

# Suite philosophy streamlines web design

BY PETER DUDAR

I RECALL A RECENT TRADE SHOW IN WHICH Macromedia offered *Dreamweaver*, *Fireworks* and *Flash* as a comprehensive Web suite: *Dreamweaver* for authoring Web pages, *Fireworks* for making and producing Web graphics, and *Flash* for creating high-end animation and interactivity.

Until now, constructing and updating a website has required going in and out of disparate applications, including text editors, vector-based graphics programs, image editors, animation tools

and *Debabelizer*-type processing and optimization utilities. Macromedia is in the vanguard of software developers streamlining that process.

Proviso: recommended RAM allocations for these applications range anywhere from 16 to 40 MB each, depending on the system used (Windows, Windows NT, Mac PowerPC).

## DREAMWEAVER 1.2

*Dreamweaver* premiered as the first WYSIWYG Web authoring tool with support for dynamic HTML, including

layers, style sheets, timelines and behaviours. (See the February 1988 issue for a review of Version 1.0.)

*Dreamweaver's* award-winning fea-



## AT HOME WITH THE HOMEGURRL

# Lynda Weinman opens Ojai Digital Arts Center

FOR THOSE FRUSTRATED BY THE LEARNING CURVES ASSOCIATED with mastering new web design applications, take note that best-selling author, lecturer, journalist and instructor Lynda Weinman (familiar to GRAPHIC EXCHANGE readers as the *Homegurrl*) has just signed a contract with Macromedia to produce a series of training videos to accompany the company's suite of applications.

The first video will be on Macromedia's new *Fireworks* software (reviewed in this issue).

But for serious web design folks, a more significant announcement was the September 14th opening of the Ojai Digital Arts Center in Ojai, California, a small tourist town located close to Santa Barbara and Los Angeles. ODAC is a brand new training facility operated by Lynda and husband/partner Bruce Heavin (check [www.digitalartscenter.com](http://www.digitalartscenter.com) for course registration details). The new school offers in-depth hands-on instruction by Lynda and Bruce on the full range of design applications, including Macromedia *Fireworks*, *Flash*, *Dreamweaver*, *Freehand* and *Director*, Adobe *After Effects*, *ImageReady*, *Photoshop*, *Premiere* and *Illustrator*, Equilibrium *Debabelizer*, and GoLive *CyberStudio*.

Despite the fact that the school's official pre-publicity was only carried in a single low key press release in late July, Lynda received a wave of response, not just from all over North America but also from interested parties in Europe and the Middle East. Even before the doors opened,

close to forty students had registered for Lynda's week-long immersion tutorials — a testament to her lofty standing in the web design community.

Although Lynda has achieved international status in the world of web design through her six books on the subject (at last count, her first book, <DESIGNING WEB GRAPHICS> had sold better than 70,000 copies in six languages), it was her first love — teaching — that inspired her to open the Ojai Digital Arts Center.

Her initiation into instruction in new media came in 1989 when she began teaching Macromedia *Director* at Art Center College of Design in Pasadena, California. Since then, her open-minded dedication to dispersing knowledge has propelled her to the forefront of the web design industry. She is in demand as a speaker at major trade shows, as well as being a columnist for several major industry publications.

But when Lynda talks about the art of teaching in a classroom environment, her enthusiasm is

The announcement of the opening of the Ojai Digital Arts Center in Ojai, California was met with a wave of enquiries from all over the world. Web design author and instructor Lynda Weinman (left) and Bruce Heavin opened the doors to their new training facility on September 14th. (inset) A classroom of 20 seats equipped with fully loaded iMacs which are networked and connected to the Internet through a T1 line.

CONTINUED ON PAGE 18



## USING ALL THREE

As you become familiar with the applications and clue in to their unique strengths and capabilities, you can more fully exploit them interchangeably. Macromedia's website ([www.macromedia.com/support/flash/ts/nav](http://www.macromedia.com/support/flash/ts/nav)) provides a case study that uses the three applications: an image is sliced in *Fireworks*, it's turned into a relatively sophisticated animation in *Flash*, and then it's embedded into a *Dreamweaver* page.

## OFFLINE AND ONLINE HELP

The manuals for all three applications are similarly designed and concise, ranging from 134 to 200 pages. And each provides well-indexed online help. *Dreamweaver* and *Flash* employ Web browsers, which include animated tutorials, and enable you to access current information directly from Macromedia. *Flash* also provides fully interactive lessons.

ture is roundtrip HTML, which lets you move instantaneously between the visual window and a text editor with little or no impact on source code; plus integration with external text editors such as *BEdit* or *HomeSite*. *Dreamweaver's* roundtrip capability has not been duplicated.

*Dreamweaver* enables you to set up pages with more established means like tables and frames, using fast click-and-drag procedures. When you split a page, *Dreamweaver* creates a frameset file and documents for the new frames; and you can work directly in the frameset display.

*Dreamweaver's* Site window transfers files between your local and remote sites, maintaining identical directory structures to ensure that links and references are not accidentally broken. In version 1.2, users working behind a firewall can access site FTP features by providing the address of the proxy server and the port which connects to the FTP server.

Making up for the application's major shortcoming, the new Link Checker dialog generates reports of broken links, external links, and orphaned files. You can fix broken links and image references directly in the dialog by inputting the correct path, or just browsing to the required file. *Dreamweaver* informs you if there are other broken references to this same file, and a simple click updates all the documents that reference this file.

*Dreamweaver's* new 'Convert to 3.0 Browser'



(top) The 'Convert to 3.0 Browser' command enables you to convert DHTML pages into pages compatible with 3.0 browsers. (bottom) The 'Check Browser' dialogue. This behavior automatically sends viewers to the page optimized for their particular browser.

command enables you to generate alternate pages compatible with 3.0 browsers, after designing pages using layers and cascading style sheets. The catch is, all your page content has to be on layers, or the converter will not work. The command converts layers into tables, but tends to output superfluous cells and occasional idiosyncrasies while doing so. It's faster than creating alternative pages from scratch, but anticipate doing some minor fixes.

*Dreamweaver 1.2* also includes a 'Check Browser' behavior to automatically send viewers to the page optimized for their particular browser. With the new 'Pre-load Images' behaviour, you can require that dependent files be downloaded before loading the page or executing Java-Script. Interactive properties, like a 'Drag Layer' feature and a Graphical Resize feature, enable end users to manipulate elements directly on the browser page.

*Dreamweaver*, which comes with either *BEdit* or *HomeSite*, lets you configure any text editor from the preferences dialog box. With *BEdit*, changes are dynamically mirrored in the layout and text windows.

CONTINUED ON PAGE 48

## Verging on convergence

CONTINUED FROM PAGE 11

coast event was inundated with at least twenty solutions, ranging in price from a few hundred dollars right up to six-figure packages.

Second to the flock of DAM sells was the broadside of PDF workflow add-ons, led by Agfa with its Apogee system and demonstrating an implementation of Adobe's in-RIP trapping technology using a Quark XTension that allows setting sophisticated trapping settings which are read at the RIP (download it from Agfa's website if you're curious).

Among the handful of products which caught my attention, two stand out. First was the premiere of Ultimatte's *Knockout 1.0* masking software, which blows away any desktop masking package I've seen to date ([www.ultimatte.com](http://www.ultimatte.com)). Second was Markzware's soon-to-be-released prepress automation technology, *MarkzScout*, a cross-platform multi-purpose file and workflow manager that may plug a vital hole in the desktop workflow.

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In the end, the most significant product showing at Seybold had to be what was obviously a last minute addition to Steve Jobs' keynote. Jobs provided a spellbinding demonstration of Adobe's "Quark-killer" page layout software (known only as K2 — pressroom scuttlebutt had it that Adobe folks were slightly miffed because he wasn't actually supposed to call it by name).

Although K2 is still in early development and not expected to be seen before the second half of next year, from this sneak preview it appears that all the rumours of it being a *QuarkXPress-cum-Photoshop* are true. We saw an impressive display of object-oriented programming that allows free manipulation of both graphics and editable text (including shearing and skewing) incorporates layers, supports a PDF workflow seamlessly, and promises creative imaging and vector-based tools far beyond anything Quark has ever shown. No wonder Tim Gill is scared.

It's a good bet that if it hadn't been for the pressure John Warnock and Chuck Geschke were getting from shareholders and customers over the Quark attack, Adobe would have had no compelling reason to preview K2 at Seybold. But there's no question it had its desired effect. The crowd was wowed, the trade press was rapturous, and the Quark offensive was for all intents and purposes stopped dead in its tracks right there and then.

Adobe is also driving a major initiative to publicize its Extreme architecture, the "son of Supra" PDF workflow and RIP system which has been repackaged with a heavier emphasis on Adobe's Portable Job Ticket capabilities. By about this time next year, we should see more evidence of how well Extreme is being adopted by OEMs.

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## Ojai Digital Arts Center

CONTINUED FROM PAGE 14



boundless. She has definite ideas about what works and what doesn't.

"Part of the skill of teaching is in balancing the needs of a wide spectrum of students," she says. "One of the added difficulties with web design is that there are so few qualified instructors."

The Ojai Digital Arts Center truly boasts state-of-the-art technology. Aside from the twenty brand new 233 MHz iMacs (each loaded to the gills with RAM, equipped with Virtual PC to emulate the Wintel environment, and connected by a 100BaseT Ethernet network), it happened that by a stroke of good fortune, the space that Lynda and Bruce chose was situated below the only T1 line in Ojai — a blessing neither of them had anticipated. So not only do students at Ojai benefit from the tutelage of a leading figure in web design, using the latest in hardware and software, they also enjoy very fast connectivity to the web.

Tutoring doesn't end with scheduled classes; the facility remains open in the evening so that students can spend time on their own, practicing what they learn and exploring individual needs.

The structure of Lynda's classes is an equal mix of lectures and hands-on discovery. She and Bruce split lecturing chores, though Lynda handles the lion's share. The maximum class size at ODAC is twenty students.

The Ojai Digital Arts Center's five day course in web design costs \$1295 (US); a three-day course is also available at a cost of \$895 (US). Check out the complete details at [www.digitalarts.com](http://www.digitalarts.com). \*

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With random thoughts of technological convergence drifting through my head, I tottered down the stairs of The Stinking Rose restaurant, the beneficiary of an excellent garlic-strewn dinner courtesy of color king Michael Kieran. Spotting a cab and two people getting into it, I soon found myself riding back to my hotel with Hewlett Packard color guru Michael Stokes and Roger Siminoff, Apple's worldwide ColorSync developer liaison.

Being in a curious frame of mind, and with fresh memories of struggling with *Photoshop 5's* new color management setup, I asked these proponents of sRGB, *Photoshop's* default color space in which a vast chunk of the CMYK gamut is missing, what place this color space had in a world still very much dependent on printed matter.

Our brief but lively exchange concluded with Siminoff's declaration, "It's not meant for a print-centric workflow!"

It got me wondering about how useful the "Digital Master" would ever be if in the quest for a universal color standard, print is relegated to non-essential status. Maybe full convergence in the workflow is farther off than I thought. \*

# Fireworks, Flash and Dreamweaver

CONTINUED FROM PAGE 15



## DREAMWEAVER 1.2

Recommended system requirements  
Windows 95 or NT version 3.0,  
16 MB RAM  
Power Macintosh, System 7.5,  
24 MB RAM

Retail price \$470  
Macromedia Web Essentials (Dreamweaver plus Fireworks) \$399 (US)  
Contact Macromedia 800-457-1774

## ANIMATION IN DREAMWEAVER

Dreamweaver's Timeline inspector enables the creation of animation without using ActiveX controls, plug-ins or Java applets. Timelines use DHTML features to change the position, size, visibility and stacking order of layers in a series of frames over time. Timelines can also change the source file of an image that is not in a layer and can execute behaviours at a particular frame. But they work only in 4.0 or later browsers.



Dreamweaver's Timeline inspector enables the creation of animation using DHTML features.

like *ImageReady*, a bitmap-based application, but *Fireworks* functions in both vector and bitmap modes, with vector mode as its default.

*Fireworks'* interface, with its floating tabbed panels, feels like *Photoshop*. An Opacity toolbar lets you set opacity using sliders and choose *Photoshop*-type blending modes. The URLs toolbar enables you to attach client-side and/or server

side URL hotspots to objects, by drawing color overlays on your graphic. On Macs, this toolbar also provides status information for selected objects, including a 'stop bitmap mode' button. On Windows, status info is located in the lower left corner of the document window.

*Fireworks'* vector tools produce editable results, like *Freehand's* and *Illustrator's* tools, though they often behave like bitmap tools; the bitmap tools generally behave like *Photoshop* tools. So dual-mode tools, like the Brush, are editable in one mode, but not the other. You have to familiarize yourself with idiosyncrasies introduced to accommodate the dual interface. For instance, bitmaps reside within vectors, so importing and placing images is a

In this application, you can select an airbrush swoosh with one simple click, then change its path, color and texture using simple menu selections; or turn a 1-pixel hard pencil path into a 20-pixel oil splatter and then convert its soft drop shadow into a halo glow. It's uncanny.

A floating palette provides Brush and Fill tabs with exten-

## EXTERNAL IMAGE EDITORS

You can open a selected image in an external image editor directly from *Dreamweaver* by first specifying an editor, like *Fireworks* or *Photoshop* in *Dreamweaver's* preferences. Not surprisingly, *Fireworks* has a built-in edge here: *Fireworks* automatically searches for the original PNG version of the selected file, since PNG is its native file format.

Other image editing applications open the selected image. To open the original file from which your GIF was generated you have to proceed manually, and then regenerate the GIF. In either case, when you return to *Dreamweaver* after saving the image file, it's already updated in the Document window.

## FIREWORKS AND IMAGEREADY

Procedure-wise, the fundamental difference between *ImageReady* and *Fireworks* is this: with *ImageReady*, you mostly import images or convert vector graphics by using the File > Open command. *ImageReady's* display window provides two separable tabs, one with the original image, the other with a copy for optimizing. *ImageReady* doesn't separate image editing and export functions. With *Fireworks*, you can open a bitmap directly, placing it into the background layer of your file, or import vector and bitmap graphics into any other layer of an existing file, as in a page layout application. You work with a *Fireworks*-native PNG file, and can switch between vector and bitmap modes as needed. When finished, you access an Export Preview dialog. Here, you optimize your graphic for export using comparative previews, then create an export file. Unlike flattened export graphics, the master PNG file is always editable, since it retains all path, frame and layer information.

sive gradient options and modifiers. And here's a neat touch: sample swatches pop up as you move through texture selections. An Effects tab provides bevel (inner and outer), drop shadow (basic and soft), emboss and glow options. And by grouping objects and effects, you can pile on even more effects.

*Fireworks* has pretty comprehensive drawing functions, including grouping, layering and masking, plus a customizable grid and guides. But like *ImageReady*, *Fireworks* lacks image editing tools such as Smudge, Blur, Sharpen, Dodge, Burn and Sponge. (There are Blur and Sharpen filters.) It does, however, have an extended set of path altering tools, including: Redraw for altering part of a path, Freehand-type Freeform: tools for pushing and pulling path segments and Path Scrubbers for altering the speed and pressure-based characteristics of 'bitmap' paths. When you click an initial point and then drag, the Pen tool displays a rubber-banding curve that shows your impending shape. And an Export Area tool enables you to re-use a graphic by exporting only selected portions. You use layers less than in *Photoshop* or *ImageReady*, since elements don't automatically merge. I particularly like one tool option: selectable objects can be highlighted as your mouse passes over the artwork.

You input text into *Fireworks* with an intermediary *Photoshop*-like Text Editor. You can adjust tracking, leading, kerning, proportions, alignment, direction, flow and baseline shift, but the palette displays only font selection and size. You can apply and preview text without closing the editor, but unlike other palettes there's no auto-apply. A major plus that *ImageReady* lacks, is *Fireworks'* ability to apply multiple formatting attributes within text blocks (but not multiple colors). Also, *Fireworks* produces manipulable text boxes — you can rotate, skew and stretch them along with their content. And if you re-size just the box, *Fireworks* auto-wraps copy. Single lines of text or entire paragraphs can be attached to paths. But since type is not selectable, as in *Illustrator* or *Freehand*, re-positioning requires inputting text offsets within a dialog.

*Fireworks* outdoes *ImageReady* in its support for rollovers. You simply make an original button in one frame and the version that appears when a cursor passes over it in the next frame, using the layers-style Frame panel.

You don't even have to create the look of succeeding states — just apply presets from the Effects palette: raised, inset, highlighted and inverted. In *Fireworks'* Export Preview panel, you apply options and optimize — *Fireworks* creates a separate GIF file for each rollover state and creates an HTML file containing the Javascript code (including pre-caching) all in one go.

*Fireworks* imports *Photoshop* 3 and 4, GIF, JPEG, PICT, PNG, TIFF, xRes LRG, BMP and ASCII files. Besides *Fireworks'* bitmap tools, these files can be edited with *Photoshop* filters, plus some third-party plug-ins. And you can



(left) The Brushes and Fills palette. The Effects tab has bevel, drop shadow, emboss and glow options. It also provides button state presets: raised, inset, highlighted and inverted.

(right) The Layers and Frames palette, for managing multi-layered documents and animation

configure your Prefs to access your *Photoshop* folder. *Fireworks* doesn't load known unusable plug-ins. On my Mac G3, Extensis products ended up on the disabled list. *Eye Candy 3.01* filters worked. But *KPT 3.0* filters, which were accepted, crashed the entire system. *Fireworks* imports vector graphics from *Illustrator* 7, *Freehand* 7 and 8 and *CorelDRAW*, with layers intact. Imported paths are editable.

Most of us use *Photoshop* (via plug-ins) for scanning and then correcting images, or just fixing existing images, by adjusting levels, curves, color balance, brightness, contrast, hue and saturation. Though *Fireworks* and *ImageReady* are primarily made for Web optimization, users expected image correction capabilities in these applications when they premiered. *Fireworks* pales next to *ImageReady* here. *ImageReady* provides some of the above, plus a Windows to Mac/Mac to Windows gamma function. *Fireworks* can open *Photoshop* files with layers, but can't edit them. With *ImageReady*, if your images don't need intensive editing, you can simply access your *Photoshop* scanner plug-in, and then scan them directly into *ImageReady*.

Being vector-based, *Fireworks* can't do likewise. Its Xtras menu provides non-reversible *Photoshop*-type effects like Blur (including Gaussian Blur), Invert and Sharpen (including Unsharp Mask) — compensating somewhat for its shortfall here.

The current version of *Fireworks* supplements these abilities by including an undocumented set of *Cytopia PhotoOptics* filters in its drop-down Xtras menu. The set has eight photographic color manipulation filters for colorization, contrast, exposure and color cast treatment, along with special effects such as noise generation and



## FIREWORKS 1.0

Recommended system requirements  
Windows 95, 32 MB RAM  
Windows NT 4 (with Service Pack 3), 40 MB RAM  
Power Macintosh, System 7.5.5,  
24 MB RAM (32MB with virtual memory off)

Retail price \$460  
\$199 (US) if you own Dreamweaver or a competing product, contact Macromedia (800-457-1774)



(above) Fireworks' Export Preview dialogue. Options, File and Animation panels let you experiment with file formats; compare the the output of color palettes and transparencies; and customize and save palettes, export presets and animation settings.



(right) The Slice tool in the URLs toolbar (grayed out). You simply draw a rectangle on the graphic, then define settings in the Object Properties dialogue.

**EXPORTING FIREWORKS FILES**

The Export Preview dialogue is where *Fireworks* really shines, enabling users to optimize for quality and speed using four side-by-side export previews — and opening up the potential for finding unanticipated or innovative solutions. Options, File and Animation panels let you experiment with file formats; compare the the output of color palettes and transparencies (Index Color, Alpha Channel); and customize and save palettes, export presets and animation settings.

Each preview includes estimates of file size and download time at 28.8 kps, plus a pull-down menu of export presets. Selected palettes display on the Options panel and re-configure as you reduce them — by placing your cursor on a swatch, you can determine its RGB, Hexadecimal and Index values.

Instead of going directly to the Export dialogue, you can automate the export process by selecting the Export Wizard from the File menu. The Wizard analyzes and prepares the file based on your input regarding intended use. It then opens the Export Preview dialog box with one or more optimum formats in place. *Fireworks* exports GIF, Animated GIF, GIF Rollover, JPEG, JPEG Rollover, PNG, TIFF, xRes LRG, BMP and PICT.

infrared simulation. On-screen help is provided within *PhotoOptics'* floating palettes, but for detailed info, you have to go to [www.cytopia.com](http://www.cytopia.com). The *PhotoOptics* dialogues use annoyingly small thumbnail previews and controls, but they'll do if you don't have *Photoshop*.

*Fireworks'* File > Batch command converts an entire folder of graphics using any setting made in the Export Preview dialog. And with it, you can generate sets of thumbnails in one go. There are no *Photoshop/ImageReady*-type actions for grouping pre-export commands.

*Fireworks* image slicing and exporting capabilities surpass *ImageReady's*. You can slice anywhere, and the pieces are exported as unique files. They can be individually optimized and coded as links; you can mix JPEGs and GIFs; and the pieces appear as a seamless whole on the Web page. You simply draw a rectangle on the graphic; this calls up an

Object Properties dialogue, where you define the slice as an image or rollover, select export settings, or access the Export Preview. Repeat for each slice. Then use the File > Export Slices command to put your images into a sub-folder. *Fireworks* automatically generates an HTML table file, with links to the images.

If you've edited a PNG file that was launched from within *Dreamweaver*, just choose File > Export Again, type a file name in the resulting dialog, select a destination folder and then click Save. The image updates in *Dreamweaver*.

**FLASH 3**

If *Fireworks* is *Freehand* for the Web, then *Flash* is *Director* for the Web — a means to create and deliver fast, compact vector-based graphics, animation and interactivity.

Initially, the *Flash* player needed to be installed by the end user. Now, the *Shockwave Flash Player* is included in every *Netscape* browser and comes pre-installed in the Windows 98 operating system; America Online is also adding it to the AOL 4.0 CD-ROM. With these alliances, the release of *Flash 3*, and the recent opening of the *Flash* file format (.swf), Macromedia seems to have gone from mere viability to establishing a vector graphics standard for the Web.

Two work areas 'cohabit' the interface: the Stage, where you create and view the individual frames of the *Flash* movie using shapes, groups and symbols; and the Timeline, where you define the movie over time. Timeline rows correspond to layers. Scenes incorporate layers. And scene names are used as targets for actions. Binder-like Scene tabs are

**ANIMATION IN FIREWORKS**

*Fireworks* streamlines the generation of animated GIFs using tweening. This is done with symbols and instances, a method derived from Macromedia *Director's* cast members and sprites; and also inherited by *Flash*. *Fireworks'* approach is consistent with the other apps, but more complex than *ImageReady's*. And its frames can't be displayed side-by-side.

But with its layer-to-frame quick navigation and frame-to-frame copy abilities, and the capability to tween shape, color and fills as well as movement and opacity, *Fireworks* enables greater sophistication. Symbols are original objects; instances are representations of the original and update automatically when symbols are modified. But modifications to an instance do not affect its symbol. And changes to an instance are automatically reapplied when its symbol is modified.

To see how your animation plays, you go into the Export Preview dialog, which provides a tabbed Animation palette for inputting specifics like frame delay and number of loops.

displayed down the right side of the Timeline window

As in *Fireworks*, symbols are reusable movie elements. *Flash* symbols can include other symbols, shapes, groups and text; and incorporate animations and interactions. Each symbol is stored as vector data, so you can use as many instances of a symbol as you want without increasing the movie's file size. (Director users: cast member = symbol, sprite = instance, Score = Timeline.)

In *Flash 3*, three types of behaviours are assigned to symbols and instances: Graphic, Button or Movie Clip. A graphic symbol is mostly used for still images or animations you want controlled by the main Timeline. A movie clip is similar to a graphic symbol, but works as a completely functional, interactive and self-contained movie that plays independently of the main movie's Timeline. A button symbol has a four frame Timeline that defines the mouse-up, mouse-over, mouse-down and hit states of the button.

*Fireworks* doesn't store symbols, they're just tagged. *Flash* uses libraries to manage three element types: symbols, bitmaps and sounds. Besides placing new instances on the Stage, *Flash* libraries enable you to edit existing symbols or check how elements play.

You can now make more things happen, in more complex ways, when a user clicks a button or a movie reaches a certain frame. *Flash 3* has new actions for stopping and

starting movies, loading and unloading movies, or going to a specified URL. 'If Frame is Loaded' verifies that the contents of the specified frame are present before executing an action. 'Tell Target' accesses different levels in *Flash's* timeline hierarchy, enabling one object to control the actions of another object. The new Actions panel, residing in the Instance and Frame Properties dialogues, lets you assign multiple actions to a single button or frame event.

You can now give each frame a unique name. Unlike a numbered frame, a labelled frame keeps its identifier if you add or remove other frames from the movie — so you don't have to revise its links if a labelled frame shifts.

Because shape tweening transforms shapes without keyframing each change, it's memory efficient. In *Flash 3*, you can attach corresponding shape hints, like pasties, onto your start and end graphics to visually optimize the transition. So if you're tweening a face, for example, using a shape hint to mark each eye keeps the eyes recognizable during the transition.

By applying new alpha channel effects to colors and gradients, you can control the opacity of just about anything you draw in *Flash 3*. By adjusting the transparency of symbols and groups and then tweening, symbols can be made to fade in or fade out. And for a more dramatic effect, you can tween both alpha settings and shapes so both happen simultaneously.

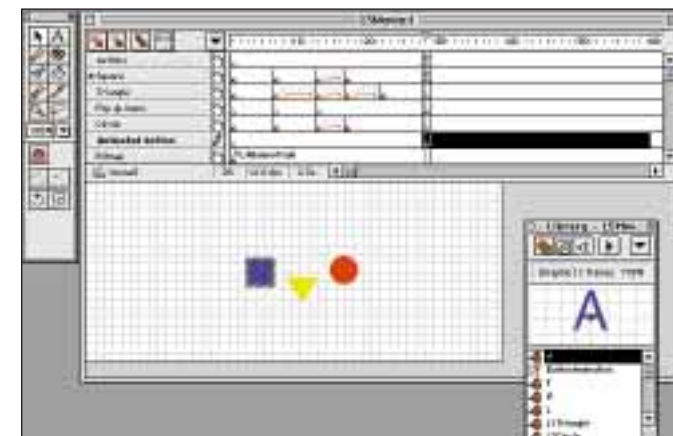
Similar to *Photoshop's* layer masks, *Flash's* new masking layers let you use shapes or text objects on one layer to selectively reveal parts of the layer underneath. In a drawing applica-

**FLASH AND FIREWORKS DRAWING ENVIRONMENTS**

Though *Flash* is vector-based, its drawing environment differs appreciably from *Fireworks'*. *Freehand* is more the predecessor of *Fireworks*, while *Flash's* Stage derives more from *Director's* Paint Window. *Fireworks'* interface is oriented to its dual vector/bitmap environment, but *Flash's* drawing methods have more to do with animator's needs and the tight interplay between Stage and Timeline.

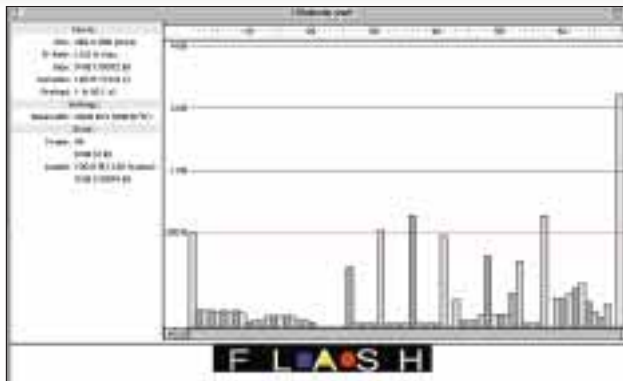
**FLASH AND DREAMWEAVER**

If you're using *Dreamweaver*, its easier to forego *Aftershock*. In *Dreamweaver*, place the cursor where you want to insert the Shockwave movie. Click the Shockwave *Flash* button on the Object palette. Enter the name of the source movie file in the dialog box that appears. In the Property inspector, enter the width and height of the movie in the W and H boxes. These are the only required properties. If you don't want to go with *Dreamweaver's* defaults, the Property inspector provides pop-ups, check boxes, text fields and buttons for setting all the *Flash* parameters. 'Tag' determines the tags (OBJECT and/or EMBED) used to identify the Shockwave movie. 'ID' defines the optional ActiveX ID parameter. 'Parameters' opens a dialog box for entering additional parameters. 'Quality', 'Scale', 'Autoplay' and 'Loop' are self-explanatory.



(top) *Flash's* toolbar, with the Arrow tool and modifiers selected; the Timeline, where you define the movie over time; the Stage, for creating and viewing the individual movie frames; and the Library, for managing symbols, bitmaps and sounds (bottom) The Instance Properties dialogue, with the Actions tab selected.

The Bandwidth Profiler checks the contents of every frame in a movie, compares them to the modem speed you specify, and graphically indicates where the downloading might fall behind.



functions work only when exported. Using the Control menu, you can export a movie in Shockwave Flash format and run it in a test window. You can also rapidly track down potential download problems using the new Bandwidth Profiler. It checks the contents of every frame in a movie, compares them to the

tion, this would be like using the Paste Inside command; in *Flash* animation, it enables keyhole or spotlight effects and transitions.

*Flash* provides ten standard-looking drawing tools, augmented with contextual modifiers in the toolbar. In *Freehand* or *Illustrator*, some of *Flash*'s modifiers would be considered standalone tools. For instance, the Arrow tool modifiers are Rotate, Scale, Snap, Smooth and Straighten.

You get used to *Flash*'s drawing environment pretty fast, considering that certain drawing conventions don't apply: you don't always select elements before modifying them; a filled shape with an outline is two separable elements; you just click, rather than shift-click, to add to a selection; groups are floating elements; ungrouped elements merge; you just grab and pull to reshape elements (there are no bezier handles).

Certain tools and modifiers facilitate illustration: the Ink Bottle tool changes the color, thickness and style of existing lines; Straighten and Smooth modifiers clean up freehand lines; Brush modifiers allow you to paint inside or behind elements; and the Paint Bucket enables you to fill shapes that have broken outlines.

*Flash* now supports *Fireworks*' native format, PNG, enabling cross-platform compatibility for importing and exporting bitmapped images with alpha channels. You can directly import *Freehand* 8 files, with CMYK-to-RGB fidelity and layers. *Illustrator* 7 files have to be pasted from the clipboard. *Flash* also supports: GIF, animated GIF, JPEG, PICT, PNG, AutoCAD DXF, Enhanced Metafile and FutureSplash Player, plus AIFF and WAV sound files.

Although *Flash* plays movies internally, some

dem speed you specify, and graphically indicates where the downloading might fall behind.

*Flash 3* can create templates for use with *Flash Generator*, a Web server application that dynamically adds data to *Flash* movies, like real-time headlines, advertising, interactive maps, schedules, graphs, and personalized user interfaces. *Generator* is available directly from Macromedia.

*Flash 3* ships with *Aftershock*, a separate application for automatically generating HTML files that contain *Shockwave Flash* movies. *Aftershock* inserts *Flash* movies into an HTML document using the EMBED and OBJECT tags, insuring compatibility with both *Explorer* and *Netscape*.

*Flash 3* also ships with the stand-alone *Flash* player, that enables you to create projectors: *Flash* movies that play all by themselves. You just export a movie as *Shockwave Flash* file, double-click the file to open it in the stand-alone player and choose File > Create Projector. Done.

**CONCLUSION**

*Dreamweaver* and *Fireworks* are a formidable integrated pair. *Dreamweaver*, with its unique roundtrip HTML, is one of the best pro-oriented Web site applications out there. And *Fireworks* has strong enough vector tools that you really don't need *Freehand* or *Illustrator*, except in extraordinary circumstances.

But you should keep *Photoshop* in the production stream for scanning, correction and intensive image editing. Because you can access *Fireworks*' PNG files directly from within *Dreamweaver*, it makes sense to import your *Photoshop* files into *Fireworks* and then use PNG files as masters.

If animated GIFs and DHTML will take care of your animation and interactivity needs, then you're all set with *Dreamweaver* and *Fireworks*. If not, then *Flash* will boost your capabilities here considerably. *Dreamweaver*'s DHTML comes with browser compatibility issues. But ironically, *Flash*'s downside, the fact that it is only viewable with a plug-in, is also an advantage — all users with a version 3 browser or better, pretty well see the same thing. Note that *Flash* is the most difficult of these applications to master. *Dreamweaver* and *Fireworks* provide your site's indispensable elements. *Flash* makes it sing. \*

**FLASH 3.0**

Recommended system requirements  
 Windows 95, 24 MB RAM  
 Windows NT 4, 32 MB RAM  
 Power Macintosh, System 7.5, 32 MB RAM

Retail price  
 \$460

Upgrade  
 \$99 (US)