

TECH REVIEW

THE DESIGNER'S GUIDE TO DIGITAL TOOLS

An Animated Bunch: Flash MX, LiveMotion 2.0 and Toon Boom Studio 2.0

by Stephen Beale

As any diehard Web surfer will affirm, Macromedia Flash has become the format of choice for interactive designers who want to create graphically rich online animations with minimal file sizes. Its popularity is such that a host of developers aside from Macromedia—including archrival Adobe—now offer tools for creating Flash movies.

Adobe took its first shot with LiveMotion 1.0, a capable animation program that nevertheless failed to dent Macromedia's dominating presence. Now the contest has entered round two with the release of Macromedia Flash MX and LiveMotion 2.0, significant upgrades that add numerous features for creating interactive content.

Meanwhile, little-known Montreal-based Toon Boom Technologies has won considerable praise—and a software-design award from Apple—for Toon Boom Studio 2.0, a full-featured animation tool that can export Flash or QuickTime formats. All three programs run under Microsoft Windows and Mac OS X; Flash and LiveMotion run under Mac OS 9 as well.

Although they all produce Flash movies, these are very different pro-

grams that will appeal to distinct groups of users. Flash MX has evolved from humble beginnings as a simple animation package into a comprehensive tool for developing interactive Flash-based Web sites. LiveMotion 2.0 has moved further into Macromedia's turf by adding powerful scripting functions, but its strength remains its flexible keyframe-animation timeline and tight integration with Adobe Photoshop and Illustrator. Toon Boom Studio lacks the scripting capabilities of Flash or LiveMotion, but compensates with a rich array of animation features.

Although there's plenty of overlap, Flash speaks largely to developers and interactive designers; LiveMotion appeals mostly to graphic artists seeking a flexible and easy-to-use animation tool; and Toon Boom leans primarily toward heavy-duty animators.

FLASH MX

Flash MX, aka Flash 6, is part of Macromedia's recent rebranding of its Web-authoring software, which also includes the recently released Dreamweaver MX and Fireworks MX (the "MX," in case you're wondering, doesn't stand for anything in particular). With Flash 5,

MACROMEDIA FLASH MX

Rating: ★★★★★

Price: \$499; \$199 upgrade

Platforms: Mac OS X v10.1,
Mac OS 9, Microsoft Windows

Contact: Macromedia;

www.macromedia.com

ADOBE LIVEMOTION 2.0

Rating: ★★★★★

Price: \$399; \$99 upgrade

Platforms: Mac OS X v10.1,
Mac OS 9.1, Microsoft Windows

Contact: Adobe; www.adobe.com

TOON BOOM STUDIO 2.0

Rating: ★★★★★

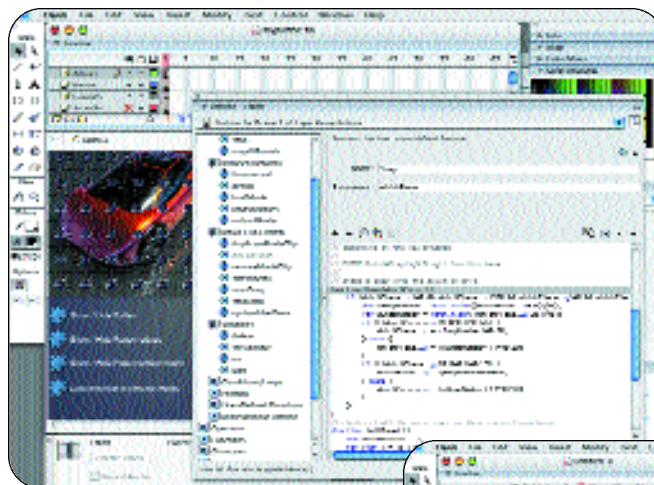
Price: \$374, \$129 upgrade (boxed);
\$349, \$99 upgrade (electronic)

Platforms: Mac OS X,
Microsoft Windows

Contact: Toon Boom Technologies;
www.toonboomstudio.com

Macromedia introduced a new standard interface for its Web applications, prompting a patent-infringement lawsuit from Adobe. The new version includes a completely revamped interface featuring a context-sensitive Property Inspector, extensive use of floating windows, and a set of collapsible panels that provide access to color-mixing, alignment and other frequently used functions. The tabbed, tear-off palettes from previous versions are gone, which can make for a cluttered display if you have lots of windows open. On the plus side, you can save custom panel layouts and define your own keyboard shortcuts.

One of Flash MX's most intriguing new features is its ability to incorporate video clips in MPEG, DV, QuickTime or Windows .AVI formats. Once embedded in a Flash file, the movies are viewable by anyone who has the Flash 6 browser plug-in, even if they don't have QuickTime or another media player installed. You can also use ActionScript—

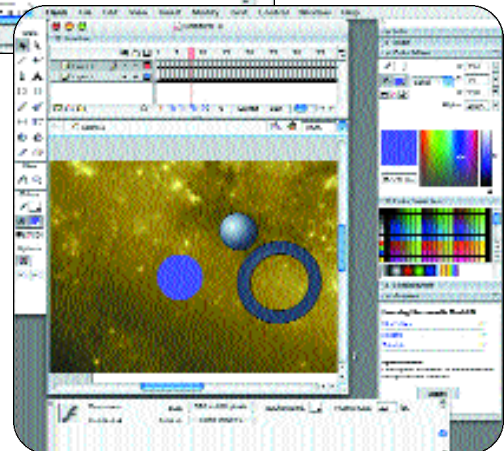


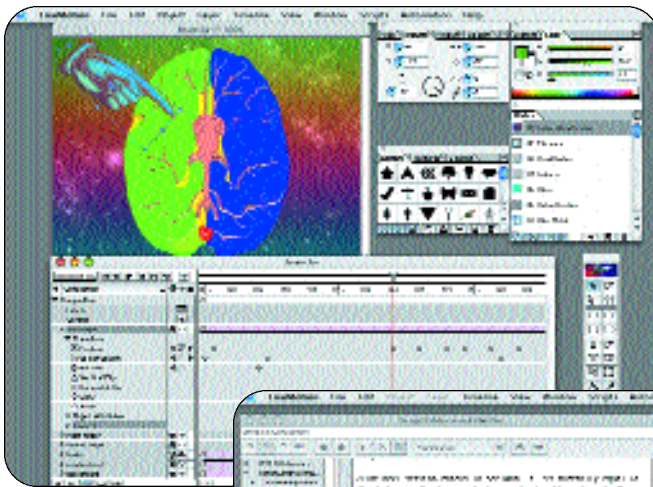
You can use Flash MX's scripting tools to create complex, interactive Web applications, such as this online puzzle (LEFT).

Flash MX features a revamped user interface with collapsible panels on the right and a context-sensitive Property Inspector on the bottom.

Flash's JavaScript-based scripting language—to download JPEG or MP3 files to the Flash Player. The benefit is that you don't have to import these files into your Flash animations, thus keeping file sizes small.

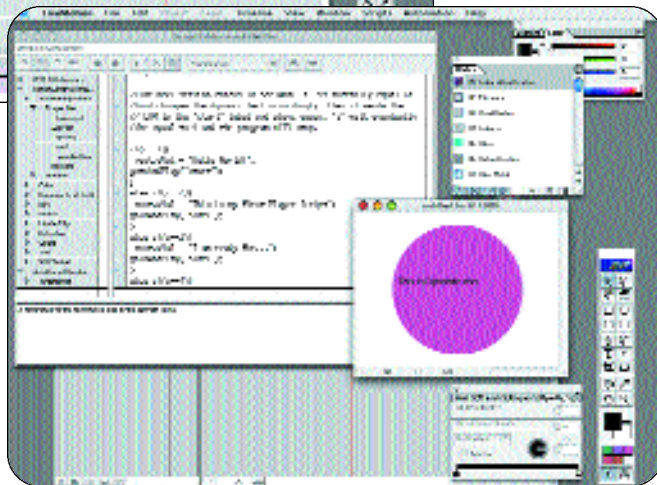
For designers, Flash MX adds an enhanced color mixer that lets you easily create [170▶](#)





LiveMotion 2.0's flexible timeline (LEFT) makes it easy to set up and modify complex keyframe animations.

The addition of a Script Editor (RIGHT) to LiveMotion 2.0 addresses one of the biggest weaknesses in the original release.



gradient fills. But most of the new features are geared toward creating interactive content. For example, the new Components panel, replacing the previous SmartClips, lets you quickly add customizable checkboxes, scroll bars, push buttons and radio buttons to your Flash content. Simply drag the element into the scene and use the Components Parameters window to modify its label and other settings. Then attach a script that triggers a predefined action based on the user's input.

Macromedia has also enhanced Flash's already-powerful scripting environment, which now includes a Reference window with extensive information about ActionScript commands. Also new is an Accessibility window that lets you create more usable sites for people with disabilities. The feature works in conjunction with Windows-based screen-reader software—including the Flash 6 Player—which generates a spoken description of the site.

The Flash animation timeline now lets you organize multiple layers into

groups for easier handling. The timeline in general, however, remains one of the program's weak points. Although it offers full support for keyframe animation, it's still somewhat clunky and inflexible compared with LiveMotion's vastly superior implementation. If you create animations on a frame-by-frame basis, the Flash timeline won't bother you, but if your animation work involves a lot of complex tweening, you'll have an easier time with LiveMotion. (Keyframe animation, for the uninitiated, lets you define starting and ending points for an object's position, rotation and other attributes, then generates the transitional frames automatically.)

On the plus side, Flash MX can import Flash movies created in other programs, including LiveMotion, Toon Boom Studio and 3D-graphics programs that support Flash output, such as Amorphium Pro and Swift 3D. You can then add navigation controls and other interactive elements, or use scripts to launch predefined actions when a certain frame plays.

LIVEMOTION 2.0

Adobe's LiveMotion evolved from a discontinued Web-graphics program known as ImageStyler, to which the company added keyframe-animation features derived from its popular AfterEffects video-effects software. Although Macromedia reps derided it as "ImageStyler with an AfterEffects timeline," the two actually made for a powerful combination.

With version 2.0, Adobe has added a complete JavaScript-based authoring environment that supports most ActionScript commands. The company also bumped up the street price from \$99 to \$399; upgrades from version 1.0 cost \$99.

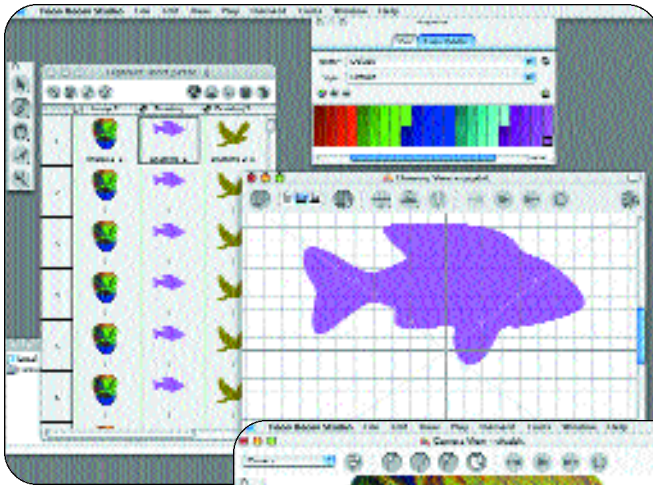
LiveMotion's keyframe-animation timeline, with a few enhancements from version 1.0, remains one of its major strengths. As before, you can import a layered Photoshop or Illustrator file, separate the layers into independent objects, and then use keyframing to animate each object's position, opacity, rotation, scale and other attributes.

(Flash can import either format as well, but it flattens Photoshop files into a single bitmapped layer.) Once you've defined a keyframe, you can easily move it around the timeline or duplicate it to repeat an action. You can also do the same with multiple selected keyframes.

This is a godsend because creating complex animations often involves a great deal of trial and error, and LiveMotion's timeline makes it easy to tweak an object's movement. New in version 2.0 is the ability to change the duration of an animation by dragging its endpoints. The upgrade also recognizes Photoshop and Illustrator layers.

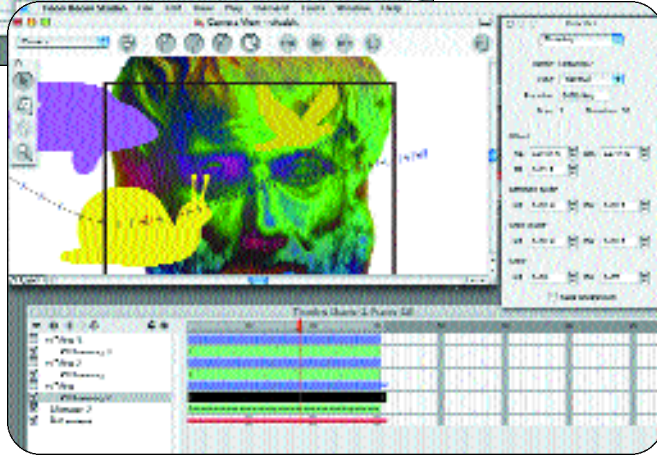
In addition to importing Photoshop or Illustrator files, you can use LiveMotion's built-in graphics tools to create artwork. A Styles palette, similar to those in Photoshop and Illustrator, lets you quickly apply drop shadows, bevels and other effects to selected objects. You can also apply styles that generate animation or rollover effects.

The new scripting environment goes a long way toward closing the gap with



Toon Boom Studio's Drawing mode (LEFT) includes an Exposure Sheet where you store graphic elements.

Toon Boom Studio uses "pegs" (RIGHT) derived from traditional animation techniques to control the movement of objects over time.



Flash's sophisticated scripting tools, though the latter still holds an edge. LiveMotion's script editor lists the available commands next to the frame in which you write the scripts. When you click on a command, a brief description appears in a window below. The package also includes an excellent printed scripting guide that's considerably longer than the program's user manual. As with Flash, LiveMotion also provides debugging tools.

In addition to scripts that you apply to Flash movies, LiveMotion 2.0 lets you create scripts that automate its own functions. The program includes a set of ready-made Automation Scripts that provide such functions as adding stars or breaking apart words. Also new are Live Tabs, Automation Scripts that have simple user interfaces and act much like plug-ins. You can align and distribute objects, add a user-defined grid or apply text-animation effects using Live Tabs built into the program.

LiveMotion's biggest drawback is that it can't import Flash files created

in other software. So if you use Amorphium Pro or Swift 3D to create Flash animations to which you want to add interactive elements, Macromedia's software is your only choice.

TOON BOOM STUDIO 2.0

Whereas Flash and LiveMotion emphasize interaction, Toon Boom Studio is a pure animation tool. It has a few rough spots, and its interface is a little quirky, but its animation capabilities go far beyond those in the other programs.

For example, the Show Lip-Sync command analyzes spoken dialog in imported sound files, then generates reference sheets showing the appropriate lip movements. And taking a page from 3D-graphics software, it lets you position a virtual camera and 2D objects in a 3D space.

The program has two operating modes: Drawing and Sceneplanning. In the Drawing mode, you create vector artwork using illustration tools similar to those in Flash, then place those drawings in an Exposure Sheet, which serves as a storage area for all animation elements. If you have a Wacom graphics tablet, you can use stylus pressure to control line thickness as you draw. In addition to vector drawings, the Exposure Sheet stores bitmapped images, imported Flash movies and audio tracks. Each column in the sheet stores a different graphic element; the rows represent successive frames in the animation.

But graphics-import options are somewhat limited. Although you can import bitmapped images in various formats, vector import is limited to Illustrator versions 5.0 through 8.0. There's a neat Import and Vectorize command that converts bitmapped images into vector objects, but it works only with Microsoft's BMP format.

The Sceneplanning mode is where you position and animate objects you've defined in the Drawing mode. As with Flash and LiveMotion, Toon Boom includes a timeline for defining keyframes and a scene window where you assemble the objects. The timeline isn't as intuitive as LiveMotion's, but it provides powerful functions for animat-

ing objects individually or in groups. Instead of assigning keyframes to objects, you attach the objects to elements known as "pegs," then use the pegs to control movement, scaling and rotation. This approach, borrowed from traditional animation techniques, takes some getting used to, but it has its advantages. For example, you can attach multiple objects to the same peg to create coordinated movements.

At press time, Toon Boom Technologies had just released version 2.0.1 of the software for Microsoft Windows and Mac OS X. Although there's room for improvement, Toon Boom Studio is an intriguing piece of software with animation features that go far beyond those in Flash and LiveMotion.

AND THE WINNER IS ...

If you're a serious Flash designer, Macromedia's Flash software definitely falls into the must-have category. Beyond the built-in authoring tools, it's the only package that lets you add interactive elements to Flash animations created in other software, particularly the numerous 3D-graphics programs that now support Flash output. However, if you find yourself creating complex 2D animations, LiveMotion's superior timeline justifies the \$399 price tag.

Even if you prefer Flash's scripting features, you can create your animations in LiveMotion, then import them into Flash to add interactive elements. LiveMotion's scripting functions fall a bit short of its rival's, but they meet the needs of most Flash authors. LiveMotion also benefits from tight integration with Photoshop and Illustrator, and continues Adobe's tradition of excellent interface design.

Toon Boom Studio is an easier call: If your Flash movies consist of little more than moving text or logos, it's probably overkill. But if you fancy yourself a modern-day, Flash-based Hanna-Barbera, this is the program for you. **HOW**

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