



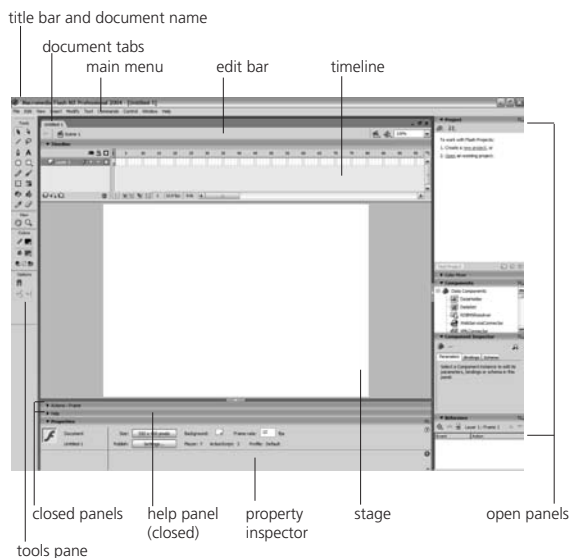
*Macromedia Flash MX 2004:
Training from the Source*
by Jan deHaan
0-321-21342-4

Get “Rich” Quick With Flash MX 2004

Rich Internet applications, that is. Macromedia Flash MX 2004 and Macromedia Flash MX Professional 2004 are tools that help you create engaging animations, stream interactive media on the Web such as video, build e-commerce sites, and put together Rich Internet Applications (RIAs) that sometimes include most or all of those elements combined. Learn from Jen deHaan as she shares some of her top Flash tips from her new book *Macromedia Flash MX 2004: Training from the Source*—Macromedia's official guide to mastering Flash.

Learning the Basics

Flash is a well-established application for building multimedia files. You can import many kinds of media into Flash, including text, graphics, video, vector files (including Illustrator and Freehand), PDFs, and audio. You can load Flash SWF files, images, text (including HTML formatted text), and video files into Flash when it is running in a Flash Player. The **Flash Player** allows you to connect SWF files to a database, XML file, or even a Web Service. You can make your files interactive and dynamic, entertaining and intuitive. The diverse tools in Flash allow you to maximize your creative skills or follow established standards: Flash accommodates and fuses design and development so you can create just about anything.

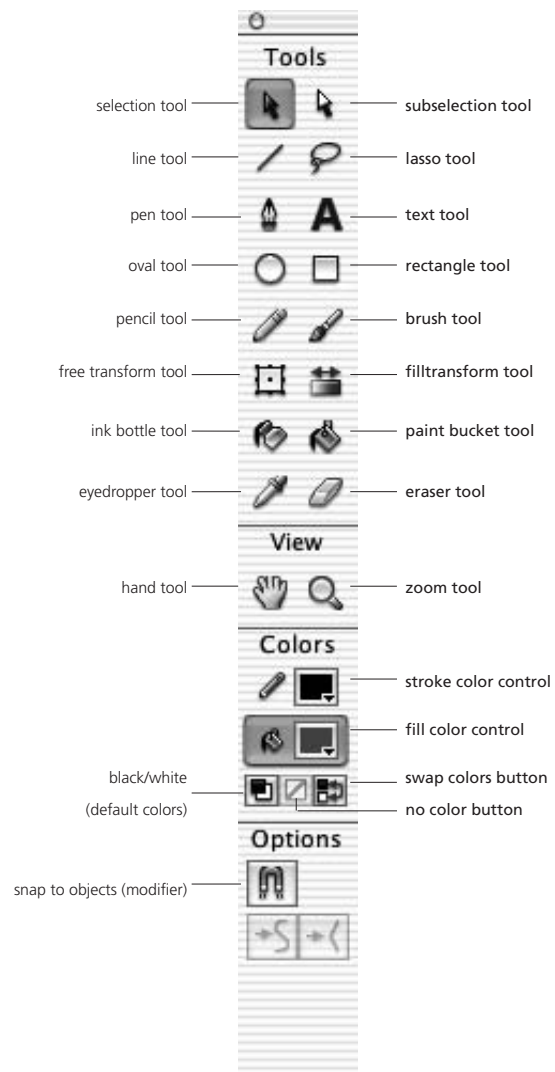


The Power and Ease of Using Flash

Flash uses a scripting language called **ActionScript**, which is a powerful and standards-following language based on ECMAScript and similar to JavaScript and Java. ActionScript is currently in version 2.0, although Flash MX 2004 files can be created using either version of the language. Both versions of ActionScript enable you to create complex and powerful applications. Even though Flash has a scripting language, you don't need a lot (or any) code to build an interactive application. You can essentially drag and drop functionality into your Flash documents using components and behaviors.

Creating Graphics

To make a document in Flash, you do not need graphics, animation, or even more than one frame! However, SWF files that do not contain graphics or animation can sometimes lack some visual interest. Typically, you have to create or include some kind of visual element to create an appealing SWF file. The drawing tools and the capability to import various kinds of media help you put together presentations that can engage viewers. Flash also provides tools that help you with layout and visual editing. You have a lot of control over what you can create using Flash.





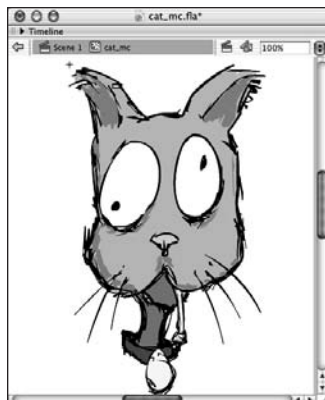
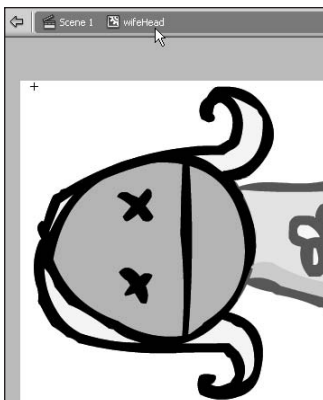
* You have to be careful when you are using bitmap (raster) graphics because they do not always scale well. If you change the size of a bitmap, you probably distort the image. Always try to maintain the same image dimensions as the original that you are importing.

* PNG (Portable Network Graphics) is a bitmap image format that is commonly used for adding bitmap images to Flash documents. It is widely used because it is economical on file size and supports both transparency and masking. PNG bitmaps typically add less file size to SWF files than JPG images of the same quality, which is another great reason to use PNG bitmaps instead. If you are working with Fireworks, then you are in luck because the native file format of Fireworks is PNG. You can export PNG bitmaps from most professional image editors.

Creating and Editing Symbols on the Stage

There are two ways that you can create a new symbol. You can create a symbol from an item already on the **Stage** (such as a raw graphic or another symbol). The content you select and press **F8** to “convert” into a symbol is actually placed inside of the symbol itself. For example, if you have drawn a square on the **Stage**, select it and choose **Modify > Convert to Symbol**. The square is then placed inside of the symbol you create on a new layer, so you are essentially wrapping a symbol around the shape you selected. You could just as easily do the same thing that you did to the square to a bitmap, or even another symbol like a movie clip.

The second way to create a symbol is to start from scratch and add new content into the symbol using symbol-editing mode. **Symbol-editing** mode takes you to a separate editing area independent from the Stage. You can enter symbol-editing mode by double-clicking a symbol in the **Library**. While you are in symbol-editing mode, the **edit bar** (directly above or below the Timeline on Windows and the Mac) reminds you that you are editing the symbol by the links you see on the bar.



Understanding Animation

An **animation** is a sequence of images that create the illusion of movement when viewed in rapid succession. In Flash, these images are formed by content that's placed on frames on the **Timeline**. You might use drawings, photos, or even ActionScript-generated graphics to create an animation or motion in your FLA files.

There are several ways to create custom motion or animations in Flash. You can **motion tweens**, **shape tweens**, or create **frame-by-frame** animation. **Tweening** refers to calculations made by Flash to animate, move, or modify the properties or shape of an object in the SWF file. You create a beginning and an end for the particular transition using **keyframes**. When you apply a motion tween to the set of keyframes, Flash creates the movement itself by filling in the changes that occur between the two frames. Shape tweens are used to change a vector line or shape, such as changing a square into a circle. Motion tweens are used to change properties, such as moving objects around the Stage or fading objects in and out.

A frame-by-frame animation is a more traditional way of creating animation. Instead of having Flash create a tween using automatic calculations, you draw each increment of the movement manually allowing you to create more complicated effects, particularly when motion or shape tweening doesn't allow you to create the kind of animation you require. Frame-by-frame animations are usually more time-intensive to create, and they add more file size to the SWF.

* You can also create scripted animation using ActionScript and (typically) movie clips. There is a part of ActionScript called the Drawing API that is used to script lines and shapes on the Stage, and can be used in very complex ways. It is definitely worth looking into if and when you choose to learn more about ActionScript.