

Bells and whistles don't make a software easier to use--a well designed interface does. Visually, LiveMotion 2.0 hasn't changed much from its earlier version. LiveMotion's interface is something of an amalgamation of Adobe products and should feel familiar to users of Illustrator and After Effects. For Adobe users, LiveMotion 2.0's familiar interface is consistent with other products--including a timeline that looks the same as Adobe AfterEffects. To enhance this connection, LiveMotion 2.0 now includes more keyboard shortcuts which map to those used by AfterEffects customers. While consistency is a good thing some commands overlap for instance when you press "p" get position property (like AfterEffects) only when the timeline is active. When you're on the stage "p" will give you the pen tool (like Illustrator). In addition LiveMotion's color tools are as extensive as Illustrator's but lack the web standard Hex color system though you can save a palette of commonly used colors for quick access.

Macromedia took a more heavy-handed approach to updating the Flash interface, which has been criticized in the past for being unintuitive. Flash MX, which is the first in a family of "MX" products, offers a more streamlined and space efficient look. Gone from MX are the tabbed palettes and in their place is a panel that expands and collapses like window shades pushing unused tools out of the way so you have more space to work. Of course, those who prefer to scatter individual panels around their desktop still can by undocking them and organizing the tools how you wish. Once you've set up your interface to match your work style, Flash MX lets you save the panel layout. This is a step better than LiveMotion which simply cleans up when you restore to the default layout.

Macromedia also dumped nearly a dozen panels and replaced them with one context sensitive Properties panel. Where in the past you had to use three separate panels to set type, the Properties panel now does it all. Basically, you won't need to hunt around for options because everything is right there. If you need help getting started or perhaps want to search the web for Flash books the new web connected reference panels provide answers without leaving Flash (of course you need to be online to search or update the references files). Programmers will find the new reference panel and code hints invaluable because definitions and syntax help immediately appears in a panel without launching the full HTML help files. While LiveMotion 2.0's help files are not as comprehensive (or updateable) as Flash's, only the Adobe Online feature lets you automatically check for patches and install upgrades.

It's the little things that make Flash MX more usable than Flash 5. You'll find subtle improvements such as optional default registration points when creating symbols so the rotation axis can be something other than center. Also, gone are minor annoyances like orphan text blocks, which appeared every time you clicked with the text tool selected (LiveMotion 2.0 still does this). It's obvious Flash MX is a mature product and that Macromedia has listened to user requests.

Creating Artwork Although no web animation tool will likely become your draw tool of choice using it when you can is not only convenient, it's the best way to keep files small. Vector clay is the best way to describe Flash drawing because you create vector graphics by bending and molding shapes using a variety of paint-like tools. Both tools offer basic

vector features and Adobe Illustrator users will feel at home in LiveMotion 2.0's standard vector tools. In addition to these, LiveMotion distinguishes itself from Flash by also offering non-destructive special effects such as emboss and ripple. The list of filters is short and LiveMotion 1.0 users will notice you can't use Photoshop filters. However, effects (not destructive filters) you create in Photoshop or Illustrator files remain editable through the expanded edit-original feature. You can certainly create such effects outside Flash and import Fireworks or Freehand files but LiveMotion effects are always editable meaning you can make adjustments any time and even animate effects over time. For example, you can make a ripple look like it's rippling over time. Even though a bitmap animation bloats file size you can't create them in Flash.

You can ensure effects look consistent with LiveMotion's Styles palette--a feature any Flash user would love. Once you create an effect or animation sequence you can store it in the Styles palette then apply it to another movie. By keeping the animation separate from the content you can recycle effects and build a library of generic animations. Although the Styles palette was in LiveMotion 1.0 it now optionally preserves attached scripts so, for example, a button style could include the script that jumps to your homepage. Flash's Common Libraries feature is similar but lacks the ability to separate animation from the graphics.

Drawing in Flash MX remains unconventional despite recently adding many traditional tools. The unique way, for example, you can grab a shape to bend it or stretch it so it snaps to another object can be quite powerful. In addition to the recently added pen and subselect tools, Flash MX now has a transform tool that adds distort (for perspective control) and envelope (for free transforming using Bezier handles). Even though the new transformations don't work with symbols, bitmaps, or editable text it sure beats launching Freehand or Illustrator just to distort some text (see [figure 1](#)).

Despite the freedom artists feel, drawing in Flash can be very technical. When you snap shapes together for example they become bonded at a sub-pixel level. This means you can make accurate drawings without needing to zoom in and inspect pixels [or use rulers and guides](#)[highlight is optional part]. Because Flash is a vector tool, zooming re-renders the screen the same way the Flash player does. LiveMotion 2.0 fails to provide a way to accurately edit vector shapes because everything is always in whole pixel locations plus the screen reverts to a pixel display when you zoom (which can look different than your final output as shown in [figure 2](#)).

Flash's aversion to bitmaps becomes problematic however when you try manipulating a raster graphic such as a photo. The only viable choice is to re-edit the original because Flash's Advanced Effect dialog box makes anything but psychedelic effects nearly impossible (see [figure 3](#)). In LiveMotion 2.0 desaturating or bumping the contrast in a photograph is a matter of dragging a slider (see [figure 4](#)). In recognition to how poorly bitmaps were handled in the past[could say "in balance" as it's really a slightly different point], Flash MX has eliminated the jitter often seen with bitmaps by providing a snap to pixel feature.

Importing

Designers who don't want to struggle with the limited design tools in Flash and LiveMotion can import native files from more familiar and full-featured programs. Naturally, importing same-brand files yields the best results. LiveMotion2 now supports Photoshop layers and nested Illustrator folders meaning [alt for "meaning": "to"] you can animate them independently in the Timeline. Unfortunately live text is always converted to bitmaps. [passive voice] Another nice touch is the way LiveMotion 2.0 handles round-trip editing. Even after you've imported a Photoshop document and animated the layers LiveMotion 2.0 now lets you launch Photoshop to make touch ups. Flash MX only supports "edit original" on flattened raster graphics.

Flash MX still imports Fireworks and FreeHand documents (including an option to keep text editable). MX now has an option to retain effects such as glows and drop-shadows from Fireworks as bitmaps (although they're no longer editable). Unfortunately importing Fireworks documents won't provide as many options as importing FreeHand files such as an option to turn FreeHand layers into keyframes for animating.

You may want to import more than just static images. LiveMotion 2.0 now lets you import animation data from AfterEffects 5.5. With all the add-ons available for AfterEffects this can prove to be a powerful —albeit expensive—combination. Flash MX's big brother Director Shockwave has grown beyond simply an animation tool. Instead of reinvent the wheel, Flash MX can now import source Toon Boom files. This tool (reviewed xxx) is ideal for character animation and lip-synching. [this paragraph could be shorter if I got ride of the sentence about Director. I could *add* something about how you can use Flash inside Director but not the other way around]

What really separates Flash are tools that you'd expect to see in paint tool allowing you to draw a cartoon character for example. Everything in Flash is vector so it's smaller than a bitmap. LiveMotion excels for bitmapped effects and basic geometric shapes but you'll need an outside tool for the freeform look of a paint brush. [The first part is really necessary not only for transition but because you really shouldn't import unless you have to because the file size grows] **When you've got to import outside files** both LiveMotion 2.0 and Flash MX support their respective sister programs quite nicely but the Adobe family **takes the lead** with features for registration and re-editing. [gotta think of something other than "takes the lead"]

Animating

LiveMotion and Flash have traditionally offered two very different approaches to animating—and the current versions are no different. Flash's frame based timeline is similar to traditional cell animation plus you can morph shapes or tween based on properties. Tweening in LiveMotion is more refined because keyframes apply to one property at a time but can't morph two shapes. Also, LiveMotion's time-based system makes changing an animation's duration easier. You'll find these differences explored in the side bar X.

[too much explanation above? perhaps the same content is in the side bar]

The timeline in LiveMotion 2 offers several nice tweaks that will make users more productive. The new Time Stretch feature lets you extend or shorten an animation while automatically scaling the relative position of existing keyframes (simply hold down the ALT key while you adjust the segment). The resulting animation looks identical, just longer or shorter. Similarly, when you change LiveMotion's frame rate, animations accommodate by getting choppier or smoother--not by changing their elapsed time the way Flash does. Making such adjustments in Flash means manually inserting or removing frames between each keyframe.

In previous versions of Flash the Timeline was often criticized as unintuitive and hard to manage. But for frame-by-frame animation, Flash's frame cells make it easy to draw one frame at a time. Traditional animators will appreciate Flash's Onion Skin feature. Plus only Flash can do morphing (called shape-tween). To make the timeline more manageable when working with complex projects, Flash MX lets you combine layers into hierarchal folders. Layer folders make it easy hide or reveal groups of layers the way LiveMotion can hide "shy" layers. Flash MX also adds the ability to break apart text (one character at a time) and then distribute them to individual layers, making a per-character animation easy (a feature available in LiveMotion 1.0).

Masks are useful for special effects [such as a making spotlight]. LiveMotion 2.0 now [I'm checking to see if this was in LM1] displays masking effects while you edit (in Flash you have to lock layers). In balance, Flash MX has a new scripted mask feature meaning masks can move based on dynamic information during runtime (like making a spotlight follow the user's mouse position). If you attempt this in LiveMotion it will actually crash the user's browser! LiveMotion 2.0's masking feature is well designed but fails to be usable because what you see is *not* what you get when using strokes or scripting in a mask layer.

Sound

The way you can place and control sounds in your LiveMotion 2.0 animations would blow away Flash if it weren't for the practical limits of the .swf file format. For example, you can keyframe volume and pan settings right in the LiveMotion timeline. Flash makes you open a separate Edit Envelope dialog box. Plus, because LiveMotion is time-based, so changing frame rate won't alter its synchronization. However, inherent limits in the Flash player make these advantages moot when you're targeting the web. LiveMotion's cool keyframe features and preview capabilities are disabled when you set the sound to synchronize with the timeline (called "stream"). It's not that Flash MX can do any better, but LiveMotion 2.0's audio advantages only apply when you're delivering QuickTime files.

Video

Only Flash MX supports video in the Flash player. You can import all sorts of videos (such as QuickTime, DV, and MPEG) and Flash will compress them with settings you provide, based on content, to optimize image, audio, and file size. For example, a cooking demonstration may warrant more compression on the sound than the image. The

standard codec included in Flash is called Sorenson Spark although the "professional" version (Sorenson Squeeze for Macromedia Flash MX \$299) yields better results.

Once compressed an imported, video in Flash MX behaves like an animated Movie Clip. It lacks an audio preview when you scrub but that minor annoyance is more than made up by the fact you can mask, tint, and animate the video clip itself. For example, you could easily reveal a video through the windows of a drawn car by masking the windows (like in figure 5). [Personally, I can't draw this, but it might make a good figure--It can be mocked up--maybe you have an artist who can do it....see my sample]

Automation

Both LiveMotion and Flash offer tools to insulate you from difficult or tedious tasks. The LiveMotion 2.0 now lets you affect the authoring environment JavaScript-based language enabling macros that make edits to your open file (sort of like Photoshop Actions). For example, one Automation Script that ships with LiveMotion2 will create the keyframes to animate objects along a drawn path (figure 6). This cuts down on a lot of monotonous work) LiveTabs add a graphic interface for Automation Scripts requiring additional information such as the star tool which needs to know how many points. As these scripts edit your composition, the changes can only be removed manually. Also, while several useful Automation Scripts ship with LiveMotion 2.0 actually creating your own is no walk in the park. Adobe is trying to **incubate script writers** however through its community site at www.actionxchange.com. [any ideas to replace "incubate"?)

Flash MX's Components don't make edits to your file. Rather you drag these self-contained widgets into your movie like building blocks. The standard set of user interface Components let you add scrollbars to your text or make drop-down menus by just populating it with your data. The new Live Preview feature means Components can reflect your content while authoring where in the past you had to test the movie to see the results. **See figure 7**. Beyond their utility, Components are convenient because they're easy enough for anyone to build, you can always tweak as settings as nothing is written to file until you export a movie, and you don't to build a custom graphic interface unless you wish to. Macromedia also has a community site at www.macromedia.com/exchange.

Programming

When Flash 5 added ActionScript in version 5 it gave developers the ability to make full fledged applications like banking interfaces. In LiveMotion 2.0, Adobe offers its own take on ActionScript. Although they don't call it ActionScript (they say it's "JavaScript based") it's effectively the same as Flash 5. LiveMotion 2.0 traditional debugger is much better than Flash 5's but Flash MX's debugger is better still because you can add breakpoints as well as troubleshoot movies after their online. LiveMotion's first attempt to add programming is confusing, inconsistent, and buggy. For example by keeping scripts in drop down menus, LiveMotion succeeds in keeping the script window clean but it also makes finding scripts quite a challenge. You can't access a button's script, for example, unless you first make a visual "state" (for down or over) and then open the correct portion of the script window. Plus there's an annoying bug with LiveMotion's script window that often requires that you close and reopen to view an updated script.

For those without programming aspirations, LiveMotion does offer a point-and-click way to create simple or disjointed rollovers. Also, LiveMotion buttons have an "out" state to indicate a button has been selected--this requires some scripting in Flash MX.

Flash MX's Actions panel is improved and just plain better than LiveMotion 2.0's. Not only will you find preferences for visual settings like background color, font choice, and syntax colors, but there's a host of new features to make coding less error prone. For example, code hints, auto-completion, and auto-formatting achieve the goal of reducing typos and keeping code looking clean. For example, type "myMovie_mc." and immediately the auto-complete dropdown list appears and you can select attachMovie (or any other movie clip option). Then a tip appears guiding you through the syntax. [alt example: "For example, you can accurately write complete scripts with just a few keystrokes."]

And thanks to its integration with the new Flash Player 6 (which was released after Adobe finished LiveMotion 2.0), Flash MX is able to do countless ["many" is too few and "countless" may not be the right word] things that are simply impossible with LiveMotion. For example dynamically loading MP3s and JPEGs will let you modularize your movies, keep data in its original form, and let users download only the media they request. You can also layout and format text on the fly including Unicode support to display text for other languages. Also the Shared Objects feature means you can restore user settings when they revisit your site--like cookies but independent of the browser.

Exporting

LiveMotion 2.0's preview feature allowing you to watch your compositions without export and open a separate window is convenient and improved. The newly added "simulate slow download" option gives you a sense of how dialup users will experience your site. However, again, it fails in practical terms. Because it doesn't actually use the Flash player you'll often see inaccurate results until you actually export the movie. For example, a simple rollover animation I created in LiveMotion2 looked good when previewing but flickered when testing in the browser. Even though Flash's "test movie" feature isn't perfect it's much better than LiveMotion.

[Earlier I did mention the preview fails for strokes in the mask.]

To make your movies download faster you'll often want to compress images and sounds. LiveMotion 2.0 lets you see a preview of quality while working. Plus each object clearly indicates whether it will export as bitmap or vector. However, if you import JPEGs or MP3s you'll find that, unlike Flash, LiveMotion *always* recompresses which introduces undesirable artifacts.

Accessibility

Sites created with Flash MX can now be fully accessible. In addition to government regulations ([reference 508 article?](#)) inaccessibility has been a major gripe against Flash. Now users who use a Microsoft Active Accessible screen reader will "see" everything in

your Flash movie even when authoring Mac. By setting options in the Accessibility panel you can automatically make button labels and text in your movie accessible.

Stability

LiveMotion 2.0 and Flash MX work under Mac OS 9.1 (and higher) and OS X 10.1. Both programs could be sluggish at times. For example LiveMotion nearly came to a halt when nesting groups of objects where Flash starts to slows down when you have tons of fonts installed. Also, I found both programs were snappier in OS9.1 on a **more moderate** machine. [iMac with 256RAM--could say "anything but a super computer"]

Recomendations

While it's certainly possible to create entire interactive websites in LiveMotion 2.0 I see little reason to do so. The killer new features in Flash MX make it the clear choice for professionals and a no-brainer upgrade. The fact Flash costs more is certainly justified if you can use even just one of new features. However, LiveMotion 2.0 offers some distinct advantages to users who are focused more on animating than scripting. LiveMotion's advantages include property specific keyframes for more control and bitmapped effects. If you want to export standard QuickTime video LiveMotion is better than Flash MX, but then again, AfterEffects is really the best choice there. If you're coming from another Adobe product I don't think the similarities in the interface are enough to ignore Flash's dominance. If you've got a ton of existing Photoshop and Illustrator files that you plan to animate then LiveMotion will serve you better although the output may be inappropriately large for web delivery. In any event, if you're coming from another background you'll find much stronger Flash community from which to learn.

LiveMotion 2.0

2.5 stars

Pros: bitmap effects, standard controls, photoshop/illustrator integration

Cons: inaccurate preview, recompresses media, bigger files, Livetabs difficult to create.

www.adobe.com

upgrade \$99, full product: \$399

Flash MX

4.5 stars

Pros: customizable and improved interface, programmer's dream, video, accessibility.

Cons: Video lacks audio scrubbing, old quirks still present

www.macromedia.com

upgrade: \$199, full product: \$499

Phillip Kerman author of "Sams Teach Yourself Macromedia Flash MX in 24 Hours" (SAMS 2002) and "ActionScripting in Flash MX" (New Riders 2002) conducts Flash training workshops around the world. Archives of his free newsletter are available from www.phillipkerman.com

SIDEBAR:

While people usually have a clear picture how they want their animation to look, selecting the most appropriate timeline is not as easy. [here's how the two tools compare] Only Flash's timeline cells let you can draw frames of your animation like frames in a movie. This seemingly meticulous approach has forced traditional animators develop techniques that trick the eye. In just three keyframes, for example, you can effectively make a Tasmanian devil spin wildly. Additionally, Only Flash has features like preview keyframe previews (like a filmstrip) and Onion Skin that gives you a view of neighboring frames like squinting through tracing paper ([sidebar_1_REPLACE.tif](#)).

Instead of drawing every frame, both tools let you draw two keyframes and then--by calculating the inbetween frames--the software will interpolate (or "tween") the difference [highlight is sort of repetitive but I like the tempo]. Flash's unique shape-tween feature can morph two freeform shapes. It turns out, however, frame-by-frame animation often gives you more control.

Only LiveMotion lets you independently set keyframes based on properties like scale, position, and opacity. In Flash keyframes record all properties of the object you're animating. This means fading text in at a different rate than it's growing is easy in LiveMotion (though it's certainly possible in Flash when nesting one animation that fades inside another that grows)--see [sidebar_2.tif](#). [That parenthetical point is not totally necessary]

You can compare Flash's frame-based timeline and the time-based one in LiveMotion to how one person will say they're commute is 20 miles and someone else says it takes 30 minutes. But unlike commuting, you always have the power to change the duration of an animation after it's built--and here LiveMotion has distinct advantages over Flash. If you have three keyframes animating a yo-yo down and back up in 1 second you can easily use LiveMotion's time stretch feature to change it so it takes 2 seconds. All contained keyframes adjust automatically ([sidebar_3a.tif](#) & [sidebar_3b.tif](#)). In Flash you'd have to manually stretch the span between both the first and second keyframes as well as between the second and third. Alternatively you can lower the framerate--but again, LiveMotion's time-based system is better because a 1 second animation will be 1second regardless of the frame rate. However, in practical terms high framerates are never guaranteed (when viewing .swfs on a user's slow computer) so neither frame-based or time-based systems provide accurate timing unless you keep frame rates low. [I think I say what I want to in that sentence but it's not exactly a great way to end. It's important to mention that just because LiveMotion's time-based system is no guarantee that the animation's timing will stay on-time on a slower machine.]

TABLE:

	LM	MX
<i>Built in Drawing</i>	50	50
paint tools		x
standard tools *mixed with unorthodox behavior	x	x*
advanced drawing tools	x	
color schemes	x	
3D effects (bevel, ripple, lens, etc.) *balloons filesize	x*	
Snap to objects drawing		x
union/difference	x	
font preview		x
variable anti-aliased text	x	
Sub-pixel positioning		x
Shapes with both stroke and fill		x
<i>Built in Animation</i>	80	20
keyframe individual properties	x	
time stretch	x	
global framerate change (without affecting existing timing) *you may want it to change timing	x	*
masking visible while editing	x	
morphing (shape tween)		x
motion guides *pretty touchy feature in MX	x	x*
frame-by-frame animation		x
onionskin		x
<i>Importing Media (could move this after "built in drawing")</i>	50	50
retains nested object hierarchy in Photoshop or Illustrator files	x	
retain editable text		x
runtime import (mp3 and jpg)		x
option to avoid recompression		x
digital video import and compression		x
support for AfterEffects 5.5 animations	x	
support for ToonBoom 1 project files		x
<i>Audio</i>	20	80
multiple sound export formats		x
audio scrub preview	x	x
visual waveform preview		x
keyframe volume and pan *only suitable for QuickTime export	x*	
<i>Programming</i>	1	99
option to consolidate all scripts		x

Flash 6 player support		X
context sensitive help *not as good as MX	X*	X
auto format / auto complete		X
code hints		X
extensible script editor		X
full syntax coloring *has limited coloring--not full	*	X
<i>Workspace/Interface/Usability</i>	<i>10</i>	<i>90</i>
efficient screen space use and fully resizable panels		X
multiple undos *hierarchical	X	X*
styles palette to save effects and animations	X	
ability to save panel layout		X
media library	X	X
runtime sharing of media libraries		X
author-time shared media		X
starter templates		X
Components		X
Live Tabs	X	
features to prevent inadvertent object creation		X
keyboard shortcut re-assignment		X
matches shortcuts from sister products *overlapping commands confusing	X*	X
invisible buttons/clips made visible while authoring		X
hide/shy layers *no "shy" but layer folders are equivalent	X	X*
roll-out button state	X	
hit states		X
accurate preview		X
publish templates		X
backwards compatible (save as Flash 5)		X*
<i>Web Centric</i>	<i>40</i>	<i>60</i>
scaled raster images export proportionally	X	
live bandwidth profiler		X
per object export details while authoring	X	
Shared Objects feature to save user data locally		X
Local Connection between multiple movies		X
publishes to any version of Flash player *Flash 5 only	*	X