Chapter 13

Publishing Your Flash Files

In This Chapter

- ▶ Reducing your movie's size for fast download
- Testing your Flash movies
- ▶ Publishing Flash movies to .swf, HTML, and other formats
- ▶ Using Publish Profiles
- Posting your movie to your Web site
- Exporting movie and image files
- Creating movies that viewers can print

Your Flash movie is completed. Now you need to publish it in its final form — most likely an . swf file that you can post on your Web site. In this chapter, we explain how to prepare a Flash movie for publishing and help you determine the ideal publish settings for your needs. We also discuss how to publish to other graphic file formats such as PNG, in case you want to create a non-Flash site or use your material in another program. We cover all the bases so that you can get your animation up and running.

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The filenames of Flash-published movies end with the .swf suffix. The letters *SWF* originally stood for *Shockwave Flash*, but nobody uses that term for Flash movies anymore, even though the letters remain the same. So we refer to SWF files as Flash Player files, not Shockwave Flash files. Flash converts your movie data into a highly compact and efficient form in an SWF file; the SWF file contains only the information needed for playback of your movies. In contrast, when you save your movies by choosing File=Save (or File=Save As), they are saved with the .fla suffix. They are saved in a format that can be read by the Flash CS3 application, but not the Flash Player. The .fla file contains lots of information about layers, Library items, your video source files, and so on, which you need when you are creating your movies and which the Flash Player doesn't need.

Optimizing Movies for Fast Download

Throughout this book, we offer suggestions for designing a Flash movie with speedy downloading in mind. In this section, we put the suggestions together so that you can review your movie as a whole before you publish it.

Reducing your Flash Player file sizes is no longer so important because many people now have high-speed Internet connections. But not everyone does. So it still isn't a bad idea to spend a little time thinking about shrinking the size of your Flash movies.

Simplifying artwork

By simplifying the artwork in your movie, you can greatly reduce the size of a Flash movie, thereby increasing its speed. Here are the most important techniques:

- ✓ Use symbols for every object that appears more than once. You can turn any object or group of objects into a symbol. Nest your symbols for example, turn an object into a symbol and then use it in a movie clip or button. Remember that you can change the color of symbol instances — you don't need to create a new symbol. (Chapter 7 covers symbols in detail.)
- ✓ Group objects whenever possible. Groups are almost as efficient as symbols. (Chapter 4 explains how to create groups.)
- ✓ Use vector graphics rather than bitmaps when you can. When you do use bitmaps, don't animate them unless you need to. Bitmaps and bitmap animation can increase your Flash Player file size and thus the download time. However, with the rising adoption of broadband Internet access, bitmaps are an increasingly important part of Flash projects, including the sites referred to in this book, and now Photoshop files can easily be imported into Flash. (Chapter 3 explains how to import a bitmap.)
- ✓ Optimize curves (choose Modify ⇒ Shape ⇒ Optimize). You can optimize curves to reduce the number of lines used to create a shape. This can be tiresome on a large project, but if you really need to reduce the size of your Flash movie, this may help. (Check out Chapter 4 for further explanation.)
- ✓ Use solid lines rather than dashed, dotted, and other line types when possible. Try to avoid custom line widths. (We explain line types in Chapter 3.)
- ✓ Use the Pencil tool rather than the Brush tool whenever possible. The Pencil tool uses fewer bytes in your movie.

- ✓ Use the Web-safe color palette. Avoid custom colors. (Check out Chapter 3 for the lowdown on colors.) Custom color definitions are kept with the Flash Player file.
- ✓ Avoid using transparency when you don't need it. Using transparency doesn't make your Flash file bigger, but it can slow down playback because of the extra calculation required. (On the other hand, sometimes transparency effects make your movie look really great.) See Chapter 7 to find out about changing the transparency of the elements in your movie.
- ✓ Use solid fills rather than gradients. Gradients are more complex and make the Flash Player file bigger. However, gradients are also key to the Flash look that is so popular. They help to make vector graphics look less flat.

Optimizing text

Text can consume lots of bytes. Here's what you can do to reduce the byte bite:

- Reduce the number of fonts and font styles (bold, italic) as much as possible. Use simpler sans serif fonts if you can. You get the best results file-size-wise with the device fonts (sans, serif, and typewriter), although you might find these device fonts boring. Flash doesn't need to store the outlines of device fonts in the .swf file, so these take up fewer bytes. And usually your Flash projects will look better if you don't use too many fonts a useful rule in the graphic design world is to avoid using more than three fonts in a design. (See Chapter 5 for more information on fonts.)
- ✓ If you create text fields, limit the text and specify any restrictions that you can in the Character Options dialog box. (Choose Window Property Properties to open the Property inspector if it's not already open, and then click Character in the Property inspector to open the Character Options dialog box.) For example, exclude unnecessary character outlines, such as numbers.

Compressing sound

You can compress sounds to reduce the file size. When you compress individual sounds in the Sound Properties dialog box, you can fine-tune settings for each individual sound in your movie. Later in this chapter, we review how to compress sound when you publish a Flash movie. Use the MP3 format whenever possible because it compresses well. If you need more information on compressing sounds, check out Chapter 11. Here are some other ways that you can reduce the size of your sound files:

- ✓ Adjust the sound's Time In and Time Out points to prevent silent areas from being stored in your . swf file.
- Reuse sounds by using different In and Out points and by looping different parts of the same sound.
- Don't loop streaming sound.

See Chapter 11 for more information on editing, looping, and streaming sound.

Animating efficiently

One of the most effective ways to reduce file size is to use tweens (see Chapter 9). Frame-by-frame animation creates larger files. Keeping animation localized in one area also helps. Small animations (animations where the objects don't move much) produce smaller file sizes than wide-area animations.

Testing Movies

Before publishing your movie, you should test it. The first step is to simply play your animation, as we explain in Chapter 9. But playing the animation on the Stage doesn't provide you with enough information to determine problems caused by file size. To find those kinds of bugs, you have to use the Test Movie command or test your movie in a browser. The following sections tell you how to test both ways.



Flash CS3 is optimized for the tasks that you perform when creating a Flash movie (such as drawing, adding keyframes, showing and hiding layers, and typing ActionScript code). It's not optimized for playing back your animation the Flash Player is optimized for that. Your .fla file contains lots of information that you need when you're creating your movies but the Flash Player doesn't need. The Flash Player plays only . swf files, which you can create when you choose File=>Publish.

Using the Test Movie command

After playing your animation, you should use the Test Movie or Test Scene command. Then you can use the Bandwidth Profiler (and other tools described in the following steps) to provide estimates of downloading speed so you can find bottlenecks that pause your animation. You can also see the results of movie clips and all ActionScript code.



If you're using movie clips, they won't play when you choose Control +>Play. To see them play you must choose Control +>Test Movie or Control +>Test Scene.

To test a movie or scene, follow these steps:

1. Choose Control Test Movie (or Test Scene).

Flash publishes your movie to an .swf file by using the current settings in the Publish Settings dialog box (see the section "Publishing Flash Movies," later in this chapter) and opens a new window. You see your animation run. You can change the settings in the Publish Settings dialog box (choose File=>Publish Settings) before using this command.

2. Choose View Download Settings and choose a downloading speed between that of a 14.4 modem (1.2 Kbps) to a T1 line (131.2 Kbps).

If you repeatedly change the download settings, you get a better sense of their effect. To specify your own settings, choose Customize, and in the Custom Modem Settings dialog box, enter the menu text that you want to appear on the menu and the bit rate in bytes per second. Click OK. Then open the Download Settings menu again and choose your customized setting, which now appears on the menu.

3. Choose View=>Bandwidth Profiler to see the graph that shows the downloading performance.

The bandwidth profiler (as shown in Figure 13-1) displays the byte size of each individual frame. Frames whose bars rise above the lower red horizontal line cause loading delays.

4. To see settings for any one frame, stop the movie by clicking the frame's bar.

To the left of the bandwidth profiler, Flash displays the movie's statistics: dimensions, frame rate, file size, movie duration, and the amount of animation to preload in frames and seconds. You also see the size of each individual frame.



Frames with bars above this line cause loading delays.

- 5. Choose View=>Streaming Graph to see how the Flash movie streams into a browser.
- 6. Choose View=>Frame by Frame Graph to see which frames contribute to delays.

A frame whose bar extends above the red line may cause a bottleneck when the movie downloads at the connection speed you choose in Step 2. By default, Flash opens the SWF window in Streaming Graph mode.

- 7. Choose View=>Simulate Download if you want to see the Flash movie play as if loading at the speed you choose in Download Settings in Step 2.
- 8. To close the SWF window, click its Close button.

After you analyze your movie, you can go back and optimize it to eliminate delays. A short delay in the first frame is usually acceptable, but significant delays during the movie result in jerky animation or pauses.



If you have a long movie divided into scenes, you can save time by using the Test Scene command instead of the Test Movie command.

Testing a movie in a Web browser

The final steps of testing a movie are publishing it and viewing it in a Web browser. For a quick view, you can use the Publish Preview command. Flash publishes your movie to an .swf file, creates the appropriate HTML file, and opens the HTML file in your default browser. Viewing your Flash Player file in a browser reveals how the browser will display the movie when you upload it to a Web site.

Flash uses the current settings in the Publish Settings dialog box to create the preview, including the types of file formats that you have selected.

To preview your movie in a browser, follow these steps:

1. Choose File Publish Settings to open the Publish Settings dialog box. Choose the desired file formats and publish settings, and then click OK.

See the "Publishing Flash Movies" section, later in this chapter, for more information on the Publish Settings dialog box.

2. Choose File Publish Preview and choose the desired format from the submenu.

Flash opens your browser and runs your movie.

3. Close your browser to end the preview.

As with any Web page material, you need to consider the following when testing a Flash Player file:

- ✓ The browser that your audience is using: Preview your Flash Player file in the current version of both Internet Explorer (IE) and Mozilla Firefox, if possible. You should probably try out at least one earlier version of Internet Explorer, too. And you should test it in Safari on a Mac. Okay, so you probably won't do all this, but don't say that we didn't tell you.
- ✓ The resolution of viewers' screens: Test at least the following common settings: 800 x 600 and 1024 x 768. Remember that the amount of material that appears on the screen changes with the resolution. If you preview at 640 x 480, you can be sure that people with higher resolutions can see your entire movie, but then again, a Flash movie that fits in a 640 x 480 screen may look pretty humble on a 1280 x 1024 screen.
- ✓ The color settings of viewers' screens: Color settings might range from 256 colors to 16 million. If you aren't using Web-safe colors, some viewers might not see them accurately. But the vast majority of viewers now have thousands or millions of colors, which means that it's not so important to test that your movie looks good with fewer colors.

Professional Web site developers take this testing phase seriously. No matter how good an animation looks on your screen, it's not a good animation if it doesn't translate well to your target number of viewers' screens.

Saving Your Work in Flash 8 Format

If you're collaborating on a Flash project with a group of friends or co-workers and they're still using Flash 8 (the predecessor of Flash CS3), there is still hope for them. You can save your work in Flash 8 format.

To save your work in Flash 8 format, follow these steps:

1. Choose File Save As.

The Save As dialog box appears.

- 2. Choose where you want to save your file and then type the filename you want to use.
- 3. Click the Format drop-down list and select Flash 8.
- 4. Click Save.



If you're using features new to Flash CS3, a window appears, listing the new features that won't be saved in the Flash 8 file and asking whether you want to continue. Click the Save as Flash 8 button if you want to continue. If you do so, some of the data in your file will not be available in this saved version. So be sure to save a CS3 version as well to keep all your data intact.

Publishing Flash Movies

So you're finally ready to publish your Flash masterpiece. It's time to choose File Publish Settings. This brings you to the Publish Settings dialog box. Don't be overwhelmed by all the options. Usually, you use only a few of them. Start by specifying the settings. Then publish the movie to create the .swf file viewed on a Web page.

After you specify the settings, you can click OK rather than Publish if you want to go back to your Flash movie file and choose Control Test Movie to see the results of your settings. You can try various settings until you're satisfied. Then click Publish to create the final SWF (Flash Player) file. Published files are in the same folder as your FLA movie file by default; you can specify another location if you want. Of course, you can also move the files afterward.

The Publish Settings dialog box lets you easily specify all your settings in one place. Then you click the Publish button, and Flash creates the SWF (Flash Player) file according to your settings. Choose File⇔Publish Settings to open the Publish Settings dialog box with the Formats tab on top, as shown in Figure 13-2.

Publish Setti	ngs	
Current profile: Bounce Publish Profile	¢ + =	0 9
Formats Flash	HTML	
Type:	File:	
🗹 Flash (.swf)	bounce.swf	
HTML (.html)	bounce.html	1
GIF Image (.gif)	bounce.gif	
JPEG Image (.Jpg)	bounce.jpg	1
PNG Image (.png)	bounce.png	1
Uindows Projector (.exe)	bounce.exe	
Macintosh Projector	bounce.app	1
QuickTime with Flash Track (.mov)	bounce.mov	6
	Use Default Names	
		_

Figure 13-2: The Publish Settings dialog box is your one-stop place for starting the publishing process of your Flash movie. Flash automatically names the files that it creates for you, using the Flash movie's name and adding the appropriate file extension, such as <code>.html</code> and <code>.swf</code>. You can see the names in the Formats tab of the Publish Settings dialog box. To specify your own name for a file, click the File text box and type the new name. To revert to the default filenames, click the Use Default Names button.

Most of the time, you need only the Flash (.swf) and HTML formats. But if you want other formats, select them on the Formats tab. When you mark an additional format, the dialog box adds a new tab for that format (except for the projector formats, which don't need one).

After you mark the formats you want, click each tab to specify the settings for that format. The next few sections of this chapter explain each format, why you might want to use it, and how to specify the settings.

After you finish specifying all your settings, click the Publish button, and Flash does your bidding, creating the files that you need to put your great creation on the Web.

Publishing to SWF

The second tab in the Publish Settings dialog box (choose File=>Publish Settings) is the Flash tab, which creates the Flash Player file, also called an . swf file. On this tab, shown in Figure 13-3, you specify settings that affect the .swf file.

Flash gives you the following options:

- ✓ Version: Allows you to save in previous version formats for backward compatibility (or in the Flash Lite format for playing Flash movies on mobile phones, but that's a subject for another book). If you use new features but choose an old Flash Player version, Flash warns you of potential problems when you publish your movie.
- ✓ Load Order: Specifies how Flash displays the first frame of the Flash movie. Bottom Up (the default) loads layers from the lowest layer upward. Top Down loads layers starting from the top layer and moving downward. Your viewers will see the difference between these two settings only if the Flash movie is loading slowly (because of a slow Internet connection, for example). Because faster Internet access speeds are becoming increasingly common, you may not need to worry about this.

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Current profile. Bounce Publ	ish Profile 🗘 🗘 🕂 🖽 🕻
(Formats Flash HTML
Version:	Flash Player 9
Load order:	Bottom up 🛟
ActionScript version:	ActionScript 3.0 🛟 Settings
Options:	Generate size report
	Omit trace actions Permit debugging
	Compress movie
	Optimize for Flash Player 6 r65
	Export hidden layers
Password:	
Script time limit:	15 seconds
JPEG quality:	, j 0 100
Audio stream:	MP3, 16 kbps, Mono Set
Audio event:	MP3, 16 kbps, Mono
	Override sound settings
	Export device sounds
Local playback security:	Access local files only

Figure 13-3: Specify how Flash creates the SWF (Flash Player) file.

ActionScript Version (for Flash Player 6, 7, 8, and 9, and Flash Lite 2.0 and 2.1 only): Specifies whether your movie is using ActionScript 1.0, 2.0, or 3.0. ActionScript 2.0, which was introduced in 2003, added new commands to ActionScript that are mostly of interest to intermediate or advanced programmers who are building applications in Flash that implement new classes and subclasses of objects. ActionScript 3.0 is new in Flash CS3. Fundamental changes in the underpinnings of ActionScript in version 3.0 make it possible for ActionScript 3.0 code to execute up to ten times faster than code from earlier versions.



In this book, we use the new methods for handling events and other new methods of ActionScript 3.0, so generally you will want to choose ActionScript version 3.0 in the ActionScript Version drop-down list. You can try choosing ActionScript 1.0 in the ActionScript Version drop-down list and an earlier version of the Flash Player (such as Flash 5 or Flash 6) in the Version drop-down list, and then see whether you get a warning when you publish your movie. If you don't get a warning, your published movie will safely play on older versions of Flash, and thus may reach a larger audience. ✓ Generate Size Report: Creates a .txt file that you can use to troubleshoot problem areas. The report relates the various parts of your movie to the number of bytes that they require in the .swf file.



- The size report can be more useful than the bandwidth profiler in pinpointing the location of the giant-size parts of a movie. It's worth reviewing, and it's interesting (and often surprising) to see the size of the various elements of the .swf file.
- ✓ Protect from Import: Prevents the .swf files from being downloaded from the Web site and imported back into Flash. This feature doesn't provide 100-percent-guaranteed protection, but it helps keep your work from being "borrowed."
- ✓ Omit Trace Actions: Omits special codes used by programmers. *Trace actions* insert into Flash movies the codes used to record and display technical information about a Flash movie's progress in a special window, named the Flash Debugger. Programmers use this information to *debug* (remove errors from) their ActionScript programming. If you added Trace actions to your Flash movie, select the Omit Trace Actions check box to omit these codes from the . swf file, and your file will be smaller.
- Permit Debugging: Lets you use the Debugger to debug a Flash movie from another computer. If you permit debugging, you can add a password to protect the movie file. Although this option is useful for ActionScript programmers, discussing it is beyond the scope of this book.
- ✓ Compress Movie: Compresses your Flash Player file, especially text and ActionScript, so that it can download faster. This option is great except that your compressed file does not play in Flash Player versions earlier than Flash Player 6.



Your Flash movie probably uses some feature that's been added to Flash after Flash Player 5 anyway, so you might as well go for it and compress your movie.

- ✓ Optimize for Flash Player 6 r65: This option appears if you choose Flash Player 6 when you choose the Flash Player version at the top of the dialog box. Flash Player 6 r65 was an updated version of Flash Player with significant bug fixes and performance enhancements.
- Export Hidden Layers: This option is set by default. If you deselect this option, Flash will not publish layers (including layers inside movie clips) that are marked as hidden. Deselecting this option can be useful because then you can test different versions of your document simply by hiding layers.

- Export SWC: If you're new to Flash, you can safely leave this option disabled. SWC files are packages of precompiled components. Components in Flash can be implemented either in an .fla file or an .swc file. The User Interface components (such as CheckBoxes, ComboBoxes and RadioButtons) are implemented as FLA-based components, and the FLVPlayback and FLVPlaybackCaptioning components are SWC-based. You can use ActionScript to add SWC-based components while a Flash Player movie is running so that they can be kept in .swc files that are separate from your Flash Player file. Because .swc files contain precompiled components, the components appear faster than ordinary movie clips. If you enable this option, when you publish your file, Flash creates an .swc file that contains your SWC components and an .swf file that uses the .swc file.
- ✓ Password: Allows you to select a password for debugging, if you enable the Debugging Permitted (or Protect from Import) check box. This option prevents viewers from debugging (or importing) the movie unless they have the password.
- ✓ Script Time Limit: If a Flash movie seems to be stuck in an endless loop, after 15 seconds the Flash Player will present the user with dialog box asking whether to continue or quit. Here you can set the limit to a time other than the default of 15 seconds.
- ✓ JPEG Quality: Sets the compression (size) versus quality of bitmaps, if you have any in your movie. You can set the quality anywhere from 0 (the lowest quality and highest compression) to 100 (the highest quality and lowest compression).
- ✓ Audio Stream: Displays and sets the audio compression for stream sounds (sounds that use the Stream Sync setting in the Property inspector when a frame with the sound is selected). This setting applies if you haven't set the compression for individual sounds in the Sound Properties dialog box. Also, if you enable the Override Sound Settings check box in the Publish Settings dialog box, this setting overrides the setting in the Sound Properties dialog box. To change the current setting, click Set. The options are the same as in the Sound Properties dialog box. (Turn to Chapter 11 for details on setting sound properties.)
- ✓ Audio Event: Displays and sets the audio compression for event sounds (as set in the Property inspector when a frame with the sound is selected). Otherwise, the compression setting is the same as Audio Stream.
- ✓ Override Sound Settings: Select this option to override settings in the Sound Properties dialog box. Then the settings here apply to all sounds in your movie.
- Export Device Sounds: This gives you the option of exporting sounds in formats suitable for playback on mobile devices, such as certain mobile phones and personal digital assistants (PDAs). To do this, you use proxy sound files, a discussion of which is beyond the scope of this book.

✓ Local Playback Security: If you select Local Access Only, your Flash movie can interact only with files and resources on the computer that it's playing on. If you select Access Network Only, your movie can interact only with files and resources on the network, and not with those on the computer it's playing on. (This separation of local and network access helps make it more difficult for a malicious programmer to create a Flash file that collects data from your computer and transmits it over a network such as the Internet.)



If all these settings seem like a bit much, you can always just use the default settings, go with the flow, and check the results.

Publishing to HTML

HTML is the basic language of Web pages. If you work on a Web site, you can write the HTML code from scratch or use an HTML editor. However, many people use a Web authoring program, such as Dreamweaver.

To place a Flash Player file on a Web page, you need the proper HTML code. You probably also want some sophisticated JavaScript code in the Web page that takes care of recent changes in Internet Explorer so that your Flash movies will activate automatically, without first requiring that the user respond to a prompt for a click. (*JavaScript* is a programming language that is designed to give Web pages capabilities far beyond what HTML can do.) Luckily, Flash can create all this code for you, in formats suitable for most browsers.



As the result of a patent lawsuit, in 2006 Microsoft released an updated version of Internet Explorer that prompts the user with a request for a confirmation click for each Flash file, QuickTime movie, and other Active X control in each Web page, to confirm that the user wants to activate it. Yikes!

Understanding the HTML code for a movie

Figure 13-4 shows the type of HTML code and JavaScript code that Flash generates when you publish your Flash file by using default settings, as displayed in TextEdit on a Mac. (In TextEdit, before opening your HTML file, be sure to choose TextEdit¢Preferences and then select the Plain Text option in the New Document Attributes section of the Preferences dialog box.) Windows users can use Notepad to view HTML code created by the Publish command.

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If you know some HTML, some parts of this page will look fairly familiar. (And if you don't, you might want to check out *HTML 4 For Dummies*, 5th Edition, by Ed Tittel and Mary Burmeister, from Wiley Publishing, Inc.) The page starts with the *tags* (codes) that all HTML documents contain, namely <html>, <head>, <title>, and <body>. Here's how to understand the code in Figure 13-4:



After <body, you see bgcolor="#ffffff">. This is the background color of the entire HTML page.

By default, Flash makes the background color of the HTML page the same color as the background of your Flash movie, but you might prefer to change it to a different color to help visually define the Flash movie.

- After the comments (which start with <!) is JavaScript code between the <script language="javascript"> tag and the </script> tag. This code is used by another JavaScript file (named AC_RunActiveContent. js) created by Flash when you publish your Flash movie. The JavaScript code writes HTML code that your Web browser will display. So the JavaScript code creates the HTML code that creates the Web page that you end up seeing.
- After the </script> tag, you see a <noscript> tag. All the code after the <noscript> tag is the HTML for the Web page that will appear if users have JavaScript turned off in their browser.

- Next you see the object tag. Microsoft Internet Explorer requires this tag to display your Flash Player files. The object code includes the following:
 - Detailed codes (which are required to tell Internet Explorer how to display your player file).
 - The specification of the version of the Flash viewer to look for and where to download it if necessary.
 - The width and height of the Flash movie in the browser.
 - The name of the file (value="Movie of the Year.swf").
 - Parameter settings for local or network access, looping, quality, and background color. You set the background color by choosing Modify Document in Flash and choosing a background color in the Document Properties dialog box. (See Chapter 2 for details on using this dialog box.)
 - The embed code is for Netscape Navigator, Mozilla, and Mozilla Firefox browsers, and accomplishes the same thing as the object code.
- Finally, you see the closing </object> tag, the closing </noscript> tag, and the tags that end every HTML document: </body> and </html>.

If you want to use the HTML document as is, you can. But if you want to combine your Flash Player file with the elements in another HTML file (as you would for a Flash button, for example), you need to combine the code in the two documents.

One way you can do this is to treat as one unit all the code in the first document (the HTML document created in Flash when you choose File=>Publish), starting with <script language="javascript"> and ending with </script>, which is the tag immediately before the <noscript> tag. Think of this unit as your Flash movie code. Then copy HTML from your second HTML document and paste it before or after your unit of Flash movie code, to display HTML elements before or after your Flash movie.

If you didn't change your default folder locations in the Formats section of the Publish Settings dialog box, your .swf file will be in the same folder as the HTML file that Flash creates when you publish your movie. In that case, the HTML <object> and <embed> tags created by the Flash publishing process reference the .swf file by simply mentioning the filename. For that to work, the .swf file must be in the same folder on your Web site's server as your Web page's HTML file.

If you usually keep image files in a subfolder and want to also place your .swf file in that subfolder, you can specify that location in the Formats tab of the Publish Settings dialog box. Click the small folder icon to the right of the name of the .swf file, and navigate to the subfolder where you want it to be placed.

Specifying Flash Player detection and other HTML settings

To create the HTML file, you need to specify the HTML settings on the HTML tab of the Publish Settings dialog box, as shown in Figure 13-5.

		Publish Settings
	Current profile: Bounce Po	ublish Profile
		Formats Flash HTML
	Template:	Flash Only Info
		Detect Flash Version Version: 9.0
	Dimensions:	Match Movie
	Playback:	65 X 60 pixels □ Paused at start ☑ Display menu
	Quality: Window Mode:	High
	HTML alignment:	Default
Figure 13-5:	Scale:	Horizontal: Vertical:
Specify	Flash alignment:	Center 🗘
creates HTML code to display		Show warning messages
your movie.		Publish Cancel OK

Template

The first setting, Template, lets you select a template. The template determines the format and contents of the HTML file. To keep matters simple, select the default, Flash Only. Table 13-1 explains the other template options, although it's very possible that you may never need to use anything other than the default, Flash Only.

Table 13-1	HTML Template Options
Option	What It Does
Flash for Pocket PC 2003	Creates an HTML file with <object> and <embed/> tags and with Pocket PC-specific alignment. Can be used with Pocket IE and with desktop Internet Explorer and Netscape browsers.</object>
Flash HTTPS	Creates an HTML file with JavaScript code that displays your Flash movie without requiring a user to first respond to a prompt. Uses the HTTPS protocol to specify where to go to download the Flash Player if necessary. <i>HTTPS</i> is designed to send data over the Web more securely than the standard method (HTTP). Also creates a JavaScript file in your HTML output folder, and this must be uploaded along with the HTML file.
Flash Only (Default)	Creates an HTML file with JavaScript code that displays your Flash movie without requiring a user to first respond to a prompt. Also creates a JavaScript file in your HTML output folder, and this must be uploaded along with the HTML file.
Flash with AICC Tracking	Includes support for AICC-HACP tracking when using Macromedia Learning Interactions. (AICC is Aviation Industry Computer-Based-Training Committee, and HACP is HTTP AICC Communications Protocol.)
Flash with FSCommand	Used when you have added an FSCommand action to your movie to interface with JavaScript. The HTML file also includes the <object> and <embed/> commands.</object>
Flash with Full Screen Support	Creates an HTML file with JavaScript code that displays your Flash movie without requiring a user to first respond to a prompt. Includes support for playing your Flash movie full screen. Also creates a JavaScript file in your HTML output folder, and this must be uploaded along with the HTML file.
Flash with Named Anchors	Creates an HTML file with <object> and <embed/> tags. Adds browser scripting and HTML anchors so that viewers can bookmark Flash content in Flash Player 6 and later, and thus use the Web browser's Back button effectively while navigating within a Flash movie.</object>
	This could be a great feature, but many browsers don't support it, so it's fairly useless.

(continued)

Table 13-1 (continued)				
Option	What It Does			
Flash with SCORM 1.2 Tracking	Includes support for SCORM (Sharable Content Object Reference Model) version 1.2 tracking when using Macromedia Learning Interactions.			
Flash with SCORM 2004 Tracking	Includes support for SCORM 2004 tracking when using Macromedia Learning Interactions.			
Image Map	(If you don't know what an image map is, don't worry about this option.) Instead of displaying an SWF player file, uses a GIF, JPEG, or PNG image (which you need to choose in the Formats tab) as a client-side image map coded in your HTML page.			
QuickTime	Creates <embed/> and <object> tags in an HTML page to display a QuickTime Flash movie based on your Flash movie. You need to select the QuickTime check box on the Formats tab. A QuickTime Flash movie plays with only QuickTime 4 or later. QuickTime 4 can recognize only Flash 3 features. QuickTime 5 can recognize Flash 4 fea- tures. (QuickTime 4 and 5 are old, so this isn't an interest- ing way to publish your Flash movies.)</object>			

Below the Template drop-down list is the Detect Flash Version check box. (This option is available only if you choose Flash Player 4 or later in the Flash tab of the Publish Settings dialog box and the Flash HTTPS or Flash Only template.) Select this check box to add browser scripting to detect the Flash Player for the version of Flash you specify on the Flash tab. When this check box is enabled, the Version number text boxes below it are also enabled. If you want to more exactly specify the minimum version required, type revision numbers in the Minor Revision and Incremental Revision text fields there. (*Minor Revision* and *Incremental Revision* appear in tooltips when you move the mouse cursor over the text boxes.)

If you select the Detect Flash Version check box, when you publish your Flash file, the resulting HTML code prints "Alternate HTML content should be placed here" in your Web page if the Flash Player of the specified version can't be found or if the Web browser doesn't have scripting enabled. (Scripting must be enabled by the Web browser for the Flash Player version detection to work.) You can edit the HTML to replace the sentence "Alternate HTML content should be placed here" with whatever alternative content you want to display when the Flash Player version can't be found.

Dimensions

The Dimensions options control the size allotted to your Flash Player movie on your Web page. You have three options:

- ✓ Match Movie matches the width and height that you set in the Movie Properties dialog box (choose Modify ⇒ Document).
- Pixels lets you specify the Width and Height in pixels. Type the desired values in the text boxes.
- ✓ Percent lets you specify the area used by the Flash Player movie as a percentage of the browser window size. The 100% setting is ideal for pages designed to take up the entire page. Type the desired percentage values in the text boxes labeled Width and Height.

Playback

The Playback section determines the values of parameters in the HTML code. You have four options:

- Paused at Start creates a PLAY parameter whose value is FALSE. The person must start the movie by clicking a button in the movie the button's instance needs to have a Play action in it. Alternatively, viewers can right-click (Windows) or Control+click (Mac) the movie and choose Play in the shortcut menu, but they might not be aware of this. By default, this check box is deselected, so movies start to play automatically.
- ✓ Loop creates a LOOP parameter whose value is TRUE. The movie repeats over and over. By default, this check box is selected, so make sure to clear it if you don't want to loop your movie!
- ✓ Display Menu creates a MENU parameter set to TRUE. This option enables viewers to right-click (Windows) or Control+click (Mac) the movie and choose from a menu. The menu options in Flash Player 9 are Zoom In/Out, Show All, Quality (High, Medium, or Low), Play, Loop, Rewind/Forward/Back, Settings, Print, Show Redraw Regions, Debugger, and About Adobe Flash Player 9. Without this option, Settings, Show Redraw Regions, Debugger, and About Adobe Flash Player 9 are the only items on the shortcut menu. By default, Display Menu is selected.

Show Redraw Regions shows you the outlines of the regions of your movie that Flash is currently refreshing.

✓ Device Font applies to Windows playback only. When this check box is selected, the HTML file includes a DEVICE FONT parameter set to TRUE, and Flash substitutes *anti-aliased* (smoothly curved) system fonts for fonts not available on the viewer's system. This applies only to static text you create in Flash. By default, this item is not selected.

Quality

The Quality section determines the quality parameter in the <object> and <embed> tags of the HTML code. Quality refers to the level of anti-aliasing, which means the smoothing of the artwork so that it doesn't have jagged edges. The lower the quality, the faster the playback. Usually, you want to find a middle ground between quality and speed. You have six options:

- ✓ Low doesn't use any anti-aliasing (and looks awful).
- ✓ Auto Low starts at a low quality but switches to a high quality if the viewer's computer, as detected by the Flash Player, can handle it.
- Auto High starts at a high quality but switches to a low quality if the viewer's computer can't handle the playback demand. This option should provide good results on all computers.
- Medium applies some anti-aliasing but doesn't smooth bitmaps. This option is a good middle ground between low and high. This setting is the default.
- High always uses anti-aliasing for vector art. Bitmaps are smoothed only if the file doesn't contain tweens. (See Chapter 9 for the scoop on tweens.)
- ✓ Best always uses anti-aliasing, including for bitmaps.

Window Mode

Window Mode specifies how the player movie's window interacts with the rest of the page. Here are your options:

- Window plays your movie as an opaque rectangle within your Web page and does not allow your HTML to render other content in that rectangle. This is the default mode.
- ✓ Opaque Windowless creates an opaque background for the movie so that other elements in the Web page don't show through when they're behind the movie. This setting does allow your HTML to render content in front of the movie.
- ✓ Transparent Windowless makes the Flash background color transparent so that other elements on your Web page show through (or can appear on top of) your Flash content. This setting might slow down playback.

The code for the Transparent and Windowless modes has an effect only in more recent browsers running on Windows or Mac OS X — Internet Explorer version 5 and later, Netscape version 7 and later, Mozilla 1 and later, Firefox 1 and later, and Opera 6 and later.

HTML Alignment

The HTML Alignment setting specifies the ALIGN attribute and specifies how the Flash Player movie is aligned within the browser window. You have five options:

- ✓ Default theoretically centers the Flash movie. If the browser window is smaller than the movie, this option theoretically crops the edges of the movie. But in our tests, the default is always left even though it should be center.
- ✓ Left aligns the movie along the left side of the browser window. If the window is too small, this option crops the other sides of the movie.
- ✓ Right aligns the movie along the right side of the browser window. If the window is too small, this option crops the other sides of the movie.
- ✓ Top aligns the movie along the top of the browser window. If the window is too small, this option crops the other sides of the movie.
- ✓ Bottom aligns the movie along the bottom of the browser window. If the window is too small, this option crops the other sides of the movie.

Scale

The Scale setting defines how the movie is placed within the boundaries specified by code in the HTML page when (and only when) you set a width and height different from the movie's original size, using the Pixels or Percent options in the Dimensions section of the Publish Settings dialog box. You have four options:



Default (Show All) displays the entire movie without distortion but might create borders on two sides of the movie.

The Show All setting shows all the elements in your Flash movie, even those that you move to the sides, off the Stage.

- ✓ No Border scales the movie to fill the dimensions without distortion but might crop portions of the movie.
- Exact Fit fits the movie to the dimensions, distorting the movie if necessary.
- ✓ No Scale stops the movie from changing its scale if the viewer resizes the Flash Player window.

Flash Alignment

Flash Alignment determines how the movie fits within the movie window (as opposed to the browser window). It works together with the Scale and Dimensions settings. In other words, it determines how the Flash movie fits within the dimensions you specify. For the Horizontal setting, you can choose Left, Center, or Right. For the Vertical setting, you can choose Top, Center, or Bottom.

Show Warning Messages

At the bottom of the Publish Settings dialog box is the Show Warning Messages check box. When it's selected, you see warning messages during the publishing process. The publishing process continues, but you know that you might have made an error. For example, if you've chosen a template that requires a GIF or JPEG image but you haven't selected either format on the Formats tab, you see a warning message.

After you choose your settings, click OK to return to your movie or click Publish to publish it.

Publishing to Other Formats

You can use Flash's Publish Settings to generate files in a variety of other formats besides HTML pages and Flash Player movies. These other formats are GIF images, animated GIFs, JPEG images, PNG images, QuickTime movies, and self-playing Windows and Mac projectors.

Even if you use Flash all day, every day, you might never need to generate GIF images, JPEG images, or QuickTime images from your Flash movies, so we won't clog up your life by describing the Publish Settings for those formats here.

Creating PNG graphic files

PNG files can display millions more colors than GIF files and support transparency. They offer some of the advantages of both GIFs and JPEGs. To create a PNG image, choose PNG Image on the Formats tab of the Publish Settings dialog box (refer to Figure 13-2). Flash creates a PNG tab in the dialog box, as shown in Figure 13-6.

Flash publishes the first frame of your movie unless you label a different frame with the #Static label. (To create a label, click the frame and choose Window > Properties > Properties to open the Property inspector. If necessary, expand the Property inspector to its full size. Type a label name in the Frame text box on the left side of the Property inspector.)

		Publish Sett	tings
	Current profile: Bound	ce Publish Profile	++++03
		Formats Flash I	ITML PNG
	Dimensions:	Width: Height: 65 X 60	Match movie
	Options:	Optimize colors Interlace	Dither solids Remove gradients
	Dither:	(None	•
	Palette Type: Max colors:	Web 216	<u></u>
	Palette: Filter options:	None	
Figure 13-6 [.]			
Use the PNG tab to create PNG			
images.		(Publish Cancel OK

You have the following options:

- ✓ Dimensions lets you specify your own Width and Height settings if you deselect the Match Movie check box. This could be useful if you want to create a thumbnail image to use on a Web page to link to your movie. By default, Flash matches the dimensions of the movie.
- ✓ Bit Depth controls the number of bits per pixel, which in turn means how many colors the image contains. You can select 8-bit for 256 colors (like a GIF), 24-bit for 16.7 million colors, or 24-bit with Alpha, which allows for transparency. When you choose 24-bit with Alpha, the image's background becomes transparent. This is one of the things that designers love about PNG files.
- ✓ **Options** specifies how the PNG file appears:
 - **Optimize Colors** removes unused colors from the file's color table to reduce the size of the file.

- Interlace causes a static PNG image to load in incremental resolutions, so the image appears first fuzzy and then successively sharper. Some people like this option because viewers may be able to click the image before it fully downloads, thus reducing their waiting time.
- Smooth anti-aliases (smoothes) the artwork. Text usually looks better (and the file size is larger), but occasionally you may get an undesirable halo effect around your art. In that case, turn off smoothing.
- Dither Solids does just that it dithers solid colors as well as gradients and images. Dithering is a way to approximate colors not available on the color palette by using a range of similar colors. This applies only to files with 8-bit color. See the Dither option, which we describe a few paragraphs from now.
- Remove Gradients turns gradients into solids. Gradients may not look good in a Web-safe color table. Nevertheless, Flash uses the first color in the gradient, which may not be the color you want.
- ✓ Dither enables dithering for files with 8-bit color, as we define in the Dither Solids bullet in the Options descriptions. Dithering helps to create more accurate looking colors but increases file size. Choose one of the three options:
 - None disables dithering.
 - Ordered provides a medium amount of dithering and a corresponding medium increase in file size.
 - Diffusion provides the best-quality dithering and increases file size the most. It works only with the Web 216-color palette. (Refer to Chapter 3 for a description of color palettes.)
- ✓ Palette Type determines the color palette for the PNG image. This applies only to PNG files with 8-bit color. (Refer to Chapter 3 for a discussion of colors in Flash.) You have four options:
 - Web 216 uses the standard 216-color palette that includes only Web-safe colors (those that look good on all Web browsers). You can usually get good results for Flash artwork without increasing file size.
 - Adaptive creates a unique color table for your file, based on the actual colors present. You get more accurate color (although these colors may not be Web safe), but the file size may be larger. Use this option if an accurate representation of the colors is most important, as in a photographic bitmap image. You can use the Max Colors text box to specify how many colors you want in the table. The default is 255. Use fewer colors to reduce the file size.

- Web Snap Adaptive works like the Adaptive option but optimizes the color palette for the Web. Colors close to the 216 Web-safe colors are turned into one of the colors on that palette. Other colors function like the Adaptive option. As with the Adaptive option, you can specify the number of colors on the palette in the Max Colors text box.
- **Custom** lets you specify a palette in the ACT format. Click the file folder icon near the Palette text field to browse for a color palette file. (Read the section in Chapter 3 on solid colors for an explanation of how to create a color palette and save it in ACT format.)
- The **Max Colors** option is enabled only when you choose Adaptive or Web Snap Adaptive, and the **Palette** option is enabled only when you choose Custom.
- Filter Options controls how an image is analyzed line by line to compress it. You have these options:
 - **None** applies no filtering. The resulting file is larger than with the other options.
 - **Sub** filters adjoining pixel bytes (working horizontally). This works best when the image has repeated horizontal information.
 - **Up** filters in a vertical direction. This works best when the image has repeated vertical information.
 - Average uses a mixture of horizontal and vertical comparison; this is a good first-try option.
 - **Path** employs a more complex method that uses the three nearest pixels to predict the next one.
 - Adaptive creates a unique color table for your PNG file based on the actual colors present. You get more accurate color, although these colors might not be Web safe. The file size might also be larger. Use this option if accurate representation of colors is most important, as in a photographic bitmap image.

After you specify your settings, click OK to return to your movie or click Publish to publish your PNG image and create the other files you've chosen.

Creating self-playing movies

You can also create projectors in the Publish Settings dialog box. A *projector* is a self-playing Flash movie that doesn't require the Flash Player. All the interactive and animated features of your Flash movie work in a projector. You can use a projector for a Flash movie that you want to burn on a CD-R or DVD-R computer disc (The projector format is not compatible with the format of a DVD movie disc, though.) Projector files tend to have much larger sizes than their corresponding . swf files.

You can create a Windows or Mac version from either platform. But if you create a Mac version in Windows, you need to use a file translator, such as BinHex so that the Mac Finder recognizes it as an application.

To create a projector, follow these steps:

1. Choose File Publish Settings.

The Publish Settings dialog box opens.

- 2. On the Formats tab, select the Windows Projector check box or the Macintosh Projector check box, or both.
- 3. Click Publish.
- 4. Click OK or Cancel to close the Publish Settings dialog box.

For Windows, Flash creates an EXE file. For the Mac, Flash creates a Macintosh Projector application. If you create the Macintosh Projector file in Flash while using a Windows computer, the Macintosh Projector file is stored inside a compressed BinHex file (HQX), which can then be uncompressed on a Mac.

Don't forget to test your movie after you copy it to a CD-ROM or another computer. Try it out with a variety of processor speeds if possible.

Using Publish Profiles

You can save all the settings that you configure in the Publish Settings dialog box as a *publish profile*. You can then duplicate, modify, export, import, and delete your publish profiles and trade them with your collaborators. You can create standard publish profiles, which you use to make sure that all your files are published uniformly, and you can create specialized publish profiles specific to a single project. The following sections tell you how.

Creating a publish profile

To create a publish profile, follow these steps:

1. Choose File Publish Settings.

The Publish Settings dialog box appears.

2. Click the Create New Profile button (the + symbol) in the upper-right part of the dialog box.

The Create New Profile dialog box appears.

3. Type a name for your profile and then click OK.

The Create New Profile dialog box disappears, and the name of your new profile appears in the Current Profile drop-down list of the Publish Settings dialog box.

4. Specify the publish settings for your document in the Publish Settings dialog box, as we describe in earlier sections of this chapter, and then click OK.

Duplicating or renaming a publish profile

You might want to duplicate a publish profile to use it as a springboard for new variations. To duplicate a publish profile, do the following steps:

1. Choose File Publish Settings.

The Publish Settings dialog box appears.

- 2. In the Current Profile drop-down list (near the top of the dialog box), select the publish profile that you want to rename (or copy).
- 3. Click the Rename Profile button (or the Duplicate Profile button the horizontal arrow button), in the upper-right part of the dialog box.

The Profile Properties dialog box (or the Duplicate Profile dialog box) appears.

4. Type a new name for your profile (or the name for your duplicate profile) and then click OK.

The dialog box disappears. The name of your renamed profile (or your duplicate profile) appears in the Current Profile drop-down list of the Publish Settings dialog box.

Modifying a publish profile

You might use a particular publish profile as, for example, a standard for your co-workers. As circumstances change, you might want to modify the publish profile, and that's easy to do. To modify a publish profile, follow these steps:

1. Choose File Publish Settings.

The Publish Settings dialog box appears.

- 2. In the Current Profile drop-down list (near the top of the dialog box), select the publish profile that you want to modify.
- 3. Select the publish settings that you want for your document in the Publish Settings dialog box, as we describe in the earlier sections of this chapter, and then click OK.

Deleting a publish profile

To delete a publish profile, follow these steps:

1. Choose File Publish Settings.

The Publish Settings dialog box appears.

- 2. In the Current Profile drop-down list (near the top of the dialog box), select the publish profile that you want to delete.
- **3.** Click the Delete Profile button (the trash can) in the upper-right part of the dialog box.

A dialog box appears asking you to confirm that you want to delete the profile.

4. Click OK.

Exporting and importing publish profiles

To use a publish profile in documents other than the document in which you created it, first you export it from the document in which you created it. Then you import it into the new document.

This makes your work easier if, for example, you're working on a Flash project with a team and need to publish your Flash documents according to a single standard. The entire team can easily share the same publish profile.

To export a publish profile, follow these steps:

1. Choose File Publish Settings.

The Publish Settings dialog box appears.

- 2. In the Current Profile drop-down list (near the top of the dialog box), select the publish profile that you want to export.
- 3. Click the Import/Export Profile button (the vertical arrow button in the upper-left part of the dialog box) and select Export in the drop-down list.

The Export Profile dialog box appears.

4. In the dialog box, select a location where you want to save the file and then click Save.

The default location is a folder named Publish Profiles, which is located in the Flash CS3 application folder. The file is saved as an .xml file.

To import a publish profile, follow these steps:

1. Choose File >Publish Settings.

The Publish Settings dialog box appears.

2. Click the Import/Export Profile button (the vertical arrow button in the upper-left part of the dialog box) and then select Import in the drop-down list.

The Import Profile dialog box appears.

3. In the dialog box, browse to find the publish profile that you want to import and then click Open.

The name of the imported publish profile appears in the Current Profile drop-down list of the Publish Settings dialog box.

Using Publish Preview

If you want to specify publish settings, see the results, and then go back to tweak your settings, you can use Publish Preview rather than Publish. Publish Preview creates the files specified in the Publish Settings dialog box, just as the Publish command does. The only difference is that Publish Preview automatically displays the requested file, usually the .swf file. The value is in simply saving the steps of manually opening your files in your browser — helpful when you're doing lots of tweaking and going back and forth between your publish settings and your browser to see what works best.

To use Publish Preview, follow these steps:

- 1. Specify your settings by using the Publish Settings dialog box (as we explain earlier in this chapter) and then click OK.
- 2. Choose File Publish Preview.
- **3.** In the Publish Preview submenu, choose the file format that you want to preview.
- 4. When you're finished, close the window or browser.

Posting Your Movie to Your Web Site

After you finish publishing your movie, you probably want to post your $.\,{\tt swf}$ file on your Web site or place it on a CD-R or other media.

You can make Mac and Windows projectors and copy them onto a CD-R by using CD-burner software. Then you can view your Flash movie independently of a Web browser. Or copy your published HTML and .swf files onto a CD-R along with any external scripts, image files, or text files used by your HTML and .swf files.

Refer to the "Understanding the HTML code for a movie" section, earlier in this chapter, for instructions on modifying the HTML code if you want to place your . swf file on an existing Web page or place your . swf file in a subfolder.

To post your movie to a Web site, upload the HTML, the $\,.\,{\tt swf}$ file, and the JavaScript file.

The default HTML file that Flash generates when you publish a Flash movie depends on an external JavaScript file that Flash generates along with it.

If your HTML or . swf files load data from any image files, text files, or external scripts (such as JavaScript or ActionScript files), you need to upload those, too.

Open your browser and load the Web page that contains your Flash movie. We hope it works perfectly and looks great! If not, check out the HTML code, check your publish settings, and make sure that the necessary files are in the proper location on your Web site's server.

Exporting Movies and Images

In addition to publishing, Flash lets you export image files and QuickTime movies. Export a Flash file when you want to use it in another application. For example, you may want to export a frame as a PNG file and insert it into a word processing document. You can use Export Movie to export to a QuickTime movie or to create a still image of every frame.

After you export a movie or image, you can then import it into the desired application for further editing or display.

Note that when you choose File Export Export Movie to export a movie to a format such as GIF, JPG, or PNG, you export a sequence of individually numbered images. That might give you some interesting raw material to import into other graphics applications. In fact, exporting a Flash movie as a PNG sequence is how many professional animation jobs are now done. The sequence of PNG files is then imported into Adobe After Effects to be converted to Cineon files, which are used to put the animation onto movie film.



To export a movie or image, follow these steps:

1. Open the Flash document from which you want to export.

See Chapter 1 for information about opening an existing Flash movie.

- 2. To export to an image, select the frame that you want to export. Otherwise, skip to Step 3.
- 3. Choose File=>Export=>Export Image or File=>Export=>Export Movie.
- 4. In the dialog box, navigate to the desired location and type a name for your image or movie.
- 5. In the Save as Type (Format on a Mac) drop-down list, select the type of file.
- 6. Click Save.

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7. Depending on the format that you selected, a dialog box might appear. If so, specify the settings and then click OK.

These settings are similar to the kind of settings that we describe earlier in this chapter, in the "Creating PNG graphic files" section.

Table 13-2 lists the types of files that you can export.

Export File Types		
Windows	Мас	Comments
Х	Х	A vector format.
Х	Х	A format that you can import into AutoCAD, although you lose fills.
Х	Х	A vector format used in Adobe Illustrator and recognized by many other applications.
Х	Х	A bitmap format, limited to 256 colors.
Х	Х	A bitmap format that supports 24-bit color.
Х	Х	A video format designed for use with video conferencing and other com- munications applications.
	Windows X X X X X X X X	Windows Mac X X X X X X X X X X X X X X X X X X X X X X

(continued)

Table 13-2 (continued)			
File Type	Windows	Мас	Comments
PICT (PCT)		Х	A bitmap format that can be used with most Mac and many PC applica- tions. The PICT format supports transparency and variable bit depths.
Portable Network Graphic (PNG)	Х	Х	A bitmap format that supports variable bit depths and transparency.
QuickTime (MOV)	Х	Х	A QuickTime 4 format movie.
QuickTime Video (MOV)		Х	On Macs only, uses the Video QuickTime 3 format, bitmapping all content.
Video for Windows (AVI)	Х		A bitmap video format. Files can get large.
Windows Audio (WAV)	Х		Exports just the sound.
Windows Bitmap (BMP)	Х		A bitmap format. Many applications recognize it. Offers variable bit depths and transparency support. File size is large.
Windows Metafile and Enhanced	Х		A vector format supported by many Metafile (WMF/EMF) applications. Creates smaller files than EPS.

Creating Printable Movies

Suppose that you want your Web site viewers to be able to print a form on your Web site that you created in Flash. Or perhaps you want them to print your contact information so that your Web page can become your business card. The Flash Player printing features enable your viewers to print receipts, information sheets, coupons, or whatever else helps you do business on the Web. You can specify certain frames in a movie — including frames in the main Timeline, a button, or a movie clip — to be printable from the Flash Player shortcut menu. Viewers right-click (Windows) or Control+click (Mac) to access the Print command.



Your viewers need instructions on how to print, so place some text somewhere telling them what to do.

Of course, viewers can use their browser's Print command to print, but the result isn't nearly as controllable. When we tried it, our browser printed only the first frame, which was useless in our example. The browser also added the Uniform Resource Locator (URL), the name of the movie, the date, and the page number.

By default, the Flash Player shortcut menu lets viewers print the entire movie, frame by frame. This feature is useless for most purposes. But by specifying which frames are printed and the print area, you can use the Player's Print command to make specific information or forms available to your viewers.

Preparing your movie for printing

If you want a nice, clean result, you need a nice, clean frame. The Flash Player prints all objects on all layers of the movie. If you want to create a form, for example, put it in its own frame and make sure that objects on other layers don't continue into that frame.

Alternatively, you can specify the print area so that you include only the area that you want printed, excluding other objects on the Stage in the frame. But if you specify a small area, this area becomes the entire page size when printing, so the objects in that small area are enlarged to take up the entire printed page. You can control the layout by changing the dimension, scale, and alignment HTML settings (on the HTML tab of the Publish Settings dialog box).

Make sure that everything you want to print is on the Stage. For example, if you want to print from a movie clip, it must be on the Stage and have an instance name.



You can make a movie clip invisible by setting its _visible property to false. (Use the Actions panel.) This capability enables you to instruct viewers to print an item that they don't see on the screen — for example, a form that's formatted differently on paper and on the computer screen.

If your movie displays text instructing users how to print from the printable area, you might want to exclude this text from the printable area. They probably don't want to print the instructions on how to print, right?

Specifying printable frames

To specify which frame or frames you want to print when your viewers choose Print in the Flash Player shortcut menu, follow these steps:

1. With the movie open, choose Window Properties Properties to open the Property inspector.

The shortcut is Ctrl+F3 (Windows) or #+F3 (Mac). If necessary, expand the Property inspector to its full size.

- 2. Select from the Timeline the frame you want printed.
- 3. If the frame you selected is not a keyframe, make it a keyframe by choosing Insert=>Timeline=>Keyframe.

Turn to Chapter 9 for the lowdown on keyframes.

4. In the Property inspector, type #p in the Frame text box, as shown in Figure 13-7. Below the Frame text box, set the Label Type drop-down list to Name (the default).

Figure 13-7:

Use the Property inspector to label frames for printing.

Fram	e	Tween: None	•	Sound:	None	0
#p				Effect:	None	tdit
Labe	I type:			Sync:	Event \$	Repeat 1 0

For each additional keyframe that you want to specify for printing, select the frame and then label it $\#_p$ in the Property Inspector Frame text box.

Specifying the print area

Unless you specify the print area, the Flash Player prints the entire Stage. If you have loaded other movies, the Flash Player uses their Stage size. You might, however, want to specify a different area. As we mention earlier in this chapter, you might want to include instructions on how to print, but you may not want the instructions to be printed. You can exclude other objects on the Stage as well.



Choosing a very small print area results in an output of very big objects. The Flash Player sizes your objects to take up the entire printed page.

You create an object, usually a rectangle, to specify the print area. To specify the print area, follow these steps:

- 1. Click a frame that you have labeled #p (as we describe in the preceding section).
- 2. Create a rectangle around the area that you want to be printed.

You might have to experiment with different sizes of rectangles. See the instructions in the section "Printing movies from the Flash Player," a little later in this chapter, to test the printing of your movie.

Use the No Fill feature for the rectangle so that you can see the material that you want to print.

- 3. Select the rectangle and choose Edit Cut to cut it to the Clipboard.
- 4. Click a frame without a #p label but on the same layer.

Using the next frame might be a good choice to keep the printing area rectangle conveniently close to the frame you've specified for printing.

5. Choose Edit >Paste in Place.

You now have a rectangle of the right size, but in its own frame — a frame without a $\#_{\rm P}$ label.

6. Select the frame containing the rectangle and choose Window Properties Properties to open the Property inspector.

If necessary, expand the Property inspector to its full size.

7. In the Frame text box on the left side of the Property inspector, type #b to signify that the shape in this frame will be used as the boundary for the print area.



You can have only one #b label in a Timeline. Also note that if you use a #b label, it must be on the same layer as the #p label.

Printing movies from the Flash Player

Before uploading your printable movie to your Web site, you should test the printing function. To do so, use the Publish Settings dialog box to specify the publish settings that you want, as we explain throughout this chapter. Then choose File Publish Preview Default. Your browser opens, and you see your movie play.



To test-print your movie, right-click (Windows) or Control+click (Mac) in the browser. In the Flash Player shortcut menu, choose Print.

On the Mac, the Page Setup dialog box appears; choose the printer, paper size, orientation, and scale, and then click OK.

Then for both Mac and Windows, the Print dialog box appears. Choose the print range to select which frames to print or choose All. In Windows, you can also choose Selection to print the current frame. If only one frame has been made printable, the Pages option appears dimmed. Any option that you choose prints the frame you've specified for printing. Click OK (Windows) or Print (Mac) to print.

After you upload your movie onto your Web site, viewers use the same procedure to print your movie.



Place on your page some text that explains to your viewers how to print your movie. Many viewers don't even know that the shortcut menu exists.