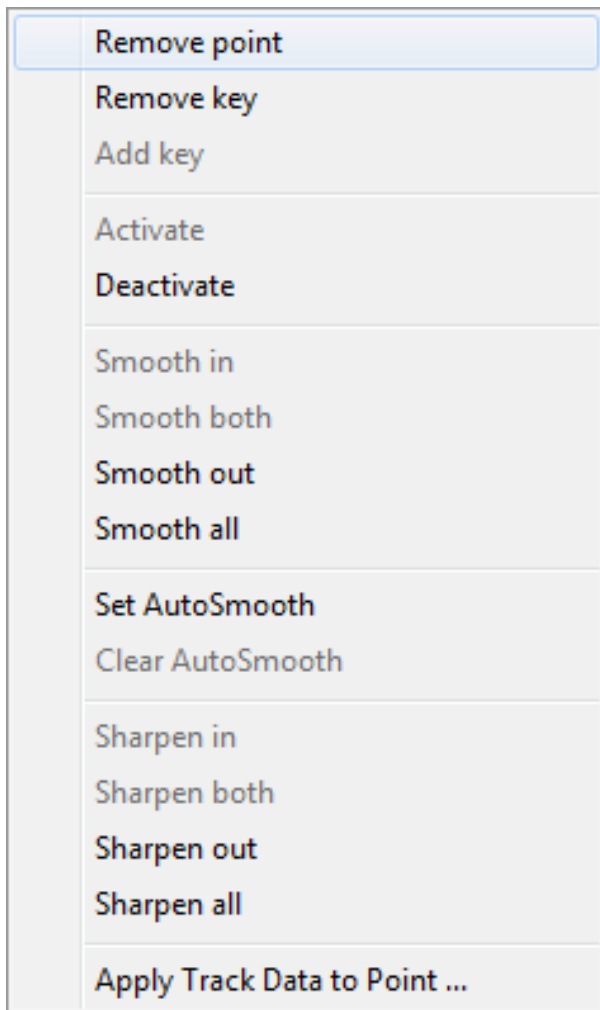
13.6.1   To Activate or Deactivate a Point

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab and then the **Points** tab.
3. Select the **Move Points** tool.
4. Right-click and from the appearing context menu click Deactivate or Activate on the pop-up menu. A deactivated point is stored with the shape, but does not affect the shape.

13.6.2   To Move One or More Points on the Shape Outline

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab and then the **Points** tab.

3. Select the **Move Points** tool.
4. Click the point you want to move. The point turns yellow to show it is selected.
5. Drag the point to the new position:
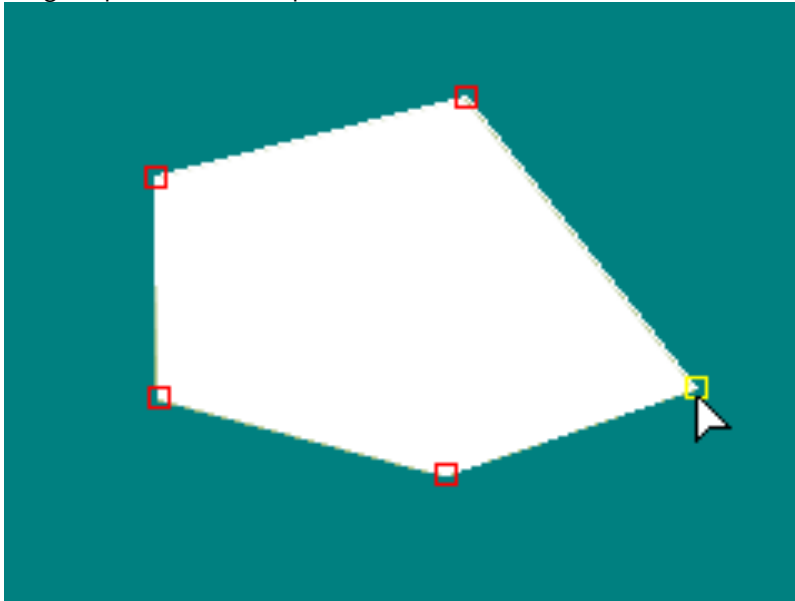
To move several points at once, first select them by holding down **SHIFT** and clicking them, or drag to enclose them.

You can also move points with the **Add Points** tool selected by holding down **ALT**.

13.6.3   To Adjust the Curvature at a Point on a Bezier Curve

Every point on a Bezier curve has a pair of tangent handles. The angle of the tangent handles determines the angle of the curve through the point, and the length of the tangent handles determines the curvature.

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab and then the **Points** tab.
3. Select the **Move Points** tool.
4. Hold down **CTRL** and drag a point up/down/left/right to adjust the smoothness at that point:
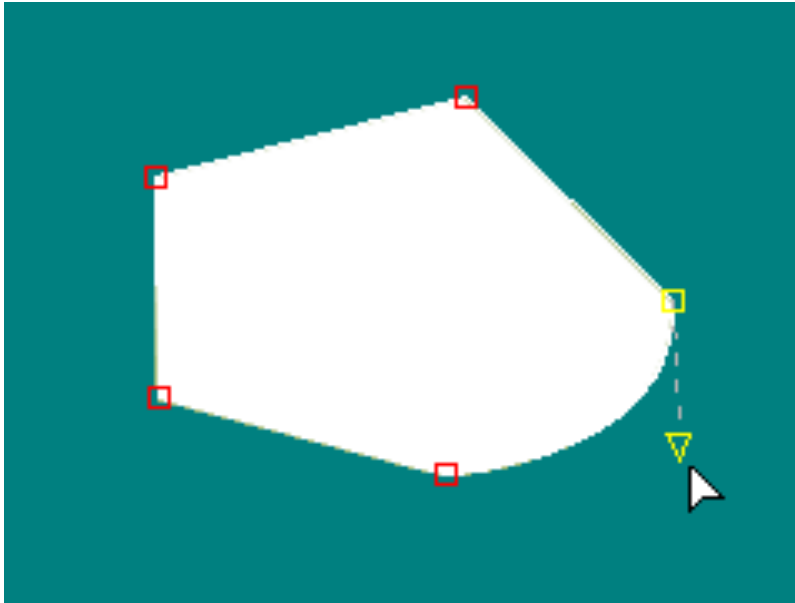
5. Drag one of the tangent handles to adjust the curvature at the point.
6. Hold down **CTRL** while dragging a tangent handle to make it independent of the other one.
7. Hold down **SHIFT + CTRL** to align both tangent handles.

13.6.4   To Adjust the Curvature at a Point on a B-Spline Curve

Every point has a pull factor which determines how close the curve gets to the point.

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab and then the **Points** tab.
3. Select the **Move Points** tool.
4. Hold down **CTRL** and drag a point up/down/left/right to adjust the pull factor at that point.

13.6.5   To Add Points

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab and then the **Points** tab.
3. Select the **Add Points** tool.
4. Click on the shape outline to add a point.
5. Hold down **CTRL** to insert the new point equidistant from its neighbors. After clicking you can drag the new point to position it. You can also add points with the **Move Points** tool selected by holding down **ALT**.

13.6.6   To Delete Points

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab and then the **Points** tab.
3. Select the **Delete Points** tool.
4. **Click** a point to delete it.

13.6.7   To Soften the Edge of a Shape

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab and then the **Points** tab.
3. Select the **Shape Edge** tool.
4. Drag to extend a second outline around the section of the shape you want to soften. The edge of the shape fades smoothly between the two boundaries.

13.7   Defining the Appearance of Shapes

The options on the Properties panel allow you to adjust the fill and outline styles of the shape, apply a texture to a shape, change its opacity and softness, transform it numerically, or add a drop shadow:

This section contains information on the following topics:

- Appearance Options
- Transform Options
- Drop Shadow Options (not Rotoshapes)
- Motion Blur Options

13.7.1   Appearance Options
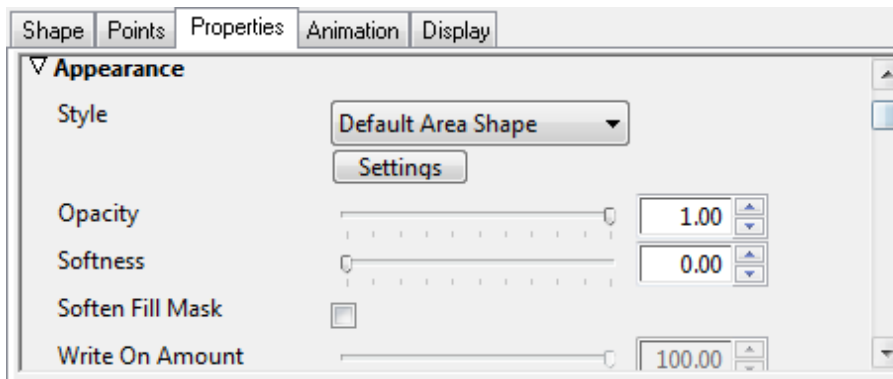
The **Style** pop-up menu lets you select a style for the shape.

Use the **Opacity** and **Softness** controls to adjust the opacity of the shape and the softness of its edge.

The **Write On Amount** allows you to animate the appearance of a line shape, such as to indicate the route of a journey. The line is animated from the starting point to the ending point with precise interpolation between points.

To Define a Shape Style

Click the Settings button. The Settings dialog box is displayed.

To Draw a Shape with a Brushed Outline

1. Choose Brushed from the Style pop-up menu.
2. Click the Settings button to select the brush to use.

To Fill a Shape with the Background Image

Choose **Merge** from the **Style** context menu.

To Add a Texture to a Shape

1. Click the **+** button in the **Settings** dialog box to display an **Open** dialog box, and select a texture.
2. Select the texture from the **Texture** context menu.
3. Use the buttons to the right of the **Texture** context menu on the **Settings** dialog box to move or scale the texture. The texture is used as a fill for the shape.

13.7.2   Transform Options
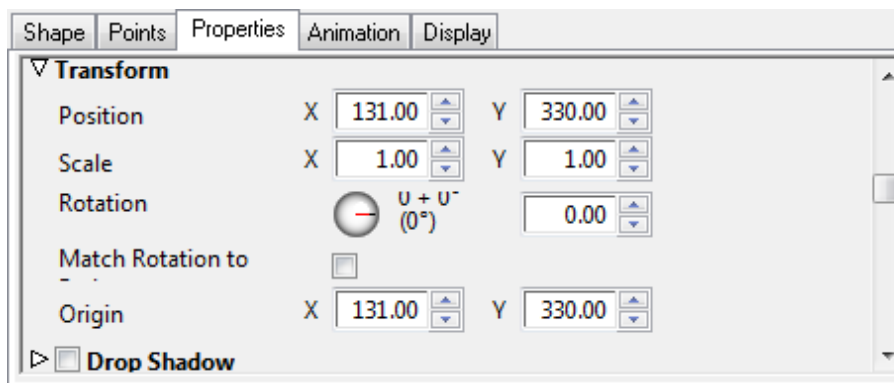
Allows you to transform the shape numerically.

13.7.3   Drop Shadow Options (not Rotoshapes)
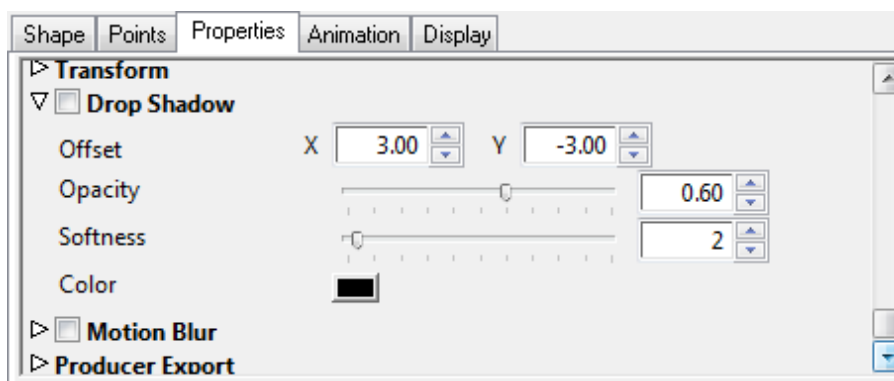
Select **Drop Shadow** to turn on a drop shadow for the shape.

The following parameters are provided:

- **Offset:** The offset of the drop shadow, in pixels.
- **Opacity:** The opacity of the drop shadow. 0% gives no drop shadow.
- **Softness:** Blurs the drop shadow to smooth the edges. Values in the range `0-5` are recommended.
- **Color:** The color of the drop shadow.

13.7.4   Motion Blur Options
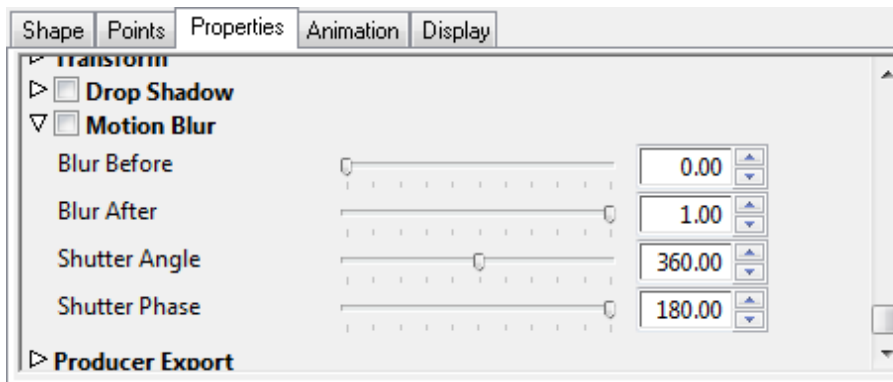
Adds motion blur before and/or after a shape.

13.8 Animating Shapes
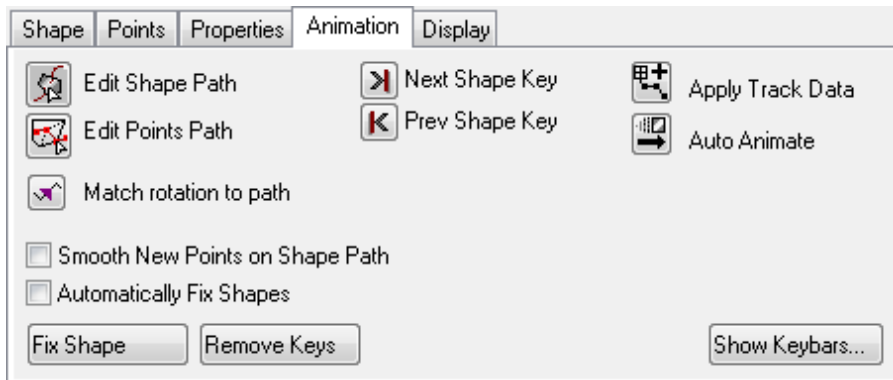
The options on the **Animation** panel allow you to animate individual shapes on a shape layer. This panel is not available for shape overlays.

- **Edit Shape Path:** Enables you to edit the shape's path by adjusting the points on the path (for example, the start and end points).
- **Edit Points Path:** Enables you to edit the shape's points (for example, giving the shape another shape during the animation).
- **Next Shape Key:** Jumps to the shape's next keyframe.
- **Prev Shape Key:** Jumps to the shape's previous keyframe.
- **Apply Track Data:** Applies a tracking path to a layer in your project.
- **Auto Animate:** Enables you to set animation properties like slide in/out and fade on/off.
- **Match rotation to path:** Enables the object's rotation to follow the direction of the path.
- **Smooth New Points on Shape Path:** Converts an angle point to a smooth curve point on a shape path.
- **Automatically Fix Shapes:** Automatically makes the current frame a key frame for every point on the shape.
- **Fix Shape:** Adds a keyframe (for example, to an animated path).
- **Remove Keys:** Removes a keyframe. Use the **Next Shape** and **Prev Shape** keys to jump between the keyframes.
- **Show Keybars:** Opens the Shape Keybars editor. This allows you to edit the shape's animation properties (for example, transformation) on its timeline.

This section contains information on the following procedures:

- To Fix a Shape
- To Remove the Keys
- To Animate an Individual Shape
- To Animate Individual Points on a Shape
- To Show the Keybars for a Shape

13.8.1 To Fix a Shape

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab and then the **Animation** tab.
3. Click the **Fix Shape** button. This makes the current frame a key frame for every point on the shape.

13.8.2   To Remove the Keys

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab and then the **Animation** tab.
3. Click the **Remove Keys** button. This removes all keys for the current frame.

13.8.3   To Animate an Individual Shape

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab and then the **Animation** tab.
3. Select the shape in the **Shapes list.**
4. Select the **Edit Shape Path** tool.
5. Open the **Animation Controls** and set the marker where the animation should end (for example, 50 fps).
6. Drag the center of the shape to define its path throughout the animation.
7. Hold down **CTRL** and drag from a point on the animation path to extend tangent handles from that point and create a curved animation path.

13.8.4   To Animate Individual Points on a Shape

1. Select a shape from the **Layers list.**
2. Select the **Contents** tab and then the **Animation** tab.
3. Select a shape in the **Shapes list.**
4. Select the **Edit Points Path** tool.
5. Drag the points to the positions you want them to have at each frame of the animation.
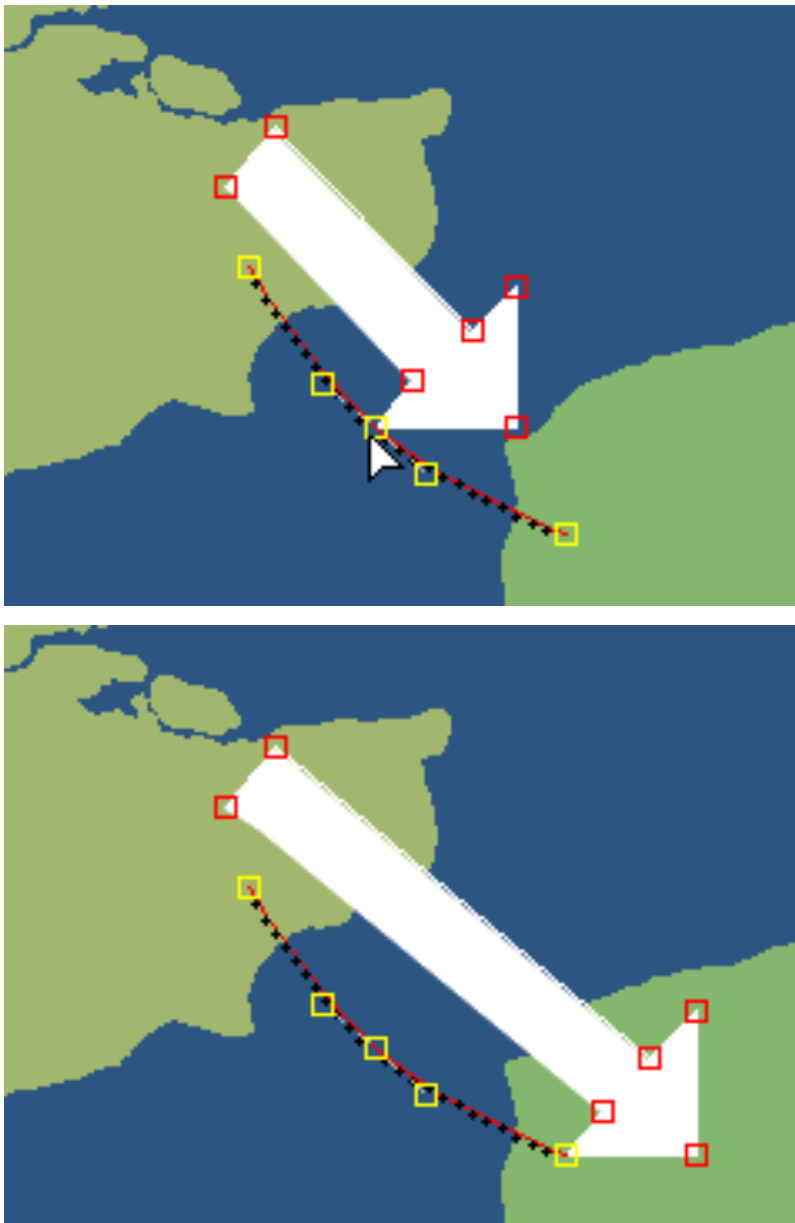
6. Hold down **CTRL** and drag from a point on the animation path to extend tangent handles from that point and create a curved animation path. The keys for individual points are not displayed in the **Keybars** panel.

13.8.5   To Show the Keybars for a Shape

1. Select the shape in the **Shapes list**.
2. Click the **Show Keybars...** button on the **Animation** panel. The **Shape Keybars** window shows a keybar for each shape in the Shapes list. You can click the arrow to the right of each shape to show a **Transform** bar showing the transformations applied to the entire shape, followed by a keybar for each point on the shape:
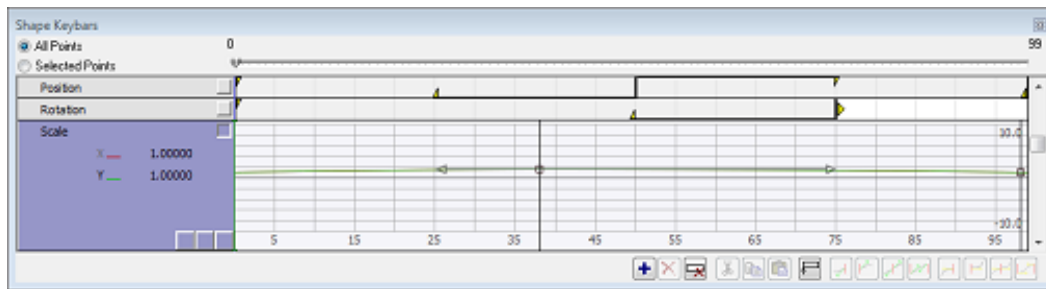
3. Select **All Points** to include a keybar for every point in the Shapes list, or **Selected Points** to show only selected points on those shapes. The **Shape Keybars** window works in the same way as the **Keybars** panel; for more information see the Using the Keybars Panel section.

13.9   Specifying How Shapes are Displayed

The options on the Display panel allow you to specify how shapes are displayed while they are edited:
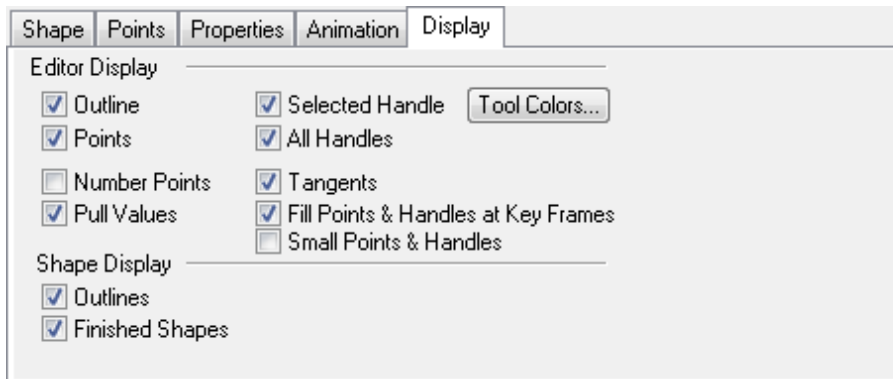
Use the **Editor Display** options to specify which features of a shape are displayed during editing.

The **Fill Points & Handles at Key Frames** option displays each point filled if the frame is a key frame for that point, and is only available for shape layers.

Use the **Shape Display** options to specify how shapes are normally displayed.

Click the **Tool Colors...** button to define the colors for the editing features:
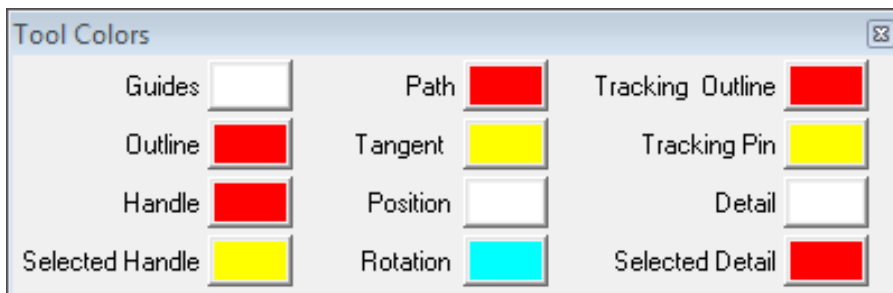
13.10   Setting the Shape Layer Properties
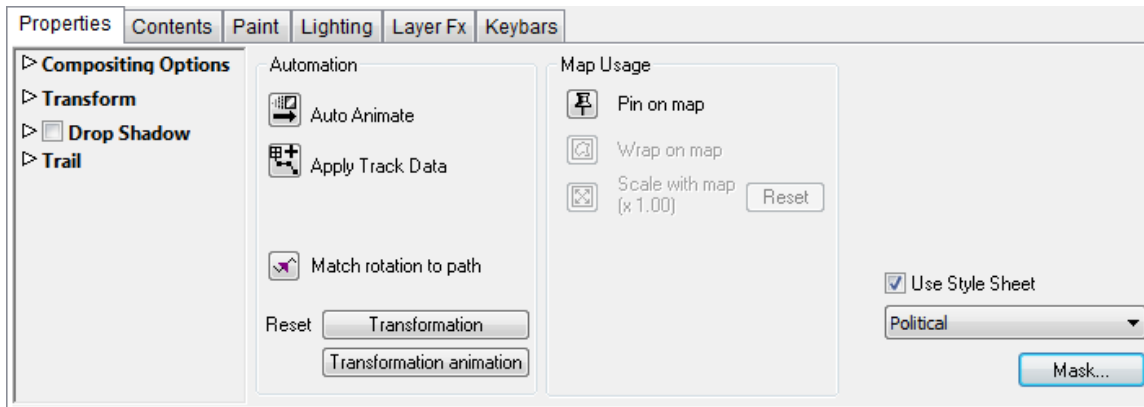
The options on the **Properties** panel allow you to specify the compositing options for the shape layer, transform it, and add a drop shadow, or animation trail. It also provides several animation options.

This section contains information on the following topics:

- Compositing Options
- Transform Options
- Drop Shadow Options
- Trail Options

13.10.1   Compositing Options
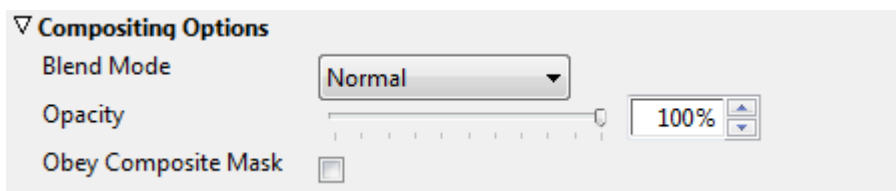
- **Blend Mode:** Specifies how the layer is combined with the other layers, and can be one of:
    - Normal
    - Add
    - Subtract
    - Difference
    - Multiply
    - Darken Only
    - Burn
    - Color Burn
    - Screen
    - Lighten Only
    - Dodge
    - Color Dodge
    - Hue
    - Saturation

- Value
- Color
- Overlay
- Soft Light
- Hard Light
- Pin Light
- Exclusion
- Negation
  - **Opacity:** Determines the layer opacity, and can be animated.
  - **Obey Composite Mask:** Specifies whether the current layer should obey the composite mask.

For more information see Controlling Layer Compositing.

13.10.2 Transform Options
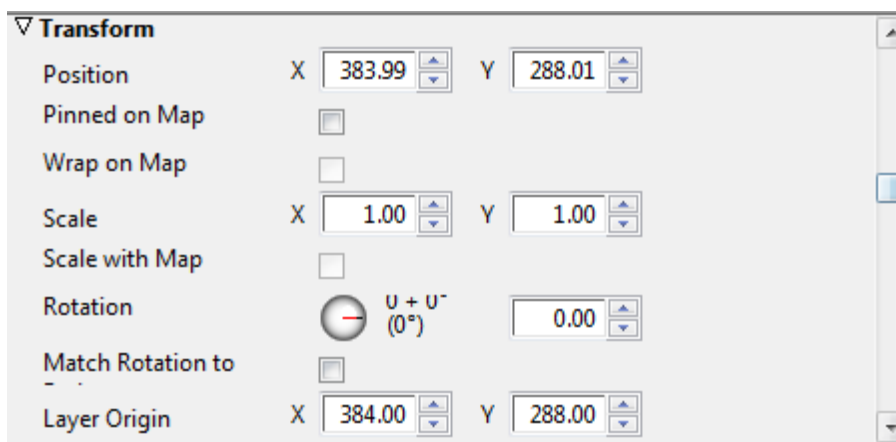
These allow you to specify the position, rotation, scale, and origin of the entire shape layer numerically.

These options behave in exactly the same way as for image layers.

13.10.3 Drop Shadow Options
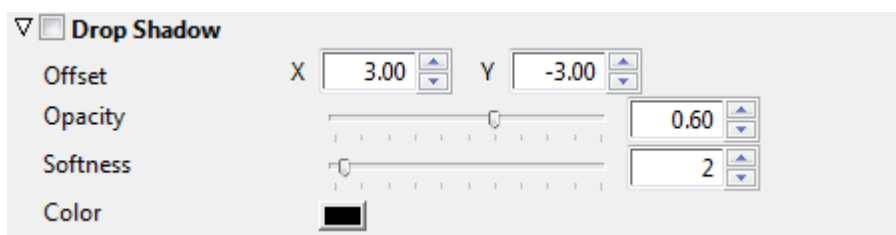
Select **Drop Shadow** to turn on a drop shadow for the layer. The following parameters are provided:

- **Offset:** Sets the offset of the drop shadow, in pixels.
- **Opacity:** Sets the opacity of the drop shadow. 0% gives no drop shadow.
- **Softness:** Blurs the drop shadow to smooth the edges. Values in the range `0-5` are recommended.
- **Color:** Sets the color of the drop shadow.

13.10.4 Trail Options
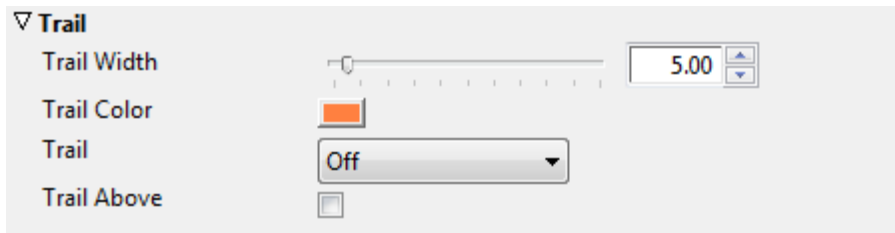
The **Trail** options allow you to leave a trail as the shape layer animates. For more information see Leaving an Animation Trail.

13.11   Adding Shape Overlays to a Map Layer

As well as constructing drawings out of shapes in separate shape layers, you can also add shape overlays to map layers. Shapes drawn on a map layer appear in the **Details** list on the layer's **Contents** panel and are referred to as shape overlays. They include all the same features as shapes drawn in shape layers with some extra features that make them particularly useful for highlighting areas on maps:

- You can draw shape overlays by automatically tracing borders, coastlines, built-in roads and railways, or imported lines on the map.
- You can clip shape overlays to the land, so that any areas overlapping the sea are effectively transparent.
- You can choose to draw shape overlays as land, water, relief, road, rail, or imported data to give the shape exactly the same scale and appearance as the corresponding features.

This section contains information on the following procedures:

- To Define the Properties of Shape Overlays
- To Draw Shape Overlays as Land, Water, etc.
- To Clip a Shape Overlay to Land
- To Draw Shapes by Tracing Map Features
- To Zoom or Pan while Tracing

13.11.1   To Define the Properties of Shape Overlays

1. Select the shape in the **Details** list.
2. Click the **Shape** tab to display the properties for the selected shape:
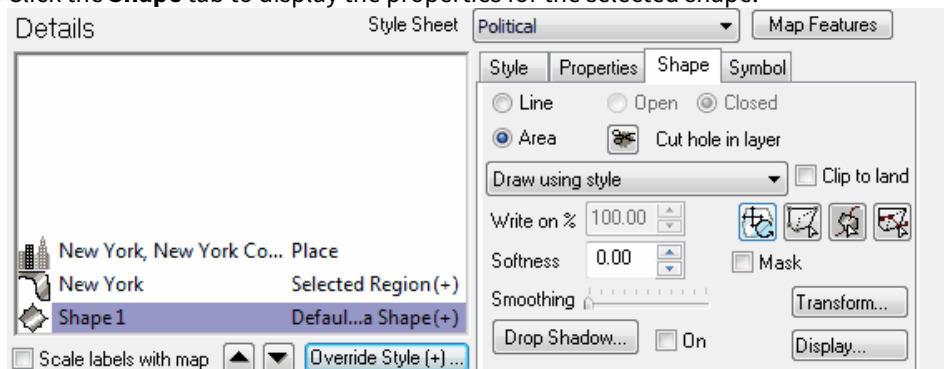
The options are the same as for shapes in shape layers, with the addition of **Draw using style**, **Clip to land**, and the edit tools of Shape, Points and Animation. All are described in the following sections.

13.11.2   To Draw Shape Overlays as Land, Water, etc.

- Choose the appropriate option from the drop-down menu:
  - **Treat as Land:** Colors the land and relief.
  - **Treat as Water:** Colors the sea and depth contours.
  - **Draw with Border line width:** Scales with region borders.
  - **Draw with Road/ Rail line width:** Scales with built-in roads/railways.
  - **Draw with Imported Data line width:** Scales with imported data.

For example you can use a shape set to **Treat as Land** to mark out an area of a particular terrain type, such as desert:

13.11.3   To Clip a Shape Overlay to Land

- Select the shape detail in the **Details** list and select **Clip to land** in the **Shape** panel.

13.11.4 To Draw Shapes by Tracing Map Features

⚠ **Note:** You can only trace features on the map once the high quality rendering of the map layer has completed.

1. Select the map layer on which you want to create the shape.
2. Select the **Add Point Shape** tool and click the arrow to the right of the tool to display a submenu of options for the tool:
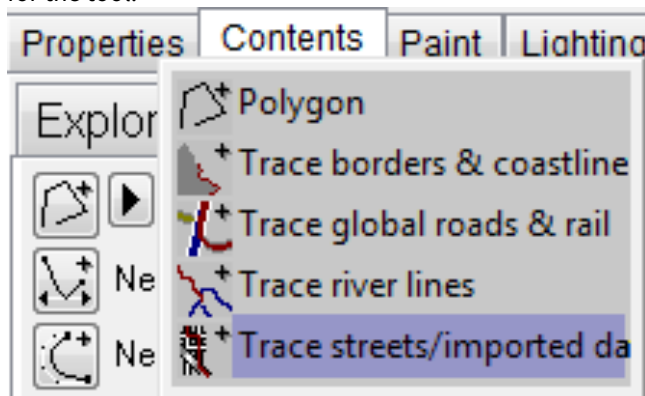
   Press **ESC** if you want to cancel the submenu without making a selection.
3. Select **Trace borders & coastline**, **Trace global roads & rail**, **Trace river lines**, or **Trace streets/imported data** according to which features on the map you want to trace.

> ⚠ **Note:** River tracing cannot be used on rivers that are wide enough to be drawn as area shapes rather than simple lines.

4. Move the mouse pointer near the feature you are tracing; for example, the coastline or border between regions.
   - The mouse pointer changes shape (cuts the tail) to show that the border has been detected:
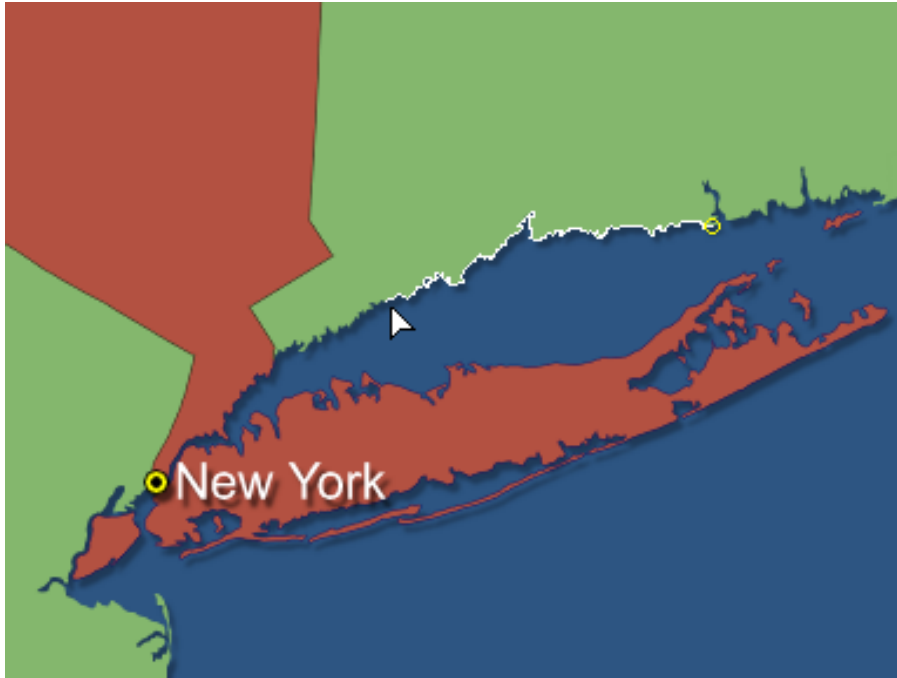
5. Click to create a point, and then move to the next point along the border you are tracing.
   - A line indicates the outline of the shape being traced. If the line being traced follows the wrong path, take smaller steps between points.
   - As you are drawing the shape you can use the Add Point Shape tool to turn tracing on or off, or change the feature being traced, to achieve exactly the effect you want.
6. Finally complete the shape in the usual way, by clicking on the starting point to create an area shape, or clicking (for example, double-click) again on the previous point to create an open shape:
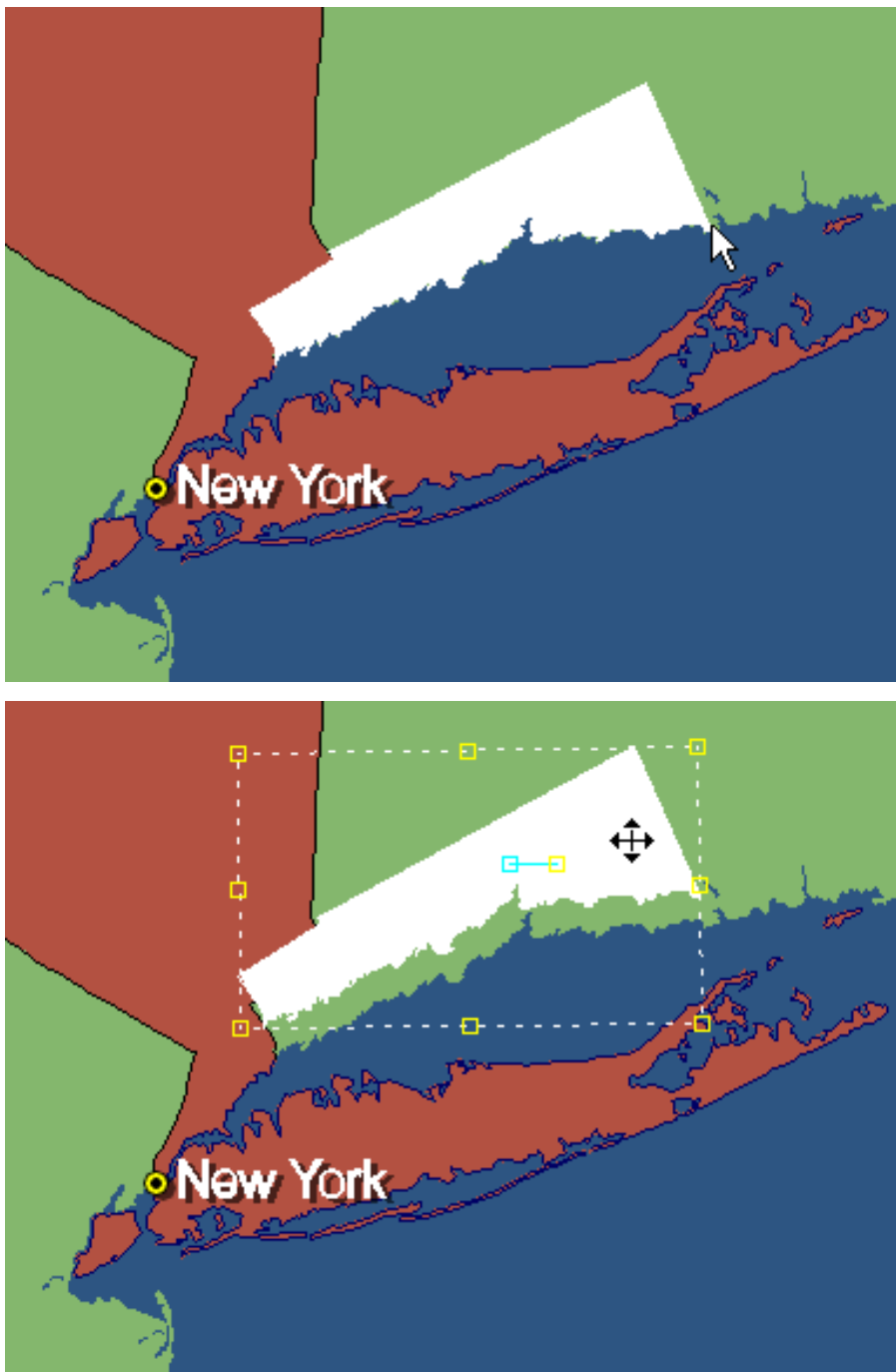
Once you have traced the shape, you can edit it or transform it in exactly the same way as for other shapes you draw.

13.11.5   To Zoom or Pan while Tracing

You can only trace areas of the map that are actually visible on the screen, but if necessary you can zoom or pan the map while you are tracing to change the part of the map that is in view

1. Type **Z** to temporarily select the **Zoom** tool or **P** to temporarily select the **Pan** tool while you are tracing.

2. Press either key again to switch back to the **Add Point Shape** tool.

13.12   Animating Shape Layers

In addition to being able to animate individual shapes, you can animate the complete set of shapes on the shape layer as a single entity.

This is useful if you have constructed a complex illustration from a number of separate shapes and want to animate it as if it were a single object.

Each shape can be given its own animation path with control over the following features:

- Opacity
- Drop shadow opacity
- Offset color and softness
- Position
- Rotation
- Scale
- Write on amount
- Softness

13.12.1   To Auto-animate the Entire Shape Layer

Click the **Auto Animate** button on the **Properties panel** for the shape layer, or select the shape layer in the Layers list and click **Auto-Animate...** on the **Layer** menu.

The **Automatic Animation** dialog box allows you to automatically slide in, slide out, fade on, and/or fade off the shape layer with specified timings.

For more information about using the automatic animation dialog box see section Automatically Animating a Layer.

13.12.2   To Animate the Entire Shape Layer

1. Select the **Path** tool:
2. Drag the shape layer to the position you want it to have at each frame of the animation.

3. Hold down **CTRL** and drag from a point on the animation path to extend tangent handles from that point and create a curved animation path:

> ✅ **Tip:** If you are creating a small graphic draw it in the center of the shape layer, as this makes its position correspond to the points on the animation path.

13.13   Shape Tools

The following shape tools are provided for drawing shapes on shape layers, and overlays on map layers:

- **New Polygon:** Straight lines and polygons.
- **New Bezier:** Smooth Bezier.
- **New B-Spline:** Smooth B-Spline.
- **New Freehand:** Freehand shapes.
- **New Circle:** Circles.
- **New Ellipse:** Ellipses and circles.
- **New Rectangle:** Rectangles and squares.

> ⚠️ **Note:** All shape tools are available to map layers; however, not all features of all tools are (for example, the Points editor).

As you are drawing a shape a floating palette gives you options for completing the shape:

- Alternatively, to cancel drawing a shape press the **ESC** key.

For more information about using each of these shape tools see the following procedures:

- To Draw a Polygon, Bezier, or B-Spline Shape
- To Complete the Shape to Make an Area Shape
- To Complete the Shape to Make a Line Shape
- To Draw a Freehand Shape

- [To Draw a Geometric Shape](#)

13.13.1 To Draw a Polygon, Bezier, or B-Spline Shape

1. Select the **New Polygon** (⬜), **New Bezier** (⬜), or **New B-Spline** (⬜) tool:
2. Click at the appropriate position to draw each point. As you draw the points, the shape is shown as straight line segments (New Polygon tool), smooth Bezier curves (New Bezier tool), or B-Spline curves (New B-Spline tool) determined by the point positions:
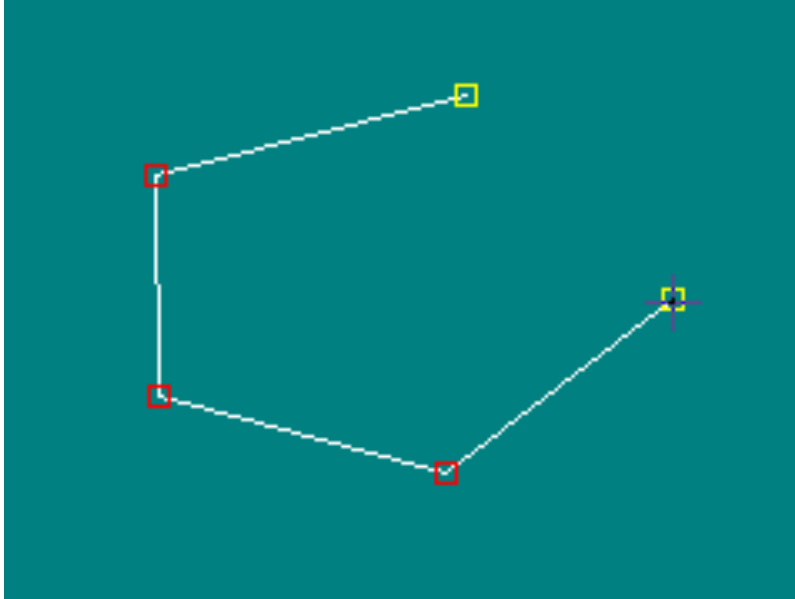
The points are drawn in red with the two endpoints highlighted in yellow by default.

13.13.2 To Complete the Shape to Make an Area Shape

Either click the **Area** button in the floating **Shape** palette or right-click and select **Make Area Shape** from the appearing context menu:
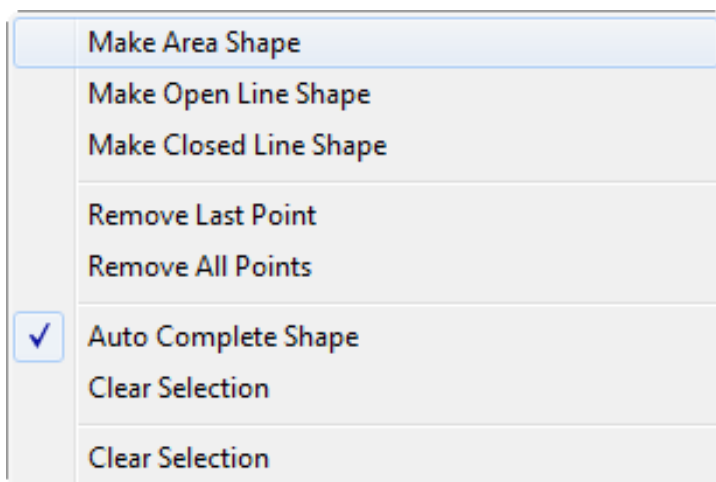
- The shape is closed and displayed, drawn with the current area style:
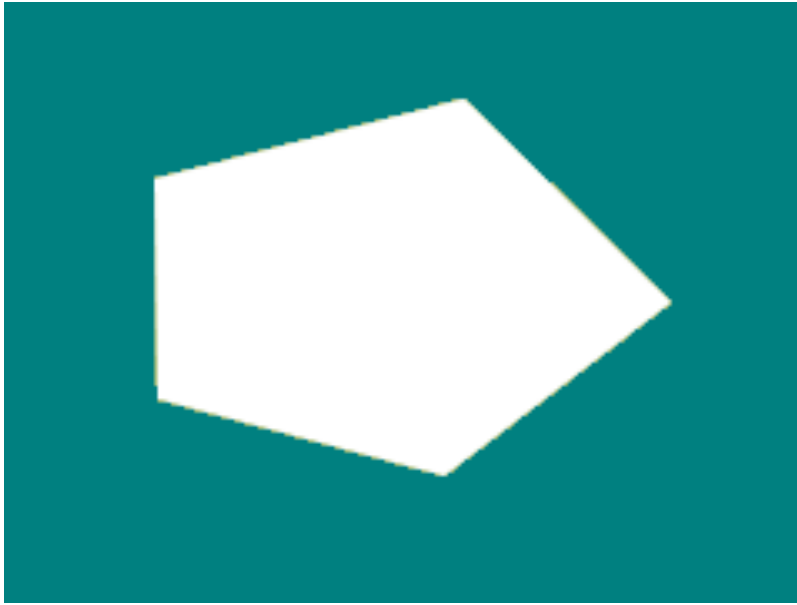
13.13.3   To Complete the Shape to Make a Line Shape

Either click again on the last point you drew, or:

- Click the **Closed Line** or **Open Line** button in the floating Shape palette, or
- Right-click the shape and select **Make Open Line Shape** or **Make Closed Line Shape** from the appearing context menu. The shape is drawn with the current line style:
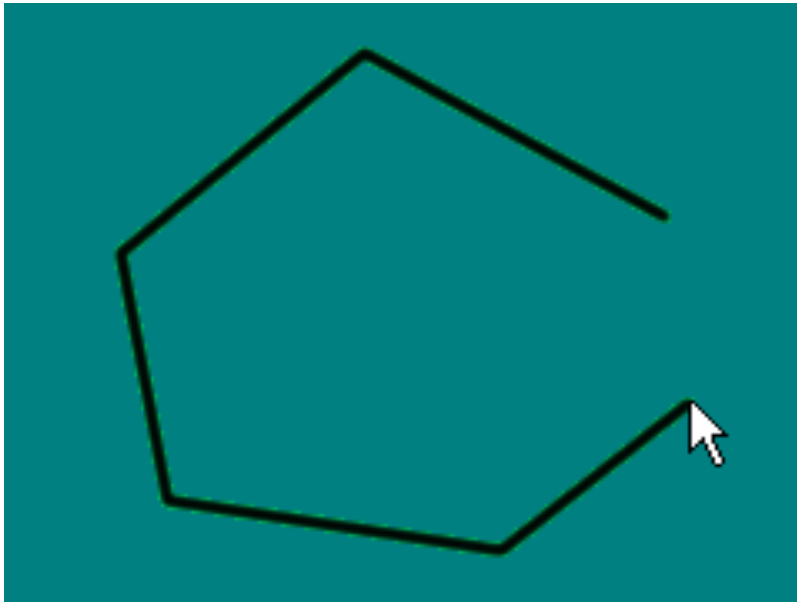
13.13.4   To Draw a Freehand Shape

1. Select the **New Freehand** () tool button.

2. Hold down the mouse button and drag to create the shape you want to draw:
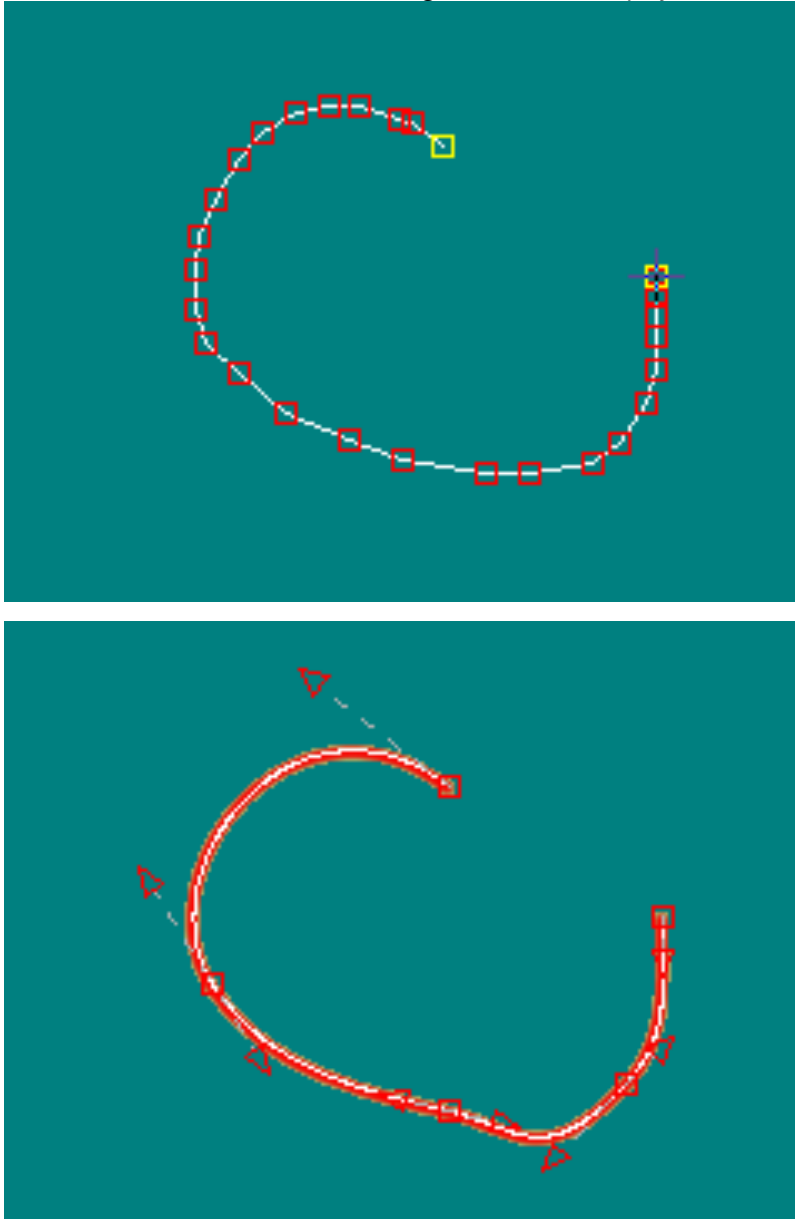
3. Click **Points** tab and select **Move Points**. As you drag, points are added as necessary to create the shape you are drawing.
4. Complete the shape as for drawing a point shape. The freehand shape is converted to an equivalent Bezier curve that uses as few points as possible.

> ⚠️ **Note:** The Points tab is not available when drawing shapes on map layers.

13.13.5   To Draw a Geometric Shape

1. Select the **New Circle** (⊘), **New Ellipse** (⬦), or **New Rectangle** (▢) tool.

2. When using the New Ellipse or New Rectangle tool, hold down **CTRL** to constrain the shape to a circle or square:
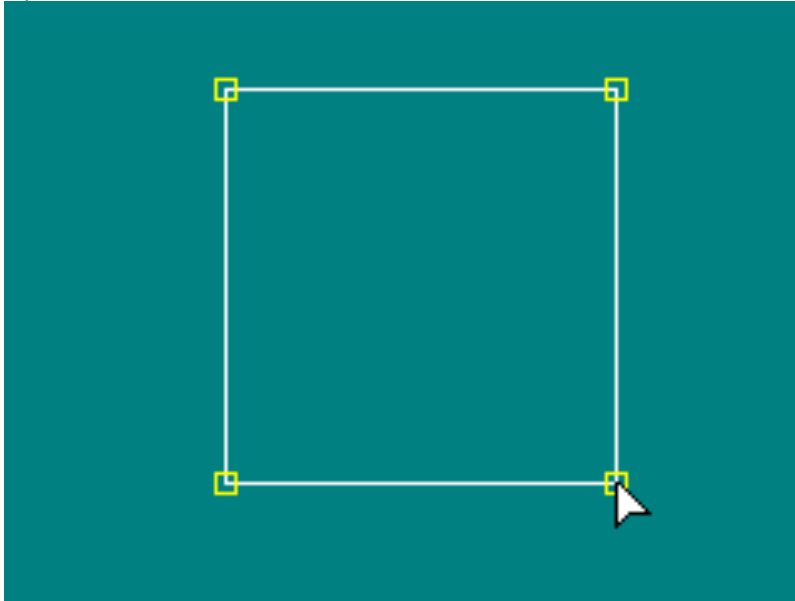
When you release the mouse button the shape is filled with the current area style.

14 Working with ESRI Shape Files

This section explains how to import map data in ESRI Shape File format and configure it for use with your maps.

Although the Street Data format provides a more convenient way of creating street maps, a wide range of published data is available in ESRI Shape File format, and Viz World Classic allows you to import this data and configure it for use with your maps.

Viz World Classic supports ESRI Shape File format data in which the text and field data are encoded in an extended range of formats, including UTF-16 and various language-specific encodings including some Japanese, Hebrew, and Arabic encodings.

You can specify the encoding for each field of imported shape file data, allowing maps to be created in many different languages.

This section contains information on the following topics:

- Setting up ESRI Shape File Data
- Using ESRI Shape File Data

See Also

- Working with Street Maps

14.1 Setting up ESRI Shape File Data

Data in ESRI Shape File format may contain a large number of different attributes and values which describe the data contained in the file. For Viz World Classic to understand how to draw the data, you first need to create a data set definition that describes which features are to be drawn and in which style.

This section contains information on the following procedures:

- To Create a Data Set Definition
- To Edit the Data Set
- To Add Subsets to a Data Layer
- To Define the Style for Data Layers or Subsets

14.1.1 To Create a Data Set Definition

1. On the **Import** menu, click **Map Data (Shape Files)...** to display the **Imported Data Sets** dialog box.

2. Click the **Create a Data Set Definition** (▦) button.
   The following dialog box allows you to select an existing data set definition as the basis for the new one:
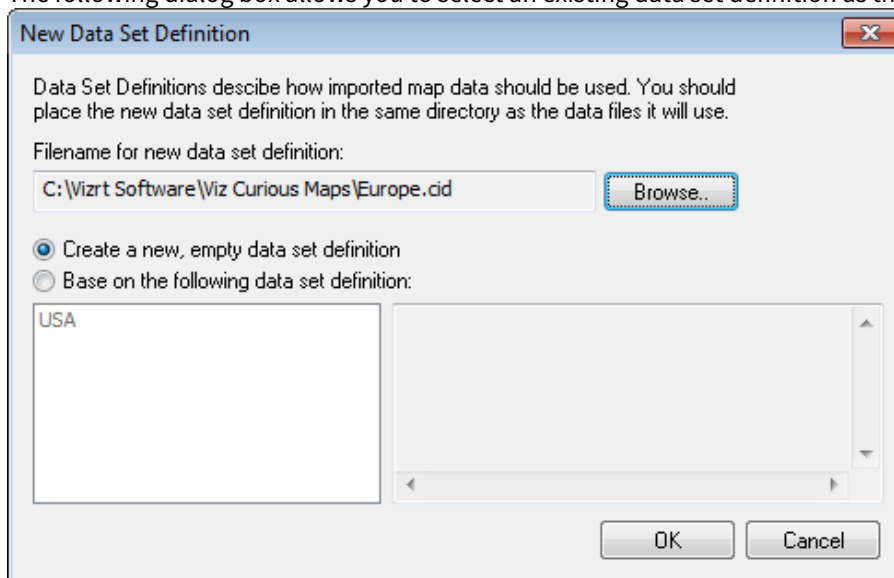
3. Click the **Browse...** button to specify the filename for the new data set definition.

If you want to base the data set definition on an existing one:

1. Click **Base on the following data set definition** and select a definition in the list.
2. Click the **OK** button to create the new data set definition. It is displayed in the **Imported Data Sets** dialog box.

14.1.2   To Edit the Data Set
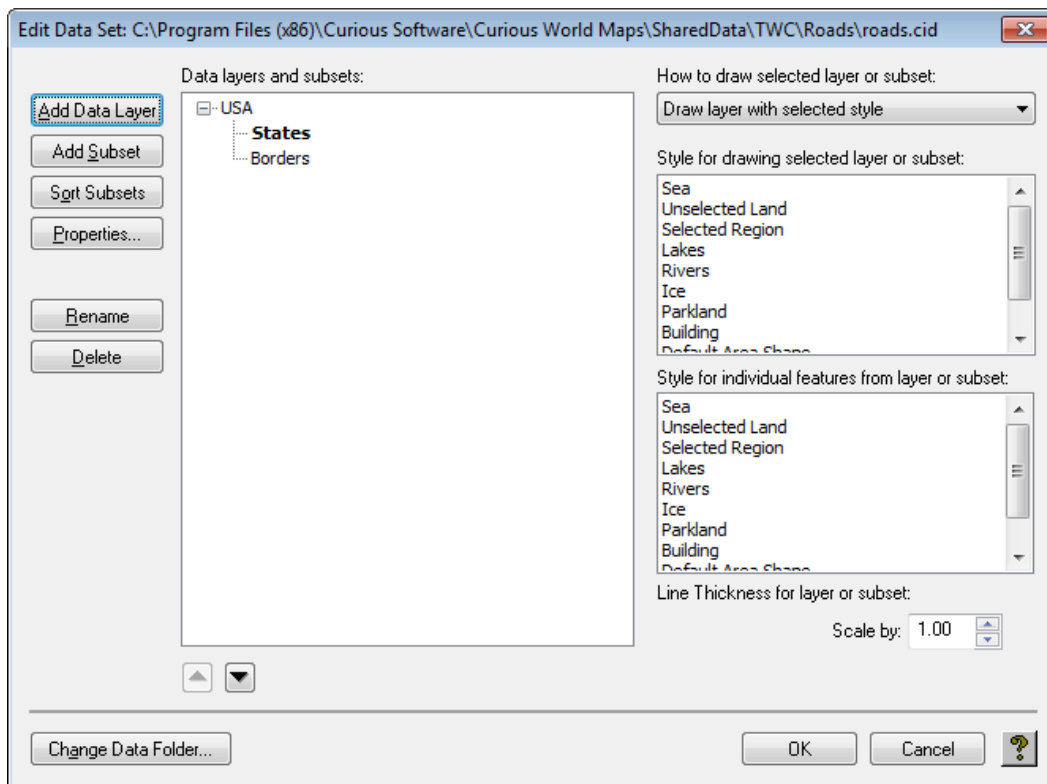
1. Select the data set definition in the **Data Sets** list.
2. Click the **Edit Data Set Definition** button. The Edit Data Set dialog box allows you to edit the data set definition.
3. Click the **Add Data Layer** button.
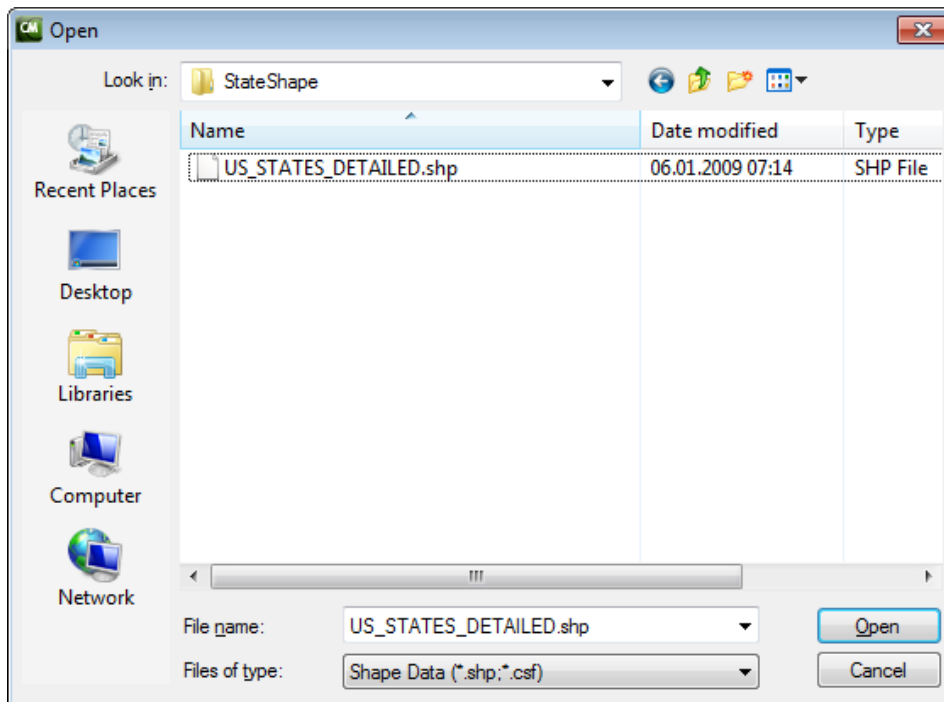
4. Select the data file you want to add. Supported file formats are *.shp* (Shape File) and *.csf* (Curious Shape File). The **Data File Properties** dialog box then allows you to specify how the features in the data file you have loaded are labeled on the map.
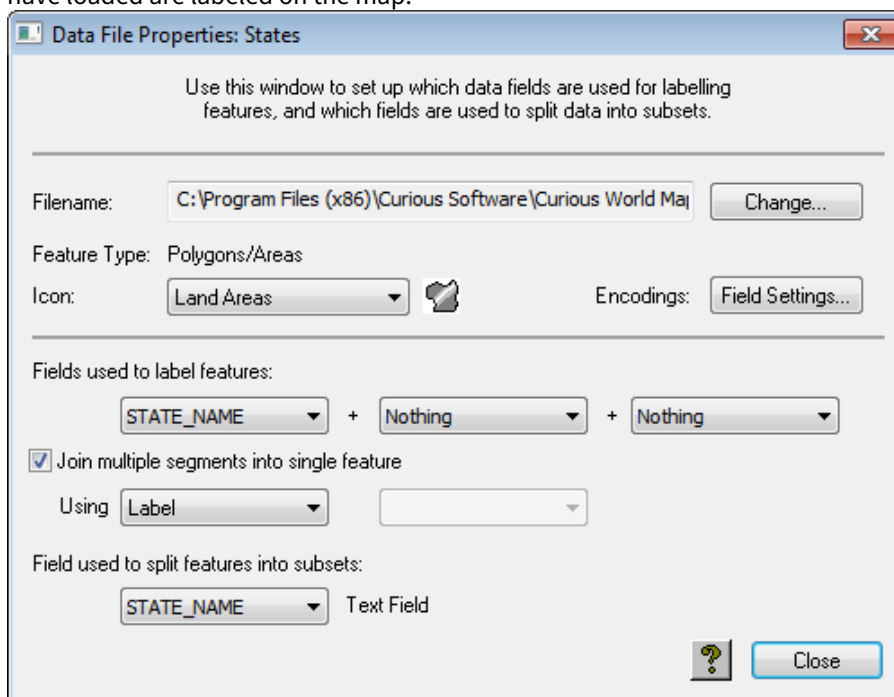
5. Choose up to three fields from the **Fields used to label features** drop-down menus. Each street is labeled with the specified field values.
6. Click the **Field Settings...** button to display the following dialog box, which allows you to specify the encodings for each field in the file:
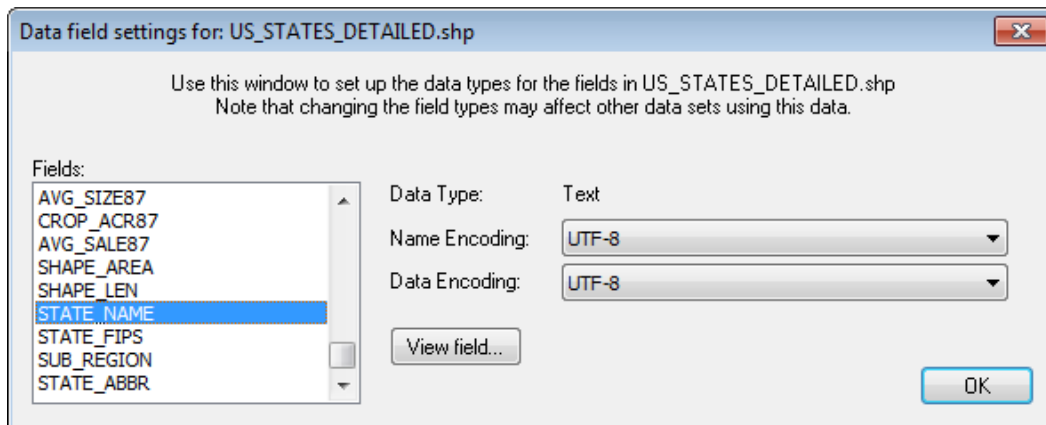
7. Select one or more fields in the **Fields** list, then choose the relevant encodings from the **Name Encoding** and **Data Encoding** pop-up menus. You can preview the effect of the encodings by clicking the **View field…** button.
8. Click the **Close** button to save the data layer in the data set definition.

14.1.3   To Add Subsets to a Data Layer

You can create subsets of a database file based on the contents of a specified field. This allows you to filter the database, and display each subset in a different style.

1. Open the **Data File Properties** dialog box and choose the field you want to use to divide the database into subsets from the **Field used to split features** into subsets drop-down menu. For example, to divide states according to east and west coast states.
2. Click the **Close** button to close the **Data File Properties** dialog box.
3. Select the appropriate data layer in the **Edit Data Set** dialog box.
4. Click the **Add Subset** button.
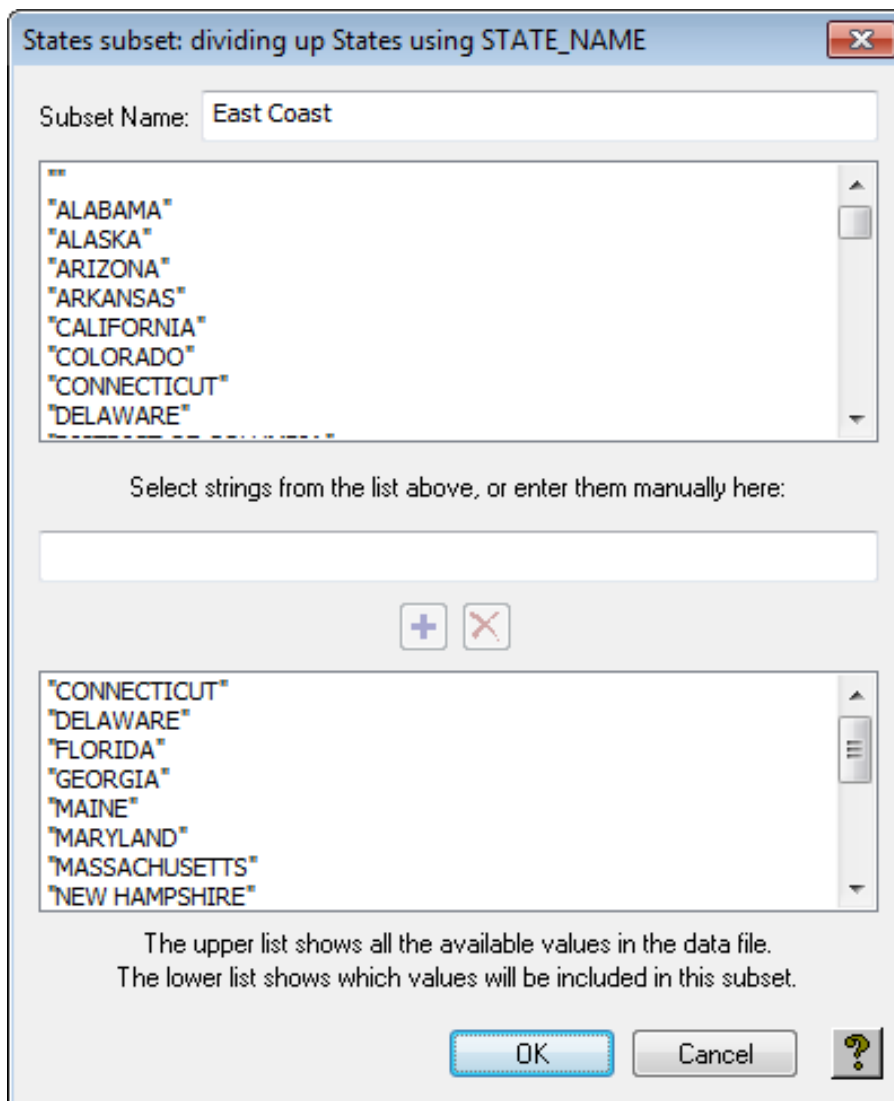
- The following dialog box displays a list of the available values for the specified field in the data file and allows you to select values to create the subset.
5. Select the values you want to use in the upper list and click the **+** button to add them to the lower list.
6. Hold down **SHIFT** to select multiple contiguous items, and **CTRL** to select multiple non-contiguous items. For example, to create a subset containing only the East Coast states you could select and add those.
7. Enter a name for the subset in the **Subset Name** field.
8. Click the **OK** button to save the subset definition.

14.1.4   To Define the Style for Data Layers or Subsets

You can define a separate style for each data layer or subset you have created, to distinguish them on the final map.

1. Select the data layer or subset in the **Edit Data Set** dialog box.
2. Select **Draw layer with selected style** from the **How to draw selected layer or subset** drop-down menu.
3. Select the styles for drawing the selected layer or subset, and the style for drawing individual features, in the lists on the right side of the **Edit Data Set** dialog box:
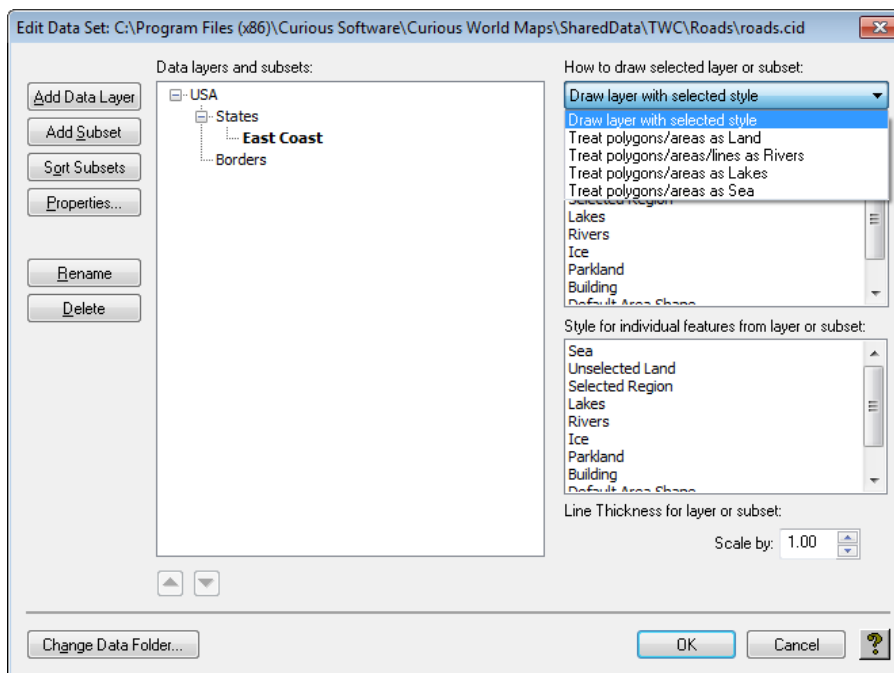
- Appropriate styles are listed in the **Style** lists depending on whether the type of the layer is Area, Line, or Point.
- Alternatively, select **Draw polygons/areas as Land**, **Draw polygons/area/lines as Rivers**, **Draw polygons/areas as Lakes** or **Draw polygons/areas as Sea** from the **How to draw selected layer or subset** drop-down menu to treat the selected layer in the same way as the built-in land, rivers, lakes or sea respectively.
- The **Scale by** box allows you to scale the line thickness defined by the style. For example, you can identify different types of roads by using the same **Primary Roads** style but different **Scale by** settings for the line thickness.

4. Enter a value to scale the line thickness and press the **RETURN** key.
5. Repeat for any other data layer or subsets.

See Also

- How to edit any of the styles using the Styles Editor in the Working with Styles section

14.2   Using ESRI Shape File Data

Once you have created a data set definition, you can use this to load the ESRI Shape File data with the attributes you have specified.

This section contains information on the following procedures:

- To Load a Data Set Definition
- To Load the Data
- To Use Imported Map Data
- To Add Labels to Imported Data Features

14.2.1   To Load a Data Set Definition
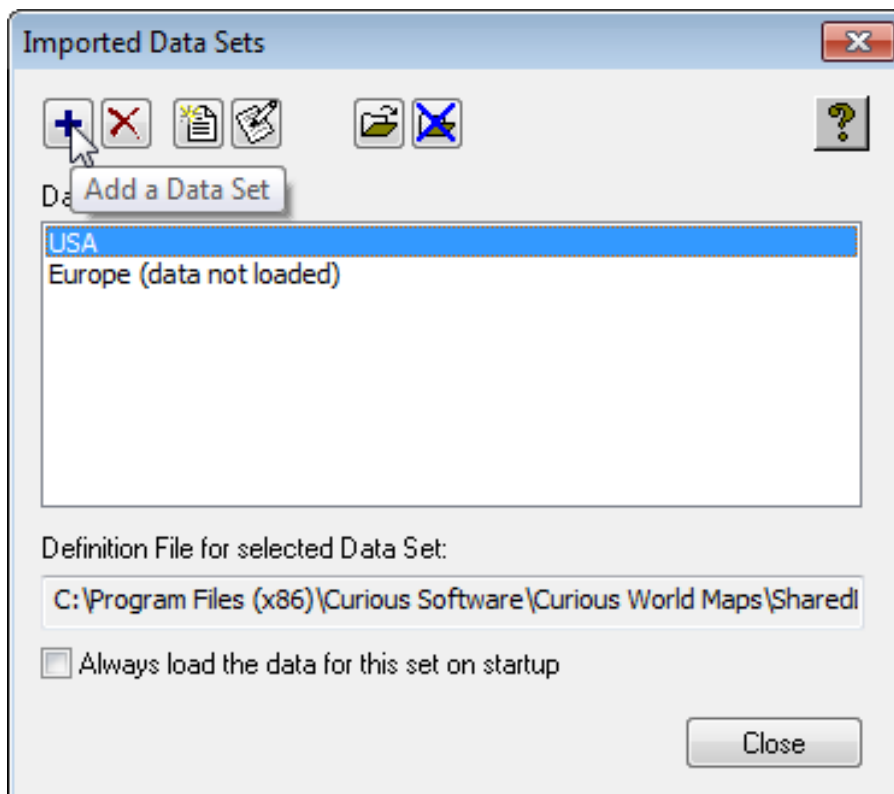
1. On the **Import** menu, click **Map Data (Shape files)...** and click the **Add a Data Set** button.
2. Select the data set definition file and click the **Open** button to load it. The data set is displayed in the **Data Sets** list.
3. Click the **Close** button to close the dialog box.

Once you have added a data set, it is remembered for future use of Viz World Classic, so there is no need to add the data set to the list every time you start the software. If you want the data for the data set to be loaded automatically on start-up you can select the **Always load the data for this set on startup** box.

14.2.2 To Load the Data

Adding a data set to Viz World Classic does not load the map data by default. This prevents very large data sets being loaded before you are ready to use them. You can instruct Viz World Classic to automatically load the data for a set, in the **Import Data Sets** dialog box (see how Using ESRI Shape File Data#To load a data set definition), or you can load the data manually when you need it as follows:

1. Click the **Imported Data** tab in the map layer's **Contents** panel to display the data sets you have imported. The data set definitions are shown in the left list.
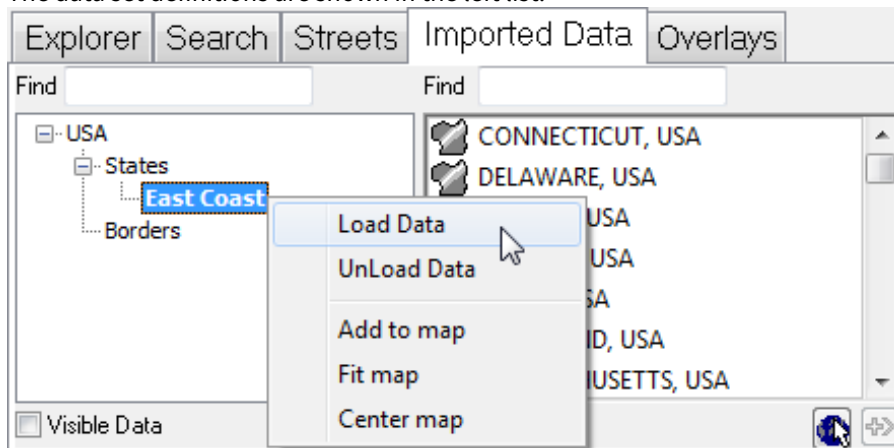
2. Click the data set you want to import with the right mouse button and select **Load Data** from the appearing context menu.

You can unload a data set (for example to free up some memory to load a different set) at any time by clicking the set with the right mouse button and choosing **UnLoad Data** from the appearing context menu.

14.2.3 To Use Imported Map Data

You can expand the tree to show the data layers and subsets for each data set.

1. Select the data layer or subset in the **Imported Data** list to show the features it contains.
2. Click each data layer, subset, or feature with the right mouse button and select **Add to map** from the appearing context menu, or click the **Add To Map** button to add it to the map layer.
   You can also search for imported features in the **Search** panel, in exactly the same way as for built-in map data.

14.2.4 To Add Labels to Imported Data Features

Initially the features in imported data are drawn unlabeled, but you can add labels to selected features to label them on the map just as you would with other map details.

1. Select the **Browse Imported Data** tool.
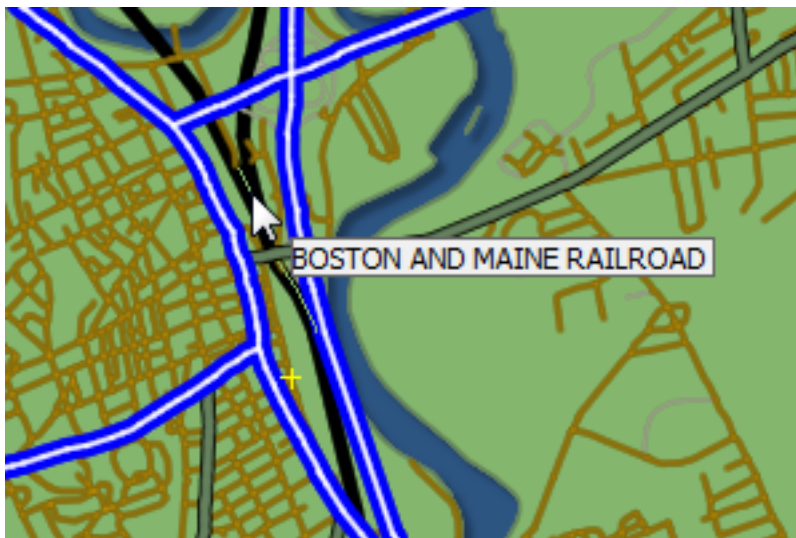
As you move this over the map the tool tip shows you the name of each imported data feature.
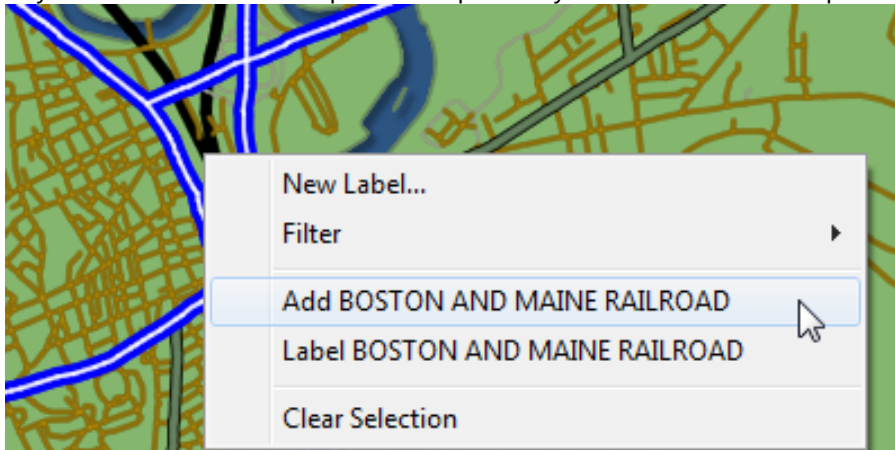
2. Right-click and from the appearing context menu click the appropriate label option.
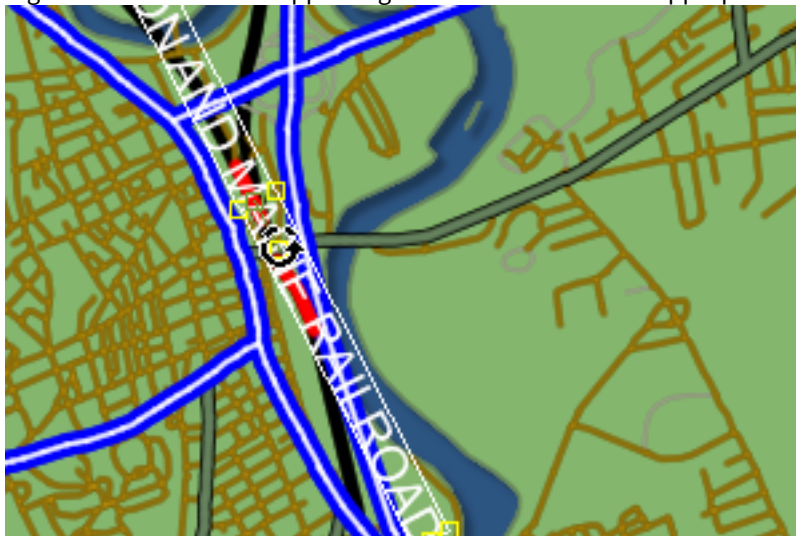
If you are labeling a street, the label is drawn aligned with the direction of the street. You can then use the Text tool to move or rotate the label as desired.

15 Adding Text to a Project

Each map detail you select in your project is automatically provided with a text label, pinned to the map. Viz World Classic also allows you to add independent text layers to the project, each containing one or more separate text items, with precise control over the appearance of each item and the way in which they are animated. For example, you could use a text object to add a title to the animation, add legends to graphics incorporated in the animation, or label map features not provided in the map database.

You could also use a text label to label a map detail instead of the default label provided with the detail, for greater control over its appearance and the way it is animated.

Viz World Classic allows you to use any of the TrueType fonts installed on your computer and supports text in many international character sets. You can change the font used in the Viz World Classic user interface to ensure that the international character set you are using is displayed correctly.

This section contains information on the following topics:

- Creating Text on a Text Layer
- Manipulating Text Items
- Editing Text
- Defining the Appearance of Text Items
- Animating Text Items
- Defining the Properties of the Entire Text Layer
- Defining the Text Layout

15.1 Creating Text on a Text Layer
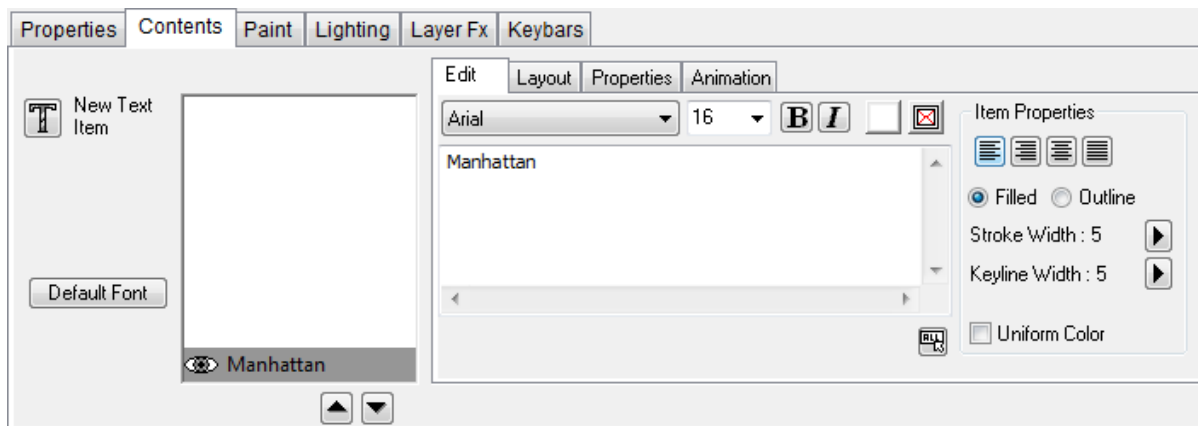
This section contains information on the following procedures:

- To Create Text on a Text Layer
- To Create Additional Text Items
- To Define the Default Text Properties

15.1.1 To Create Text on a Text Layer

1. On the **Layer** menu, point to **Add Layer**, and then click **Text**.
2. Click in the Viewer to define the position of the text item. Alternatively you can drag to define the width of the text item.
3. Type the text you want to add:
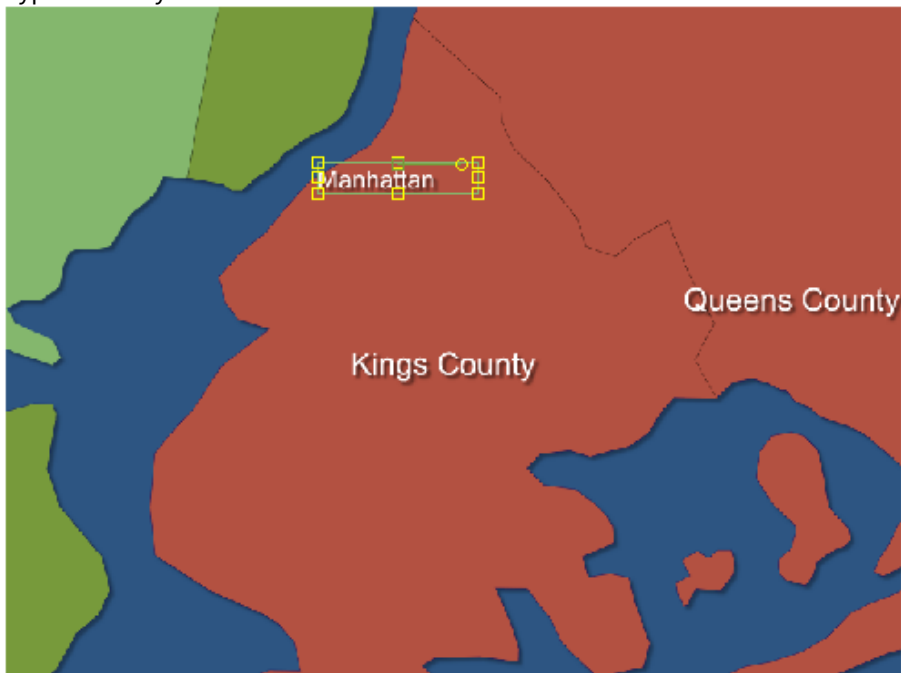
15.1.2   To Create Additional Text Items

1. Select the **New Text Item** tool on the Contents panel.
2. Click or drag in the Viewer and type the text. The text items are displayed in the text items list.

To enter international characters not shown on the keyboard, such as accented characters, use the standard procedure for your computer system. Once you have created one or more text items on a text layer you can edit them or change their appearance using the panels on the **Contents** panel.

15.1.3   To Define the Default Text Properties
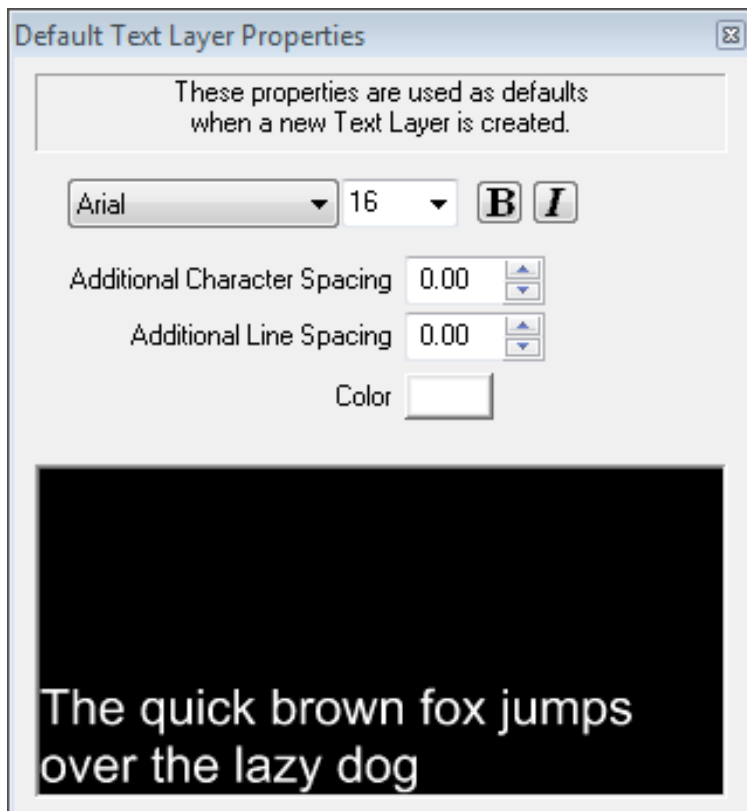
On the **Styles** menu, click **Default Text Properties**. The above dialog box allows you to specify the default font, size, style, spacing and color for new text layers.

15.2   Manipulating Text Items

15.2.1   To Move Text

1. Select the **Text** tool ( ) button in the toolbar. This tool is automatically selected when you create a new text item.
2. Drag the text by the position handle.

15.2.2   To Resize a Text Item

Drag one of the handles on each side of the text item. The text is wrapped to fit in the text item.

15.3 Editing Text

The options on the Edit panel (depicted above) allow you to edit the font, size, style, and color of selected characters, change the alignment of the text, and edit the stroke and keyline widths.

This section contains information on the following procedures:

- To Edit the Text
- To Specify Text Alignment
- To Create Outlined Characters
- To Add a Keyline around Characters

15.3.1 To Edit the Text

Either:

- Select by marking the characters you want to edit in the Viewer.

Or:

- Select the characters in the **Edit panel.**

Or:

- Select the entire text by clicking the **Select All** (⌨) button in the **Edit panel.**
- Select the font, size, style, fill color, and outline color using the controls at the top of the **Edit panel.**

15.3.2 To Specify Text Alignment

Click the appropriate button to the top right of the **Edit panel**.

15.3.3 To Create Outlined Characters

1. Select the **Outline** option.
2. Choose the stroke width from the **Stroke Width** pop-up menu. The character outlines are drawn with the specified stroke width in the fill/outline color.

You can specify the fill and keyline colors individually for each character in a text item. Alternatively selecting **Uniform Color** makes all the letters have the same color. When **Uniform Color** is selected the text color can be animated.

15.3.4   To Add a Keyline around Characters

1. Choose the keyline width from the **Keyline Width** pop-up menu.
2. Select the characters you want to edit in the Viewer, or on the **Edit** panel, and click the keyline color box to specify the keyline color for the selected characters.

With filled characters the keyline is drawn as an outline around the characters:

With outlined characters the keyline is drawn as a double line around the outlines.

15.4 Defining the Appearance of Text Items

The options on the Properties panel allow you to specify, the appearance of individual text items, including the compositing options, spacing, transformation, drop shadow, frame, or animation trail:
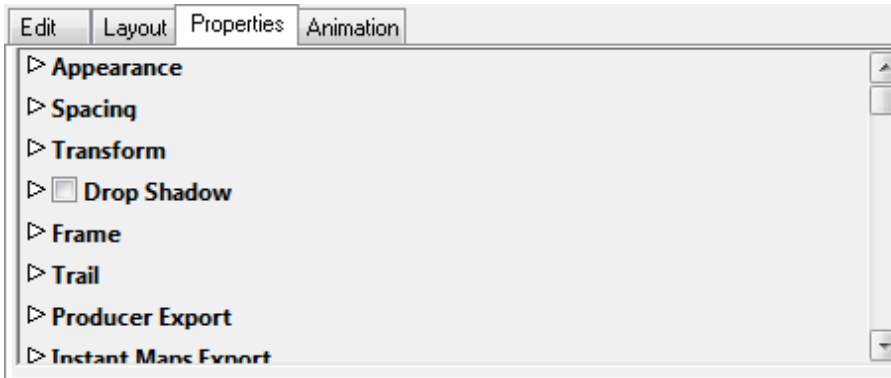
This section contains information on the following topics:

- Appearance Options
- Spacing Options
- Transform Options
- Drop Shadow Options
- Frame Options
- Trail Options
- Instant Maps Export

15.4.1 Appearance Options
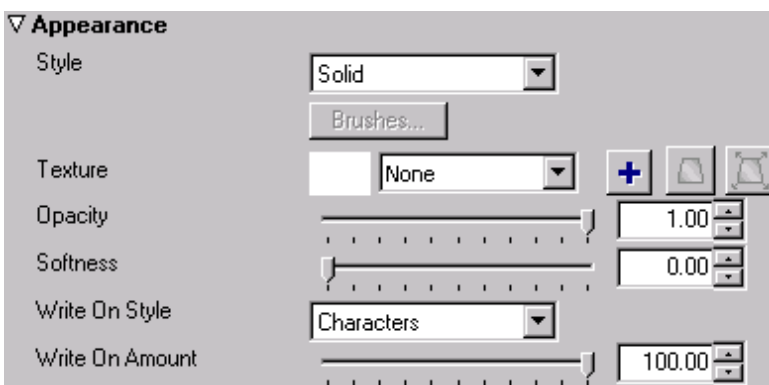
The **Appearance** options allow you to specify the rendering style of the text, apply a texture to the text, and animate its writing.

To fill the text with a texture choose **Solid** from the **Style** pop-up menu, and click the **+** button to select an image file for use as the texture:

Use the **Opacity** and **Softness** controls to adjust the opacity of the text, and blur the edges of the text.

The **Write On** options (text layers only) allow you to animate the way in which the text appears, to cause it to appear to be typed on as the animation progresses.

- Choose **Characters** from the **Write On Style** pop-up menu to make the text appear character by character, or **Words** to make it appear word by word.
- Set the **Write On Amount** to `0` at the frame where you want the animation to begin, and to `100` at the frame where you want the animation to end.

15.4.2   Spacing Options

The **Spacing** options allow you to adjust the character and line spacing for the text item.

15.4.3   Transform Options
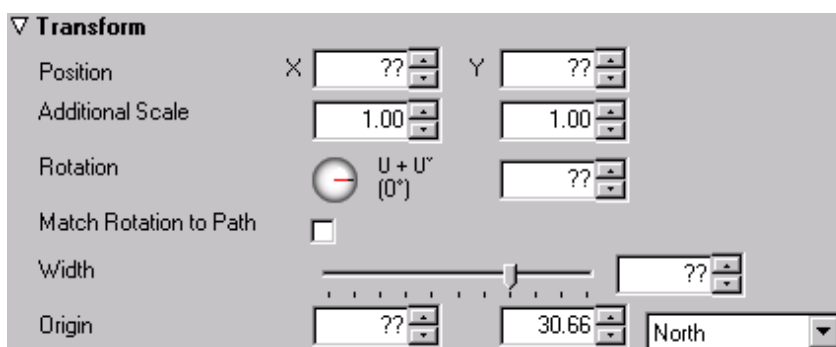
The transform options allow you to specify the position, scale, rotation, and origin numerically. The **Origin** determines the point about which the text item is rotated or scaled, and defaults to **North**, or the top center of the text item.

Choose one of the predefined options from the Origin pop-up menu, or edit the X and Y origin values to specify the origin in pixels relative to the lower left corner of the text item.

15.4.4   Drop Shadow Options
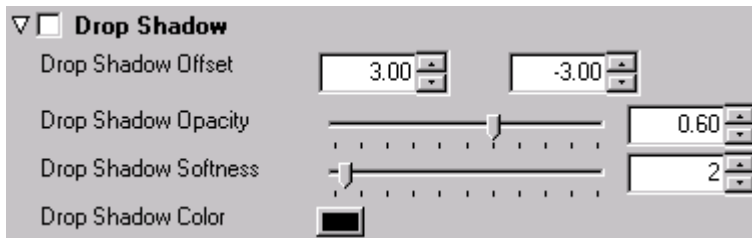
Select **Drop Shadow** to turn on a drop shadow for the text item. The following parameters are provided:

Parameter	Description
Offset	The offset of the drop shadow, in pixels.
Opacity	The opacity of the drop shadow. `0%` gives no drop shadow.
Softness	Blurs the drop shadow to smooth the edges. Values in the range `0-5` are recommended.
Color	The color of the drop shadow.

15.4.5   Frame Options
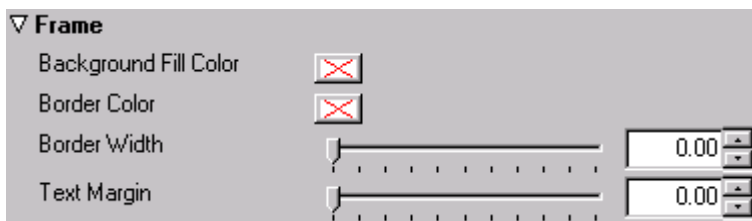
Allows you to add a colored fill, and/or border to the text item.

Border Width specifies the width of the border in pixels.

15.4.6   Trail Options
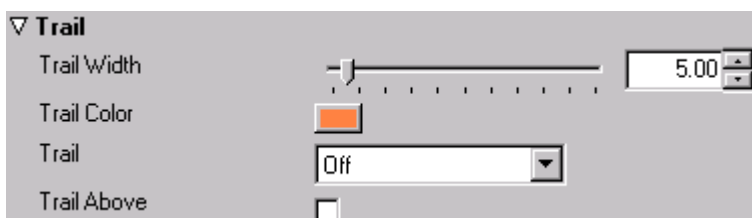
The **Trail** options allow you to leave a trail as the text item animates.

15.4.7 Instant Maps Export
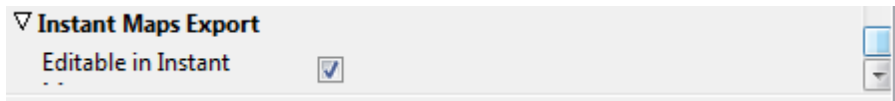
Allows you to make maps available to the Viz World Instant Map tool.

See Also

- Leaving an Animation Trail

15.5   Animating Text Items
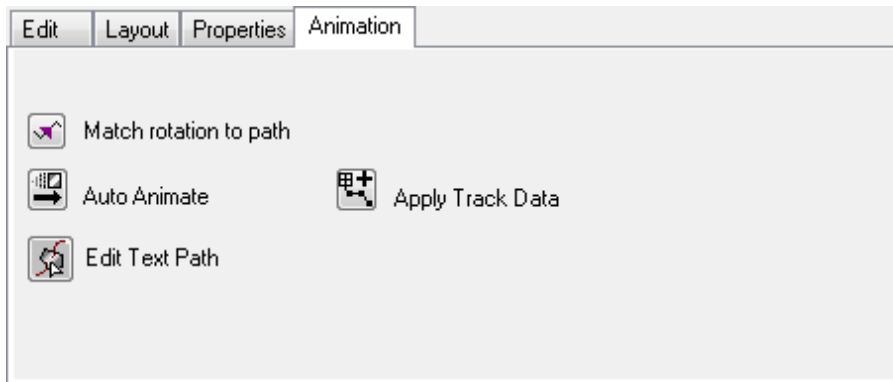
The options on the **Animation** panel allow you to animate text items on text layers.

See Also

- **Match rotation to path** and how To Align the Image, Text Item, or Drawing to the Angle of the Animation Path
- **Auto Animate** and Automatically Animating a Layer
- **Edit Text Path** and Animating an Image, Movie, Text Item, or Drawing Along a Path
- Creating Tracking Paths

15.6   Defining the Properties of the Entire Text Layer
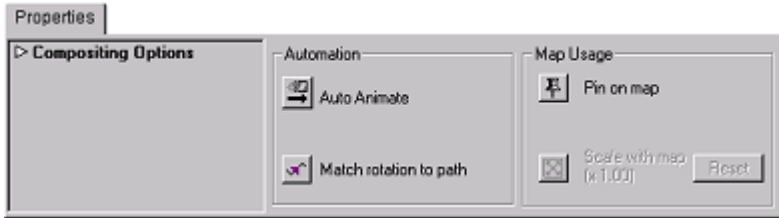
In addition to being able to define the properties of individual text items, the **Properties** panel allows you to edit properties for an entire text layer.

15.6.1   Compositing Options

Blend Mode specifies how the layer is combined with the other layers, and can be one of:

- Normal
- Add/Subtract
- Difference
- Multiply
- Darken Only
- Burn/Color Burn
- Screen
- Lighten Only
- Dodge/Color Dodge
- Hue
- Saturation
- Value
- Color
- Overlay
- Soft/Hard/Pin Light
- Exclusion
- Negation.

The **Opacity** determines the layer opacity, and can be animated.

15.6.2   Animation Options

Allows you to animate the entire text layer. The options are the same as for individual text items.

15.7   Defining the Text Layout
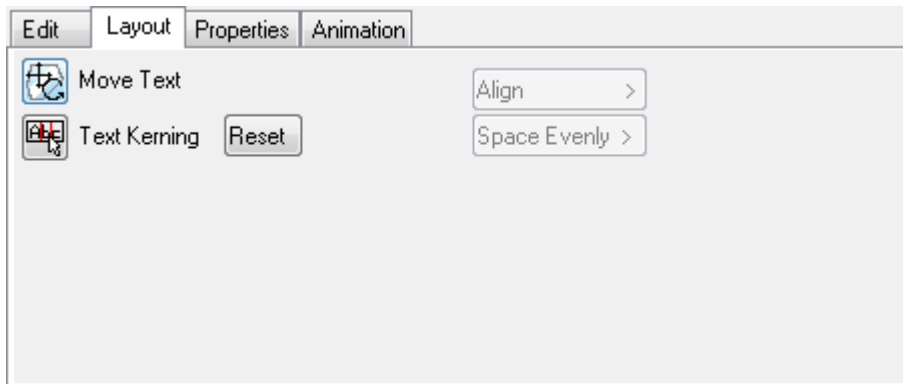
The options on the **Layout** panel (depicted above) allow you to move, scale, or rotate a text item, adjust the kerning, or align or space evenly multiple text items.

This section contains information on the following procedures:

- To Move a Text Item
- To Scale Text
- To Rotate Text
- To Adjust the Letter Spacing
- To Align Several Text Items
- To Space Several Text Items Evenly

15.7.1   To Move a Text Item

1. Select the **Move Text** tool ( ) button.
2. Position the mouse pointer within the text item.
3. Drag the text item to the new position:
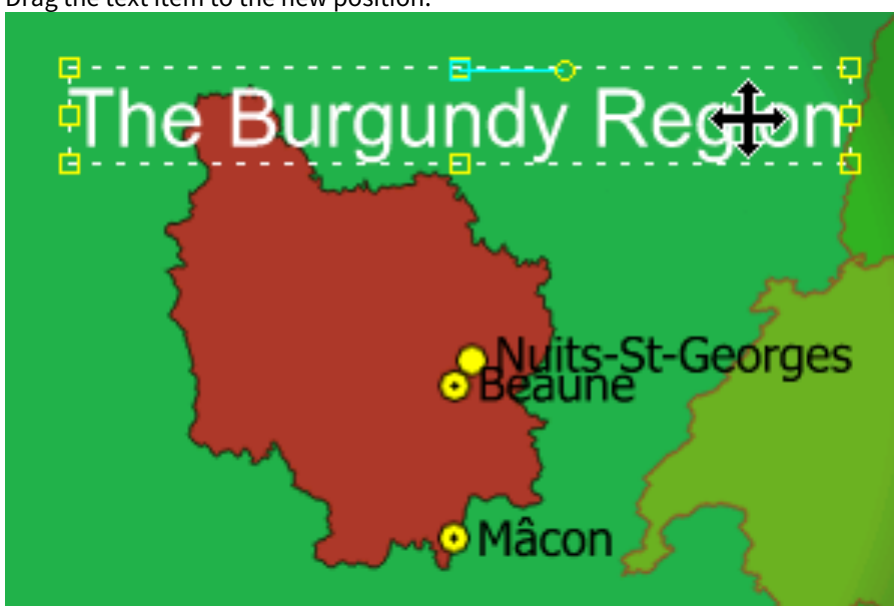
This allows you to move a text item even if the position handle is out of view.

15.7.2   To Scale Text

1. Select the **Move Text** tool () button.
2. Drag one of the handles on the border of the text item:

3. Drag while holding down **CTRL** to scale the text proportionally.

15.7.3   To Rotate Text

1. Select the **Move Text** tool () button.
2. Point to the rotation handle, the yellow circle to the right of the center of the text item.
3. Drag the handle to rotate the text item about its center:

15.7.4   To Adjust the Letter Spacing

1. Select the **Text Kerning** tool. The Viewer indicates the position of each character by a marker on the baseline:

2. Drag a marker to the left or right to adjust the spacing between the corresponding characters.
3. When you have finished kerning the text, click the **Text Kerning** tool again.

✅ **Tip:** You can reset the default kerning of the text by clicking the **Reset** button.

15.7.5   To Align Several Text Items
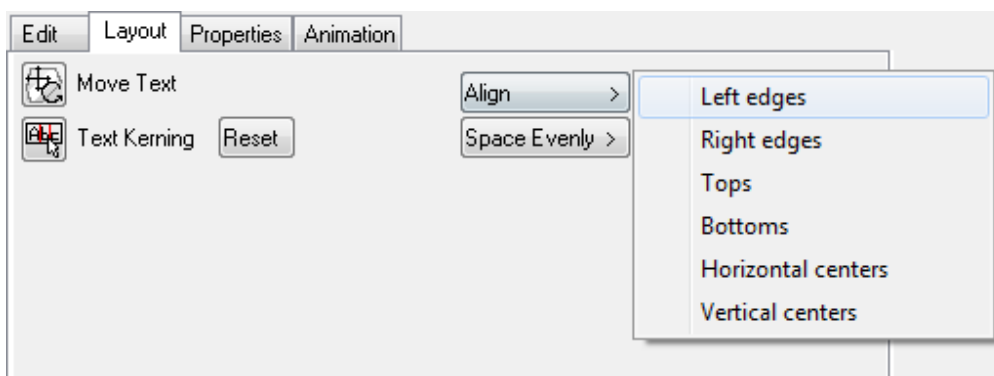
1. Select at least two text items in the list, using **SHIFT** to select multiple items.

2. Choose the appropriate alignment option from the **Align** context menu (see above).

15.7.6 To Space Several Text Items Evenly
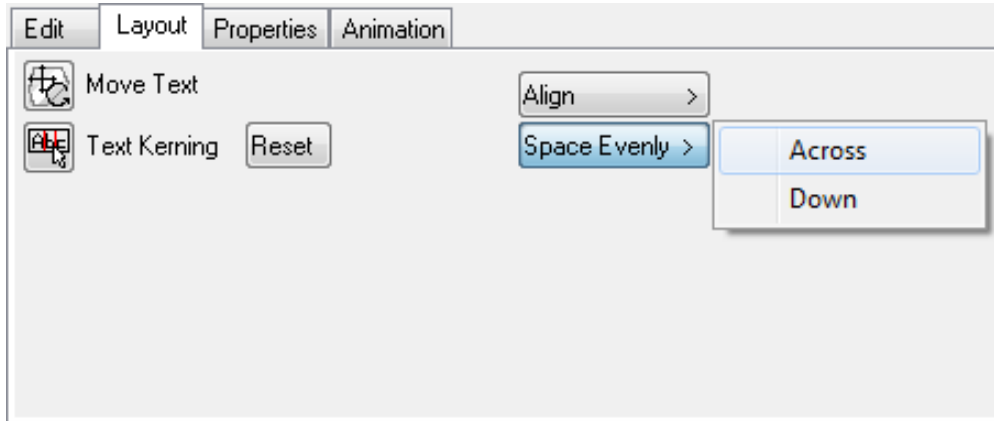
1. Select at least three text items in the list, using **SHIFT** to select multiple items.
2. Choose the appropriate alignment option from the Space Evenly context menu.

16 Working with Cutouts

Viz World Classic allows you to cut out a selected area from the Viewer to create an image overlay called a cutout. You can use a cutout to paint onto an image or its mask, or you can convert one or more cutouts to a new image/ movie layer.

This chapter contains information on the following topic(s):

- Creating Cutouts
- Moving and Transforming Cutouts
- Defining the Appearance of Cutouts

16.1 Creating Cutouts
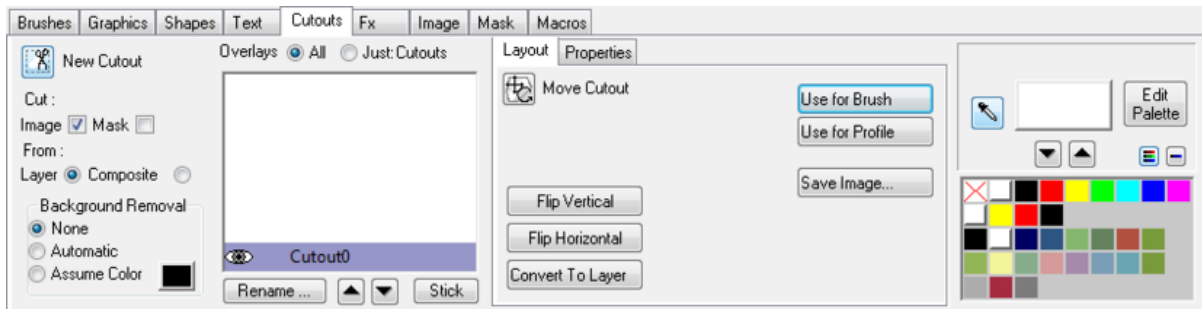
16.1.1 To Cut a Section of an Image

1. Select **Cut: Image**.

2. Select the **New Cutout** tool ( ) button.

3. Select **From: Layer** to create a cutout from just the current layer, or **From: Composite** to create a cutout from the composited layers.

4. Drag to draw a rectangle defining the size of the cutout you want to create:

The cutout is displayed in the Overlay list on the Cutouts panel:
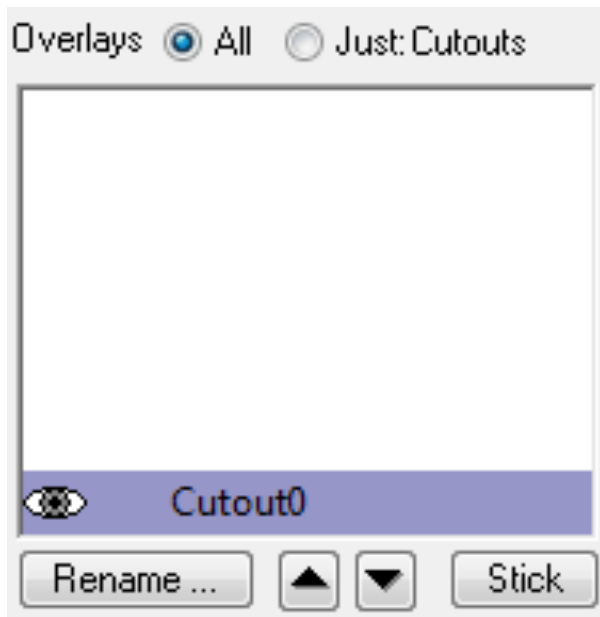
5. You can then drag the cutout to displace it from the original image, or display it on another layer:

16.1.2   To Cut an Object Defined by a Mask

1. Draw a mask over the part of the image you want to cut out:

For more information see Specifying the Brush Settings.

2. Select **Cut: Image** and **Cut: Mask**.

3. Select the **New Cutout** ( ) tool button. Selecting **Cut: Mask** uses the image's mask to cut out the image from its background.

4. Drag to draw a rectangle defining the size of the cutout you want to create, enclosing the image:

The **Move Cutout** tool is automatically selected so you can drag the cutout to see it independently of the original image:

The cutout is available to any other layers in the project:

When using **Cut: Mask**, the **Background removal** options can be used to remove edge effects around the mask.

Assume Color allows you to specify a color to be removed from the edge of the mask, and **Automatic** uses the average color within the cutout rectangle, but outside the mask.

16.1.3 To Create a Cutout Using the Magic Wand Tool

If the feature you want to cut out is clearly distinguished from its background, you can use the **Magic Wand** tool to mask the feature, and then create a cutout using the mask.

1. On the **Graphics** panel click the **Magic Wand** tool:
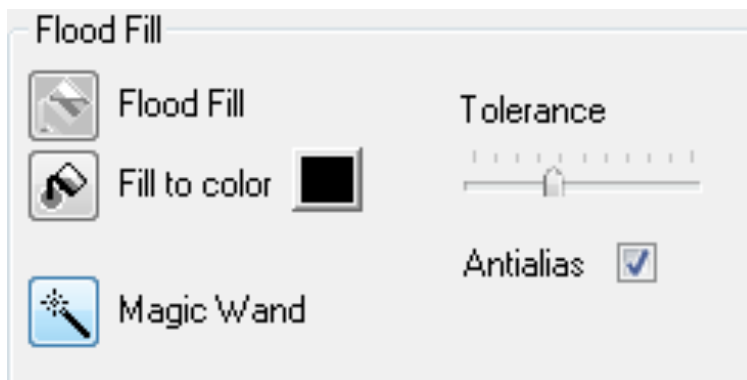
Display Mask is automatically selected in the paint controls to show the mask when you create it.

2. Click the feature you want to mask. If necessary, adjust the **Tolerance** control and click again with the **Magic Wand** tool until the feature is completely masked:

3. On the **Cutouts** panel select **Cut: Image** and **Cut: Mask**.
4. Select the **New Cutout** tool.
5. Drag to draw a rectangle enclosing the feature:

6. Drag the cutout to see it independently of the original image:
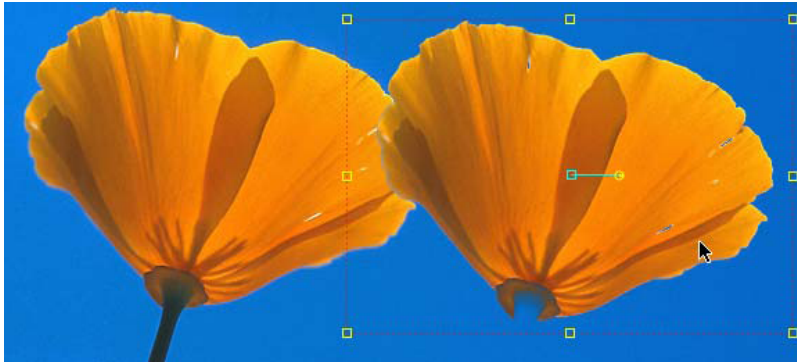
16.1.4   To Stick a Cutout to an Image/Movie Layer

1. Select the cutout in the **Overlay** list.
2. Click the **Stick** button.

16.2   Moving and Transforming Cutouts

The options on the **Layout** panel allow you to move, scale, or rotate cutouts, or use them in other ways:

16.2.1   To Move a Cutout

Select the **Move Cutout** tool. You can then move, scale, or rotate the cutout in exactly the same way as for images; see Moving, Resizing, or Rotating an Image.

16.2.2   To Flip a Cutout about the Vertical or Horizontal Axis

Click the **Flip Vertical** or **Flip Horizontal** button.

16.2.3   To Convert a Cutout to a Layer

1. Select the cutout in the **Overlay** list.
2. Click the **Convert to Layer** button. A new image/movie layer is created, above the current layer, containing the cutout.

16.2.4   To Use a Cutout for a Brush or Profile

Click the **Use for Brush** or **Use for Profile** button. The cutout appears in the **Brushes** or **Profile** list on the **Brushes** panel.

16.2.5   To Save a Cutout as an Image

Click the **Save Image**... button. You can save it in any of the standard image formats.

See Also

- Moving, Resizing, or Rotating an Image
- To Load a Cutout for Use as a Brush or Profile

16.3   Defining the Appearance of Cutouts

The options on the **Properties** panel allow you to define the style, opacity, and softness of cutouts, add a drop shadow, and specify a transformation numerically:
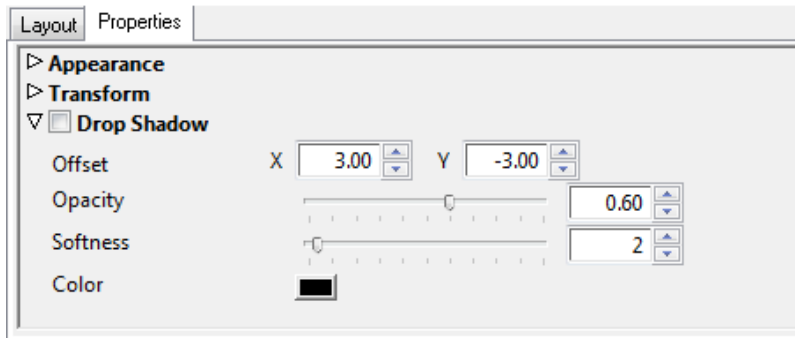
16.3.1   Appearance Options
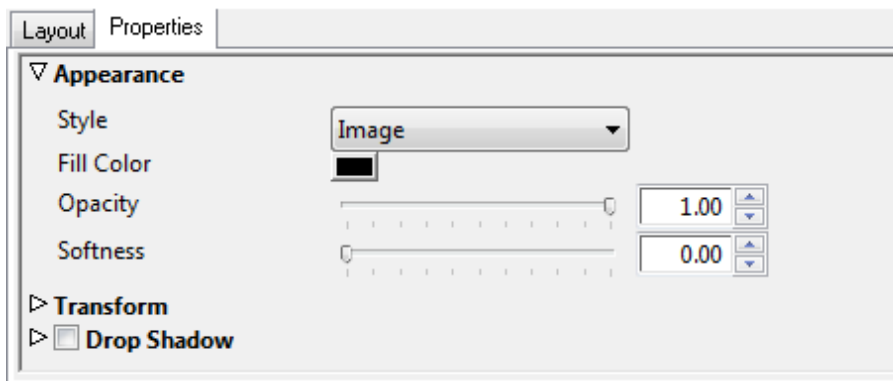
The **Appearance** options allow you to specify the style of the cutout, and change its opacity or softness. Set the **Style** to **Color** to convert the cutout to a solid color, and use **Fill Color** to define the color. This is useful for creating shadows.

16.3.2   Transform Options
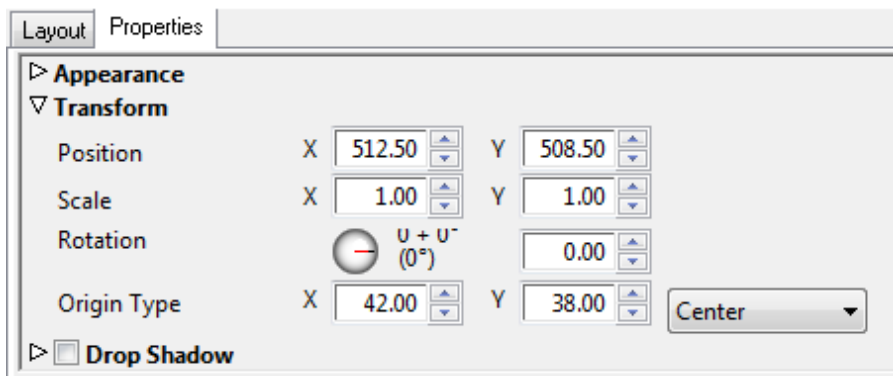
These allow you to specify the position, scale, rotation, and origin numerically. The **Origin** determines the point about which the cutout is rotated or scaled, and defaults to **Center**.

Either:

- Choose one of the predefined options from the **Origin** context menu.

Or:

- Edit the **X** and **Y** origin values to specify the origin in pixels relative to the lower left corner of the cutout.

16.3.3 Drop Shadow Options
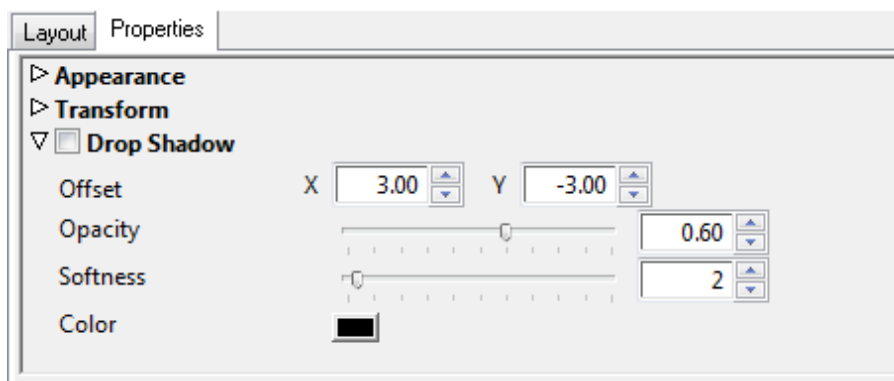
Select **Drop Shadow** to turn on a drop shadow for the cutout.

The following parameters are provided:

- **Offset:** Sets the offset of the drop shadow, in pixels.
- **Opacity:** Sets the opacity of the drop shadow. 0% gives no drop shadow.
- **Softness:** Blurs the drop shadow to smooth the edges. Values in the range `0-5` are recommended.
- **Color:** Determines the color of the drop shadow.

17   Lighting and Effects

Viz World Classic includes sophisticated lighting features and effects, to enable you to add shading and depth to your map animations, and give them a unique and distinctive appearance.

This section contains information on the following topics:

- Using Lighting
- Setting the Lighting Options
- Changing the Position, Size, or Angle of the Light
- Animating a Light
- Using Style Lights
- Add Image Effects to a Layer

17.1   Using Lighting

Each of the map, image, text or shape layers in your project can include one or more lights which you can use to focus the viewer's attention, or add depth and perspective to the animation. Three different types of light are provided, and you can use these either individually or in combination to achieve a wide range of different effects.

- **Highlight:** Gives the appearance of a light reflecting from a shiny surface.

- **Spotlight:** Casts a concentrated disc of light, with areas outside the beam remaining dark.
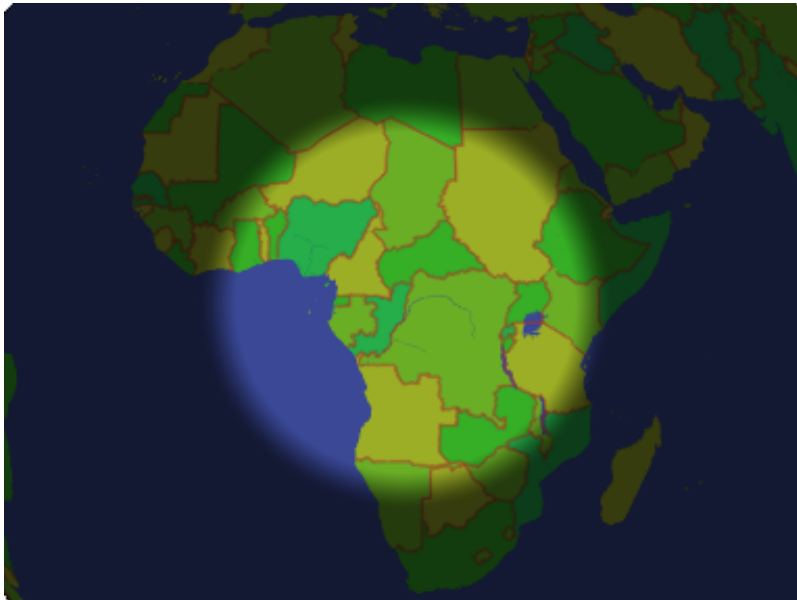
- **Diffuse light:** Casts a diffuse disc of light, falling away gradually to the edges. For each type of light you can adjust the size and shape of the beam, the position, brightness, and color of the light.

- **Combining lights:** Impressive effects can be achieved by combining two or more lights on a single layer. For example, the image above uses a highlight combined with a diffuse light.

17.2   Setting the Lighting Options
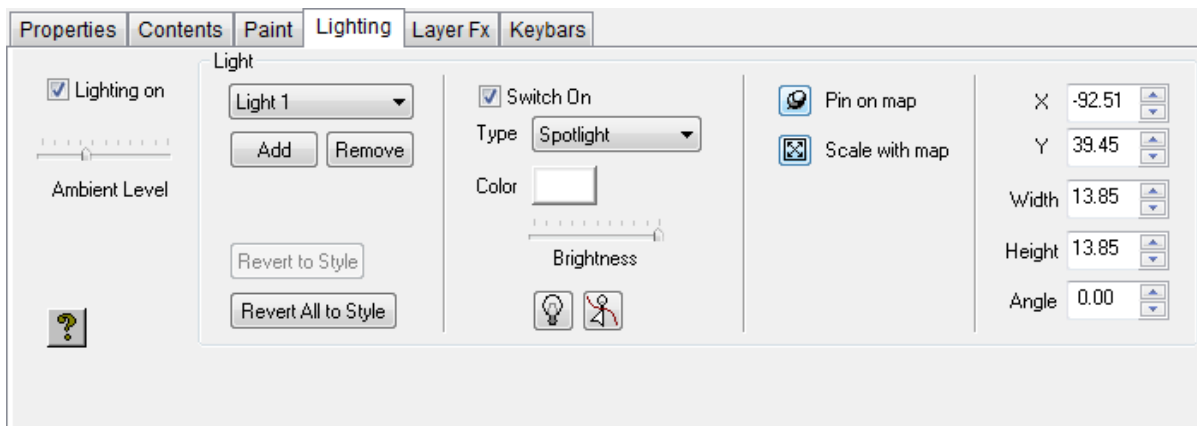
The Lighting panel allows you to create and edit the lights on each layer.

17.2.1   To Add a Light to a Layer

1. Select the layer and click the **Lighting** tab to display the lighting options for the layer. Initially lighting is turned off, and no lights are defined.
2. Select **Lighting on** to turn lighting on for the layer.
3. Click the **Add** button to add a light to the layer. A new light is created with a default name, such as *Light1*.
4. Choose **Highlight**, **Spotlight**, or **Diffuse** from the **Type** drop-down menu to specify the type of light.
5. Use the **Brightness** control to adjust the brightness of the light.
6. Use the **Ambient Level** control to adjust the background light level. This determines the brightness of parts of the layer that are not directly illuminated by one of the lights.

For map layers:

- Click the **Pin on map** or **Scale with map** buttons to move and/or scale the light as the map layer is moved or zoomed.

17.3   Changing the Position, Size, or Angle of the Light

When you add a light, the **Light** ( ) tool is selected in the Lighting panel to allow you to move, scale, or rotate the light. The extent of the light is shown as a circle:

17.3.1   To Move the Light

Position the mouse pointer anywhere within the circle and drag the light to the required position.

17.3.2   To Change the Size of the Beam

Drag the outline of the surrounding circle.

17.3.3   To Stretch the Beam in One Direction

Drag the light by one of the four handles on the surrounding circle:

17.3.4   To Change the Angle of the Light

Drag the handle extending from the center of the circle:

17.3.5   To Specify the Parameters of a Light Numerically

Edit the **X**, **Y**, **Width**, **Height**, and **Angle** values in the Lighting panel.

17.4   Animating a Light

The **Light Path** tool ( ) allows you to manipulate the animation path along which a light is animated.

See Also

- Animating an Image, Movie, Text Item, or Drawing Along a Path

17.5   Using Style Lights

You can make a particular combination of lights part of your house style by defining the lights in the **Lighting** panel of the **Styles Editor**. Any lights you define there are automatically applied to each map layer, with the names **Style light 1**, **Style light 2**, etc.

You can modify the characteristics of each style light within a particular layer to override the settings defined in the style sheet.

17.5.1   To Revert Style Lights to Stylesheet-defined Settings

Click the **Revert to Style** or **Revert All to Style** buttons in the **Lighting** panel for the layer.

17.6   Add Image Effects to a Layer
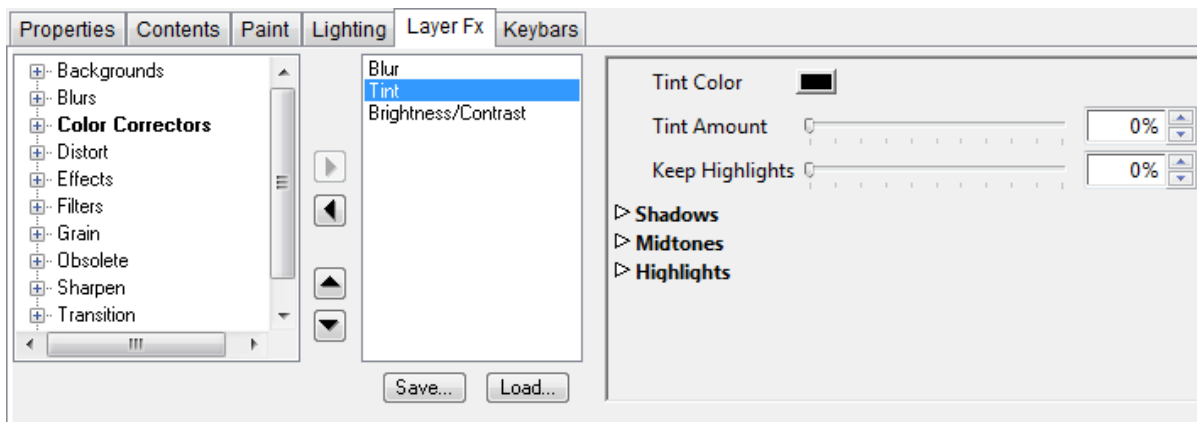
17.6.1   To Apply One or More Image Effects to a Layer

1. Select the layer.
2. Click the **Layer Fx** tab to display the **Layer Fx** panel for the layer.

Every parameter of an effect can be animated. For more information see the Using the Keybars Panel section.

17.6.2   To Add an Effect to a Layer

1. Click the arrow symbol to the left of a heading in the effects list to expand the list, and show the effects under that heading.
2. Select the filter and click the **right arrow** button to add it to the right-hand list of effects to be applied to the layer.

Each effect displays a set of controls to allow you to adjust its parameters.

17.6.3   To Determine the Order of Effects

The order of effects in the list determines the order in which they are applied. Select an effect in the right-hand list and click the **UP ARROW** or **DOWN ARROW** buttons to move it up or down in the list.

17.6.4   Layer Fx

The following layer effects are available:

Blur

- **Softness:** Softens the layer, giving it an out-of-focus appearance.
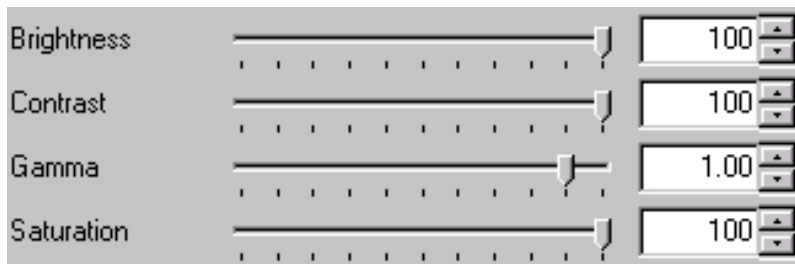
Brightness/Contrast

- **Brightness:** Adjusts the brightness, where `0.00` corresponds to normal brightness.
- **Contrast:** Adjusts the contrast of the layer, where `0.00` corresponds to normal contrast.
- **Gamma:** Adjusts the gamma of the layer, where `0.00` corresponds to normal gamma.
- **Saturation:** Adjusts the color saturation of the layer, where `0.00` corresponds to normal saturation.
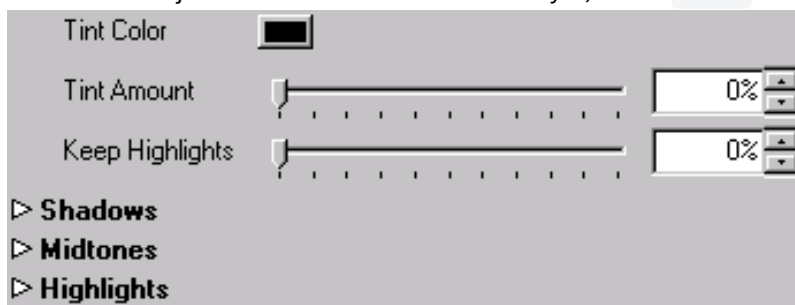
Tint

Applies a tint color to the layer. The **Tint Amount** control allows you to adjust the degree of the tint.

18   Controlling Animation

This section explains how to use the time slider to control the progress of an animation. It also describes how to use the Automatic Animation tool to set up impressive animations with a few simple clicks, and the Keybars panel to provide individual control over each component of a project.

This section contains information on the following topics:

- Using the Animation Controls
- Automatically Animating a Layer
- Using the Keybars Panel
- Getting Natural Motion
- Displaying Detailed Information About a Feature
- Animating an Image, Movie, Text Item, or Drawing Along a Path
- Leaving an Animation Trail

18.1 Using the Animation Controls

The Animation controls allow you to choose which frame of the animation you are editing, and let you preview the finished project.

This section contains information on the following procedures:

- To Specify the Time Display Format
- To Move to a Specific Frame
- To Move Frame by Frame
- To Move to the Start or End of the Animation
- To Move to the Next or Previous Key
- To Expand the Slider Scale
- To Show the Whole Project
- To Select Continuous Playback

18.1.1 To Specify the Time Display Format

Choose the format as follows:

- **Format:** Description
- **Timecode:** Hour:Minute:Second:Frame.
- **Frames:** Frame number.

18.1.2 To Move to a Specific Frame

Either edit the Current frame field:

Or drag the time slider until the appropriate frame is displayed in the Current frame field:

18.1.3 To Move Frame by Frame

Click the **Step back** or **Step forward** buttons.

18.1.4 To Move to the Start or End of the Animation

Click the **Start** or **End** buttons.

18.1.5   To Move to the Next or Previous Key

K **>|** Click the **Next Key** or **Previous Key** button in the Animation controls.

> ✅ **Tip:** A key is a frame in which one or more properties have been edited.

18.1.6   To Expand the Slider Scale

1. Click the **Range…** button.
2. Select **Part of project**, and specify the **Start** time, and the **End** time or **Duration**, of the section of the project you want to work on:
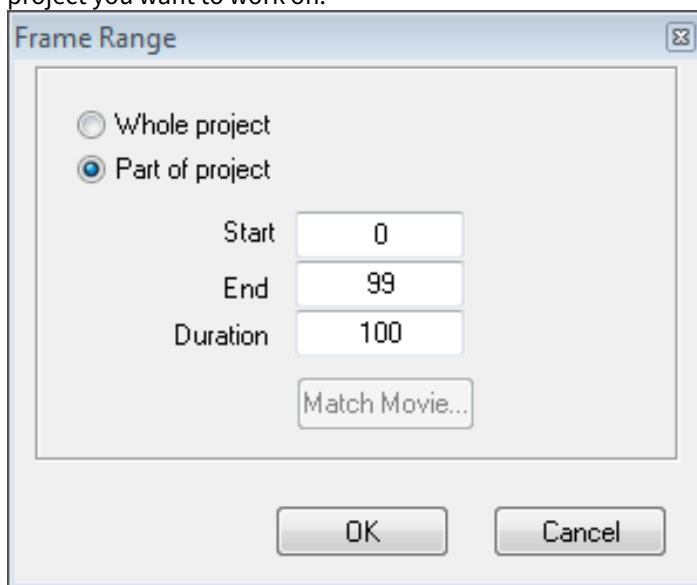
3. Click the **OK** button.

18.1.7   To Show the Whole Project

- Click the **Slider Range** button.
- Select **Whole project** and click the **OK** button.

18.1.8   To Select Continuous Playback

- Click the **Loop Play** ( ) button to play repeatedly, restarting at frame 0 after the last frame.
- Click the **Bounce Play** ( ) button to play continuously, alternately forward and backwards.

18.2   Automatically Animating a Layer

Viz World Classic includes an automatic animation tool, to make it easy for you to add animation to any layer of your project.

It provides the following animations:

- **Slide:** Allows you to slide the layer on and/or off in any direction horizontally, vertically, or diagonally.
- **Fade:** Allows you to fade the layer on and/or off.
- **Write on:** In addition, for text layers, you can animate the text so that it writes on, in characters or words.

This section contains information on the following procedures:

- To Automatically Animate a Layer
- To Animate the Position of the Layer
- To Animate the Opacity of the Layer
- To Animate the Writing of Text

18.2.1   To Automatically Animate a Layer

Click on the **Layer** ( ) button to select the layer you want to animate.

Either:

- On the **Layer** menu, click **Auto Animate**.

Or:

1. Click the **Properties** tab to display the **Properties** panel for the layer.
2. In the **Automation** section click the **Auto Animate** button:
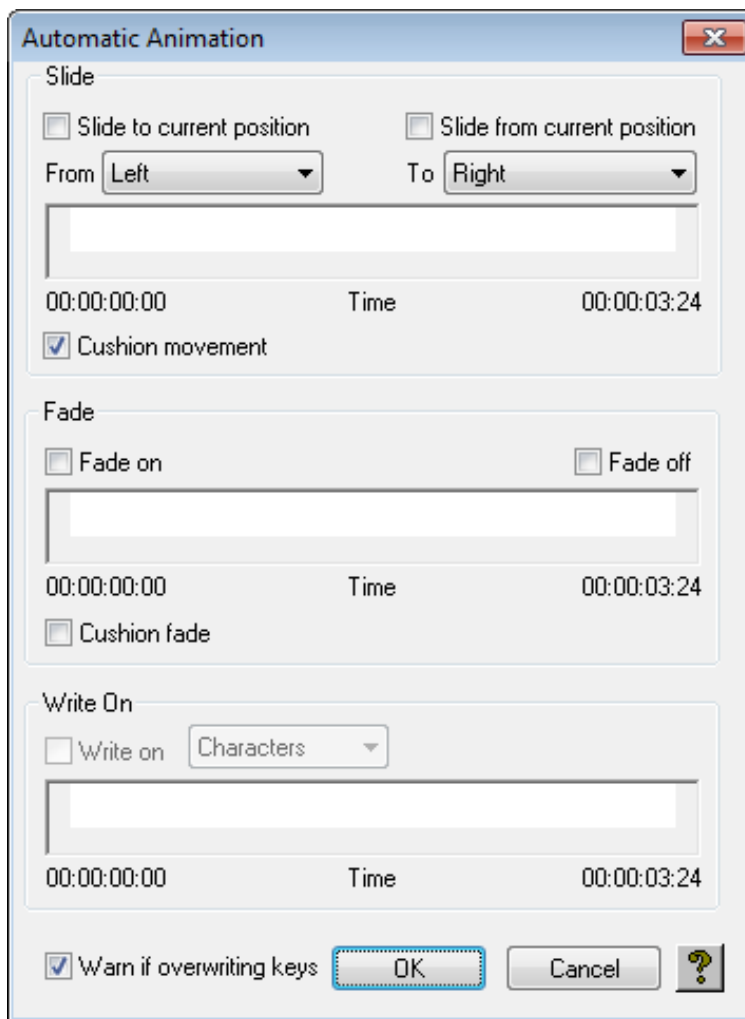
The Automatic Animation dialog box is displayed to allow you to specify how you want the layer to be animated:

18.2.2   To Animate the Position of the Layer
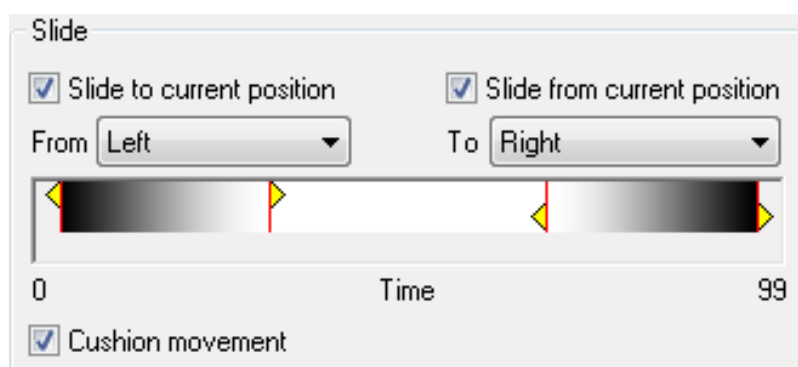
1. Select **Layer** from the main menu and then **Add Layer** > **Map.**
2. Select the **Properties** tab and click the **Auto Animate** button.
3. In the Slide frame select **Slide to current position** and/or **Slide from current position** and choose the direction of the slide from the **From** and/or **To** drop-down menus.

4. Drag the keys on the time scale to adjust the extent of the slide. In the central white section, the layer is static at its current position, and in the black sections to the left of the first key or to right of the last key the entire contents of the layer are outside the image layer.
5. Select **Cushion movement** to include a smooth run-in and run-out.

18.2.3   To Animate the Opacity of the Layer
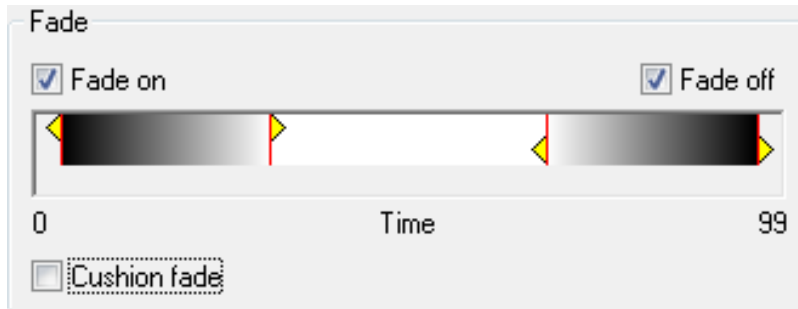
1. Select **Layer** from the main menu and then **Add Layer** > **Map.**
2. Select the **Properties** tab and click the **Auto Animate** button.
3. Select **Fade on** and/or **Fade off.**
4. Drag the keys on the time scale to change the rate the fade occurs. The white central area corresponds to 100% opacity and the black regions to the left of the first key and to the right of the last key correspond to 0% opacity.
5. Select **Cushion fade** to include a smooth run-in and run-out.

18.2.4   To Animate the Writing of Text
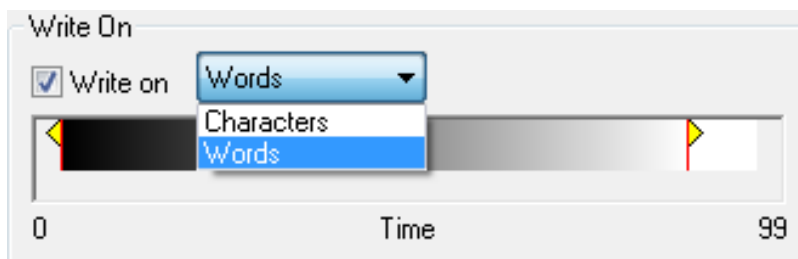
1. Select **Layer** from the main menu and then **Add Layer** > **Text.**
2. Select the **Contents** tab and enable the **New Text Item** button and add a text to the layer.
3. Click the **Animation** tab and click the **Auto Animate** button.
4. Select **Write on**, and choose **Characters** or **Words** from the drop-down menu to specify how the text should be written.
5. Drag the keys on the time scale to determine the rate at which the text is written on:
   The white section to the right of the right most key corresponds to all the text written on, and the black section to the left of the left most key corresponds to 0%.
6. Click the **OK** button to set up the animations you have specified for the layer.

Auto animate automatically sets up the **Opacity**, **Position**, and **Write on** amount (text layers only).

18.3 Using the Keybars Panel
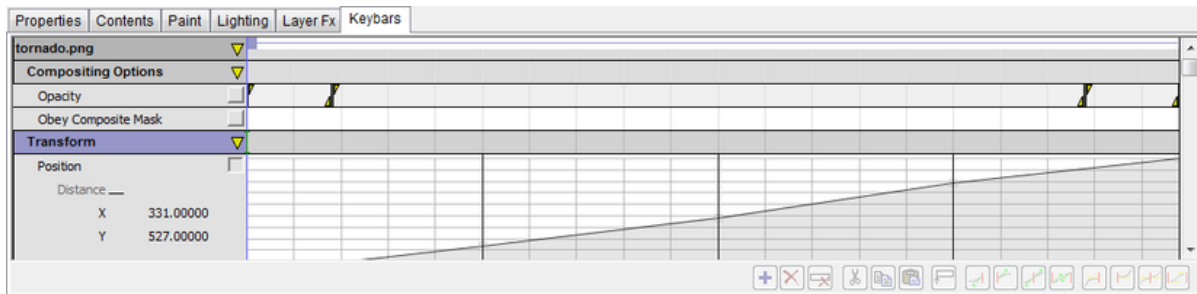
For each layer in a project, the **Keybars** panel shows a keybar for each of the features that can be animated, grouped into categories such as **Compositing Options**, **Transform**, **Drop Shadow**, and **Trail**. You can click the arrow to the right of each layer or category heading to collapse it into a single bar, or expand it to show the keybar for each feature.

The animations in each layer are summarized in an overview bar, and this allows you to move or scale the whole layer's animation in a single operation.

Each category also provides an overview bar, and you can use this to scale or move all the animations in that category.

In image layers containing a movie the overview bar also shows the extent of the movie, and you can drag this to change the start time of the movie.

This section contains information on the following procedures:

- To Display the Keybars List
- To Collapse or Expand the Keybars List
- To Move the Animation for a Layer or Category
- To Scale the Animation for a Layer or Category
- To Add a Key
- To Change the Position of a Key
- To Cut, Copy, Paste, or Delete a Key
- To Delete All Keys on a Keybar
- To Delete All Keys for a Layer

18.3.1 To Display the Keybars List

Click the **Keybars** tab.

18.3.2 To Collapse or Expand the Keybars List

Click the triangle to the right of the layer name or category name. Selecting a layer automatically collapses the keybars for the other layers.

18.3.3 To Move the Animation for a Layer or Category

Drag the layer or category overview bar.

18.3.4   To Scale the Animation for a Layer or Category

Drag the yellow triangle at either end of the layer or category overview bar.

18.3.5   To Add a Key

Either:

- Right-click the keybar and click **Add Key** on the pop-up menu:

Or:

1. Click to position the marker where you want to add the key.

2. Click the **Add Key** (➕) button:

A key is also added automatically at the current frame position, when you change the setting of any feature that can be animated.

18.3.6 To Change the Position of a Key

Drag it along the keybar with the mouse pointer. The cushion bars on either side of the key are scaled in proportion to the distance to the key and the keys on either side.

18.3.7 To Cut, Copy, Paste, or Delete a Key

Either:

- Click on the key with the right mouse button and click the appropriate command on the pop-up menu:

Or:
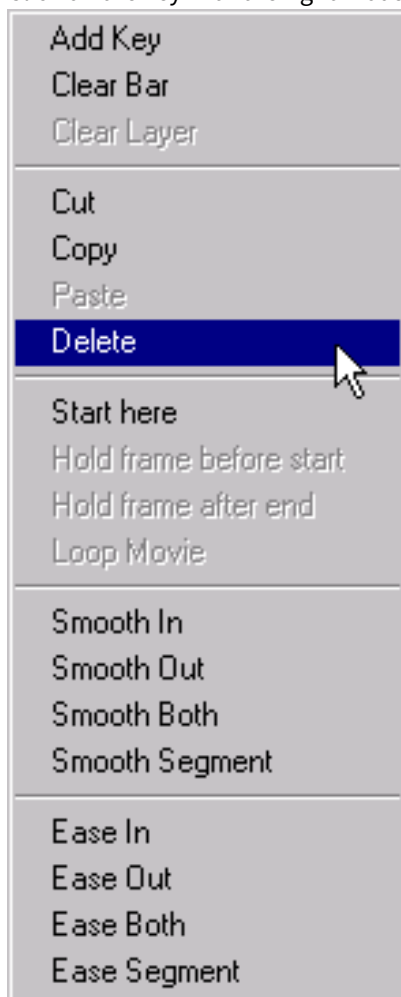
1. Click the key to select it. The key turns red.
2. Click the appropriate button:

The cushion bars for the keys on either side are reset to their default positions.

18.3.8   To Delete All Keys on a Keybar

Either:

- Click the keybar with the right mouse button and click **Clear Bar** on the pop-up menu.

Or:

1. Click to position the marker in the keybar you want to clear.
2. Click the **Clear Bar** (⬜) button.

18.3.9   To Delete All Keys for a Layer

Click any keybar with the right mouse button and click **Clear Layer** on the pop-up menu.

18.4   Getting Natural Motion

By default, Viz World Classic causes objects to move with a smoothly varying speed between keyframes. You can apply **Smooth In/Out** or **Ease In/Out** animation options to any key to achieve a more gradual acceleration or deceleration.

The following table summarizes the differences between the options:
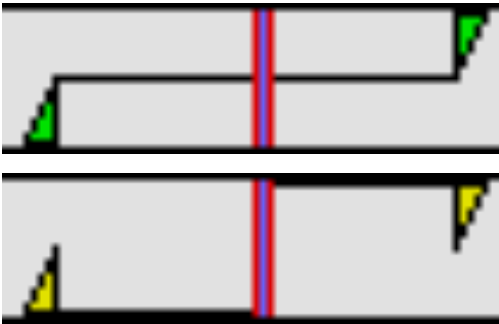
- **Smooth In/Out:** The rate of change of the property is constant through the key.
- **Ease In/Out:**The rate of change of the property is stationary through the key.
  For example, if the property being animated is an object's position, with **Ease In/Out** the object slows down to a halt at the key, but with **Smooth In/Out** the object is moving with constant velocity through the key.

You can extend the cushion bars to increase the time either side of the key during which the object moves with constant velocity (**Smooth In/Out**) or decelerates and accelerates (**Ease In/Out**).

18.4.1   To Cushion Animation

Either:

- Click in the Keybars panel with the right mouse button and click the appropriate Smooth or Ease option on the pop-up menu:

Or:

1. Click the key to select it. The key turns red.
2. Click the appropriate button in the toolbar:

If you click on a key you can smooth or ease either or both handles for the key.

If you click between two keys you can smooth or ease the appropriate handles for both keys.

18.4.2   To Adjust the Cushion Bars

1. Point at the cushion bar with the mouse pointer, until the mouse pointer turns to a single-headed arrow.
2. Drag the cushion bar to the appropriate position between the two keys:
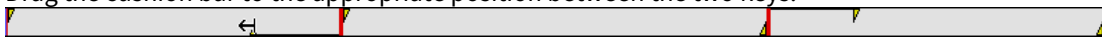
Each cushion bar can be dragged as far as the adjacent key.

18.5   Displaying Detailed Information About a Feature

You can display a graph showing the change in the value of any feature throughout the animation. You can manipulate the graph to change keys, cushion the animation, or add keys, as an alternative to working in the keybar.

18.5.1   To Display the Detail Graph

Click the Detail (⊡) button to the right of the feature name. The keybar expands to show the detail graph.

18.5.2   To Return to Keybar View

Click the keybar (⊞) button to the right of the feature name.

18.6 Animating an Image, Movie, Text Item, or Drawing Along a Path

Viz World Classic allows you to draw a smooth path, using Bezier curves, and animate an imported image, movie, text item, or drawing on a shape layer along the path.

This section contains information on the following topics:

- To Create an Animation Path
- To Convert the Path to a Curve
- To Adjust the Path
- To Align the Image, Text Item, or Drawing to the Angle of the Animation Path

18.6.1 To Create an Animation Path

1. Move to the first frame of the animation.
2. Select the Path tool and drag the image, text item, or drawing to the initial location:

3. Move to the last frame of the animation.
4. Drag the image, text item, or drawing to the ending position. A line is drawn to show the animation path, with dots indicating the position in each frame:

18.6.2 To Convert the Path to a Curve
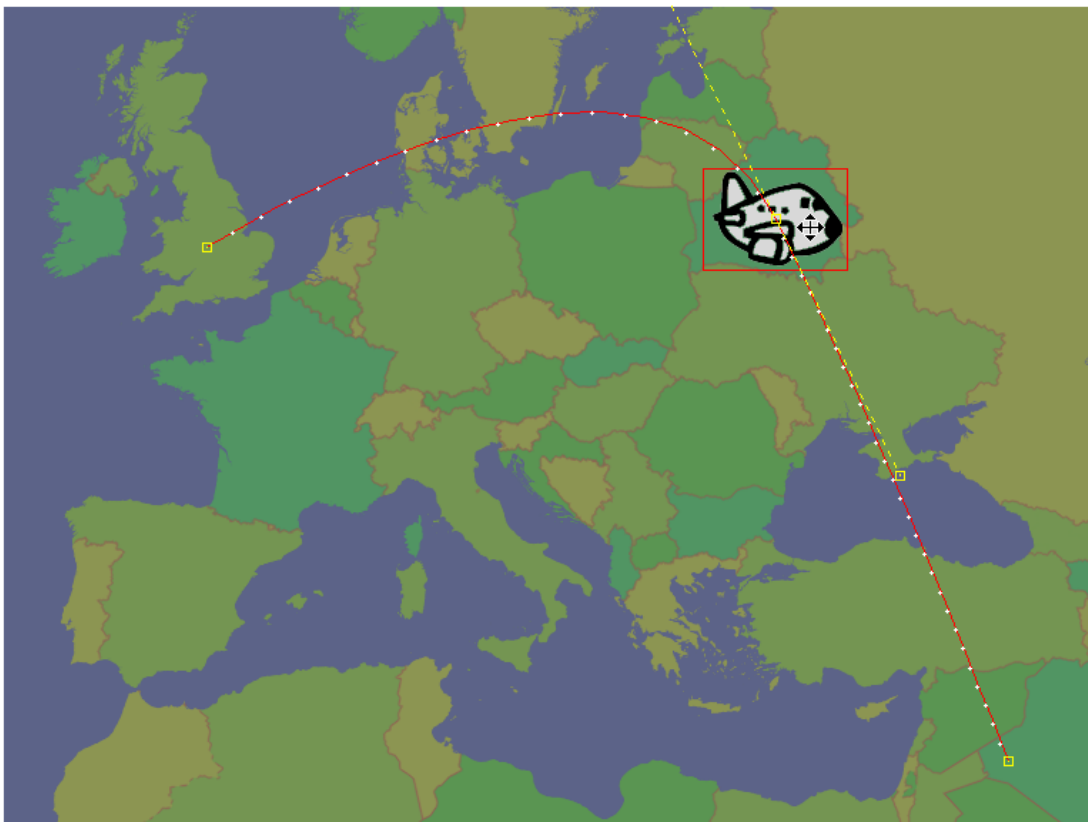
1. Move to an intermediate frame of the animation.
2. Drag the image, text item, or drawing. The path curves through the new position.

18.6.3   To Adjust the Path
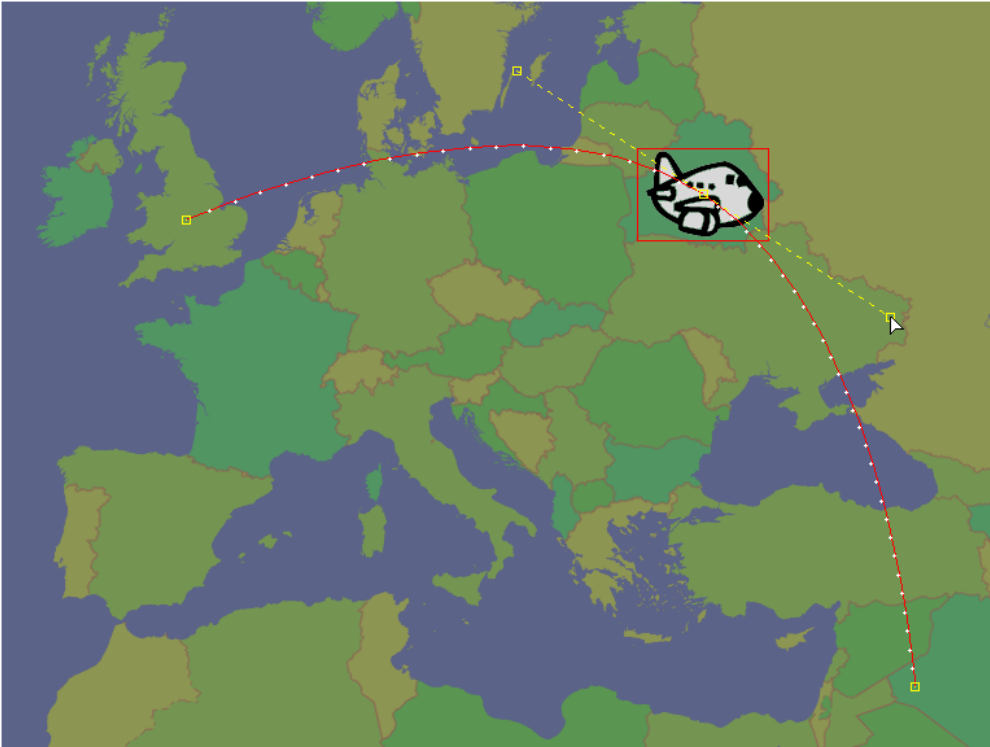
1. Drag one end of the tangent handles extending from a point on the curve:
2. Hold down **CTRL** to drag a tangent handle independently of the other one.

18.6.4   To Align the Image, Text Item, or Drawing to the Angle of the Animation Path

1. Click the **Match rotation to path** button on the **Properties** panel for the image, text, or shape layer:
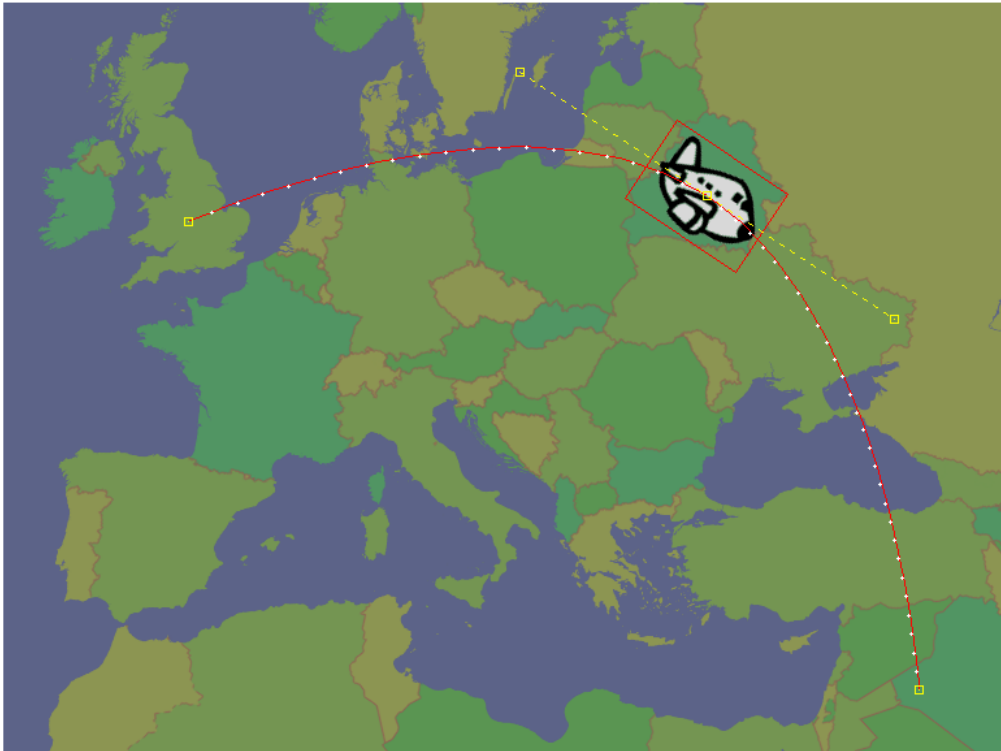
18.7   Leaving an Animation Trail

You can cause the map layer, text item on a text layer, image on an image/movie layer, or drawing on a shape layer to leave a trail as it animates by choosing the appropriate option from the **Trail** drop-down menu in the **Trail** section of the **Properties** panel for the layer.

For example, you could leave a trail behind an image of a plane to show the route of a journey:
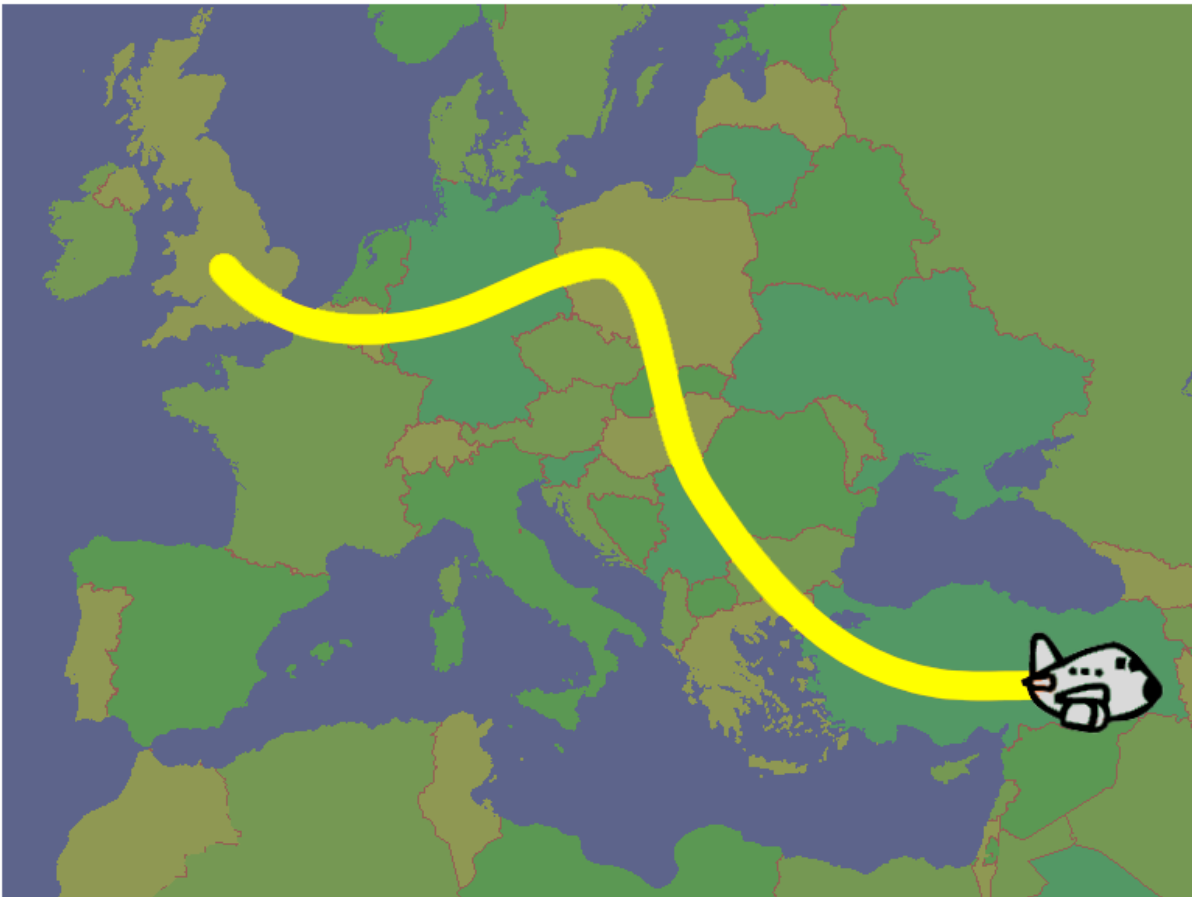
18.7.1   To Leave an Animation Trail

- Choose **Behind**, **Ahead** or **Full** from the **Trail** pop-up menu to leave a trail behind, ahead of, or on both sides of the path.
- Use the **Trail Width** and **Trail Color** options to define the width and color of the trail, and select **Trail Above** to display the trail above the layer.

19 Creating Tracking Paths

Viz World Classic includes a powerful tracking tool, which allows you to track features in a movie to create one or more tracking paths. These can then be used to automatically stabilize the tracked feature, or to match the tracking of another movie or image to that feature in creating a composite.

This section contains information on the following topics:

- Creating a Track
- Applying Tracking

The tracking tool lets you identify a distinctive feature in one frame of a movie, and then automatically track the feature throughout the movie to create a tracking path.

19.1 Creating Tracking Paths

You can create any number of tracking paths in a single movie, or across multiple movies. One track is needed to adjust for position, with two independent tracks the tracking tool can also adjust for scaling and rotation.

Additional tracks can be used to track independently moving objects. For example, if your video sequence shows two cars driving towards each other you can create a separate tracking path for each car, and then use these to superimpose a logo onto the side of each car.

You can also change the feature you are tracking mid-way through the movie. For example, if the feature goes out of view or behind an obstacle you can select an alternative feature, and then continue tracking from that point.

19.2 Applying Tracking Paths

Having created a tracking path you can apply it in several ways:

- To the original movie to stabilize the image, keeping the tracked feature with the same position, scale, and rotation on the frame. For example this can be used to stabilize an interview filmed with a hand-held camera.
- To a different image or movie to animate it, matching the movement, scaling, and rotation of the selected feature so that when the two sequences are composited they appear as a single, natural image.
- To the points and shapes in a rotomatte, to match their movement, scaling, and rotation to the original movie.
- To the position parameters of filters and effects; for example, to make a wipe follow a feature in a movie.

19.3 Creating a Track

On the **Tools** menu, click Tracker or click the **Tracking** button in the toolbar. The **Tracker** dialog box is displayed to allow you to create one or more tracks.

19.3.1 To Create a Track

1. Click the **+** button to create a new track, and select it in the **Tracks** list.
2. Click the **Edit Tracks** button to indicate which feature of the image you want to track:
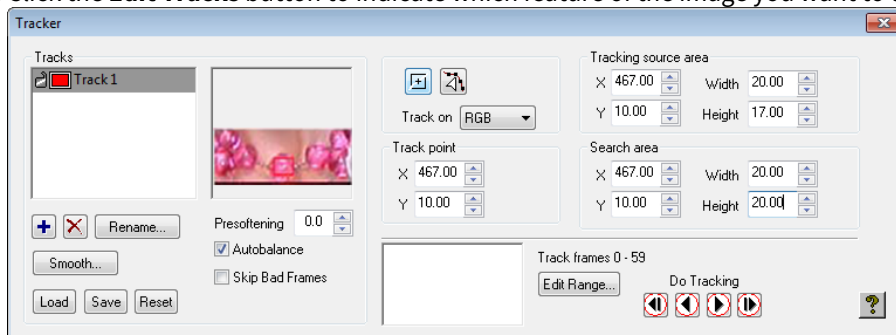
   Two concentric squares are drawn in the Viewer with a **+** at their center.
3. Move the mouse pointer over the center square until it changes to a move symbol and drag the squares over the feature you want to track.
4. The center square acts as a magnifying glass to help you locate the feature accurately:

5. If necessary move the central **+** to the precise position you want to track. This is the pin position that determines the precise offset generated by the track. Usually, you leave this at the center of the inner square. The outer square determines the search area that the tracking tool scans at each frame when looking for the feature you have specified. Its size should be sufficient to cover the maximum movement in

any direction from any frame in the sequence to the next frame. It does not need to cover the area occupied by the feature of interest throughout the whole sequence.

6. Adjust the **Presoften** value to blur the image before matching the target; this helps tracking if the image is noisy, or includes a random feature such the rain.

19.3.2   To Start Tracking

1. Click the **Track Next Frame** ⏭ button to step forward a frame at a time, tracking the feature.

2. Click the **Track Forward** ▶ button to start automatically tracking the feature from the current frame.

As tracking proceeds the **Tracker** dialog box plots a graph showing the quality of the track:

Higher values indicate a good match.

The tracking paths are shown in the Viewer as a white line with red dots at each track position:

19.3.3   To Correct a Tracking Path

The automatic tracking procedure may occasionally lose the feature being tracked. To correct for this:

1. Go to the last frame where the track was correct (or another earlier frame).
2. Hold down **SHIFT** and drag the tracking box. This leaves the tracking point itself unchanged, so that the points added to the motion path continue on the same track, but it uses a different area for subsequent detection. It is important to choose a different area which is moving in the same way.

3. Click the **Track Forward** ▶ button to continue tracking from that point. For example, if the feature being tracked goes out of sight or behind another object, you need to select another feature to track. When

tracking an actor's eye it may be necessary to manually position the tracking tool if the actor blinks. You can also track backwards or track the previous frame using the appropriate controls.

19.3.4 To Lock a Track

Click the **lock** icon to the left of the track name in the Tracks list. This is useful once you are satisfied with a track, to protect it from changes during subsequent tracking actions.

19.4   Applying Tracking

After creating one or more tracking paths you can apply these to any layer in your project. In addition, in a shape layer you can apply a tracking path to individual shapes in the layer.

19.4.1   To Stabilize a Movie

One application of tracking is to stabilize the movie that was used to generate the tracking path.

1. Select the movie layer in the **Layers** list, and click the **Properties** tab to display the **Properties** panel for the movie ![icon].
2. In the **Automation** section click the **Apply Track Data** button:
   - The **Apply Track Data Wizard** is displayed to lead you through the steps needed to apply the track data to the image layer.
   - The first panel lets you specify the transformations you want to track:
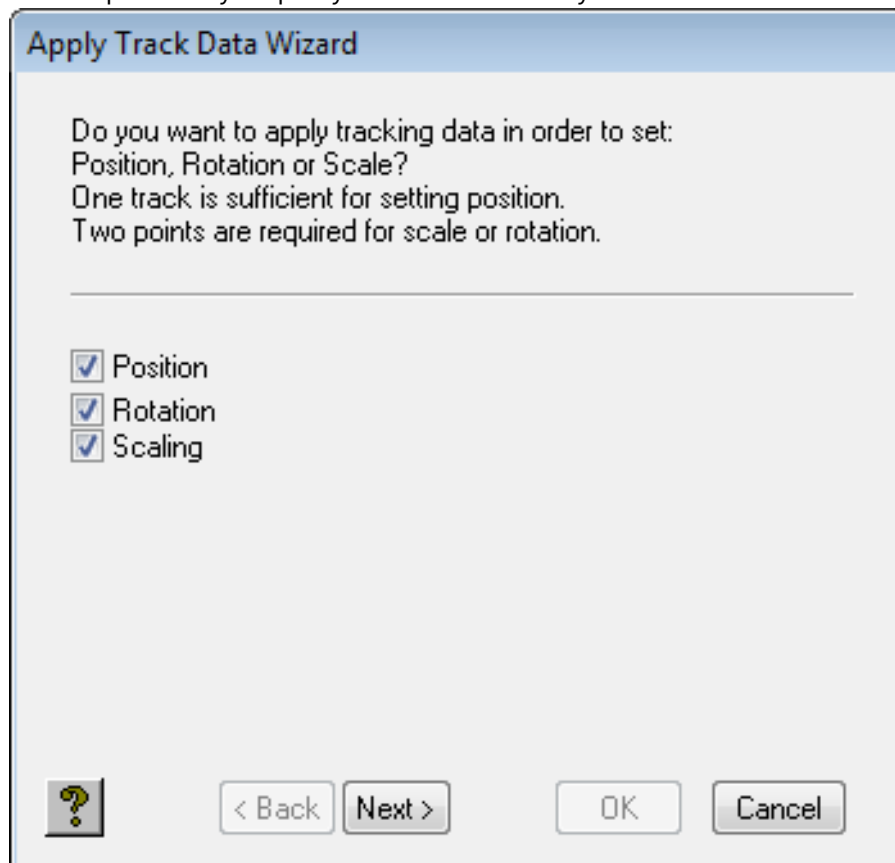
3. Select **Position**, **Rotation**, and/or **Scaling** as required, and click the **Next** button to continue. If you have only recorded one track **Rotation** and **Scaling** are not available. The next panels let you select the tracks to use.
4. Select the first track and click the **Next** button to continue. If you are adjusting rotation and/or scaling you are prompted to select a second track.
5. Select the track and click the **Next** button to continue. The next panel lets you choose how the transformations are applied:

- **Absolute:** Aligns the pin position of the object with the current track position.
- **Relative:** Displaces the object by the track position.
- **Stabilize:** Applies the recorded tracks to the layer to stabilize it:

6. Click the **OK** button to apply the track information to the current image layer.

20 Rendering a Project

This section explains how to render your project as a preview image or movie, or as a finished image or movie. It also describes the options for exporting an image or a 3D model from a project.

This section contains information on the following topics:

- Rendering the Project
- Displaying a Live Video Output
- Exporting 3D Models
- Creating GIF Images

20.1   Rendering the Project

Viz World Classic allows you to render your project as a movie or as a sequence of still images, one per frame, as separate sequentially numbered files. Alternatively you can render a single layer, or its layer mask.

This section contains information on the following topics and procedures:

- Movie Formats
- Image Sequence Formats
- To Render the Animation
- To Specify the Output Format
    - Frame Size
    - Timing
    - Format Options
    - Field Render
        - To Render a Single Layer

20.1.1   Movie Formats

The movie formats provide all the frames of the animation in a single file, optionally using compression to make the file smaller and improve playback rates. A number of different movie formats are supported, some of which are designed for playback on specific video output boards. The range of output formats available on your system depends on the operating system, the version of Viz World Classic you are using, and the presence of any optional video hardware.

Viz World Classic requires a QuickTime player for playing QuickTime movies on your computer monitor, and a Video Output player which can play QuickTime movies on the video output of compatible QuickTime video boards. Other video devices may be supplied with their own playback applications for movies rendered in their own native formats.

20.1.2   Image Sequence Formats

The image sequence formats provide a sequence of numbered files, one frame per file (for example, *myanim0001.bmp, myanim0002.bmp* etc.). The files can be in any of the formats supported by Viz World Classic. This can be a very useful format for exchanging images with other applications, many of which support single frame per file sequences.

When you first choose a file to render you are presented with a name *untitled0000*. This renders a sequence with four digits for the frame number as above. If you want to change the number of digits, edit the name (for example, *untitled000* would use three digits for the frame number).

You can change the default filename format using the **Numbering** option in the **File Formats** section of the Options dialog box:
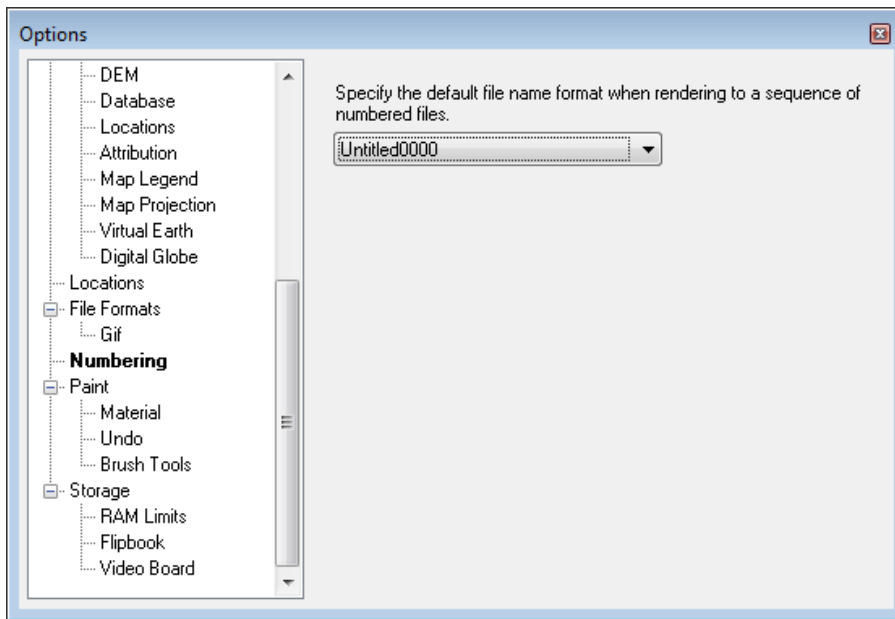
20.1.3   To Render the Animation

- On the **File** menu, click **Render Project**… or **Render Project Preview**….
    - **Render Project Preview**: Renders a low-quality version without anti-aliasing, and with no lighting effects.
    - **Render Project**: Produces a finished, high-quality version of the animation.

The **Render** dialog box is displayed to allow you to specify the output format and filename for the rendered movie, and specify the output settings:
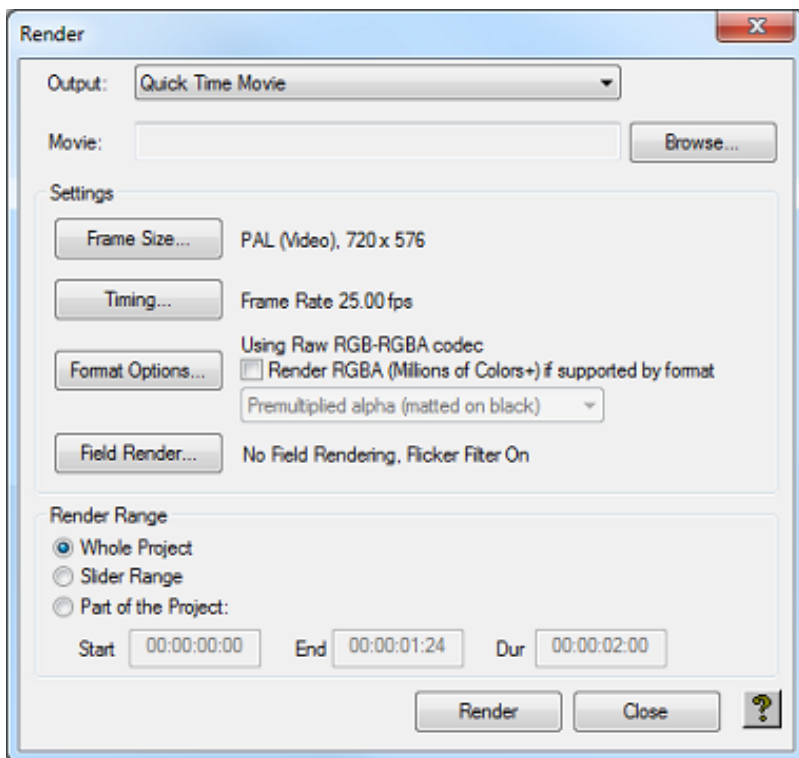
20.1.4 To Specify the Output Format

1. Choose the appropriate format from the **Output** dropdown menu.
2. Select **Whole Project** to render the whole project, or **Part of the Project** to render the range of frames specified in the **Start**, **End** and **Dur** fields.
3. Click the **Frame Size...**, **Timing...**, **Format Options...**, or **Field Render...** buttons to set up the corresponding options.
   - To render with an alpha (mask) channel select **Render RGBA Movie (Millions of Colors+)** and specify how the alpha channel should be treated by selecting one of the options from the drop-down menu.
   - **Premultiplied alpha** effectively superimposes the image on a black background; transparent areas of the image appear black, and semi-transparent areas of the image are mixed with black in proportion with their transparency.
   - **Straight Alpha** leaves the image unchanged.
4. Click the **Render** button to render the animation with the settings you have specified. While the animation is being rendered the progress bar in Viz World Classic's status bar shows the progress of each frame, and the viewer shows the frame currently being rendered.

Frame Size

Allows you to set the frame size for the rendered movie:
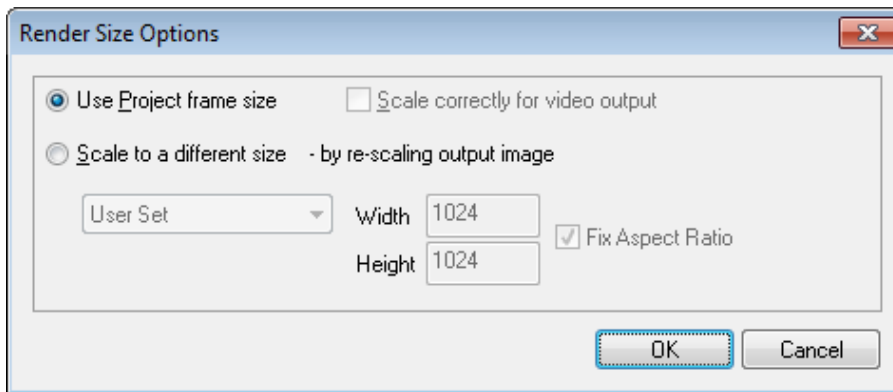
The default project sizes in Viz World Classic are square pixel versions of the popular PAL and NTSC video formats, suitable for displaying on a computer screen. When rendering final output Viz World Classic automatically scales the output images to the corresponding video formats (PAL video, NTSC video) to ensure that the images continue to look correct (video pixels are a different shape to computer pixels) on a video monitor. If you are outputting for further manipulation or use on a computer (in another software package) you should deselect **Scale correctly for PAL (Video) output**.

Timing

Allows you to set the frame rate for the rendered movie:
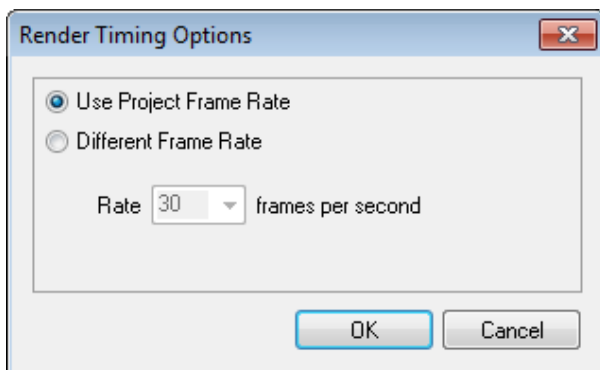
Note that changing the frame rate does not change the total time of the animation. For example, rendering a 25 FPS animation at 30 FPS simply generates more intermediate frames to ensure the animation plays out at the same speed.

Format Options

Allows you to change the compression and quality settings for the movie. The options available depend on the output format you have selected.

Field Render

Field rendering is a technique used to create smoother looking animations when creating output for video or broadcast. It takes advantage of the fact that most video is interlaced, each frame consisting of two fields displayed in turn:
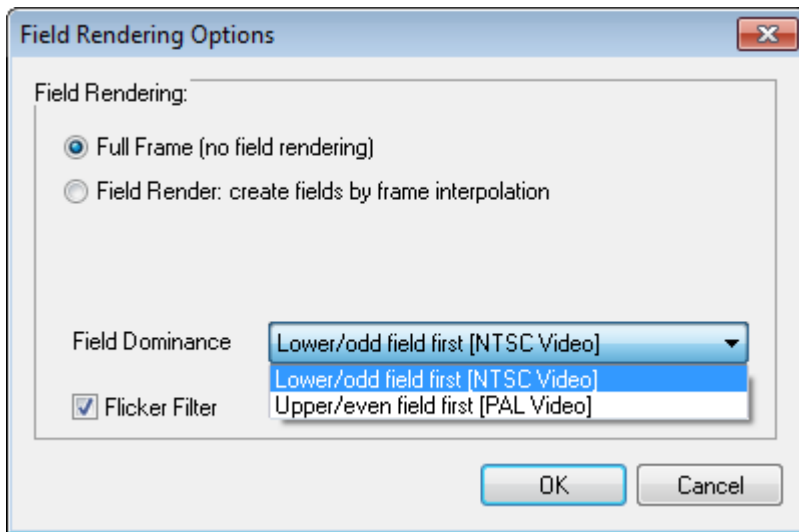
Enabling field rendering can produce a considerable improvement for certain types of animations, when played back on suitable video equipment such as a video output board or video tape. Rendering times are significantly increased however, as every frame requires two separate fields to be rendered and then combined. Animations for playback on a computer are generally rendered without field rendering.

The **Upper field first** and **Lower field first** options determine the field ordering for the rendered output.

Animations rendered with incorrect field ordering can appear jumpy and distorted. The correct setting can vary with your desired output type (PAL or NTSC) and the video equipment you are using.

The **Flicker Filter** option applies a small amount of softness to the rendered output. This can help to prevent slight flickering which can sometimes be a side-effect of field rendering.

To Render a Single Layer

Rendering a layer outputs the layer as it appears in the project at project size, including the layer's transformation and any filters.

1. Select the layer you want to render.
2. On the **Layer** menu, click **Render Layer...** or **Render Layer Preview...**.
3. Proceed as described in To Render the Animation.

20.2   Displaying a Live Video Output

The image displayed in the Viewer can be transferred directly to the video outputs of supported video cards, for previewing images on a broadcast monitor, or transferring single frame images directly to video.

20.2.1   To Select Live Video Output

1. On the **Video** menu, click **Video Device setup...**. The **Video Board** option in the **Video** section of the **Options** dialog box is displayed:
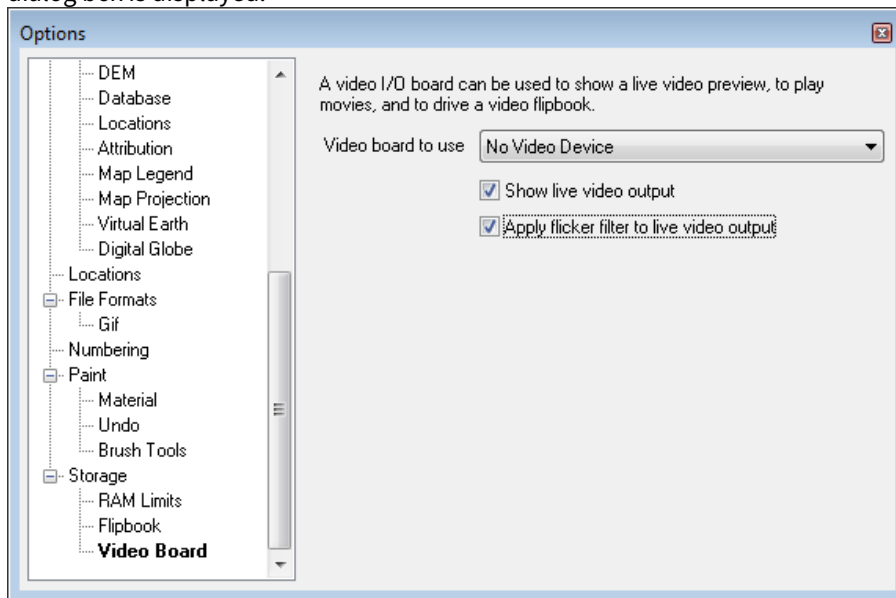

2. Select your video board from the drop-down menu.
3. Select **Show live video output**.

The **Apply flicker filter** option adds a slight vertical blur to the image, to prevent flickering of very fine horizontal images such as roads and rivers.

20.3   Exporting 3D Models

An option is available to allow you to output a 3D model of the land relief in a specified 3D object file format to allow you to import it into a suitable 3D package such as Maya, Softimage XSI, 3D Studio Max, ORAD CyberGraphics, or Discreet Frost. Alternatively you can export the 3D model to Viz Artist.

The texture can be output at the same time, to color the relief, and this can optionally be scaled up to provide more detail on the resulting 3D model:
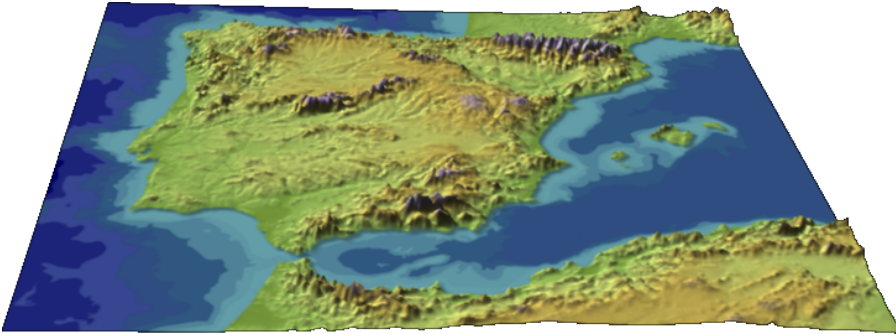
This section contains information on the following procedures:

- To Export the Currently Selected Map Layer as a 3D Model
- To Preview the 3D Model

20.3.1   To Export the Currently Selected Map Layer as a 3D Model

1. On the **File** menu, click **Export 3D Model**. The **3D Export** dialog box allows you to specify the filenames for the model and texture, and optionally preview the result in the 3D Viewer:
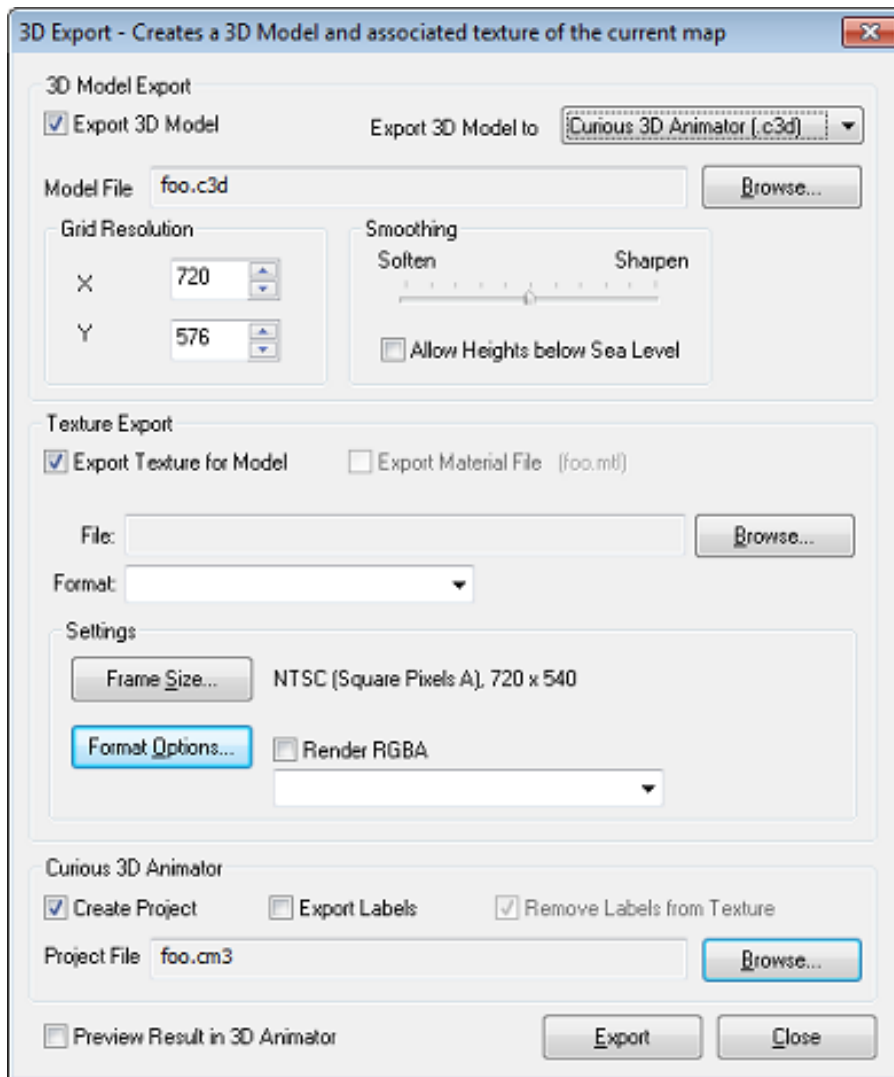
2. Select the 3D object file format from the **Export 3D Model** to drop-down menu.
3. In the **3D Model Export** section, click the **Browse...** button, and specify a name for the 3D model.
4. If required, edit the **Grid Resolution** and **Smoothing**, to determine the mesh used for the 3D model.
5. In the **Texture Export** section leave **Export Texture for Model** selected if you want to export a texture bitmap, and select **Export Material File** if you also want to export the texture as a material file.
6. Choose the format from the **Format** drop-down menu.
7. Click the **Browse...** button, and specify a name for the texture file.
    • The **Frame Size...** button gives you the option of scaling the image to a different frame size; for example to provide greater detail on the resulting model. Note that this produces a true optical scaling of the image, whereas changing the project size leaves features, such as road and river line thicknesses, unchanged.
    • For certain formats the **Format Options...** button gives you control over of the parameters of the format.
8. Select **Preview Result in 3D Viewer** to preview the exported files in a 3D viewer.
9. Click the **Export** button to export the model.

20.3.2   To Preview the 3D Model

If you checked *Preview Result in 3D Viewer* in the 3D Export dialog box, the 3D model is displayed in the 3D Viewer for previewing.

1. Drag the model to change the viewpoint.
2. Hold down **CTRL** and drag up and down to zoom in and out respectively.
3. Hold down **SHIFT** and drag up and down to increase or decrease the scale of the relief.
4. Hold down **ALT** and drag left and right to rotate the model about the viewpoint.
5. Click the **Play** button in the toolbar, or choose **Play** from the **File** menu, to rotate the model continuously.

20.4   Creating GIF Images

Viz World Classic cannot create or render GIF format images by default. It works with some commercially available third-party GIF creation applications to allow creation of GIF images.

Supported applications are as follows:

- Platform Application
- PC FCoder 2GIF
- Mac Lemke Software Graphic Converter

20.4.1   To Set up Viz World Classic for GIF Image Creation

1. Purchase and install one of the supported GIF creation applications. If you are running Viz World Classic on Windows, then you must specify the location of the 2GIF application.
2. On the **View** menu, click **Options...**.
3. In the **File formats** section click **Gif**.
4. Click the **Browse...** button and select the path of the 2GIF application:
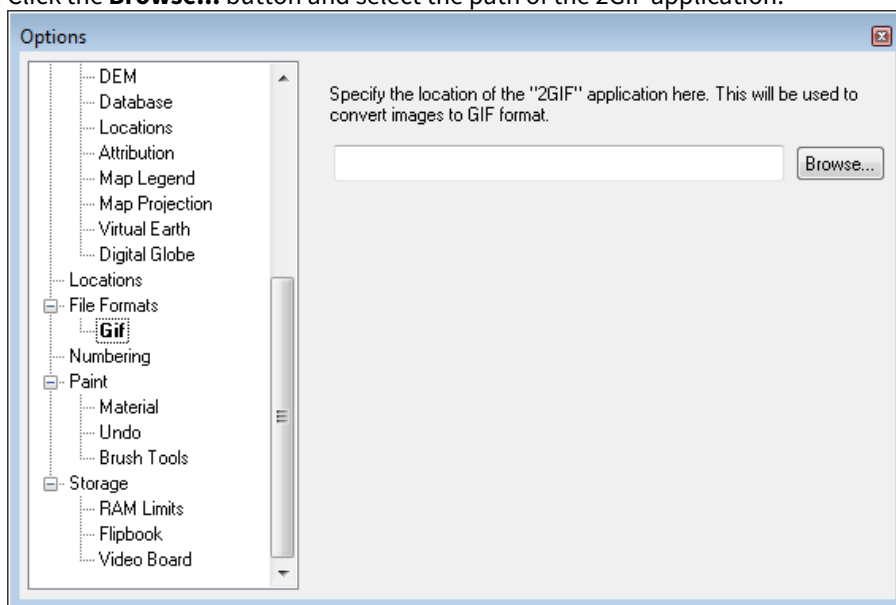
The GIF file format and associated options are then available in image save, export, and render windows.

21 Working with Street Maps

Viz World Classic allows you to import street data for towns and cities, to create maps from the whole world down to a single street corner or building. The Street Data format is supplied and configured with appropriate labels for each of the features, and so using it is simply a matter of adding it to your map. Viz World Classic also supports map data in ESRI Shape File format; for more information see the Working with ESRI Shape Files section.

This section contains information on the following topics:

- Using Street Data
- Loading Street Data
- Tracing Street Data

21.1 Using Street Data

A wide range of street data designed especially for use with Viz World Classic is available for most parts of the world from Vizrt.

For more details, and to order, please contact your local Vizrt representative.

21.2 Loading Street Data

To use street data for a particular town or city you first need to install the street data into an appropriate directory on your disk, and then add a license for the data. For more information about adding a license see the Installing Viz World Classic section.

This section contains information on the following procedures:

- To Specify the Location of Street Data
- To Load Street Data
- To Use Street Data
- To Display Street Data
- To Highlight Individual Features
- To Label a Feature

21.2.1 To Specify the Location of Street Data

When you install street data it is copied to the **Street Data** location specified in the **Options** dialog box. This is initially set to a default location, but you can change it as follows:

1. On the **View** menu, click **Options...**, then click the **Locations** tab to display the **Locations** panel of the **Options** dialog box. The **Street Data** field shows the directory used for street data files.
2. Click the corresponding **Browse...** button and select the appropriate location to change the directory used for street data files.

21.2.2 To Load Street Data

1. On the **Import** menu, click **Street Data...** The **Street Data Management** dialog box shows the street data sets you have available:
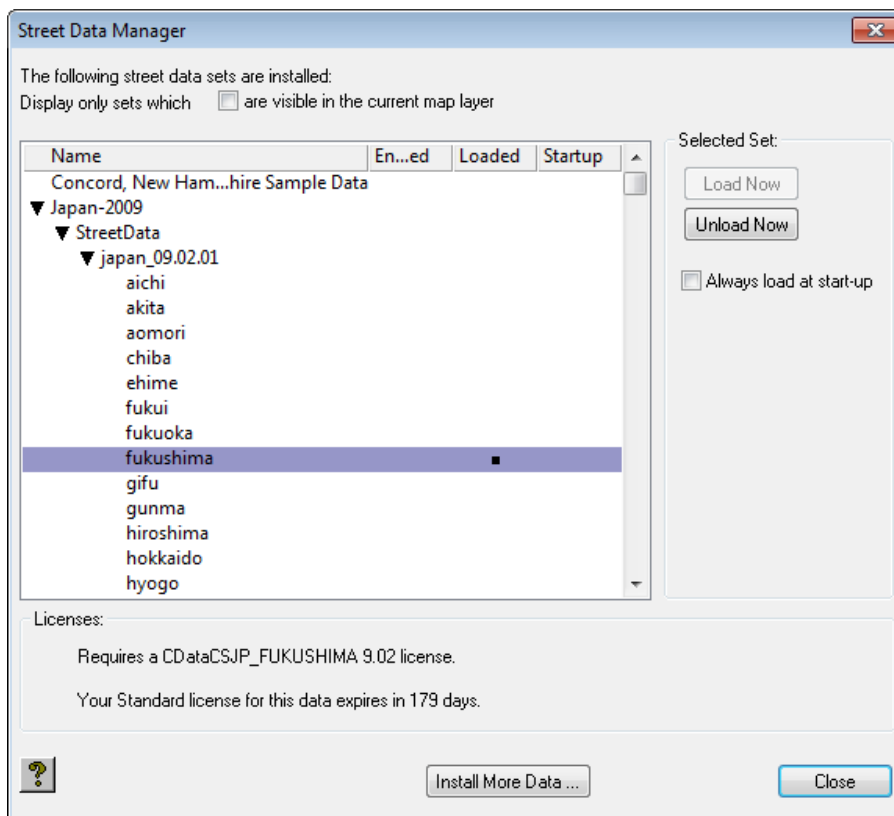
2. Click the **Install More Data...** button to install additional street data sets from disk or CD-ROM, or by scanning the street data directory for new data. The following dialog box is displayed:
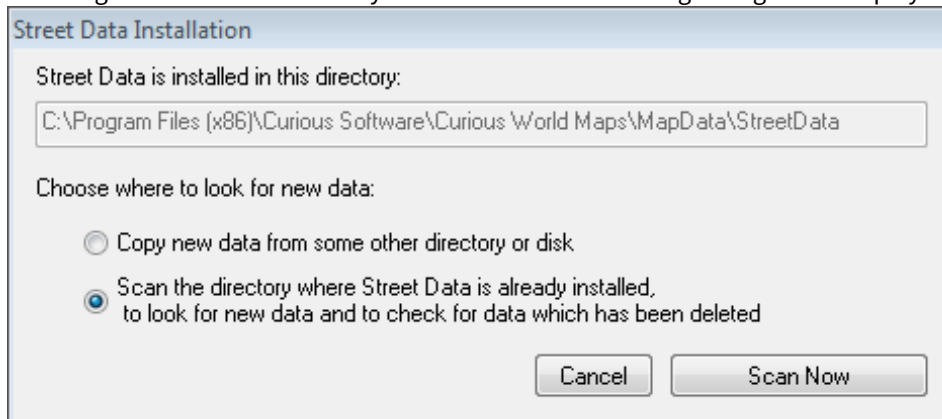

- Either select **Copy new data from some other directory or disk**, click the **Choose Folder** button, and locate the source of the new data.
- Or select **Scan the directory where Street Data is already installed** ... to automatically locate new data. Then select the data set you want to load and click the **Load Now** button.

> ✅ **Tip:** You can also select **Always load at start-up** to load the specified street data each time you run Viz World Classic.

3. Repeat for any other street data sets you want to load.
4. Click the **Close** button to close the dialog box.

21.2.3   To Use Street Data

1. Click the **Streets** tab in the map layer **Contents** panel to display the street data sets you have loaded.
2. Select the street data set in the left list to show the features it contains:
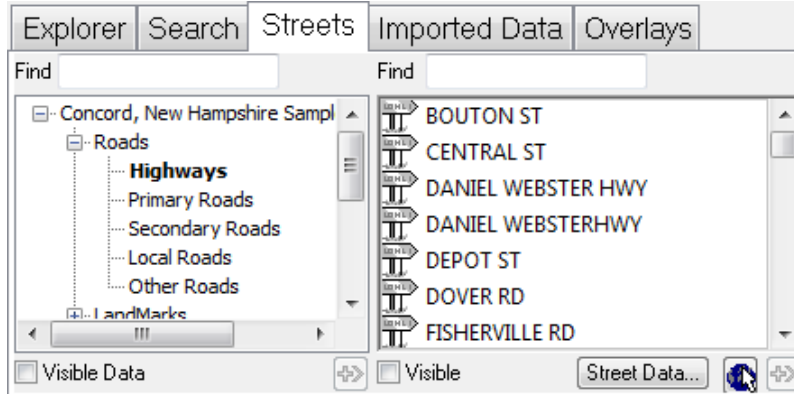
3. Select which features you want to display from the pop-up menu below the features list. This includes different road categories, railways, rivers and lakes, and a range of other urban features.

21.2.4   To Display Street Data
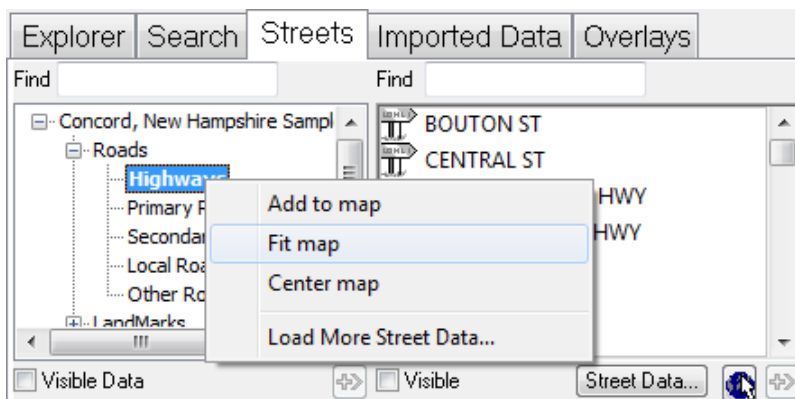
- Click the street data set name with the **right mouse** button and click **Fit map** on the pop-up menu. The street data is drawn, scaled to fit within the image window:
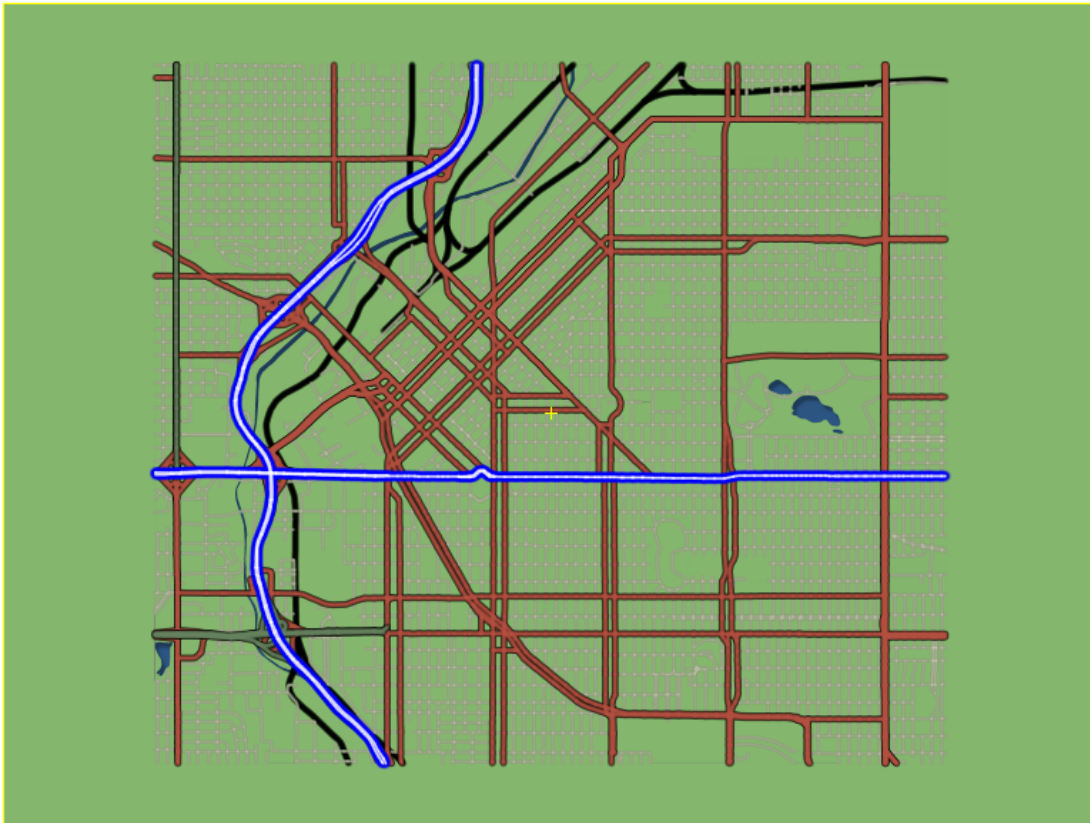
> ⚠️ **Note:** The style sheet specified for the map layer determines which lakes, rivers, roads, and railways are drawn on the map. You can override this for the current map layer by clicking the **Map Features** button in the top right corner of the **Contents** panel.

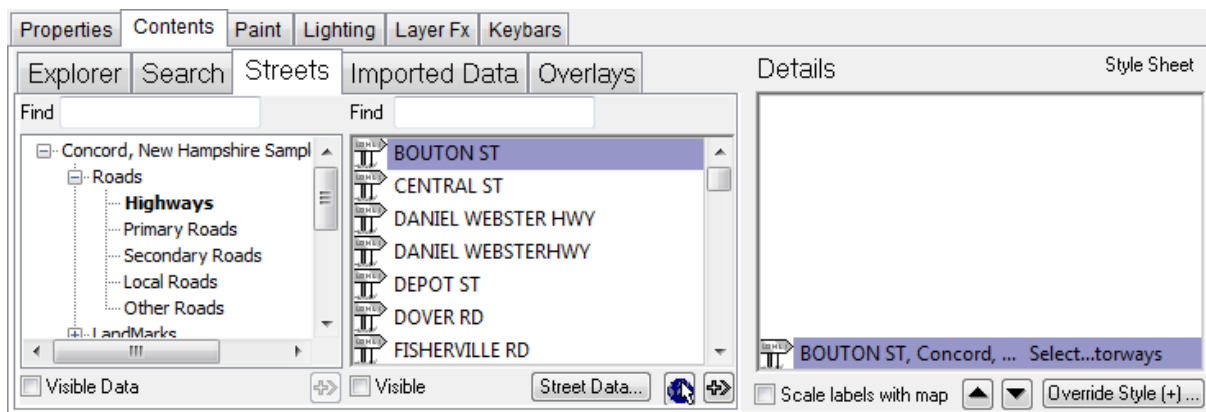## 21.2.5   To Highlight Individual Features

You can add a feature to the **Details** list so you can modify its appearance, to highlight it on the map.

Either:

- Select the feature in the features list and click the Add Feature To Details button.

Or:

- Click the feature with the **right mouse** button and click **Add to map** on the context menu:
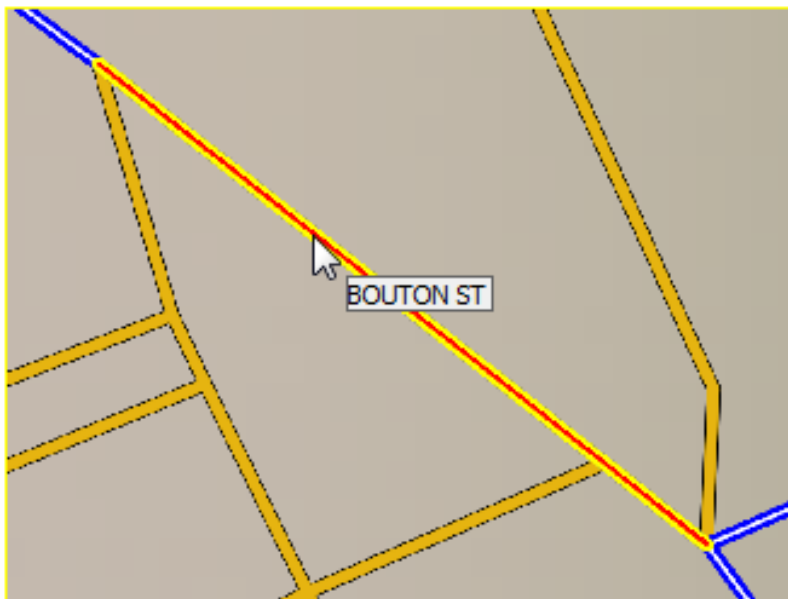
Area features, such as lakes and parks, are initially drawn with a label. Line features, such as roads and rivers, are initially drawn unlabeled. You can add a label at a specific position as described in the next section.
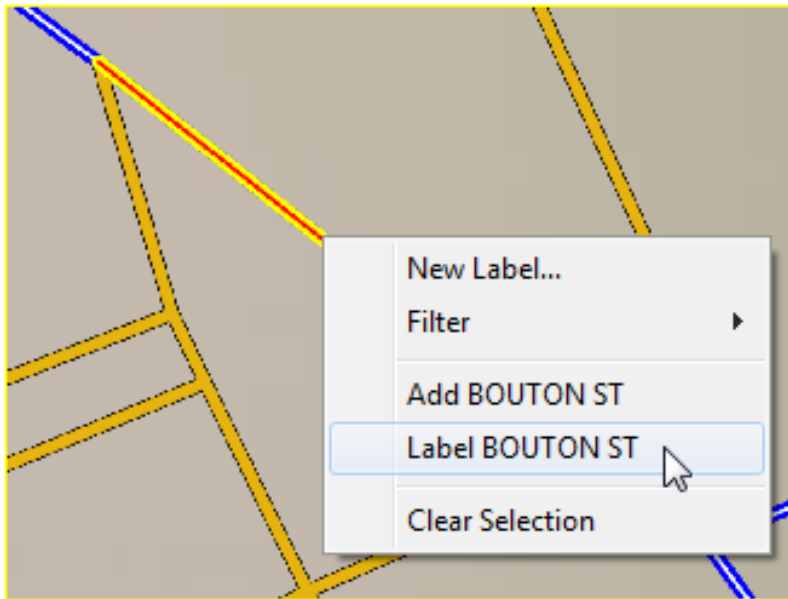
## 21.2.6   To Label a Feature

1. Select the **Browse Street/Shape Data** tool. As you move this over the map a tool-tip shows you the name of each street data feature:

2. Click with the right mouse button and choose the appropriate label option from the pop-up menu:

- **Add:** Adds the feature without a label, so you can highlight it by editing its style.
- **Label:** Adds the feature with the label positioned at the point you clicked. If you are labeling a line feature the label will be drawn aligned with the direction of the feature.
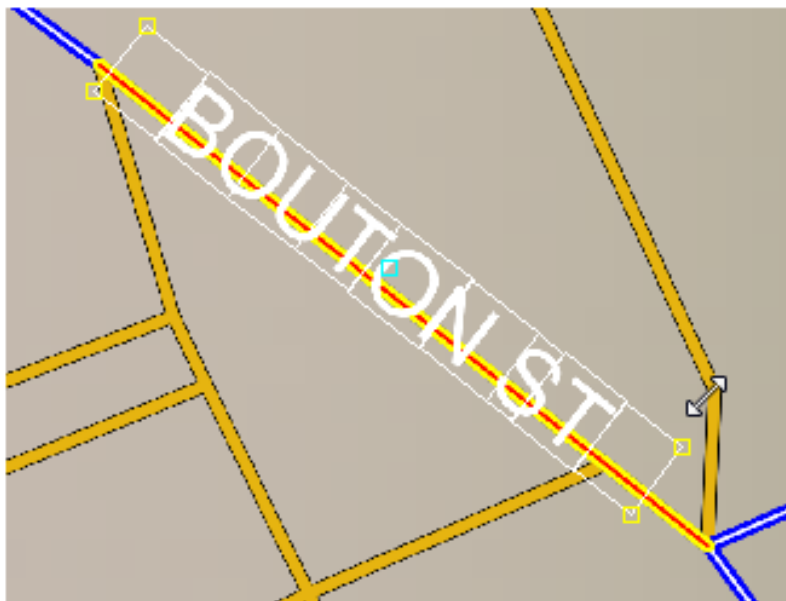
3. Use the **Text** tool to move or rotate the label as desired.

21.3 Tracing Street Data

You can use the shape tools to trace street data in order to add lines and area shapes to your street maps.

For example, you could trace streets to draw a line shape showing the route of a carnival. Alternatively, you could trace an area of a city to create an area shape showing a proposed traffic-free zone.

See Also

- To Draw Shapes by Tracing Map Features