

## Bonus Chapter

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# What Those Obscure Terms Really Mean

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**absolute path:** A complete description of the location of a file. On the Internet, it usually starts with `http://` and continues with the complete Universal Resource Locator (URL) and filename (for example, `http://www.ellenfinkelstein.com/index.html`). On a computer, an absolute path starts with the hard drive, such as C (or Macintosh HD), and continues with the folder(s) and filename. On Windows for example, an absolute path might be `C:\animations\example.swf`, and on a Mac, it might be `/Macintosh HD/Users/Jennifer/Documents/example.swf`.

**action:** An expression in ActionScript, the Flash scripting language, for controlling objects and creating interactivity in a movie (see Chapter 10).

**ActionScript:** The Flash scripting language. Uses a syntax similar to JavaScript for animating objects and creating interactivity in a movie.

**ActiveX controls:** Software building blocks that are often small enough to be downloaded over the Internet and that can provide extra functionality inside Windows applications. For example, one Flash ActiveX control enables you to play a Flash Player movie from within Microsoft Office documents.

**AIFF sound:** A sound stored in the Audio Interchange File Format, developed by Apple. Flash can import AIFF sounds (see Chapter 11).

**alpha:** Opacity. In Flash, you can change the opacity of colors so that you can create see-through objects (see Chapter 3). Technically, alpha and opacity aren't exactly the same thing, but for all practical purposes, in Flash they are.

**anchor point:** A point that you specify when creating a Bezier curve or line segment with the Pen tool. An anchor point helps define the shape of the object (see Chapter 3).

**anti-aliasing:** A method of displaying objects so that they appear smoother. *Aliasing* is the jaggedness that you get when you try to draw a diagonal line on the checkerboard-like grid of the computer screen.

**authoring environment:** The place where you create Flash movies (the Stage and the Timeline).

**AVI:** The Windows bitmap-based movie format. Flash can export to AVI format (see Chapter 13). AVI stands for *Audio/Video Interleaved*.

**behaviors:** Prewritten collections of ActionScript code that you may add to your movie from the Behaviors panel (see Chapter 10).

**bit:** A binary digit. The binary world deep inside computers, where memory switches are either on or off, uses just two digits: 0 and 1.

**bit rate:** A measurement of the quality of a sound, measured in kilobits per second, or Kbps (see Chapter 11).

**bit-depth:** The number of binary digits (ones and zeros) of information per dot of color. A bit-depth of 8 gives you a palette of  $2^8$  colors (256 colors). A bit-depth of 24 (also called *24-bit color*) gives you  $2^{24}$  colors (more than 16 million), which is good for rendering photographic images.

**bitmap:** A type of graphic image made up of dots (see Chapter 2).

**blend mode:** In Flash Professional 8, you can use blend modes to change the way a movie clip on the Stage is blended with objects beneath it. For example, the Normal blend mode simply paints the image of the top object over the objects beneath it; the Lighten blend mode, however, paints the top image over objects beneath it only for the pixels in the top image that are lighter than the corresponding pixels in the objects beneath.

**brightness:** The lightness (or darkness) of an image (see Chapter 3).

**broadband:** A connection to the Internet that is faster than the connection provided by the typical 56K modem that you would use with a computer and a standard telephone line. Examples of broadband connections include a digital subscriber line (DSL) connection, a cable modem, or a T1 connection.

**button:** An image that you can click (not the thing that holds your coat on). It often takes you to another page on the Web, but it can also display more information or start a Flash movie, for example (see Chapter 8).

**byte:** Eight bits of information. Eight bits of information is enough to represent 256 numbers, so it is enough numbers to assign, for instance, a different number to each key on your computer keyboard. *See also* bit.

**CGI script:** A Common Gateway Interface script; a computer program running on a Web server that can dynamically interact with a Web page (for example, to facilitate searching a database of books for a specified author).

**codec:** A piece of hardware or a software program that *codes* and *decodes* signals (usually audio or video signals) to and from a digital computer format.

**component:** A pre-built movie clip with sophisticated functionality that you can use as a building block for creating Web applications. Flash 8 comes with an assortment of useful components, including check boxes, radio buttons, scrolling lists, and more. See Chapter 12 for more on components.

**compression, sound:** A method of reducing the size of sound files (see Chapters 11 and 13).

**CRT:** Cathode ray tube; the giant glass tube in most television sets and in many computer monitors. In the computer world, when people refer to a CRT, they usually mean the whole monitor, not just the cathode ray tube.

**data binding:** Connecting an information display to a data source that might be constantly changing, such as stock market prices or news headlines.

**dithering:** A method of combining existing colors in a color palette to approximate colors not in the palette.

**Down state, button:** The state of a button when you click it (see Chapter 8).

**download:** To copy software (such as an application or a document) from one computer (usually a computer somewhere out on the World Wide Web) to your computer.

**easing, animation:** A way of changing the pace of tweened motion animation so that the movement either speeds up or slows down throughout the time of the motion (see Chapter 9).

**editable text:** Text that users can change while they view your Flash movie on a Web site (see Chapter 10).

**EMBED parameter:** The HyperText Markup Language (HTML) code required by Netscape Communicator or Navigator and their cousins, Mozilla and Mozilla Firefox, to display a Flash Player movie (see Chapter 13).

**fill:** An object that fills in a shape. You create fills with the Brush and Paint Bucket tools. The Oval and Rectangle tools create fills and can also create strokes around the fills.

**filter:** In Flash Professional 8, you can apply graphic effects filters to text, buttons, and movie clips on the Stage. A filter analyzes the image data of the object to which it is applied, and then it filters and transforms the data to give the object a new look. You can create animated drop shadows, blurs, glows, and beveled edges, as well as adjust and animate color, brightness, and contrast.

**Flash Lite:** Macromedia's Flash Lite is a version of the Flash Player designed especially for mobile devices, which typically have much smaller screens and various other constraints that the regular Flash Player doesn't encounter on desktop computers.

**Flash Player file:** The file with the extension `.swf` that you create when you publish your Flash movie (which has an `.fla` extension). You can display an SWF file on a Web site but not the FLA file.

**FLV:** The Macromedia Flash Video file format for efficiently storing video data. Macromedia developed the FLV format especially for video on the Web.

**focus:** In a Flash movie, refers to the button in the movie that should receive input when the user presses Enter (Windows) or Return (Macintosh). It also refers to which text box or user interface element is selected.

**frame:** A representation of a small amount of time on the Timeline. By default, a frame represents  $\frac{1}{2}$  of a second (see Chapter 9).

**GIF:** A compressed bitmap graphic file format often used on the Web. The GIF format is usually used for simple line art (see Chapter 9).

**gigabyte:** One thousand twenty-four (1,024) megabytes; abbreviated as GB.

**gradient:** A fill that varies in color. Flash can create linear gradients for striped effects and radial gradients for concentric effects (see Chapter 3).

**group:** A set of objects that function as one object for purposes of selection and editing (see Chapter 4).

**guide layer:** A layer that contains an object, usually a curved shape or series of line segments, that guides an animated object's motion (see Chapter 9).

**hexadecimal:** A number system using 16 digits (represented by the digits 0–9 and the letters A–F). The hexadecimal system is used extensively in the computer world. For instance, Web-safe colors are defined by using a hexadecimal system (see Chapter 3).

**Hit state, button:** The area in and around the button that responds when you click the button (see Chapter 8).

**HTML:** HyperText Markup Language; the code most commonly used to create Web pages.

**hyperlink:** A link on a Web page. Click it and suddenly you end up on another Web page — the one it hyperlinked to.

**instance:** A copy of a symbol that you can use on the Stage and for animation. You can change certain properties of instances without affecting the symbol (see Chapter 7).

**interactivity:** The ability of a Flash movie to respond to users. An example is clicking a button to turn off music (see Chapter 10).

**interlacing:** A way to display a GIF file while it loads so that the viewer sees the entire graphic but in increasingly clear values.

**JPEG:** A highly compressed, 24-bit bitmap, graphical format. The JPEG format is usually used for photographs and other graphics with many colors.

**kerning:** A way to control the spacing between pairs of characters, such as the capital letters A and V (see Chapter 5).

**keyframe:** A frame on the Timeline that contains a change in animation. For example, to create tweened animation, you need to create keyframes at the beginning and end of the tween (see Chapter 9).

**kilobyte:** One thousand twenty-four (1,024) bytes; abbreviated as K or KB.

**layer:** A level on the Stage that contains objects. Different animations should always be on different layers (see Chapter 6).

**LCD:** Liquid crystal display; the kind of display used for laptop computers and many flat-screen computer monitors.

**Library:** The storehouse for symbols, imported bitmaps, and sounds (see Chapter 2).

**loop:** To replay a movie over and over again. By default, movie clips loop. Also, the default setting when publishing a movie is to loop the movie (see Chapters 7 and 13).

**mask:** A special kind of layer that hides objects on layers below it. You can put a shape on a mask layer to reveal objects on lower layers within that shape (see Chapter 6).

**megabyte:** A million bytes, or 1,048,576 bytes, depending on whom you ask; abbreviated as MB. In case in you were wondering, 1,048,576 bytes is 1,024 kilobytes.

**Merge Drawing model:** The old drawing model in Flash prior to version 8, in which foreground objects act like cookie cutters which automatically delete the parts of any object below them on the same layer. With Flash 8, you can choose to use the Merge Drawing model or the new Object Drawing model.

**method:** A procedure that comes built in with an ActionScript object. (See Chapter 10 for more information on ActionScript.) Sounds in Flash, for instance, come with a built-in `setVolume` method, which makes it easy for you to control how loudly the sounds play.

**mobile devices:** Electronic gadgets that you can carry with you, such as mobile phones and PDAs. Some of them can play Flash documents by using Flash Lite.

**motion path:** A path — created with the Pencil or other tool — that defines the motion of an object in a motion tween (see Chapter 9).

**motion tween:** An animation that moves objects, created by defining the beginning and end points and letting Flash automatically fill in the in-between motion (see Chapter 9).

**movie clip:** A movie contained in a symbol. A movie clip has its own Timeline, which is independent of your Flash file's main Timeline. You can place a movie clip symbol on the main Timeline so that you are playing a movie within the main movie (see Chapter 7).

**Movie Explorer:** The Flash panel for discovering all the elements of a movie, including objects, layers, and actions (see Chapter 12).

**MP3:** A highly compressed, sound-file format (see Chapter 11).

**navigation:** A set of buttons or hyperlinked text that enables the viewer of a Web site to move through the various Web pages.

**Object Drawing model:** A new mode in Flash 8 that lets you overlap objects on the Stage without having them cut into each other where they overlap. The old drawing model in previous versions of Flash is the Merge Drawing model, and in Flash 8, you can choose either the Object Drawing model or the Merge Drawing model (see Chapter 3).

**OBJECT parameter:** The HTML code required by Internet Explorer to display a Flash Player movie (see Chapter 13).

**onClipEvent handler:** A way to define what event, such as a frame loading, triggers the action in a movie clip (see Chapter 10).

**On (mouse event) handler:** A way to define what happens when the mouse interacts in different ways with a button, such as passing over it or clicking it. `On (release)` is an example of the beginning of an `On (mouse event)` handler (see Chapter 10).

**Onion Skin mode:** A method of viewing animation so that you see all the frames at one time (see Chapter 9).

**orient to path:** A setting that rotates an object in a motion tween in the direction of its motion path. A bird turning as it flies is one example (see Chapter 9).

**Over state, button:** The state of a button when the mouse cursor passes over it (see Chapter 8).

**palette:** A set of colors that are available for use in drawing or publishing a graphic file.

**panels:** The windows in the Flash program that allow you to view, organize, and change the elements of a Flash movie. You can collapse and expand these panels.

**PDA:** Personal Digital Assistant; a pocket-sized computer typically used as an address book, calendar, and note-taker. Some PDAs double as cell phones, and some can even surf the Web and play Flash movies via Flash Lite.

**PICT:** A Macintosh graphic file format that can be either a bitmap or a vector file.

**pixel:** A picture element — a single dot in a computer image. A color pixel on a CRT monitor is actually made up of three dots (one red, one green, and one blue), which blend together. *See also* CRT.

**PNG:** A bitmap graphic file format available on both Windows and Macs that supports transparency.

**preloader:** An animation that downloads quickly and plays at the beginning of a Flash movie to let your audience know that the larger Flash movie is downloading and about to launch.

**pressure-sensitive tablet:** A flat surface for drawing that is connected to a computer. The tablet usually comes with a stylus that looks like a pen. A pressure-sensitive tablet responds to the pressure that you use with the stylus to create variable-width lines, for example (see Chapter 3).

**publish:** To create a Flash Player file (an `.swf` file) that can be viewed on a Web site (see Chapter 13).

**RAM:** Random access memory; the electronic memory in your computer. Storing information in RAM is much faster than storing it on your hard drive, but, megabyte for megabyte, RAM is more expensive than a hard drive (at least at this writing). Most types of RAM (except super-expensive stuff) do not continue to store any information when you turn off your computer's power.

**raster:** The grid of dots that make up a computer image.

**relative path:** A relative path is the description of the location of a file, relative to another file, so that you don't have to describe the entire location. For example, if a Flash file named `sample.swf` is in the same folder as the Web page file `index.html`, then in the Web page `index.html`, you can refer to the Flash file simply as `sample.swf`, instead of having to laboriously specify its full path name, which for example might be `C:\portfolio\webpages\current\sample.swf`.

**RGB color:** A method of defining a color according to the amount of red, green, and blue that it contains (see Chapter 3).

**sample rate:** A means of controlling the fidelity and size of a sound file. Higher sample rates sound better but result in larger files (see Chapter 11).

**scene:** A division of a movie; used to help organize the movie into parts (see Chapter 9).

**Script Assist:** A mode that you can turn on by clicking the Script Assist button in the Flash Actions panel (see Chapter 10). In Script Assist mode, when you choose an action from the left side of the Actions panel, the top-right pane of the Actions panel shows the parameters you may choose for that action. This makes it possible to write scripts for your Flash movies without knowing much about ActionScript.

**shape hint:** A means of specifying how a shape tween changes shape (see Chapter 9). *See also* shape tween.

**shape tween:** An animation in which one shape changes into another shape; you define the first and last shapes, and Flash automatically fills in the intermediate shapes (see Chapter 9).

**shared library:** A library residing on a computer server that can be accessed by a Flash Player file (an `.swf` file); used to make Player files smaller (see Chapter 2).

**Stage:** The rectangle in the middle of the Flash screen where you place objects for animation.

**streaming media:** Audio/video information that is heard and/or seen by the viewer at the same time that the information is being sent over the Web to the viewer. If you must download a complete audio/video file onto your computer before you can start playing it, it is not streaming media.

**stroke:** A line or outline. For example, a circle or rectangle can have an outline (see Chapter 3).

**SWF:** The filename extension for a Flash Player file. An `.swf` file can be displayed on a Web site. (A Flash `.fla` file cannot be displayed on a Web site.)

**symbol:** A named, saved object or set of objects, stored in the Library. You can create instances of symbols and place them on the Stage (see Chapter 7).

**synchronization, animation:** A means to make sure that animation in a movie clip keeps pace with the number of frames that it occupies on the main Timeline. This is useful if your animation is in a graphic symbol and the number of frames it occupies isn't an even multiple of the frames that the symbol occupies in the main Timeline (see Chapter 9).

**tablet, pressure-sensitive:** *See* pressure-sensitive tablet.

**tangent handle:** A marker, displayed when drawing with the Pen tool, that determines the direction of a curve.

**target:** The object of an expression in ActionScript; specifically, a Timeline. For example, if a movie clip tells the main movie what to do, the main movie's Timeline is the target.

**template:** A group of settings for the HTML code used to display a Flash Player file (an `.swf` file). Flash offers a number of templates that you can use (see Chapter 13).

**Timeline:** A movie's set of frames along which the animation runs (see Chapter 9).

**tween:** See motion tween, shape tween.

**type:** Another word for *typography* or *text* (see Chapter 5).

**upload:** To copy files (such as an application or a document) from your computer to another computer (usually a computer somewhere out on the World Wide Web).

**URL:** Uniform Resource Locator; the standard way of specifying the location of an item on the Internet, such as the address of a Web page — for example, <http://www.infinityeverywhere.net>.

**variable:** In ActionScript, a named holder for a value that you can retrieve for use in a script or database.

**vector:** A definition of a distance and a direction. Vector graphics, such as those in Flash, are defined by equations rather than by the dots used in bitmap graphics (see Chapter 2).

**WAV:** A Windows sound format (see Chapter 11).

**Web services:** Software interfaces that are made public so that computer programs can communicate over the Web to other computer programs.

**Web-safe color:** A color that appears the same on all computer systems and in all browsers. All 216 Web-safe colors are defined by using a hexadecimal system (see Chapter 3).

**XML:** eXtensible Markup Language; an increasingly popular language for creating customized languages for designing documents, the kinds of data that the documents contain, and how the data is displayed.