



# Basic Tutorial

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## Credits

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# Basic Tutorial

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## Introduction

Form & Vision Eclipse® is one of the most powerful highend image editing packages available.

Eclipse's proprietary, resolution independent and objectbased ShapeLayer technology allows users to quickly and nondestructively work with large volumes of data. Eclipse makes it possible to manipulate the contents of ShapeLayers in real time, with complete visual control.

In conjunction with an intelligent memory caching system, its ShapeLayer technology also makes Eclipse one of the fastest production tools for image editing, retouching and compositing.

Until the rendering process, file size is generally not a factor: 300 MB files can be manipulated just as easily and in the same variety of ways as can 10 MB files.

Some of the Special Effects in Eclipse, such as Warping and Warp Shading, a 3D effect, are unique and not available in any other 2D program.

Other effects derived from 3D applications include Eclipse's Glow brushes.

Form & Vision will continue to develop these and other features while continually working with customers to expand and improve Eclipse's functionality.

With each new program version, Form & Vision Eclipse® users will find useful and surprising new tools at their disposal.

## About this Tutorial

The Tour, the Basic and Advanced Tutorials are each designed to take you through the process of creating an image from start to finish.

If you wish, you can begin with the Basic Tutorial; however, you will gain a better understanding of the program if you start by taking the Tour.

The Advanced Tutorial builds on the basic knowledge introduced in the Basic Tutorial.

If you are not yet familiar with Eclipse, please begin with the Basic Tutorial to become familiar with the program's most important features.

If you are already an Eclipse user, you will find the Advanced Tutorial — and perhaps the Basic Tutorial as well — filled with many enhanced techniques and tips for the current version.

The Tutorials provide step by step instructions, helping you build each composition yourself, so you can learn the program from the basics. You are given many opportunities to experiment with your own ideas, but you always have the option of using the intermediate files we have prepared for you.

The images in this tutorial were created from screen captures and are intended to approximate their appearance on your monitor.

## Requirements

Before you begin the Form & Vision Eclipse® Tutorial, you should be familiar with your computer's operating system. You should know how to use a mouse, standard menus and commands. If needed, refresh your skills by reading your computer's documentation or use the online help.

## Conventions

In this tutorial, commands, dialogs, shelves and tools as well as keyboard entries are indicated in **bold**. Names, e. g. of files and folders, are set in Monotype.

If the text instructs you to click or doubleclick without indication of a specific mouse button, this always refers to the left mouse button.

The background of the program window is referred to as the canvas, and the background image is called the canvas image.

All illustrations in this tutorial are from the Windows NT® version of the program.

## Restoring the default settings

The settings for some commands are stored in default setting files.

To ensure that everything works exactly as described in each lesson, you will need to delete these files each time before beginning a lesson.

To restore Eclipse's default settings under Windows NT, proceed as follows:

- Quit Eclipse.
- In the **Windows Explorer** go into your user directory under C:\WINNT\Profiles.
- Delete the file .EclipsePrefs by pressing **Shift + Delete**.

Just as in the Eclipse Tour, this tutorial uses a specific motif to give you in-depth information about working with the program. In the course of the following lessons, you will learn how you can use Eclipse to realize an idea for an image — from scan to final compositing.

First, let us begin with the basics.

## 1 The Workspace

The more familiar you become with Eclipse, the more you will notice that there is almost always more than one way to achieve a desired result. For this reason, it is important that you know your way around the workspace in order to be able to make the best use of the numerous options for editing images.

In this lesson, you will learn how to:

- Launch Eclipse
- Get help
- Create presets
- Open files
- Use the view options to magnify or reduce the image display
- Navigate around in an image
- Work with the standard shelves and dialogs

### Launching F+V Eclipse

- **Start Menu** → **Programs** → **Eclipse**

- Restore default command options and shelf settings by deleting the Eclipse settings file. For more information, please refer to the section “*Restoring the default settings*” on page 4.

### Online help

You will find complete information about Eclipse functions in the online help, which contains the entire text of the printed user’s guide.

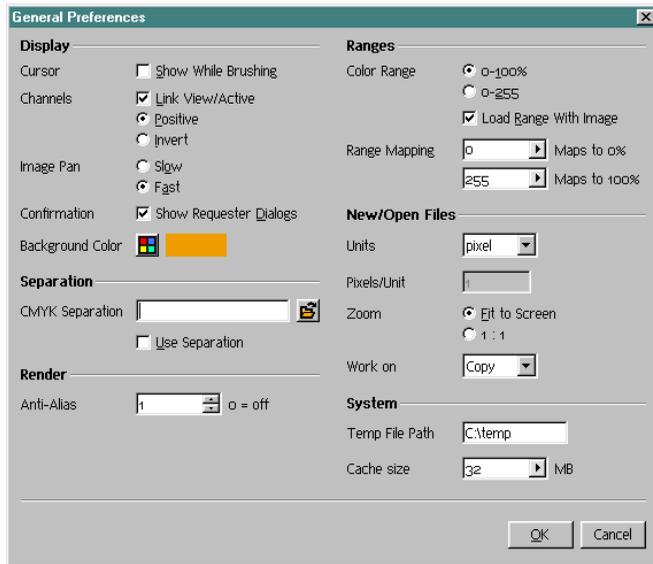
- To open the online help, select **Eclipse** from the **Help** menu.
- Your Adobe Acrobat Reader is launched to display the help file, which is stored as a PDF file on your hard drive.
- Select the desired chapter or topic from the index.
- Use Acrobat Reader’s browsing commands to navigate through the chapters.
- Close Acrobat Reader by clicking the **Close** button in the title bar or minimize the program window by clicking the **Minimize** button, located at the top right of the browser’s title bar.

### Setting General Preferences

Among the options in the **General Preferences** dialog you can specify how images are displayed when opened, which units of measurements are used, etc. You can change these settings at any time according to your work preferences.

Initially, we will leave the default settings unchanged.

- From the **File** menu, select **Preferences** → **General**.



- Check the settings in the dialog and click **OK** to confirm the settings and close the dialog.

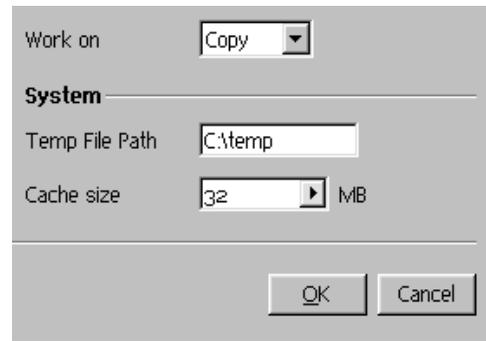
#### SEE ALSO

For more information, please refer to chapter 9 of the online help, “Setting Preferences”.

## Setting System and File Preferences

In the **System** section of the **General Preferences** dialog, you specify the path for the temporary files of Eclipse and the size of Eclipse’s own memory (**Cache size**). Above in the New/Open Files section you specify in the **Work on** drop-down menu whether you wish to work in **Copy** or **Original** mode.

- Select **File** → **Preferences** → **General** to see the default settings.



#### NOTE

You must restart the program to make these changes active. For the time being, please leave the settings shown above as they are.

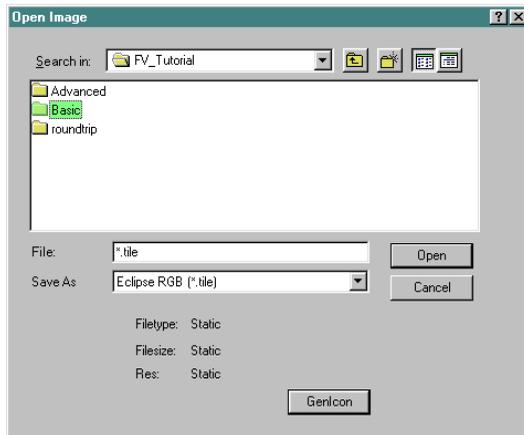
## Opening files

Eclipse works with pixel-based files in its own **Tile** format and supports more than 12 standard third-party formats.

- In the menu bar, select **File** → **Open** → **Image**. In the **Open Image** dialog, navigate through the directory where you installed **Eclipse** until you find `FV_Tutorial\Basic`. Open the directory by doubleclicking the folder icon.

### NOTE

You can also open the dialog by way of the keyboard shortcut **Ctrl+O**, as indicated next to the command in the menu. Nearly all available keyboard shortcuts are indicated in this way in the menus.



- Select the **Basic** directory, either by doubleclicking or click once and choose **Open** to confirm. All images contained in the directory are listed.

- Select the file `Eurocity_final.tfile`. Click on the **GenIcon** button to have Eclipse generate a preview of the image. To open the file doubleclick the file or click on the **Open** button.

You see the finished compositing which you will create in the course of this exercise.



### Zoom menu view options

You are currently in the **Zoom Fit** view, i. e. the entire image is visible in the program window. You use the **Zoom** menu to magnify or reduce the image. The **Zoom** menu is located at the left of the program window's status bar.



- To magnify the view, click the **Zoom** menu arrow button and select, for example, **1:1** view from the menu.

In this view, the screen resolution corresponds 1:1 to the image resolution — which means you see one screen pixel per image pixel.

Please note the message at the right of the status bar.



- Click on the portion of the image which you would like to view enlarged.

**NOTE**

You *must* complete this operation before you can continue working. In general, please note the messages displayed in this location; they provide information about the current function commands or tool.

- To switch back to a reduced view, you can either go back and select a new **Zoom** level from the menu or you can use the **Quick Zoom Out** button next to the **Zoom** menu.



- This command switches to a view reduced by one **Zoom** Level.  
In the same way, clicking the **Quick Zoom In** button will bring the display up one **Zoom** level.

**NOTE**

As long as the enlarged view of a **Zoom** level can be fully displayed in the program window, the view changes immediately. Only if the desired magnification can not be completely displayed, are you prompted to select the **Zoom Center**.

The following keyboard commands are also available:

Zoom to Fit	<b>Ctrl + o</b>
Zoom to 100% (1:1)	<b>Ctrl + 1</b>
Increase Zoom Level	<b>Ctrl + +</b>
Decrease Zoom Level	<b>Ctrl + -</b>

**Navigating with the Pan Window dialog**

When going through the Eclipse Tour, you navigated through the image using the right mouse button. The **Pan Window** dialog is a useful navigation aid when you are working in a magnified view of an image.

- Zoom to a **2:1** view of the image.
- Open the dialog by selecting **Pan** from the **Window** menu.

The dialog shows a small copy of the image. The small box represents your position in the image; the size of the box indicates the **Zoom** level.

- Click and drag the box to a different position; the screen view is immediately updated accordingly.

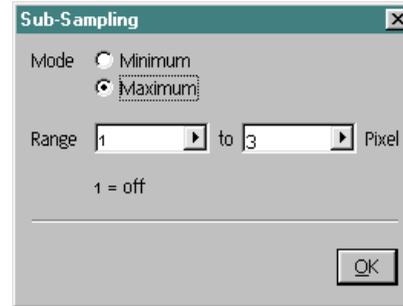


- Click the dialog's title bar button to close it.

### Setting View Preferences for the Canvas Image

When you move the **Canvas Image** or when you move or edit ShapeLayers, Eclipse redraws the image display in several stages from coarse to fine. This process is called **Subsampling**. This is helpful when working with very large files. Thus you are able to continue working while the image is being redrawn, with immediate visual control.

- In the menu bar, select **View** → **Subsample**.



By default, a **Maximum Sub-Sampling** value of three is specified in the **Sub-Sampling** dialog. You can enter up to nine levels.

Activating the **Minimum** button deactivates the **SubSampling** option. This increases the speed of high-resolution image display, based on the overall time required. However, in some cases you may end up waiting too long for the image to be redrawn. This could be inconvenient for instance when painting, since you cannot see where in the image your brush is located.

The optimal setting depends on your current work speed and the image size, or simply your subjective perception. Pressing **Ctrl+Alt+S** toggles between **Sub-Sampling Off** and **On** (with the **Maximum** value you specified), even if you have closed the dialog.

- Try to find the setting that works best for you, and then close the dialog.

### Setting View Preferences for ShapeLayer fills

You are going to change the adjustments of the settings in the **View** → **ShapeLayer** menu also repeatedly depending on your need.

- From the **View** menu, select the **ShapeLayer** command.

By default, the display of ShapeLayer fills is set to **Image**.

This means that images and masks contained in the ShapeLayer are displayed at their full resolution. Use this setting before rendering ShapeLayers, for instance to judge fine transitions to the **Canvas** image.

- Switch to **Proxy** by clicking on it.

This setting allows you to work the fastest with ShapeLayers that are filled with images, since Eclipse only displays the proxies (preview images) in the ShapeLayers.

#### SEE ALSO

*For more information on proxies, please refer to chapter 1, “Eclipse Basics” in the online help.*

### Working with standard shelves and the ShapeLayer Toolbox

When launched, Eclipse opens the **ShapeLayer Toolbox** and the **Brush Shelf** by default. You can show and hide any of the shelves or the **ShapeLayer Toolbox** at any time.

- From the **Window** menu, select **Hide** to hide them. You can also use the keyboard command **Tab**.
- To bring them back, again select the **Hide** command or press **Tab**.
- To hide or show any of the shelves except the **ShapeLayer Toolbox** use the keyboard command **Shift+Tab**.

#### The ShapeLayer Toolbox:

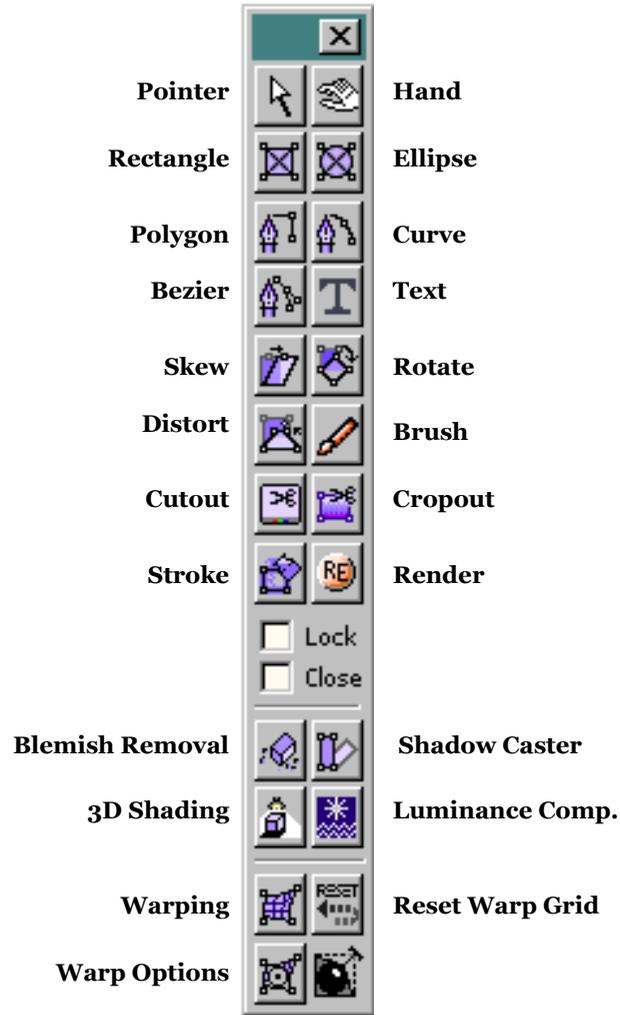
ShapeLayers comprise the central image editing functions of Eclipse.

This Toolbox contains all of the tools required for creating and editing ShapeLayers, as well as applying **Special Effects** and rendering ShapeLayers.

In addition, the **Toolbox** contains the **Brush Tool** for switching to brush mode.

#### NOTE

*When you close the **ShapeLayer Toolbox**, you no longer have access to the existing ShapeLayers; they are hidden, and you are automatically in draw mode. To open the **ShapeLayer Toolbox** again, select it from the **Window** menu.*



**Pointer Tool:** Select and edit ShapeLayers and ShapeLayer fills

**Hand Tool:** Select ShapeLayers; edit only ShapeLayer fills

**Rectangle Tool:** Drag to create a rectangular ShapeLayer; shift-drag to create a square ShapeLayer

**Ellipse Tool:** Drag to create an ellipse; shift-drag to create a circle

**Polygon Tool:** Click to create a polygonal ShapeLayer

**Curve Tool:** Click to create a Bi-spline curve ShapeLayer

**Bezier Tool:** Click to create a straight segment; drag to create a curve segment

**Text Tool:** Create and edit text; fill it like any other ShapeLayer

**Skew Tool:** Drag sides to distort a ShapeLayer

**Rotate Tool:** Rotate ShapeLayers and/or ShapeLayer fills

**Distort Tool:** Distort a ShapeLayer in perspective

**Brush Tool:** Activate the currently selected brush; ShapeLayer fills are hidden

**Cutout:** Copy the previously saved Canvas Image into the selected ShapeLayer

**Cropout:** Copy the visible ShapeLayer content and save as an image

**Stroke:** Stroke the outer boundary of a ShapeLayer with the brush

**Render:** Render ShapeLayer fills onto the canvas image; RenderMode in the ShapeLayer menu determines whether all or only selected ShapeLayers are rendered

**Lock:** Controls the fill method of overlapping ShapeLayerLayers

**Close:** Close or open a ShapeLayer created using the Bezier, Curve or Polygon tool

**Blemish Removal:** Remove dust and scratches without softening the image

**Shadow Caster:** Attach/edit shadows to filled or unfilled ShapeLayers

**3D Shading:** Use ShapeLayers to add depth to selected image areas or ShapeLayer fills

**Luminance Compositing:** Transfer the luminance of the canvas image to a ShapeLayer fill

**Warp Tool:** Warp ShapeLayers and/or ShapeLayer fills

**Warp Reset:** Reset the Warp grid to its default state

**Warp Options:** Specify Warp options

The **Brush Shelf:**

Here you will find anything that has to do with painting, retouching and editing using **Brushes**. In this shelf, you can select options for different brushes, create brush profiles and save them in individual **Brush** palettes, or load the default palettes provided.

Options you can control in the **Brush Shelf** while painting include stroke pressure, **Density** and **Transparency**.

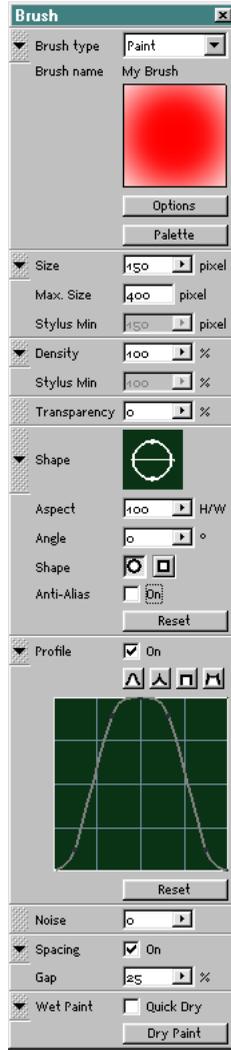
Eclipse allows you to work with ten different **Brush types**. You can paint with a color or with the previously saved version of an image. You can render **ShapeLayer fills** with the **Render Brush**, or paint using effects or corrections. You can undo a brush stroke at any time by using the middle mouse button.

The **Glow Brush** provides the option of adding photorealistic highlights and glows to the image.

You can magically create motion blur with the **Smear Brush**. You can apply masks or paint with image elements — all at an unusually high speed, even when using large brushes in high-resolution images.

**SEE ALSO**

*For more information, please refer to chapter 4, “Using Brushes” in the online help.*



**Rollout arrow button:** Click to access the complete section. This applies to all rollouts in all shelves of Eclipse's user interface.

### Brush type section:

- **Brush type:** Choose from ten available brush types
- **Brush Name:** Displays the name of the currently selected brush type
- **Brush Preview:** Previews currently specified options
- **Options:** Opens the corresponding Brush Options shelf or dialog
- **Palette:** Open brush palette and save custom brushes

### Size section:

- **Size:** Current size in pixels at maximum pressure of stylus pen
- **Max. Brush Size** in pixels: limit the size of all brush types
- **Stylus Min:** Adjust current size at minimum pressure of stylus pen

**Density section:**

- **Density:** Air-to-paint ratio for Airbrush; enter maximum color application/Airbrush density
- **Stylus Min:** Enter minimum color application/Airbrush density

**Transparency Level:** Enter transparency of stroke; 100 = no color applied

**Shape section:**

- **Shape:** Adjust shape of brush
- **Aspect:** Adjust aspect ratio of brush
- **Angle:** Adjust brush angle
- **Shape: Round/Rectangular Brush**
- **Anti-Alias:** ON/OFF
- **Reset:** Return to default shape settings

**Profile section:**

- **Airbrush:** ON/OFF
- **Airbrush Graph:** Adjust spread of air-to-paint ratio
- **Reset:** Return to default profile settings

**Noise:** Add noise to the brush

**Spacing section:**

- **Spacing:** ON/OFF; join individual brush points to achieve a uniform brush stroke
- **Gap:** Control the space between spots of color; only in conjunction with Spacing ON

**Wet Paint section:**

- **Quick Dry:** ON/OFF; drying of the brush stroke— adds the color application; only the last brush stroke can be undone
- **Dry Paint:** Quick Dry only for the next stroke
- Close the **Brush Shelf** by clicking the **Close** button in the shelf's title bar.
- To open it again, select the **Brush Shelf** command in the **Window** menu or press **AltGr+M**.

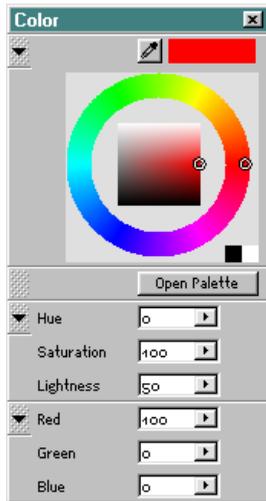
The **Color Editor** shelf:

To select a color or sample a color value from the image, use the **Color Editor** shelf. To display the **Color Editor**, either select it from the **Window** menu or from one of the tool shelves or dialogs that contain a **ColorLink** button. This automatically links the **Color Editor** with this tool; the name in the title bar of the **Color Editor** shelf changes accordingly.

- Select **Window** → **Color Editor** or **Ctrl+E**.

**SEE ALSO**

*For more information, please refer to section 1.10 “Choosing a color” in chapter 1, “Eclipse Basics”, of the online help.*



**Title bar:** Changes depending on the tool to which the Color Editor is linked

**Color Picker:** Sample a color value from the image (Message in the status bar!)

**Color Swatch:** Displays the currently selected color for the currently linked Tool

**HSL Color Wheel:** Select Hue from wheel; adjust saturation and lightness

**Color Palette:** Opens the Color Palette

**Hue:** Adjust hue

**Saturation:** Adjust saturation

**Lightness:** Adjust lightness

**Color Value Red:** Adjust red channel

**Color Value Green:** Adjust green channel

**Color Value Blue:** Adjust blue channel

- Click the **Options** button in the **Brush type** rollout of the **Brush Shelf**.

Reflecting this, the title of the **Color Editor** has changed to **Brush Color** as the **Paint Brush** is selected by default in the **Brush Shelf**.

- Now, select the **Brush Tool** from the **ShapeLayer Toolbox** and experiment with the settings in the **Brush Editor** while painting on the image with the **Paint Brush**. Switch color through the **Color Editor**.

The **ShapeLayer Fill** shelf:

You can fill any closed ShapeLayer with color or a color gradient (**Color Vignette**), with an image, a transparency gradient (**Transparency Vignette**)

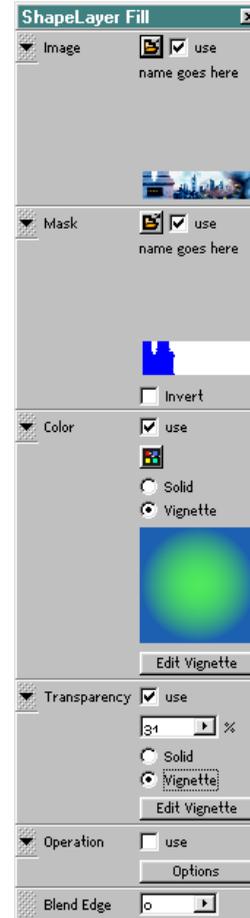
or a mask. A ShapeLayer can also contain a combination of all of these fill elements.

In the following, you will use the **ShapeLayer Fill** shelf to assign fill options to a ShapeLayer.

- In the **ShapeLayer Toolbox**, select the **Rectangle Tool** and draw any desired ShapeLayer.
- Select **Window** → **ShapeLayer Fill** or switch to the **Hand** and double-click the ShapeLayer to bring up the **ShapeLayer Fill** shelf.

#### SEE ALSO

*For more information, please refer to chapter 5, “Working with ShapeLayers” in the online help.*



#### Image section:

- **OpenFile** button: Fill ShapeLayer with an image

- **Use check box:** Use ShapeLayer image fill
- **Image file name**
- **Image Preview:** Shows image preview

### Mask section:

- **OpenFile** button: Fill ShapeLayer with a mask
- **Use check box:** Use ShapeLayer mask fill
- **Mask file name**
- **Mask Preview:** Shows mask preview

**Invert ON/OFF:** Invert mask fill

### Color section:

- **Use check box:** Use ShapeLayer color fill
- **ColorLink** button: Opens Color Editor
- **Solid ON/OFF:** Fill ShapeLayer with solid color
- **Vignette ON/OFF:** Fill ShapeLayer with Color Vignette
- **Color Preview:** Shows color or vignette preview

- **Edit Color Vignette:** Opens Color Vignette dialog

### Transparency Fill section:

- **Use check box:** Assign transparency to a fill
- **Transparency Level:** Enter transparency value in %
- **Solid ON/OFF:** Assign the fill a uniform transparency value
- **Vignette ON/OFF:** Fill the ShapeLayer with a Transparency Vignette
- **Edit Transparency Vignette:** Opens Transparency Vignette dialog

**Operation section:** Assign Effect or Correction preview constantly to a ShapeLayer

- **Use check box:** Assign operation function to ShapeLayer
- **Operation Options:** Opens the assigned Effect or Correct dialog

**Blend Edge:** Assign the ShapeLayer soft edges

- To close the shelf, click the **Close** button in the title bar.
- To close the image, select **File** → **Close** or **Ctrl+F4**.

- Confirm the command in the **Close Requester** dialog.

Since you have not saved the image, the file is stored on your hard disk in its original state.

You have now gotten a first impression of your workspace and you will become more familiar with it in the course of this exercise.

Now you can begin creating and editing images in Eclipse.

Our practice image is a manipulated panoramic view of Frankfurt am Main, where the headquarter of Form & Vision is located.

This motif represents Frankfurt's leading role in Europe as the "City of the Euro"; it was designed as a proposed heading motif for an investment bank.

The skyline consists of multiple individual images which were digitized with a drum scanner.

In the following chapter, you will combine the images to create a panoramic view.

## 2 ShapeLayers

ShapeLayers are your basic tool in Eclipse. These resolution independent vector objects take up very little hard disk space, although they are able to contain numerous different elements. You can open as many ShapeLayers as desired in one image, then edit them in a variety of ways and create additional ShapeLayers.

Whether ShapeLayers contain a great amount of image data or simply color with a correction or effect (in addition, they could be filled with gradients or masks), you work with them in real time while having full visual control.

Any type of ShapeLayer can be warped, scaled, distorted, reduced and enlarged again without losing any data — and all of this with unlimited undo.

You can apply **Special Effects** such as **Warp Shading** or **3D Shading** in ShapeLayers.

After completing this lesson, you will be able to do the following in Eclipse:

- Create a new image
- Compare images
- Create ShapeLayers using the Rectangle and Polygon Tools
- Fill a ShapeLayer with an image
- Work with rulers and guides
- Edit ShapeLayers with the Skew and Distort Tools
- Separate or select image elements
- Arrange ShapeLayers

### Creating and saving a new canvas image

You will begin by creating an empty background that is large enough to give you plenty of room to position individual elements.

- Select **File** → **New Image**.
- From the **Units** menu in the **New Image** dialog, select the unit of measurement **mm**, enter **240** for **Width** and **160** for **Height**. For **Resolution**, enter **12**, which means 12 pixels per mm.
- Click **OK** to close the dialog.

Now you can see the white canvas. The program title bar indicates the name **New Image**, the file size in megabytes (MB) and the dimensions in pixels.

#### NOTE

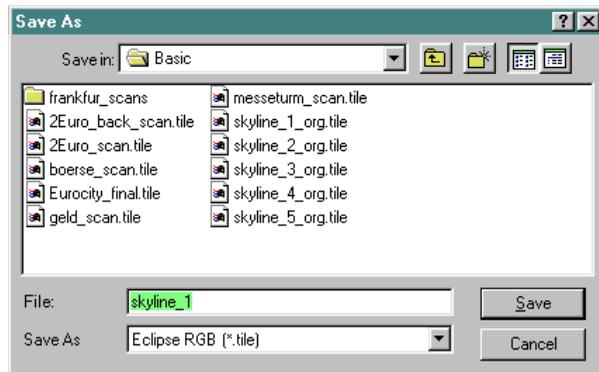
*The title bar always contains the unit of measurement you specify in the **General Preferences** dialog. This information is included in the file format of files that you save from within Eclipse.*

- Select **File** → **Preferences** → **General** and set the **Units** to **mm** to get a sense of the resolution of pixels compared, for instance, to **mm**. To confirm your setting, click **OK**.
- Save the image by choosing **File** → **Save** or pressing **Ctrl+S**.

**NOTE**

*In this case, the **File** → **Save** command is equivalent to the **File** → **Save As** command, since you will first need to name an image before you can save directly to the image. We recommend you to do this right at the start, so that you can make full use of the program's functions.*

- The **Save As** dialog appears. Navigate to the directory `FV_Tutorial\Basic`, enter `skyline_1` in the **File** text entry field and choose **Eclipse RGB** as file format in the **Save As** text entry field; then click **Save**.



- Close the currently displayed **New Image** and open the saved image `skyline_1.tile`.

**Comparing images**

To better orient yourself when placing the first **ShapeLayer**, open the file `skyline_1_org.tile` in a second program window.

- Select **File** → **Open Image**. In the **Open Image** dialog, open the image `skyline_1_org.tile`, and in the **Requester** dialog **Close the current image before opening?** select **No**.

You have just launched Eclipse again.

- Press **Tab** to hide the shelves, and then switch to a reduced view, such as **1:8** or **1:4**. Then resize the program window to match the reduced view by clicking and dragging its outer edges or corners, then right-clicking-dragging to position the image within the window.
- Place the window in the upper right corner of your desktop, and minimize the program window with the reference image by clicking the **Minimize** button at the top right of the title bar.

Now you can easily check at any time how the individual **ShapeLayers** are arranged, simply by clicking the icon in the task bar and then minimizing the window view again.

**Creating a rectangular ShapeLayer and filling with an image**

- Select the **Rectangle Tool** from the **ShapeLayer Toolbox**, and draw a **ShapeLayer** of any size by click-dragging on the canvas.



- Select **ShapeLayer Fill** in the **Window** menu.
- The **ShapeLayer Fill** shelf appears. Use the **Pointer Tool** (hereinafter referred to as the **Pointer**) to click on the **OpenFile** button in the **Image** section of the shelf.



- The **Open** dialog appears. Double-click to get to the `frankfur_scans` directory, click on the `frankfu_5.tile` file and then click **Open** to have the image name as well as the preview displayed in the shelf.
- Click the **use** check box to fill the ShapeLayer with the image.



- With the **Pointer**, double-click the **Magic Handle** (the ShapeLayer's hollow corner handle at bottom left). This resizes the ShapeLayer to match the dimensions of the image or **ShapeLayer fill**.
- In the **Zoom** menu, select a reduced view, such as **1:4**, and place the ShapeLayer in the center of the canvas by click-dragging in the ShapeLayer.

### Working with rulers and guides

The tallest of the skyscrapers should be positioned as exactly as possible in the center. Eclipse has some useful tools to help you do this; you will also use them later when doing perspective distortions. These tools are all available in the **Organize** menu.

- Select **Organize** → **Rulers** to show the rulers. The units of measurements shown are those specified in the **Units** drop-down menu of the **General Preferences** dialog.
- In the **Organize** menu, select **Guides** → **Add** or press **Ctrl+D** on the keyboard.
- Now click on the canvas near the top ruler at about 110 mm. To precisely position the guide, again go to the **Organize** menu and choose **Guides** → **Move** or press **Ctrl+F** and click-drag.

#### NOTE

*Always observe the messages in the status bar, as they contain helpful information.*

- Close the **ShapeLayer Fill** shelf, since you do not need it at the moment.
- Now place a horizontal guide (parallel to the x-axis) by first pressing **Ctrl+D** and then clicking on the canvas at 130 mm near the outer left ruler.
- Zoom into the image and move the guide to 132 mm.

**NOTE**

You can change the display color of the interface. Press **AltGr+C** repeatedly to cycle through the seven available colors and one transparent setting. You can choose the transparent view directly by pressing **Ctrl+H** to hide the outer boundaries of ShapeLayers.

Now position the ShapeLayer in such a way the left base of the highest building in the middle is touching the vertical guide, and the top edge of the ShapeLayer touches the horizontal guide. Check to see whether the ShapeLayer is still selected.

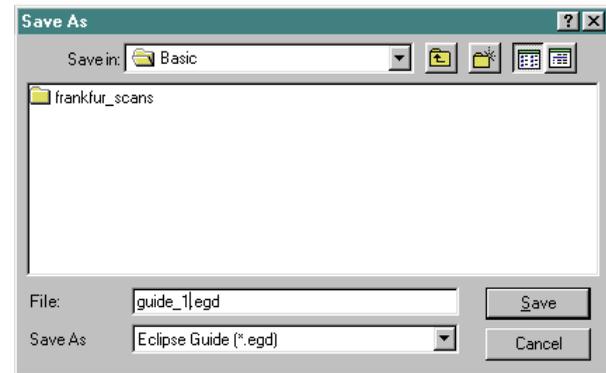
**NOTE**

A ShapeLayer is selected if you see its bounding box with side and corner handles.

- If you do not see the ShapeLayer's bounding box, select it again by clicking on one of the ShapeLayer's border lines with the **Pointer**.
- Click-drag, or use the combination of **Ctrl** and **Cursor** keys to move the ShapeLayer by about 4 mm. For precise positioning, use only the **Cur-**

**sor** keys — which will move the ShapeLayer by about 0.15 mm.

- Save your **Guide** settings by going to **Organize** → **Guides** and selecting **Save**. In the **Save As** dialog navigate to the FV\_Tutorial\Basic directory and enter the name guide\_1 in the **File** text entry field.

**NOTE**

**Guides** do not become transparent when changing the interface display to transparent; only **Rulers** and **ShapeLayers** do. To hide the **Guides** again, you must delete them.

- Select **Organize** → **Guides** → **Clear**.
- Open them again by selecting **Organize** → **Guides** → **Open**, and selecting your saved file in the **Open** dialog.

- To hide rulers, simply press **AltGr+C** to switch to the transparent interface display or repeat the command **Organize** → **Rulers**.

### Correcting distortion using the Skew Tool

Now you will need to correct the optical distortion created by the wide-angle lens used in taking the photograph. Use the **Skew Tool** to move the ShapeLayer and/or ShapeLayer fills by either the x- or y-axis.

- Zoom to **1:1** view.

An additional tool that will help you adjust vertical placement in the image is the **Cross Hair**.

- Select **Organize** → **Cross Hair**. The **Pointer** arrow is replaced by a cross hair on the canvas.
- For better visual control, switch to ShapeLayer fill view by selecting **Image** in the **View** → **ShapeLayer** menu.
- Select the **Skew Tool** from the **ShapeLayer Toolbox**.



- Grab the ShapeLayer at its top side handle and move it until the vertical lines of the skyscraper are parallel to the **Guide** at left and the **Cross Hair** at right. Make sure to keep the top edge of

the ShapeLayer on the horizontal guide to prevent scaling it.

#### NOTE

*Using the **Skew Tool**, you are not just moving the object in parallel direction, but also scaling by way of the side handles, if you do not remain on the same axis height. You can move the vertical orientation of the ShapeLayer/ShapeLayer fill via the x-axis and the horizontal orientation via the y-axis.*

Now all of the skyscrapers to the right of the center, including the highest, are aligned to the center.

- Zoom out one level by clicking the **Zoom Out** button next to the **Zoom** menu.

### Using the Distort Tool

We still need to align the church steeple and the building behind the steeple. To do this you will use the **Distort Tool**.

- In the **ShapeLayer Toolbox** switch to the **Distort Tool**, located below the **Skew Tool**.



- The ShapeLayer now has four hollow corner handles.
- Lock or anchor the two bottom corner handles and the top right corner handle by left-clicking on them. They are now filled.

- Drag the top left corner handle horizontally to the left until the church steeple is vertically straight.

### NOTE

You can use the **Distort** or the **Skew Tool** to select and move ShapeLayers when they are active. To deselect these tools, click again on the tool icon in the **ShapeLayer Toolbox**.

- If you release the corner handle now, it is automatically anchored. You can unlock it by clicking on it again.
- Switch to **1:1** view and check alignment using the **Cross Hair** on the front corner side of the tower.
- Repeat this process as many times as required until you are satisfied with the result.

### NOTE

It does not matter if you have distorted the ShapeLayer too much, since you have an unlimited number of ShapeLayer undos. Just click **Ctrl+Z** to go one step back towards the ShapeLayer's original state, and click **Ctrl+X** to go one step forward towards its current state.

- To save the ShapeLayer, select **File** → **SaveAs** → **ShapeLayer**. In the **Save As** dialog, select the `FV_Tutorial\Basic` directory, and type `Center` in the **File** text entry field. Eclipse automatically appends the extension `.shp`.

- To become familiar with this tool, continue experimenting with the ShapeLayer and perspective distortion. When finished, press **Delete** to delete the ShapeLayer, or select **ShapeLayer** → **Delete**.
- Select **File** → **Open** → **ShapeLayers** to select and open the previously saved version of the ShapeLayer (`center.shp`) in the **Open** dialog.

### NOTE

If you are not happy with the current ShapeLayer, you can also continue working with the original version of the ShapeLayer, which is located in the working directory. To do this, open the file `center_org.shp`.

At this point, you should see only the outlines of the ShapeLayer and of course its contents, but not the corner and side handles. This appearance indicates that the ShapeLayer is not selected.

Now you will continue to build the skyline.

## Creating a ShapeLayer using the Polygon Tool

Eclipse provides three different curve tools that allow you to create freeform ShapeLayers: the **Polygon Tool**, the **Curve Tool** and the **Bezier Tool**.

You will load the next panorama part into a ShapeLayer created using the **Polygon Tool**. This tool allows you to create editable straight lines joined by line segments. In a moment, you will see which advantages this provides in making adjustments.

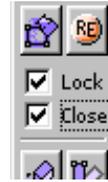
- Select the **Polygon Tool** from the **ShapeLayer Toolbox**.



- Switch to **Zoom Fit** view and right-click-drag to move the canvas a bit to the right.
- Click in the outside of the image to place the first point.
- Create a rectangle by placing a second point at about the same height next to the church visible in the first ShapeLayer. Place the third point vertically beneath it, at the bottom of the *center* ShapeLayer. Place the fourth and final point beneath the starting point.

Initially, it is not important whether the segments are parallel to each other, or how large the ShapeLayer is. Do not worry about clicking into the *center* ShapeLayer — since it is not selected, it is inactive. You are working in a new **ShapeLayer**, basically one layer above.

- Click the **Close** button in the **ShapeLayer Toolbox** to close it.



- Press **V** to switch to the **Pointer**, or select the tool from the **ShapeLayer Toolbox**.

Once again, you see the bounding box of the ShapeLayer with all corner and side handles, indicating that the ShapeLayer is selected and active. The straight line points of the polygon are currently hidden.

- Press **H** to switch to the **Hand**.
- Double-click inside the ShapeLayer to open the **ShapeLayer Fill** shelf.
- Click the **OpenFile** button and load the file `frankfu_8.tile` from the directory `frankfur_scans`. Activate the **use** check box in the **Image** section of the shelf.
- Switch back to the **Pointer** by pressing **V**.
- Double-click the **Magic Handle** (bottom left corner handle of the ShapeLayer), to fit the ShapeLayer to the image.

### NOTE

Use the **Pointer** and double-click the **Magic Handle** to adapt the *ShapeLayer* to the dimensions of the image it contains. Use the **Hand** and double-click the **Magic Handle** to adapt the image contained in the *ShapeLayer* to the dimensions of the *ShapeLayer*.

- Click the **Close** button of the **ShapeLayer Fill** shelf's title bar, since you do not need it at the moment.

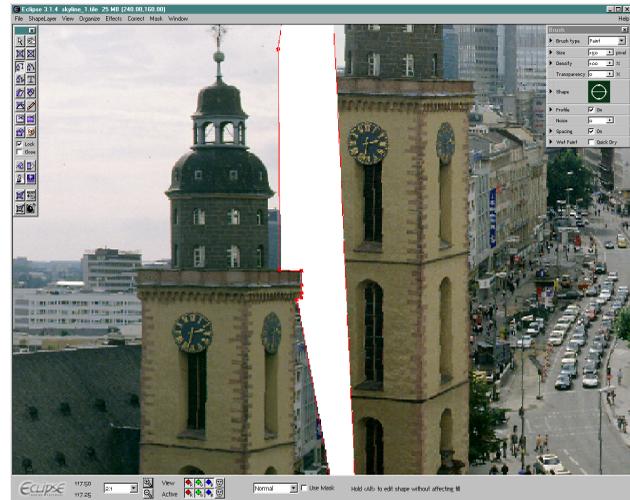
### Using ShapeLayers to select portions of an image

You will now make it easier to adapt the perspective of this photograph to match the center portion by cropping out areas of the image which you don't need.

- Switch back to the **Polygon Tool** by clicking on it in the **ShapeLayer Toolbox**.
- Drag on all four straight line points to open up the entire image.
- Zoom to **1:1** view and fit the straight lines exactly to the edges of the image by moving the four points one after another.
- Switch back to the **Pointer**, go to **Zoom Fit** view and move the *ShapeLayer* in the white area of the image in such a way that both church steeples are side by side.

### Using ShapeLayers to select portions of an image

- Zoom again to an enlarged view and select the **Polygon Tool**.
- Add another straight line point at the same height as the top of the church steeple, by clicking on the segment.
- Add another point and drag it downwards along the edge of the skyscraper up to the steeple balustrade.
- Place another point and pull it towards the right to the corner.
- Continue masking the steeple in this way, until you reach its base.



### NOTE

*In order to edit a ShapeLayer created using one of the curve tools, you must first select it either with the **Pointer** or **Hand** by clicking on a border of the ShapeLayer. Then select the **Curve Tool** with which it was created. For example, you cannot use the **Polygon Tool** to edit a ShapeLayer created with the **Curve Tool**.*

- Close the ShapeLayer by clicking **Close** in the **ShapeLayer Toolbox**.
- Reopen the ShapeLayer by again clicking on **Close**.
- Place points by clicking on the canvas. The points are automatically connected by a line segment.
- You move points by click and drag them.
- You add points to an existing segment by clicking on the segment.
- You delete points by middle-clicking on them.
- You end the process of editing or creating the ShapeLayer by pressing **V** to switch to the **Pointer** or clicking on the **Pointer Tool** in the **ShapeLayer Toolbox**.
- Press **V** and zoom back out of the image.
- Pull the ShapeLayer towards the right, approximately onto the position of the church steeple in the middle ShapeLayer.

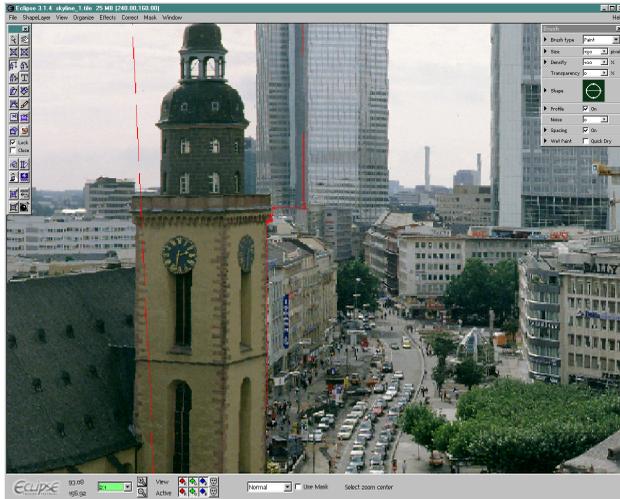
- Press **Ctrl+H** to hide the ShapeLayer borders, zoom back into the image, and use the **Cross Hair** from the **Organize** menu to help check the vertical orientation of the steeple.
- Use the **Cursor** keys to position the ShapeLayer in front of the other steeple in such a way that the vertical lines at the back fit precisely one on top of the other. Place the two corners of the steeple balustrades above the clock one over the other in the same way.
- If it appears that the outer edges of the steeple are not properly selected, simply edit the points again using the **Polygon Tool**. However, you can save fine-tuning for later, since ShapeLayers always remain editable.
- Zoom back out of the image — the **Polygon Tool** is selected — and limit the left side of the ShapeLayer to the vertical start of the image by dragging the top and bottom points inwards, thus removing the protruding portions of the ShapeLayer. Let it bleed just a bit over the edge.
- Select the **Distort Tool** again from the **ShapeLayer Toolbox**.



- Anchor the two bottom corner handles so that they are filled, and drag outwards on the top right corner until the sky segment next to the church

steeple exactly fits with the skyscraper behind it in the middle ShapeLayer. Drag parallel to the x-axis to prevent the ShapeLayer from scaling vertically.

- Check the distortion by zooming to **1:1** view, switching to the **Pointer** and moving the ShapeLayer with the **Cursor** keys. Once again, place the balustrades directly on top of one another.
- Now anchor the two top corner handles and drag the bottom right handle until the front vertical edge of the steeple is properly aligned.



- Switch back to the **Pointer**, move the ShapeLayer, and adjust the boundaries by making corrections with the **Polygon Tool**, etc.

- Now anchor the two inner corner handles with the **Distort Tool**, and pull the left top corner handle outwards.
- You may have inadvertently enlarged the ShapeLayer while distorting it. Try to create a better fit by scaling it proportionally. While pressing **Shift**, drag the bottom right corner handle with the **Pointer**.

### NOTE

*When using the **Pointer** you always scale a ShapeLayer together with its contents resp. ShapeLayer fill.*

*To leave the contents unchanged while scaling only the ShapeLayer, press **Ctrl** while dragging.*

*Pressing **Shift** in combination will always scale proportionally.*

*Dragging with the **Hand** scales only the content.*

- *Click and drag on the corner handles to scale simultaneously horizontally and vertically.*
- *Press **Shift** in addition to scale proportionally.*
- *Drag on the side handles to scale either horizontally or vertically.*
- Also, look at the pattern of the clouds in both ShapeLayers; they should match fairly closely.
- Lastly, expand the ShapeLayer again resp. use the **Polygon Tool** to again reveal the image up to the center edge of the skyscraper behind it, by aligning the points.

- While doing this, compare your results from time to time with the final image by maximizing the second program window from the task bar.
- Go to a reduced view to check that the ShapeLayer still extends to the left outer edge of the image. If not, select the **Polygon Tool** again, and correct the two outer points.
- If you are satisfied with the result, click next to the ShapeLayer with the **Pointer** to deselect it. Select the `center.shp` and remove it from the image by pressing the **Delete** key.
- Save your second ShapeLayer under `links1`.

**NOTE**

*When a ShapeLayer is saved, all of the ShapeLayers on the canvas are saved along with it. This is why you just deleted the first ShapeLayer, allowing you to easily open all of the ShapeLayers individually at a later time.*

*If you like, you can continue working with the ShapeLayer file provided. To do so, delete your ShapeLayer, and load the file `links1_org.shp`.*

**Arranging ShapeLayers**

You can visualize each ShapeLayer as a page of paper on the canvas. When you have opened multiple ShapeLayers, you need to sort them just as you would a stack of paper. The ShapeLayer you created last is always on top, i. e. in front. If you again load the middle ShapeLayer, you will see that it is placed in front of the ShapeLayer at left. When individually

saved ShapeLayers are loaded again, they are always on top.

- Open your `center.shp` or `center_org.shp` by selecting **File** → **Open** → **ShapeLayers** and select the file in the **Open** dialog.

You can now see that the ShapeLayer is located above the ShapeLayer at left. There are two ways to arrange the two ShapeLayers correctly:

- You can select the ShapeLayer at left and select **Front** or **Forward** from the **Organize** menu.
- You can select the middle ShapeLayer and select **Back** or **Backward** from the **Organize** menu.

**NOTE**

*To select a ShapeLayer located within (behind) the ShapeLayer in front, press **Ctrl** while clicking.*

- *To move a ShapeLayer all the way to the front (top), select **Front** or press **AltGr+F**.*
- *To move a ShapeLayer one layer forward, select **Forward**.*
- *To move a ShapeLayer all the way back (down), select **Back** or press **AltGr+D**.*
- *To move a ShapeLayer one layer backward, select **Backward**.*

You can now continue completing the skyline. Create a new ShapeLayer with the **Polygon Tool**. This

will later give us the option of more easily hiding portions of the sky or bringing them forward.

- Select the **Polygon Tool** from the **ShapeLayer Toolbox** and create a rectangle.
- Load the file `frankfu_10.tile` into the ShapeLayer.
- Adapt the ShapeLayer to fit the contents by clicking the **Pointer** on the **Magic Handle**.
- Now make sure that the entire image is visible in the ShapeLayer. As described above, again correct individual points of the polygon as needed.
- Move the ShapeLayer approximately to the correct location.
- From the **Organize** menu, select **Back** to place the ShapeLayer behind the one in the middle.
- Select the **Distort Tool** to correct the perspective.
- Load the previously saved **Guides** and use the **Cross Hair** to help.
- First, correct the converging lines by locking the two bottom corner handles and dragging one of the top handles outwards until the vertical sides of the skyscrapers at left are approximately vertical.
- Then do the opposite, i. e. lock the two top corner handles and drag the bottom handle towards the right, until the building on the outside right is vertical.
- Position the ShapeLayer in such a way that it exactly blends into the one in the middle. As an orientation, use the corner of the building at the very bottom and the one above it.
- After you have correctly adjusted the vertical lines, continue adapting the ShapeLayer by clicking the **Distort Tool** again to deselect it. Then **Shift**-drag a corner handle to scale the ShapeLayer proportionally until both buildings fit together exactly.
- Depending on the results, you may need to again scale the ShapeLayer either just vertically or just horizontally by means of the side handles. You can get a good sense of the relative sizes by comparing the windows of the skyscraper section at left, or by checking the alignment and crossbraces of the building at the bottom and front.
- Use the **Cursor** keys to move the ShapeLayer, occasionally pressing **Ctrl+H** to show and hide its outlines. Zoom in and out of the image to gauge the results.



- Repeat these steps as long as needed to make the ShapeLayer a perfect fit under the middle ShapeLayer.
- Finish by limiting the ShapeLayer's overlap at right to the canvas dimensions by using the **Polygon Tool** to drag the two outside right points inward to the edge of the image. Save the ShapeLayer as `rechts1`.
- You can also load the prepared ShapeLayer `rechts1_org.shp` and place it all the way in back (at the very bottom) by selecting **Organize** → **Back**.

### 3 ShapeLayer Fills

A ShapeLayerLayer can simultaneously contain an image, a **Color Vignette**, a **Transparency Vignette** and a mask. You can edit the content in the ShapeLayer or by means of the ShapeLayer's outlines — separately, too — before applying them to the image and you can display previews of color corrections and effects.

In addition, you can specify soft edges and use them e. g. immediately after rendering the image also to apply a correction. A **Cutout** allows you to fill a ShapeLayer with the saved version of an image. Conversely, you can select the **CropAs** or **Cropout** command to load a copy of the current state of the portion bounded by the ShapeLayer into the ShapeLayer and save it to disk.

In this lesson, you will learn the following:

- Basics of rendering and displaying ShapeLayer fills
- Using the Undo, Restore and Retain commands
- Checking the position of ShapeLayers
- Using the Restore Brush to adjust portions of an image
- Checking and measuring color values
- Applying color corrections in ShapeLayers
- Using the Cutout command to adapt areas of an image
- Creating Transparency Vignettes in ShapeLayers to blend ShapeLayer fills with the canvas image

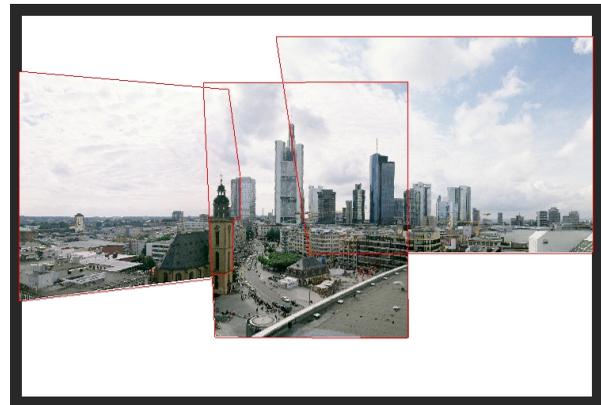
Begin by deleting the default settings as described in “*Restoring the default settings*” on page 4.

### Correlation between Render Mode and View

You will now render these three ShapeLayers, i. e. apply them to the canvas image.

We could render all three ShapeLayers together, however we would lose quick and easy means of performing corrections. That is why we will do it one ShapeLayer at a time, from bottom to top, i. e. from the ShapeLayer located all the way back to the one at the front.

The appearance of your canvas is approximately as shown here:



- Select the right ShapeLayer by clicking on one of its outlines.
- From the **ShapeLayer** menu, select **Render Mode** → **Selected ShapeLayers**.

Now you see only the ShapeLayer fill of the selected ShapeLayer as well as the outlines of all ShapeLayers.

### NOTE

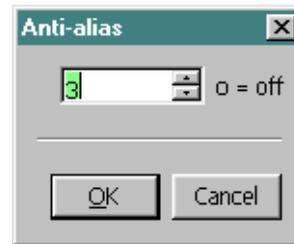
The **Render Mode** setting applies to the view of the ShapeLayer as well as — indicated by its name — rendering.

- **Render Mode** → **All ShapeLayers ON** means that all ShapeLayers whose content or ShapeLayer Fills are being displayed, will be rendered, even though they are not selected.
- **Render Mode** → **Selected ShapeLayers ON** means that only the ShapeLayer Fills of the selected ShapeLayers are visible, and that only these will be rendered.
- You can add ShapeLayers to the current selection by pressing **Shift** when making selections.
- You can subtract ShapeLayers from an existing selection by clicking them again while pressing **Shift**.
- You can select all of the ShapeLayers on the canvas by choosing **ShapeLayer** → **Select All** or pressing **Ctrl+A**.
- You can deselect all of the ShapeLayers on the canvas by clicking on the canvas anywhere outside the ShapeLayers.

- To deselect a single ShapeLayer, click on the canvas anywhere outside the ShapeLayer.

You should perform one more step before rendering.

- Select **ShapeLayer** → **Anti-alias**, and enter the highest level (three) either numerically or by clicking the arrow buttons.



### NOTE

**Anti-aliasing** means that Eclipse interpolates pixels, i. e. the program calculates additional pixels based on a specific algorithm. The level determines the matrix or range of interpolation.

- You should always specify a level of **two** or **three** when scaling, rotating, or distorting images or rendering diagonal lines.
- Calculating **Anti-alias** is a processor-intensive task; each additional level requires double the processing time of the previous level.

- While working, we recommend you always leave the **Anti-alias** level set to **zero** (= OFF); increase the setting just before rendering.
- Now choose the render command by clicking the **Render** button in the **ShapeLayer Toolbox** and confirming in the **Render Requester** dialog.



- Press **Delete** to delete the ShapeLayer.
- From the **File** menu, select **Retain**.

### Understanding the Undo, Restore and Retain commands

In contrast to the unlimited levels of **Undo** and **Redo** available within ShapeLayers under the **ShapeLayer** menu or by pressing **Ctrl+Z** or **Ctrl+X**, there is only one raster-**Undo** available when rendering ShapeLayer fills and for all operations applied directly to the canvas image. The **Undo** command is located in the **File** menu.

**File** → **Undo** as well as **File** → **Restore** and the **Restore Brush** are associated with the **File** → **Retain** command.

Next, after you have rendered the second ShapeLayer, you will use the **Restore** option to bring back portions of the sky. You can do this by one of two ways: either by working with the **Restore Brush** or by selecting **File** → **Restore**.

You have selected the **Retain** command to use the current state of your image as the basis of **Restore**. If you had not done this, by using **Restore** you would again reveal the white portions of the image last saved with **File** → **Save** or **File** → **SaveAs**. The advantage of selecting **Retain** for an image state is that you need not save into the original to be able to use the **Restore** options.

#### NOTE

The **Restore** and **Retain** commands are only available in **Copy** mode. You can specify the **Copy** or **Original** settings under **Preferences General** (see “Setting System and File Preferences” on page 6).

- **Undo** goes back one raster process, thus concerns any operation directly affecting the canvas image, such as rendering ShapeLayer fills, applying effects, color corrections and any type of brush stroke..
- **Restore** brings back the state of your work when it was last saved or retained. **Restore** cannot be used within a ShapeLayer; it always applies — with the exception of the **Restore Brush** — to the entire canvas.
- **Retain** keeps all changes made on the canvas up to this point. Your original image is not affected by this command. Your original image remains unchanged until you save it by selecting **File** → **Save** or **Save As**.

- To go back to the original version of an image after selecting **Retain**, you must close and reopen your image.

Let us move on:

- Select the middle ShapeLayer.

#### NOTE

Take care not to move the ShapeLayers when selecting them; this can occur if you briefly release the mouse or stylus. Since this selects the ShapeLayer, it can also be moved. If you believe you may have inadvertently moved the ShapeLayer, simply check its placement again before rendering.

- Double-click inside the ShapeLayer with the **Pointer**, this brings up the **ShapeLayer Geometry** shelf.

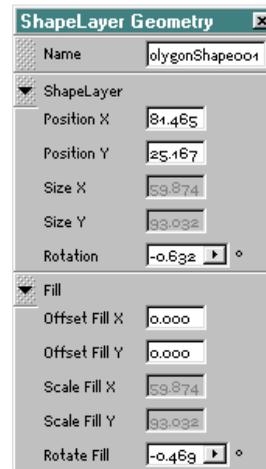
### Checking the position of a ShapeLayer or ShapeLayer fill

The **ShapeLayer Geometry** shelf shows position, dimensions and degree of rotation for a ShapeLayer. The information is numerically displayed in the units you specified under **General Preferences** (in this case, mm). The information for the ShapeLayer fill correspond to these.

- If you press **Ctrl+Z** and **Ctrl+X** to go one step back and then forward again, the XY position tells you exactly whether the ShapeLayer is still in its original position.

#### SEE ALSO

For more information, please refer to the online help, chapter 6, “Editing ShapeLayerLayers and their Fills” under “Using the ShapeLayer Geometry Shelf”.



#### NOTE

The name under which you save the ShapeLayer to disk is not automatically copied into the **Name** text box. By default, the type of ShapeLayer is indicated, such as Polygon Shape. When working with many ShapeLayers, we recommend entering either the saved name and/or references to saved corrections, effects, etc., which you may wish to apply or have calculated at a later time.

You may want to reuse a ShapeLayer in the current project or in a different one — in that case, you

*will find this “note” helpful.*

*Afterwards, save the ShapeLayer again or enter the note here before saving the ShapeLayer.*

- Press **H** to switch to the **Hand** and double-click inside the ShapeLayer.
- In the bottom text box of the **ShapeLayer Fill** shelf, enter a value of about **5-10** for the **Blend Edge** option.
- Zoom in to check the appearance of the soft edge, pressing **Ctrl+H** to hide the outlines.
- Render the ShapeLayer by selecting **Render** in the **ShapeLayer Toolbox**, and press **Ctrl+H** to again display the ShapeLayer’s outlines.

### NOTE

*After a ShapeLayer has been rendered, the ShapeLayer and its contents remain on the canvas. To view the rendered result, you must either move or delete the ShapeLayer or delete only the ShapeLayer fill.*

*Another possibility is changing the ShapeLayer view by **View** → **ShapeLayer** → **Outline**.*

- *If you have activated the **Pointer**, you will delete the ShapeLayer and the ShapeLayer fill.*
- *If you have activated the **Hand**, you will delete only the ShapeLayer fill.*
- Move the ShapeLayer fill with the **Hand** by click-dragging within the ShapeLayer.

- Switch back to the **Pointer** by pressing **V** and delete the ShapeLayer by pressing **Delete** or selecting **ShapeLayer** → **Delete** and close the **ShapeLayer Fill** shelf.

### Using the Restore brush to go back to the retained version

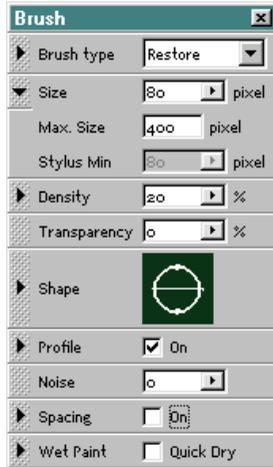
You can see that the vertical part of the middle section of the image is slightly visible as an edge. The quickest way to remove this imperfection is re-touching using the **Restore Brush**. This is why you previously selected **Retain**.

- Select the **Brush Tool** from the **ShapeLayer Toolbox**.



- From the **Brush type** menu in the **Brush Shelf**, select the **Restore Brush**.

The illustration shows the appearance of the **Brush Shelf** in a system without a graphic tablet.



- Select the **Airbrush** by clicking the **Profile** check box **On**, using size of **80** for the sky area, and then incrementally smaller brush sizes, the closer you get to the skyscrapers.
- Select a low **Density** value.
- Begin at the top of the sky, and create a soft transition between the image sections. Middle-click to undo any operation in which you have applied too much with the **Restore Brush**.
- Follow the entire line, even if the difference is barely noticeable, since it may well be visible when enlarged.
- Remember to check the transitions within buildings as well.

**NOTE**

*When painting, you have the option of unlimited and direct **Undo**, regardless of the **Brush type** you are currently using. As long as you do not change the **Transparency**, you can delete any brush stroke by clicking the middle mouse button.*

- When you are satisfied with the result, select **File** → **Save** or **Ctrl+S** to save this state.
- Now select the last ShapeLayer (at left) remaining on the canvas.
- Using the **Hand**, double-click inside the ShapeLayer.
- Zoom to the **2:1** view, and using the edge of the church steeple and upper portion of the building, test which **Blend Edge** (specified in the **ShapeLayer Fill** shelf) provides the best result. Select a value ranging from **2** to **4** pixels.
- Render the ShapeLayer.
- Since the **Hand Tool** is activated, you can delete the ShapeLayer fill by pressing **Delete**.

The **Image** section in the **ShapeLayer Fill** shelf shows now a deactivated **use** check box. However, the **Blend Edge** remains.

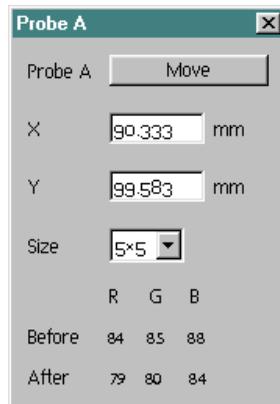
- Hide the ShapeLayer's outlines by pressing **Ctrl+H**.

As you can see, the left portion of the image does not fit well with the middle portion. Color and brightness need to be corrected.

### Checking color values

You will be using the densitometer, which we call **Probe**.

- Make the ShapeLayer's outlines visible again.
- To bring up the densitometer, select **Window** → **Probe**.



- Place the first sampling point by clicking on a dark portion of cloud at the edge of the ShapeLayer.
- Specify a sampling area of five by five pixels in the **Size** drop-down menu of the dialog.

The values in the **Before** row indicate the percentage of each color of the last saved or retained version within the sampling area. In this case, you see the values of the previously rendered and saved sky area of the middle section.

The values in the **After** row interactively indicate the change previously performed, or the current change. What you see now is the values of the rendered (left) portion of the image.

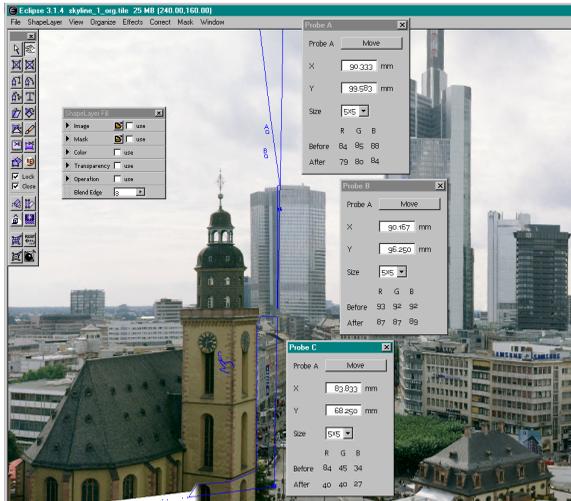
#### NOTE

*The color values indicated are determined by the settings you specify for the **Color Range** under **General Preferences**. Since we have selected **0-100%**, these values represent percentages. You can also specify **0-255** to represent absolute color values. This applies to almost all shelves and dialogs that display numeric color values.*

*When you select the **Probe** command, a sampling dialog, labeled **Probe A**, appears on the canvas, corresponding to a sampling point on the canvas labeled **A**. You can add up to 25 more points, each labeled with the successive letter of the alphabet.*

- *In some cases, a new shelf may be placed directly over a previous shelf. Click-drag the title bar of this shelf to move it.*
- *Place a sampling point by clicking the desired location in the image.*
- *To move the sampling point, click **Move** in the dialog, then click-drag.*

- Open another Probe dialog by selecting **Window** → **Probe**.
- Click on a bright spot in the clouds below sampling point **A**. Move the point by clicking **Move** in the **Probe B** dialog, and select **5x5** for this sampling area as well.
- Create a third **Probe** and place its sampling point on the brick area of the steeple.



Make sure your ShapeLayer is still selected.

## Applying color corrections in ShapeLayers

You will now perform an image correction. As long as the ShapeLayer is selected, the correction is limited to the ShapeLayer.

Of the 13 different correction options available in the **Correct** menu, you will use **Freeform** correction.

- Select **Correct** → **Freeform**.
- Begin by clicking to place three graph points anywhere in the graph, and then click **Reset** in the **Freeform** dialog.
- Place another point between the three-quarter tone point (the fourth point from **0**) and the absolute highlights (**100**).

### NOTE

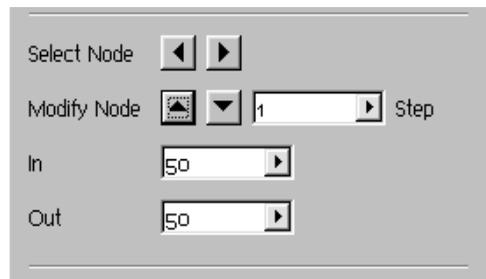
Since you are working in the **RGB** color space — an additive color space based on human perception of light — **0%** represents no light or no visible color. As you increase these values, you advance towards **100% light or color per channel**. **0%** in all channels represents the color black, **100%** in all channels represents the color white.

If you are working in **CMYK** mode (the dialogs have an identical appearance but have an additional **Black** channel, along with the color channels

**Cyan, Magenta and Yellow**), colors are calculated in a subtractive color space, based on the specific requirements for mixing colors to apply color on a neutral base (e. g. printing on paper). Accordingly, the numbers work the other way around.

**0** represents white (the white of the paper) or no color applied. As the values increase, you approach black, or **100%** applied color per channel.

- Now try to match the sky in the adjoining section as closely as possible by first (using the horizontally oriented **Select Node** arrow buttons) selecting the tone value, then clicking the vertical **Modify Node** arrow buttons upwards while observing the changing values in the **Probe A** dialog. The dark portion of the clouds is approximately in this tonal range.



By doing this, you are adjusting the values in all channels in this tonal range, since the **All** button is activated, and you also see only one graph.



- Next, select a point higher up in the graph, and correct it upwards a bit. Observe the values in the **Probe B** dialog, for which you have placed the sampling point on a lighter cloud.
- Then view the changing values in the **Probe C** dialog when you correct the color of the steeple in the midtone and quarter-tone range, by moving the third and second point.

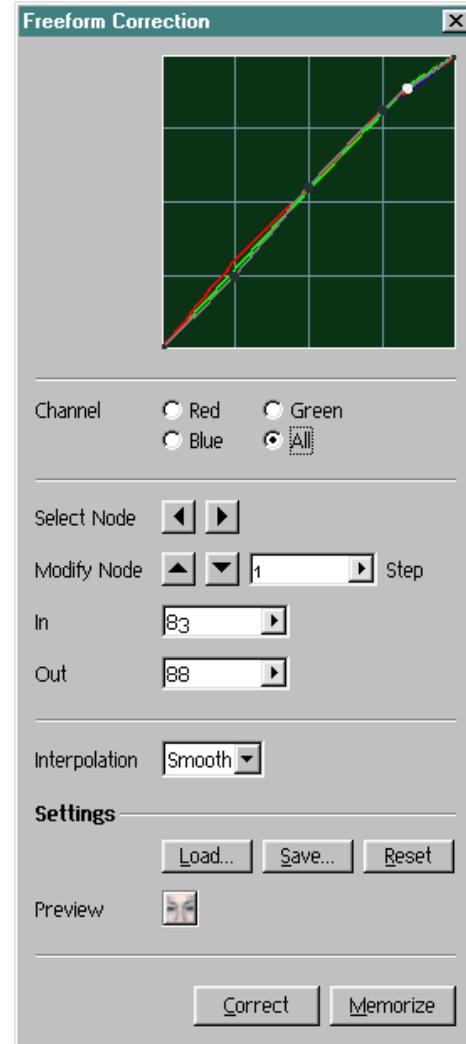
Initially, move the point only until one color value in one channel of the **After** row of the corresponding **Probe** dialog matches the **Before** value.

- Next, you will go into the individual color channels for each of the modified points and individually adjust the colors by clicking the color channel button in the dialog and then moving the corresponding point.

### NOTE

*In the **Freeform Curve**, you can also use the mouse to directly move the points in any direction, and place as many points as desired. For fine adjustments, however, we recommend using the arrow buttons.*

- While you are working, occasionally view the image at a reduced size. It is not so crucial to exactly match the color value at one sampling point; instead, try to match the overall color of the left portion of the image to the others. To help, hide all outlines, and press **Tab** to hide all shelves and dialogs.
- Check the results of your correction by toggle the preview button in the dialog Off and then On again or by pressing **AltGr+P**.
- Make sure that preview is turned on again, and that the ShapeLayer is selected.
- Close all **Probe** dialogs by clicking the right button in their title bars.
- Save the settings of the **Freeform** curve by clicking **Save** in the dialog and entering `links1_free1` for the name in the **Save As** dialog. Eclipse automatically appends the extension `.corr`.



- If you are not satisfied with your result, open the prepared correct file from the dialog by selecting **Load** → **Open** → `links1_free1_org.corr`.
- Apply (render) the correction to the image by clicking **Correct**, confirm the command, and delete the ShapeLayer.
- Close the **ShapeLayer Fill** shelf.

Eclipse has now applied the correction inside the ShapeLayer while taking into account the soft edge.

#### NOTE

*Make sure that you have set **View** → **Preview ON**. Also, when applying corrections within ShapeLayers, make sure that these are selected. If they are not selected with **ShapeLayer** → **Render Mode** → **Selected ShapeLayers**, the correction is displayed and rendered for the entire image.*

*If you have set **ShapeLayer** → **Render Mode** → **All ShapeLayers ON**, corrections are applied within all ShapeLayers, even those not selected. The correction is only displayed and rendered for the entire image when all ShapeLayers have been removed from the canvas.*

#### SEE ALSO

*For more information, please refer to the online help, chapter 2 "Correcting Color".*

- Select **File** → **Retain**.

### Using the Cutout command

You will again retouch the transition in the sky portion of the image, this time using the **Cutout** function, which loads a copy of the last saved image into any desired ShapeLayer. The **Cutout** command is directly associated with the saved version of the image — it omits temporary, intermediate versions of your work saved using the **Retain** command.

Begin by creating a ShapeLayer using the **Curve Tool**.

- Select the **Curve Tool** from the **ShapeLayer Toolbox**.



#### NOTE

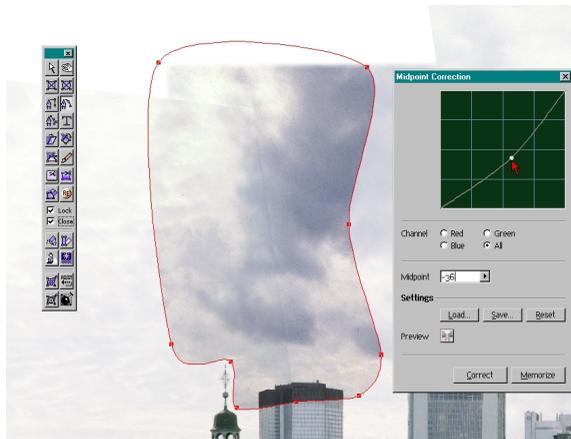
*Use the **Curve Tool** to create a ShapeLayer from curve segments. Left-click to place points, left-click-drag to move them. Middle-click to delete a point. To add a point to an existing segment, click on the desired segment.*

- *The curve path is defined by the next point; the curve does not have handles at its points.*
- *To create a straight line or corners, simply place the points close together.*
- Place the points a good distance from the border edge. You can include the building.

- Close the ShapeLayer by selecting **Close** in the **Toolbox**.
- From the **Correct** menu, open the **Midpoint** correction curve and move the midtones graph point downwards to make the edge more visible.

### NOTE

Use the tools in the **Correct** menu in conjunction with a preview to check an image for errors — in this case, to help you more clearly see the area to be retouched. Even very high-end monitors are unable to properly display certain ranges of the color spectrum. However, you may well find blemishes, such as “banding” (color steps) in gradients, in a printout or film.



- Now load a copy of the saved version of the image into the ShapeLayer by selecting **Cutout** from the **ShapeLayer Toolbox**.



### NOTE

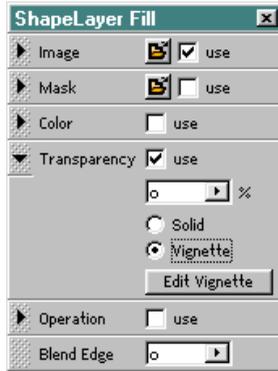
The **Cutout** copy in the ShapeLayer always consists of the entire image, although only the portion of the image framed by the ShapeLayer is visible.

- If you switch to the **Hand** in the **Toolbox** and double-click inside the ShapeLayer to bring up the **ShapeLayer Fill** shelf, you will see a preview of our saved image version displayed in the **Image** section of the shelf.

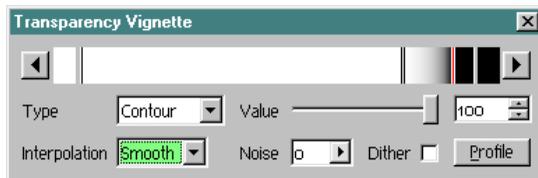
## Creating Transparency Vignettes

In addition to an image, a ShapeLayer can also contain a **Transparency Vignette**, which provides efficient options for smooth blending of images.

- Activate the **Transparency use** check box and the **Vignette** button in the **ShapeLayer Fill** shelf.



- Click on **Edit Vignette** to bring up the **Transparency Vignette** dialog. From the **Type** drop-down menu, select a **Contour** Vignette; below it, select a **Smooth Interpolation**.



- Click in the white area and drag the marker to the right until you achieve a soft blend outwards, with the edge in the middle still sufficiently covered.
- If you hide the ShapeLayer's outlines, you will still see an edge along the outside. That is why you will drag a second marker from right to left to

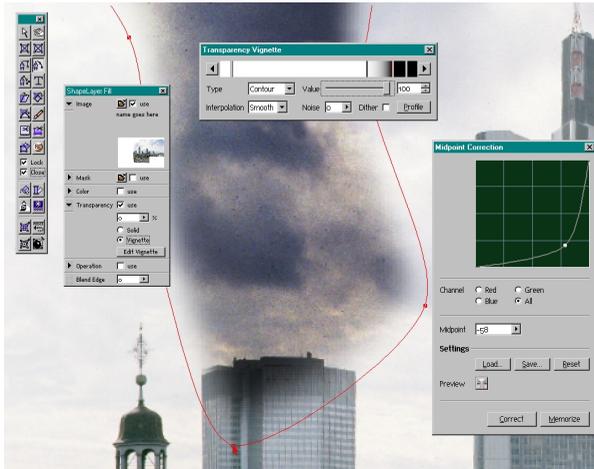
control the transparency from the outside edge inwards.

#### NOTE

*White stands for 0% transparency, i.e. 100% opacity (coverage), black stands for 100% transparency and 0% opacity (coverage).*

- Place a marker by clicking the transparency ramp.
- Click and drag to move markers.
- Middle-click to delete a marker.
- Select a marker by clicking on it or using the arrow buttons, placed to the left and right of the ramp.
- If a marker is highlighted in red, it can be edited.
- A marker's transparency level can be adjusted using the **Value** slider or by entering a numeric value in the text box resp. using its arrow push buttons.
- Switch back to the **Curve Tool** and adjust the curve by dragging its points and leaving only the area needed towards the left. Eclipse automatically adjusts the **Transparency Vignette**.
- Drag one of the left points towards the right across the area where the edge is located, then briefly deselect the ShapeLayer by clicking next to it with the **Pointer**. The **Midpoint** correction

preview is now visible on the canvas image, so you can exactly see the area you should cover.



- Select the ShapeLayer again, switch back to the **Curve Tool** and drag the point towards the left.
- Then pull downwards across the area of the building until the dividing line is no longer visible. Later on, you will use the **Restore Brush** to get this small area back from the retained version.
- Now enter a **Noise** value of **2** and activate the **Dither** option by clicking the corresponding check box.

#### NOTE

*The display of the ShapeLayer fill you see now is not an accurate representation of the rendered result. When you specify **Noise** or **Dither**, Eclipse displays the gradient coarsely. Base your decision on the appearance displayed before you set these options.*

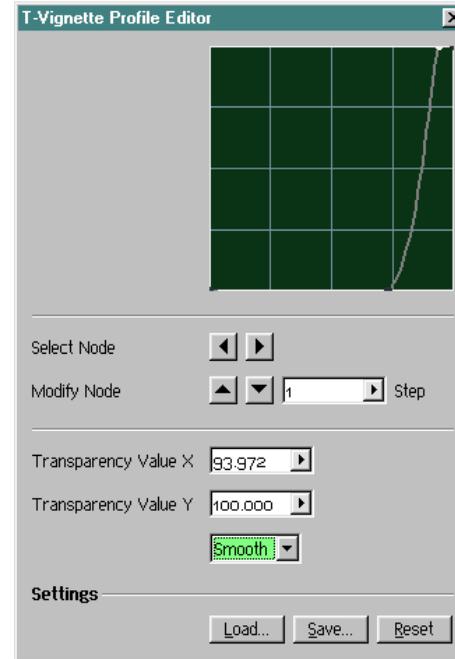
*Check the values you enter here by viewing the rendered result of a 1:1 view of the image.*

- **Noise** jiggles the pixel values at the transitions of each transparency level, thus softening the transitions. The effect of the value you specify depends on the image resolution and the difference between the transparency of individual levels created by placing markers.
- **Dither** reduces the banding within gradients, jumps calculated by the system within the color or transparency required for the human eye. These are visible as bands or stripes whose appearance in turn depends on the system's color depth. By dithering, you can move these bands (which cannot be completely eliminated) closer together or overlap them in such a way that they are no longer visible to the human eye. It is almost always worthwhile to use the **Dither** option.
- Specify **Smooth** to create soft transitions.
- Use the **Linear** option when you wish to achieve steeper, more abrupt transitions.

- You can save your custom gradient profile by clicking the **Profile** button to bring up the **T-Vignette Profile Editor** dialog.
- Click the **Save** button and save your profile as `Himmelret.vign` in your working directory. *Eclipse* automatically adds the file extension `.vign`.

You can also create vignettes in the **Profile Editor**. Each point on the graph corresponds to a marker placed in the **Transparency Vignette** dialog.

- Navigate through the markers in the dialog using the arrow buttons and observe how the display of the graph points changes from black to white.



- If you like, you can load the prepared profile `Himmelret_org.vign` by selecting **Load** and choosing the file in the **Open** dialog.

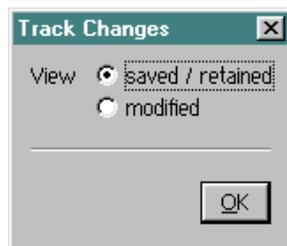
#### NOTE

*The **Profile Editor** provides an easier and more precise means for creating and editing complex vignettes.*

- You only need to save your gradient profile if you want to use the profile in a different `ShapeLayer`, or if you choose not to save the `ShapeLayer` itself,

since Eclipse saves vignettes together with the ShapeLayer.

- All vignette settings, including the **Noise** and **Dither** options, are saved along with the ShapeLayer when saving the ShapeLayer.
- When the vignette **Profile** is saved by itself, the **Noise** and **Dither** options are not saved, so you must again set them manually in the **Transparency Vignette dialog**.
- Now, render the ShapeLayer by using the **Pointer** to click **Render** in the **ShapeLayer Toolbox**.
- Close the **Midpoint** correction, since you have only activated it for better control and delete the **Cutout** in the ShapeLayer by deactivating the **use Image** check box in the **ShapeLayer Fill** shelf.
- Hide the ShapeLayer's outlines, and from the **View** menu, select **Track Changes**.



- When you select **saved/retained**, you see the state of the image before modifying. You can toggle between the two states by clicking the buttons.

#### NOTE

Use **Track Changes** to check an image after you have rendered a ShapeLayer fill, a correction or an effect.

- **saved/retained** shows the last saved or retained version of the entire canvas image.
- The **saved/retained** or **modified** state of an image is shown for the entire image, regardless whether ShapeLayers are on the canvas, and whether these are selected or not selected.
- If you wish, save your ShapeLayer as `Himmelret`, but you will not be needing it anymore in the course of this lesson. Afterwards, delete it.
- If you are not satisfied with the rendered result, select **Undo** and try to improve the ShapeLayer or the vignette.
- In this case, create a new **Cutout** or press **Ctrl+Z** to go back one step in editing your ShapeLayer.
- You can also delete your ShapeLayer, load the prepared ShapeLayer `Himmelret_org.shp` and select **Cutout** to place a copy of the image into the ShapeLayer. Render the ShapeLayer, then delete it.

**NOTE**

*The **Cutout** command always places a copy of the entire last saved image into the ShapeLayer. Accordingly, it is best to save ShapeLayers created for **Cutouts** without their content, when overwriting the file at a later time. The version of the image contained in the ShapeLayer would be automatically updated when loading the ShapeLayer again later, which would only make it more confusing to reconstruct a work sequence.*

*Unless of course, you would like to use this ShapeLayer — with the **Cutout** version it contains — in a new image. In that case, you should not overwrite this version.*

*To make a copy of the portion of the image contained in the ShapeLayer in its current state use the **Cropout** command, which we will describe later on.*

- Switch to the **Brush Tool** and select the **Restore Brush** from the **Brush Shelf**.
- Restore the top edge of the building from the previously retained version.
- Select **File** → **Save** to save the image.

## 4 Simple Masking

A mask protects selected areas of an image from any image manipulation. When you create or edit a mask, you are working in a separate channel, the mask channel. However, masks can also be active within ShapeLayers.

In this lesson, you will learn how to:

- Create a mask with a ShapeLayer
- Combine ShapeLayers
- Change the mask display
- Render a mask to an image
- Edit a mask

Begin by again deleting the default settings as described in the “Restoring the default settings” on page 4.

### Creating a mask with a ShapeLayer

You will now your first mask through a ShapeLayer in your image to enable you to later correct and edit the sky separately from the buildings.

You will create the ShapeLayer using the **Bezier Tool**.

The **Bezier Tool** is the most flexible of the curve tools; it allows you to draw straight lines as well as curves. It requires a bit of getting used to — but when you get the hang of it, you will rarely use the **Polygon** or **Curve Tool**, because the **Bezier Tool** provides all the editing options you need.

- Select the **Bezier Tool** from the **ShapeLayer Toolbox**.



- Zoom to a **4:1** view.
- Begin placing curve points at the left on the horizon, just outside the canvas image.

#### NOTE

*Click for straight (corner) points, click and drag for curve points. Middle-click on a point to delete it.*

- *Left-click on a segment to add a point to an existing segment.*
- *Change a segment from curve to straight or vice versa by **Shift**-clicking the segment.*
- *When you select a point by clicking on it, its two handles become visible. Both can be moved together to edit the segment.*
- ***Shift**-click one of the two handles to unlink them and edit the selected handle individually. **Shift**-click again to link the two handles back together.*



- Continue tracing the line. Place the points more in the darker area towards the bottom. Skip the cranes between the buildings; we will retouch them out of the picture later on.



- Always stay on the outer edge to the sky — do not worry about those areas in which portions of the sky appear below this edge.
- When you have reached the outer right edge, generously frame the image on the outside, then place a final point just before the first one and select **Close** in the **ShapeLayer Toolbox**.

- Deselect the ShapeLayer by pressing **V** to switch to the **Pointer** and clicking on the canvas to the left of the bounding box. Zoom out of the image.
- Switch back to the **Bezier Tool** and begin working on the top of the church steeple.
- Using the **Bezier Tool**, frame the area of the top of the church steeple in which the sky appears.
- Begin with the first small slit and close the ShapeLayer. Then deselect it by clicking next to it with the **Pointer**, and begin with the next window by switching back to the **Bezier Tool**, selecting the open area, closing the ShapeLayer, etc.



- The sky is also visible through some of the buildings to the right of the center. Perform the same procedure there.

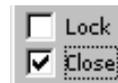
## Combining ShapeLayers

You will now combine these ShapeLayers in such a way that your mask will later cover areas of the sky within the buildings.

By using the **Combine** command, you create new ShapeLayers or combinations of existing, overlapping ShapeLayers.

A combined ShapeLayer, i. e. a ShapeLayer joined with one or several other ShapeLayers using the **Combine** command, is either the total area or an intersection of its ShapeLayer components, depending on whether its individual component ShapeLayers have been assigned the option **Lock ON** or **Lock OFF**.

- Begin by deselecting all ShapeLayers: press **Ctrl+A** to select all of them and then click on the canvas area outside of the large ShapeLayer.
- Now use the **Pointer** to select all of the small ShapeLayers one by one, and deactivate the **Lock** button in the **ShapeLayer Toolbox** for each one.



- Press **Ctrl+A** to select all of them again, then select **Organize** → **Combine**. The ShapeLayers are now combined.
- In the status bar at the bottom, click the **Active Mask** button.

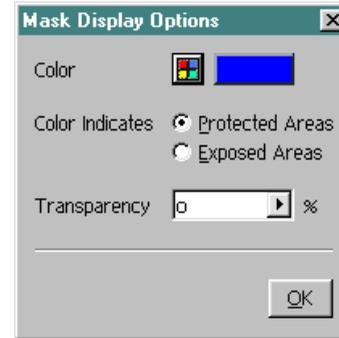
**NOTE**

The top bar (**View**) represents the monitor display. Here you can view the individual color channels either separately or in combination, by selecting or deselecting them. The lower bar (**Active**) shows which channel is currently active. Here you can determine the channels to which rendering processes will be applied by activating or deactivating individual color channels. Since you have specified the **Link View/Active ON** option under **General Preferences** → **Display** → **Channels**, the **View Mask** is automatically activated and the mask is displayed.

**Setting the mask display**

Eclipse now fills the ShapeLayer with the mask color, which is blue by default, but can be specified as desired.

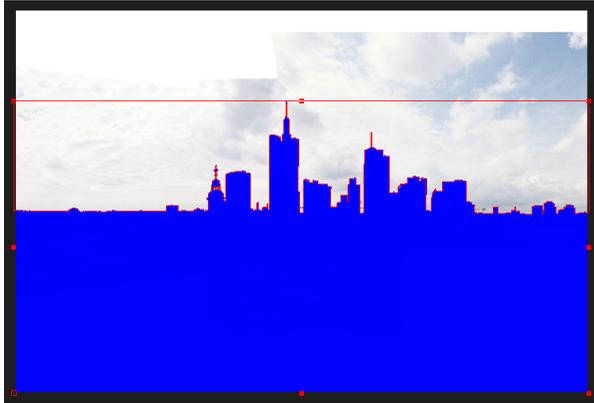
- Select **Mask** → **Display Options**.
- In the **Mask Display Options** dialog, you can choose any color from the **Color Editor** by clicking the **ColorLink** button and adjusting a color in the **Mask Color Editor**. You can also specify the **Transparency** of the mask display.

**NOTE**

**Transparency**, i. e. the transparency you set in this dialog, only relates to the display of the mask and has nothing to do with the actual density of the mask and its effect on the image.

The same is true for the buttons **Protected Areas** (positive display) and **Exposed Areas** (negative display).

You now see that the areas enclosed by the ShapeLayers, which you have previously assigned the option **Lock OFF**, have been omitted from the mask.

**NOTE**

The **Organize** → **Combine** command allows you to combine multiple *ShapeLayer* components into a *ShapeLayer*, either as an total (additive) or intersection (subtractive) area.

- If two *ShapeLayers* are assigned the **Lock ON** option before you combine them, the result is the sum of these two *ShapeLayers*. When you create a new *ShapeLayer*, it is initially assigned the **Lock ON** option by default.
- If one or both of the two *ShapeLayers* are assigned the **Lock OFF** option, the result is the intersection area of the two components.
- In the case of combined, but empty *ShapeLayers*, you still see the outlines (boundaries) of all *ShapeLayer* components. To see the form of the

new *ShapeLayer* created by using the **Combine** command, you must fill them.

- When you combine several filled *ShapeLayers* (i. e. *ShapeLayers* assigned a *ShapeLayer* fill), *Eclipse* applies only the complete fill attributes of one *ShapeLayer*.
- The fill attributes of the frontmost (top) *ShapeLayer* are used for the combined *ShapeLayer*. To move the **ShapeLayer**, i. e. to assign the *ShapeLayer* a layer position, use the commands **Front**, **Forward**, **Back** and **Backward** in the **Organize** menu.
- To separate a combined *ShapeLayer* into its individual components, select **Organize** → **Split**.
- When you use the **Split** command to separate a *ShapeLayer* (previously combined using **Combine**) into its original component *ShapeLayers*, the fill attributes of the previously combined *ShapeLayer* are transferred to all of the now separate *ShapeLayers*.
- Begin by selecting **File** → **SaveAs** → **ShapeLayers**, and save your *ShapeLayer* under the name `Skyline_1`.
- Delete the *ShapeLayer* from the canvas by pressing the **Delete** key.
- Create a *ShapeLayer* using the **Rectangle Tool** and a second *ShapeLayer* using the **Ellipse**

**Tool.** Move the ShapeLayers together so that they overlap.

- Observe how the **Combine** command works by assigning each ShapeLayer a different **Lock** option, then selecting both of them, combining them, separating them again using **Split**, then combining them again with different **Lock** options, etc.
- Since you are working in the mask channel, the ShapeLayers are automatically filled with the mask color.
- Delete the test ShapeLayers.

### Rendering the mask

- Open your ShapeLayer `Skyline_1.shp` or the ShapeLayer `Skyline_1_org.shp` that has been prepared for you, if you have previously used the prepared files.
- Select it using the **Pointer**, and choose **ShapeLayer** → **Anti-alias** to check whether an **Anti-alias** level of **3** has been specified.
- Select **Render** in the **ShapeLayer Toolbox** to render the mask fill of the ShapeLayer in the mask channel, and delete the ShapeLayer after Eclipse has completed the **Render** process.

The mask is now on the canvas image in the mask channel.

### NOTE

*When you activate the **Active Mask** button to switch to the mask channel, ShapeLayers are automatically filled with the mask color. Just as you can modify any other ShapeLayer fills, you can assign this mask fill **Transparency**, a **Transparency Vignette** or a **Blend Edge**. Basically, you can edit a mask in the ShapeLayer just as you can any ShapeLayer fill, and you can make corrections and apply effects to any mask.*

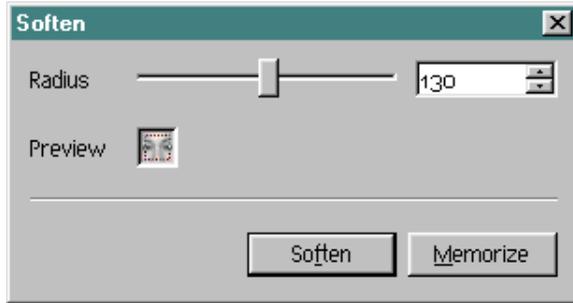
*As long as the mask channel is active, only the mask is rendered when choosing **Render**. Any images in the ShapeLayer are left unchanged.*

### Edit the mask, apply an effect and save it

If we used the mask in its current state to correct the color of the sky, the horizon line would appear as an ugly, hard edge opposite the buildings.

To prevent this, you will now apply an effect to **Soften** the mask. Using the assigned value, the edge of the mask is uniformly softened in both directions, i. e. into the mask area and outwards from the mask (the area not protected by the mask).

- Select **Mask** → **Soften**.
- Specify a value of **130** by dragging the slider.



- Check the result by toggling the **Preview** button ON and OFF or pressing **AltGr+P**.
- Render the effect onto the mask by clicking **Soften**.
- Select **File** → **SaveAs** → **Mask** to save the file under the name `skyline_1`. Eclipse automatically appends the extension `.tmsk` (for tiled mask) to the filename.

#### NOTE

*The **Soften** effect in the **Mask** menu is identical to the **Soften** effect in the **Effects** menu.*

*The value you specify here is relative; at **255** it corresponds roughly to the **Gaussian Blur** effect with a specified value of **2** to **3** pixels.*

- Close the image.

## 5 Editing and Retouching

The most important tools for retouching an image are brushes. Eclipse brushes allow you to render ShapeLayer fills, partially restore the original state of an image, apply special effects in ShapeLayers, apply color corrections and effects, and create and edit masks.

In conjunction with ShapeLayers, brushes offer a wide range of retouching and editing options.

In this lesson, you will learn how to:

- Apply a mask
- Create layouts and layout ShapeLayers
- Use the Clone Brush to remove imperfections
- Work with brushes in general
- Use the Smear and Effects Brush
- Apply ShapeLayer fills using the Render Brush
- Use the Cutout command
- Use the Cropout command

Begin by deleting the default settings as described in “Restoring the default settings” on page 4.

Our background image still needs a lot of retouching work to make it suitable for the actual compositing.

You will use the mask you have just created.

### Applying a mask to the Canvas Image

- Open the working image again, and open the mask you just created by selecting **File** → **Open** → **Mask** → skyline\_1.tmsk.

- Click the **View Mask** button in the **View** section of the status bar. The mask is displayed on the image.



- Click the **Use Mask** check box to activate the **Use Mask** option.
- Hide the mask display by deactivating the **View Mask** button. To check the exact placement of the mask while you are working, activate the button again.

Although the mask is no longer visible, it is now actively affecting the image.

#### NOTE

*It is important to understand the difference between an active mask and the active mask channel or mask mode.*

- You are actively in the mask channel or masking mode if you have activated the **Active Mask** button. In this mode, you create or edit masks.
- A mask is active, i. e. protects the masked areas of an image, if you have activated the **Use Mask** check box and are working in one or more color channels. If you have not just created a mask, the mask must be loaded into the mask channel in

addition to the image using the **File** → **Open** → **Mask** command.

- You can only open mask files that “match” an image, i. e. a mask must have the same ratio of resolution to dimensions, or the same pixel ratio as the canvas image.

### Creating a layout ShapeLayer

You are about to retouch the image to remove the unappealing construction cranes. However, you need only retouch those areas that will not be covered by the as yet missing parts of the composition. To save yourself unnecessary work, you will create a layout ShapeLayer.

- Create a rectangular ShapeLayer using the **Rectangle Tool**.
- Double-click inside the ShapeLayer using the **Hand** and load the finished compositing `Eurocity_final.tile` into the ShapeLayer.
- Switch to the **Pointer** and double-click the **Magic Handle** to adapt the ShapeLayer to fit the image.
- Move the buildings until they are approximately aligned, and activate and deactivate the mask by switching the **Use Mask** option ON and OFF.

As you can see, it is enough to generously apply fine retouching around the center of the image.

- Save your ShapeLayer under the name `Layout`, delete it from the canvas, and make sure that the mask is active, i. e. that the **Use Mask** check box is activated.

#### NOTE

*In this case, you have the finished compositing as a guide. Before beginning with an actual composition, it is always wise to create what we call a layout.*

*Basically, you create layouts with smaller calculated (file size) copies of your original files.*

*This allows you to see early on — before working with the large original files — whether your planned technique will be successful, or how you may need to alter your approach to achieve the desired result.*

*The more familiar you become with Eclipse, the more you will find that there are always several ways to reach a specific destination and creating a layout can save you time-consuming detours.*

*We distinguish between two variations of layouts — in both cases, when creating the layout image, you should specify the dimensions, i. e. the ratio of its sides to the planned final (high-resolution) file.*

- *Firstly, the rough layout, which is concerned with how the individual parts of a composition should be assembled according to their display ratio and placement. This is mostly intended for your own orientation when working on simple compositions, or when the final image will only be a small file. Of course, what is considered*

*large or small is relative to the hardware you are using.*

- *Secondly, the in-detail-layout, which is usually created to review the composition with the client. Eclipse provides the extremely effective option of using all of the ShapeLayers, which you spend much time creating, in a perfect fit for the high-resolution file. All you need to do is replace the small (low-resolution) image data with the identically named original data in the directory. However, this requires that the dimensions of the final image be identical to those of the layout. We recommend creating a in-detail-layout if you are uncertain about how you will proceed, i. e. how the final image should look. A layout allows you to quickly generate variations of a solution, concerning, for example, coloring.*

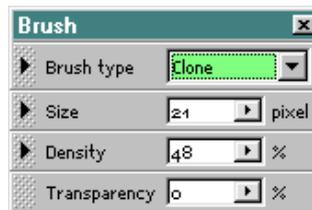
### Retouching using the Clone brush

You will begin by removing any irritating items from the sky area. First, you will use the **Clone Brush** to perform pixel transfers. The **Clone Brush** allows you to copy pixels according to the shape and size of the brush from one portion of the image to another. You can also use the **Clone Brush** to measure distances in an image.

- Zoom to a **4:1** enlarged view of the area in the center of the image where a construction crane juts into the sky.
- From the **ShapeLayer Toolbox**, select the **Brush Tool**.



- From the **Brush Shelf**, select the **Clone Brush** under the **Brush type** menu. You can also press **F**.

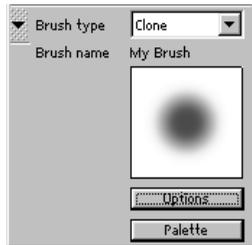


As soon as you have selected the **Clone Brush**, a message in the status bar asks you to select a **Clone Source**, i. e. a source for the pixel transfer.

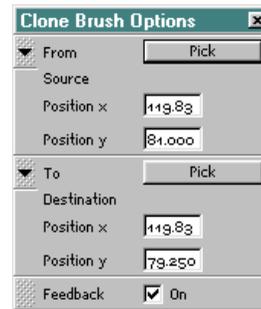
- Do select the source, click in an area of the sky above the crane.

You now see the **Brush Cursor** connected by a line to a second **Brush Cursor**. In addition, the status bar indicates the **Cloning Distance**. To the right of the Eclipse logo you can always see your current position on the canvas, regardless of the specific tool you are using.

- Although you have not yet selected the destination for the pixel transfer, click the **Options** button in the **Brush type** section of the **Brush Shelf**.

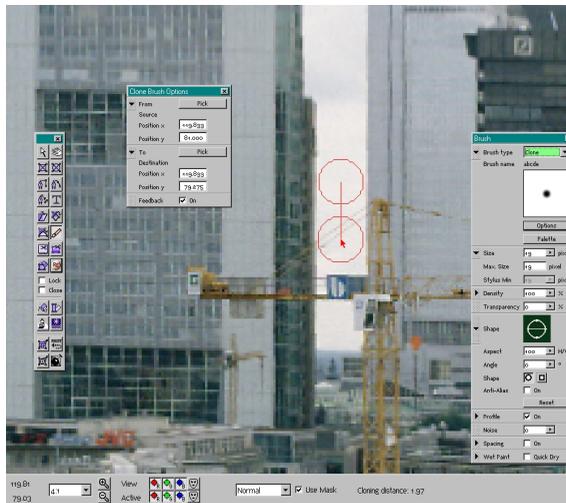


This opens the **Clone Brush Options** shelf, in which you can read and numerically enter precise distances, or numerically enter the source and destination for the **Clone Brush**.



**NOTE**

*You can also use the **Clone Brush** in conjunction with the **Clone Brush Options** shelf to measure distances on the canvas.*



- You can enter values numerically to transfer objects in the image from a source to a target destination with great precision.
- If you have specified **Feedback ON**, the **Clone Brush** can again transfer areas that have already been cloned.
- If this option is set to **OFF**, the brush loses the information immediately after cloning, i. e. if you clone this cloned area again, you will be transferring the original information beneath it.
- Observe how values are indicated when you click on the crane, located vertically below the source.

**NOTE**

You can clone *outwards* from a masked area, but you cannot clone *into* a masked area.

- To set a new source and target for the **Clone Brush**, press F.
- Experiment with the settings to see how **Feedback** ON or OFF affects the brush, then select **File** → **Restore** or use **Brush Undo** with the middle mouse button, or use the **Restore Brush** to bring back the original.
- Close the **Clone Brush Options** shelf.
- Continue using the **Clone Brush** to remove the construction cranes. Change the brush size and perhaps **Density** in the **Brush Shelf**, and set the source and target areas repeatedly as desired.
- From time to time, you can display the mask to help orient yourself.

**NOTE**

Leave the **Transparency** setting on zero when working with the **Clone Brush**, since partially transparent cloned areas look a bit sloppy.

- This basic principle applies to all brushes: as soon as you change the **Transparency**, you will *not* be able to use middle-click (**Brush Undo**) to undo something you have previously painted. This is *also* true if you switch the **Brush type** or if you use the **Color Brush** and then change the color when painting.

- It is important to always place the **Clone Brush** in a new position when cloning, to prevent unintended new patterns from being created.

- When editing gradients, always place the **Clone Brush** parallel to the gradient direction

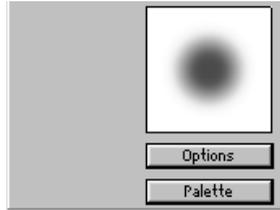
**Basics of working with brushes**

To be able to use them properly, it is important to understand how the various brush options work. For this reason, we will go into detail about **Brush types** and brush settings available in the **Brush Shelf**.

- Click the **Brush type** arrow to rollout this first section of the shelf.

In the **Brush type** drop-down menu you can choose between 10 different brush types. Beneath the menu, the currently selected **Brush name** is indicated as well as a preview of the selected brush. Clicking the **Options** button in the **Brush type** section of the shelf displays the corresponding **Brush Options**, e. g. the **Brush Color Editor** when you are working with the **Paint Brush** or the specific **Correct** dialog when using the **Correct Brush**, etc.

Clicking the **Palette** button brings up either the default **Brush Palette** or the one last used. You can also display the **Brush Palette** by selecting **Window** → **Brush Palette**.



Two brush palettes are included by default, `def-brush.pal` and `glows.pal`. These files are located in `\program files\eclipse\util\custom` directory.

Any brush you create can be put in a **Brushes Palette**. A **Brushes Palette** can be saved under a customized name.



- Use the scroll bar to navigate down to the end of the palette. An empty preview appears below the **Smear Brush**.
- Left-shift-click the preview; your current brush has now been stored in the palette. You can enter a name of your choice in the text box below the brush preview.

When saving a brush in a **Brushes** Palette, you save every available option specified in the **Brush Shelf** with it.

- To save your palette, click **Save** and enter a name in the **Save As** dialog. The extension **.pal** is automatically appended.
- Middle-click a brush to delete it from the palette. Click **Reset** to return to the default **Brush Palette**.
- To open your palette, choose **Open** and select your file in the **Open** dialog.

**Size** and **Density** each have a slider and text box called **Stylus Min** for minimum stylus pressure when you are using a graphic tablet. This is because you can adjust both options additionally by the pressure of the stylus on the tablet as well.

The maximum brush size you can set under **Max. Size** is **1024** pixels.

The **Density** setting applies only to the **Airbrush** you specify with **Profile On** located further down in the **Brush Shelf** and determines the ratio of air to color application. The lower this value, the less color is applied; the higher the value, the greater the amount of color applied.

**Transparency** determines the transparency of the color applied. With a setting of **100**, no color is applied. A value of **0** means the color is completely opaque, i. e. **0** percent transparent.

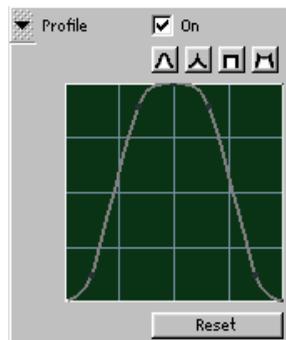
In the **Shape** section you can directly adjust the shape of the brush by click-dragging the **Shape** preview.

**Anti-Alias** refers to the value specified under **General Preferences** → **Render** or **Shape-Layer** → **Anti-alias** and is important when you work with the **Solid Paint Brush**.

**Aspect** lets you specify the brush diameter and **Angle** allows you to control the brush angle. Select between round or rectangular shaped brush next to **Shape**.

Click **Reset** to return to default shape settings.

- Rollout the **Profile** section of the **Brush Shelf** by clicking the arrow button.
- As you click the **Profile** check box **On** you specify the use of an **Airbrush**.



- Drag the graph points to change the spread of the air-to-paint ratio of the **Airbrush**.

Use **Noise** to add noise (color-neutral grain) to the color inside the brush.

**Spacing On** means that the individual drops of color or brush strokes are uniformly connected with the spacing you specified under **Gap** in percent relative to the brush size. This helps you achieve a consistent application of color when painting. The lower the **Gap** value, the smaller the distance between the individual drops of color, the softer your brush stroke and the slower your brush speed.

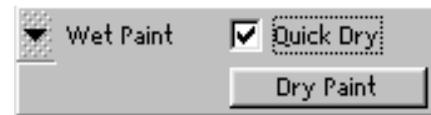


For freehand painting, try a **Gap** value between **15** and **30** to achieve a consistent stroke. If you use the **Stroke** command from the **ShapeLayer Toolbox** to have the brush follow the outline of a ShapeLayer, you should definitely set **Spacing to On**.

If you use the mouse for painting, set **Spacing to On** to apply color only once in each location and to achieve a soft color blend or soft brush. If you have set **Spacing Off**, a single mouse click will apply several dabs of color to a single spot at high speed, without being able to control the application of color.

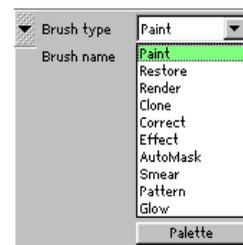
If you specify **Quick Dry On** in the **Wet Paint** section of the shelf, the applied color is dry immediately after picking the brush up from the canvas and you can add to the color. In this case, however, you can only middle-click to undo the last brush stroke or dab.

With **Dry Paint**, this option is only applied to the brush stroke immediately following.



Painted areas also dry automatically and you have no option of middle-clicking to brush **Undo** when you change **Transparency**, **Brush type** or **Brush Color**.

All of the principles mentioned above apply to all ten of the brushes available in the **Brush type** menu.



The **Glow Brush**, with which you can create incredibly realistic light refraction and glare effects, is provided with a default palette, which is called `glows.pal1`.

The **Pattern Brush** allows you to copy areas from inside the brush cursor into the brush and paint with them.

### SEE ALSO

*For more information, please refer to chapter 4 of the online help, “Using Brushes”.*

- After you have removed all of the cranes from the sky, take another look at the areas you have cloned by selecting **View** → **Track Changes** and toggling between the two states.
- If you are satisfied with the result, press **Ctrl+S** to save the image.

Next, you will invert the mask to protect the sky while you remove the cranes from the building area.

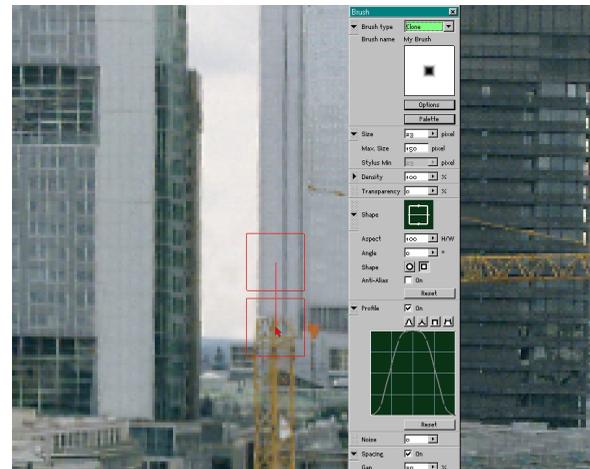
- Select **Mask** → **Invert** or **Ctrl+I** and confirm your choice in the **Requester** dialog.

You will notice that Eclipse automatically activates the **View** and **Active Mask** buttons, thus switching to masking mode.

- Go back to one of the colors in the **Active** bar and click the **View Mask** button to hide the mask. Check whether the **Use Mask** option is still set to ON.

## Retouching using the Smear and Effect Brush

- Begin at the bottom of the tallest skyscraper.
- Zoom to the **4:1** view.
- In the **Brush Shelf**, check whether the **Profile** check box is activated, whereby the Airbrush is selected. Rollout the **Profile** section of the **Brush Shelf**.
- Select the angular shape for the selected **Airbrush**. In the **Size** section, specify a **Size** of about **20**, set **Spacing** to **On** with a **Gap** of about **20%**.



- Always place the **Clone Brush** parallel to the vertical or horizontal lines of buildings or their extension.
- Things are a little more difficult in the lower area of the building next to it. Keep changing the size and shape of the brush, and do not worry about the “S” in the “Samsung” logo on the building in front.
- Switch to the **Smear Brush** to smudge the cloned areas a bit. Set the **Density** to a low value when working with the **Smear Brush**.
- Continue reconstructing the “Samsung” building in a realistic manner.
- When you have finished working on the windows, switch to the **Effects Brush**.
- From the **Effects** menu, select **Add Noise**, specifying a value of **6** in the **Noise** dialog.
- Close the **Noise** dialog and paint the effect on the areas you have cloned and then smudged using the **Smear Brush**.

### NOTE

*When working with the **Clone Brush** and the **Smear Brush** at low **Density** values, you are also smearing the film grain in the original image, and thus sacrificing sharpness. You can use the **Noise** effect to optically compensate for this effect.*

*The grain of the **Noise** effect is a monochrome gray grain which is in most cases the best suited to compensate for such losses. To create colored grain, you need to apply the effect separately in the individual color channels.*

- Temporarily save the state of the image by selecting **File** → **Retain**.

### Editing using the Render Brush and the Cutout command

You can also render ShapeLayer fills onto the image with the help of the **Render Brush**. This is especially useful if you want to render only small areas. The first letter of the illuminated logo on the building in front has most likely been garbled in the cloning process. To reconstruct it, simply make a copy of the second “S” in the logo, and place it at the beginning.

- Switch to the **Rectangle Tool** in the **ShapeLayer Toolbox** and draw a small ShapeLayer around the “S”.
- Select **Cutout** in the **ShapeLayer Toolbox** and use the **Pointer** to move the ShapeLayer.

You are probably wondering about the fact that the ShapeLayer seems not to have a fill. But things are not as they seem.

- Select **Window** → **ShapeLayer Fill** to open the **ShapeLayer Fill** shelf.

As you can see now, Eclipse has also loaded a copy of the mask into the ShapeLayer, because the **Use Mask** option is active. Since the stored version of the mask is the original one, i. e. not the inverted version, it is placed over the image in the ShapeLayer, and you cannot see it initially.

- Click the **Invert** check box in the **Mask** section of the **ShapeLayer Fill** shelf to invert the mask in the ShapeLayer.

The “S” should now appear as follows.



- Move it to the beginning of the logo, specify a **Blend Edge** of **1** and press **Ctrl** while adjusting the ShapeLayer until only the most necessary part of the ShapeLayer fill is visible.

- Switch to the **Brush Tool** in the **ShapeLayer Toolbox** and select the **Render Brush** from the **Brush type** menu.

Now the ShapeLayer fill is no longer visible; you see only the ShapeLayer’s outline.

- Paint the letter into the image. Since you are active in the color channels, you are not rendering the mask contained in the ShapeLayer onto the image.
- Delete the ShapeLayer. Since you will not need it anymore, you do not need to save it.
- Afterwards, select **Retain**.

### NOTE

*When you use the **Render Brush** to render a ShapeLayer fill onto the image, you are only rendering the portion of the ShapeLayer fill bordered by the ShapeLayer. All other brushes operate independently of ShapeLayers, i. e. you can view them as limited to effects or color corrections on ShapeLayers — but when you apply them with the **Effects** or **Correct Brush**, you are “painting” these effects or corrections onto the canvas outside of the ShapeLayer as well.*

- Using what you have learned, continue retouching the remaining areas of the buildings.
- Finish by selecting **Mask** → **Invert** to invert the mask again, then activate the color channels and

deactivate the mask display. Make sure that the **Use Mask** option is active.

### Using the Cropout command

One use of the **Cropout** command in the **ShapeLayer Toolbox** is to copy the current state of the image into a ShapeLayer. Another is to save this portion of the image to disk.

You will now use the **Cropout** command to reduce the generous area of the canvas image and use this cropped section as the base of your further work.

- Draw a ShapeLayer using the **Rectangle Tool**.
- Place and/or scale the ShapeLayer at the top in such a way that it encloses exactly that area of the sky where it stretches horizontally across the entire width of the image. Drag it across the entire width of the image and downwards up to the point where you can still see the church.
- Click the **Cropout** button in the **ShapeLayer Toolbox**.



- The **Save As** dialog appears. Enter the name `crop2skyline_2.tif` and click **Save** to confirm.

Since the **Use Mask** option is active, Eclipse automatically stores the corresponding mask in the working directory under the same name with the file extension `.tmsk`.

Both files, the mask and the cropped image section, are stored in the ShapeLayer.

- Save the ShapeLayer under the name `Crop2skyline_2` by selecting **File** → **Save As** → **ShapeLayer**.

#### NOTE

*When you select the **Crop As** command from the **File** menu to save a cropped section of an image to disk, you are unable to save the corresponding ShapeLayer, and thus also unable to save the position of the cropped section.*

*The **Cropout** command is often used to save modified image sections temporarily as a variation or as a backup copy. In that case it is important to also save the ShapeLayer, in order to be able to place the copy in the original location in the image.*

- All **Crop** commands store the current state of a cropped section defined by a ShapeLayer, as opposed to the **Cutout** command, which loads the last saved version of the image into the ShapeLayer.
- The commands **Crop** and **Paste Crop** in the **File** menu are linked and utilize the program's clipboard.

#### SEE ALSO

*For more information about the **Crop** commands, please refer to chapter 5 of the online help, "Working with ShapeLayers" under "Filling a ShapeLayer".*

*Layer with an Image” and chapter 1, “Eclipse Basics“ under “Cropping, Rotating or Transforming an Image“.*

- Press **Delete** to delete the ShapeLayer, and save the image by pressing **Ctrl+S**.
- Close the image by selecting **File** → **Close**.

## 6 Compositing and Masking

The complex fill options offered by ShapeLayers allows you to create extensive image compositions. You can create any number of ShapeLayers on an image and assign them a wide variety of options.

Depending on your needs and working preferences, you can apply multiple ShapeLayers to an image individually in sequence, or in specific combinations, and then apply corrections or effects.

You also have the option, though, of creating and editing any number of ShapeLayers on an image, and then applying them all to the canvas image at once.

In this lesson, you will learn how to:

- Use the clipboard
- Scale ShapeLayers from their center
- Apply effects in ShapeLayers
- Use the Automask Tools
- Work with complex filled ShapeLayers
- Rotate ShapeLayers
- Use masks within ShapeLayers
- Change the background color of the canvas

Begin by again deleting the default settings as described in “Restoring the default settings” on page 4.

Whether you have been using the prepared ShapeLayers or those you created:

If you continue to use your copy `skyline_2.tile`, created with **Cropout**, as a basis for further work,

all of the ShapeLayers and ShapeLayer fills prepared for the following lesson will not be in the exact position of the finished compositing. If you want to use the exact position in the following but wish to continue with the state of the work you have performed, the metric dimensions of your cropout must be identical to those of the file `skyline_2_org.tile`.

For this reason, proceed as follows:

- Open your file `skyline_1.tile`.
- Open the corresponding mask by selecting **File** → **Open** → **Mask** and activate the **Use Mask** option by clicking the **Use Mask** check box in the status bar.
- Open the ShapeLayer `Crop2skyline_2_org.shp` and select it.
- Select **Cropout**.
- Eclipse asks in a **Requester** dialog: “Replace image(s) and/or mask(s) in selected ShapeLayers?”. Click **Yes** to confirm.
- As described in the previous chapter, save the cropped image portion as `skyline_2.tile` and the ShapeLayer as `Crop2skyline_2`. Eclipse asks whether you wish to overwrite – confirm by clicking **Yes**.
- Delete the ShapeLayer and close the file.

### Using the Cut, Copy and Paste commands

You can copy ShapeLayers from one image to another by way of the clipboard.

You will now prepare the entrance of the Frankfurt Stock Market for the composition.

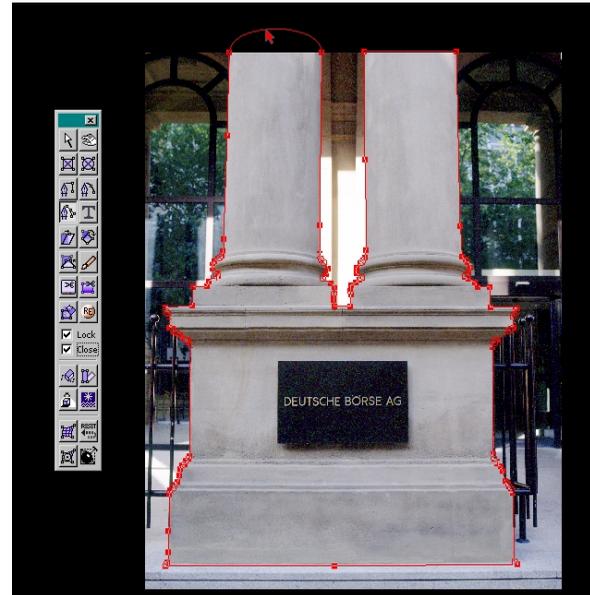
- Open the image `boerse_scan.tile`.
- Frame the entrance with a Bezier curve. To do this, select the **Bezier Tool** from the **ShapeLayer Toolbox**.
- Begin at the top left outer side of the column. When you have completed the ShapeLayer to the point that you have reached the right inner edge of the column, close the ShapeLayer by selecting **Close** from the **ShapeLayer Toolbox**.
- Straighten the curve segment at the end by left-shift-clicking it.
- Switch to the **Pointer** and select **Cutout** from the **ShapeLayer Toolbox**.
- Save your ShapeLayer under the name `boerse_scan`.

If you would like to continue working with the prepared ShapeLayer, delete your ShapeLayer and open the file `boerse_scan_org.shp`.

- From the ShapeLayer menu, select the **Cut** command to cut the ShapeLayer and its contents, i. e.

to remove them from the image and copy them into the clipboard.

- Close the current image by selecting **File** → **Close**.



- If you would like to continue with your version of the work process thus far, open the file `skyline_2.tile`.
- If you would like to continue with the prepared version, open the file `skyline_2_org.tile`, save it as `skyline_2.tile`, close the original, and open `skyline_2.tile`.

- Select **ShapeLayer** → **Paste** or press **Ctrl+V**.

Note the text in the status bar.

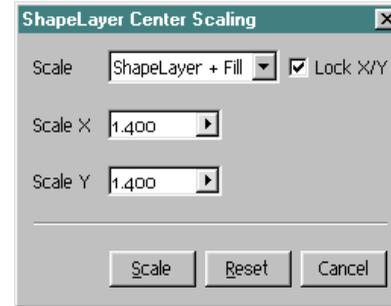
- Click on the canvas to position the ShapeLayer.

#### NOTE

*You could also have selected **ShapeLayer** → **Copy** or **Ctrl+C** to first copy the ShapeLayer and then select **ShapeLayer** → **Paste** or **Ctrl+V** to paste it into the working image. Closing the stock market image would have closed the ShapeLayer as well.*

### Scale a ShapeLayer from the center

- Begin correcting the converging lines of the columns using the **Distort Tool** by locking the two bottom points and dragging one of the upper points vertically.
- Then correct the bottom until the vertical lines of the base are set at a right angle to the sign. Use the **Cross Hair** to help you.
- Position the ShapeLayer to the left of the church.
- From the **ShapeLayer** menu, select **Scale from Center** to bring up the **ShapeLayer Center Scaling** dialog.
- **Lock** the **XY** axes and enter an enlargement factor of **1.4** by moving one of the sliders and click **Scale** to confirm.
- Click-drag to move the ShapeLayer into position.



#### NOTE

**ShapeLayer Center Scaling** works from the center of the ShapeLayer.

*This allows you to scale the two axes independently of one another, or scale both together using the **Lock XY** option. The popup menu at right provides the option **ShapeLayer + Fill** for scaling the ShapeLayer and its contents, as well as the options **ShapeLayer Only** and **Fill Only**.*

- As a positioning helper, open the final composition Eurocity\_final.tile in its own program window.
- If you wish to position it precisely, open your layout ShapeLayer and set **ShapeLayer** → **Render Mode** → **All ShapeLayers** to ON.
- Open the **ShapeLayer Fill** shelf through the **Window** menu or use the **Hand** to double-click inside the stock market ShapeLayer.

- Set the **Transparency** of the ShapeLayer fills to **100**, so that you see only the outline of the entrance.
- Now you easily position the ShapeLayer using the **Cursor** keys in such a way that the ShapeLayer's outlines match the stock market entrance in the final compositing.
- Switch back to the **Pointer**, select the layout ShapeLayer and delete it by pressing **Delete**.
- Press **Ctrl+A** to select your ShapeLayer again, set the **Transparency** back to **0**, enter a **Blend Edge** of **3**, and render the ShapeLayer onto the canvas image. Check beforehand to make sure that the **Anti-alias** level is set to **3**.
- Delete the ShapeLayer from the canvas and check the rendered version in the **1:1** view.
- If you are satisfied with the result, press **Ctrl+Z** to get your ShapeLayer back and activate the mask channel.

You can also open the prepared file `boerse_org.shp`, select **Undo**, switch back to the color channels and repeat the rendering process. Afterwards, switch back to the mask channel.

Eclipse automatically fills the ShapeLayer with the mask color.

- Select **Render** again to apply the mask to the canvas image.

- Select **File** → **SaveAs** → **ShapeLayer** to save your ShapeLayer under the name `boerse`, then delete it from the canvas.
- Select **File** → **SaveAs** → **Mask** to save your mask under the name `boerse`. You will need to use the mask again later.
- Lastly, press **Ctrl+S** to save the canvas image.

### Applying Effects within a ShapeLayer

Frankfurt's Messeturm (the tower on the trade fair grounds) is one of the city's landmarks. However, it's barely visible from the perspective at which our compositing sections were photographed. You can see the tower, almost completely covered, to the right of the center in the skyline, behind an office building.

To give this significant Frankfurt landmark the emphasis it deserves in our compositing, we will take the liberty of changing the image accordingly.

- Open the file `Messeturm_scan.tile`.

If you have not closed the current working image earlier, Eclipse now asks whether you would like to close the current image. Confirm by clicking **Yes**.

- Frame the tower using the **Bezier Tool**, close the ShapeLayer, select **Cutout** and select **ShapeLayer** → **Cut** to copy it into the clipboard as described above.

**NOTE**

*You do not need to save the ShapeLayer. If your subsequent adjustments do not succeed, you can always insert it again. As long as you do not close Eclipse, the ShapeLayer is stored in the clipboard until you replace its contents by copying a new item.*

- Close the file, open the working image again, and press **Ctrl+V** to paste the ShapeLayer.
- Reduce the ShapeLayer slightly and proportionally by using the **Pointer** to **Shift**-drag a corner handle, or scale the ShapeLayer from the center as described earlier.
- From the **ShapeLayer Toolbox**, select the **Rotate Tool** and rotate the tower to the desired angle by left-click-dragging inside or outside of the ShapeLayer in the desired direction.

**NOTE**

*As soon as you activate the **Rotate Tool**, a small triangle appears in the center of the ShapeLayer to indicate the axis of rotation. You can click and drag to reposition the axis at any time. This allows you to specify the center of rotation for the ShapeLayer and ShapeLayer fill.*

- *To move the center of rotation back to its original position in the center of the ShapeLayer, press **Ctrl** while clicking on it.*
- *Use the **Pointer** to rotate the ShapeLayer and ShapeLayer fill. When you press **Ctrl** you rotate the ShapeLayer only – the ShapeLayer fill remains in position.*
- *Use the **Hand** to rotate the image within the ShapeLayer.*
- *Use the **Hand** and press **S** to rotate a **Color Vignette**.*
- *Use the **Hand** and press **A** to rotate a **Transparency Vignette**.*
- *Use the **Hand** and press **S** and **A** to rotate both vignettes together.*

*These tool and keyboard combinations apply in general to editing of ShapeLayers or ShapeLayer fills.*

*To scale proportionally use these combinations in conjunction with the **Shift** key.*

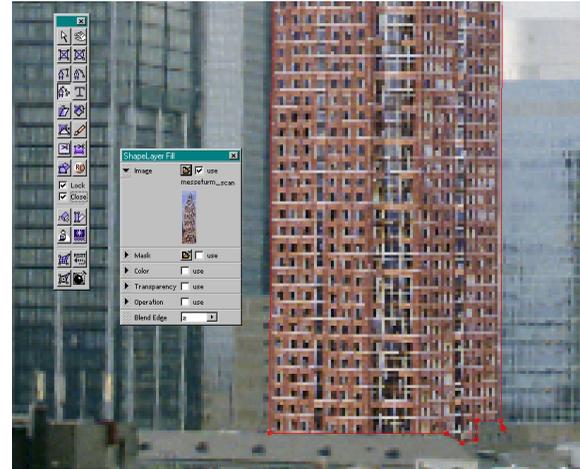
**SEE ALSO**

*For more information, please refer to chapter 6 in the online help, “Editing ShapeLayerLayers and their Fills“, under “Editing Basics”.*

- Switch back to the **Pointer**, open the layout ShapeLayer as a guide, reduce the tower accord-

ingly, and move it to the correct position. Delete the layout ShapeLayer from the canvas.

- Now correct your ShapeLayer at the base of the tower by switching to the **Bezier Tool** and editing the curve in such a way that the tower is perfectly inserted behind the buildings in front of it.
- Enter a **Blend Edge** of **2** and correct other areas of the ShapeLayer if necessary.
- When everything looks as desired, render the ShapeLayer, but do not forget to check the **Anti-aliasing** beforehand.
- To check the rendered result, move the ShapeLayer or hide the image in the ShapeLayer by adjusting the transparency, and press **Ctrl+H** to hide the outlines, or use the **Hand** and **Delete** to delete the *ShapeLayer fill*, or click the **Use Image** check box OFF in the **ShapeLayer Fill** shelf, or delete the entire ShapeLayer.



- If you are happy with the rendered result, and regardless of which method you chose to hide the ShapeLayer fill, press **Ctrl+Z** to undo the action, and save your ShapeLayer under the name mes-seturm.

### NOTE

*You can also hide the content of the ShapeLayer by selecting **View** → **ShapeLayer** → **Outline** and then hide the outlines by pressing **Ctrl+H**. Then you will need to remember to change the ShapeLayer fill view again. We think that the methods described above are those that guarantee the fastest workflow, but you should choose the method that best suits your subjective style.*

*Please remember to save a ShapeLayer with its Fill*

*before* you delete the content for the purpose of subsequent actions. Then you can always access it as needed later on.

Bear in mind that the position of the ShapeLayer fill, if you have in some way *manipulated* it with the ShapeLayer or individually, will be *lost* if you delete it from the ShapeLayer, unless you have saved the ShapeLayer with a positioned ShapeLayer fill.

#### SEE ALSO

For more information, please refer to chapter 5 of the manual, “Working with ShapeLayers” under “Removing or Replacing a ShapeLayer Fill”.

You can also delete the ShapeLayer from your canvas, select **File** → **Restore**, load the prepared file `messeturm_org.shp` and render it to the canvas.

The tower was photographed under completely different lighting conditions than the rest of the scene. You can make the necessary adjustments right in the ShapeLayer, basically placing the tower in hazy ambient light to help it blend into the rest of the skyline. To do this, select the **HSL Replace Color** effect.

- Delete the ShapeLayer fill, since you do not need it anymore.
- Select **Effects** → **HSL Replace Color** to bring up the **HSL Replace Color** dialog, and press **Ctrl+H** to hide the ShapeLayer’s outlines.

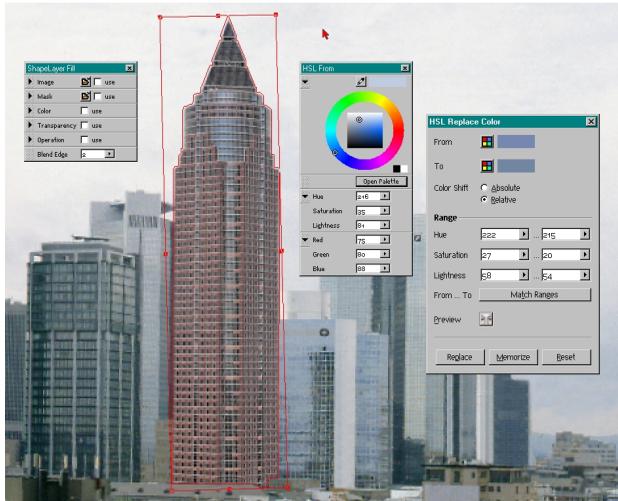
- Clicking the **From ColorLink** button of the dialog — the color swatch to the right indicates the source color in conjunction with the left column text boxes in the **Range** section below— brings up the **Color Editor** shelf, now called **HSL From Color**.
- Select the **Color Picker** in the **Color Editor**, and sample a color from the windows at the top of the tower — the color is copied into the **From** color swatch.
- Now click the **To ColorLink** button and sample a color from the bluish area of the sky. The color swatch to the right represents now the selected target color.
- See how the coloring changes, and then reduce the values for **Saturation** and **Lightness** by clicking the arrow buttons of the corresponding text boxes in the right column of the dialog’s **Range** section and moving the pop-up sliders.
- If you like, you can use the values from the image, or you can load the values prepared for you under the name `messeturm.eff` by selecting **File** → **Open** → **Effect**.
- Observe the results of the effect by repeatedly pressing **AltGr+P** or the dialog’s **Preview** toggle button

### NOTE

The **Relative Hue Shift** option in the **HSL Replace Color** dialog keeps the different levels of color values (**Hue**).

The **Absolute** option changes all color values to the specified target color.

To save your **HSL** settings, select **File** → **SaveAs** → **Effect**. Eclipse automatically appends the extension **.eff**.



- Select **Replace** to apply the effect to the image.

The tower is still somewhat too sharp in comparison to the other buildings.

- Select **Soften** from the **Effects** menu, specify a value of **40**, and select **Soften**.

Do not delete the ShapeLayer from the canvas yet, because you are about to create another mask which you will need later on.

- First, activate the **View Mask** button down in the status bar to check whether there is still a mask on the image. If yes, select **Mask** → **Clear** from the **Mask** menu.

### NOTE

If there is already a mask on the canvas image, the mask in the ShapeLayer would be added to it when rendering. For the time being, however, you will want to keep these separate.

- Activate the **Active Mask** button; you will see the ShapeLayer filled with the mask color.
- Render the mask onto the image, and select **File** → **SaveAs** → **Mask** to save it under **messturm**.
- Save the working image by pressing **Ctrl+S**.

## Using the AutoMask Tool for preparatory masking

To make it easier to insert the coins on the right side of the compositing, you will now create a mask on the coin photo.

You will create the mask using one of the automatic masking tools, the **HSL AutoMask** tool.

The **AutoMask** and **HSL AutoMask** dialogs basically have the same appearance, and you work with both of them in the same manner.

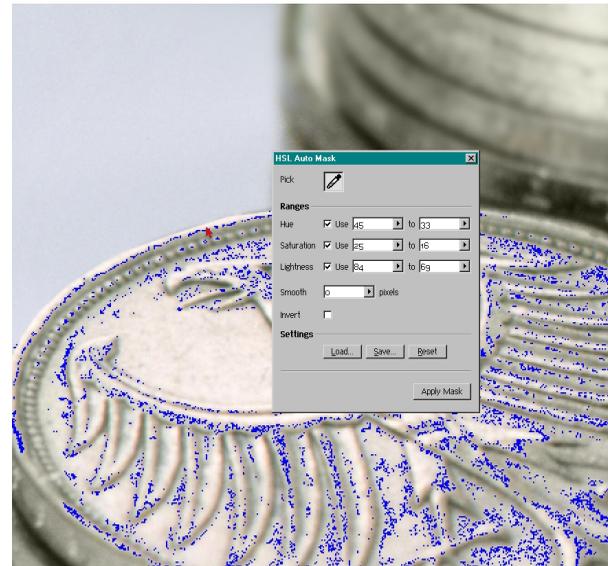
**AutoMask** works on the basis of the color channels, while **HSL AutoMask** is based on the image's hue, saturation and lightness values.

There are numerous “image situations” in which these tools are extremely helpful or even necessary. In this case, we need them to insert less sharp image areas in such a way that they do not look “cut off” and artificial in their new environment.

- Load the file `geld_scan.tile`.
- Select **Mask** → **HSL AutoMask**.
- Switch to a **1:1** view of the image.
- Activate the **Pick** button to sample tonal areas from the image.
- Begin at the back edge of the top front coin, click and drag along it.
- Add values by clicking on other areas of the stack of coins, middle-click to subtract them from the selection.
- For now, sample fewer areas and then move the **Smooth** slider, which allows you to create soft transitions between the masked and non-masked areas.
- You can also control the mask through its individual effective areas, e. g. by having sampled values and then, for example, deactivating the **Lightness** channel and then moving the corresponding **Hue** and **Saturation** sliders above in

the left **Ranges** column, for the minimum value, and/or the sliders to the right for the maximum value. In each case, the difference between the two is the area included in the mask.

- Observe how the tool works, and then load the prepared file `geld_org.hslautomask`.



The dividing line to the bottom or background is too weak — no problem, since you will correct the mask.

Now you have two options for applying and post-editing the mask:

You can first select **Apply Mask** to render the mask onto the image and then remove the outer areas of

the mask, e. g. by using the **Restore Brush**. Afterwards fill the inner portions of the coins with the **Color Brush**, i. e. with mask color.

Or you could use the **AutoMask Brush** to apply the mask and in doing so omitting those areas that should not be masked. Subsequently fill the inner portions with ShapeLayers or by using the **Color Brush**.

In this case, you will use the latter method.

- Close the **HSL AutoMask** dialog, select the **Brush Tool** from the **ShapeLayer Toolbox**, and then select the **AutoMask Brush** from the **Brush type** menu in the **Brush Shelf**.

### NOTE

*You can also leave the **HSL AutoMask** dialog open while you paint, for example to change the values while you work. To do so, click the **Pick** button to **OFF** and press **AltGr+P** to turn the **Preview OFF**. Keep in mind, though, that the new settings will replace any previous values unless your working in the **Add Canvas Mode**.*

But for now, you will proceed as follows.

- Use the brush to frame the group of three coin stacks in front; select an **Airbrush** that is not too small.
- Omit the areas in which the mask extends into the background.

- At the front bottom edge of the stack, do not take the mask all the way to the edge, instead shaping the edge yourself using the brush. Just middle-click to delete any errant strokes.
- Do this at any places along the edge where the mask appears to hard.
- Use the **Color Brush** to paint closed any of the gaps in the inner portion.
- Select **Mask** → **Soften** and specify a value of **200** to soften the mask.
- Where necessary, apply the **Smear Brush** along the edges of the mask with a low **Density** of about **15** to **20**.
- Invert the mask to see whether it completely covers the stack — also show/hide the color channels to help.
- Use the **Restore Brush** to remove the mask color.
- When you are happy with the resulting mask, save it under the name `geld_scan`.
- Open the mask `geld_scan_org.tmsk` for comparison; your mask is automatically closed.

## Positioning and editing complex ShapeLayers

A ShapeLayer can contain an image, a mask, **Color Vignette** and **Transparency Vignette**. You will now use this option for blending the stack of coins.

- Using the **Curve Tool** create a ShapeLayer all around the stack, roughly following the outlines of the stack and leaving about 5 mm of space.
- Press **Ctrl+C** or select **ShapeLayer** → **Copy** to copy the ShapeLayer.
- Close the current image and open your working image `skyline_2.tile`.
- Click the desired location and press **Ctrl+V** to place the ShapeLayer from the clipboard into the right side of the image.



- Now use the **Hand** to double-click in the ShapeLayer, thus bringing up the **ShapeLayer Fill** shelf.
- Activate the **use Image** check box and load the image `geld_scan.tile` by clicking the **Open File** button.
- Click the **OpenFile** button in the shelf's **Mask** section and load your mask file or the prepared mask associated with the image; activate the **use Mask** check box.

As you can see, the mask is automatically positioned correctly, thus releasing the stacks of coins.

- In the **ShapeLayer Center Scaling** dialog, scale the ShapeLayer and ShapeLayer fill proportionally by a factor of **3.370**.

- Zoom out to a **1:4** view of the image and use the **Pointer** to move the ShapeLayer approximately as shown in the following screenshot capture.



### NOTE

You may have noticed that the background color in the screenshot varies. In this example, we selected black to better see the canvas image in a semi-transparent view. However, we recommend you normally use a neutral gray background color, approximately in the **20 to 30** range, which gives you a more accurate impression of the colors while you work. You can specify the background color in the **Background Color** dialog, which is located in the **View** menu.

- If you use the **Hand** to move the image in the ShapeLayer, the mask moves along with it. Place

the image in the center of the ShapeLayer, and switch to the **Pointer**.

- Open the final compositing as a guide in a new program window, or load the *layout* ShapeLayer. In this case, switch the **Render Mode** to **All ShapeLayers ON** in the **ShapeLayer** menu, and select **Organize** → **Back** to move it back.
- When you have moved it roughly into position, bring the *layout* ShapeLayer forward, delete it, or switch the **Render Mode** back again. When making adjustments, change the **Transparency** of the ShapeLayer fills display.
- Activate the **Transparency Vignette** in the ShapeLayer. Select a **Contour Vignette** and the **Smooth** option. In the **Transparency Vignette** dialog, select **Profile**, and load the vignette profile *muenzen\_comp.vign*.

When you switch to the **Hand**, you will see a small hollow square in the ShapeLayer; this indicates the vignette's focus point.

- Move the focus point towards the right while pressing **A**.

### NOTE

Use **A** and **Hand** to edit **Transparency Vignettes** – use **S** and **Hand** to edit **Color Vignettes**. Since the ShapeLayer contains only one **Transparency Vignette**, you do not need to press **A**. However, it is a good idea to become accustomed to always press-

ing **A** when editing a **Transparency Vignette**, for example to prevent from rotating the image along with the vignette, as you do next.



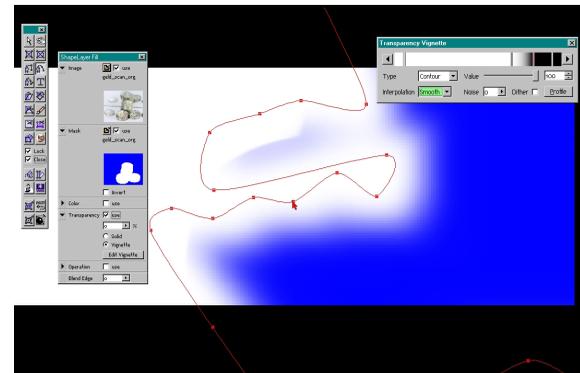
- Select the **Rotate Tool** and press **A** while rotating the vignette.
- Move and rotate repeatedly until you are happy with the result, and the tower appears with some definition from the coin.
- You can also edit the vignette setting; the loaded **Profile** is just a guide.
- Switch to the **Curve Tool** and adjust the curve until you are satisfied with the compositing. Add points and move them.

### NOTE

If you remove a point, the vignette inside the ShapeLayer is not immediately adjusted accordingly. Use the **Hand** to move the focus point a bit, and press **Ctrl+Z** to go back; that will correct the vignette. To get a very good view of the vignette,

activate the mask and hide the color channels, because the vignette automatically affects the mask as well.

- Finally, check your adjustments while being in the mask channel, hide the image and see whether the gradient to the edge of the ShapeLayer really goes all the way to **100% Transparency**. Do this in the **1:1** view.
- If necessary, correct the far right marker in the **Transparency Vignette** dialog inwards, i. e. towards the left.



Load the finished ShapeLayer `muenz_comp_org.shp`, if you would like to use it. In this case, delete your ShapeLayer beforehand, but remember to save it under `muenz_comp`.

- Render the image and then the mask onto the canvas.

- Save the mask under `muenz_comp`, then delete the image and the mask from the ShapeLayer. Reactivate the color channels.
- Select **File** → **Retain**.

Now you will transform the stack of 5 DM coins in the front into a stack of 2 Euro coins.

- Open the file `2Euro_back_scan.tile` in a new program window.
- Use the **Ellipse Tool** to draw a circle by starting at the top left corner and left-click-drag while pressing **Shift** to frame the coin. Position the circle directly over the coin.



- Select **Cutout** and then **ShapeLayer** → **Cut**, or press **Ctrl+C** to copy it.
- Close this program window.
- Select **ShapeLayer** → **Paste** or press **Ctrl+V** to insert the ShapeLayer into your working image.
- Move it roughly into position.
- Open the **ShapeLayer Geometry** shelf by double-clicking with the **Pointer**.

- Rotate the ShapeLayer fill either by numerically entering **-130** degrees into the **Rotate Fill** text box, or use the **Rotate Tool** to turn the contents with the **Hand** until you reach approximately **-130** degrees.
- Firstly, reduce the size of the ShapeLayer, then use the **Distort Tool** to adjust it to the DM coin until it fits exactly.
- Invert the mask and activate it by setting the **Use Mask** check box to ON; observe how the Euro coin fits in.
- Enter a **Blend Edge** of about **38**.
- When you are satisfied with the result, save the ShapeLayer as `euro_comp`.

Alternatively, you could load the ShapeLayer `euro_comp_org.shp`.

The surface of the DM coin must be removed in order to insert the Euro coin into the cityscape.

No problem:

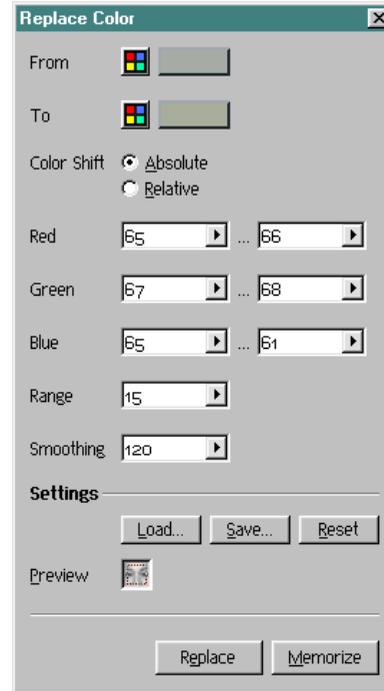
- Deactivate the mask on the canvas and just make a **Cutout**.

Eclipse replaces the Euro with the last saved version of the image.

- Select **Render**.

- Press **Ctrl+Z** to go back; the Euro is back in the ShapeLayer.
- Reactivate the mask and render the Euro on the canvas, then delete the Euro from the ShapeLayer.
- Select the **Replace Color** correction from the **Correct** menu. In the dialog click **Load...** and open the prepared correction `euro_sel.corr`.

We have sampled a tone from the light gray area of the Euro and have picked as a target color a similar tone from the stack of coins, to better match the color of the Euro to the stack of DM coins.



- Try adjusting the color yourself.
- Select **Replace** to apply the correction.

### NOTE

**Relative Color Shift** adds the target color to the source color. Using the **Absolute** option changes the source completely to target color.

**Range** lets you specify the range of color values to be changed to the target color.

**Smoothing** gives you a gradual color transition from the area changed to the areas not affected by the **Replace Color** correction.

- Use the **Restore Brush**, which goes back to the retained version, to again stroke the edges of the coins in the front left area.
- Finally, adjust the blur by selecting **Gaussian Blur** from the **Effects** menu.
- Enter a value of **19**, activate a **Transparency Vignette**, select a **Vertical** gradient **Type** with a **Smooth Interpolation**, and load the **Profile** `euro_blur.vign`.
- Set **Dither** to ON and enter a **Noise** value of **5**.
- Select **Blur** in the **Gaussian Blur** dialog.
- Delete the ShapeLayer and press **Ctrl+S** to save the image. Save a copy under `skyline_3.tile`.

## 7 Post-Editing

Often, post-editing is the phase in creating a compositing where the real editing begins, i. e. where you give the image its actual “look” that makes it an eye-catcher.

In Eclipse, you can completely change an image right up until the end — especially if you initially do not render the “floating” ShapeLayers. Even in this case, where you have already rendered all of the individual areas of the image, you can still use masks and ShapeLayers to give the image a whole new appearance, and still return to a “neutral” version at any time.

In this lesson, you will learn how to:

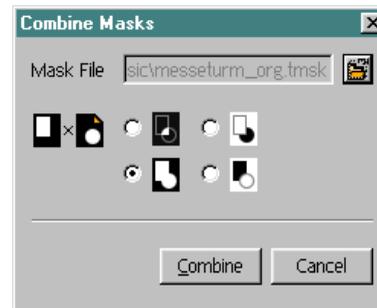
- Combine masks
- Work with additional Correct tools
- Apply Special Effects
- Combine Effects with Luminance Compositing
- Use canvas modes
- Run brushes alongside a ShapeLayer
- Create text
- Simulate motion blur
- Apply final fine-tuning

Begin by deleting the default settings as described in “Restoring the default settings” on page 4.

### Combining masks and correcting image parts

The **Combine** command from the **Mask** menu allows you to easily combine existing masks, without having to render them again.

- If you would like to continue with the original version, open the file `skyline_3_org.tile`, save it under `skyline_3.tile`, thus overwriting the copy you previously made, and close the original file.
- Open `skyline_3.tile`.
- Select **File** → **Open** → **Mask** to open the mask `skyline_2.tile.tmsk`, (or `skyline_2_org.tile.tmsk` and in the following the prepared `*_org.tmsk` masks, if you will continue working with the original).
- Select **Mask** → **Combine** and in the **Combine Masks** dialog, open the mask `messturm.tmsk`.



#### NOTE

You can choose between four different combinations. The pictograms represent clockwise starting with the left one of the upper row the following combinations:

- *Intersection area becomes the new mask.*
- *A negative of the selected mask is added to the current mask.*
- *Additive combination of both masks.*
- *A positive of the selected mask is added to a negative of the current mask.*
- Leave the default activated combination and click **Combine** to confirm.
- If you activate the **View Mask** button, you will see the positive combination of both masks. Since you will create additional combinations based on this one, save the mask under `skyline_3`.
- Select **Mask** → **Invert** to invert the mask.
- Repeat the **Mask** → **Combine** command, open the mask file `boerse.tmsk` and again select the left additive combination of the lower row in the dialog.
- Repeat this procedure with the `muenz_comp.tmsk` mask, activate the color channels and the **Use Mask** check box, and turn the **View** → **Mask** button OFF.

### NOTE

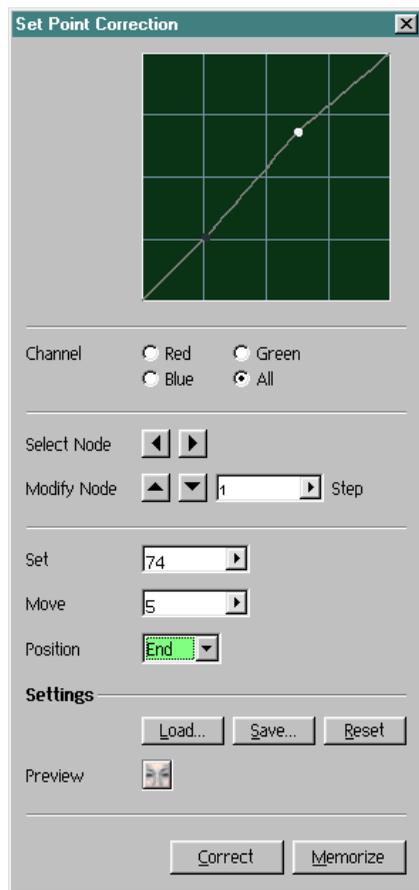
*To undo the combination, simply select **File** → **Restore** or **Undo**. Because you are working in the mask channel, the originally loaded mask is restored.*

Now that everything except the skyline has been masked, you can apply a correction to it to improve the contrast. Use the **Set Point** correction to reinforce the highlights.

- Select **Correct** → **Set Point** and load the prepared settings `skylinesetp1_org.corr` from the dialog.
- If you move the left graph point, you can see how raising the highlights extends into the midtone areas. Use the right graph point to control the degree to which the highlights are increased or reduced.
- Open the correction again and select **Correct**.

### NOTE

*If you select the **End Position** in the **Set Point Correction** dialog, you will edit the highlights. If you select the **Start Position**, you will edit the shadows.*



- Select **File** → **Retain**.

Next, you will apply a correction to the sky:

- Open the mask `skyline_3.tmsk` and combine it first with the stock market mask, then with the coin mask. In both cases, select the additive combination.

#### NOTE

*When you load a new mask, the currently loaded mask is replaced, i. e. you do not need to select **Mask** → **Clear** to delete it.*

All areas of the image except the sky are now protected by the mask.

- Select **File** → **Open** → **Correction** and open the setting `himmfree1_org.corr` in the **Open** dialog.

#### NOTE

*You can load stored correction settings by selecting **File** → **Open** → **Correction** or through the individual dialogs. Load a correction settings file through the **File** menu if you do not remember which kind of correction you applied. Eclipse then automatically opens the corresponding dialog. When you open from the settings files, you may need to open several dialogs in order to find the appropriate one. To avoid this we recommend to name the settings files according to their kind.*

- In the **Freeform Correction** dialog, select **Correct** to apply the correction. Then select **File** → **Retain**.

## Final coloring with Special Effects

With the help of ShapeLayers which contain color and transparency gradients, and with **Luminance Compositing**, you will now completely change the look of the composition. **Luminance Compositing** allows you to recolor images while precisely controlling the contrast and tonal range of the color/image combination. If the ShapeLayer contains an image, you can use **Luminance Compositing** to perfectly blend it with the canvas image, since the density or luminance values of the background are transferred into the ShapeLayer image fill.

We have begun by giving the sky a morning appearance.

- Select **File** → **Open** → **ShapeLayers** to open the ShapeLayer `himmelver11_org.shp`.
- Activate it, by first clicking the **Edit Vignette** button in the **ShapeLayer Fill** shelf's **Color** section to open the **Color Vignette** dialog, then click **Edit Vignette** in the **Transparency** section to bring up the **Transparency Vignette** dialog.
- From the **ShapeLayer Toolbox**, select **Luminance Compositing**.

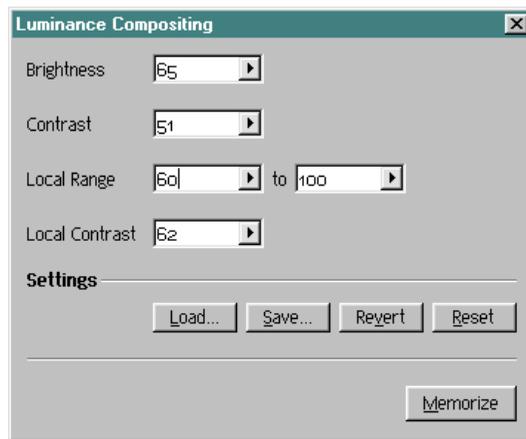


- In the **Luminance Compositing** dialog, select **Load...** and load the settings file `himmel1_org.lum`.
- Play with the gradients to see how the individual components interact. Assign different colors to the gradient and change the transparency.
- Alter the settings in the **Luminance Compositing** dialog and observe the effects.



**NOTE**

Use **Local Range** to enter the range of midtones that you fade out or in by means of the **Local Contrast** text box or slider. Use **Contrast** to control the contrast outside of this range. **Brightness** determines the overall brightness of the application.

**SEE ALSO**

For more information, please refer to chapter 7 of the user's guide, "Special Effects using ShapeLayers" under "Luminance Compositing".

- Before selecting the **Render** command, check to make sure the **Anti-alias** setting is **3**. Delete the ShapeLayer and select **File** → **Retain**.

Next, you will adjust the buildings in the image:

- Load the mask skyline\_3.tmsk, inverting and combining it in such a way that only the skyline is left unmasked.
- Load the ShapeLayer skylineblau1\_org.shp, proceed as described above and load the **Luminance Compositing** settings file skyline1\_org.lum from the dialog.
- If you like, change the settings for color, transparency or **Luminance Compositing**, and then save the ShapeLayer and **Luminance Compositing** settings under a new name (the extension .lum is automatically appended).
- Render the ShapeLayer, then delete it and select **File** → **Retain**.

The stock market entrance is now also bathed in a blue-red light:

- Open the stock market mask and invert it.
- Open the ShapeLayer boersever11\_org.shp, and load the settings file boerse1\_org.lum from the **Luminance Compositing** dialog.
- Render this ShapeLayer as well, then select **File** → **Retain** after deleting the ShapeLayer from the canvas.

Next, you will work on the stack of coins:

- Activate the mask channel and select **Mask** → **Clear**.

- Mask the stars on the Euro by tracing all of the stars with the **Polygon Tool**, then selecting them all, combining them through **Organize** → **Combine** and specifying a **Blend Edge** of three pixels.
- Render the mask, save the ShapeLayer under `star`, and save the mask under `star` as well.
- If you worked on the original version, you can also use `star_org.shp` and the mask `star_org.tmsk`.
- Combine the mask with the file `muenz_comp.tmsk`, and select the second combination in the upper row of the **Combine Masks** dialog, which adds a negative of the selected mask to the current mask.
- Load the ShapeLayer `muenzver11_org.shp` and the luminance settings file `muenz1_org.lum`.
- Use the **Hand** while pressing **S** to move the radial gradient in the ShapeLayer as desired.
- Render this ShapeLayer as well, then delete it and select **File** → **Retain**.

The stack of coins still seems a bit on the heavy side. You can improve its appearance by combining two **Effects**.

- Open the mask `muenz_comp.tmsk` and invert it.

- Draw a ShapeLayer using the **Rectangle Tool** generously outlining the coin area.
- Then open the **Gaussian Blur** dialog from the **Effects** menu, and enter a value of **100**.
- Activate **Luminance Compositing** and load the settings file `blur1_org.lum`.
- Select **Blur**.
- Combine the current mask with the star mask in such a way that only the stars are left unmasked.
- Open the ShapeLayer `starcolor_org.shp`, activate **Luminance Compositing** and load the settings file `star_org.lum`. Change color and luminance as desired.
- Render the ShapeLayer, select **File** → **Retain** and delete the ShapeLayer's color fill.
- Leave the ShapeLayer as it is and turn the **Use Mask** option OFF.

### Effects and Brushes in conjunction with Canvas Modes

The different **Canvas Modes** are indicated in the program's status bar. The selected **Canvas Mode** determines how image modifications- no matter what kind - are displayed and applied to an image. This also applies to ShapeLayers and brushes. There are many uses for **Canvas Modes**; depending on how they are combined with, for example, effects, you can achieve a wide variety of results.

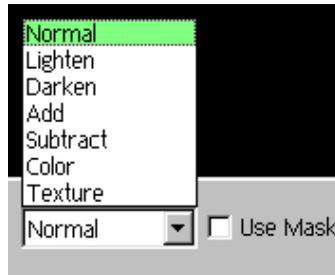
You can choose from seven different modes.

In **Lighten** mode, which you will use in the following procedure, color in ShapeLayers or using the brush is applied only to those areas in the image which are darker than the selected color fill or brush color. All lighter areas remain unaffected.

In the same way, you can achieve glow effects by using **Gaussian Blur** in **Lighten** mode, since you are then softening from light to dark. The **Effect** is applied mainly to the highlights in the image and becomes visible in the darker areas of the image.

Next, you will give the stars on the Euro a golden glow:

- Select **Lighten** mode from the menu in the status bar.



- Open the **Gaussian Blur** dialog from the **Effects** menu and specify a value of about **30**.
- Observe the different effects when you switch modes.

- Then, select **Brush Tool** and the **Effects Brush** and paint the effect over the stars on the Euro.

### NOTE

*Use ShapeLayers if you want to apply **Effects** only to selected portions of the image, even if you apply them later using the brush. This increases screen redraw speed, especially for **Gaussian Blur**, and you can compare the difference with the rest of the image. All of the effects in the **Effects** menu can also work directly on the canvas image.*

### SEE ALSO

*For more information about **Canvas Modes** please refer to chapter 1 of the user's guide, "Eclipse Basics" under "Canvas Modes".*

- Select **File** → **Retain** again and delete the ShapeLayer from the canvas.

Next, you will work on the stock exchange entrance.

A gentle glow along the outer edges of the entrance would enhance the scene nicely. To accomplish this, just run a brush along the outlines of the ShapeLayer.

- Open the ShapeLayer `boerse_org.shp` and delete the ShapeLayer fill.
- Use the **Cursor** keys to move the ShapeLayer a bit to the left.

- Select the **Brush Tool** from the **ShapeLayer Toolbox** and the **Paint Brush** from the **Brush type** menu in the **Brush Shelf**.
- Click the **Options** button and then the **Color Picker** in the **Brush Color Editor** and sample a very light color from the sky next to the entrance. We have selected an **RGB** value of **96,85,86**.
- Set the brush **Size** to about **115** and move the brush cursor along the center of the ShapeLayer's outline to check the size.
- In the **Brush Shelf**, also set the **Density** to about **5%**, **Transparency** to about **10**, set **Spacing** to **On** and **Gap** to **30%**.
- Switch back to the **Pointer** and make sure you are in **Canvas Mode Lighten**.
- Now select **Stroke** from the **ShapeLayer Toolbox**.



- The brush automatically strokes the ShapeLayer's outlines. If you are not happy with the result, select **File** → **Restore** and repeat this procedure with other brush settings.

You are trying to achieve a soft glow around the entrance. Selecting **View** → **Track Changes** will give you a good comparison to check the effect.

- Delete the ShapeLayer and **Retain** the image.

### Text ShapeLayers

Since the scan of the stock market was overly sharpened, applying **Luminance Compositing** caused an unattractive effect with the writing on the sign. You can quickly correct this by simply generating new text.

- Select the **Text Tool** from the **ShapeLayer Toolbox**.



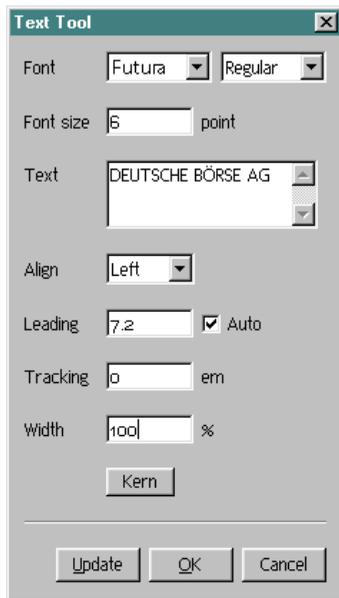
- In the **Text** dialog, select the **Font** *Formata-Regular* or another appropriate font type. Enter a value of about **6 pts** in the **Font size** text box.

#### NOTE

*To type the umlaut character “Ö” in “Börse”, you have to switch your keyboard layout to “German”. To do this see your computer’s manual.*

- Enter the writing in the **Text** entry field and select **Update** to view the text ShapeLayer on the canvas.

- When you press **OK** to confirm, the dialog closes and you can edit the ShapeLayer just as you would any other ShapeLayer.

**NOTE**

As long as you are editing the **Text** in the dialog, you can see the effect by selecting **Update**. Selecting **OK** closes the dialog with the current setting. To again edit the **Text** later on, first select the ShapeLayer, then the **Text Tool**. The dialog appears, showing the options selected.

**SEE ALSO**

For more information about text ShapeLayers, please read chapter 5 in the user's guide, "Working with ShapeLayerLayers" under "Adding Text".

- Now you will adjust the ShapeLayer to the original writing of the sign and fill the ShapeLayer with color. We have selected a golden RGB color value of **59, 56, 7**, and a **Blend Edge** of **1**. (deutscheboerse\_org.shp)
- Set the **Canvas Mode** to **Normal** and save your ShapeLayer under a new name.
- Move the ShapeLayer, deselect it and then use the **Clone Brush** to remove the original writing.
- Press **Ctrl+Z** to move the ShapeLayer back to its original position and render the ShapeLayer, then delete it.

**NOTE**

When you save a ShapeLayer, the current **Canvas Mode** setting is saved along with it. When you load the ShapeLayer again later, this automatically tells you the mode in which you rendered it.

- Draw a rectangular ShapeLayer around the sign, letting it extend about one centimeter all around.
- Enter a **Blend Edge** of **10** in the **ShapeLayer Fill** shelf and select **Gaussian Blur** from the **Effects** menu, entering **15** in the dialog.

- In **Lighten Canvas Mode**, adjust the ShapeLayer in such a way that the soft glow along the edges is limited to the sign. (schild\_blur\_org.shp)
- Render the ShapeLayer and save your image under skyline\_4; close the current image.

### Create motion blur and double-exposure effects

The original Euro coin was a low-quality image; it was scanned from a very small printed proof, then descreened and sharpened. We will make the best of this by smearing the coin to make it look as if it was captured via flash photography while in motion.

- Open skyline\_4.tile or the original file skyline\_4\_org.tile, then save it under skyline\_4, so you can work on a copy of the original.
- Select the **Smear Brush** and specify a very large brush size of around **700 pixels**.
- Select a low **Density** of about **30** to **40**, then load the mask muenz\_comp.tmsk and invert it.
- Now try to paint a natural-looking motion blur in **Lighten** Mode. Focus initially on the outside of the coin, then turn the **Use Mask** check box OFF and work on the inside of the coin.
- If you have gone too far, middle-click or select **File** → **Restore** to go back. While experimenting, save a version that might be satisfactory un-

der skyline\_5 or save intermediate versions as **Cropouts** with the ShapeLayer. Then select **File** → **Restore** to go back.

- If you are happy with the motion blur, save the version under skyline\_5.
- Close the current image and open skyline\_5.tile
- Load the mask skyline\_3.tmsk, hide the mask view, and click the **Use Mask** check box to ON.
- Using the **Effects Brush** and specifying a **Soft-en** value of about **180-200**, stroke along the horizontal line that appears too hard after the previous corrections. Extend your strokes into the sky only as much as necessary. Work with a small brush of (**12** pixels) in the **4:1** view.
- Finally, add some **Noise** to the entire image, with the exception of the sky.
- To do this, combine the masks. For the coins, specify a value of about **10**, for the cityscape about **8**, and **7** is sufficient for the stock market entrance.
- You can apply the **Noise** effect locally with the brush or to the entire image by selecting **Noise** from the **Noise** dialog, while using masks to protect specific areas, such as the sky.

The added noise should match the film grain of the sky.

- Press **Ctrl+S** to save this version, and select **Cropout** to crop the image at the top and bottom and save it as the final image under a new name. If you load `layout.shp`, you can see which area of the image we saved as `Eurocity_final.tile`.
- There is room for a headline on your final version. If you like, you can add a line of text perhaps to the right of the center, and experiment with the **Special ShapeLayer Effects** tool **Shadow Caster** - you became acquainted with that in the Tour - to add a shadow to the text.

### SEE ALSO

*For more information on Shadow Casting, please refer to chapter 7 of the user's guide, "Special Effects Using ShapeLayers" under "Shadow Casting".*

We have come to the conclusion of the Basic Tutorial. You have learned quite a bit and are now ready for the Advanced Tutorial.