Chapter 1: Getting Started

System requirements

e-Picture Pro requires the following hardware and software:

- 200MHz or faster Pentium-compatible CPU
- Windows 98, NT 4.0, 2000 or XP
- 64MB of RAM (128MB or more recommended)
- 20MB of available hard disk space
- 800 by 600 resolution (higher recommended)
- CD-ROM drive

Installing e-Picture Pro

Please refer to the ReadMe.html file in the installation folder before installing e-Picture Pro for any last minute installation notes.

1. Insert the e-Picture Pro CD into your CD-ROM or DVD-ROM drive.
2. If you have AutoPlay enabled, the e-Picture Pro installer will run automatically after a few seconds. If it does not, open My Computer, right-click on the CD-ROM drive icon, and choose AutoPlay.
3. Follow the installer instructions that appear on your screen.
4. Double-click on the e-Picture Pro icon to launch e-Picture Pro from the installation folder.

The e-Picture Pro installer also includes the e-Picture Imager, a special plug-in for Microsoft FrontPage 2000 and FrontPage 2002. The e-Picture Imager will only be installed if FrontPage is currently installed. If you subsequently install FrontPage and wish to install the e-Picture Imager, launch the e-Picture Pro installer again.

Registering e-Picture Pro

The first time you launch e-Picture Pro, you will be given an opportunity to register the program online. If you skip that option, you may register at any time by selecting Help/Registration.

Integrating e-Picture with Popular HTML Editors

e-Picture Pro 3.0 has been specially designed to integrate with popular page layout applications. In particular, e-Picture Pro has special capabilities built-in that enable dynamic imaging in Microsoft FrontPage. If you wish to use e-Picture Pro with Microsoft FrontPage 2000 or FrontPage 2002, simply go through the installation process. Everything you need is built right in.

If you wish to use e-Picture Pro with earlier versions of FrontPage, Adobe GoLive or Macromedia Dreamweaver, you can configure your preferred HTML editor to open the original e-Picture document in e-Picture Pro for revision and re-export by double-clicking on an animation or image.

To enable this, set your HTML editor to use e-Picture Pro as the default graphics application for the relevant graphic formats (animated GIF, JPEG, and so on). Generally, this involves setting an option for each file type individually. The method for associating a particular application with each file type varies from editor to editor. You should consult your HTML editor documentation for specific details on how to change these settings, but the dialogs where you make these settings are (based on recent versions of these applications):

- **Adobe GoLive**: Edit/Preferences/File Mapping
- **Macromedia Dreamweaver**: Edit/Preferences/External Editors
- **Microsoft FrontPage**: Tools/Options/Configure Editors

Important notes on HTML editor integration

When you double-click an animation or graphic in your HTML editor, e-Picture looks for the original.ep file in the same directory as the exported file. Thus, for seamless integration to work, you must keep the original file and the exported file(s) in the same directory.

Updating e-Picture Pro

Registered users are entitled to free incremental (3.x) upgrades of e-Picture Pro. To upgrade to the latest version, visit the Beatware web site at http://www.beatware.com and follow the links to the e-Picture Pro product section.

For more information

Numerous sources of information are available to answer questions and provide more information on e-Picture Pro. The following are currently available:

e-Picture Pro User Manual

The e-Picture Pro User Manual (this document) contains numerous step-by-step tutorials as well as comprehensive documentation on how to derive the greatest benefits from e-Picture's many features. This guide is also available in PDF format from the Help menu.

e-Picture Pro Web site

Beatware's e-Picture Pro Web site, located at http://www.beatware.com/products/epicture_pro.htm, contains the latest information available on e-Picture Pro including numerous sample banners, documentation and other information.

Customer Support

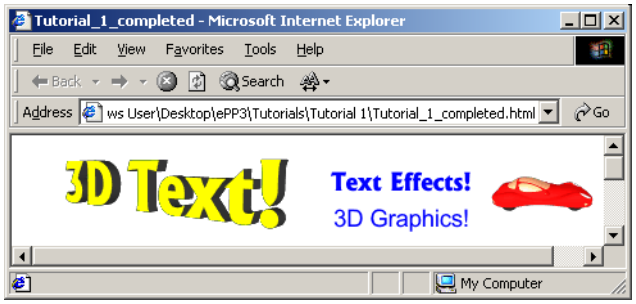
Licensed e-Picture Pro users are entitled to free customer support via e-mail. The Beatware support staff strives to respond to all customer support questions within one business day. Please send your customer support inquiries as well as feature suggestions to support@beatware.com.

Chapter 2: e-Picture Pro Tutorials

Tutorial 1: Working with e-Picture Pro

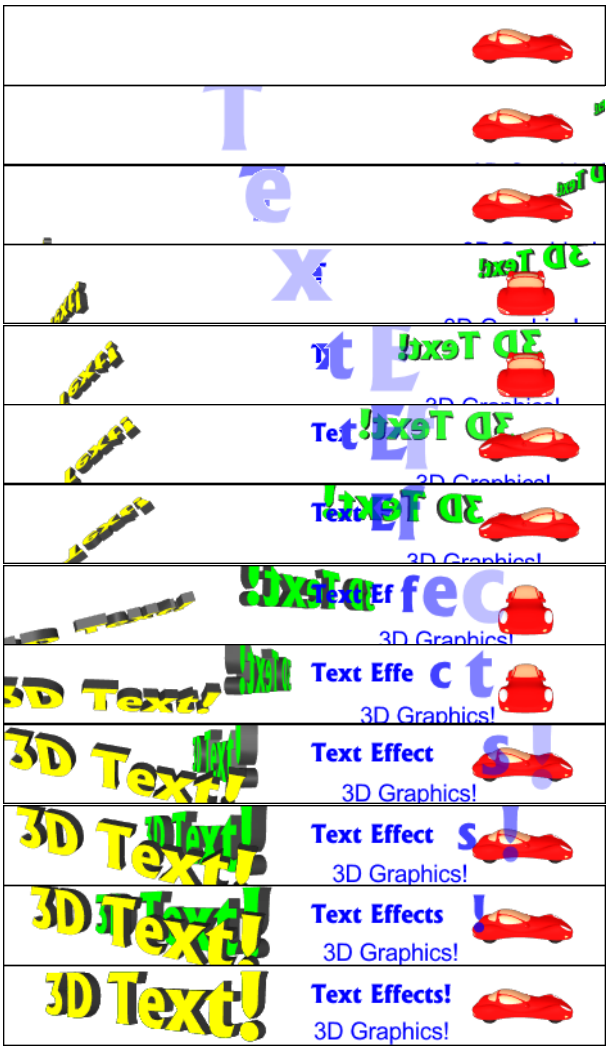
In this first tutorial, we'll take a look at the basic components of e-Picture Pro's work space, get some hands-on experience in editing e-Picture documents, export a sample document, and view it in your Web browser. If you're an experienced e-Picture user, most of this will be familiar.

1. Run Windows Explorer, select Options or Folder Options from the View menu. If the "Hide file extensions for known file types" box on the View tab is checked, uncheck it. Then click OK. This will make the names of the files used in the tutorial appear as described in these tutorials, with their extensions visible. (Windows ends file names with a period followed by letters indicating what type of file it is—.ep for e-Picture, .swf for Flash animations, and so on. By default these extensions are hidden.)
2. Open the Tutorial 1 folder, located under the Tutorial folder.

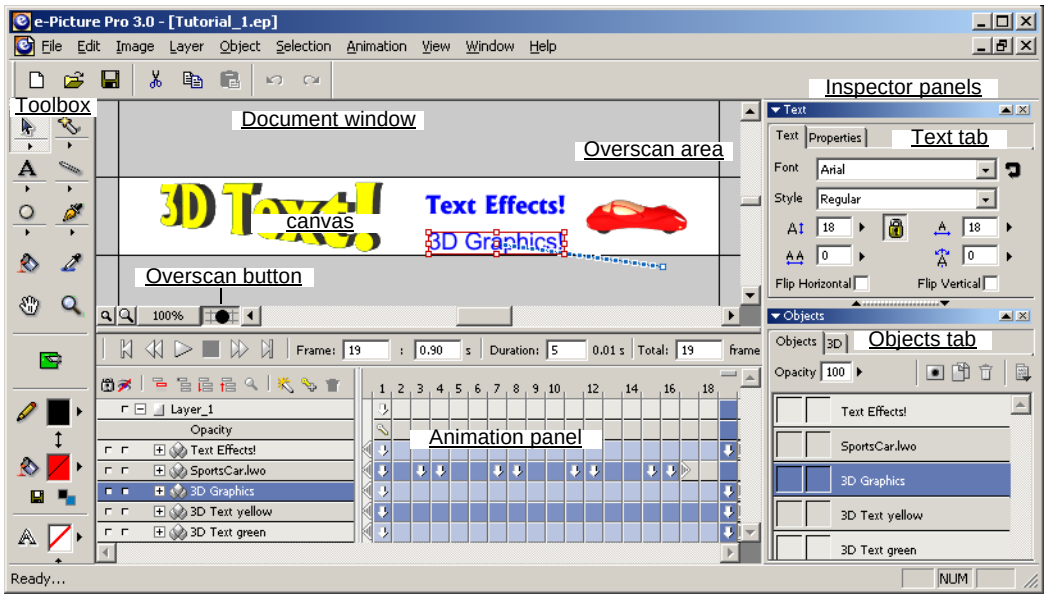


3. Double-click on Tutorial_1_completed.html and a complex animated banner created in e-Picture will appear in your Web browser. Press your browser's Reload or Refresh button to replay the animation. Notice the way the car and 3D text rotate and how the special effect applied to Text Effects adds a deceptively complex look to the animation.

As you can see, the illusion of movement is produced by quickly displaying a series of still images. Each image in the series is called a frame—a crucial concept in animation, and a term that we will use frequently throughout these tutorials and the rest of the manual.



4. Now let's take a look at how that animated banner was created in e-Picture. Switch back to the Tutorial 1 folder, double-click on Tutorial_1.ep, and an almost completed version of the same banner will appear in e-Picture.

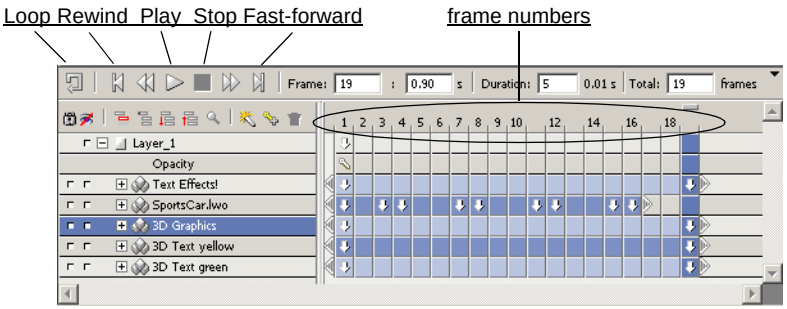


5. If you have used other graphics programs, most of the interface elements of the e-Picture work area will look fairly familiar.

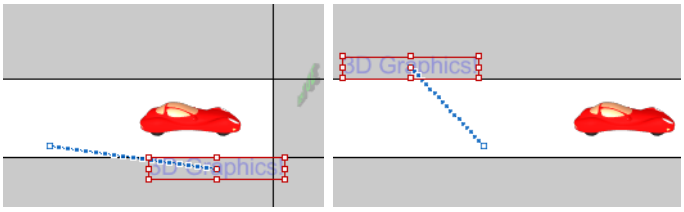
   - The animation appears in the document window.
   - In the center of the document window is the canvas, which shows the boundaries of the animation as it will appear when exported to a browsable format such as JPEG, animated GIF or Flash SWF.
   - Surrounding the canvas is the overscan area, an offstage region that allows objects to enter and exit the canvas during the course of the animation. (An object is anything that can move independently during an animation, including text, lines, shapes, bitmaps, imported 3-D graphics, and masks.) The overscan area can also be used, as in a drawing program, as storage space for extra objects, clip art, and so on.
   - Clicking on one of the items in the toolbox lets you select a different tool, such as the Pen or Ellipse. (You may also change tools with keyboard shortcuts, as described in “Changing tools with the keyboard” on page 61 of Chapter 3, “Reference”).
   - The Inspector panels let you change various properties of the currently selected object, such as color or rotation angle. You can have multiple inspector panels (two are shown above), and each panel can have multiple inspector tabs. The contents of each tab changes depending on what type of object is currently selected.

- The Objects tab in the lower panel shows which object is currently selected, lets you change the order in which objects are stacked, make fine adjustments to their size and position, and affect various other object properties. We will discuss this tab in more detail later, in "Tutorial 2: Creating an Animation from Scratch" on page 18. All of the tabs are described in Chapter 3, "Reference."
- The Animation panel controls how objects move during the course of the animation. For the moment, let's just take a quick look at some of its basic functions. We'll discuss it in more depth in the next tutorial.

Using the Animation Panel

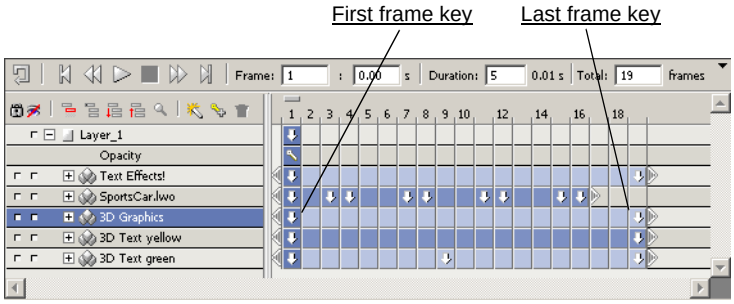


6. Click the play button to play the animation within e-Picture. Note that since e-Picture is calculating object positions and effects on the fly, motion may be jerky or slower than in the final output. The faster your computer, the less likely this is to be an issue.
7. For a more realistic preview, uncheck the Overscan button (at the bottom of the document window) to hide the overscan area. Press play again; notice that e-Picture automatically rewinds before playing. This time through, you see only what will appear when you play the final exported animation in a Web browser. Check the Overscan button again to redisplay the off-canvas objects.
8. The frame numbers at the top of the Animation panel let you select a particular frame for display or editing. Select each frame from 1 to 19 by clicking each number in sequence, and notice how the objects change their positions. You may also move to the first or last frame by clicking the rewind or fast-forward buttons next to the play button.
9. Now let's modify the animation. Select frame 1, then click on 3D Graphics in the Animation panel to select the "3D graphics!" text object (you can also click on the same item in the Objects tab). Notice the blue line that appears in the workspace: it indicates the path the object will take over the course of the animation. Click play again and you will see that each of the boxes along the path line indicates 3D Graphics' position in a different frame.



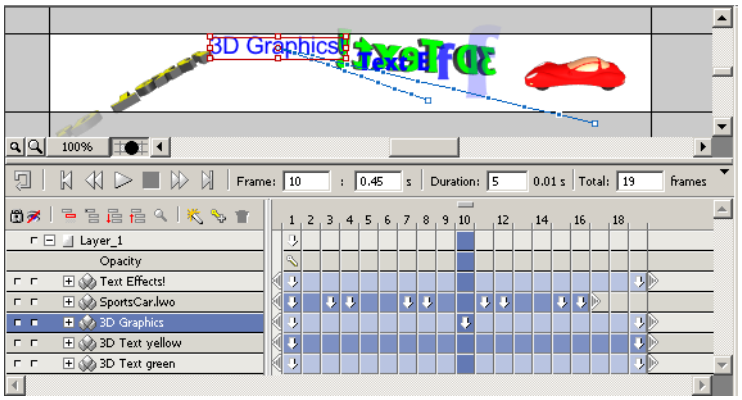
10. Select frame 1, then click and drag the 3D Graphics object around the screen. Notice how as you drag 3D Graphics, the path line alters to show that its position is changing not just in frame 1, but in every other frame except the last. That's because 3D Graphics' position has been set manually only in the first and last frames, that is, at the beginning and end of the path. e-Picture sets the object's position in the other frames automatically, a process called tweening. By default the tweened points are in a straight line, evenly spaced. (We'll discuss other possibilities in "Tutorial 4: Bouncing a Ball with the Tweening Wizard," below.) Drop 3D Graphics somewhere in the overscan area above the canvas, press play, and you'll see it move from its new start point to the original end point.

11. Press Ctrl-z to undo the change and return 3D Graphics to its original position in frame 1.



Now let's make 3D Graphics move along a more complicated path—but first, take a look at the Animation panel. Notice how in the row labeled "3D Graphics" there are two arrows, one in the first frame (1) and one in the last (19). These arrows indicate that those frames contain keys for the 3D Graphics object that control its position (or some other property) manually rather than by tweening. Frames containing keys are called key frames.

12. To create a path more complicated than a straight line, you define additional key frames. Select frame 10, click and drag the 3D Graphics object, and drop it in a new location near the top of the canvas, as shown below. The path changes to a slanted V shape, and a new key appears in the animation grid in frame 10 of the 3D Graphics row, indicating that the object's position is now set manually at three points along its path. Press play to see how the change affects the animation.



13. Select frame 19 and move the 3D Graphics object so that the end point of its path overlaps the starting point. Then select frame 10 and move Text1 to its original end point. Press play, and the 3D Graphics will move forward and back along its original path.

14. Select File/Revert and click OK to return the file to its original state.

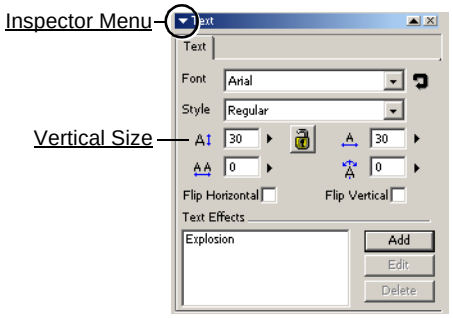
At this point, feel free to take a break from the tutorial and experiment with moving the various objects around in various frames. When you're finished, perform step 14 again to return the file to its original state.

Using the Inspector

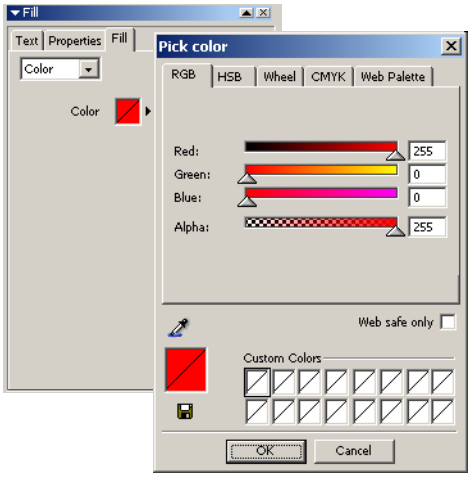
The Inspector panel is another key element of the e-Picture work area: it handles formatting and most other settings for objects. In this tutorial, we'll just cover the basics of the Inspector panel by using it to modify three different attributes.

15. If it is not already on screen, open Tutorial_01_completed.ep, select frame 19, and make sure that Inspectors is checked in the Window menu.

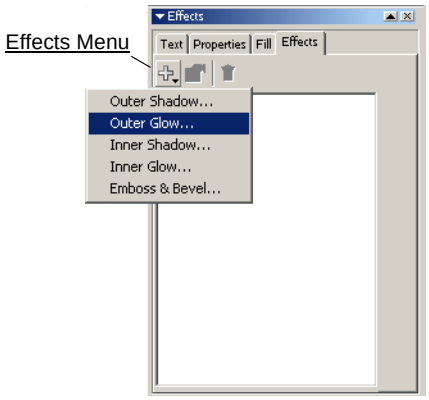
16. Select the 3D Graphics object by clicking on "3D graphics!" in the document window or on 3D Graphics in the Animation panel. Click on the Text tab to bring it to the front of the Inspector panel as shown at right. If the Text tab is not visible, select it from the Inspector menu. Select frame 1 and change the Vertical size to 1, then select frame 19 and set it to 30. Press play to see how e-Picture tweens the frames to make the text grow to fill the canvas.



17. Click the Fill tab (use the Inspector menu to display if necessary) and then click on the Color sample to bring up the Color Picker dialog. Adjust the sliders to change the text color to bright red, as shown at right and click OK. Press play, and e-Picture will change the text's color from dark blue to bright red over the course of the animation.



18. Click on the car graphic (or SportsCar.lwo in the Animation panel) and select frame 1. Click the Effects tab, and select Outer Glow from the Effects menu (click OK in the Outer Glow dialog to accept the default glow settings). Play the animation, and you will see that the white halo around the car makes it stand out more against the underlying animated text in the early frames.



19. Select File/Revert and click OK to return the file to its original state.

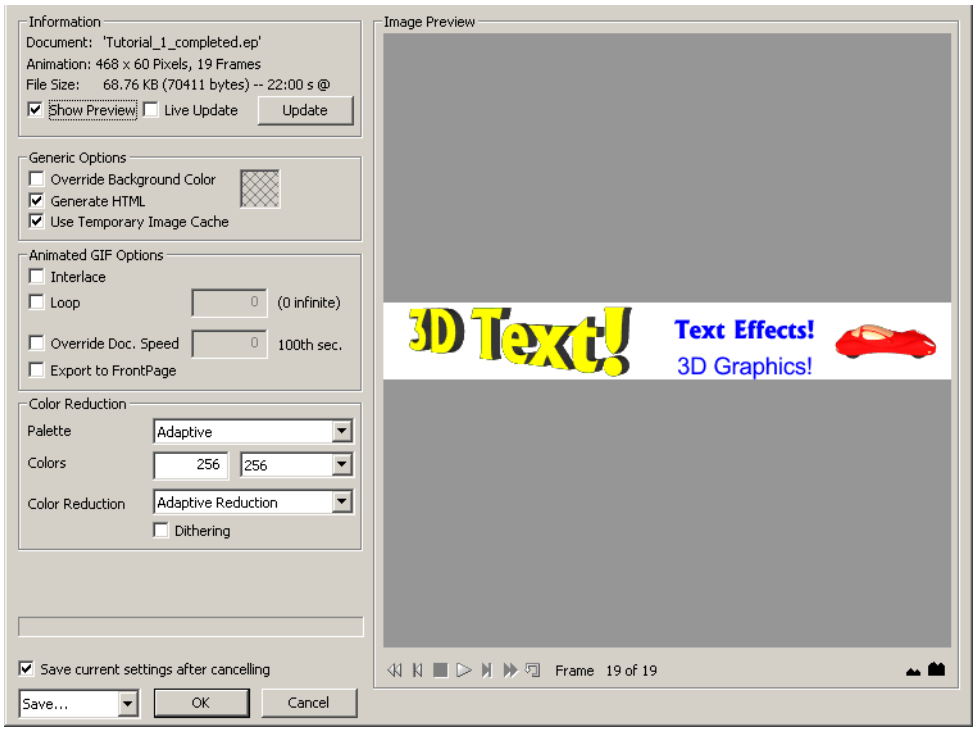
At this point, feel free to take another break from the tutorial and experiment with different properties and effects. When you're finished, perform step 19 again to revert the document to its original state.

Exporting Your Animation

The final step in a typical e-Picture project is to export the document to a file in a format that can be played in a Web browser. In this tutorial we'll walk through the basic steps to create an animated GIF file.

Exporting an Animated GIF

20. Choose File/Export/Animated GIF, and the Export to Animated GIF dialog appears. If the preview panel (the right portion of the export panel) is not visible, check Show Preview in the Information section of the export dialog box. The status bar will indicate e-Picture's progress in rendering the individual frame bitmaps for export. With minimum-requirement hardware, this may take a minute; on high-end computers, it will take only a few seconds.



21. When the rendering process is complete, the OK button is enabled. Press the play button under the image to see a preview of the rendered animation. As discussed in "Tutorial 5: Using the Export Wizard" on page 32, you can use the settings at left to make manual adjustments to the GIF file. Make sure that Generate HTML is checked and Loop is unchecked, then click Save As, enter the name Export1.gif, and press Save.

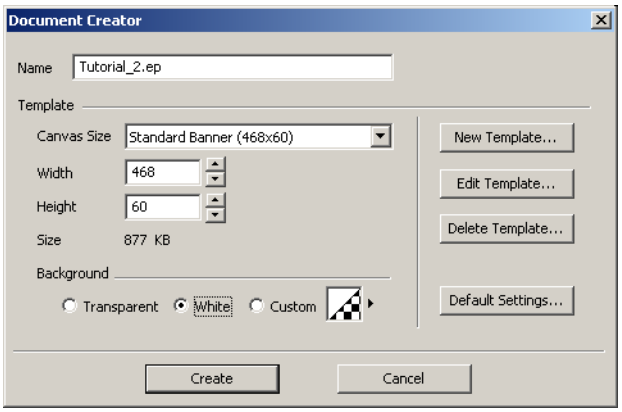
22. On your Windows desktop, you should see two files. Export1.gif is the exported animation, and Export1.html is a simple Web that includes Export1.gif. Double-click Export1.html to play the exported GIF in your default browser. Press your browser's Reload or Refresh button to replay the animation.

Tutorial 2: Creating an Animation from Scratch

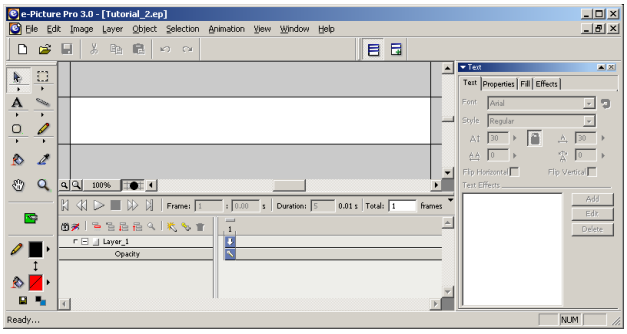
This example assumes that you are familiar with the e-Picture basics discussed in tutorial 1.

Creating a new e-Picture document

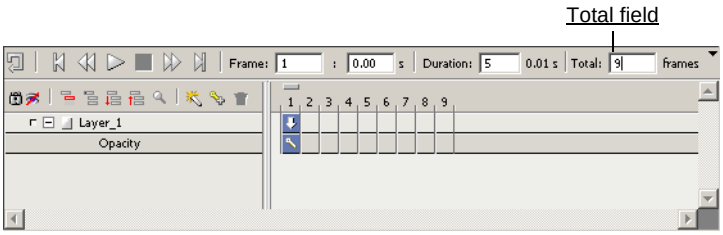
1. If you are already running e-Picture, select File/New to bring up the New Document dialog. Otherwise, start e-Picture, and (assuming you have not changed the Preferences) the New Document dialog will appear automatically.
2. In the Name field, type Tutorial_2.ep.
3. Under Background, select White. (If you are planning to export in Flash format, it is important to choose white or custom, as Flash does not support transparent backgrounds.)
4. Click Create.



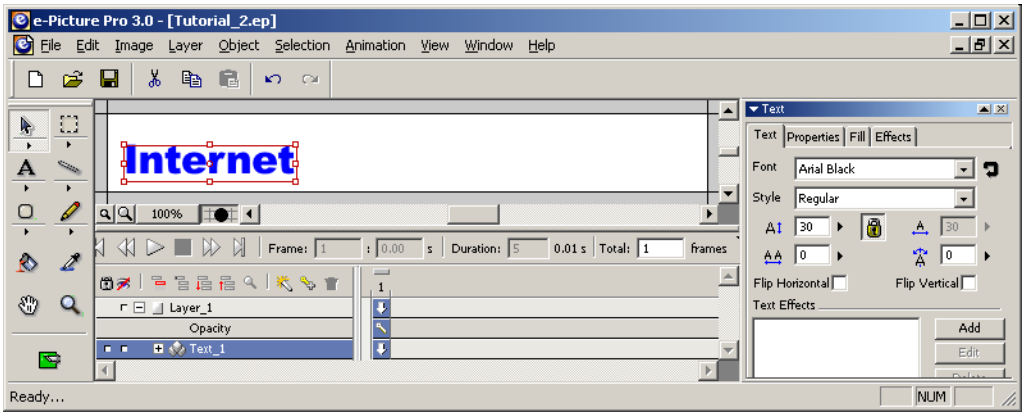
5. The new document appears in the e-Picture workspace. Because there are no objects selected, the Inspector panel tabs are all grayed out (unless you selected an object-creation tool before creating the new document, in which case it will display the current properties for that tool). In the Animation panel, you can see that the document has only one frame.



6. Before you can create an animation, you will need to add more frames. Double-click in the Total field, type 9, and press Enter. The additional frames appear in the animation grid. Select frame 9 so that the changes you make in the next few steps all are recorded there.



Creating and naming objects

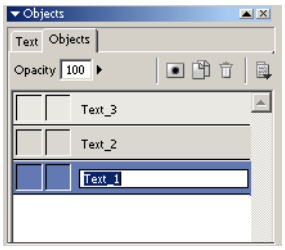


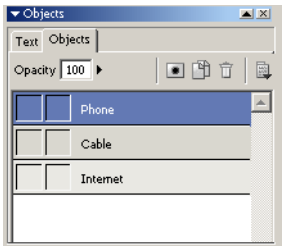
7. In the toolbox, select the Text tool (the plain black A in the left column). If a different text tool is currently on the top of the stack, click the small triangle below the current top tool and select the first Text option. Click the Text Inspector tab and use it to change the font to Arial Black, or if that is not available some similar font. Also change the vertical text size to 30 point. If the lock button is down (the default), the text will resize proportionally.

8. In the document window, click near the lower left corner of the canvas, with the horizontal arm of the cross-shaped cursor at the point where you want the text's baseline to appear. Type "Internet", then press Esc to let e-Picture know that you are through typing text.

9. Next, create two additional text objects. Click to the right of the Internet text object and type " Cable " (with spaces before and after). Click somewhere outside the border of the text object, another way of letting e-Picture know that you have finished typing, then click to the right of "Cable", type "Phone", and press Esc.

10. If you look at the Objects tab, as shown near right, you will see items named Text_1, Text_2, and Text_3, which are the text objects you just created. (If you used e-Picture before starting this tutorial, the numbers may be higher.) To give them more descriptive names, Ctrl-click Text_1, type "Internet", and press Return or Enter. Use the same technique to rename the other two objects, as shown far right. Note that you can use this same Ctrl-click method to change object names in the Animation panel.



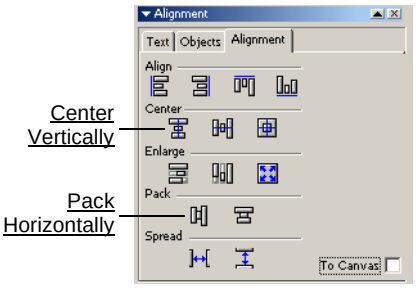


11. Select File/Save, then click Save.

Aligning and formatting objects

Now we will align the text neatly.

12. Switch from the Text tool back to the Selection tool by pressing v. (See "The Inspectors" on page 70 of Chapter 3, "Reference" for a complete list of keyboard shortcuts.) Then press Ctrl-A to select all three objects, as shown in the "before" image below.



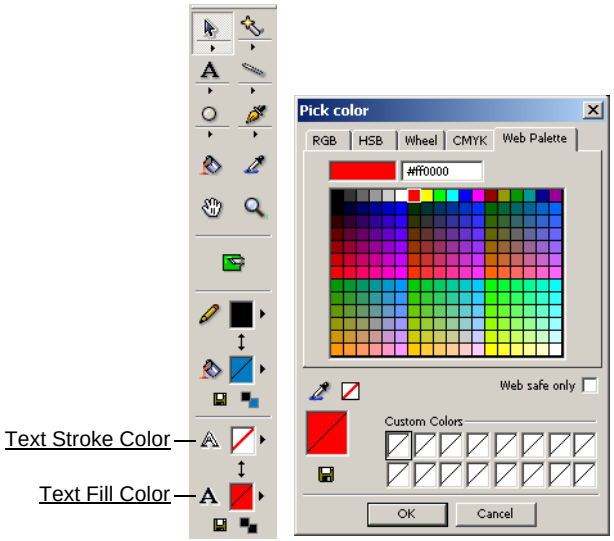
before:

after:

13. Select Alignment from the Inspector menu to display the Alignment panel.

14. Click the Center Vertically and Pack Horizontally icons to align the three text objects, then drag the group of icons to center them on the canvas, as shown in the "after" image above.

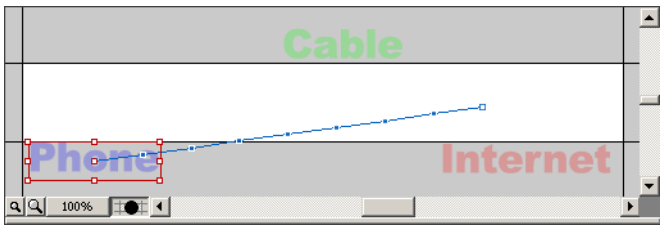
15. Click outside of the red selection border to deselect the objects, then select Internet.
16. In the toolbox, click the Text fill color sample to bring up the Color Picker dialog.
17. If necessary, select the Web Palette tab in the Color Picker.
18. Click on a bright red swatch and click OK to change the Internet text object's fill to bright red.
19. Select the Cable object and make its fill bright green.
20. Select Phone and make its fill bright blue.
21. Press Ctrl-S to save your changes.



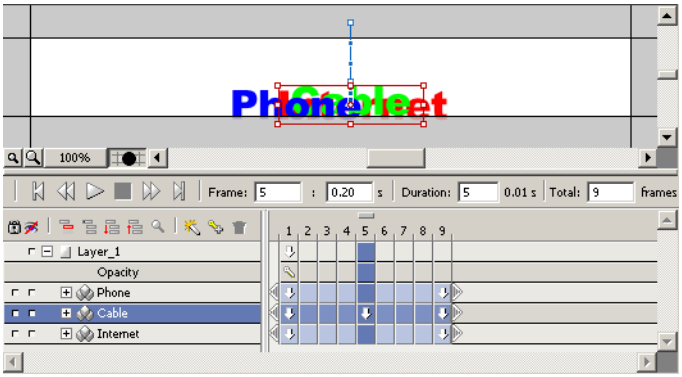
Animating objects

Now that we have created a file with multiple frames and populated it with objects, you can create the animation. To start, move the three objects to different starting positions.

22. In the Animation panel, select frame 1.
23. Use the mouse to drag the three text objects to the positions shown at right, just off the edge of the canvas, Press the Play button in the Animation panel and you will see them move to the ending positions you set before.

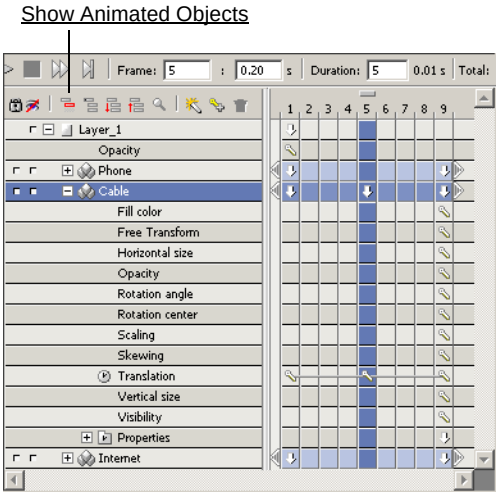


24. The animation might be more impressive if all three objects crossed paths simultaneously. To try that, select frame 5, and drag Cable down so it overlaps the other two objects.



25. When you drop the Cable object, a new object key appears in frame 5 of the corresponding row in the Animation panel. Click the plus to the left of the Cable label and you can see that the "Translation" property key is set.

26. Click the Show Animated Objects button to collapse the key display. Then play the animation to see the effect of the new key.

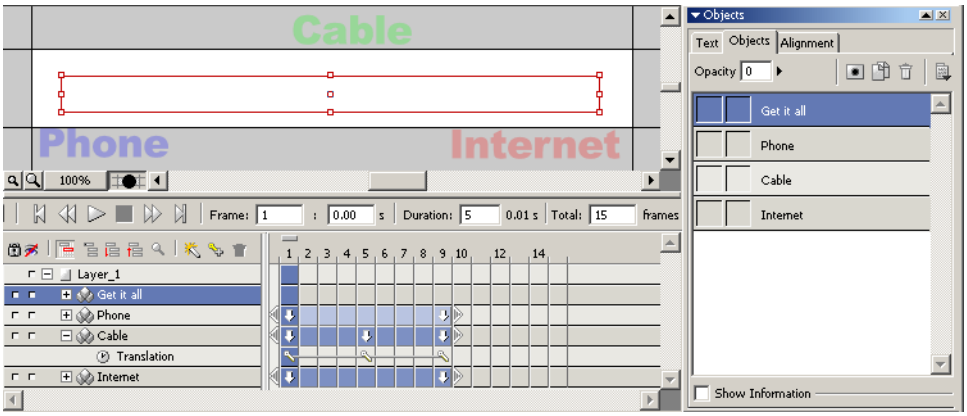


Expanding the animation and using effects

As you saw in Tutorial 1, e-Picture animations can include not just graphic objects but visual effects that modify them. Let's finish this sample project by adding some additional text that will fade in at the end. The following instructions will be less detailed, since they repeat techniques introduced earlier in this tutorial.

27. Create a fourth text object: select frame 1, select the Text tool, use the Text Inspector to change the fill color back to black, create a new text object that says "Get it all for $39 a month!", and center the new object in the frame.

28. Make the new object invisible at the start of the animation: in the Objects tab, rename the object “Get it all”, then change its Opacity setting from 100 (completely opaque) to 0 (invisible). This is done by changing the Opacity value in the Objects tab. Note that even though the text is now invisible, the bounding box still shows the position of the text.



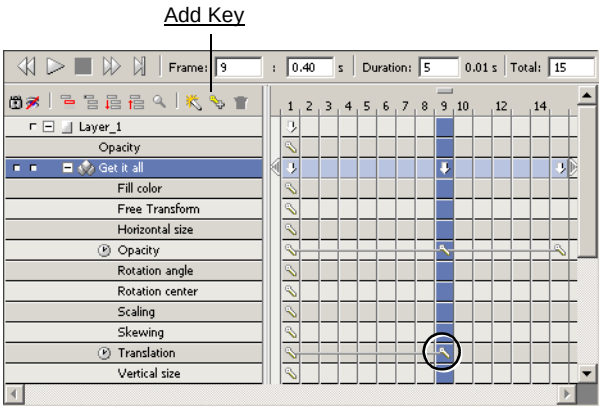
29. Add additional frames to the animation: double-click in the Total field and enter 15. As you can see in the image above, the new frames appear after frame 9, but the keys in frame 9 stay where they are. Thus the first nine frames of the animation play just as before, and the objects remain still for the remaining six frames. (There are other ways to increase the length of an animation that have different effects—see “The Animation panel” on page 66 of Chapter 3, “Reference”.)

30. Select frame 15 and set Opacity to 100, then select frame 9 and set Opacity to 0. Play the animation and you can see that “Get it all” starts fading in at frame 9.

Creating keys manually

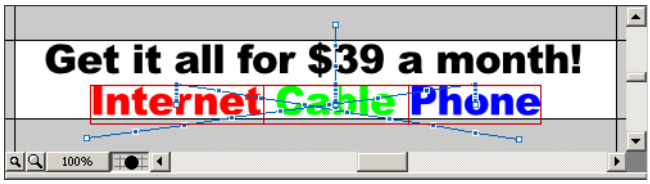
To complete the animation, we’ll have “Get it all” move up and the other three text objects move down to make two lines of text. The first step is to create a key to manually lock the “Get it all” object in its current position in frame 9. (The other objects already have keys for frame 9, since that is the frame in which you created them.)

31. Select frame 9 and in the Animation panel click the triangle next to "Get it all." Click the Add Key button, then click in the Translation property row's cell for frame 9. If necessary, click the Show Animated Objects button to display all of the object properties.



32. Now move the objects to their ending positions. Click on the arrow tool, then select frame 15 and drag "Get it all" to the top of the canvas.

33. Then select the three other objects (click on one, then use Shift-click to select the other two) and use the cursor-down key to move them to the bottom of the canvas.

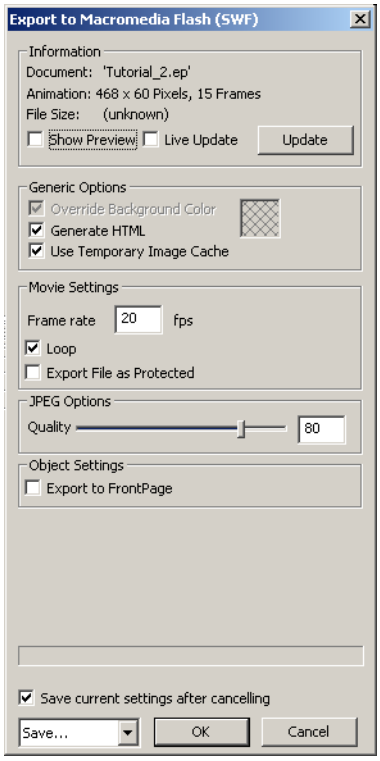


34. Click outside the objects to deselect them, then play the completed animation. Internet, Cable, and Phone will cross paths, align themselves, then move toward the bottom as "Get it all" fades in while moving to the top.

35. Press Ctrl-S to save the animation.

Exporting a Flash (SWF) file

The final step in this project is to export the animation to a Flash (SWF) file for display in a browser.



36. Select File/Export/Macromedia Flash (SWF) and the dialog box at right will appear. Note that with Flash, you set the frame rate (frames per second) rather than hundreds of seconds per frame as with animated GIFs. Set the frame rate to 20.

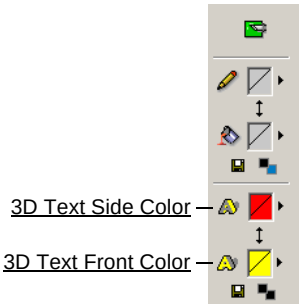
37. Check the Generate HTML check box, click OK, then click Save to accept the file name Tutorial_2.swf.

38. On your Windows desktop, double-click the HTML document to open it and play the Flash animation in your browser. Press your browser's Reload or Refresh button to replay the animation.

Tutorial 3: Using 3D Text

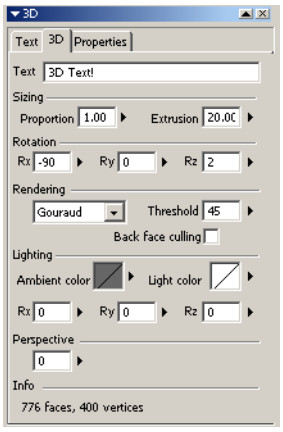
This example assumes that you are familiar with the e-Picture basics discussed in tutorials 1 and 2.

1. Select File/New and click Create to start a new e-Picture document.
2. In the Toolbox, select the 3D Text tool. If it is not visible, click the small triangle below the current text tool, and choose the 3D Text tool from the tool selection pop up.
3. Click near the right edge of the canvas and type “3D text!” Press Esc when you are finished typing.
4. In the Text tab, change the font to Arial Black, or if it is not available some other angular, substantial-looking font.
5. In the toolbox, change 3D Text side color to red and the front color to yellow. Note that the 3D text color icons and samples have replaced the regular text stroke and fill colors used in the last tutorial (the regular text icons and samples will return when you select a regular text object or a different text tool). You can also use the Stroke tab to set the 3D Text side color, and the Fill tab to set the 3D text front color.

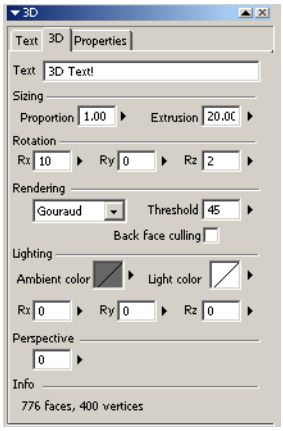


6. In the Properties tab, check the Anti-aliasing check box (at the very bottom).
7. In the 3D tab, set the Rotation Rx, Ry, and Rz values to -90, 0, and 2. The text will appear edge-on.

8. In the Animation panel, change the Total value to 20 to expand the animation to 20 frames.
9. Select frame 20. In the 3D Object Inspector, set the Rx value to 10. The text will appear face forward, tilted slightly down.



10. Resize the 3D text so it almost fills the canvas: hold down Shift to constrain the object, and drag the left side handle to the left until the text almost reaches the left edge of the canvas. Then do the same for the right side. Play the animation and you will see the text tilt up and widen to fill the canvas.

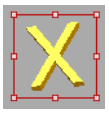


11. Experiment with the different rotation options and see how they change the appearance of the animation during playback. When you are happy with the animation, export to animated GIF and view it in your Web browser.

You can also animate 3D models the same way you animated 3D text. To experiment, drag a file from the 3D Models folder onto your canvas.

✻ *Instead of editing the Rx, Ry, and Rz values, you may rotate 3D objects with the mouse. Select frame 1, then double-click on the 3D text object. The green outline should appear in the bottom left corner. Click within the object's border and drag, and the text will rotate. Hold down the Alt, Ctrl, or Shift key while dragging to constrain movement to one axis at a time. For more information, see "Rotating 3D text and 3D models with the mouse" on page 65 of Chapter 3, "Reference".*

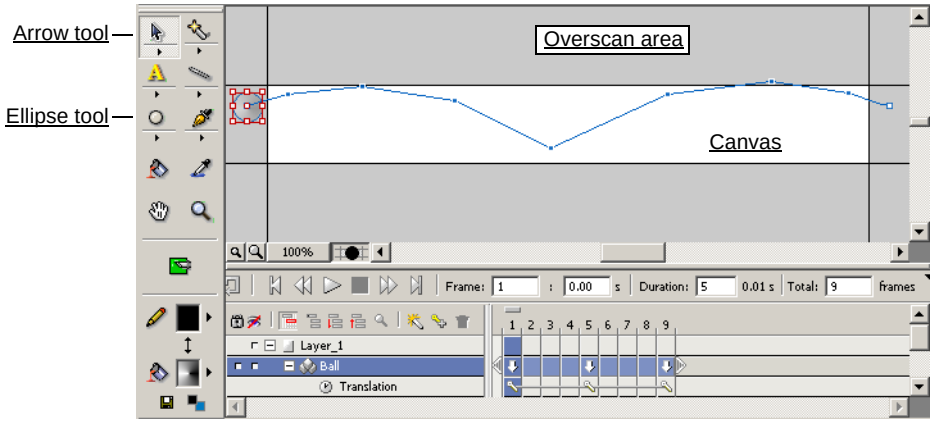
Free rotate selection



Resize selection

Tutorial 4: Bouncing a Ball with the Tweening Wizard

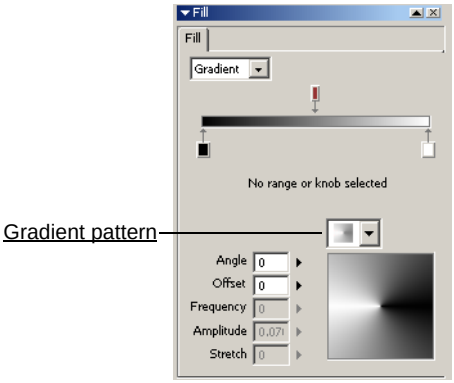
In this tutorial, we will explain how to use e–Picture Pro's Tweening Wizard to create more natural-looking motion. The text assumes that you are already familiar with the basic e-Picture concepts and terms discussed in tutorials 1 and 2. The major e–Picture interface elements used in this tutorial are shown in the figure below:



1. Create a new e-Picture document using the Standard Banner template and a white background.

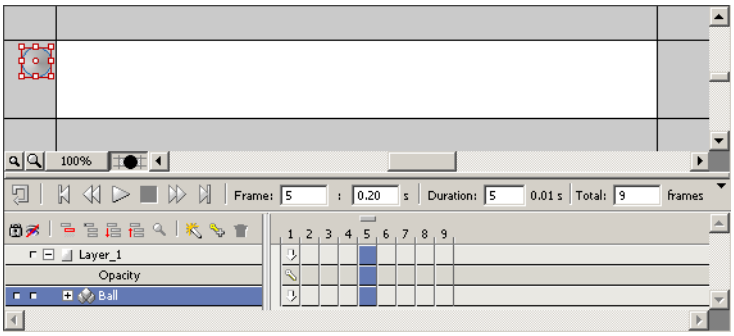
To create the ball at its starting point in frame 1:

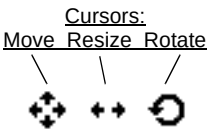
2. Select the Ellipse tool.
3. While holding down Shift (to constrain the Ellipse tool), draw a small circle in the overscan area just to the left of the top left corner of the canvas. Select the Arrow tool to exit object-creation mode.
4. Ctrl-click on the ellipse object in the Animation panel, and rename the object "Ball".
5. Select the Fill tab of the Ellipse Inspector and give the object a radial gradient fill pattern, as shown at right.

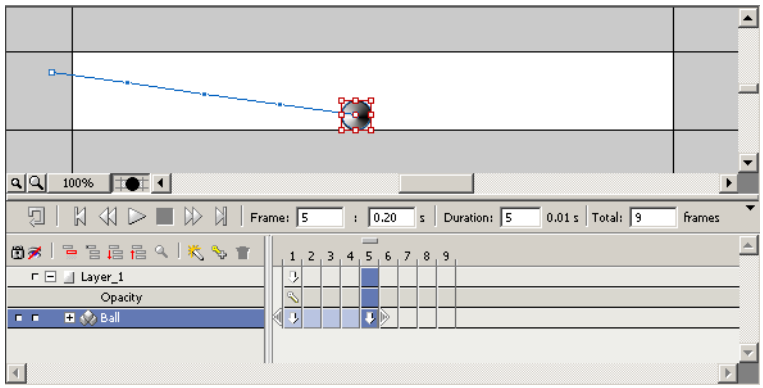


To create the key for the ball's bounce in frame 5:

6. In the Animation panel, enter 9 in the Total field and press Enter to make a 9-frame animation, then select frame 5, the midpoint of the sequence. Both these changes are shown here.







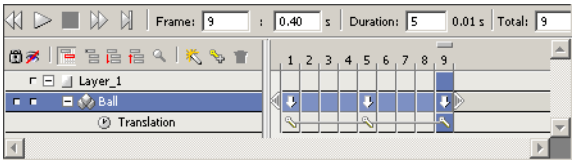
7. Move the Arrow tool over the ball until the Move cursor appears. (When moving small objects, it's important to look before clicking to make sure you have the Move cursor rather than the Resize or Rotate cursor. Note also that the Rotate cursor has different effects depending on where you click it: within an object's bounding box, it moves the rotation point; outside the bounding box, it rotates the object around its rotation point.) Then click and drag the ball to a point near the bottom center of the canvas, the spot where you want the ball to bounce, as shown above.

To create the key for the ball's exit in frame 9:

8. In the Animation panel, select frame 9, the last of the sequence.
9. Drag the ball to a point in the overscan area just to the right of the top right corner of the canvas.

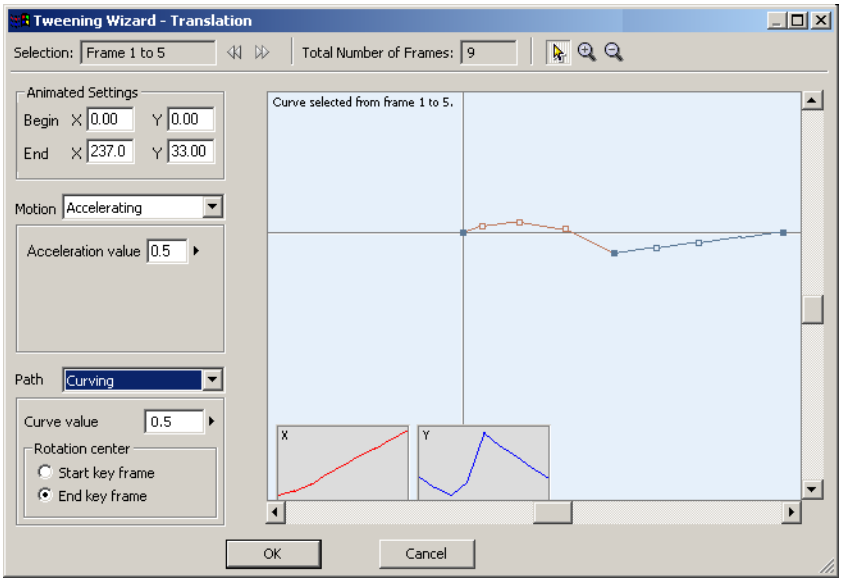
Adjust tweening to make the ball bounce:

Press the Play button now, and you will see that the ball simply moves at a constant speed along a V-shaped path from its start point in frame 1 to the bounce point in frame 5 to its end point in frame 9. Using the Tweening Wizard, we can easily make this motion look more like a bounce.



10. In the Animation panel, click on the plus sign next to the Ball object to expand its properties.

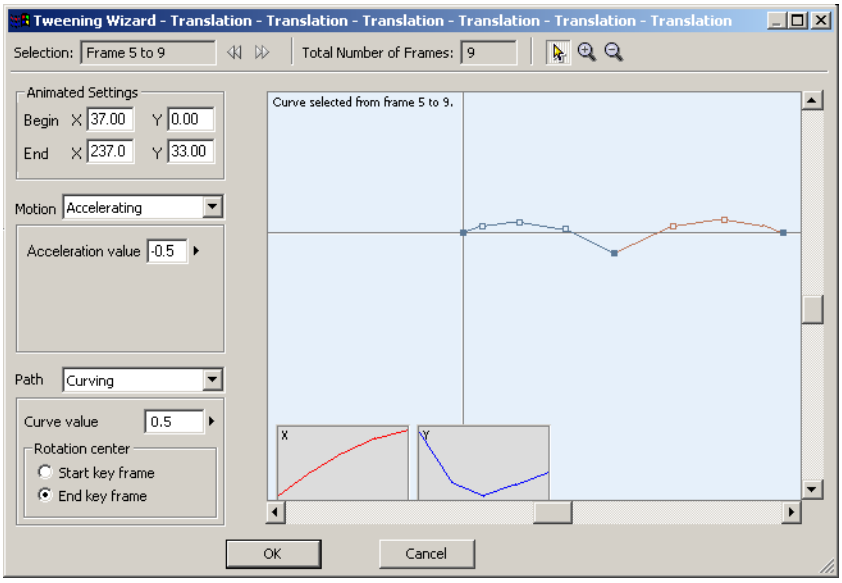
11. Click on Translation (on the text label, not in the animation grid) to open the Tweening Wizard. The Translation property controls the position of an object in the document window.



In the Tweening Wizard window, e-Picture displays the path the ball takes as it translates—that is, the path of its motion in the document window. The solid boxes represent the ball's position in key frames where it has been set manually, and the empty boxes indicate where its position has been set automatically in the other frames by tweening. The first segment of the path is shown in red, to indicate that it is the portion that will be affected by changes made in this dialog box.

12. Change Motion from Constant to Accelerating.

13. Change the Acceleration value to 0.5, either by adjusting the slider or typing the number in the box. Notice how the boxes reposition themselves along the path.
14. Change Path from Linear to Curving. Notice how the straight path from the beginning point to the bounce turns into a curve.
15. Change the Curve value to 0.5 to set a gentle curve.
16. Click on the right-hand segment of the path to select it.
17. Change Motion from Constant to Accelerating and change the Acceleration value to –0.5. (Note the minus sign.)
18. Change Path from Linear to Curving. The Curve value is copied from the left-hand path segment, which is appropriate for the desired effect, so you do not need to change it.



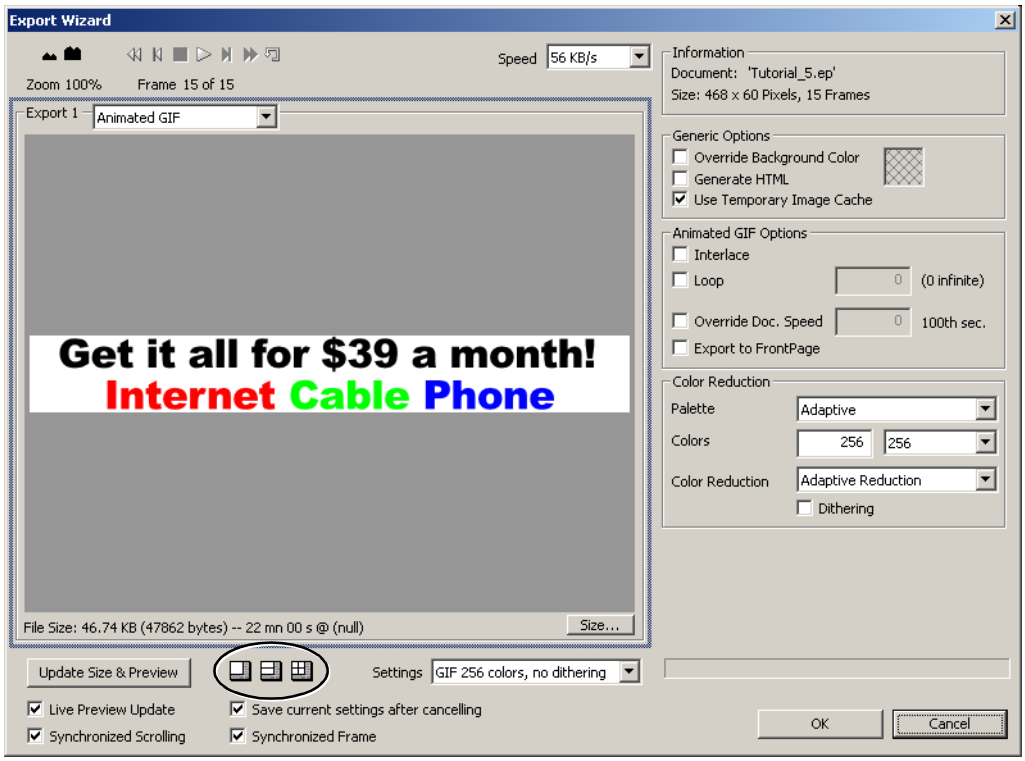
19. At this point your Tweening Wizard should look like the example above. Click OK to close the Tweening Wizard.

Press the Play button, and you will see that the circle's path now looks more like the natural motion of a ball.

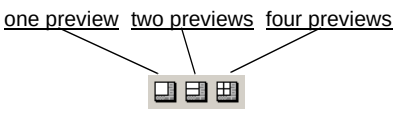
Tutorial 5: Using the Export Wizard

This example assumes that you are familiar with the e-Picture basics discussed in tutorials 1 and 2.

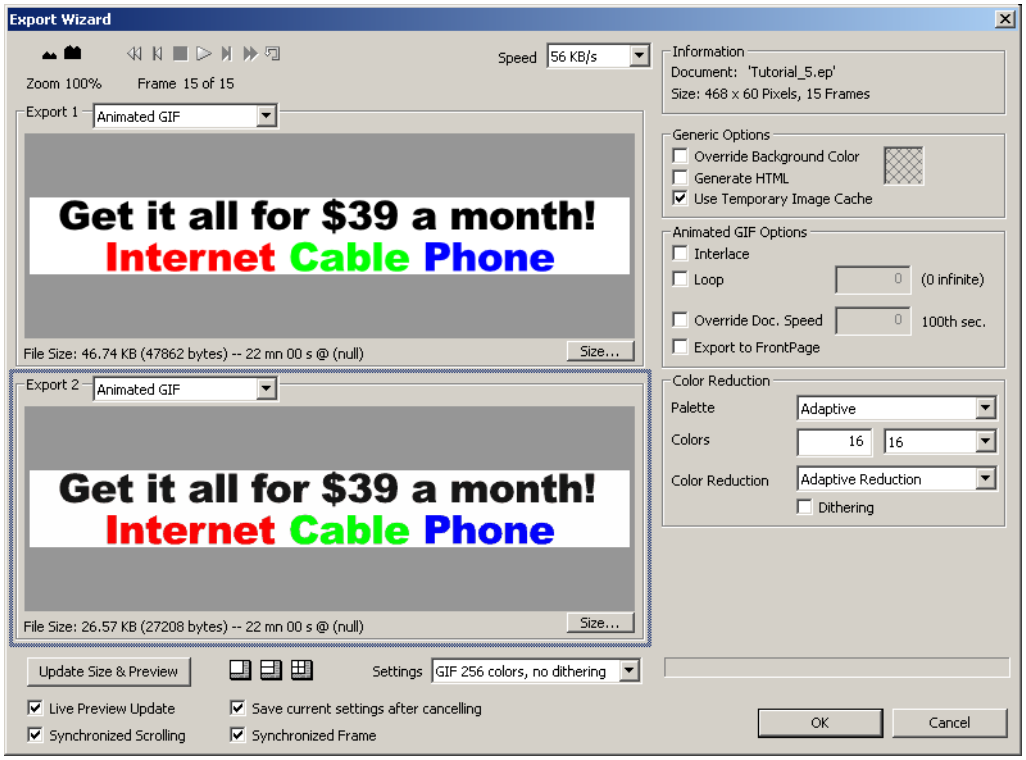
1. Open Tutorial_5.ep, a duplicate of the animation you created in Tutorial 2.
2. Choose File/Export Wizard.
3. e-Picture will display the Export Wizard dialog. It will take a few seconds (depending on the speed of your computer) to render the animation.



4. Click on the two-previews button at the bottom of the dialog and the window will change so you can compare two different export settings.



5. From the Export 2 pop-up list, select Animated GIF. After e-Picture finishes rendering the preview, change the number of colors from 256 to 16, as shown. Compare the file sizes, and you'll see that the 16 color version is about 20K smaller. If you look closely, you can also see some subtle differences in the quality of the images.



You can switch between Export 1 and Export 2 and try different settings to see which gives you the most acceptable quality and file size.

Using the Size Wizard

Let's say that your production specs require you to produce an animated GIF no larger than 18K. You can use the Size Wizard to automatically constrain the file size to whatever number you wish.

6. From the Export 2 drop-down list, choose Animated GIF.
7. When e-Picture finishes rendering, click the Size button.

8. When the Size Wizard appears, click Next. Enter 18000 in the File Size field, then keep clicking Next to accept the defaults until the Compute button appears.
9. Click Compute, and e-Picture will perform various calculations to determine the optimum settings for an 18K file. This may take some time, particularly on a slower computer. When e-Picture finishes, you will see that it has reduced the file size for Export 2 to under 18K.

You can click the four-preview button and run the Size Wizard again in the Export 3 and Export 4 panels, trying different constraints to see which gives the best quality.

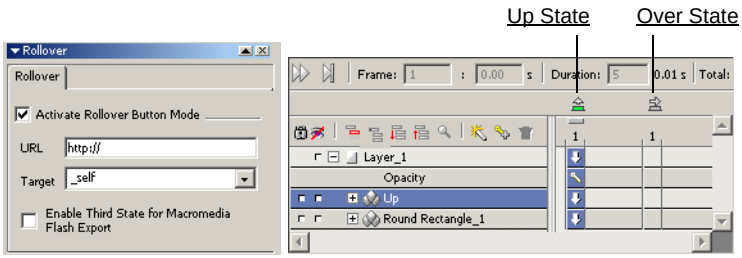
Tutorial 6: Creating rollovers using the Rollover tab

This example assumes that you are familiar with the e-Picture basics discussed in tutorials 1 and 2.

e-Picture provides two different mechanisms for creating rollovers, the Rollover tab and the image slicing tool. Rollovers are HTML and Flash mechanisms for adding a dynamic element to a web page. Generally speaking, rollovers are used to display one image when the mouse pointer is away from a particular graphic, and a different image when the mouse pointer is over that graphic. This is accomplished by having two images that occupy the same space, only one of which is shown at a time.

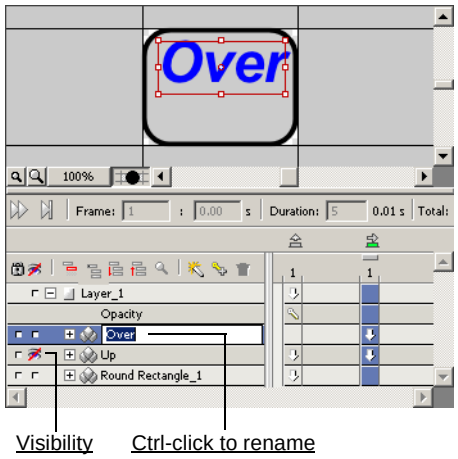
The Rollover tab is described in this tutorial. Image slicing is described in Tutorials 7 and 8.

1. Open Tutorial_6.ep.
2. In the Rollover tab, click the Activate Rollover Button Mode check box. This enables all of the fields in the Rollover tab and changes the Animation panel to include two different sections: Up State and Over State. The Up State is the one that the user will see when the mouse pointer is outside of this graphic. The Over State is the one the user will see when the mouse pointer is over this graphic. The Rollover tab also includes a check box for enabling a third state (Down State) for Macromedia Flash export. The Down State is the one the user will see when the mouse is clicked on this graphic.

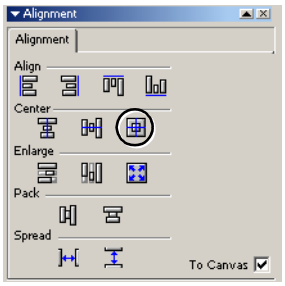


3. Click on the Over State button. Notice that the image shown on the canvas does not change. This is because the state of each object in the Up State automatically carries over to the Over State.

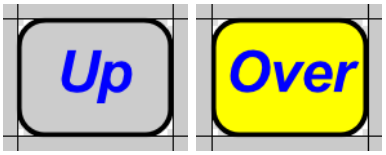
4. Replace the “Up” text object with an “Over” text object in the Over State. To do this, hide the Up State object by clicking on its Visibility icon in the Animation panel. Next, use the Text tool to add the word, “Over” on the canvas, then Ctrl-click on the object name in the Animation panel and Rename it to Over. These changes are shown at right.



5. In the Over State, use the Alignment tab to center the Over text on the canvas. To do this, select the Over text on the canvas, check the To Canvas check box in the Alignment tab, and click the Center Horizontally and Vertically button, circled at the right.
6. In the Over State, select the round rectangle object and change its fill color from gray to yellow.
7. In the Up State, click on the Visibility icon for the Over text object.



8. Click on the Up State and Over State buttons in the Animation panel to view the completed buttons.
9. Choose File/Export/GIF to open the export dialog. Be sure to check the “Generate HTML” box and save the file to your Desktop.



10. On your Desktop, open your rollover file and view the results of your work.

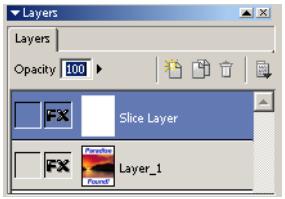
Tutorial 7: Slicing an image into table cells

This example assumes that you are familiar with the e-Picture basics discussed in tutorials 1 and 2.

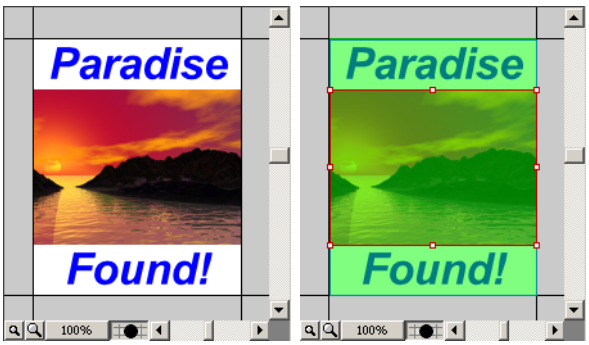
Image slicing allows you to split up a single image or animation into multiple smaller images. These smaller images are placed in cells of an HTML table to recreate the original larger image or animation. Image slicing is a popular method of both improving the quality of an image and reducing the amount of time it takes to load an image by treating different parts of the image differently.

For example, in this tutorial the original graphic includes both text and a sunset scene. Text is well suited for GIF files and pictures are best stored as JPEG files. With image slicing, you can take advantage of the strengths of each format for both quality and file size.

1. Open Tutorial_7.ep.
2. In the Toolbox, select the Image Slicing tool. The first time you select the Image Slicing tool, you are notified that you are automatically being switched to the Slice Layer, as shown. The Slice Layer is a special layer that always sits on top of all other layers. Image slices are only visible when the Slice Layer is selected. To return to a drawing layer, click on it in the Layers tab.

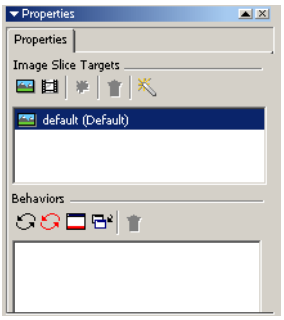


3. Draw three rectangular "slices," as shown at right in the After image. Each slice will be exported as a separate cell in the HTML table (if there were portions of the canvas not covered by slices, they would not be exported).

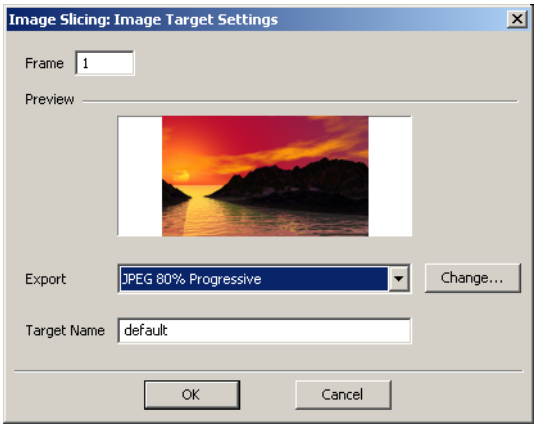


Before After

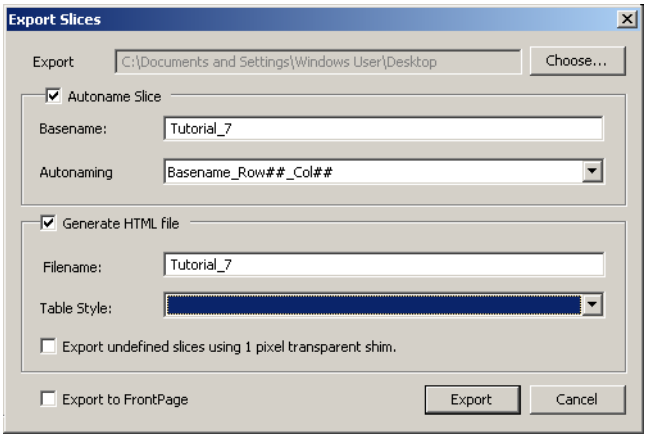
4. Select the middle sunset slice, and in the Properties tab, double-click on the item shown in the Image Slice Targets section, as shown. The contents of the Properties tab change for each image slice, just as they are different for each object you select.



5. In the Image Slicing: Image Target Settings dialog, change the Export format from GIF (the default) to JPEG 80% Progressive. You can customize the Export format options by clicking the Change button. Click OK to return to the Properties tab. For more information on image slices and their properties, see "Tutorial 8, Creating Rollovers Using Image Slices."



6. Select File/Export Slices. The Export Slices dialog appears.
7. To select the destination folder for the exported slices, click Choose. Since image slicing creates multiple files, it is often convenient to place them together in a separate folder.
8. Edit the Basename so it reads Tutorial_7. e-Picture automatically uses this name to generate the name of the HTML file and a file for each image slice.
9. Click Export to export the slices.



10. When the dialog closes, go to the save folder, where you will find two .gif files, one .jpg file, and Tutorial_7.html, which contains the table code to paste into your HTML editor.

```
<html>
<head>
<title>Test</title>
</head>
<body>

<!-- Slice output created by e-Picture Pro 3.0 -->
<!-- Beatware - http://www.beatware.com   -->

<!---------------------------------- BEGIN COPYING HTML INFO ---------------------------------->

<table border="0" cellpadding="0" cellspacing="0">
<!-- [BW-ePP-DocTable-v1] "Tutorial_7.ep" "C:\Documents and Settings\Windows
User\Desktop\ePP3\Tutorials\Tutorial 7\Tutorial_7.ep" -->
 <tr valign="top"> <!-- row 1 -->
  <td><a href="#" ><img name="Tutorial_7_ImageSlice_5" src="Tutorial_7_ImageSlice_5.gif" width="161"
height="39" border="0"></a></td>
 </tr>
 <tr valign="top"> <!-- row 2 -->
  <td><a href="#" ><img name="Tutorial_7_ImageSlice_7" src="Tutorial_7_ImageSlice_7.jpg" width="161"
height="121" border="0"></a></td>
 </tr>
 <tr valign="top"> <!-- row 3 -->
  <td><a href="#" ><img name="Tutorial_7_ImageSlice_6" src="Tutorial_7_ImageSlice_6.gif" width="161"
height="39" border="0"></a></td>
 </tr>
</table>
<!---------------------------------- END COPYING HTML INFO ---------------------------------->
</body>
</html>
```

11. Copy the flagged code and paste it into the appropriate Web page in your HTML editor. Copy the .gif and .jpg files into the same directory with that Web page.

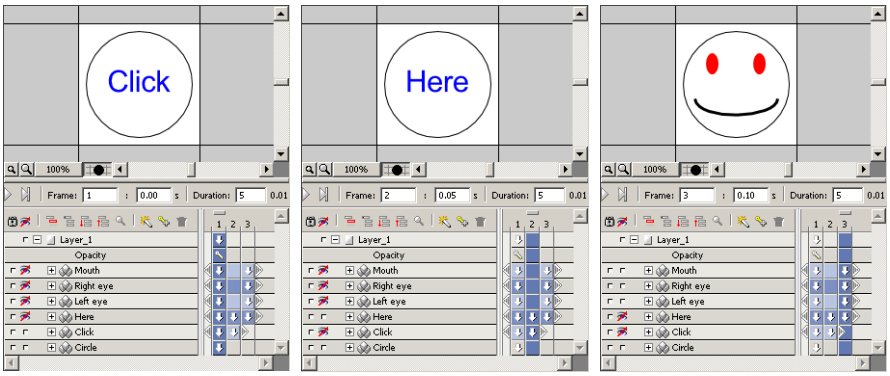
Tutorial 8: Creating rollovers using image slices

This example assumes that you are familiar with the e-Picture basics discussed in tutorials 1, 2, and 7.

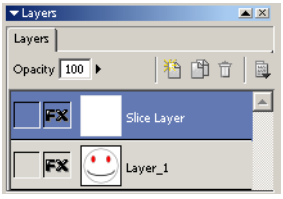
Note: When working with dynamic imaging and Microsoft FrontPage (i.e. using the e-Picture Imager), image slicing is not supported. Use the Rollover tab discussed in Tutorial 6 instead.

Creating a simple rollover button

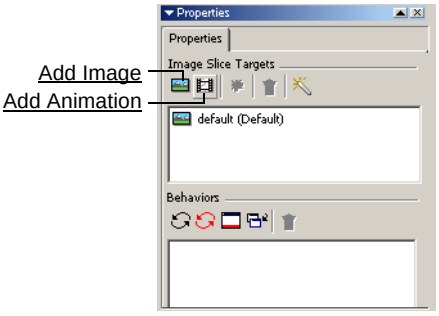
1. Open Tutorial_8.ep. This contains objects that can be used to create a rollover with an animated loop saying “Click/Here” that changes to a smiley face.
2. When creating rollovers using image slices, the frames of the Animation panel hold the various still images or animations the rollover can display. In the context of rollovers, we call these targets. Select frames 1, 2, and 3 in turn and you will see first “Click,” then “Here,” and finally the smiley face. Look at how the Animation panel changes as you change frames: the Visibility icon indicates which objects appear in each of the button’s frames.



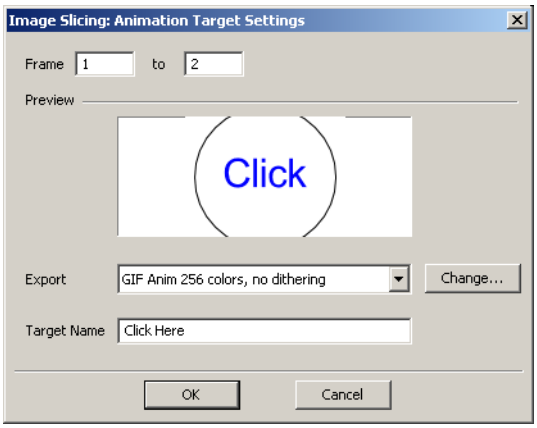
3. Draw an image slice that covers the entire canvas. This action automatically switches you to the Slice Layer in the Layers tab.
4. Select your image slice in the Animation panel.



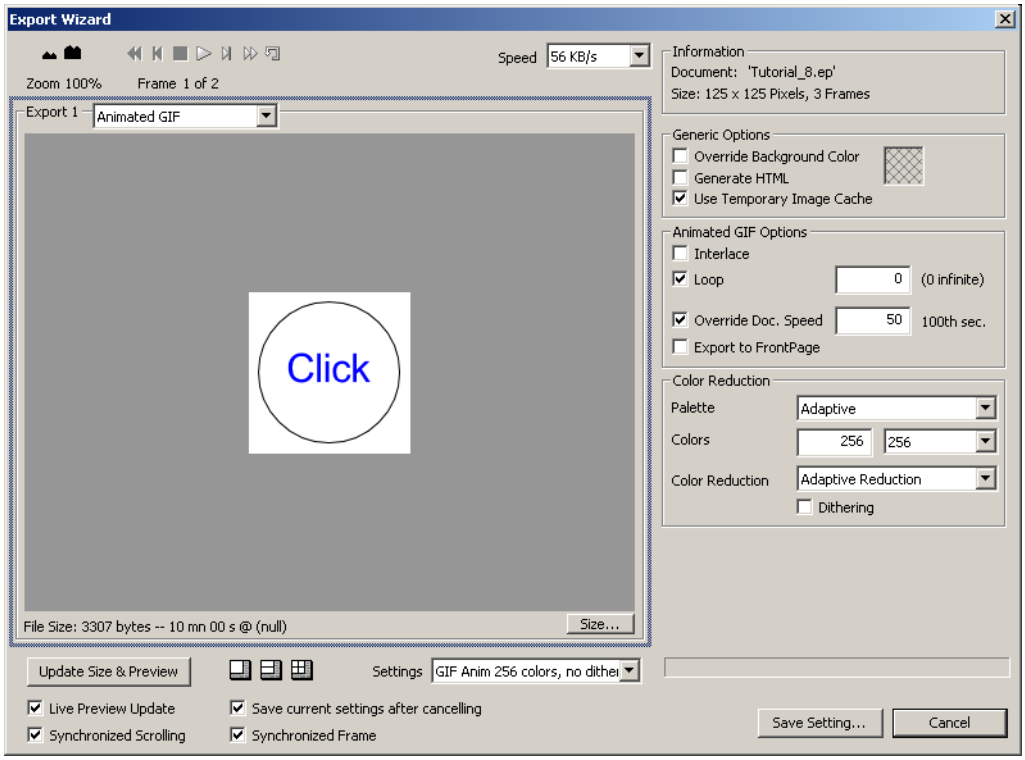
5. In the Properties tab, click the Add Animation button, as shown at right.



6. The Image Slicing: Animation Target Settings dialog appears. Set the "to" frame to 2 to set the Target Name to "Click Here."
7. Click the Change button to the right of Export Settings.



8. The Export Wizard appears. In the Animated GIF Options section, check the Loop and Override



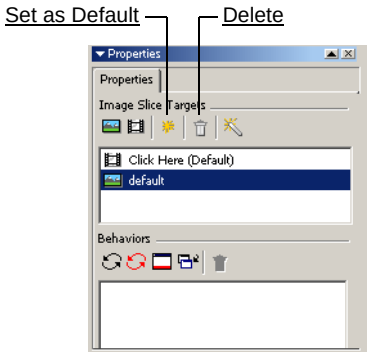
Doc. Speed boxes. Set the document speed to 50. These settings will cause frames 1 and 2 to loop endlessly ("Click … Here … Click … Here …") in the rollover, spending one half second on each frame.

9. Click Save Setting, change the setting name to "Tutorial 8 custom GIF Anim," and select the Specific to the document radio button, then click OK to save the setting. Note that the setting name must be changed before the OK button will be available.

10. To set the "Click Here" loop to appear when the rollover is first loaded, select it in the Targets menu and choose Set as Default Target. The results of this action are shown at right.

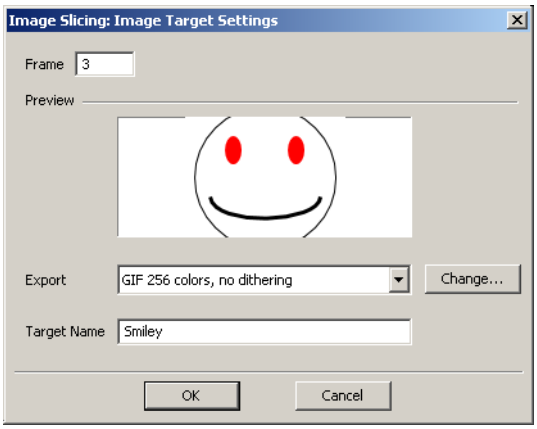
11. At this point, the "default" target created automatically by e-Picture is unnecessary and potentially confusing, so select it and click the Delete icon.

12. Next we will add the smiley image that will appear when the mouse moves over the button. In the Inspector, click the Add Image button.

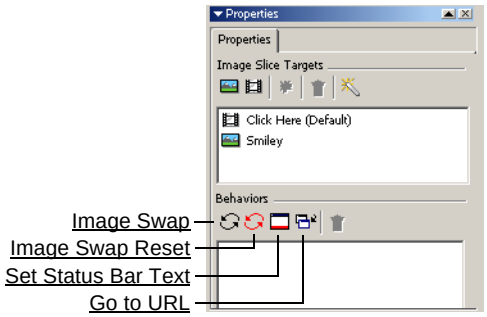


13. The Target Settings dialog appears again. This time, choose Frame 3, which contains the smiley we want to appear when the mouse moves over the button. Change the Target Name to "Smiley" and click OK.

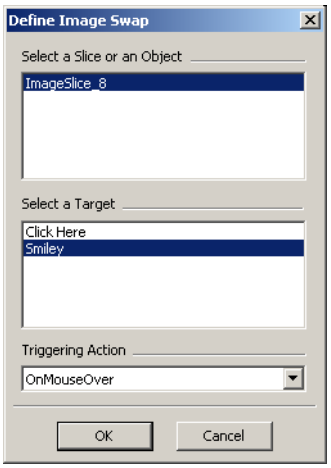
At this point, we have specified what will be displayed - one animation and one image - but not when these items will be displayed. Next, we will define when each of the two targets will appear on the face of the button.



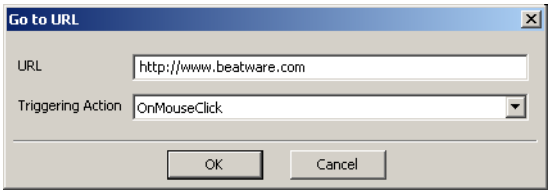
14. In the Properties tab, click the Image Swap button in the Behaviors section. This pops up the Image Swap dialog.

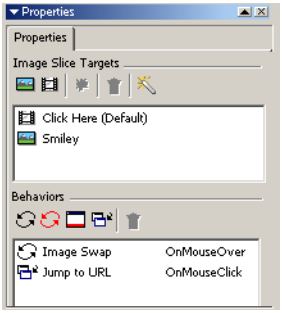


15. In the Image Swap dialog, select Smiley as the target. The default Triggering Action, OnMouseOver, is the one we want. It means that in the browser, when the user moves the pointer over the button, “Click Here” (the default target animation, a loop of frames 1 and 2) will be replaced by the Smiley (frame 3, as you defined in step 10 above). Click OK.

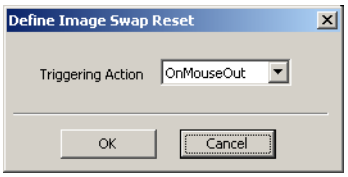


16. Next, add a URL to the page you want the browser to jump to when the button is clicked. In the Behaviors tab, click the Jump To URL button. In the dialog that appears, enter the full URL (including the http:// prefix) to your Web site, or any site you wish, then click OK. The Properties tab at right shows the results of this action.





17. Finally, to restore the rollover button to the default state when the mouse moves outside the bounds of the button, click the Image Swap Reset button in the Behaviors section of the Properties tab. In the Image Swap Reset dialog, choose OnMouseOut as the Triggering Action and click OK.



18. Select File/Save As and save the modified document as Rollover.ep.
19. Select File/Export Slices. Because Export Slices produces several files, you may want to create a separate folder to hold them. Click Export.

```
<html>
<head>
<title>Test</title>
<!---------------------------------- BEGIN COPYING JAVASCRIPT CODE ---------------------------------->

<script language="JavaScript">
<!--hide this script from non-javascript-enabled browsers
// [BW-ePP-ImgSliceJS-v1]
function BWRestoreImages() {
var i,x, imgs = document.bwImgs, srcs = document.bwOldSrc;
if (imgs == null || srcs == null) return;
for (i = 0; i < imgs.length; i++) {
if (imgs[i]) imgs[i].src = srcs[i];
}
}
function BWFindImage(name, doc) {
var img = null, i = 0;
if (!doc) doc=document;
if ((img = doc[name]) != null || (doc.all && (img = doc.all[name]) != null)) return img;
if ((img = d.getElementById(name)) != null) return img;
if (doc.layers)
for (i = 0 ; img == null && i < doc.layers.length ; i++) img = BWFindImage(name, doc.layers[i].document);
return img;
}
function BWSwapImages() {
var i, j = 0, img, argv = BWSwapImages.arguments;
document.bwImgs = new Array;
document.bwOldSrc = new Array;
for (i = 0 ; i < argv.length ; i+=2) {
if ((img = BWFindImage(argv[i])) != null) {
document.bwImgs[j] = img; document.bwOldSrc[j] = img.src; img.src = argv[i+1]; j++;
}
}
}
function BWDisplayLayers() {
var i,p,v,layer, argv = BWToggleLayers.arguments;
for (i = 0; i < argv.length; i += 2) {
if ((layer = BWFindImage(argv[i])) != null) {
v = argv[i+1];
if (layer.style) layer.style.visibility = (v == 'hide') ? 'hidden' : 'visible'; else layer.visibility = v; }
}
}
// stop hiding -->
</script>
<!---------------------------------- END COPYING JAVASCRIPT CODE ---------------------------------->
</head>
<body>

<!-- Slice output created by e-Picture Pro 3.0 -->
<!-- Beatware - http://www.beatware.com   -->

<!---------------------------------- BEGIN COPYING HTML INFO ---------------------------------->

<table border="0" cellpadding="0" cellspacing="0">
<!-- [BW-ePP-DocTable-v1] "Tutorial_8.ep" "C:\Documents and Settings\Windows User\Desktop\Tutorial_8.ep" -->
 <tr valign="top"> <!-- row 1 -->
  <td><a href="http://www.beatware.com"
onMouseOver="BWSwapImages('Tutorial_8_ImageSlice_8','Tutorial_8_ImageSlice_8_Smiley.gif');"
onMouseOut="BWRestoreImages();" ><img name="Tutorial_8_ImageSlice_8" src="Tutorial_8_ImageSlice_8.gif"
width="21368752" height="7012840" border="0"></a></td>
 </tr>
</table>
<!---------------------------------- END COPYING HTML INFO ---------------------------------->
</body>
</html>
```

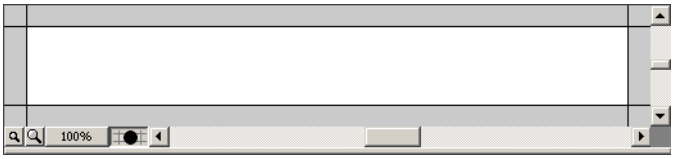
20. When the dialog closes, go to the Rollover folder, where you will find two .gif files and Rollover.html, which contains the JavaScript and HTML code to paste into your HTML editor. You can also double-click Rollover.html to try the button in your default browser.

Tutorial 9: Masks

This example assumes that you are familiar with the e-Picture basics discussed in tutorials 1 and 2.

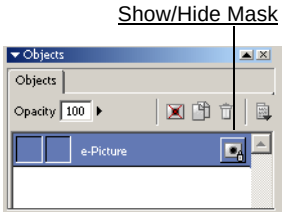
Masks allow you to use one e-Picture object as a sort of animated stencil for another. The classic example is to use text as a mask on a scanned photo to create the familiar postcard effect of a picture of a city peeping through its own name. It's easier to demonstrate how masks work than it is to explain them, so before we create a mask from scratch let's take a look at a sample.

1. Open the file Tutorial_9.ep. In the first frame, all you see is a blank canvas.

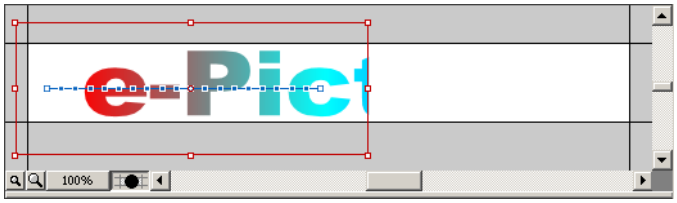


2. Click the play button and the mask will expand to reveal the underlying text.

3. The way this works is clearer if you select the mask before playing the animation. Select frame 1. If the Objects tab is not showing, select it from the Inspector panel menu. Click on the e-Picture entry in the Objects tab (the text will appear in outline), then click the mask icon on the right side of the e-Picture entry to switch the selection to the mask.



4. Play the animation again, and you see that the rectangle's right side simply moves until the rectangle covers (or, as a mask, uncovers) all the text.



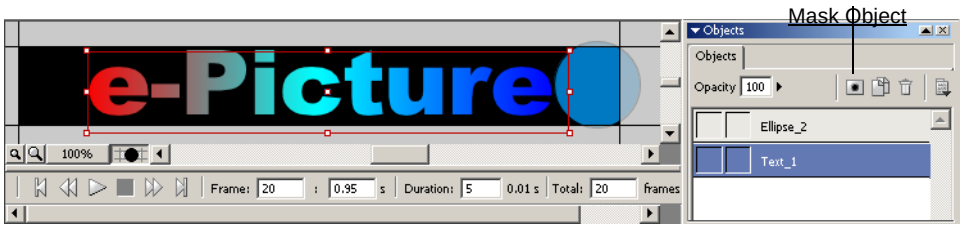
What's Happening Here? The Gory Technical Details

A mask is an invisible object that reveals or hides all or part of an associated object. Technically, what's happening is that the alpha-channel opacity of the mask is replacing that of the underlying object. Any parts of the underlying object not covered by the mask have an opacity of 0, which makes them invisible.

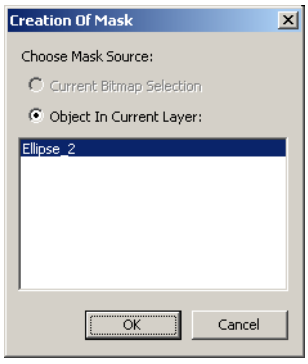
Create a Mask from Scratch

Now lets make a mask from scratch. The basic steps are to create the object you plan to mask, create the object you will use to mask it, and then convert the second object to a mask. We recommend that you animate the second object before converting it to a mask, since at that time it is easier to select, view, and switch between the two objects.

1. Create a new e-Picture document using the Standard Banner template and a black background. To specify a black background, click the Custom radio button and click the Custom color sample.
2. Select the Text tool and create a text object centered in the canvas.
3. Use the Text Inspector to choose a gradient fill. (See “Selecting a gradient fill or stroke” on page 73 for tips on using gradients.)
4. Select the Ellipse tool, hold down Shift to constrain it, and draw a circle to the left of the text object. Make the circle large enough to cover the tallest letter in the text. Give it a solid fill, with opacity set to 100 (so that when converted to a mask it will completely block the text).
5. In the Animation panel, set the total number of frames to 20.
6. Select frame 20, select the Arrow tool, hold down Shift to constrain the path to a straight horizontal line, then drag the circle to the right until it is just past the text.



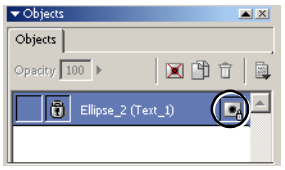
7. Select the text object, then click the Mask Object button in the Objects tab, as shown above. In the Create Mask dialog, select the ellipse object, as shown at right, then click OK. Play the animation to see the effect of the mask.



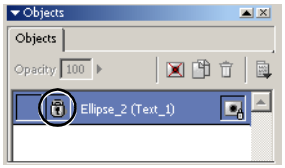
Modifying an Existing Mask

Let's say that instead of having the mask move across the text, you want it to expand to create an opening-iris effect. To modify a mask, you must first select and unlock it.

1. If the document you created in the last section of this tutorial is not still on screen, open Tutorial_9_completed.ep. In the Objects tab, click the Show/Hide Mask button at the right side of the text object's entry, as shown at right.



2. The entry's label changes to show that the ellipse mask is selected. Click the lock icon, as shown at right, to unlock the mask.
3. Select frame 20 and resize the circle until it covers (reveals) the complete text object.



4. Select frame 1, resize the circle until it is a small dot, then drag the dot to the center of the canvas, between the two middle letters of the text. Play the animation to see how the mask's behavior has changed.
5. You may create more complicated masking effects by using filters. Select frame 1, select the mask in the Objects tab, select the Filters tab, click the Add Filter button, and select Blur. Set a value of 25 and click OK. Play the animation, and you will see the iris is now blurry around the edges.

For a more striking iris effect, bring up the Tweening Wizard and change the motion from Constant to Accelerating to have the circle grow slowly at first.

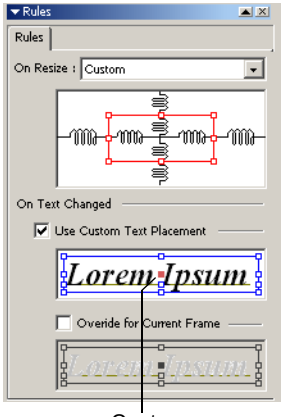
Tutorial 10: Using Dynamic Imaging in Microsoft FrontPage

This example assumes that you are familiar with the e-Picture basics discussed in tutorials 1 and 2. If you wish to understand how the provided tutorial file was created, see Chapter 6, “Establishing rules for dynamic imaging”.

e-Picture Pro includes special features that allow it to work closely with Microsoft FrontPage to support dynamic imaging. In this example, you will use e-Picture with FrontPage to create a button bar on a web page using dynamic imaging.

In order to complete this tutorial, you must have FrontPage 2000 or FrontPage 2002 installed on your machine.

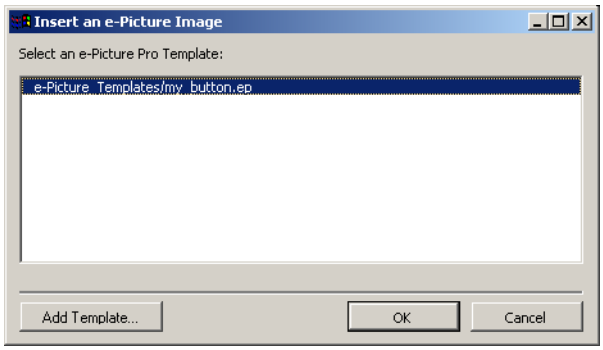
1. Open the file Tutorial_10.ep. This document contains a simple rollover button composed of a background round rectangle and some text. In the Up rollover state, the text looks very plain. In the Over rollover state, the text includes a drop shadow. For more information on Effects, see “The Effects tab” on page 77 of Chapter 3, “Reference”.
2. Select the Button text object in the Animation panel and then select the Up state. For more information on rollovers, see “Tutorial 6: Creating rollovers using the Rollover tab” on page 35.
3. In the Rules tab, choose Custom from the On Resize menu. This enables the remaining portions of the Rules tab. Check the “Use Custom Text Placement” box and click the center box in the placement graphic, as shown at right. The top (resizing) section of this tab is fine as is.
4. Choose File/Export/GIF, name your file “my_button.ep” and save it to your Desktop.
5. You can close e-Picture Pro at this point.



Using e-Picture files in FrontPage

1. Open Microsoft FrontPage 2000 or FrontPage 2002.
2. In the toolbar, you should see the e-Picture Imager button, as shown at right. If not, choose View/Toolbars/e-Picture Imager from the menus. The e-Picture Imager is a FrontPage plug-in that allows you to use e-Picture Pro files as templates for creating new graphics directly from within FrontPage. For more information on the e-Picture Imager, see Chapter 7, “Using the e-Picture Imager with Microsoft FrontPage”.

3. Click the Add e-Picture Image button and then click the Add Template button in the Insert an e-Picture Image dialog that appears. Locate my_button.ep that you created above and load it. Then select this item from the list (as shown) and click OK.



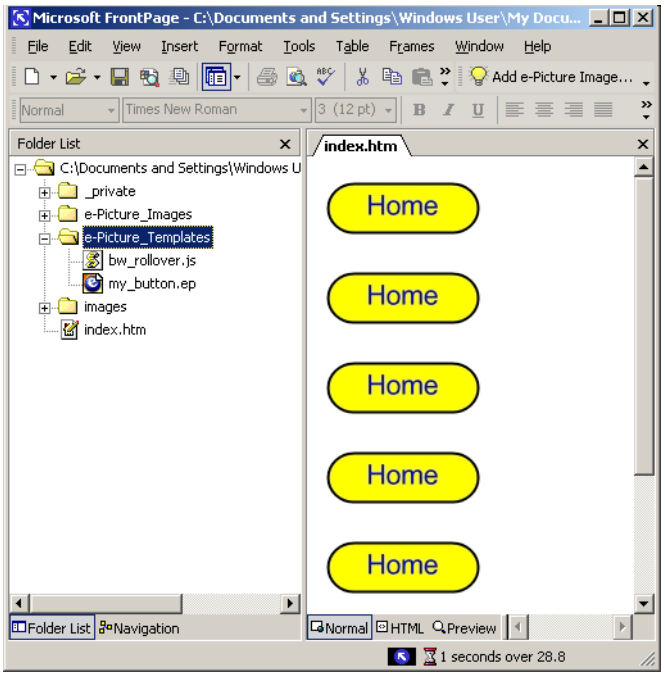
   If you do not already have a document created in FrontPage, you will be prompted to create one.

   If this is the first time you are using the e-Picture Imager, two additional folders will be created for you in your current web, e-Picture_Templates and e-Picture_Images. You will also see that the button has been placed on the web page.

4. Change the insertion point on the web page to fall just below the button you just inserted. To do this, click after the button and press Enter.

5. Add four more buttons one on top of another by clicking Add e-Picture Image from the toolbar, selecting my_button.ep from the list and clicking OK, then moving the insertion point as above. The results of this action are shown at right.

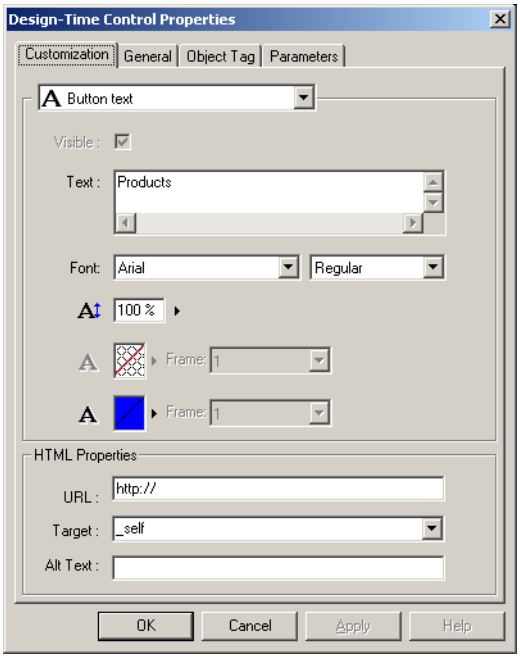
   Now you have five buttons, all created from a template. The advantage of this is that you can now modify these buttons to read whatever you want.



6. Double-click on the second button to open the e-Picture Imager plug-in. The e-Picture Imager is a Design-Time Control (hence the dialog title) that allows you to customize the various attributes of the button that were determined to be editable in e-Picture Pro.

   The first two tabs, Customization and General, are e-Picture Imager specific and are used to modify the graphic. The last two tabs are provided by FrontPage and not used here.

7. Change the Text field in the Customization tab to "Products" as shown at right, then click OK. The second button now reads "Products". Notice that you can also change the target URL the button links to and other information in the HTML Properties section of this tab.



8. Double-click on the remaining buttons and change their names to "Solutions", "Company" and "About" using the same steps as above. You have just successfully created an entire vertical button bar, all from one template. The new buttons are shown at right.

9. Save your work. At this point, you can continue creating your web page or add more buttons if you wish.

10. Choose File/Preview in Browser to view your web page. Notice that when you put the mouse over a button, a drop shadow appears (it was part of the original graphic). If you added any links to the buttons, they will also be functional in the preview.

* *This tutorial just touches upon the basic uses of the e-Picture Imager. Besides replacing text in graphics, you can also resize graphics and even have graphics resize themselves around text as you change it. The e-Picture Imager works closely with the dynamic imaging features described in Chapter 6, "Establishing rules for dynamic imaging".*

Chapter 3: Reference

To make it easy for you to find answers to questions such as “what does this button do” or “how do I use this tool,” this chapter has separate sections for each of e-Picture’s panels. To help you find answers to questions of the form “how do I do X,” the headings within those sections describe specific tasks. Aspects of the program that are sufficiently obvious to make explanation unnecessary, such as the “width” and “height” options, are discussed here only when there is something less than obvious you might need to know about them.

Setting preferences

The Preferences dialog provides a way to customize the look and feel of e-Picture. Choose Edit/ Preferences to display the preferences dialog.

General tab

The General tab lets you customize the default options e-Picture displays at launch and when creating a new document.

You can select from the following launch time settings:

- **Create new document** (default) opens the Document Creator dialog when e-Picture is launched.
- **Create new document based on a template** creates a new document using the template specified in the **Template type** menu when e-Picture is launched.
- **Open file dialog** opens the standard Windows Open dialog when e-Picture is launched.
- **Do nothing** opens e-Picture without taking any action on your behalf.

The Document open settings lets you select the initial View mode used to display your graphics. You can change the View mode at any time by choosing Image/ View mode. The View mode options are:

- **Full view** (default) shows each object fully rendered
- **Stroke preview** shows each object without any fill.
- **Shape preview** shows only the shape of each object without any stroke or fill.

Gamma tab

The Gamma tab lets you adjust the mid tone color values and tune e-Picture to the color output of your particular monitor.

Miscellaneous tab

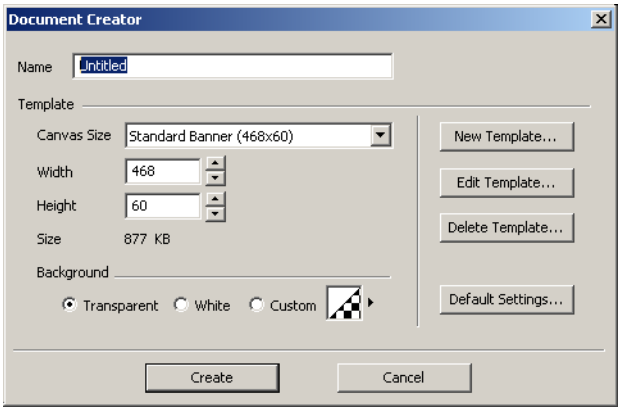
The Miscellaneous tab lets you turn the display of Tool Tips on and off and specify the number of Undo operations recorded as you work. By default, e-Picture saves only one level of undo. You may set up to 20 undo operations, or unlimited, but this will increase the amount of memory the program requires. In addition, you can reactivate the periodic warning messages that are displayed throughout e-Picture if these have previously been disabled.

Online tab

The Online tab lets you enter your email information into e-Picture. This information is used by the Help/Feedback system to allow you to send email directly to Beatware customer support from within e-Picture. The Include a System Profile option, when checked, automatically attaches a hardware profile of your computer to the feedback email. This profile information helps the Beatware customer support team diagnose any problems you might be having.

The document creator dialog

Choose File/New to open the document creator dialog.



Besides setting the name of your document, the document creator dialog offers a customizable set of standard canvas templates to select from. In addition, you can change the width or height of your canvas or the initial background color from within the document creator.

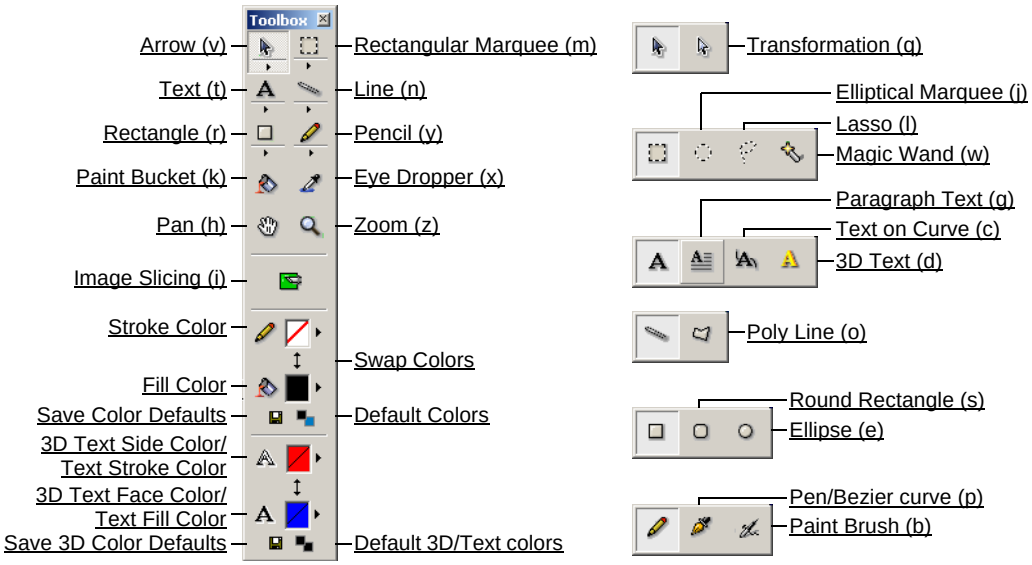
Templates can be tailored to meet your specific needs using the buttons at the right. The Canvas Size drop down menu automatically updates to reflect any changes you have made to the templates.

The Default Settings button will restore the templates to their factory settings and discard any additions or customizations you have made.

The Toolbox

The Toolbox holds various tools and color selectors you can use to create and edit e-Picture documents. The behavior of the tools is determined by the colors set in the toolbox as well as the attributes set in the inspector panels. For a more in-depth discussion of the inspector panels, see “The Inspectors” on page 70.

Certain related tools are stacked on top of each other and sometimes hidden. To select a hidden tool, click on the small triangle below the similar tool and click the tool in the popup window. Alternatively, you can press the shortcut key shown in parenthesis by each tool.



Tools

Most of the tools in the e-Picture toolbox are common to all graphics applications. A brief description of each tool is provided below, with special features and capabilities of tools mentioned where appropriate.

- The **Arrow** and **Transformation** tools are used to select, move, resize and rotate objects. When resizing, the transformation tool allows the free transformation of an object (i.e. it warps the shape of the object).

- The **Rectangular Marquee**, **Elliptical Marquee**, **Lasso** and **Magic Wand** tools are used to select a region on the canvas. Note that the marquee tools operate on bitmaps and regions, not directly on drawn objects.
- The **Text** and **Paragraph Text** tools are used to enter single or multi-line 2D text. Text created with the text tool will adjust in size to resizing operations. Text created with the paragraph text tool will reformat in response to resizing operations.
- The **Text on Curve** tool is used to enter text on a previously drawn shape. Text on curve is always added to an existing shape.
- The **3D Text** tool is used to enter 3D text.
- The **Line** and **Poly Line** tools are used to draw lines. Each click on the canvas with the poly line tool adds a corner. Double-clicking or pressing Esc ends the shape.
- The **Rectangle**, **Round Rectangle** and **Ellipse** tools are used to draw those shapes.
- The **Pencil** and **Pen** tool are used to draw free form curves. e-Picture automatically smooths the curves drawn by the pencil tool. For a more in-depth discussion of drawing and editing curves, see "Drawing and editing curves" on page 64.
- The **Paint Brush** tool is used to draw free form curves as if with a paint brush.
- The **Paint Bucket** tool is used to fill an area enclosed by objects or a selection marquee.
- The **Eye Dropper** is used to select colors from objects on the canvas. If no object is selected, the color goes into the designated color well. If an object is selected, the selected color is applied to the object. The eye dropper is used to select colors as follows:
  - The **Fill** color is selected by default.
  - The **Stroke** color is selected by holding down Shift.
  - The **3D Text Side** color is selected by holding down Ctrl-Shift.
  - The **3D Text Face** color is selected by holding down Ctrl.
- The **Pan** (**Hand**) and **Zoom** tools are used to move and change the magnification of the canvas, respectively.
- The **Image Slicing** tool is used to draw images slices. Image slices are stored in a separate Slices layer. During export, each image slice is exported as a separate image.
- The **Color Samples** are used to set their respective colors. For a more in-depth discussion of color selection, see "The Fill and Stroke tabs" on page 71.
- The **Swap Colors** button is used to switch the colors in the color samples.

- The **Save Default Colors** buttons are used to record the current colors for later use. The Default Colors buttons are used to restore previously saved colors.

Changing tools with the keyboard

To switch from one tool to another using the keyboard, press the shortcut key (shown in bold next to the tool labels above) for the tool you want to use. Note that these shortcuts will not work when you are in text-entry mode, entering a value in a panel field, adding or rotating 3D text or objects, or moving points on a poly line or pen (Bezier curve) object.

Changing tool properties (attributes)

When you start e-Picture, all tool properties (what some applications call tool options) are reset to their default values. To change a tool's properties, click on its Toolbox icon and adjust the relevant controls in the Inspector. The Arrow, Transformation, Hand, and Zoom tools have no properties to adjust, so when one of them is selected the Inspector panel displays the message, "No inspector available."

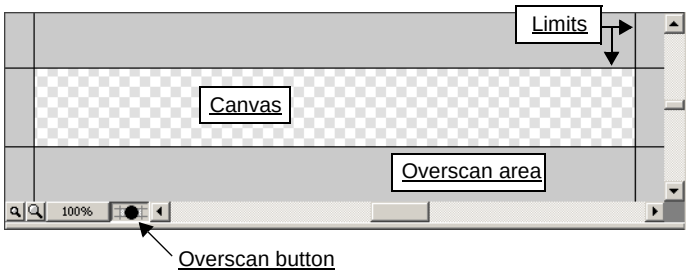
✻ *Whenever you select an object, the Inspector remembers its properties, and uses them the next time you select the tool.*

Saving tool properties

If you want to save a particular set of properties to use again later, drag an object with the relevant properties from either the Animation panel or the Objects tab to the Catalog tab, where it will appear as an icon under the Objects section there. To restore the tool settings, drag the object from the Catalog to the work space, select it, and modify or delete it, as desired. If you delete it, the Inspector will retain the object's settings for the tool that created it.

The document window

The document window displays your e-Picture documents. If you open multiple documents, each will get its own document window. You can switch between different document windows using the Windows menu.



The area in the center of the window is the canvas, which shows the borders of the exported image or animation as it will appear in a Web browser.

The gray area around the canvas is the overscan area, an offstage region that allows objects to enter and exit the canvas during the course of the animation, and which can also be used to store objects for future use.

You can hide and show the contents of the overscan area by clicking the Overscan button. The document window's other controls are standard Windows elements.

Changing the size of the canvas

Select Image/Canvas Properties and enter new pixel values for height and/or width. Press the Preview button to apply the changes to the document without closing the dialog.

Alternatively, you can drag the Limits that define the canvas to establish a new canvas size. To unlock the limits so you can drag them, uncheck View/Lock Limits and drag the limits to set a new canvas size. To prevent accidentally moving the limits, check Vew/Lock Limits.

You can also reduce the size of the canvas by selecting an area or object, then choosing Crop Canvas to Selection or Crop Canvas to Object Selection from the Image menu.

Changing the background (canvas) color

Select Image/Canvas Properties and click on the color sample. For more information on choosing colors, see "The Color Picker" on page 72.

Changing the view mode for better performance

On slower computers, you may get better performance by changing the Image/View Mode menu setting to hide some of the image contents. Stroke Preview hides objects' fills. Shape Preview hides both fills and strokes, and displays only generic outlines.

Working with multiple views of a document

Select View/New Viewer. Note the document windows can have different settings. For example, you could look at the whole document in one window and a 400% zoom of a detail in another, or full 24-bit color in one window and a "Web safe" palette (View/Color Mode/Web Safe) in another. You can switch between different document views using the Windows menu.

All windows for a document share the same view mode.

Displaying the rulers

Check View/Show Rulers to display horizontal and vertical pixel rulers. The current horizontal and vertical position of the mouse pointer is indicated by lines on the rulers.

By default, the upper-left corner of the canvas is zero on both rulers. To change that, click in the small box at the upper left of the document window, where the rulers intersect, and drag to the point you want to set as zero.

Making objects snap into position

e-Picture offers two methods for making objects snap into position, guides and the grid.

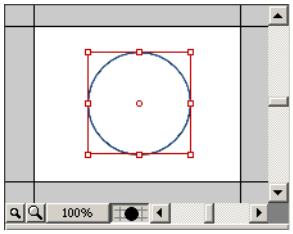
- To use the guides, check Show Guides, Snap to Guides, and Show Rulers in the View menu. Then click in each of the rulers in turn and drag into the work space. Once the guides are showing, you can simply drag them around. To prevent accidentally moving the guides, check View/Lock Guides.
- To use the grid, check Show Grid and Snap to Grid in the View menu. To change the spacing or color of the grid, select View/Set Grid Options.

Moving objects with keyboard shortcuts

Keys	Effect on selected object(s)
Arrow keys	move 1* pixel
Ctrl-cursor left	reduce width 1* pixel
Ctrl-cursor right	increase width 1* pixel
Ctrl-cursor up	reduce height 1* pixel
Ctrl-cursor down	increase height 1* pixel
| (pipe)	increase size by 20%
\	decrease size by 20%
]	rotate 1* degree clockwise
[	rotate 1* degree counterclockwise

*Hold down Shift to change effect to 8 pixels or degrees.

Resizing and rotating objects with the mouse



To resize or rotate any object with the mouse, click on the appropriate part of the bounding box and drag. Clicking on different parts of the bounding box will produce different results as indicated by the shape of the cursor in different areas.

- **Resize horizontally and vertically** by clicking and dragging the handles (small squares) in any of the corners. Hold down the Shift key while dragging to keep the dimensions proportional.
- **Resize only one side** by clicking and dragging the handles in the middle of each edge of the bounding box.
- **Rotate** by clicking and dragging on the edge of the bounding box away from the resizing handles.
- **Change the center of rotation** by clicking and dragging the rotation center handle in the middle of the bounding box. Note that moving the center of rotation only has a visible impact if the object is animated to translate between points and rotate during translation.

Editing text

To edit standard 2D text, select the text object with the arrow tool, then press Enter or double-click on it to enter text-editing mode. In this mode, click to move the insertion point, click and drag to select text, double-click to select a whole word, and triple-click to select all. When you have finished editing, press Esc to exit text-editing mode, or deselect the object.

To edit 3D text, revise the Text field in the Inspector's 3D tab. See “The 3D tab” on page 85 for more information.

Drawing and editing curves

The pen (Bezier) tool and the pencil tool both let you draw Bezier curves, complex lines or shapes that can include straight lines, smooth curves, and sharp corners.

You use the pencil tool to draw freehand shapes just as if you are writing with a pencil. When you finish drawing and release the mouse button, e-Picture automatically smooths the curves for you. You use the pen tool to create curves whose underpinnings are complex mathematical equations. To use the pen tool:

1. Select the pen tool in the toolbox.
2. Click once where you want to start drawing the first segment of the line or shape.
3. Move the mouse to where you want the segment to end, then:
   - Click once to create a corner point.
   - Click, drag, and release to create a smooth point.

4. Repeat step 3 until you have finished drawing the object. To end a line, press Esc or double-click; to close a shape, double-click on the beginning point.

To **modify a pen or pencil object**, select it with the arrow tool, then double-click it to display the points. Then:

- Drag points around to change the overall shape.
- To change the shape of a smooth point, select it and move the end points of the lever that appear. Rotating the lever changes the overall shape of the smooth point. Making one side of the lever longer or shorter increases or decreases the depth of the curve.
- To change a corner point into a smooth point, select it and press Insert.
- To change a smooth point into a corner point, select it and press Delete.

When you have finished, press Enter or Esc to exit editing mode.

Rotating 3D text and 3D models with the mouse

In free rotation mode (double-click on a 3D object or press Enter to enter free rotation mode), move the mouse up or down to rotate the object on its current vertical axis, right or left to rotate it on its current horizontal axis. Which axis values these motions affect depend on the object's starting position. For example, if a plane's Rx, Ry, and Rz values are all 0, and it appears to be flying toward you, moving the mouse up will increase the Rx value. However, if the same plane is first rotated to 0/90/0, so it appears to be flying to the left, the same movement will increase the Y value.

For finer control, while in free rotation mode you can:

- Hold down Alt to constrain rotation to the X (horizontal) axis.
- Hold down Ctrl to constrain rotation to the Y (vertical) axis.
- Hold down Shift to constrain rotation to the Z (depth) axis.

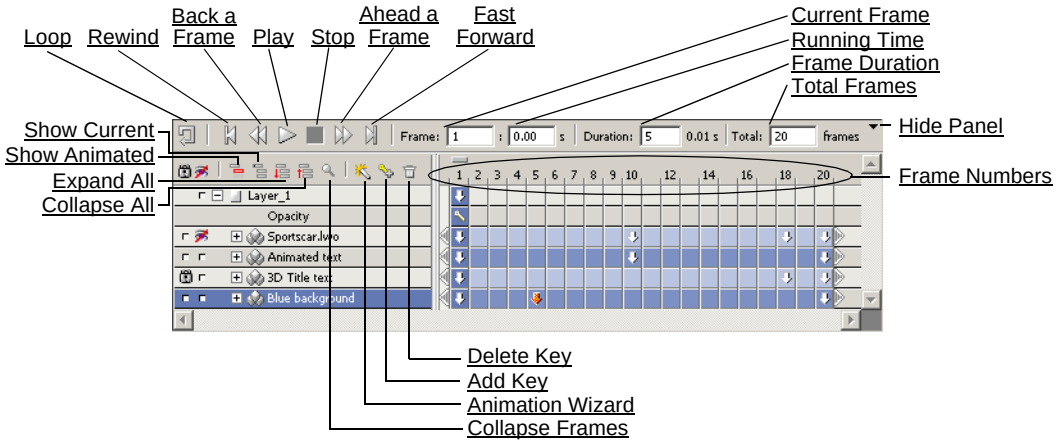
Note that when you use these modifier keys, the X, Y, and Z axes (and the corresponding Rx, Ry, and Rz values in the 3D tab) are in terms of the object's original orientation, and thus mouse movement does not always correspond intuitively to the object's current rotation on screen.

For example, if an airplane in its 0/0/0 position is flying toward you, it feels fairly natural that when you hold down Shift and move the mouse right or left the plane rotates clockwise or counterclockwise. However, if you rotate the plane 90 degrees on its Y axis, so it is flying to the left, when you hold Shift down to rotate on the Z axis you still have to move the mouse right or left, even though the natural inclination is to move it up or down.

Moving text along the curve in a Text On Curve object

Double-click on the object or press Enter to enter edit mode, Alt-click on the text, and drag the text in either direction on the curve. Press Esc or Enter to exit edit mode. For information on animating text on a curve, see "Animating text to move along a curve" on page 99 of Chapter 4, "Animation Methods and Techniques".

The Animation panel



You use the Animation panel to control how objects move in e-Picture animations. For an overview of this panel, and an introduction to keys and key frames, see Tutorials 1 and 2. For a more in-depth examination of the topic, see Chapter 4, "Animation Methods and Techniques" on page 97.

Changing the total number of frames

To change the total number of frames, type a new value into the Total frames field and press Enter. If you reduce the number of frames in this way, your animation will be truncated at your new last frame. To resize the entire animation, use the Animation Wizard.

Selecting frames

To select a frame, click on the Frame Number or type a value into the Current Frame field. To switch to a frame at a particular point in time in your animation, enter a time value in the Running Time field (in hundredths of a second).

Changing frames' duration

To change the duration of a particular frame, select it and change the value in the Frame Duration field to the number of hundreds of a second you want the frame to display. To change the duration of a range of frames, use the Animation Wizard. The default frame duration is 5 hundredths of a second (20 frames per second).

Adding and deleting frames

To add a single frame, select the frame after the point where you want it to appear (e.g., to insert a frame between frames 4 and 5, select 5) and choose Animation/Insert Frame. To add a range of frames, or to add one or more frames after the last frame, use the Animation Wizard.

To delete frames, select one or more frames (to select multiple frames, click and drag across a range of frame numbers) and choose Animation/Delete Frames.

You can also use the Animation Wizard to automatically to increase or decrease the number of frames in your document while maintaining the basic character of the animation. Select the Animation Wizard and choose Resize Animation Length.

Adding keys

See Tutorial 1 for an overview of the role of keys in e-Picture animations.

The easiest way to add keys is to change objects' positions and/or properties. For example, create an object in one place in frame 1, and move it to another place in frame 10. When you create an object, e-Picture creates keys for every property in the currently selected frame, so think about where you need keys and select an appropriate frame before adding each object.

Alternatively, you can create keys in the Animation panel. Click the Add Key button, then click in the animation grid cell for the property and frame where you want to add the key. See Tutorial 2 for a demonstration of this technique. To add multiple keys in this manner, after clicking the Add Key button hold down Shift and click repeatedly.

Deleting keys

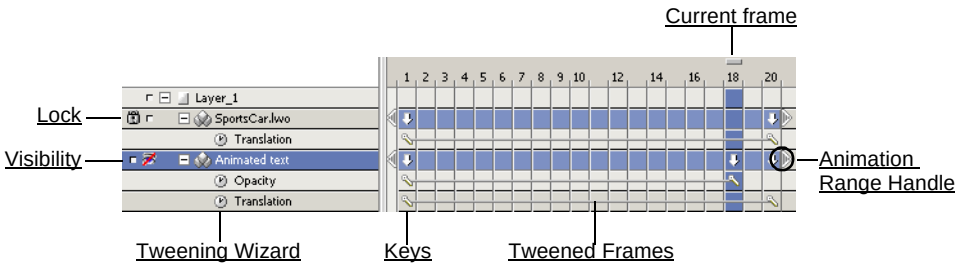
Select the key you want to delete, then click the Delete Key (trash can) button.To select multiple keys for deletion, use Shift-click, or select an arrow in an object or layer heading row. If after you select an arrow and click Delete Key some keys still remain, it may be because they are the only keys for a particular property. (Every property for every object must have at least one key.)

Shortcuts

- **Show animated** switches back and forth between showing only animated objects/properties and showing all objects/properties.

- **Show current** switches back and forth between showing only the current layer and showing all layers.
- **Expand all** displays all of the properties for all of the objects in your document.
- **Collapse all** hides all of the properties for all of the objects in your document.

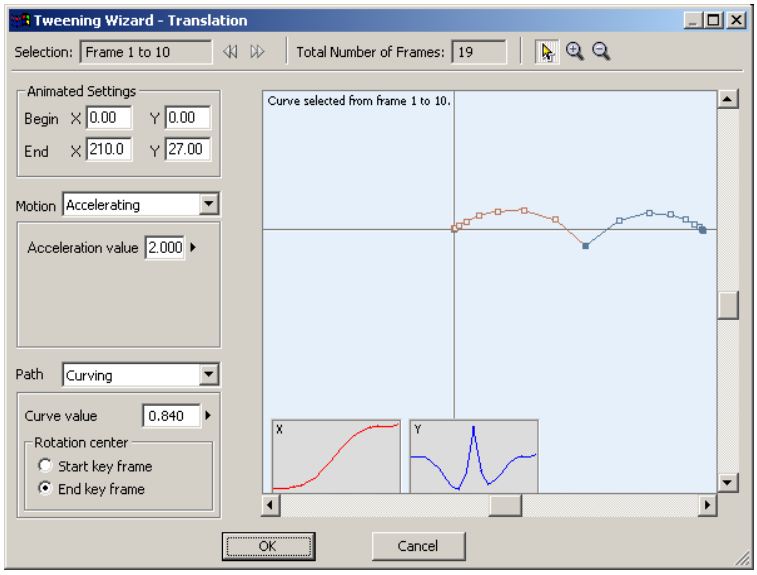
Object and property attributes



Encoded within the objects and properties list in the animation panel is all of the information regarding your animation. Icons are used to efficiently store and communicate most of the information stored in the animation panel.

- The **Lock** icon indicates that an object is locked in place. That is, it cannot be moved or resized. Click on this icon to turn the lock on and off. The lock state is not an exported property.
- The **Visibility** icon indicates that an object is currently invisible. Click on this icon to turn the visibility on and off. The visibility is an exported property for objects but not for layers.
- The **Tweening Wizard** icon provides access to the Tweening Wizard, described below. Only animated properties can be tweened.
- The line between **Keys** indicates that those are **Tweened Frames**.
- The **Animation Range Handles** show the beginning and ending frames for animated objects. By dragging these handles, you proportionally resize the animation for that object. To resize the animation for all objects simultaneously, use the Animation Wizard.

Adjusting an object's animation with the Tweening Wizard



For an introduction to this topic, see "Tutorial 4: Bouncing a Ball with the Tweening Wizard" on page 28. The Tweening Wizard allows you to change the way e-Picture calculates the in-between settings for object properties between key frames. The most obvious application is to emulate real-world motion effects, for example the curved paths, acceleration, and deceleration characteristic of a bouncing ball in the tutorial. But you can also use the Tweening Wizard with other properties, for example to have a color transition happen slowly at first, then speed up.

- **Motion** controls how the object moves from the beginning point to the end point of the selected segment, which is the transition between two key frames. (In the illustration above, the object has three key frames, hence two segments; the red color of the right segment indicates that it is selected.)
  - Constant motion (the default) means the property is tweened normally, in equal increments from beginning to end.
  - Accelerating motion slows down if the Acceleration Value is positive, speeds up if the value is negative.
  - Oscillating motion bounces back from the end point the number of times set by the Period Count. Attenuation determines how significant the dampening factor is, Amplitude the depth of the bounce.

  - Overshoot motion goes past the end point, then goes back. Attenuation determines how significant the dampening factor is, Amplitude the length of the overshoot, Speed over what portion of the animation the effect occurs; a value of 10 is balanced, under 10 weighted toward the first frame, over 10 toward the last frame.
- **Path** determines the path the object will follow when moving from its beginning to ending position. This option appears only for properties that involve position, such as Translation.
  - Linear (the default) means the object is tweened normally, moving in a straight line between the beginning and ending positions.
  - Curving makes the object follow a curved path, more or less so depending on the Curve Value setting. Higher settings will create a path that spirals around and into the end point.
  - Wave makes the object follow a wavy path. Period Count determines how many waves the path will have, Attenuation whether the waves are equal in depth or diminish, and Amplitude the overall depth of the waves.
  - Circle makes the object follow a semicircular path.
- **Animated Settings** let you change the beginning and ending values of the property being tweened without leaving the Tweening Wizard. Which controls appear here vary depending on the property: for example, Translation has X and Y coordinate values, and Fill Color has color swatches.
- Selection arrows let you cycle through the animated segments for this property. You can also select different animated segments by clicking on a segment in the preview graph.

The Inspectors

Almost all object formatting and most other e-Picture settings are controlled by the Inspectors. When you select a tool or object, the contents of the applicable inspectors change to reflect the current settings for that tool or object. In this section, we will discuss each inspector tab with special attention paid to less obvious features.

Showing and hiding the inspectors panel

The Inspectors Toolbar (Windows/Inspectors Toolbar) is used to show and hide the inspectors panel. Hiding the inspectors when they are not needed provides more room for you to work. Click the show/hide icon in the toolbar or press F5 to show and hide the inspectors.

Adding new inspectors

Choose Window/Add Inspector or click on the Add Inspector button in the Inspectors Toolbar to add a new inspector to the inspector panel.

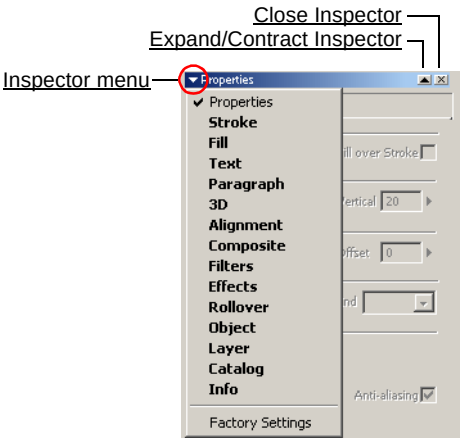
Adding tabs to an inspector

You can organize your inspector tabs in the way that best fits your work habits. Click on the Inspector menu to display a list of inspectors, as shown.

Inspectors with check marks are already displayed in the current panel. Choosing one of these will hide it.

Inspectors in plain text without a check mark are displayed in another panel. Choosing one of these will move it to this panel.

Inspectors in bold face text are not currently displayed.



The Fill and Stroke tabs

The Inspector's Fill and Stroke tabs are identical except in effect. Fill formats an object's center, stroke formats its border.

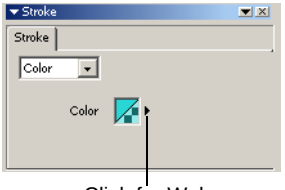
Making the fill or stroke transparent

Choose None from the popup menu.

Selecting a solid color

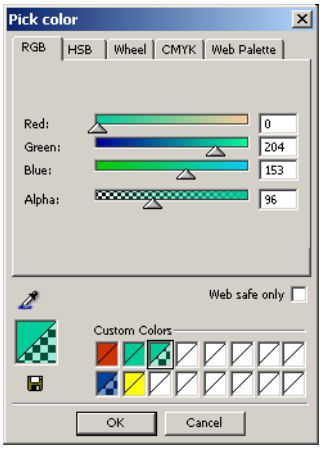
Solid colors are set using either the inspector tabs or the color samples in the toolbox. Any changes made in either of these locations is automatically reflected in the other location.

Choose Color from the tab menu to display the current color. The color sample shows the pure color on the top half, and the current level of transparency on the bottom half.



To select a new color, click on either the color sample or the Swatches Picker icon adjacent to the color sample. Clicking on the color sample will display the Color Picker dialog with the last color selection method tab you used still selected. The Web Palette button displays the same dialog, but always displays the Web Palette tab. The Color Picker dialog is documented below.

The Color Picker



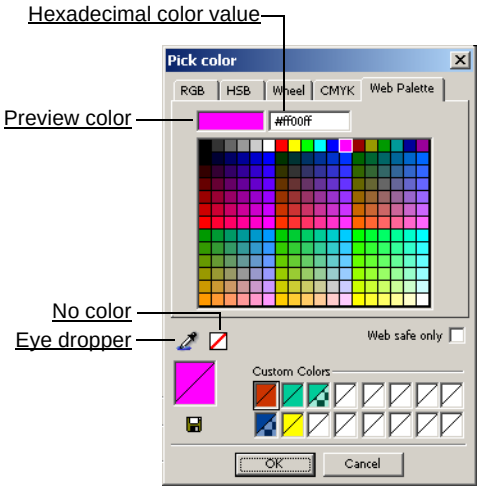
The Color Picker provides several different tabs that can be used to select a new color. Each tab contains a different color selection method to accommodate a wide range of graphics backgrounds.

The **RGB** tab provides sliders and corresponding decimal fields for setting the red, green, blue and alpha components that make up a color.

The **HSB** tab provides everything in the RGB tab plus sliders and decimal fields for setting the hue, saturation and brightness components that make up a color.

The **Wheel** tab provides an alternative presentation of the HSB sliders that combines the hue and saturation components into a wheel, with separate brightness and alpha sliders.

The **CMYK** tab provides sliders and corresponding decimal fields for setting the cyan, magenta, yellow, black and alpha components that make up a color.



The **Web Palette** tab provides access to the standard 216-color web palette as well as a other shortcuts. Note that there are more than 216 swatches, but the top row duplicates some of the most common colors for quick access.

To select a color swatch, click on it. Note that moving the pointer over the colors changes the preview color shown as well as the value in the hexadecimal color value field.

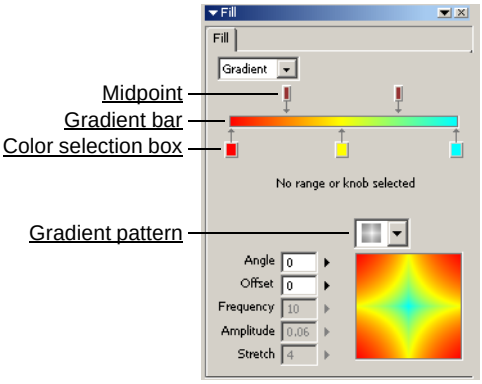
To enter a hexadecimal color value (good for matching colors precisely), type the value in that text field and press Enter.

To select a completely transparent color, click the No color swatch.

The Color Picker also provides a place to store 16 custom colors for later reuse. These custom colors are available each time you start e-Picture. To save a custom color, drag the color sample to any of the custom color samples, or click the disk icon to save the color sample at the current location. To use a custom color, click on it.

Selecting a gradient fill or stroke

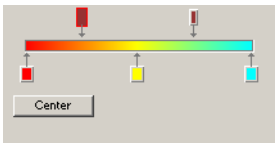
Choose Gradient from the tab menu to display the gradient builder.



The gradient builder is used to build and customize gradients. The look of a gradient fill or stroke is determined by the position of the gradient midpoint, the colors set in the color selection boxes, and the gradient pattern and associated settings.

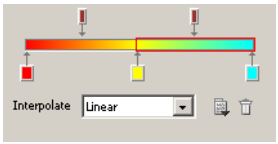
The easiest way to understand the gradient pattern and pattern settings is to experiment with them. Which of the five pattern settings are available depends on which gradient pattern you select.

The **Midpoint** indicates where on the gradient bar the color mix is exactly half way between the two defining color selection boxes. To move a midpoint, drag its control.



When a midpoint is selected, as shown, a **Center** button appears below the color selection boxes. Click Center to reset the midpoint to be exactly half way between the two defining color boxes.

The **Gradient bar** shows the entire range of colors in your gradient stroke or fill. To change one of the gradient's colors, double-click on its color selection box.



When a gradient bar is selected, as shown, the **Interpolate** menu and gradient options menu appear below the color selection boxes.

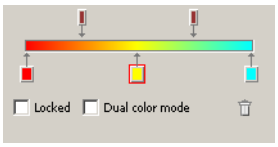
The Interpolate menu provides different looks for the selected gradient by changing the concentration levels between the color boxes. Linear, the default, creates an even transition between the two colors. Curved concentrates the transition on the same side as the midpoint (it looks the same as Linear if the midpoint is centered). Sinusoidal concentrates the transition in the middle, and the two Circular choices put most of the transition near one end or the other.

The gradient options menu provides options for flipping, splitting and replicating the selected gradient bar.

- The **Flip** option exchanges the colors in the color boxes defining the gradient bar.
- The **Split** options add evenly spaced color boxes between the two bounding color boxes without changing the gradient colors.

- The **Replicate** options copy the selected gradient bar and insert them into the selection area creating multiple smaller versions of the selected gradient.

The **Color selection boxes** determine which colors appear in your gradient. To move a color selection box, drag its control.

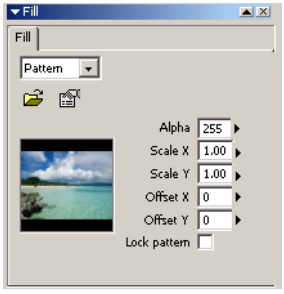


When you select a color selection box, two additional check boxes appear, as shown at right.

- Checking **Locked** prevents you from accidentally moving the color box.
- **Dual Color Mode** lets you create a sharp color change in the middle of the gradient. When you check this option, the color selection box splits in two, and you can double-click the left and right halves separately to define the abrupt change.

Selecting a pattern (bitmap) fill or stroke

Choose Pattern from the tab menu to change the current stroke or fill pattern.

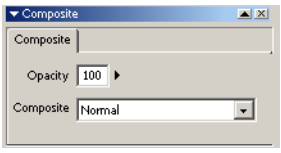


To add or change the pattern, drag a bitmap file onto the large sample square, or click the open folder button and select a file. If the bitmap is too small to fill the object, e-Picture will tile it automatically.

- The **Alpha** control sets the transparency for the pattern. This allows you to set the transparency of the pattern separate from the transparency of the object.
- The **Scale X** and **Y** controls let you scale the pattern relative to the object
- **Offset X** and **Y controls** let you move the pattern relative to the object. These controls are available only when “Lock pattern” is checked.
- Check **Lock pattern** and the pattern will move and rotate with the object. Otherwise, it stays fixed relative to the canvas.

The Composite tab

From the Composite tab’s drop down menu, you can chose one of a variety of optical composition methods which combine the selected object with its background in different ways. The best way to learn what the various methods do is to experiment.



The chart below provides a technical explanation of how the composition methods work. Where we say that mathematical operations are performed on "RGB values," we mean that e-Picture performs calculations using the individual red, green, and blue (RGB) color values of the object and the underling object(s) to set the colors to be displayed.

For example, say you create a rectangle with fill that has red, green, and blue values of 127, 0, and 0 respectively (dark red) that overlaps another rectangle with a fill that has RGB 127, 127, 0 (olive green). If you apply the Subtract composite method to the dark red rectangle, the RGB values of the overlapping section will be 0, 127, 0 (green). If instead you apply the Add, the RGB values of the overlapping section will be 255, 127, 0 (orange).

Note that e-Picture actually calculates these RGB values using the range 0-1 rather than 0-255. The only method where this makes a difference is Multiply. Using the same example, the dark red rectangle would have RGB values of 0.5, 0, 0, and the olive green rectangle 0.5, 0.5, 0. Multiply those three sets of values together and the result is 0.25, 0, 0, which is equivalent to 63, 0, 0 (darker red).

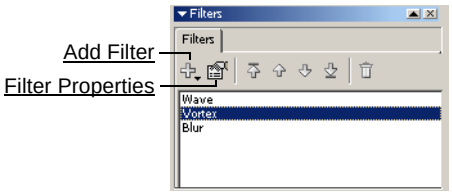
Composite Method	effect
Normal	None (no composite method applied).
Multiply	The RGB values of the object and underlying object(s) are multiplied together for each of the three channels.
Screen	The selected object "burns through" underlying objects. This has no effect on the background color.
Erase	The opacity of the object is used to "erase" the underlying objects. If the object's opacity is set to less than 100%, then the objects below show through.
Add	The RGB values of the object and underlying object(s) are added for each of the three channels.
Subtract	The RGB values of the underlying object(s) are subtracted from the object's values for each of the three channels.
Darkest	The lower of the two RGB values is used for each of the three channels.
Lightest	The higher of the two RGB values is used for each of the three channels.
Difference	The difference between the object's and the underlying object(s) RGB values is used for each of the three channels.
Average	The average of the object's and the underlying object(s) RGB values is used for each of the three channels.
Invert	The object's alpha level is used to invert the underlying objects.

Composite Method	effect
Dissolve	A random pattern is created based on the opacity of each pixel.
Replace Hue	The hue of the object is used on underlying objects.
Replace Saturation	The saturation of the object is used on underlying objects.
Replace Luminosity	The luminosity of the object is used on underlying objects.
Replace Color	The hue and saturation of the object is used on underlying objects.
XOR Mask	The difference of the object opacities is computed, the absolute value is determined, and the dominant color shows through
Alpha Mask	The inverse of an erase. The composited object shape is used to mask out all lower objects.

The **Opacity** setting is used to set the opacity of the selected objects. You can change the opacity for multiple objects simultaneously using this setting. Opacity of individual objects can also be set in the Objects tab.

The Filters tab

Filters change the appearance of objects using a complex mathematical formula. Certain filters, such as wind and wave, produce striking results that are immediately obvious. Other filters, such as vortex and mosaic only reveal their power when animated or on objects with gradient or pattern fills.



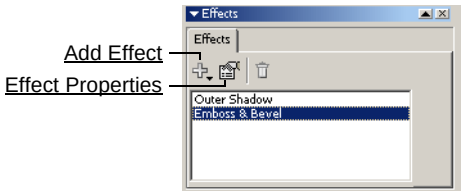
To add a filter to an object, click the **Add Filter** button and adjust the filter settings. Most filters have attributes that can be manipulated to change the visual results. To edit an existing filter, select the filter and click the **Filter Properties** button.

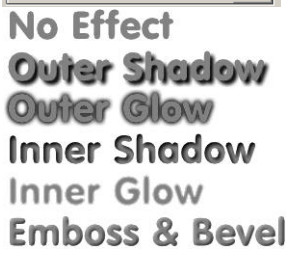
Multiple filters can be applied at one time. The order that filters are applied determines how they interact with the object and with each other. The arrow buttons adjacent to the Edit Filter button are used to change the order of the applied filters. In order, they move the selected filter to the top, up one, down one, and to the bottom.

Filters can be animated just like other object properties. To animate a filter, move to a different frame, double-click the filter's entry in the Filters list, and change the settings.

The Effects tab

Using the Effects tab, you can apply one or more of five effects to the currently selected object. The effects are inner and outer glow, inner and outer shadow, and emboss and bevel.

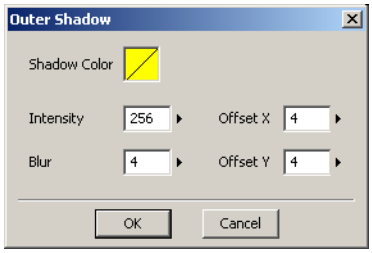




To add an effect to an object, click the **Add Effect** button and adjust the effect settings. To edit an existing effect, select the effect and click the **Effect Properties** button.

The results of the various effects are shown at right. All five effects are variations on the drop-shadow concept. e-Picture creates a copy of the object, gives it a solid fill, blurs and/or changes the opacity of the copy and/or offsets it from the original, and masks the copy with the original (or vice-versa).

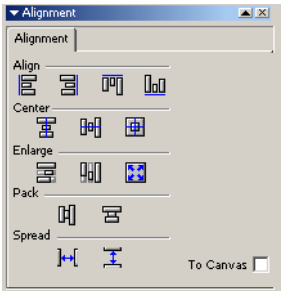
After you select an effect, you will get a dialog box similar to the one at right. The contents vary a bit from one effect to another.



- **Shadow Color** or **Glow Color** sets the color used for the shadow or glow effect. Click the color sample to bring up the color picker.
- **Intensity** adjusts the opacity of the copy and thus the intensity of the shadow or glow effect. Note that Intensity will interact with the Opacity settings of the object and its layer, so for example if an object's Opacity is 200 you will have to double the Intensity to get the same effect.
- **Blur** adjusts the sharpness of the edge of the shadow or glow. A setting of 1 gives a sharp edge (not usually desirable); 0 disables the effect. This setting interacts with any Blur filter on the object.
- **Offset X** and **Offset Y** adjust the position of the copy relative to the original.
- **High Color** and **Low Color** (emboss and bevel only) set the color used for the upper and lower colors used for the emboss or bevel effect.
- The emboss and bevel dialog also has options for you to choose between **Full Emboss**, **Outer Bevel** or **Inner Bevel**.

Effects can be animated just like other object properties. To animate an effect, move to a different frame, double-click the effect's entry in the Effects list, and change the settings.

The Alignment tab



Using the Alignment tab, you can position and align two or more objects. To use the alignment tab, select two or more objects on the canvas and click one of the alignment buttons.

The buttons in the alignment panel are grouped by function. The first object selected is used as the reference object and other objects are positioned accordingly.

The **Align** section of the panel positions objects so that the left, right, top and bottom edges of the bounding boxes are even with the reference object.

The **Center** section of the panel positions objects so that they are centered vertically, horizontally, and both vertically and horizontally.

The **Enlarge** section of the panel increases the width, height, and both width and height of objects to match the reference object.

The **Pack** section of the panel moves each object vertically and horizontally such that the edge of each bounding box is abutting the edge of the next bounding box.

The **Spread** section of the panel evenly distributes the objects between the left and rightmost objects for spread horizontal, and between the top and bottommost objects for spread vertical.

The **To Canvas** box performs the alignment specified above with respect to the canvas. Only one object need be selected when the To Canvas box is checked.

The Properties tab

Using the Properties tab, you can specify common attributes for the currently selected tool or object. The properties tab provides different options for different types of objects, though most related objects have similar options. Each object type is discussed below.

Selection tools properties

The Selection tools, the **Rectangular Marquee**, **Elliptical Marquee**, **Lasso** and **Magic Wand**, operate only on bitmap objects (including Paint Bucket objects). If you wish to use them with other types of objects, you must first convert them to bitmaps using the Object/Flatten command.

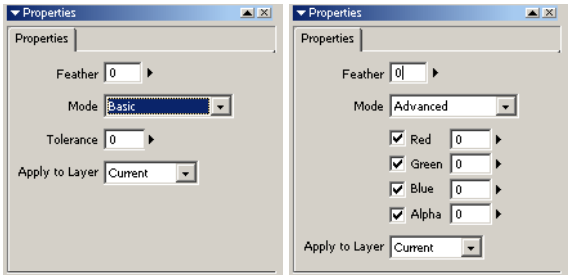
These four area selection tools operate a little differently than their counterparts in strictly bitmap programs: after you use one of these tools to select an area, you must use the arrow key to select the bitmap object to which you want the selection to apply. Once you have done that, there are two things you can do to the bitmap:

- Select Object/Crop To Bitmap Selection to make the area outside of the selection transparent.
- Select Object/Cut Out Bitmap Selection, make the area inside of the selection transparent.

You can also choose Image/Crop To Selection to shrink the canvas until it is just big enough to contains the selection, or click in a selection with the Paint Bucket tool to create a new bitmap object.

The Rectangular Marquee, Elliptical Marquee, and Lasso tools do not offer any user specified properties, so the properties tab for these tools will reflect whatever object was previously selected.

The Magic Wand's properties include both Basic and Advanced Modes.



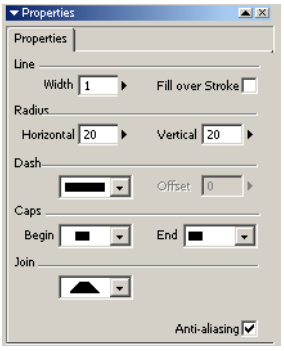
Common to both Magic Wand modes are the Feather and Apply to Layer setting. **Feather** blurs the edges of a cropped or cut-out area. **Apply to Layer** determines whether the magic wand selection applies only to bitmaps in the current layer or all layers.

The Magic Wand's Basic mode includes a general color **Tolerance** control, which determines the range of colors to be selected. If you set Tolerance to 0, only pixels that are exactly the same color as the one you click on will be selected; set it to 255, and all pixels will be selected.

The Magic Wand's Advanced mode enables you to select areas based on their individual color or alpha channel values. For example, if you set Red to 125, the Magic Wand will select only pixels that have Red values higher than 125.

Text and drawing properties

With the exception of the Paint Bucket and the Brush tools, all text and drawing tools share the same Properties panel. Not all fields in the Properties panel are active or applicable to all text and object types.



The **Line** section is used by all applicable objects to define the look of the stroke (outline). Increasing the **Width** value makes the stroke of an object larger. Checking the **Fill over Stroke** box causes e-Picture to draw the stroke of an object first, then the fill. Normally, the stroke is drawn on top of the fill.

The **Radius** section is used by **Round Rectangles** to determine the roundness of its corners. The **Horizontal** and **Vertical** radius values are set separately. If both are set to 1, the object is a normal rectangle; if both are set to 100, it is an ellipse.

The **Dash** section affects the stroke of all text and shape objects except 3D text. By default, the dash pattern is a solid line, but different dash patterns can be selected from the drop down menu. **Offset** changes the position of the pattern in a dashed stroke. It has no effect when Dash pattern is set to a solid line. Changes to the dash pattern may not be very noticeable if the stroke and fill are the same color.

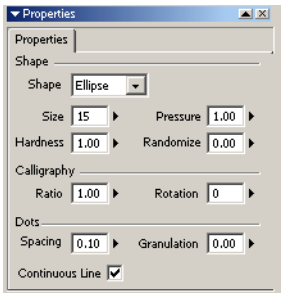
The **Caps** section is used by the **Line**, **Poly Line**, **Pencil** and **Pen** tools to change the shape of the beginning and end of the lines. It has no effect if Width is set to None.

The **Joins** section is used by the **Poly Line** and **Rectangle** tools to change the shape of the points where the line segments that make up a shape join. It has no effect when Width is set to 1.

Anti-aliasing smooths the appearance of text and shapes by adding lighter pixels along curved and angled portions of the object. Anti-aliasing will generally produce more visually appealing results, but it will also increase file size.

Brush properties

The Brush tool is used to create objects that are less geometric in nature. Brush objects remain live, so you can change the settings at any time, transforming a shape from a spray paint look to series of loosely associated dots, for example.

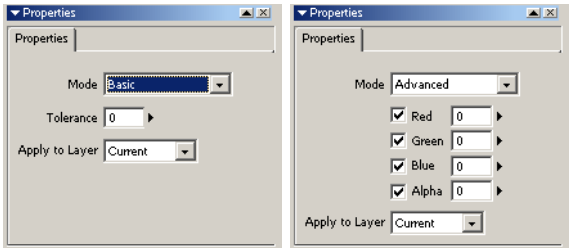


Because most of the brush properties interact with each other, the best way to understand the brush tool is to play with it. A brief description of the brush settings is provided to guide you in this process.

- **Shape** determines the shape of the brush used to create the object.
- **Size** determines the thickness of the brush stroke. Larger values produce wider strokes.
- **Hardness** determines how dark the brush "ink" appears to be. Larger values produce fainter strokes.
- **Pressure** determines how hard the brush is pressed against the canvas. Larger values produce darker strokes.
- **Randomize** adds a "sloppiness" element to the brush stroke. Larger values exaggerate the curves and points in the stroke.
- **Ratio** determines the relative width to height of the brush, providing a means of creating brush strokes that look like they were drawn with a calligraphy pen.

- **Rotation** determines the rotation of the brush which changes the appearance of the stroke when the ration is not 1.
- **Spacing** determines the distance between dots. Each brush stroke is made up of a large number of dots, usually overlapping. Increasing the spacing reveals these dots.
- **Granulation** determines
- **Continuous Line** specifies

Paint Bucket properties

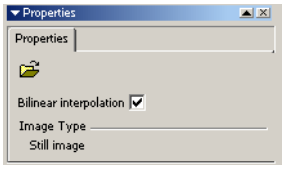


The Paint Bucket's properties are the same as the Magic Wand's, but without the Feather control. e-Picture's Paint Bucket behaves a bit differently from those in other graphics applications: instead of changing the fill color of the object or selection you click, it creates a new bitmap object with the selected fill.

- If you select a region with the Lasso or one of the Marquee tools, then click within it with the Paint Bucket, it will create a bitmap the shape of the selection.
- If you click an object with the Paint Bucket, it will create a bitmap the shape of the object.

The Advanced properties work like the Magic Wand's, except pixels that match the selection criteria are filled rather than selected.

Bitmap properties



The Bitmap properties tab appears when you click on an imported bitmap graphic or use the Object/Flatten command to convert an object of another type to a bitmap.

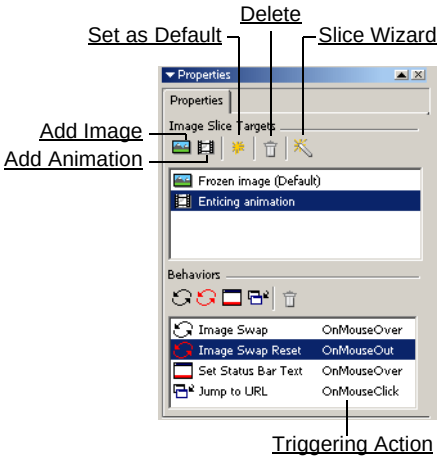
- **Bilinear interpolation** makes the image look smoother after you stretch or resize it. If you uncheck this option, a stretched or resized bitmap will look pixilated.

Image slice properties

Image slicing is used to cut an image into smaller pieces. Usually this is done to reduce download time or enable JavaScript rollovers.

When simply cutting an image into smaller pieces to reduce download time, only the Image Slice Targets section of the Properties tab is useful. This is where you set the export format for each slice. See "Tutorial 7: Slicing an image into table cells" on page 37 of Chapter 2, "e-Picture Pro Tutorials" for an overview of using Image Slices to reduce download time.

The entire Image Slice Properties tab is used when creating JavaScript rollovers. For an overview of creating rollovers using image slices, see "Tutorial 8: Creating rollovers using image slices" on page 40 of Chapter 2, "e-Picture Pro Tutorials".



As with other objects, the Image Slice tab displays different contents depending on which slice is selected. Each image slice consists of two different components, targets and behaviors.

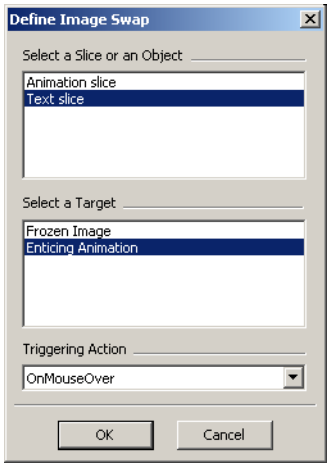
- **Targets** are either still images or animations that can be displayed in response to a particular behavior.
- **Behaviors** are those activities that can be set to occur in response to user actions.

Perhaps the easiest way to think about creating rollovers is to consider the behaviors and their Triggering Actions first. There are five different user actions that can be detected and responded to in a browser window:

- **OnMouseOver** is triggered whenever the user has the mouse pointer over the rollover.
- **OnMouseClick** is triggered whenever the user clicks the mouse button when over the rollover.
- **OnMouseIn** is triggered whenever the user moves the mouse into the rollover from outside.
- **OnMouseOut** is triggered whenever the user moves the mouse out of the rollover from inside.
- **OnLoad** is triggered whenever the web page is loaded.

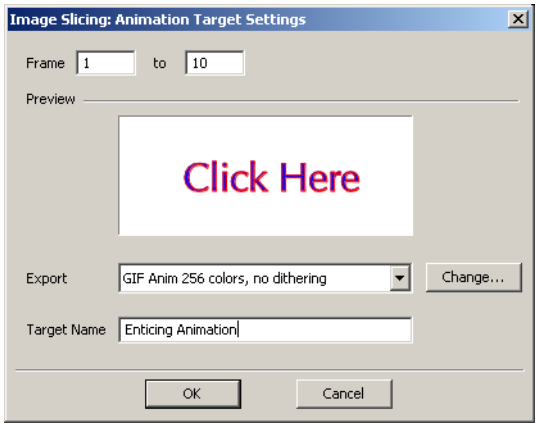
When any of the above actions is triggered, any of four different behaviors can be set to occur:

- **Image Swap** results in one image/animation being swapped for another image/animation that has been defined in the Targets section.
- **Image Swap Reset** results in the current image/animation being swapped for the default image/animation as specified in the Targets section.
- **Set Status Bar Text** results in the specified text being set in the browser window status bar.
- **Jump to URL** results in the specified web page being loaded.



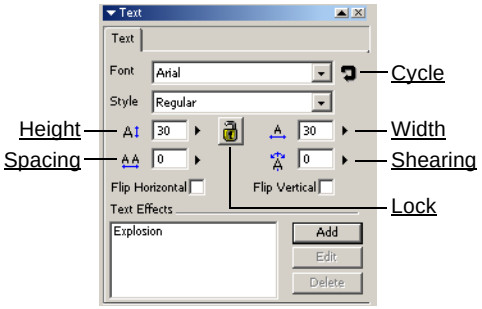
The Image Swap and Image Swap Reset behaviors both cause a new image or animation to be loaded. The graphic that is loaded is defined in the Targets section. The target that is loaded does not have to be part of the current slice, though this most commonly the case. For example, in the Image Swap dialog shown at right, whenever an OnMouseOver action is detected, the Enticing Animation target will be shown, which is part of the Text slice.

In the Targets section, clicking on the **Add Image** or **Add Animation** button displays the target settings dialog, shown at right. You use this dialog to specify the Target Name and its frame(s). You can also set or change the Export options for this target here (i.e. this is where you would say you want your animated GIF export to be limited to 32 colors for this slice).



The Text tab

Using the Text tab, you can change the attributes of **Regular Text**, **Paragraph Text**, **Text on Curve**, and **3D Text**.



To change the attributes of any text object, select a text object or highlight one or more characters and make changes in the text tab. Not all types of text support all of the available attributes.

Font changes the current font for the selection. The **Cycle** button automatically selects the next font each time it is clicked.

Style changes the style of the font, if different styles are available.

Height and **Width** change the vertical and horizontal point sizes for the text. When selected, **Lock** keeps the height and width of the font proportional when changes are made to one of these. Height and width do not apply to 3D text; 3D text size changes are made directly on the canvas.

Spacing changes the space between each character. 0 is normal. Negative values squeeze letters together, positive values spread them apart.

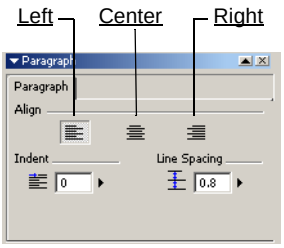
Shearing changes the angle of the text, though not in the typographic sense. 0 is normal.

Flip Horizontal and **Flip Vertical** flip the text as indicated on a letter by letter basis.

Text Effects are pre-programmed special animations made specifically for use with regular text. Users familiar with Macromedia Flash will recognize many of these text effects. To add a text effect, click the Add button and specify the attributes for the effect. Each text effect includes a **Duration** setting that determines how many frames are used to create the effect. If necessary, e-Picture will create frames to accommodate the effect. will have different parameters that control the behavior of the effect. Multiple text effects can be combined to quickly produce unique and interesting results.

The Paragraph tab

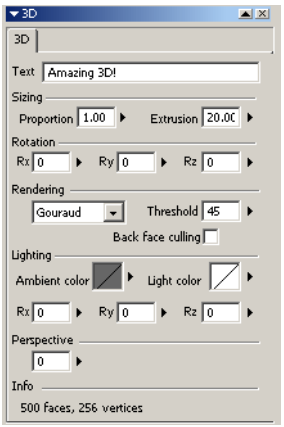
Using the Paragraph tab, you can control the formatting of **Regular Text** and **Paragraph Text**. To use the formatting tools, click one of the Align buttons or enter a value for Indent or Line Spacing.



- **Align Left** justifies the text along the left edge of the bounding box.
- **Align Center** positions each line in the center of the bounding box.
- **Align Right justifies** the text along the right edge of the bounding box.
- **Indent** sets the number of pixels that the first line of paragraph text is indented.
- **Line Spacing** sets the number of pixels between each line of paragraph text.

The 3D tab

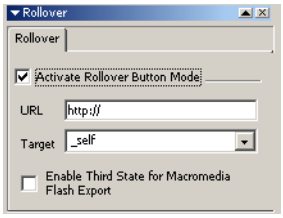
The 3D tab is used for both 3D Text created in e-Picture and 3D models created in other programs and imported.



- Edit the **Text** field to change the text of the 3D text object.
- **Proportion** lets you make 3D text shorter and wider, or taller and narrower.
- Change the **Extrusion** value to make 3D text deeper or shallower, that is, to increase or decrease the apparent distance between its front and back faces.
- The Rotation settings **Rx**,**Ry**, and **Rz** let you change the rotation of the object, which you can also change with the mouse, as discussed in “Tutorial 3: Using 3D Text” on page 26 of Chapter 2, “e-Picture Pro Tutorials”.
- The **Gouraud** rendering method will generally produce the best results. To reduce file size at the cost of 3D quality, you may choose **Cartoon** rendering. You may also choose **Wireframe** to display only an outline grid of the object. Note that when you export to Flash, e-Picture will convert Gouraud objects to a series of bitmaps, but will convert Cartoon and Wireframe objects to Flash vectors.
- **Threshold** determines the sharpness of the edges where the object’s faces join. The higher the setting, the smoother the edges. Raising the threshold increases file size.

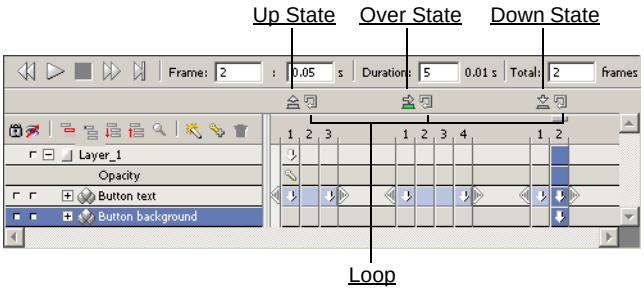
- **Back face culling** skips rendering of parts of the object that are not visible, which may reduce file size. With some imported objects, this may produce unsatisfactory results; it should have no effect on 3D text created in e-Picture.
- **Ambient color** controls the appearance of the light that illuminates the object from all directions. Click the sample to change it.
- **Light color** controls the two point lights on opposite sides of the object that produce its highlights.
- The Lighting settings for **Rx**, **Ry**, and **Rz** let you adjust the position of the point lights.
- **Perspective** controls the perspective effect for 3D text. In conjunction with Extrusion, perspective an increase (smaller values) or decrease (larger values) the apparent depth of 3D text.

The Rollover tab



The Rollover tab is used to ease the creation of rollover buttons. By default, rollover button mode is inactive. By clicking the Activate Rollover Button Mode check box in the Rollover tab, you enter Rollover mode.

The primary change in Rollover mode is that the Animation panel is automatically segmented into two or three different frame sections, called states, which correspond to the location and "click" state of the mouse in a web browser.



Up State - this specifies the look of the rollover when the mouse pointer is outside of the bounds of the rollover graphic.

Over State - this specifies the look of the rollover when the mouse pointer is over any part of the rollover graphic.

Down State - this specifies the look of the rollover when the mouse button is clicked on any part of the rollover graphic. The Down State is only visible in the Animation panel when the Enable Third State for Macromedia Flash Export box is checked.

Each state has several facets that are independent of the other states such as frame count and Loop status.

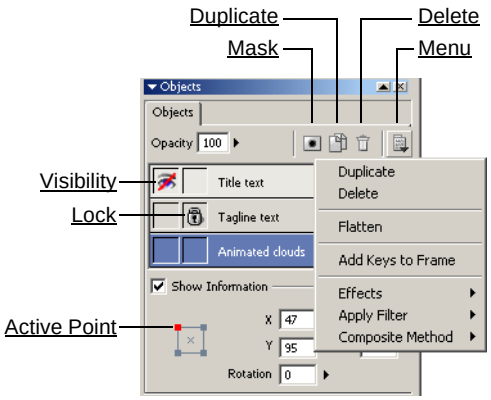
However, even though there is physical separation between each state, object properties will be carried over from one state to the next. Thus, if the Button background color above was set to blue in frame 3 of the Up State, frame 1 of the Over State will also be set to blue by default. This of course can be changed

by selecting frame 1 in the Over State and changing the color. Because information does carry over from one state to the next, extra attention should be paid to those properties that are animated within the rollover. You may wish to manually set keys at the beginning of each state to prevent accidentally tweening across rollover states.

At export time, each state generates a separate image or animation, as determined by the number of frames specified for each state (the Total Frames field can be set differently for each state).

The Objects tab

The Objects tab lets you view, rearrange, resize, and apply effects and filters to objects in the currently selected layer.



Selecting an object

Click on the object's entry in the objects list. This also selects the object in the document window, so you can use this method to select an object hidden behind another object. Note that if you select multiple objects with the mouse, only the last one selected is highlighted in the Objects inspector.

Renaming an object

Select the object then Ctrl-click on it to edit the text. Type Enter to record the new name.

Reordering objects

The objects list specified the order that the objects will appear with the top object listed first. To move one object behind another, drag the object down in the list. To move an object in front of another, move it up in the list.

Making an object opaque, transparent, or invisible in the animation

Change the opacity value, either by clicking the triangle and dragging the slider, or by double-clicking the Opacity field and entering a value. An Opacity of 0% makes the object invisible. A value of 100% makes the object opaque, and values between 0 and 100% make it more or less transparent—if the opacity of the layer containing the object is set to 100%. Otherwise, the opacity is the product of the settings for the layer and the object. For example, if the layer's setting is 50% and the object's is 50%, the object's opacity will be 50% of 50%, or 25%; raise the object's setting to 200%, and its opacity will be 200% of 50%, or 100%.

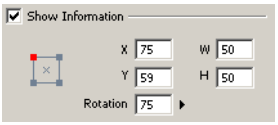
Making an object visible or invisible

Click the Visibility button to change an object's visibility. The eye icon with a red slash through it indicates that the object is invisible. No icon indicates that the object is visible. The visibility property for objects is exported (unlike layers), so clicking this icon will add a key to the property at the current frame.

Locking an object in place

Click the Lock button to lock an object. Click it again to unlock the object. Note that you cannot move, resize or change the opacity of a locked object, but you can still modify its other properties with the Inspector.

Moving, resizing, or rotating objects precisely using Show Information settings



The Show Information section of the Objects panel lets you view and adjust an object's size, position, and rotation angle numerically:

- The box at left represents the object's bounding box. Click on one of the corners or the rotation center (the x in the middle) to display information for that point. The active point is displayed in red.
- **X** is the number of pixels between the currently selected point and the left edge of the canvas.
- **Y** is the number of pixels between the currently selected point and the top edge of the canvas.
- **W** is width of the object, in pixels.
- **H** is the height of the object, in pixels.
- **Rotation** is the number of degrees the object has been rotated counterclockwise from its original position. A negative number indicates clockwise rotation. Rotation values above 360 or below -360 degrees indicate that the object has been rotated more than one full turn. For example, if an object has a Rotation value of 0 in frame 1 and it makes two full clockwise turns over the course of an animation, its value in the final frame would be -720.

You may modify any of these values for the current frame by double-clicking on a field and entering a new value.

Note that when you change the width, height, or rotation, the currently selected point does not move. Thus if you want to make an object wider without changing its position, you would select the rotation center before changing the W value. On the other hand, if you wanted to make it wider without moving the left edge, you would select the top or bottom left corner.

Duplicating and Deleting objects

Click the **Duplicate** icon to copy the current object and paste the copy directly on top of the original. Click the **Delete** icon to delete the current selection.

Masking objects

Masks allow you to use one e-Picture object as a sort of animated stencil for another. The classic example is to use text as a mask on a scanned photo to create the familiar postcard effect of a picture of a city peeping through its own name. For detailed instructions on creating and modifying masks, see "Tutorial 9: Masks" on page 48 of Chapter 2, "e-Picture Pro Tutorials."

To **create a mask**, select the object you want to mask, click the Mask Object button, select the object you want to use as a mask in the dialog that appears, then click OK.

To **show or hide a mask**, click the mask icon that appears on the right side of its entry in the Objects panel.

To **delete a mask**, select the masked object, click the mask icon in its Objects panel entry, and click the Lock icon to separate the mask from the object. Now you can delete the mask.

The Objects tab menu

The Objects tab menu provides quick access to commonly used features found in other tabs, buttons and menus. Unless a feature is unique to the tab menu, a reference is provided where you can find more details.

The Duplicate and Delete items provide the same function as their panel buttons described above.

The **Flatten** item converts the current vector object, including all filters and effects, into a bitmap object. Bitmap objects, which also include imported images, can be manipulated using the selection tools.

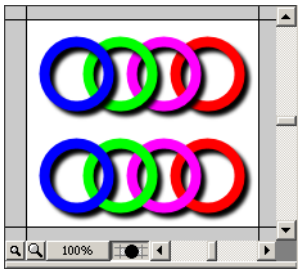
The **Add Keys to Frame** item records a property key for every property in the current frame for the selected object. If you want to guarantee that an object always looks the same in a given frame no matter how else it is animated, this menu item is a good shortcut to use.

The Effects, Apply Filter and Composite Method submenus provide a subset of the functionality provided by the tabs of the same name.

The Layers tab

Layers are less important in e-Picture than in bitmap-oriented graphics programs such as Photoshop, since most of what you could do with layers you can do more efficiently with objects. e-Picture's layers do have a couple of important uses, however.

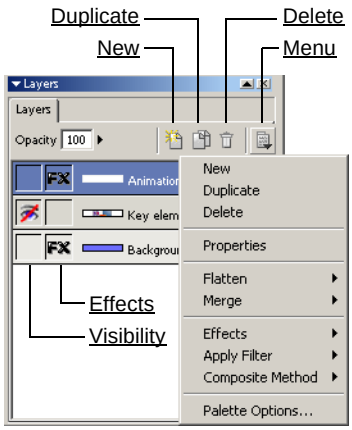
Perhaps the most important use for layers is to apply an effect to a group of objects rather than to individual objects. The two rows of rings below illustrate the difference.



- In the top row, the Outer Shadow effect has been applied to the objects individually, with the result that each ring casts a shadow on both the background and on the rings below it.
- In the bottom row, the same effect has been applied to the layer, with the result that the group of rings cast a shadow only on the background.

Another practical use for layers is to restrict the effects of a composite method to only some of the objects in the document. For example, you might have a photograph of a city on a bottom layer, and a semitransparent collage of local attractions on the top layer. To create a text banner that cuts through the collage and lets the background photo show through, you could apply an Erase composite method to the text.

The Layers tab controls and layout are similar to the Objects tab. Refer to the Objects tab section for information on Duplicating and Deleting layers, setting layer Opacity, reordering layers, and changing layer names.



Creating a new layer

Click the New button to create a new layer. New layers are added on top of existing layers.

Making a layer visible or invisible

Click the Visibility button to change a layer's visibility. Unlike with objects, the layers visibility icon simply hides the layer in the work space (instead of writing a Visibility key in the current frame).

Turning effects rendering on and off

Click the **FX** (Effects) button to turn layer effects rendering off. Some effects can require a lot of processing power to render. Turning layer effects off can improve performance. The layer effects button does not have any affect on effects applied directly to objects.

Moving objects between layers

To move a single object from one layer to another, drag the object within the Animation panel to the new layer and position where you want it to appear.

The Slice layer

When working with image slices, a separate Slice Layer is automatically created for you to hold all of your image slices. Use the Layers tab to switch back and forth between your slice layer and your other layers.

The layers tab menu

The Layers tab menu provides quick access to commonly used features found in other tabs, buttons and menus. Because the layers tab menu closely parallels the objects tab menu, only new menu items are documented below.

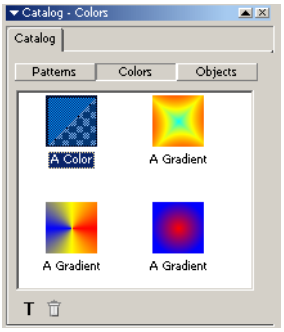
The New item provide the same function as the panel button described above.

The **Properties** item pops up a dialog containing filters, effects and composite method sections. To apply any of these to a layer, you must do so through this dialog or using the items of the same name in the layers tab menu.

The **Flatten** and **Merge** submenus provide similar options, described below. Flattening converts everything in the layer into a single bitmap object. Merging combines all of the objects in the specified layer into a single layer, but each object remains a separate entity.

- **Current** (Flatten only) produces a bitmap object out of the objects in the current layer.
- **All** combines all of the objects in all of the layers into a single bitmap (flatten) or layer (merge) maintaining the ordering of all objects.
- **Visible** combines all of the visible layers into a single bitmap (flatten) or layer (merge) maintaining the ordering of all objects. The layer with the combined objects replaces the bottom-most visible layer.
- **Up** combines the current layer with the layer just above into a single bitmap (flatten) or layer (merge) maintaining the ordering of all objects.
- **Down** combines the current layer with the layer just below into a single bitmap (flatten) or layer (merge) maintaining the ordering of all objects.
- **To Top** combines the current layer with all of the layers above into a single bitmap (flatten) or layer (merge) maintaining the ordering of all objects.
- **To Bottom** combines the current layer with all of the layers below into a single bitmap (flatten) or layer (merge) maintaining the ordering of all objects.

The Catalog tab



The Catalog tab provides a place to store commonly used items for reuse in later documents or design sessions. Patterns, colors (including gradients) and objects can be stored in the catalog.

To view your patterns (images), colors or objects, click the appropriate button.

Patterns and colors

To add a **pattern** or **color** to the catalog, drag and drop it into the catalog tab from the stroke or fill panel. Images dropped from the Desktop into the catalog are added to the pattern section.

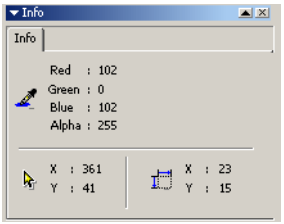
To use a pattern or color, drag and drop it from the catalog onto the stroke or fill panel.You can also drag and drop it onto the color wells in the toolbox.

Objects

To add an **object** to the catalog, drag and drop it by name from either the objects panel or the animation panel.

To use an object, drag and drop it from the catalog onto the canvas.

The Info tab



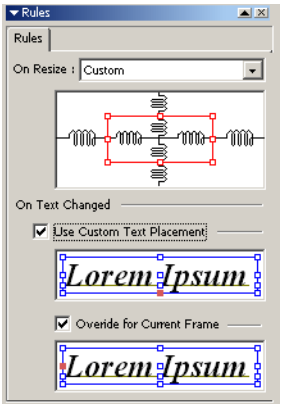
The Info tab provides feedback on the location and color under the mouse pointer when it is on the canvas. None of the data reported in the Info tab is editable.

Red, **Green**, **Blue** and **Alpha** provide the current color and transparency underneath the mouse pointer whenever it is over an object.

The **X** and **Y** values in the mouse pointer section provide the current mouse location, in pixels, relative to the top left edge of the canvas.

The **X** and **Y** values in the object dragging section provide the current object location, in pixels, relative to the coordinates of the object before being moved.

The Rules tab



Rules are a special feature in e-Picture that facilitate the reuse of images and animations in Microsoft FrontPage. The Rules tab contains features that allow you to specify how standard text and shapes should behave when an entire graphic is resized or when the object has its contents replaced (i.e. the text is changed from “Fantasy Vacations” to “Welcome to Paradise on Earth”). For a general discussion on Rules, see Chapter 6, “Establishing rules for dynamic imaging”.

Rules are set in the Rules inspector tab. By default, e-Picture does not set any rules for you. Without any rules, a graphic that is stretched or compressed in FrontPage will do so proportionally.

The On Resize drop down menu is used to select one of the predefined rules, or custom. The predefined rules are available as a time saving short cut. For complete control over your graphic modification rules, select Custom from the On Resize menu. When Custom is selected, the other elements of the Rules tab are enabled, as shown.

Predefined rules

The predefined rules in the On Resize menu are designed to address the most common image resizing scenarios.

Image fit text directs e-Picture to keep the distance from the left and right edges of the text the same. If the text content is changed, the image will resize to fit the new text using the same left and right spacing as before. Only one text object per image may use Image fit text.

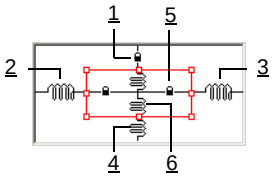
Follow left directs e-Picture to always keep the left edge of the selected object’s bounding box at a fixed distance from the left edge of the canvas. The object itself will not change in dimensions when the image is resized. In the case of text, if its content is changed, the bounding box will be extended to the right.

Follow right directs e-Picture to always keep the right edge of the selected object’s bounding box at a fixed distance from the right edge of the canvas. The object itself will not change in dimensions when the image is resized. In the case of text, if its content is changed, the bounding box will be extended to the left.

Centered directs e-Picture to always keep the selected object’s bounding box at the same proportional distance from each edge of the canvas. The object itself will not change in dimensions when the image is resized. In the case of text, if its content is changed, the bounding box will be extended equally to the left and right.

Custom Image Resizing

Using custom image resizing, you can dictate exactly how text and other shapes will respond to resizing. In the image at right, you see a simple red bounding box that represents the bounding box of the currently selected object. **Springs** and **locks** attach to both the inside and the outside of the box. By clicking on a spring, you change its appearance to a lock. Similarly, clicking on a lock changes its appearance back to a spring.



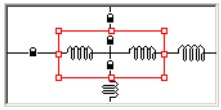
Springs represent connections that are flexible and locks represent fixed distance to edges. When resizing occurs, edges with springs will resize proportionally. Edges with locks will remain fixed. The location of the spring or lock determines how the text behaves.

Spring 1 is used to change how the object resizes with respect to the top edge of the canvas. When a spring, the top edge of the object will maintain a proportional distance from the top of the canvas. When a lock, it will remain the current distance from the top of the canvas.

Springs 2, 3 and 4 behave in an analogous way as spring 1 with respect to the edges of the canvas to which they have a virtual connection.

Springs 5 (interior horizontal) and 6 (interior vertical) control the width and height of the object, respectively. As with the others, when these are springs resizing will remain proportional. When they are locks, the object width and height are fixed.

For example, say you wanted a text object to always remain the same distance from the top left corner of your image, and the text always to be the same height. To accomplish this, you'd first change the top and left springs to locks to fix the top left corner, then you'd change vertical height spring to a lock to fix the text height. This is shown at right.



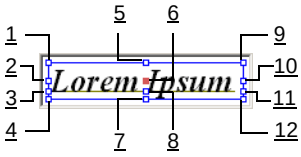
Custom Reference Points

Custom Reference Points determine how text behaves when the font information or text itself is changed in FrontPage (Custom Reference Points apply to text only). In most cases, when you change some text, it will become either longer or shorter. Reference points allow you to specify that the new text (technically the new bounding box) should be centered, use the same left edge, etc. as the original bounding box. This is important because most graphics are designed with certain key elements that shouldn't be overwritten.

For example, in the simple banners at right, the text object is changed from “Ohio” to “California”. In the top banner (the original), everything looks pretty good. The second banner shows the results of the change when the reference point is set in the middle. The text grows to both the left and the right and overwrites other image elements. The last banner shows the results of the change when the reference point is set to the left edge. The text grows to the right where there is room (by design!) to accommodate the longer text.

The same principles apply when the font and font size are changed as well. both of these actions typically result in a different sized bounding box. The nuance here is that the bounding box could both taller and wider, so consideration must be given to both dimensions of growth.

The image at right points out the various reference points. Each reference point will have a slightly different impact on text when it is changed, as follows:



Horizontally, points **1**, **2**, **3** and **4** all keep text changes left justified (i.e. new text grows towards the right). Points **5**, **6**, **7** and **8** all keep text changes center justified (i.e. new text grows evenly to the left and right. Points **9**, **10**, **11** and **12** all keep text changes right justified (i.e. new text grows to the left).

Vertically, font and font size changes are accommodated as follows:

With points **1**, **5** or **9**selected, the top of the text remains the same and changes are made downward.

With points **2**, **6** or **10** selected, changes grow proportionally height-wise.

With points **3**, **7** or **11** selected, the text baseline remains the same and changes occur above and below it.

With points **4**, **8** or **12** selected, the bottom of the text remains the same and changes are made upward.

Reference points also come into play for animated objects. The best way to illustrate this is through an example. Say you have some text that you want to appear to bounce off the four edges of your canvas. In your original animation, this is easy. Just align the proper edge of the text at each frame where the bounce is to occur. Simple. If in FrontPage you change the width (or worse, the height and the width) of the text, the alignment will likely be a bit off. The solution is to override the original reference points in each bounce frame so that the proper text edge always aligns correctly to the edge of the canvas.

Reference points are only set in frames where there is an existing translation key. e-Picture takes care of determining the position of the text in each frame to produce a smooth path between key frames taking into account the reference point in each key frame.

Chapter 4: Animation Methods and Techniques

e-Picture Pro provides tremendous flexibility when it comes to animation. Virtually every attribute of an object can be animated, often in several different ways. This chapter builds on the basic animation techniques discussed in Chapter 2, “e-Picture Pro Tutorials,” to provide an overview of a variety of alternative animation methods and techniques available to you in e-Picture Pro.

General principles

Regardless of what animation technique you use, in e-Picture you always begin with the same basic principles:

1. Select a starting frame in the animation panel and establish the initial position and attributes of your object.
2. Select the ending frame in the animation panel and set the final position and attributes of your object.

Because e-Picture only records the properties as you set them, you are free to modify the attributes in the first or last frames without any concern for changing your animation in the in-between frames. e-Picture will do all the computations necessary to ensure that these frames incorporate all of the information necessary to produce a smooth animation. This real time computation of in-between frames is also the reason that animations played in the animation panel may not run as fast as in the final exported version.

Animating between points

The most common form of animation takes place between two points. In most cases, this simply means that an object is moving from one point on (or off) your canvas to another. However, it can also mean that, for instance, the color or opacity of the object is changing over time. Whether there is physical movement or not, animating between points is the simplest application of the general principle above.

Common attributes that are frequently animated between points include (Object property name associated with this type of animation shown in parentheses):

- Position (Translation)
- Opacity (Opacity)

- Size (Scaling)
- Stroke Color (Stroke color)
- Fill Color (Fill color)

By joining together multiple animations between points, objects can take on more complex paths.

Animating curves

Both Bezier curves and poly lines can have their inflection points individually animated. When used alone, this technique makes the object appear to change or "morph" its shape over time. When used in combination with other techniques (see "Animating text to move along a curve" on page 99 for one example), the results can be even more impressive.

To animate one or more points on a curve, first create the curve in the starting frame. Then select the ending frame, double-click on the curve to enter edit mode (or press Enter), and click and drag any of the points that you established when you created your curve.

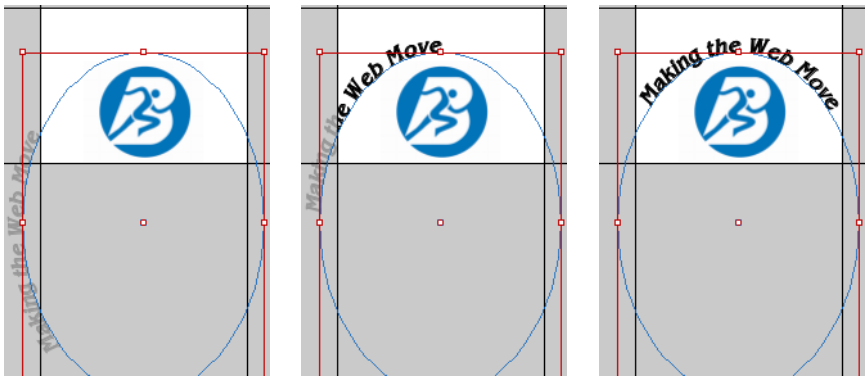
For example, to create a sad face that morphs into a happy face, do the following:

1. Create a sad face in frame 1 using the Bezier tool to create the frown.
2. Select frame 10 (select the Arrow tool and click on its frame number).
3. Double-click on the Bezier (mouth) object to enter edit mode.
4. Drag one or more of the points to change the frown to a smile.

Because multiple points can be animated in any Bezier or polyline object, much more complex changes can be created with just a few clicks of your mouse.

Animating text to move along a curve

Text not only can be placed on a curve, it can also be animated to slide along a curve. The impact of this can be far more eye catching that simply having text move in along a straight line or fade in by gradually changing its opacity from 0 to 100.



For example, to have a product tag line slide in over a company name or logo, as shown above, you would do the following:

1. Import and position your company name or logo.
2. Draw a curve over the logo that will become the path the text follows.
3. Use the Text on a Curve tool to associate the tag line with the curve.
4. In the beginning frame, double-click on the text and Alt-drag the text to the starting location.
5. In the ending frame, Alt-drag the text to the ending location.

Text can be placed upon and slide along the following objects:

- Freehand shapes (pencil)
- Beziers
- Lines
- Poly lines
- Rectangles
- Rounded rectangles
- Ellipses

Nonlinear animation

By default, when e-Picture tweens an attribute between two key frames, the attribute changes are computed to produce an even change across each of the in between frames. This is most evident when viewing translations. Translated objects, when selected, display a blue line representing the path of the object. On that blue line, little dots (the reference points) show where the object will be drawn in each frame. When an object is first translated, these reference points are always evenly spaced.

Using the Tweening Wizard, you can change both the spacing of the reference points and the path that these reference points follow. The Tweening Wizard can be accessed for any animated property by clicking on the actual name of the property in the Animation panel.

When adjusting the spacing of the reference points (the Motion field in the Tweening Wizard), you have the following options:

- Constant (default)
- Accelerating
- Oscillating
- Overshoot

When adjusting the path of the reference points (the Path field in the Tweening Wizard), you have the following options:

- Linear (default)
- Curving
- Wave
- Circle

Different combinations of Motion and Path settings produce drastically different results. A simple example would be to use acceleration to simulate a car starting (as shown above) or stopping. A slightly more complicated example is presented in “Tutorial 4: Bouncing a Ball with the Tweening Wizard” on page 28, where an acceleration is paired with a curving path to produce a bounce effect.

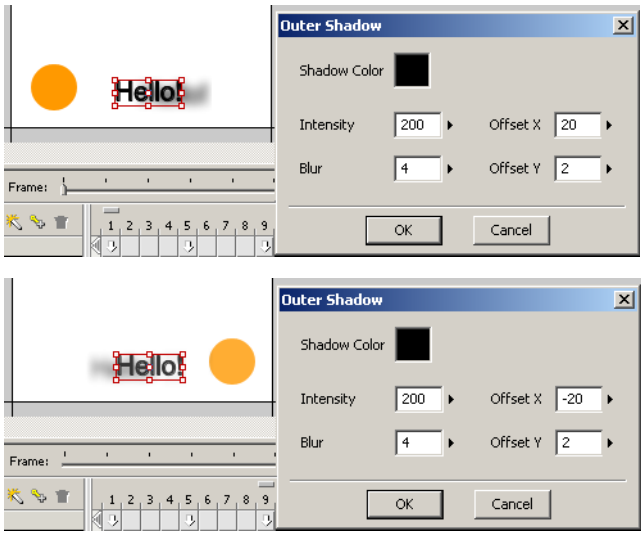
Not all properties have both Motion and Path options. However, using the Tweening Wizard to produce non-linear animations can save substantial time and effort in those situations where hand coding each frame is the only other alternative.

Animating filters and effects

Filters and special effects are treated like any other property when it comes to animation. You can have one or more filters that animate during an animation, creating virtually endless combinations of looks that become clear or drift away throughout the course of an animation. Likewise, special effects can be animated to create growing shadows or shrinking glows.

For example, to have the sun pass over a text object which casts a shadow that animates in coordination with the movement of the sun, do the following:

1. Create and animate an orange ellipse (the sun) that follows an arcing path across the top of your banner. One way to do this is by animating an ellipse to move in a straight line as described in “Animating between points” on page 97, then changing the path to follow a curve as described in “Nonlinear animation” on page 100.
2. Add and position your text beneath the sun.
3. In the first frame, add an outer shadow to the text using X and Y offsets that cast the shadow away from the ellipse, as shown at right.
4. At the midpoint in the animation when the ellipse is directly above the text, modify the X and Y offset coordinates so the shadow goes straight down.
5. In the ending frame, modify the X and Y offset coordinates of the outer shadow to again cast the shadow away from the ellipse, as shown at right.



When you play the animation, the shadow on “Hello!” will change in each frame as the sun passes across. This technique can be repeated for every object in your animation.

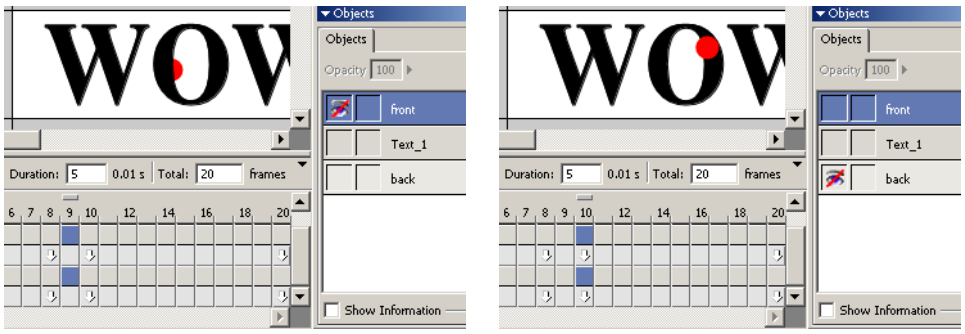
Filters are animated in the very same way, by changing their properties in the Inspector. For example, you can animate the amplitude, phase, and orientation properties of a wave filter that has been applied to an object. Certain filters produce more striking results than others when animated. Some of the most popular filters to animate include blur, rotate zoom, vortex, and wave.

Image swapping

In e-Picture, every item you create is an individual object. As such, objects have a very specific stacking (and therefore viewing) order. Through the clever and intentional use of duplicate objects, it is easy to have objects appear to change stacking positions. This technique can be used to give your animations basic 3D qualities even without using 3D models or text.

For example, to add a three-dimensional quality to "Tutorial 4: Bouncing a Ball with the Tweening Wizard" on page 28, you could have the ball start out in the distance and grow as it bounces closer and closer. To enhance the effect, the ball could be programmed to bounce through some text, effortlessly moving from behind to in front of the text. To achieve this, do the following:

1. Create an animated bouncing ball as described in Tutorial 4, animating the ball over 20 frames.
2. Change the attributes of the ball to make it smaller at the beginning and have it grow throughout the animation.
3. In frame 9, create some text and size it so that the ball appears to just fit inside the letter "o" in "WOW!"



4. Duplicate the ball. Have the original appear behind the text, and the duplicate appear in front of the text. Make the original visible for only the first 9 frames, and the duplicate visible in only the last 11 frames. This is the key to the illusion. In the example above, you can see in the Objects panel that in frame 9 (shown at left) the back copy of the ball is visible and the front copy is hidden, while in frame 10 (shown at right) the back is hidden and the front is visible.
5. As a finishing touch, have the ball finish covering the dot in the exclamation point.

Another interesting use of this effect is to have two images of the same or similar sizes fade into each other via opacity changes. Using 3D models, you can use this technique to have a wire frame version of a 3D model fade into the fully rendered model, for example. This striking effect requires very little effort.

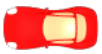
Special considerations when animating 3D objects

When rotating 3D text and 3D objects, you may get unexpected results if you rotate different axes in different frames. The following example illustrates the potential problem. (There is no need to repeat these steps yourself.)

1. Create a new banner.
2. Drop the sample 3D sports car object onto the canvas. It appears facing away from us, as shown at right.

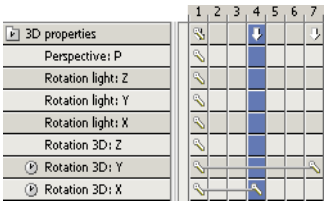
3. Set the animation to be 7 frames long.
4. In frame 4, set the Rx value to 90 and press Enter. Now you see the top of the car, as shown at right.

5. In frame 7, set the Ry value to 90 and press Enter. You still see the top of the car, but now it is facing left.



6. Now, click on frame 4 again. The car no longer looks as it did in step 4 above. Instead, it appears as you see it at right, rotated 45 degrees toward the horizontal.

Why did this happen? The Rx value is being animated over frames 1 to 4, while the Ry value is being animated across all 7 frames. Thus in frame 4 the Ry rotation is 45, halfway to its final value of 90.



If you wanted the car to rotate to the position seen in step 4, then to the position in step 5, you would need to manually add a key for the Ry property in frame 4.

Manual manipulation of keys

One of the strengths of e-Picture is the very fine level of control that you have when creating and manipulating images. While most creative and even detailed work usually takes place on the canvas at the object level, there may be times when it becomes necessary to make more refined changes to your animation.

e-Picture provides complete control at every level of animation manipulation. Specifically, through the Animation panel and the Animation menu, you have control at the frame level, the layer level, the object level, and the property level. At all of these levels, the basic premise is the same. You are adding, deleting or moving keys to change the behavior of your animation.

Each level of animation manipulation has specific uses, as explained in the scenarios below.

Scenario 1: Frame Manipulation

Frame manipulation is generally used to increase or decrease the overall length of a portion or all of an animation. For example, if part of your animation is a little too “jumpy”, one possible solution is to add frames between the two key frames that define the jumpy region. Similarly, you may find that the export size of your animation is too large, even with a reduced color palette. In this case, the best alternative may be to delete frames from your animation.

The following options are available for frame manipulation:

- Deleting frames - To delete frames at a specific point in your animation, either select the frame to be deleted and choose Animation/Delete Frame(s) or use the Animation Wizard.
- Adding frames - To add frames at a specific point in your animation, either select the frame at the point you want to add a frame and choose Animation/Insert Frame(s) or use the Animation Wizard.
- Resizing an animation - To resize the overall length of an animation letting e-Picture determine the optimal way to retain the same overall feel, use the Animation Wizard.

The other frame level option available is to add keys to every property in every object and layer in the selected frame. This would be useful if you needed to guarantee that every element in your animation looks exactly as it does at that moment. To accomplish this, choose Animation/Add Keys to Frame(s).

Scenario 2: Layer Manipulation

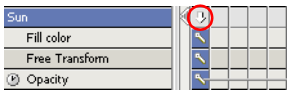
Layer manipulation is generally used to move all of the keys for a specific layer, including all of keys for the objects in the layer, from one frame to another. This is accomplished by dragging the layer level key (the down arrow indicator for the layer) from one frame to another. The layer level key turns red to indicate that it is selected. A layer-level key appears when the layer itself or any object in the layer contains a key.

For example, if you create multiple objects in frame 5 and then decide you really want them to be initialized in frame 1, you can simply drag the layer level key to frame one and all of the objects will move with it. Similarly, if you want to change the ending frame for all of the objects in a given animation, you can do this by dragging the layer level key for the layer containing those objects.

Scenario 3: Object Manipulation

Object manipulation is similar to layer manipulation in the sense that multiple keys are impacted through a single action. However, object manipulation is more flexible than layer manipulation in its capabilities.

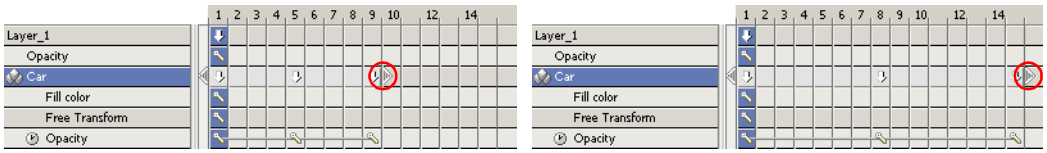
Object manipulation is used primarily to move all of the keys for a particular object from one frame to another. To do this, drag the object level key (the down arrow indicator for the object) from one frame to another. All of the object properties for the given frame will move with it.



For example, if you create an object in frame 1 and later decide that you don't want any of its properties to change until frame 13, one option is to drag the object level key from frame 1 to frame 13. e-Picture uses the first key that it finds to draw the object starting in frame 1. Because the first key is now in frame 13 for the given object, all properties will remain constant from frame 1 to frame 13.

e-Picture also lets you scale an animation for an individual object in much the same way that the Animation Wizard resizes the overall length of an animation. To do this, drag the object's animation range handles (triangles). e-Picture automatically adjusts any keys that fall within the animation range to keep the animation events proportional to the original animation.

For example, if you have an object whose opacity changes from 0 to 100 and back to 0 in frames 1, 5 and 9, respectively, and you realize that the object would look better animating over 15 frames, you can drag the right animation range handle from frame 9 (below left) to frame 15 (below right). The intermediate key in frame 5 is automatically moved to frame 8 in order to keep the animation even.



An alternative method of object manipulation is to add keys to every property in an object, which serves to record the state of an object at a given point in time. This is equivalent to adding keys to a frame, but only for one object. To do this, select a frame in the Animation panel, then, with the desired object selected in the Objects panel, choose Add Keys to Frame from the Objects panel menu.

Scenario 4: Property Manipulation

Property manipulation provides the finest level of control over every object attribute in your animation. By manipulating individual properties, you can change how individual aspects of a given object appear to animate.

Property manipulation is primarily used to fine tune the look and feel of an animation. This is usually accomplished by moving individual property keys from one frame to another, or adding and deleting property keys.

For example, you may have an existing animation with a geometric object that moves across the screen over the first 10 frames, and a text object that fades in from frame 10 to 20. If you want to overlap the fade with the movement, you can simply drag the opacity key for the text from frame 10 to an earlier frame. This same principle applies for any property that you want to manipulate.

Likewise, you may find that keys have been created that you no longer want. For instance, you change the fill color of an object mid-way through an animation and realize later that this is no longer desirable. To eliminate the fill key (or any key), select it in the Animation panel and click the Trash can icon in the Animation panel. Alternatively, to add individual keys, click the Add Keys icon in the Animation panel and click on a property in a particular frame to lock in that property. When adding and deleting keys, holding down the Shift key will enable multiple additions or deletions.

Note: Because every property for every object must have at least one key, attempting to delete the last remaining key for a given property will fail with an error message.

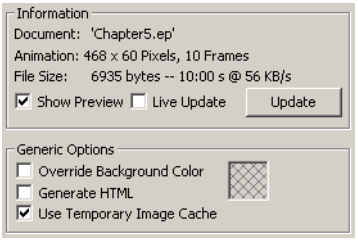
Chapter 5: Exporting animated and still images

Animation export formats compared

The following chart gives a quick overview of the advantages and disadvantages of Animated GIF and Macromedia Flash (SWF) export formats.

format	pros	cons
Animated GIF	• universal browser support • no plug-in required • can control number of colors exported	• maximum color depth is 8-bit (256 colors) • bitmap format and lack of frame-to-frame compression means files can be quite large
Macromedia Flash (SWF)	• vector-based format allows smaller files without compromising quality • plug-in bundled with both Microsoft and Netscape browsers	• requires plug-in some users prefer not to install • supports 3D text, filters, and various other e-Picture objects only by converting them to bitmaps, which increases file size

Elements common to all export dialogs



The **File Size** line displays the size and estimated download time for the file that would be created using current settings. If you check the **Live Update** check box, the file size will be updated automatically as you change export settings; if you uncheck it, you can manually refresh the file size display at any time by clicking the **Update** button.

Show Preview turns the export dialog's preview panel on or off. The preview display is also affected by the Live Update and Update controls.

Check **Override Background Color** to use a different background color than that set in e-Picture. Click on the color sample to bring up the Color Picker. (Override Background Color is available with still images and animated GIF, but not with the other animation formats.)

Check **Generate HTML** and e-Picture will generate a simple HTML file that you can open in a browser to display the animation. You can cut and paste the code from this file into your own HTML files; the code includes comments that tell you what to cut and what you should modify.

With smaller documents, checking **Temporary Image Cache** can improve e-Picture's performance when previewing different export settings or re-exporting a document that has not been changed. With larger images, the cache can consume a lot of memory and, depending on how much RAM is available, may need to be turned off.

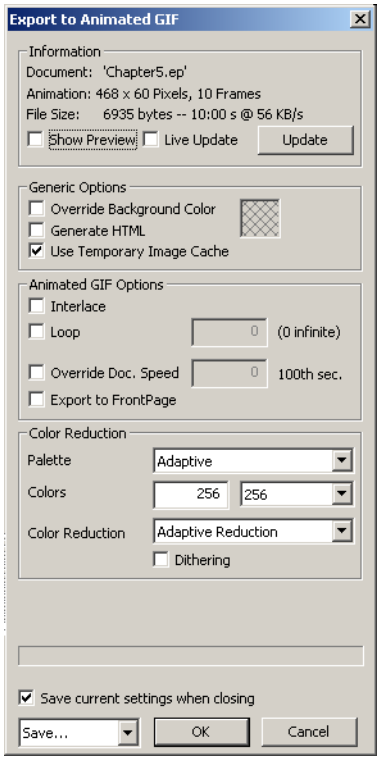
Click **Save current settings after cancelling** to name and save the current export settings for later use. Previously saved settings can be loaded by selecting them from the popup menu immediately below.

Export to FrontPage

All web export formats include an Export to FrontPage check box. When this is checked, e-Picture attempts to load the exported file into the currently open web page in FrontPage 2000 or FrontPage 2002. If FrontPage is not open, you are prompted to open it and then export again.

The file that is placed in the FrontPage web page is a simple web graphic (i.e. a GIF or JPEG), not a template. If you wish to use the dynamic imaging capabilities of the e-Picture Imager, you need to upload the Save version of the file from within FrontPage. For an example of this, see "Tutorial 10: Using Dynamic Imaging in Microsoft FrontPage" on page 51.

Exporting to Animated GIF



If you check **Interlace**, instead of loading from top to bottom the image will appear blurry at first, then get sharper as more data is downloaded. With still GIF images, this allows users with slow modem connections to click past an image they are not interested in viewing without having to download the whole thing. It is best left unchecked with animated GIFs.

Checking **Loop** repeats the animation the number of times set in the Count box. If checked with no Count value specified or a value of 0, the image will for all practical purposes loop endlessly. (To be precise, it will repeat 65,536 times.)

Check **Override Document Speed** to set a new duration for every frame in the document. Frame rates are in 1/100th of a second units.

The **Palette** setting determines which set of 256 (or fewer) colors will be used in the exported animation:

- **Adaptive** automatically selects a set of colors that best approximate the original.
- **Web-safe** uses a standard set of 216 colors that can be displayed by virtually any browser on any platform.
- **Windows** and **Mac OS** select colors that will give the best results when displayed in an 8-bit color mode on the indicated operating system.

Colors is the number of colors that will be used in the exported animation. Depending on the kinds of objects used, setting this below 256 can seriously degrade image quality. On the other hand, reducing the number of colors can often significantly reduce file size.

The **Color Reduction** setting determines how e-Picture will reduce the number of colors for export. Because results vary depending on your animation, we recommend you experiment with both methods to determine which produces the best image.

Turning **Dithering** on sometimes produces better-looking output, but it increases file size.

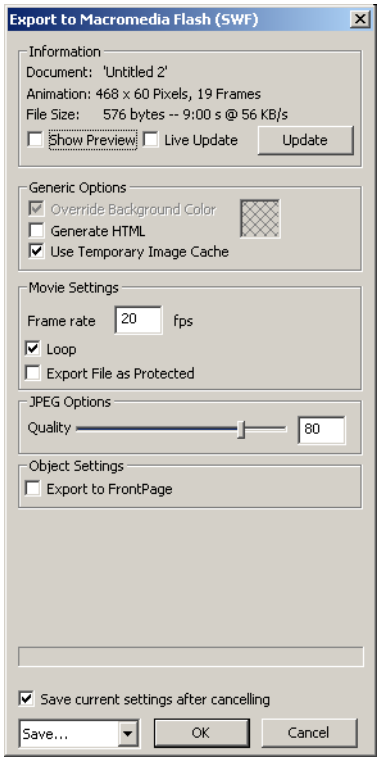
Exporting to Flash (SWF)

The Flash (SWF) format is similar to e-Picture's native format in that both store graphic elements as objects (vectors) rather than as bitmaps. Unfortunately, there are quite a few object types e-Picture supports that Flash does not. Thus, when creating a document for export to Flash, you should avoid using the following features if you want to stay strictly within Flash's vector capabilities:

- background color transparency
- text on a curve
- gradients on strokes
- patterns on strokes
- gradient fills other than radial and linear
- x/y offset of fill patterns
- fill over stroke (will be converted to stroke over fill on export)
- dashed strokes and lines
- capped lines
- joins other than round
- filters
- effects
- composite methods

As discussed under Object Settings below, e-Picture can exported these objects to Flash by converting them to bitmaps, but this may significantly increase the size of the resulting file.

The Export Flash (SWF) dialog



Frame rate overrides the duration set in the document.

Checking **Loop** repeats the animation over and over. Unlike Animated GIF's Loop, there is no count available when exporting to Flash.

Checking **Export File as Protected** prevents people from downloading and saving your .swf file on their computer. In other words, it prevents people from stealing your work.

Quality controls the JPEG compression used when e-Picture objects which have no native counterpart in Flash are converted to bitmaps for export (see next item). The higher the quality, the larger the file size.

Some of the listed object types, notably text, can normally be exported to Flash as vectors. The setting here will be relevant only if the objects have been modified in such a way as to prevent export. For example, a standard rectangle will export as a vector object, but if you use the transformation tool to drag one corner, turning it into a non-rectangular quadrilateral, it will export as a bitmap.

Text modifications that will prevent export as vectors include:

- animated stroke width
- animated shear
- deformation with the transformation tool
- use of multiple text styles within a single object

Still image export formats compared

The following chart gives a quick overview of the advantages and disadvantages of the eight still-image formats e-Picture can export. All of these are bitmap formats, and all can be imported into other graphics applications such as Photoshop.

format	pros	cons
GIF	• universal browser support • no plug-in required • very good compression of bitmaps (LZW compression supported by e-Picture) • can control number of colors exported • support for interlacing	• maximum color depth is 8-bit (256 colors), not good for scanned photos or gradients
JPEG	• universal browser support • no plug-in required • 24-bit color depth, better for scanned photos and gradients • can choose trade-off between size (compression ratio) and quality	• compression not as good as GIF for large areas of solid color
PNG	• up to 48-bit color depth, excellent for scanned photos and gradients • Very good compression • Optional lossless compression • support for interlacing	• not supported by older browsers
Targa	• common interchange format in PC graphics applications	• not a standard Web format
TIFF	• universal interchange format for professional graphics applications	• not a standard Web format
BMP	• supported by virtually all Windows applications • popular option for scanned images	• not a standard Web format

Chapter 6: Establishing rules for dynamic imaging

Introduction

Traditionally, web graphics are created in a specialized graphics application and ultimately exported in a file format acceptable for web browsing such as JPEG, GIF, animated GIF or Flash. These exported graphics files are then imported into a web design application like Microsoft FrontPage where they finally become part of an actual web page.

The additional steps required to incorporate graphics into a web page have resulted in graphics being treated differently from web text. The former requires a specialized graphics application and every graphic must be created and exported as a separate entity. The latter can be accomplished entirely within the design application.

e-Picture Pro helps alleviate this graphics burden and allow you to do more with graphics without every leaving your design application. This is accomplished through a process termed “dynamic imaging”.

Dynamic Imaging in e-Picture Pro

Dynamic imaging is a process by which existing graphics are changed and entirely new graphics generated without launching a graphics application or going through the cumbersome graphics design process for every new image that is needed. For example, most web pages include a button bar with commonly used links (Home, Products, About, etc.). Using dynamic imaging, you could create one “template” button, and then use that template from within your web design application to quickly and easily generate the other buttons.

e-Picture Pro enables dynamic imaging through the inclusion of graphics rules, or rules for short. These rules fall into one of two categories:

- **Resizing rules** dictate how text behaves when it is modified. Should it always be centered? If it is resized larger, should it grow from the bottom? Should the width of the button increase to accommodate longer words or phrases? In the button bar example, you probably would want the buttons to always be the same width, and text always to be centered -- but under other circumstances you may want an entirely different behavior.

- **Customization rules** dictate what, if anything, can be changed for each and every object in your graphic. For example, in the button bar example above, you might want to only allow the button label to be modified, but not the font, font color, background color, etc. This would help ensure that the buttons would maintain a consistent look. For an individual, this may not be a huge concern, but as soon as graphics are shared, consistency and acceptable reuse become valid considerations.

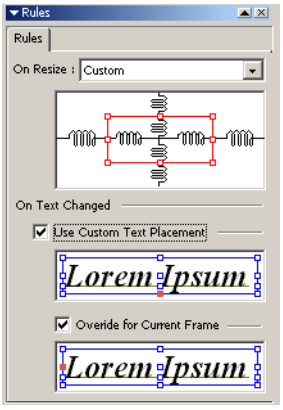
e-Picture Pro is the design tool for creating graphics and establishing rules. At any point in the graphics creation process, you can specify either customization or resizing rules. These rules are saved in the native e-Picture file format (.ep).

The e-Picture Imager, a special Microsoft FrontPage plug-in, enables dynamic imaging from within your FrontPage design environment. Using the rules you establish in e-Picture Pro, the e-Picture Imager provides an easy to use mechanism for modifying graphics through standard Windows dialog boxes. With the e-Picture Imager, you could easily generate all the buttons in a button bar from a single template in a minute or less.

Specifying resizing rules

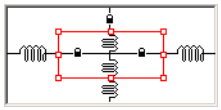
Resizing rules apply only to standard text. By specifying resizing rules, you help determine how a text object behaves when it is modified in FrontPage. Resizing rules are set in the Resizing inspector tab. For an explanation of the contents of the Resizing tab, see “The Rules tab” on page 93 of Chapter 3, “Reference”.

The On Resize drop down menu provides selections for the most common rules settings. By default, e-Picture does not set any resizing rules for you. Without any resizing rules, a graphic that is stretched or compressed will do so proportionally. This may be exactly what you want. For most other cases, it will probably be enough to simply choose one of the predefined rules from this menu. In some cases though, designs may require other resizing rules. To dictate exactly how your text behaves when resized, choose “Custom” from the On Resize menu.



Selecting Custom enables the other sections of the panel. These are described below.

Custom Image Resizing



Using custom image resizing, you can dictate exactly how text will respond to resizing. In the Image Resize section, you see an empty bounding box that represents the bounding box of the currently selected text. Springs attach to both the inside and the outside of the box. By clicking on a spring, you change its appearance to a lock. Similarly, clicking on a lock changes its appearance back to a spring.

Springs represent connections that are flexible and straight lines represent fixed edges.When resizing occurs, edges with springs will resize accordingly. Edges with locks will remain fixed.

The location of the spring or lock determines how the text behaves. A spring that falls outside the bounding box has a virtual connection to the edge of your canvas. By changing one or more of these to locks tells e-Picture that the text is always to remain a fixed distance from those edges of the canvas. That distance will be the one shown for your current graphic. For example, one of the predefined rules is, “Stuck to left, grow toward right.” You can achieve the same result by changing the spring that connects the bounding box to the left edge of the canvas to a lock.

The two springs that fall within the bounding box play a slightly different role. These control the height and width of the text when it is resized. For example, if it is important to always have text that is no longer than a certain width or height for aesthetic reasons no matter what the size of the graphic itself, these are the resizing controls to use.

Custom Reference Points

Custom Reference Points determine how text behaves when the font information or text itself is changed in FrontPage. In most cases, when you change some text, it will become either longer or shorter. Reference points allow you to specify that the new text (technically the new bounding box) should be centered, use the same left edge, etc. as the original bounding box. This is important because most graphics are designed with certain key elements that shouldn’t be overwritten.

For example, in the banners at right, the text object is changed from “Ohio” to “California”. In the top banner (the original), everything looks pretty good. The second banner shows the results of the change when the reference point is set in the middle. The text grows to both the left and the right and overwrites other image elements.The last banner shows the results of the change when the reference point is set to the left edge. The text grows to the right where there is room (by design!) to accommodate the longer text.

The same principles apply when the font and font size are changed as well. both of these actions typically result in a different sized bounding box. The nuance here is that the bounding box could both taller and wider, so consideration must be given to both dimensions of growth.

Reference points also come into play for animated objects. The best way to illustrate this is through an example. Say you have some text that you want to appear to bounce off the four edges of your canvas. In your original animation, this is easy. Just align the proper edge of the text at each frame where the bounce is to occur. Simple. If in FrontPage you change the width (or worse, the height and the width) of the text, the alignment will likely be a bit off. The solution is to set different reference points in each bounce frame so that the proper text edge always aligns correctly to the edge of the canvas.

Reference points are only set in frames where there is an existing translation key. e-Picture takes care of determining the position of the text in each frame to produce a smooth path between key frames taking into account the reference point in each key frame.

Specifying customization rules

Virtually every object that you draw or import into e-Picture Pro has associated customization rules. In fact, the document itself has some customization rules of its own. Unlike Resizing rules, Customization rules simply determine whether or not a particular attribute of an object can be changed in FrontPage or not. Available customization rules vary from object to object, with some objects such as text having more options than others.

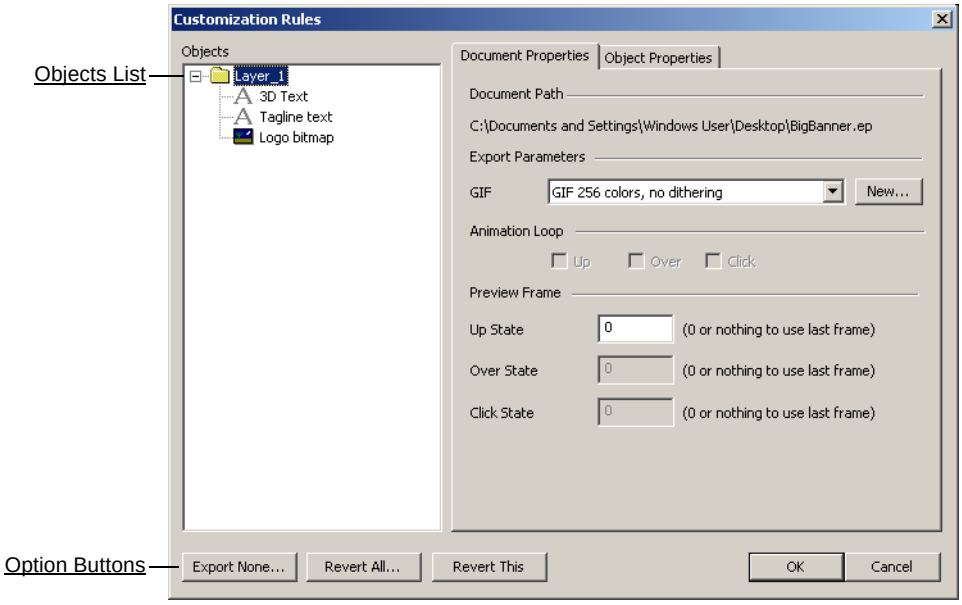
The table below shows all of the available attribute customization rules and which objects can make use of those rules. Each check mark indicates that the attribute can be set as either fixed or editable.

	Visibility	Stroke	Fill	Text	Font	Text Size	Bitmap	3D Text Colors
Text	x	x	x	x	x	x		
Paragraph Text	x	x	x	x	x	x		
Text on Curve	x	x	x	x	x	x		
3D Text	x			x	x			x
Rectangle	x	x	x					
Round Rectangle	x	x	x					
Ellipse	x	x	x					
Line	x	x						
Poly Line	x	x	x					
Pen (Bezier)	x	x	x					
Pencil	x	x						
Imported Images	x						x	

The Customization Rules dialog

Global document properties (i.e. file formats) and individual object rules are set in the Customization Rules dialog, which is opened by selecting the File/Customization Rules.

This dialog has 4 separate sections, illustrated below.



Objects List

The Objects list shows all those objects in the current design that have customization rules. When an object is selected in this list, the Object Properties tab (documented below) is automatically brought to the foreground and displays the current rules for that object. Only those objects that can be customized are listed, meaning any paint brush, paint bucket and 3D models will not be displayed in the list even though they will still be shown in the final output.

Note: The name of each object in the list is identical to the one given in the Animation panel. To change the name of any object, Control-click on the name of that object in the Animation panel or the Objects tab. For clarity, designers should name all objects that will be accessible in FrontPage.

Document Properties Tab

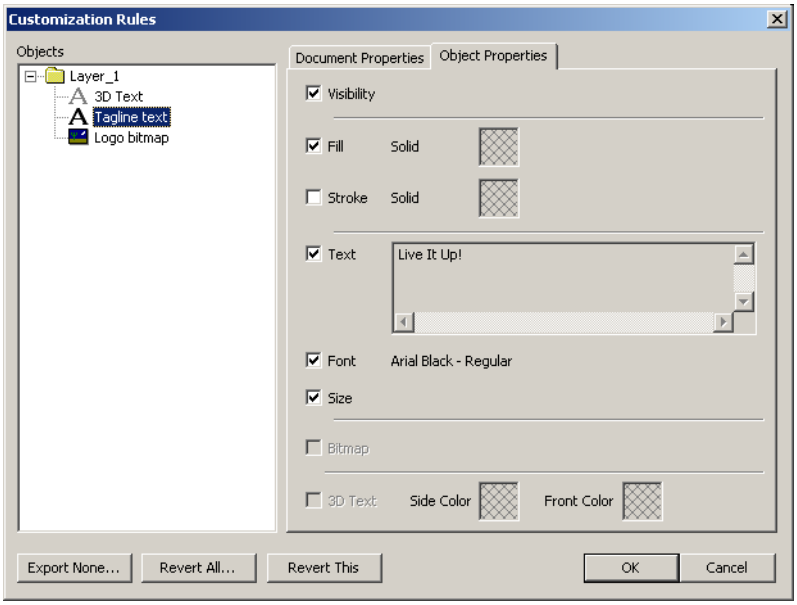
The Document Properties tab is used to specify global information relating to the current design. It has several sections:

- **Document Path** shows the current directory path and file name that your file is saved under.
- **Export Parameters** determine the export file parameters including the export file format, loop count, color reduction and compression information. You can select from the list of previously defined export formats or specify a new export format by clicking the New button. e-Picture can produce files in any standard web format including JPEG, PNG, GIF, animated GIF and Flash. More information on export parameters is available in Chapter 5, “Exporting animated and still images”.
- **Animation Loop** is used to determine whether the various states in a rollover button loop infinitely (checked) or are played once and then stop (unchecked). To loop the Up, Over and Click states, click their respective check boxes.
- **Preview Frame** is used to determine which frame in a rollover button is shown as the preview in FrontPage. When a user selects a graphic to customize in FrontPage, the e-Picture Imager shows a still preview of the graphic that includes any edits that have already been made. The designing artist can use this field to ensure that important text or other customizable objects in an animated rollover are visible from within the e-Picture Imager.

Object Properties Tab

The Object Properties tab is used to specify information relating to the current object. Not every object supports every customization attribute, so not all attributes will ever be active at any given time.

To make an attribute editable, check the box adjacent to the attribute name. To ensure that an attribute cannot be changed, uncheck the box. The customization attributes are described below.



- **Visibility** is used to provide an FrontPage users with a way to make the selected object visible or invisible. When this property is enabled, the FrontPage user can make the current object visible or invisible, revealing or hiding any contents underneath it.
- **Fill and Stroke** color changes are enabled by checking the “Fill” and “Stroke” check boxes, respectively. Of the four stroke and fill selections, two can be designated as editable (solid colors and gradients) within FrontPage, and two do not support any editing options (transparency and patterns). When the designer uses solid colors or gradients for the stroke or fill, the color sample(s) to the right show the current color(s).
- **Text** content is made editable by checking the “Text” check box. The current text is displayed in the adjacent text field.
- **Font** (i.e. Times) and font face (i.e. bold) are made editable by checking the “Font” check box. The current font and font face are shown in the adjacent text field.
- **Size** is made editable to authorized users by checking the “Size” check box. When this field is enabled, the FrontPage user can adjust the size of text to be a fixed percentage larger or smaller than the current size.

- **Bitmaps** are made swapable by checking the “Bitmap” check box. Bitmaps can be swapped in and out in place. For best results, care should be taken to ensure that bitmaps with the same dimensions are always used.
- **3D Text** front and side colors are made editable by checking the “3D Text” check box. The current front and side colors are shown in the adjacent color samples.

Option Buttons

Besides the “OK” and “Cancel” buttons which are self explanatory, the Customization Rules dialog has three user options that manipulate rules at various levels:

- **Export None** makes every object and every property non-editable (unchecked). After selecting this button, you will need to revisit each object and manually check each property that you want to be editable.
- **Revert All** undoes all property changes you have made for all objects and restores them to their default state.
- **Revert This** undoes all property changes for the currently selected object and restores it back to its default state.

Saving and Exporting Files with Rules

e-Picture has two different ways to output files: save and export. Your target destination for the file determines which of these options you choose.

Save

The Save function stores your file in e-Picture own internal format (filename.ep) for future editing. This file format includes not only the native descriptions of each object in your file, but also the complete customization information as specified in the Rules tab and the Customization Rules dialog.

Export

When you are ready to make an image available as a FrontPage graphics template, save your file to your local hard drive, then choose File/Export. Each of the web file formats available includes an “Export to FrontPage” check box as part of the export panel. For more information on the available export options, see “Elements common to all export dialogs” on page 107 of Chapter 5, “Exporting animated and still images”.

As part of the export process, you will be prompted for a file name under which to save the file for use outside of FrontPage. In addition, the following will occur:

- If FrontPage is open and a web is open, the graphic will be inserted into the current web. If there is no current web, you will be prompted to create a new page and the graphic will be inserted there.
- If FrontPage is not open, it will be launched and you will be prompted to select a web. After doing so, the web is open and the graphic is inserted into it.

Chapter 7: Using the e-Picture Imager with Microsoft FrontPage

Introduction

The e-Picture Imager is a special Microsoft FrontPage 2000 and FrontPage 2002 plug-in that allows you to modify native e-Picture graphics and animations, called templates, without ever leaving FrontPage. In essence, the e-Picture Imager allows you to design an image or animation once and reuse it many times without ever having to open a graphics application. In this context, the e-Picture Imager enables dynamic imaging in FrontPage.

For example, most web sites have a toolbar that is composed of a horizontal or vertical series of buttons, each with the same look but with different button text and different links. Using e-Picture Pro, you can design the button look once, then use that as a template for all the other buttons on your site. In fact, this is precisely what is done in “Tutorial 10: Using Dynamic Imaging in Microsoft FrontPage” on page 51.

Installation Notes

The e-Picture Imager and all of its associated tools and settings are installed by the e-Picture Pro installer. The installer detects the presence of FrontPage 2000 or FrontPage 2002 on your computer and installs and configures the proper components using this information. If FrontPage is not found on your computer, the e-Picture Imager is not installed.

If FrontPage is installed after e-Picture Pro or you upgrade from FrontPage 2000 to FrontPage 2002 after installing e-Picture Pro, you will need to reinstall e-Picture Pro before you can use the e-Picture Imager.

The first time you use the e-Picture Imager, two additional folders will be created for you in your current FrontPage web, e-Picture_Templates and e-Picture_Images. These folders hold the files used by the e-Picture Imager.

Creating e-Picture Imager templates in e-Picture Pro

e-Picture Pro is the design tool for creating e-Picture Imager templates. FrontPage can make use of both saved and exported e-Picture files. The differences between these two are important and noted here.

Save vs. Export

When you **Save** a file in e-Picture Pro, you generate a file with a ".ep" extension on it. Saved e-Picture Pro files include all of the information needed by the e-Picture Imager to support dynamic imaging. When saved e-Picture Pro files are loaded into FrontPage by the e-Picture Imager, they become **templates** that can be customized using the e-Picture Imager. The e-Picture Imager takes care of generating the web ready file formats for you based on the information supplied when creating the image in e-Picture Pro.

When you **Export** a file in e-Picture Pro, the resulting graphic or animation is in a specific web ready format such as GIF, animated GIF, JPEG or Flash. These graphics files are exactly like those that you see when you bring up any web page. Exported files cannot take advantage of the e-Picture Imager; FrontPage treats them as the simple graphics files that they are.

Setting template rules

Templates are governed by a set of rules that dictate what can and cannot be modified and how from within FrontPage. In this way, you control how the look of a particular template can change. These rules are set in e-Picture Pro.

Almost every e-Picture Pro object has rules that govern its appearance. For instance, you can specify that one object can have its fill color changed from within FrontPage, but not another. This is valuable when designing templates that will be used by others, such as in a corporate environment.

Text is unique among objects in the number of rules that can be set to govern its behavior. Besides color changes, text also supports font and font size changes, among others. In addition, you have control over how text objects behave when entire graphics are resized (other objects resize proportionally), and how text behaves when it is replaced by words or phrases that are longer or shorter.

Template rules are discussed in depth in Chapter 6, "Establishing rules for dynamic imaging".

Using the e-Picture Imager

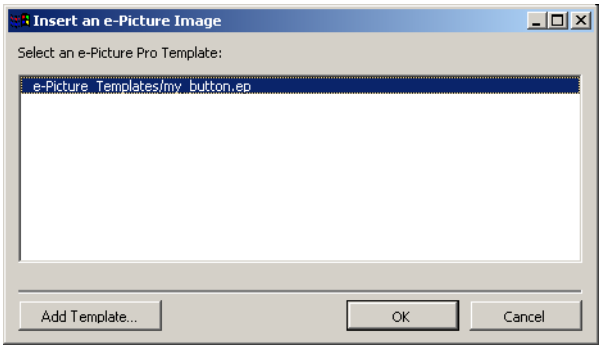
Once installed, the e-Picture Imager operates like any other feature in FrontPage. The e-Picture Imager includes its own toolbar button for adding and inserting images and templates. This button is shown at right.

If the Add e-Picture Image button is not visible, you make it visible by choose View/Toolbars/e-Picture Imager from the menus. Alternatively, this same functionality is available by choosing Insert/Add e-Picture Image.

The Add e-Picture Image button serves two functions: adding templates and creating images from templates.

Adding templates

To add a template, click the Add e-Picture Image button in the toolbar, and in the resulting dialog click the Add Template button. This brings up the standard Windows file selection window where you can browse to and select your template file (myfile.ep). Any e-Picture Pro file (.ep file) can be used as a template.



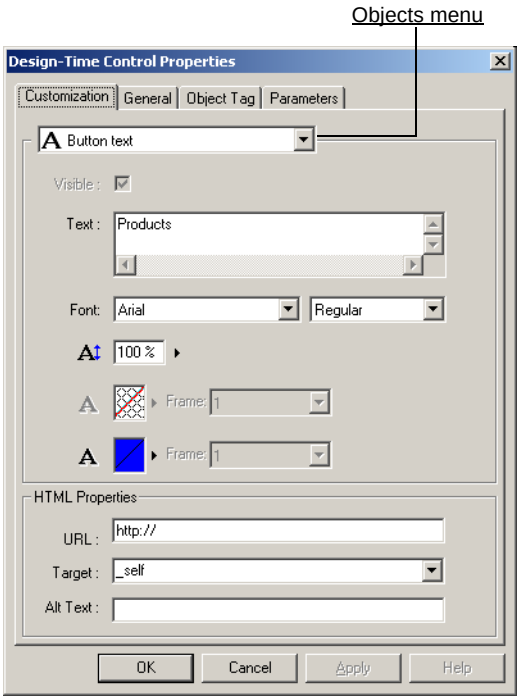
Once a template has been loaded, you then create an image from the template as described next.

Creating images from templates

To create an image from a template, click the Add e-Picture Image button, and select a template from the list of previously loaded templates shown in the resulting dialog. Click OK to dismiss the dialog and insert the selected image into your web page at the current cursor location.

Customizing images from templates

Once you have created an image from a template, you can then start customizing it to fit your needs. To customize the image, double-click on it. This action pops up the e-Picture Imager dialog, as shown at right.



The e-Picture Imager is a Design-Time Control, a special kind of plug-in that automatically generates all of the HTML code and final graphics that visitors need to view your web site. Web site visitors do not need the e-Picture Imager or any other plug-in to view these graphics.

The e-Picture Imager dialog has four tabs. The first two tabs, Customization and General, are specific to the e-Picture Imager. The last two tabs are generic to every Design Time Control and can be ignored (they are handled by FrontPage).

When you have finished making changes in the e-Picture Imager dialog, click OK to update the graphic. If the original template includes any rollovers that require scripts, a reference to these scripts is inserted into the HTML page containing this graphic.

The Customization tab

The Customization tab is used to customize the objects in your graphic.

The **Objects menu** displays which object is currently available for customization. The name shown in the Objects menu is the one given to the object in e-Picture Pro. You are encouraged to provide descriptive names in e-Picture Pro in order to make e-Picture Imager customizations easier to follow.

To change objects, select a new object from the Objects menu.

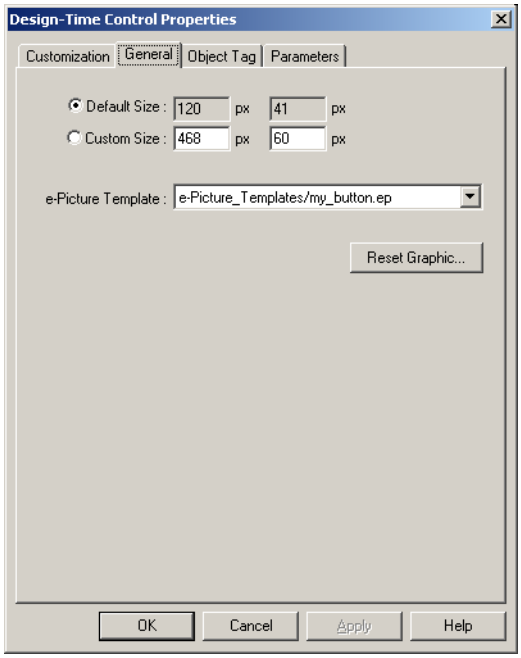
The customization fields below the Objects menu provide access to those fields that you determined should be editable in e-Picture Pro. It is here where you would change the text that is displayed in a button or the font that is used. Note: If you restricted the template to “Image Fit Text Size” in e-Picture Pro, the image will automatically resize to fit the new text. For more information on resizing restrictions, see “The Rules tab” on page 93 of Chapter 3, “Reference”.

If no fields have been enabled for modification in e-Picture Pro, the object is not shown in the Objects menu. For more information on enabling and disabling these fields and what these fields represent, see “Specifying customization rules” on page 116 of Chapter 6, “Establishing rules for dynamic imaging”.

At the bottom of the Customization tab is the **HTML Properties** section. Here, you can specify a **URL** for your image to link to, a **Target** (i.e. _blank will pop up a new browser window to display the new page), and **Alternative Text** for the graphic. Note that the HTML Properties apply to the graphic as a whole, not to the specific object selected in the Objects menu.

The General tab

The General tab is used to change the size of the graphic or to replace the current template with a different one.



The **Default Size** row shows you the current size of the graphic in pixels. The text fields are not editable since this size is determined in e-Picture Pro.

The **Custom Size** row provides you with a precise way to resize the graphic. The first number listed is the **width** of the graphic, the second is the **height**. If, for example, you decide that a button needs to be wider to accommodate the text you want to include, simply increase the first Custom Size text field value. You can always return to the Default Size by selecting that radio button.

Note: If you set the restricted the template to “Image Fit Text Size” in e-Picture Pro, the Custom Size row has no effect. For more information on resizing restrictions, see “The Rules tab” on page 93 of Chapter 3, “Reference”.

The **e-Picture Template** pop up menu allows you to choose a different template for the current image. For example, sometimes you may want to use an alternative design for a button, but only under very specific circumstances. When you select a new template from this menu, the e-Picture Imager reuses any of the current parameters for this graphic that share the same name as the previous graphic. Thus, if you have two graphics with a text object called “Button text”, any customizations to the Button text object that you made in the original graphic will be copied into the new template.

The **Reset Graphic** button reverts the e-Picture Template for the current image back to the original template. This button has no effect if the template has not been changed.

Editing Templates

From within FrontPage, you also have the ability to modify actual templates and have your changes automatically reflected in every e-Picture Imager file you have created. This is a tremendous time saving feature if you have created numerous pages and decided that you want your template (i.e. buttons) to have a different look or color scheme.

To edit a template, open the e-Picture_Templates folder in FrontPage and double-click on the template you wish to change. This action launches e-Picture Pro and loads the current template. In e-Picture Pro you can make any changes you want. Should you decide that it is easier to delete one of the objects and recreate it, just keep the object names the same and the e-Picture Imager will treat that object just like the previous one of the same name. When you Save the modified file, the template will be updated.

In order to have the changes reflected in FrontPage, close each of the web pages that use that template and reopen them. The e-Picture Imager will then detect that the template has changed and generate new images based on it.

Editing imported files in FrontPage

If you have manually imported an exported file (i.e. GIF or JPEG) into FrontPage and wish to edit from within FrontPage, simply place the e-Picture Pro file (filename.ep) in the same folder as the imported file, taking special care to ensure that the two files have the same base name (they can have different file extensions). When you edit the GIF or JPEG file, e-Picture will be notified and will load the saved version (filename.ep) of the file from your local drive or the web. When you save your changes, e-Picture automatically updates the exported version of the file for you even if it is on the web.

Advanced Upload Preparations

The e-Picture Imager generates web ready files based on the templates that you create. The web ready images are stored in the e-Picture_Images folder in order to keep them physically separated from the templates which are stored in the e-Picture_Templates folder.

As you go through the process of creating your web page, you may add and remove e-Picture Imager graphics from time to time. When you remove graphics, the e-Picture Imager has no way of knowing that this has occurred, and therefore discarded graphics can start to fill up the e-Picture_Images folder along with the necessary graphics. These discarded graphics can bog down the upload process and use up valuable disk space.

Before uploading graphics to the web (or even if you are tidying up!), you may wish to delete all of the files listed in the e-Picture_Images folder (be careful not to delete the contents of the e-Picture_Templates folder or you will lose your templates!). To do this, select all of the images in the folder and press Delete. Following this action, you will need to open each web page that uses e-Picture Imager graphics in order to re-populate this folder. Then, you can upload your web graphics knowing that no extraneous files are being posted as well.

If you manually publish your web site, you need to upload both the e-Picture_Images and e-Picture_Templates folders. With regards to the e-Picture_Templates folder, only the file bw_rollovers.js is used; the template files themselves are not need on the web server.