# The Voices of the Community

**DREAMWEAVER**
**Creating Standards-Compliant
Web Pages**

**FLASH**
**Visual Programming
in Flash**

**WEB DEV GURU** seeks an Integrated Software Suite that speaks my language (XHTML) and won't cramp my style. Must play well with XML, CSS and others. I'm not superficial, but I like a nice code view. Clutter isn't cute.

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**STUDIO** 8

# MX
## developer's journal

**MX**
developer's journal

# Fame? Fortune?

## *Maybe Not, but Rich Media Strategies Pay Off*
### by teresa ragan

**n**ormally this section of MXDJ has articles on specific features, best practices, or development topics du jour. Diving into the great new tools and features is necessary and helpful, but aside from the sheer excitement of digging into new technology, why bother designing and developing with rich media in mind? From a business standpoint, does it really pay off? According to key organizations, the response is an absolute "yes," and the data is rolling in to prove it.

Previously regarded as experimental, expensive, or difficult to implement, rich media-centric Web sites are now critical to companies' business strategies. Gartner's research found "Companies that empha-size customer experience as a strategic objective enjoy up to 60% higher profit-ability and are twice as likely to exceed analyst expectations." A university study concluded that products displaying inter-active features are 70% more likely to be purchased than products with static imag-es. And for companies doing online adver-tising, industry leader DoubleClick found that organizations saw an 80% lower click-through rate for non-rich media ads.

The industry is moving fast to replace static Web images and table-based designs with more sophisticated CSS-based layouts complete with interactive video, multi-user communication applica-tions like blogs and chats, and real-time RSS feeds. Companies like MINI USA, Penske Trucking, and Scripps Network's HGTVPro.com are getting measurable results like increased Web traffic, brand awareness, and revenue by evolving their sites to support rich media design and development.

MINI USA, a division of BMW of North America LLC, decided to reintroduce the MINI line of passenger cars to the U.S. market after a 35-year absence and drive interested shoppers to its network of 80 dealers nationwide through an ambitious Web application. MINI USA faced a three-fold challenge. It needed to create a new automotive segment (MINI is the small-est car on the American roads), launch a new brand, and introduce two models simultaneously. As the team approached the design, the considerations were: how to leverage MINI's rich heritage; how to express the BMW Group's state-of-the art engineering; how to differentiate MINI's motoring fun and exhilaration; and how to promote the brand's unique selling proposition of customization and person-alization.

Partnering with BEAM Interactive and using Macromedia Flash, MINI USA brought the brand to life online. It created a highly interactive Internet application on  HYPERLINK "http://www.miniusa.com" www.MINIusa.com that resonates with the self-expressive nature of MINI prospects. The heart of the site is the configurator, which lets people customize their own personal MINI through a simple, non-lin-ear, five-step process that includes adding after-market accessories such as custom graphics and wheels. The navigation guar-antees that absolutely everything is view-able on one page at all times. Users can see the exact car that they are custom-izing and can better understand the price implications of their configuration choices at each step in the process. The site's rules-based architecture ensures that users can actually buy the car they configured, despite the million design possibilities. MINI easily maintains the rules, although vehicle specifications change from year to year. When users have finished configur-ing a car, they can name it, save it, calcu-late the payments, and send their con-figuration to a MINI dealer where it can be purchased. They can also download and print a fully customized color brochure of their creation.

The site provides a seamless user experience with the dealer network and dealer sites, providing a sustainable

*Teresa Ragan is senior director, product mar-keting at Macromedia.*

"Companies that emphasize customer experience as a strategic objective enjoy up to 60% higher profitability and are twice as likely to exceed analyst expectations"

stream of highly qualified leads, while at the same time remaining consistent with other off-line branding efforts.

What was the pay off? MINI USA exceeded its lead generation by 52% the first year, and 79% of all the leads were generated online. Of all the visitors, 73% of the registrants configured a MINI and the conversion into sales averaged 30%. MINI USA exceeded its sales goal by an incredible 25%, increased brand loyalty, and continues to give interested prospects a unique shopping experience compared to traditional carmaker sites.

Would you like to save $220,000 in development costs? The team at Penske Truck Leasing Company did when it replaced the company's enterprise content management system with a new advanced one. Penske has grown tremendously over the past 36 years. It started as a small truck leasing firm in Pennsylvania to becoming the number one truck rental and leasing company in the world. Its growth strained the enterprise content management system that managed the critical data assets that drive the company's daily operations. The system wasn't exactly small: it contained over 13,000 HTML files, 18,000 Microsoft Office files, PDF and image files and 2,000 other kinds of files. The PENSKE team leveraged Macromedia Dreamweaver and Contribute to design, develop, and maintain the new content management system.

At the end of the project, the team had saved over $220,000 in development costs. A team of 50 Web editors used Contribute, the template-based content management software that integrates with Dreamweaver, to quickly create and edit Web sites in a tenth the time of the old system. The cost-savings, streamlined maintenance process, and overall success of migrating an enterprise-critical system proved to Penske that its strategy was worth the effort.

How are broadcasters better monetizing their ad services across TV and the Web? Scripps Networks Home & Garden offers advertisers a comprehensive, coordinated campaign that extends rich media assets as they target relevant audiences from on-screen to online. The Scripps Networks Home & Garden channel reaches nearly 80 million U.S. households on cable television. Its online property,

HGTVPro.com, attracts nearly two million unique visitors a month on average. The challenge was to drive traffic from its cable TV channel to the Web site and vice versa to leverage advertising opportunities as well as expand the network's fast-growing brand as "America's leading online home and garden destination." HGTVPro.com's best practices video site,  HYPERLINK "http://www.hgtvpro.com/hpro/best_practices" www.hgtvpro.com/hpro/best_practices, offers valuable on-demand home repair how-to's previously broadcast only on cable, so its dual-medium presence expanded its audience.

HGTVPro.com's strategy to increase ad revenue was backed by designing and developing an integrated platform for delivering coordinated advertising units (video, static, and banner ads) with useful home how-to video programs, giving the advertiser greater reach.

According to Tim O'Hare, a Scripps Networks Flash developer, "One of our main challenges was to offer an informative video application with extended content links, all within a limited space." Beyond providing smooth navigation of a content-rich site, Flash's ability to synchronize separate page elements was important. "We were able to tie our advertisements to one another so that the ad unit within the best practices framework could be synchronized with the video ad as well as the leader board ad at the top of the page."

Flash let HGTVPro.com animate and synchronize its video content to best suit its users, meet its editorial needs, and deliver unobtrusive, targeted advertising to its growing audience. HGTVPro.com hit its advertising revenue objectives, and met the demands of its advertising clients through a rich-media delivery platform.

While our industry may not have an illustrious recognition platforms like the Nobel Prize or the Academy Awards, companies like MINI USA, Penske, and Scripps Networks deserve credit for executing rich-media strategies and making them pay off with tangible results. Overall, rich-media offers a great payoff for everyone: the customer experiences rich clean Web sites, the company achieves critical business objectives, and designers and developers advance their knowledge base by working with the new tools and technology now arriving in the market.

# M E T A L I Q

## Metaliq Components (*m*COM)

Creating data-driven interfaces for online applications can be complicated and time-consuming. Developers and designers worldwide need an extensible solution that saves time and headaches. There needs to be a stable, innovative approach to solving common UI problems, such as navigation, forms, filtering and sorting immense amounts of data.

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*m*COM allow you to quickly create stable, lightweight data-driven interfaces that are extensible by designers and developers alike, both through extending classes and a simpler visual skinning process. *m*COM include a fully implemented advanced focus manager that works seamlessly with all of our components, and allows for easy creation of tab groups. For anyone familiar with Flash components, there is no learning curve. In most cases, Flash components can be easily updated to *m*COM with little or no modifications to your project.

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*m*COM
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in sample interface

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# The MX Blogosphere

*Our regular feature taking an online stroll around the MX world*
**by mxdj news desk**

**d**on't forget that you can blog yourself now, too, under the MXDJ domain – just follow the blog-n-play link from http://mxdj.sys-con.com.

## Blog Topic: CFEclipse

*Macromedia and Open Source – CFEclipse Announcement*

**By Rob Brooks-Bilson**
**www.dansshorts.com**

From the CFUNITED conference in Bethesda, MD...

"Macromedia announced formal support for the CFEclipse project ( HYPERLINK "http://www.cfeclipse.org/" http://www.cfeclipse.org/), pledging engineering support and collaboration for the project. CFEclipse will remain an independant project, with Macromedia providing advice, research, and code as time unfolds.

Simeon Bateman, the project leader for CFEclipse also addressed the crowd stating that we should start to expect more regular builds as the collaboration with Macromedia moves forward.

Expect the CFEclipse 2.0 release sometime this fall."

## Blog Topic: Ruby on Rails

*Why Rails?*

**By Michael Huffington**
**http://www.michaelbuffington.com/**

"A couple people have commented and emailed me, asking "So, how'd you go from ColdFusion to Ruby on Rails? Can you talk about that some more, maybe give some tips?"

So, without delay and from my own personal perspective - my reasons for taking the plunge with some tips for newcomers as well. It's verbose, and isn't comprehensive, but it's a start. I'd rather share now, and then share more later, than simply wait for later.

First, a little perspective - I've been writing ColdFusion applications everyday for nearly 10 years. I consider myself an expert, and even wrote a book with a major publisher a while back. For the past few months, I haven't been able to bring myself to write any ColdFusion code. Ruby has dominated my coding efforts, and while I can't say too much bad about ColdFusion, I have to admit that Ruby on Rails blows ColdFusion out of the water when it comes to productivity.

Here's what I get by choosing Ruby on Rails over ColdFusion - after this, my story will become language agnostic (except when I'm talking about Ruby).

*Tight MVC Framework*

ColdFusion has some frameworks that aren't bad. I've used Fusebox 3 and 4, and Mach-II, and have even built my own MVC frameworks over the years that help me write code quickly. It's pretty difficult to say that a good framework is a bad thing. But the frameworks that ColdFusion does have pale in comparison to the structure and tightness of the Rails framework. It's hard to give specific examples without getting overly verbose, but even if all things were equal, tightness-wise, the fact that just by typing rails my_app and having it build out the entire directory structure and build empty files for my application saves me some serious time.

*Generators*

If I have my database built, I can build an entire web based application within five minutes. Three if I can type quicker. Being able to very rapidly generate CRUD views and controllers is super special, and nothing matches it anywhere else right now. Before Rails came along, I was building something similar to this - code generation based on code introspection, but compared to how Rails does it it was primitive, at best.

*Clean Code*

You can write some pretty clean ColdFusion code, and it's not even that hard to do, but Ruby is very clean. If I wanted to setup a loop that repeated some code, say, 10 times, in ColdFusion code, it would look like this:

```
1
2
3<cfloop from="1" to="10" index="i">
...
</cfloop>
In Ruby, it can be as simple as:
1
2
310.times do
...
end
These kinds of comparisons could be
made all over the place. Ruby is sim-
ply much cleaner, and most often, very
intuitive and natural looking. Rails
continues this simplicity by having
things like this:
1
2
3
4
5
645.minutes.from_now
@blog = Blog.find(:all)
@blog.posts.each do |post|
 puts post.author.name
 puts post.body
end
```

While these are trivial looking examples, looping over a "blog" object, as shown above, happen all the time in Rails. One of ColdFusion's most important characteristics is how it can make database records very easy to retrieve and use. Rails makes it easier (if you can imagine). In fact, behind the above example, Rails is doing SQL code that joins the Blogs table to the Posts table in our database, and does so because of some relationships that have been setup in our Blog model, and because I'm asking it to loop over blog posts. Very little code for a lot of

power - it's what made ColdFusion enticing to begin with and makes Rails even more so.

*Open Source Software*

Open source might not be your thing and that's fine. It hasn't always been my thing either. In fact, there was a time when I was deep into ColdFusion development that I was happy that the company behind it, Allaire, didn't release it as OSS. I saw OSS projects flare up, and fail, and flare up, and fail again, and I liked the stability that Allaire brought the table.

That's changed for me now, and Ruby on Rails is a perfect example of how an open source project can thrive. If you find a bug in Rails and you're proficient enough in Ruby to fix it, you can make that bug fix happen. You won't get paid for it in dollars, but you also won't spend years waiting for a corporation to decide that the bug is worthy of fixing. Have you ever been plagued with CFHTTP issues with ColdFusion? It took years for Allaire/Macromedia to address some of the issues crippling CFHTTP. With Rails, a problem on that scale would likely be fixed in a day - no joke. There are enough eyes on the code, and enough people who care about having that code be good, that bad things are fixed quickly. In my meager several months of developing Rails apps, I've seen issues get fixed in surprising rapidity. That rapidity is usually a very good thing. Any problems it causes aren't nearly as bad as having to develop elaborate workarounds to problems in ColdFusion that will likely remain in your application's code for years.

Not only is Rails open source, it's free to download, and you don't have to pay a dime to anyone to develop and make money from Rails. This is encouraging to me, because the kinds of projects I like working on lately embrace free technology. ColdFusion seems to do well in a corporate environment where the corporations can afford it. They get a company with a good track record backing the product, they get support, and they get well established training programs and materials to boot. With a new OSS project like Rails, you don't get all of these things, though I probably won't be able to say that in a few years.

*Thriving Community*

The Ruby on Rails community is simply on fire right now. There's no doubt that the product evangelism is high - I'm contributing to it right now, but that's because it's a good product. For such a new product (a little over a year old) the community supporting it, in relative terms, is massive. I've watched communities of other products before, and have never seen as much growth. A rapidly growing community of evangelists means that the product will come under even more scrutiny, and out of that scrutiny there will emerge better ways of doing things.

Economically speaking, it's a good thing to have a lot of people saying good things about a web application framework. The things that people are saying about Rails help build the support - the appeal of rapid development, easy changes to existing applications, and tight controls over the framework appeal to people willing to pay for Rails development. This is a good thing for both the developer and those paying developers.

None of this suggests that the ColdFusion community is bad - but I'm not sure I can say it's thriving. Perhaps it's not a fair comparison, but go into the Ruby on Rails IRC channel (#rubyonrails on FreeNode) and you'll typically find 200+ people talking about their Rails problems and helping others with theirs. On the #coldfusion channel, you'll usually only see a handful, or 20ish at best.

Of course, this thriving community could fizzle, but I'm betting it won't. While I'm sure it's happening, the majority of people participating aren't doing so just because of the recent media buzz around Rails. They're doing so because of the product, and they believe it's a good thing to help others get into it."

## Blog Topic: Dreamweaver 8
*Dreamweaver 8 - XSLT Authoring*
**By Scott Fegette**
**http://weblogs.macromedia.com/sfegette/**

"Syndication is one of the most rapidly-growing themes online these days, and I've personally used RSS and Atom feeds to browse and aggregate content from the blogosphere, news sites, podcast directories, TV listings and many other sources quickly and easily in Flash (using its XML features) as well as with some server-side tricks. And now with version

8, Dreamweaver speaks XSLT authoring- allowing you to really do something with all those XML documents and site feeds you've been collecting. Roll up your sleeves, this FOTD will be a doozy (and it's relatively certain I'm only going to scratch the tip of this iceberg).

An XSL document can be an entire document, or just an XSL 'fragment' that's included/embedded in an existing HTML page. If you look at XML (and it's derivative content types, such as RSS, RDF and Atom syndication feeds) as strictly your content, and XSLT as strictly your presentation, you've got the rote basics. Now let's say you want to provide users on your site with a listing of the most recent posts and FOTDs I've written here. Let's start by creating a new XSLT document (entire page) by choosing "File < New...", and noting the two new XSLT document types in the template list:

```
INCLUDEPICTURE "http://weblogs.mac-
romedia.com/sfegette/blogimg/studio8/
new_file_types.gif" \*
MERGEFORMATINET
```

The new XSLT document types- (XSLT - Entire Page & Fragment)

As noted earlier, an XSLT document is a fully-formed document that you create to display a particular XML schema, and an XSLT fragment is for small news pods, lists, etc. that are to be displayed in an existing HTML page. In this case we want to create an entire page listing the current entries from my weblog, as published via its XML-based RSS 2.0 feed. Let's dive in. After creating my new XSLT (entire page) document, I'm immediately asked to show Dreamweaver a sample document- either locally (on my computer) or remotely via the network. I'll use the URL for my RSS 2.0 feed here as the basis for this new page: http://weblogs.macromedia.com/sfegette/index.xml

```
INCLUDEPICTURE: "http://weblogs.
macromedia.com/sfegette/blogimg/stu-
dio8/locate_xml_source.jpg" \*
MERGEFORMATINET
```

*Locate XML Source dialog*

After entering the URL and clicking 'OK', you'll note the 'Bindings' tab of the Application panel is now updated with the schema of my XML/RSS feed- much

like dynamic application development, this represents the heirarchical levels of data in my feed- both 'global' data variables that represent my 'blog itself - its title, the link to it's home page, description, copyright information, etc. - along with variables that are different for each content 'item' in my 'blog, such as title, description, permalink, category, etc. The top-level container is 'RSS'- the actual schema used in my RSS 2 file.

Wanna see?

```
INCLUDEPICTURE "http://weblogs.
macromedia.com/sfegette/blogimg/stu-
dio8/xml_bindings_panel.jpg" \*
MERGEFORMATINET
```

*My RSS file's schema*

From here, let's do a quick test. I simply drag the channel 'title and 'lastBuildDate' into a sentence I've already typed into Dreamweaver's design view as so:

```
INCLUDEPICTURE "http://weblogs.
macromedia.com/sfegette/blogimg/stu-
dio8/global_vars_before.jpg" \*
MERGEFORMATINET
... and when previewing in my browser,
it becomes...
INCLUDEPICTURE "http://weblogs.
macromedia.com/sfegette/blogimg/
studio8/global_vars_after.gif" \*
MERGEFORMATINET
```

*Nice and easy!*

I've just dynamically updated the content in that page based on the 'blog description and last update time in my live RSS feed. Are the potentials here becoming obvious yet? If not, let's take it a step further.

We just updated the page itself with the singular title and 'last modified' date from my 'blog, but what about variables in my XML schema that repeat- i.e. the variables underneath the 'item' node, which represent data in the posts themselves? Well, they're handled much like repeating regions in your favorite Dreamweaver server models- you need to set up an area that repeats, and then populate it with the dynamic data. First, I'm going to create a table to hold the sequential 'blog postings themselves- but

just build out one entry as a 'mockup' like so (table borders left in place to help clarify):

```
INCLUDEPICTURE "http://weblogs.
macromedia.com/sfegette/blogimg/
studio8/item_vars_before.gif" \*
MERGEFORMATINET
```

*Starting 'dynamic' XSL view*

Now I'm assuming that these three table rows will repeat for each 'blog post (item) in my RSS feed, so we need to tell Dreamweaver what part of the page actually repeats so it can do the heavy lifting! Since the three consecutive table rows will repeat, I'll just drop into Code View, select all three <tr> rows, and then select the menu option "Insert < XSLT Objects < Repeat Region", which brings up the XPath Expression Builder (although I won't get into it in this FOTD, XPath is how you write expressions to conditionally interact with your XML data, very powerful):

```
INCLUDEPICTURE "http://weblogs.mac-
romedia.com/sfegette/blogimg/studio8/
repeat_region.gif" \* MERGEFORMATINET
Selecting the table rows to loop, and
then...

INCLUDEPICTURE "http://weblogs.mac-
romedia.com/sfegette/blogimg/studio8/
xpath_xbuilder.jpg" \* MERGEFORMATINET
```

Binding them to the 'Item' node for looping

This will simply tell Dreamweaver to write those three rows for each 'item' in our RSS file, using specific values from each post to do so. We just did the first part (set up the repeating 3-row region), now let's finish the job by dragging the appropriate variables (title, description, link, date) from our Bindings Panel into the comp we've created replacing our 'boilerplate' text- and hit Preview in Browser to see it in it's full glory:

```
INCLUDEPICTURE "http://weblogs.mac-
romedia.com/sfegette/blogimg/studio8/
final.jpg" \* MERGEFORMATINET
```

*The final XSL page*

And that's all there is to it- with Dreamweaver 8 you can quickly consume XML data, bind it to areas of your document, and display it dynamically on your site. A few points to note:
This FOTD does not cover server-side transformations, which are possible as well w/DW 8, but require your server to be configured with XSLT support.

Despite the above, Dreamweaver will still let you perform client-side XSLT transformations using an included Javascript file (DW 8 will provide it, no worries) that you simply upload to your web server alongside your XSL document/fragment.

Although we just showed a very basic example here, with the power of XPath you can build very complex logic around your XML datasources, allowing very involved applications without a traditional 'server model'!

Anyway, as mentioned in the first paragraph, I'm barely scratching the surface of what you can do with XML and XSL in Dreamweaver 8- but the possibilities are endless. Don't forget you can also consume XML data in Flash 8 (but that's not necessarily news), too.

### Blog Topic: ColdFusion

*ColdFusion Powered Site Helping Katrina Victims*
**By Ben Forta**
**from http://www.forta.com/blog/**
"KatrinaLost.org ( www.KatrinaLost.org) hosts an online database of Hurricane Katrina victims (both lost and found), and an extensive housing database for victims to find nearby shelter and accommodations.

After Labor Day, KatrinaLost.org will unveil a comprehensive database of jobs for displaced workers. The ColdFusion MX 7 powered site was built by Javier Julio (who helped out at CFUNITED this year) and Jason Fill, and is hosted by E101 Linux Systems."

### Blog Topic: Studio 8
*Macromedia – Studio 8*
*By Kevin Airgid*
*from http://blog.airgid.com/*
"Macromedia Studio 8 launched by Macromedia. Seems worth the upgrade to me."

# The Voices of the Community

**of the**

f or this article we reached out to the community of developers and designers whose daily work is real-world design and programming work on some of the world's best web sites.

**by jeremy geelan**

In each case what we sought to do was, first, establish which technologies our respondents used most frequently (in order of most regular use) – so that readers can factor that in when considering their replies.

Topics dealt with ranged from the gamut of Macromedia's various technologies to wider issues such as future roadmaps, parallel technologies, competing technologies, and of course the upcoming Adobe-Macromedia deal, if it goes ahead this Fall.

At MXDJ we like nothing more than to let the community speak for itself, so without further ado, let's get into the answers of our sampling of movers and shakers in the industry. We make no claim to be scientific: but these are the raw insights of real-live technology professionals, just like you, and we are extremely proud to bring them in this very special issue of the magazine.

To all those who participated, our thanks. It is thoughtful writing like these responses that makes MXDJ what it is.

### Name: Jesse Randall Warden

*Position: Senior Macromedia Flash Developer working full-time at Round Box Media (http://www.roundbox-media.com).*

**Technologies used: Flash Player 7, Flash MX 2004 Professional, Flex & FlexBuilder, and Fireworks**

*"Macromedia's main contribution is the immense install base for the Flash Player as well as its correctly perceived security. For the developer, an ECMA standards based language that can evolve fast (compared to JavaScript), a ubiquitous platform, and ability to interface with a multitude of services (Text, XML, SOAP/RPC, Sockets [ASCII & Binary], and Remoting). For the designer, the ability to create and display whatever they come up with, to have it look like intended on all platforms, and the opportunity to work with developers to make applications rich. For business, the ability to get quicker to market solutions for the front-end that give an edge in looking better than competitors. For the user, the ability to give better experiences garnered from the benefits outlined above."*

***Q. In the last ten years what non-***

***Macromedia technologies (if any!!) have you envied?***
A. Microsoft's Visual Studio, Borland's Delphi, Adobe's AfterEffects, Alias' Maya, Sony's SoundForge & ACID, and Propellarheads' Reason

***Q. Having put the X into eXperience, what new areas are you looking forward to Macromedia's team heading off into (including as part of a merged Adobe-Macromedia)?***
A. Bringing Flex development to the masses via an appropriately priced point and/or a hosting license; improving the Flex workflow thus allowing qualified designers to create the next generation of Rich Internet Applications; bringing ActionScript 2.0 to mobile devices via Deuce (Flash Lite 2.0); and finding a way to get a product ahead of its time, Central, back into the market again.

### Name: David Sawyer McFarland

*Position: President of Sawyer McFarland Media Inc. (http://www.sawmac.com), a web development and training company located in Portland, Oregon.*

**Technologies used: Dreamweaver MX 2004, Fireworks MX 2004**

*"Macromedia has really coined the term "Rich Internet Application." The evolution of Flash from animated banner-ad creator to sophisticated online application development environment has made companies (and most people who use the web, for that matter) see that the Web can and should be more than just a hop-scotch game of hyperlinks."*

***Q. In the last ten years what non-Macromedia technologies (if any!!) have you envied?***
A. I don't know about envy, but I'd say I admire the way many open- source technologies have changed the playing field for Web design and development. The open source software movement has made a huge impact on the current state of the Web: from powerful, enterprise-level servers like Apache and MySQL, to the vast array of free (as in beer and in speech) software aimed at deploying a range of Web applications such as Blogs (Wordpress – www.wordpress.

org), bulletin boards (PHP Bulletin Board – www.phpbb.com), and countless other content management systems (www.opensourcecms.com). By all accounts, the future of the Web will be peppered with even more open source technologies; or at least, many corporations will give up proprietary standards in favor of open standards. Microsoft's announcement that they'll adopt XML as the standard file format for the next versions of Word, Excel and PowerPoint is probably just the beginning of a greater convergence of technologies that promote the easy exchange of information.

***Q. What new areas are you looking forward to Macromedia's team heading off into?***
A. Well, my bias is toward the good old HTM of L. While I'm in awe of the rich internet experience Flash is capable of, I hope that Adobe-Macromedia takes the lead in developing tools to support the fresh resurgence of DHTML, and in particular the use of what's become known as Asynchronous JavaScript and XML, or AJAX for short.

***Q. And what about the technology future in general?***
A new generation of rich internet applications that use HTML, JavaScript, CSS and server-produced XML are promising to deliver Web applications that feel like applications. Google leads the charge with tools like Google Suggest (www.google.com/webhp?complete=1&hl=en) and Google Maps (http://maps.google.com). But, every day, someone new debuts a DHTML and AJAX-enabled application with jaw-dropping effects that make you scratch your head and say, "No, that's got to be Flash!" Like the simple and intuitive list management web app, Ta-da Lists (www.tadalist.com), or the sublimely creative drag-and-drop shopping cart from Panic software (www.panic.com/goods), or the "hey ain't that Adobe Acrobat" world-wide news paper reader Press Display (www.pressdisplay.com) – and yes, that last one really is HTML!

### Name: Jim Babbage

*Position: Teacher of imaging, Web design, and photography at Centennial College's Centre for*

*Creative Communications (www. thecentre.centennialcollege.ca) and partner in Newmedia Services (www. nms123.ca), a small communications company.*
**Technologies used: Fireworks, Dreamweaver and Captivate**

**Q. Having put the X into eXperience, what new areas are you looking forward to Macromedia's team heading off into (including as part of a merged Adobe-Macromedia)?**
A. An even more robust, feature rich Fireworks application, that merges the bitmap strengths of Photoshop (notice I did not say ImageReady) with the workflow and live editing capabilities of Fireworks and the vector power of FreeHand. Not asking for much, am I? With Dreamweaver, even more standards compliance and CSS rendering support.

### Name: Tom Muck
*Position: Senior Applications Developer for Integram in Northern Virginia and coauthor of three UltraDev books including the best-seller, Dreamweaver UltraDev4: The Complete Reference.*
**Technologies used: ColdFusion MX as a server technology, Dreamweaver MX as a tool, and Flash Remoting MX in some applications.**

*"The ColdFusion platform is amazing for ease of use, and also scales very well to an enterprise level. Experienced Java programmers can make use of Java to get down into the nitty-gritty, but the core functionality of an application can be built quickly in CFML. Enterprise-level applications can be delivered much more quickly using ColdFusion than any other technology."*

**Q. In the last ten years what non-Macromedia technologies (if any!!) have you envied?**
A. I have always wished that Macromedia had put a debugger on the ColdFusion back end, as well as on the Dreamweaver front end, to assist in coding. Other technologies like PHP and ASP.NET have excellent step debuggers that speed up coding. Macromedia has not pushed to get debuggers into their tools or servers. The debugger in PHPed is great, and just what Macromedia needs for its ColdFusion language.

**Q. And the future – if the merger goes ahead?**
A. I would hope that Adobe/Macromedia would continue on a similar path, but maybe with some more resources and more muscle. For example, Dreamweaver is the best web tool around, but is still lacking a lot in key areas, such as debugging capabilities, performance, stability, and team development. I'd love to see Adobe/Macromedia put the same effort into web tools that Microsoft puts into their Visual Studio.

### Name: Erik Bianchi
*Position: Software engineer with more than five years of experience developing Flash-based RIAs and enterprise-wide applications for Fortune 50 and 500 companies (www.erikbianchi.com).*
**Technologies used: Flash MX Professional 2004 and I play around with Flex.**

*"What Macromedia has done better than most other companies is a) its community relations – really supporting the Flash community with various blogs, newsgroups, user groups, conferences, developer centers (devnet) articles, online presentations, and trial versions of software."*

**Q. In the last ten years what non-Macromedia technologies (if any!!) have you envied?**
A. Outside of the Macromedia sandbox I do have my eye on Xamlon Web, which allows you to develop Flash applications using XAML and C# in .NET which is very appealing to me on multiple levels. 1) it gets me out of the Flash IDE and using .NET and 2) I imagine that this would make Flash development much more approachable to .NET and other developers.

**Q. When it comes to enterprise-class development, what do you consider Macromedia's main contribution to be in terms of technology and inspiration?**
A. Macromedia's Flash has certainly upped the ante in how applications UIs are perceived. Because what we are dealing with are web applications that run across multiple OSs and served from a remote location, we don't have to worry about actually installing anything on the client's machine or compatibility issues.

This I think gives us some creative freedoms that other developers don't enjoy for typical shrink wrapped products.

In a way I see Flash developers as pioneers as they are more easily able to mix creative expressions with technology. You want to add an experimental UI to your application you can do it. If it doesn't work you can easily (in a well architected application) pull it out for something more traditional and only have to worry about changing the swf on the server. However it's rather unfortunate that dynamic runtime share libraries are not well supported.

**Q. Having put the X into eXperience, what new areas are you looking forward to Macromedia's team heading off into (including as part of a merged Adobe-Macromedia)?**
A. The faster rendering capabilities that are provided by bitmap caching and the new player filters seem amazing in the next Flash Player! Also, I think we (as Flash developers) have a lot to look forward to with the repositioning of Flash as a development platform. I've been referring to Flash as my development platform now for years but with Macromedia's backing I think that it adds a bit more validity to my statement and that it says a lot about where Flash is going and how it is going to be perceived by other non-Flash developers.

### Name: Dennis Baldwin
*Position: Software developer for SensorLogic Inc – runs and maintains an online community for Flash and ColdFusion developers (www.devmx.com).*
**Technologies used: Flex, Flash MX Pro, ColdFusion MX, Dreamweaver MX**

*"The future is bright for application developers because we'll be able to leverage the Flash platform to deliver robust applications in a fraction of the time."*

**Q. In the last ten years what non-Macromedia technologies (if any!!) have you envied?**
A. Adobe Photoshop; Adobe Illustrator

**Q. When it comes to enterprise-class development, what do you consider Macromedia's main contribution to be in terms of technology and inspiration?**

# MAX is Angela Buraglia.

Angela Buraglia is a web developer and work-from-home mom who somehow finds time to co-author technical books, including her latest **Dreamweaver MX 2004 Killer Tips**. She is one of thousands of leading designers and developers that will gather at MAX 2005 this October to learn new skills, explore emerging technologies, share techniques with peers, and put exciting new ideas in motion.

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A. When Macromedia embraced the fact that Flash was much more than an animation tool and started positioning it as a platform to build truly engaging RIAs. In my mind, products like Flash Remoting and the ActionScript components for Flash (both V1 and V2) were essential to the adoption of Flash for enterprise development.

**Q. Having put the X into eXperience, what new areas are you looking forward to Macromedia's team heading off into (including as part of a merged Adobe-Macromedia)?**

A. I'm extremely excited about the potential of the Flash Lite player and what it offers for mobile devices. I'm a huge fan of the Symbian OS and the announcement by Nokia to support Flash Lite on all their Series 60 devices is huge. I think we'll start to see more enterprise-level applications on devices.

The other much hyped area is Flash/PDF integration. I can envision opening a PDF file and watch an animated tutorial within the document.....no skip intro buttons please!

### Name: Kim Cavanaugh

*Position: Teacher and writer about web design software from Macromedia for over 5 years and has written two books about Dreamweaver and Fireworks, collaborated on books about Dreamweaver, Fireworks, Flash and Contribute, and continues to write extensively about Studio MX tools for CommunityMX.com.*

**Technologies used: "Depending on where I am in a particular project I might be prototyping and designing in Fireworks, working up banners or adding video in Flash, or creating a site and maintaining it in Dreamweaver. Suffice it to say that no matter what I'm doing – from site design to eLearning development to delivery of content - Macromedia tools are my tools of choice. That includes all of the Studio tools as well as Breeze and Captivate."**

*"The Flash Player has changed the face of the Web. Regardless of how the content is developed – Flex, Flash, Breeze, Captivate – it all comes down to the Flash Player and its ubiquitous spread across the Web. I think you'd be hard-pressed to find any single application that does so much for so many,* works consistently, and provides so many avenues for delivering (trite as it may be to say it) a rich user experience."

**Q. In the last ten years what non-Macromedia technologies (if any!!) have you envied?**

A. I suppose I wish there were a richer toolset for bitmap editing like you get with Photoshop, but without the steep learning curve. While I love Fireworks dearly and couldn't work without it, the depth of colors and the rich images you can create in Photoshop are something that Fireworks has trouble approaching.

**Q. Having put the X into eXperience, what new areas are you looking forward to Macromedia's team heading off into (including as part of a merged Adobe-Macromedia)?**

A. Devices of course will be huge as the infrastructure for delivering networked content to PDAs and cells and handhelds and TVs and the myriad other products out there that can take advantage of streaming content are introduced. In terms of the merger, well, to be honest I'm afraid I think that's all about shareholder value and has little to do with improving tools for web content delivery. I'm sure there will be some new tools developed as a result of the merger, just to remain competitive, but I honestly don't see a large corporation such as Adobe breaking new ground and being as nimble as Macromedia. Mark me highly skeptical on the value of the merger to me and to the Web at large.

### Name: Darron J. Schall

*Position: An application developer interested in all things programming, from ActionScript to XML and everything in between – maintains a Flash-related weblog (www.darronschall.com).*

**Technologies used: "Flash and ColdFusion have been my technologies of choice for a long time, but lately I've jumped on the Flex bandwagon.  Flex has been dominating my time, especially in the past month, and I see myself moving exclusivly to Flex for my RIA development."**

*"Flash isn't just 'those annoying banner ads' anymore, but rather a viable platform to deliver a client side solution for."*

**Q. In the last ten years what non-Macromedia technologies (if any!!) have you envied?**

A. Being a developer, I've always envied the .NET and Java development environments and the tools associated with them. There's a certain level of maturity there that ActionScript hasn't quite found yet. Visual Studio and Eclipse are a hundred times better than any IDE for ActionScript at the moment. Not to mention the supporting cast of tools for things like code generation from class diagrams, round-trip engineering, Model Driven Archtecture, etc. Pile on the extensive library support and Java and .NET look really tempting, but .swf still dominates the internet landscape... I believe the sophistication of ActionScript will continue to improve over time, so I'm not that jealous.

**Q. When it comes to enterprise-class development, what do you consider Macromedia's main contribution to be in terms of technology and inspiration?**

A. Flex. Flex opened the door to the Flash Player to enterprise level Java developers. Finally the Flash Player is being recognized in the enterprise market, and we're all benefiting because of it.

**Q. Having put the X into eXperience, what new areas are you looking forward to Macromedia's team heading off into (including as part of a merged Adobe-Macromedia)?**

A. I'm looking forward better tools and the maturation of the Platform overall. The announcement of Zorn being built on Eclipse has me extremely excited. The current Flash Player is already solid, and it's clear that Macromedia is committed to its customers based on the features present in Maelstrom. I'd like to see more work done for Flash-on-the-desktop though – imagine a cross platform desktop solution authored in Flash? I think that would be amazing.  It's exciting to think about where the Flash Platform will be 5 years down the road.

### Name: Sam Coles

*Position: Flash designer*

**Technologies used: Flash and ActionScript 2 on a daily basis, and Dreamweaver in conjunction with Flash for page layout.**

*The Flash Platform has allowed businesses to quickly build dynamic and engaging websites and RIAs without sacrificing aesthetics or functionality. Macromedia's Technologies fill a niche in the market that, in my opinion, nothing else comes anywhere close to achieving."*

**Q. In the last ten years what non-Macromedia technologies (if any!!) have you envied?**
A. There are a few emerging technologies out there, especially proce55ing, that have really caught my eye lately.

**Q. Having put the X into eXperience, what new areas are you looking forward to Macromedia's team heading off into (including as part of a merged Adobe-Macromedia)?**
A. I really love, no I'm infatuated with, the new video features in the next iteration of Flash. I think in the next couple of years Flash will become an increasingly viable option for video streaming and playback. It's just starting to take off right now but I see it becoming a, if not the, leading technology for video playback on the web in the near future. I hope Macromedia pursues this area more because other streaming media options out there are rather limited and not the lightest weight. I would also like to see easier multiuser development. Having some type of versioning that works well with Flash would be a feature I'm sure many developers would greatly appreciate.

### Name: Justin Kozuch
*Position: Witer, web developer, and Team Macromedia member who takes pride in helping other Macromedia Dreamweaver users.*
**Technologies used: Dreamweaver MX 2004, Fireworks MX 2004, ColdFusion MX 7.0**

**Q. In the last ten years what non-Macromedia technologies (if any!!) have you envied?**
A. Photoshop. Fireworks has so much potential for improvement, it could very well give Photoshop a run for its money, but this potential lies within the contributions of the user community and how much Macromedia is willing to spend on R&D as far as improving Fireworks is

concerned. Given the Macromedia-Adobe merger, I doubt that Fireworks has much of a future, which is rather unfortunate.

**Q. When it comes to enterprise-class development, what do you consider Macromedia's main contribution to be in terms of technology and inspiration?**
A. Coldfusion MX 7.0 has by far Macromedia's greatest contribution. The ability to communicate with Mobile Devices, provide rich experiences, and interact with the desktop by creating portable documents (PDF, FlashPaper) are just a few of the many aspects in which ColdFusion MX 7.0 excels. I am truly impressed with the ColdFusion MX 7.0 handles tasks with ease and how easy it is to create enterprise level applications with less code than some of the other programming languages out there (ASP, .NET, JSP, PHP, etc). As far as inspiration goes, Flash is definitely the winner. The ubiquity of the Flash player is one reason why it has so much "sex appeal". Creating rich experiences with Flash that can be viewed anywhere, anytime is the new Internet.

**Q. Adobe-Macromedia?**
A. I'd really like to see where Adobe takes the Flash Platform. That is definitely something I am interested in seeing, and how they progress with it.

### Name: Matthew David
*Position: Specialist in next-generation Web solutions and author of Flash Books (Flash MX Magic, Building Great Flash MX Games, Flash 3D Bible, and Flash MX Communication Server Bible). Writes 300 articles a year for more than 20 international magazines.*
**Technologies used: Flash MX 2004 Professional, Dreamweaver MX 2004 and Fireworks MX 2004.**

*"Flash is only at the start of it's technological wave. I see work where Flash is tied tightly into Adobe's product line (notably with Acrobat) and I also see where Flash is tied to application servers through technologies such as Flex and native Web services support."*

**Q. In the last ten years what non-Macromedia technologies (if any!!) have**

you envied?
A. The work being done in the 3D world. I really feel that the time is right for Flash to engage and use true 3D as a core feature to the Flash Player.

**Q. When it comes to enterprise-class development, what do you consider Macromedia's main contribution to be in terms of technology and inspiration?**
A. For me, the best has to be the evolution of Flash from animation to application software. This really allows me to build solutions that not only work, but buzz!

### Name: Stephanie Sullivan
*Position: Stephanie Sullivan is a Web developer, partner at CommunityMX (www.communitymx.com), owner of VioletSky Design (www.violetsky. net), and contributing author of Dreamweaver MX 2004 Magic.*
**Technologies used: "I use Dreamweaver about 16/6 (I have to sleep sometime); I use and receive Fireworks comps to create my sites with.;I work around ColdFusion with developers but don't write it; I use Flash to create sIFR swf files and tweak components and Freehand for the occasional print job."**

*"To me, one of the strong points of Macromedia as a company has been a) their involvement with, and reaction to, feedback of the community, and b) their vision for the future. I would like to see Adobe integrate and keep these attributes."*

**Q. In the last ten years what non-Macromedia technologies (if any!!) have you envied?**
A. I don't envy anything really. I suppose a good font or CSS program World have been useful to me. But with Dreamweaver's recent CSS upgrades, that's hardly necessary now. Basically, if I need it I buy it, whether it's Macromedia or not. I just don't require much outside the Studio suite.

**Q. Having put the X into eXperience, what new areas are you looking forward to Macromedia's team heading off into (including as part of a merged Adobe-Macromedia)?**
A. I'm honestly hoping to see Adobe head into more of a Macromedia direction.

In my opinion, the open ears and minds of the Product Managers and Engineers at Macromedia during alpha and beta development cycles is unmatched and the value shouldn't be underestimated. I hope this won't be lost. No doubt there will continue to be forward-thinking, innovative developments happening on the Flash platform. But what I hope the merger will bring is increased exposure for Fireworks. Having more development money and marketing muscle behind this very worthy, but lesser known product, is what I'd most hope to see happen.

### Name: Dan Short

*Position: Runs a successful Web development company, Web Shorts Site Design, is also the Lead Developer for Cartweaver (www.cartweaver.com), and helps maintain several HTML and Dreamweaver reference sites, including the Dreamweaver FAQ (www.dwfaq.com). Coauthor of Dreamweaver MX Magic 2004, Dreamweaver MX Bible (Wiley), and Dreamweaver MX: Advanced ASP Web Development (Glasshaus).*

**Technologies used: ColdFusion MX**

**Q. When it comes to enterprise-class development, what do you consider Macromedia's main contribution to be in terms of technology and inspiration?**
A. ColdFusion MX 7, easily. The ability to generate flash on the fly with simple CF tags is awesome.

**Q. Having put the X into eXperience, what new areas are you looking forward to Macromedia's team heading off into (including as part of a merged Adobe-Macromedia)?**
A. More improvements in CF, improved OO development practices, improved Flex integration – and hopefully lower pricing on that server).

### Name: Jared Rypka-Hauer

*Position: Management/Architect/Developer*

**Technologies used: ColdFusionMX, DreamweaverMX, FireworksMX, and FlashMX.**

*"CFMX bridges between the HTTP/HTML world and the OO world that supports it."*

**Q. In the last ten years what non-Macromedia technologies (if any!!) have you envied?**
A. If there was any it was OO constructs. Macromedia has always been at the forefront of innovation when it comes to my interests. Mike Nimer, from the CFMX development team at Macromedia, and I had a chance to discuss ColdFusion MX's place on the web at CFUnited and he made the point that CFMX bridges between the HTTP/HTML world and the OO world that supports it. It made so much sense, and describes where I feel most at home as a programmer. I like connecting separate things, making what once wouldn't have worked together work well into whole system. ColdFusion fits that role perfectly.

**Q. When it comes to enterprise-class development, what do you consider Macromedia's main contribution to be in terms of technology and inspiration?**
A. Definitely the OO enabling of CF and ActionScript. We now have the ultimate integration platform! I think that Adobe's involvement is a blessing for us on several levels: Adobe can insure that funding for development and marketing will be available to a larger degree in the future. Adobe's position in other markets can help insure friendly relationships with other vendors like Apple. Adobe's existing product line contains several enterprise-class products, which sell to enterprise-class clients that can be leveraged to buy into the MX technology platform. Why do these things matter to me? That's easy: Microsoft. Adobe should be a "safe harbor" that will help guarantee us a place to compete with Microsoft and .NET on their own turf.

**Q. Having put the X into eXperience, what new areas are you looking forward to Macromedia's team heading off into (including as part of a merged Adobe-Macromedia)?**
A. Specifically I look forward to enhancements in those parts of ColdFusion MX that generate content (like the paragraphFormat() function) and will allow us to create standards-compliant HTML (and CSS) more quickly. I also look forward to deeper integration between ColdFusionMX and Adobe's complimentary products (plus Flex/FlashMX). I also

hope that Adobe might be able to take a stronger look at something Macromedia just never had the resources for – applications with an embedded CFMX engine and database that work well for either small companies via intranet or even as desktop applications. As our ability to generate rich interfaces gets better, we have a killer platform for massively integrated desktop applications.

### Name: Alexandru Costin

*Position: President of Products Division at InterAKT Online and one of InterAKT's product architects, also involved in maintaining the InterAKT suite of Dreamweaver productivity tools.*

**Technologies used: "I use Dreamweaver the most, especially because the nature of my job Apart from the MX technologies, I use Captivate, a great tool for creating presentations that help you win bids and clients."**

*"I work at InterAKT, and we do Dreamweaver extensions for a living). Looking back in the past, we've started with Ultradev 4 (by creating the first PHP support for Ultradev), then we've continued with Dreamweaver MX and MX 2004. We're also looking forward to future Dreamweaver versions, lately we've been partnering with Macromedia to create the ColdFusion 7 support for Dreamweaver, and we hope that this will be included in the next version."*

**Q. In the last ten years what non-Macromedia technologies (if any!!) have you envied?**
A. Toyota Prius (and hybrid cars) – not a web technology, but definitely something to look into in the future; I've heard from Sean (Corfield) that he's got one and I envy him. Second, the iPod – a non-Macromedia technology recently transformed almost into a religion. Regarding web development tools, Eclipse – with its CFEclipse branch – the single platform more extensible than Dreamweaver. Finally, AJAX – even if Macromedia did it long before the name was invented (Dreamweaver is a JavaScript application, CourseBuilder for e-learning was really neat on DHTML)

**Q. When it comes to enterprise-class development, what do you consider**

*Macromedia's main contribution to be in terms of technology and inspiration?*
A. Definitely ColdFusion – one of the first application servers, still kicking today by adapting to the "Java world" realities. In terms of Rich Internet applications, Flex (or should I call it Flash platform?) is probably the next big thing, by separating the presentation layer from the application logic.

*Q. Having put the X into eXperience, what new areas are you looking forward to Macromedia's team heading off into (including as part of a merged Adobe-Macromedia)?*
A. Redmond. Let's eXperience some epic (technology) battles!!

### Name: Jeff Tapper
*Position: Chief Technologist for Tapper.net Consulting and a Macromedia Instructor, certified to teach all of Macromedia's courses on ColdFusion and Flash development.*
**Technologies used: Flex 1.5, Flash 2004 MX Professional, and ColdFusion MX7.**

*Q. In the last ten years what non-Macromedia technologies (if any!!) have you envied?*
A. This is a really difficult question to answer, as invariably, I envy any technology which would make the tasks I need to do today easier, but which I dont have access to. In the past, I've deeply envied things like XPath (now available in ColdFusion and Flash) for searching XML, prior to Flex I was very envious of Laszlo. At other times I envied JMS (which is now trivial to interact with from CFMX7, thanks to event gateways)

*Q. When it comes to enterprise-class development, what do you consider Macromedia's main contribution to be in terms of technology and inspiration?*
A. As a 10 year customer of Macromedia (and Allaire before them), I've always considered their main contribution to the technology to be empowering developers to build better and better applications quickly and easily. 10 years ago I was amazed at how quickly I could connect a web page to a database with CFML (actually, it was DBML at the time, but thats another story), 4 years ago with the introduction of Flash Remoting, I was

amazed at how quickly and easily compelling Flash UI's could be connected to my ColdFusion server, and 2 years ago I was amazed at how much more quickly and easily I could build compelling Flash UI's with Flex. Across all of these, the recurring theme is empowering me as a developer to build better apps quicker.

*Q. Having put the X into eXperience, what new areas are you looking forward to Macromedia's team heading off into (including as part of a merged Adobe-Macromedia)?*
A. I look forward to seeing how the next generation of Macromedia tools will continue to let me build better apps more quickly. I'm expecting the Adobe merger will at a minimum expand the ease and richness of MX apps for the web into easier, richer printable pages from our apps.

### Name: Simon Horwith
*Position: Editor-in-chief of ColdFusion Developer's Journal and CIO at AboutWeb, LLC, a Washington, DC based company specializing in staff augmentation, consulting, and training. Macromedia Certified Master Instructor and member of Team Macromedia.*
**Technologies used: "I use ColdFusion as the platform for most of my development, usually I use Dreamweaver to write the code (though I also use CFEclipse and HomeSite+). When clients desire a rich internet application interface, I use Flash and/or Flex depending on their needs."**

*"Flex is a terrific example of how an Enterprise Application server should be. Everything about the way you develop Flex applications has the enterprise in mind, as well as encouraging scalable, architectural (application design) best practices."*

*Q. In the last ten years what non-Macromedia technologies (if any!!) have you envied?*
A. Wow, that's a good question. I've always envied the IDE (Visual Studio) that MS developers use – say what you want about Microsoft, they do make great development environments. I've also envied Java developers because of the language's capabilities, the size and quality of the open

source community and open source projects, and because it's based on standards. To a degree I'm pretty much envious of anyone working in an open standards based programming language.

*Q. When it comes to enterprise-class development, what do you consider Macromedia's main contribution to be in terms of technology and inspiration?*
A. I think that with the release of CF MX 7, ColdFusion has really begun addressing the requirements of Enterprise Applications. The Flex development team, without a doubt, had "Enterprise Solution" in mind from day one. Flex is a terrific example of how an Enterprise Application server should be. Everything about the way you develop Flex applications has the enterprise in mind, as well as encouraging scalable, architectural (application design) best practices. Flex makes the implementation of Enterprise RIAs a reality. I've been focussing on Flex a lot lately – it's something that I, and the rest of the executives at AboutWeb, have prioritized as a top skill for our developers to master. We believe Flex has a terrific future.

*Q. Having put the X into eXperience, what new areas are you looking forward to Macromedia's team heading off into (including as part of a merged Adobe-Macromedia)?*
A. I'm very excited about seeing Flash become a more widespread agnostic platform. The idea of delivering rich interfaces to mobile phones, devices, and the desktop along with "traditional" web browsers is a very powerful one. With Flash as an interrface platform and PDF as a document format "platform" both controlled by one company, there are some interesting possibilities. With regards to server side technologies, I'm very anxious to see how CF integrates and/or encapsulates with existing Adobe server offerings. I'm also really excited about the doors that have been opened up with the introduction of the Event Gateway framework in CFMX 7. Future gateways can now be introduced to help developers load test and administer their servers (and not just via a web interface, either) as well as interface with a myriad of devices and other environments.

**Name: Bryan Hoff**

*Position: Freelance web designer, digital artist and animator – has worked on everything from movie and television effects to online games, 3D corporate animation, Flash, and traditional web site design.*

**Technologies used: "I use Dreamweaver almost exclusively. In my day-to-day work I don't have much call for Flash, and I use Photoshop when I'm doing Web design, because I'm familiar with it and because I find its JPG output to be superior."**

"I think Flash and the power of ActionScript have carried Macromedia this far, and it's likely what drove Adobe to buy them."

*Q. In the last ten years what non-Macromedia technologies (if any!!) have you envied?*

A. To put a bit of a twist on things, I'm actually looking forward to seeing some of FreeHand's features – like transparent gradients – in future versions of Illustrator.

*Q. Having put the X into eXperience, what new areas are you looking forward to Macromedia's team heading off into (including as part of a merged Adobe-Macromedia)?*

A. I'm looking forward to hybrid versions of GoLive/Dreamweaver and ImageReady/Fireworks. Let's see if it happens.

**Name: Dean Utian**

*Position: Architect turned multimedia consultant, with experience in teaching Director and other digital applications – teacher of two courses at the University of New South Wales, Sydney, Australia and owner of a multimedia company called Multimedia Creative (www.multimediacreative.com).*

**Technologies used: Director MX 2004, Dreamweaver MX 2004, Fireworks MX 2004, Flash MX 2004.**

"One of Macromedia's greatest contributions is their commitment to providing support and information to their users and the wider community."

*Q. In the last ten years what non-Macromedia technologies (if any!!) have you envied?*

A. I have used a range of non-Macromedia software, particularly Adobe products. Over recent years, my main envy is within Macromedia itself. I have envied the development and focus on Flash, which has far outpaced the development of Director.

*Q. When it comes to enterprise-class development, what do you consider Macromedia's main contribution to be in terms of technology and inspiration?*

A. Macromedia has promoted high impact multimedia experiences and has given the community a wealth of resources and exposure on their site. One of Macromedia's greatest contributions is their commitment to providing support and information to their users and the wider community.

*Q. Having put the X into eXperience, what new areas are you looking forward to Macromedia's team heading off into (including as part of a merged Adobe-Macromedia)?*

A. Since Director is my primary Macromedia used product, I would like to see it get more exposure. Flash has had the limelight and main focus by Macromedia over the last few years and Director has been neglected. A perception has been created that Flash and Director are competing technologies and that Director will eventually be phased out. I would like to see Director become more part of the family of products. I'd like to see better integration of Photoshop and Illustrator into Director. I would also like to see an update of 3D in Director.

**Name: Danny Patterson**

*Position: Manager of User Interface Development for POPstick (www.popstick.com), a Boston-based interactive marketing company with an emphasis in Rich Internet Application development. A partner at CommunityMX and a member of Team Macromedia Flash.*

**Technologies used: Flash, ColdFusion, Flash Remoting, Flash Communication Server, Flex.**

"The Flash Platform is quickly emerging as the standard for delivering high-quality content and applications on the web."

*Q. In the last ten years what non-Macromedia technologies (if any!!) have you envied?*

A. I find that as a Flash developer, most people envy me. Because Flash Player is so ubiquitous, I can deliver applications to a very wide audience. And without much work, these applications can truly run cross-browser and cross-platform. The tools available to Flash developers are growing.

*Q. When it comes to enterprise-class development, what do you consider Macromedia's main contribution to be in terms of technology and inspiration?*

A. The Flash Player is definitely Macromedia's largest contribution. The Flash Platform is quickly emerging as the standard for delivering high-quality content and applications on the web. The ActionScript language is maturing nicely and I am encouraged by Macromedia's involvement in ECMA International.

*Q. Having put the X into eXperience, what new areas are you looking forward to Macromedia's team heading off into (including as part of a merged Adobe-Macromedia)?*

A. The obvious answer to that question is the mobile market. However, creating mobile content and applications doesn't really excite me personally until there is more advancement in the hardware for these devices. Once we are able to run Flash Player 7 or even 8 on a cell phone, then I'll jump on the bandwagon. Right now I'm most looking forward to the integration of Flash with Adobe video products like After Effects. The new video features that I've seen in Flash Player 8 are very cool, and we need some great new tools to take advantage of them. The advancement of ActionScript is also very exciting. I am looking forward to when ActionScript is fully compliant with the ECMAScript 4 proposal. And advancements within the ECMA group in areas like XML are also promising. ActionScript is already a good language, but I am looking forward to its future.

# Studio 8: The Early Response

*The Beta Version – Road-Tested in the UK*
**by mxdj news desk**

**d**esigners and developers worldwide couldn't wait to take the Studio 8 beta version for a spin. We look at a selection of what's been written so far in the UK about the Beta of the historic release.

"For most designers, Dreamweaver 8 is the core product in the Studio 8 suite. Flash may have all the fancy moves but, if you were a shipwrecked web designer, marooned on a desert island with access to only one program, Dreamweaver's the one you'd choose."

"If Dreamweaver forms the foundations of Studio 8, then Flash Professional 8 is the gravity-defying edifice above it. ... there are also a couple of new features that make you want to shake the development team soundly by the hand."

"Macromedia Studio, the software suite that includes web design's two most important authoring tools, is back. And what a wait it's been: the usual 18 month development and deployment cycle stretched out to a little over two years this time." That was how the UK's .net Magazine welcomed Studio 8 last month.

"The stuff in this release will blow your animated socks off, complete with perspective fixed, live drop shadows," the magazine's reviewer continued. "While Flash delivers a series of sizzling new features designed to make jaws drop and heads spin, updates to Dreamweaver are more levelheaded, concentrating on coding features and CSS. It succeeds on some levels better than others. Macromedia's site authoring behemoth is the yin to Flash's yang: the balancing element in an offering that blows hot and cold."

The reviewer gave a little of the background to why Studio 8 was so relatively long in coming:

"Unfortunately, the last release, MX 2004, suffered some early problems on the Mac. Reported performance issues were quickly identified and patched – but the suspicion remained that MX 2004 may have been rushed to the market a little too soon. This overshadowed an otherwise impressive launch and perhaps it's one of the reasons Macromedia took their time to get it right with this release." But praise for the development process this time round was fulsome. "The development cycle has been remarkably open too. Macromedia pride themselves on listening to their users, talking to developers and giving them what they want. Both Dreamweaver and Flash teams have been blogging their development process this time around, giving us glimpses of important features way ahead of the release date. When you're number one in a field of one, it's the kind of the thing you can afford to do."

Dreamweaver 8 wows this reviewer.

The Dreamweaver updates met with a warm reception: "You can now embed Flash video into Dreamweaver created pages, complete with a playback control set of your own choosing, using a wizard based interface. If you've ever tried to navigate the minefield that is putting video online, this takes the pain and guesswork out of it completely."

The review continues:

"CSS gets some serious attention with a newly unified CSS panel that enables you to edit styles without having to go into a full edit dialog or nip over to the Tag Inspector. There are new visual aids too, similar to those that help you select invisible tables. Now CSS block elements can be color coded, enabling you to see exactly where they are on your page. You can also choose how to render styles for different platforms too, or turn off style rendering completely."

Then comes the first fly in the ointment. "Macromedia says that it's tweaked the CSS layouts in Dreamweaver's design view so that they look more like they would in a browser," the review notes. "However, Macromedia does seem to have overlooked the growing popularity among hardcore designers of fluid layouts with relative positioning. The program lacks specific tools to deal with them and one W3C layout we tried to edit looked broken in Dreamweaver 8." One new coding tweak in particular was singled out for praise, the update to Dreamweaver's code view: "Adobe GoLive scores few points over its rival but its hierarchical code view, enabling you to collapse the structure of a page into a branching tree, was one of them. Now Dreamweaver has something similar but more selective, right in the main code window. There's also a new set of tools for working with code available from a new coding tool bar running down the side of the window."

Flash Professional 8 gets a big thumbs-up too.

The British review then turns to Flash Professional 8.

"If Dreamweaver forms the foundations of Studio 8," writes the reviewer, "then Flash Professional 8 is the gravity-defying edifice above it."

"Now in its tenth year the package still packs surprises into every release. This one sees lots of cosmetic tweaks and minor revamps, as do all the tools in Studio 8, but there are also a couple of new features that make you want to shake the development team soundly by the hand."

"Image editing tools like Photoshop and Fireworks have long had graphic effects built in to them," the reviewer notes. "Even the short-lived Adobe LiveMotion had filter effects. Now Flash has them, too, but Macromedia has taken an interesting approach to them. Instead of being hard rendered into a scene, Flash Graphic Effects are rendered in the player. So, for example, you can apply a drop shadow to an animating object. The shadow will change and mutate live – and there's no additional overhead in your Flash file. There's no need to convert vectors to bitmaps, either. The Filters panel appears as a tab in the Properties inspector, giving you a choice includ-

ing glow, shadow, convolution, blur and other effects. Alpha transparency's there too. The Filters sit on top of an entirely new level of code giving you pixel precise control over Flash elements through ActionScript – so those filters are just the tip of the iceberg for savvy programmers."

He then turns to what he calls the "two massive innovations" in video: "Within the Flash authoring tool itself, you'll find new video templates that enable you to quickly put together video control panels. No more messing with individual components and their parameters. As if all that wasn't good enough, the same technology that brings you graphic effects now enables you to specify alpha transparency in Flash video. In turn, this allows you to composite video elements over other Flash content – live."

The mobile support is hailed too:

"One area of focus that must be mentioned though is Flash's improved support for mobile content. Flash Lite export felt like an afterthought in Flash MX 2004. Now it's fully integrated and ships with an interactive mobile emulator, which enables you to test Flash authored mobile content for a growing number of devices. There's still no SVG Tiny support, though Flash Lite is growing in popularity and Flash is the best authoring tool for vector content there is. Now it's the best video development environment and web application building tool there is, too."

Verdict on pricing

Of Fireworks 9, the reviewer writes: "There are no ground breaking new tweaks here but every one of them is welcome. The biggest of the batch is the addition of 25 new blend modes and a couple of new filters. There's a new set of sample buttons, animations and themes to help with production and the addition of a special characters panel. For us, the most useful changes were even smaller. The use of CSS in pop-up menu generation is one of them, while improved vector compatibility with Flash is another. Both guarantee better integration with other tools in the Studio 8 package."

Then comes the overall verdict on the pricing structure of Studio 8:

"With so many tools available, both as part of the studio package and as standalone tools, the pricing structure is quite complex. Generously, Macromedia

are enabling users to upgrade from any previous version. Flash Basic is the anomaly here. It's cheaper to upgrade to Flash Professional than buy Flash Basic on its own – and it's not available as part of Studio. At £699 [Editor's note: remember this was a UK review; the US price, as many MXDJ readers are aware, is $999] for the full version of Studio 8, it's a big investment. Think about what you get for your money though; a bundle without a single strip of fat in it. Studio 8 does everything you could ask of a batch of web tools. With this installed on your machine, there's really no need for anything else. In that sense it offers brilliant value for money. The upgrade price is even nicer [Editor's note: $399 in the US] – the updates to Flash are worth the money alone."

The UK review ends as it began, enthusiastically.

"Some might say that the Adobe's acquisition of Macromedia will make a few of the tools in the Studio 8 redundant in a couple of years. We can say with confidence, however, that you'll see further versions of Flash, Dreamweaver and Contribute, at the very least."

"The functionality of Fireworks and FlashPaper will live on, even if their names do not. Don't miss out by trying to second-guess what the future holds, though – if you're serious about web design, this is the package for you."

*MXDJ News Desk gathers stories, analysis, and information from around the world of software design and development and synthesizes them into an easy to digest format for Macromedia designers and developers.*

"For most designers, Dreamweaver 8 is the core product in the Studio 8 suite. Flash may have all the fancy moves but, if you were a shipwrecked web designer, marooned on a desert island with access to only one program, Dreamweaver's the one you'd choose."

# The Adobe-Macromedia Transaction Nears Its Close

*Microsoft, Look Out!*
by jeremy geelan

**Adobe's CEO Bruce Chizen**

O n April 18, 2005, as we all know, Adobe Systems Incorporated announced a definitive agreement to acquire Macromedia in an all-stock transaction valued at approximately $3.4 billion. This is a look back, sideways, and forwards, based on

what's been happening since then.

After the inevitable wave of early name speculation subsided...would the company be renamed Adobomedia? Macrodobedia? AcroMacrobe?...both Macromedia's Chief Software Architect Kevin Lynch and Adobe's CEO Bruce Chizen made it clear to MXDJ (http:// mxdj.sys-con.com/read/49240.htm) and the San Francisco Chronicle respectively that the name of the combined company after Adobe had purchased Macromedia was going to be Adobe pure and simple. Or, as the FAQ promptly displayed on the web phrased it (http://www.adobe. com/aboutadobe/ invrelations/adobe- andmacromedia_faq. html#q6):

## What Will Be The Name of the Combined Company?

*Adobe Systems Incorporated.*
There was no margin of error

either so far as the executive pecking order was concerned. As early as April 18, both Adobe and Macromedia carried on their web sites the following statement:

*In the combined company, Chizen will continue as chief executive officer and Shantanu Narayen will remain president and chief operating officer. Stephen Elop, president and chief executive officer of Macromedia, will join Adobe as president of worldwide field operations. Murray Demo will remain executive vice president and chief financial officer. Dr. John Warnock and Dr. Charles Geschke will remain as co-chairmen of the Board of Directors of the combined company and Rob Burgess, chairman of the Macromedia Board of Directors, will join the Adobe Board.*

This was fleshed out a little in terms of reporting structure [my emphasis below] in the FAQ (http://www.adobe. com/aboutadobe/invrelations/adobeand- macromedia_faq.html#q21):
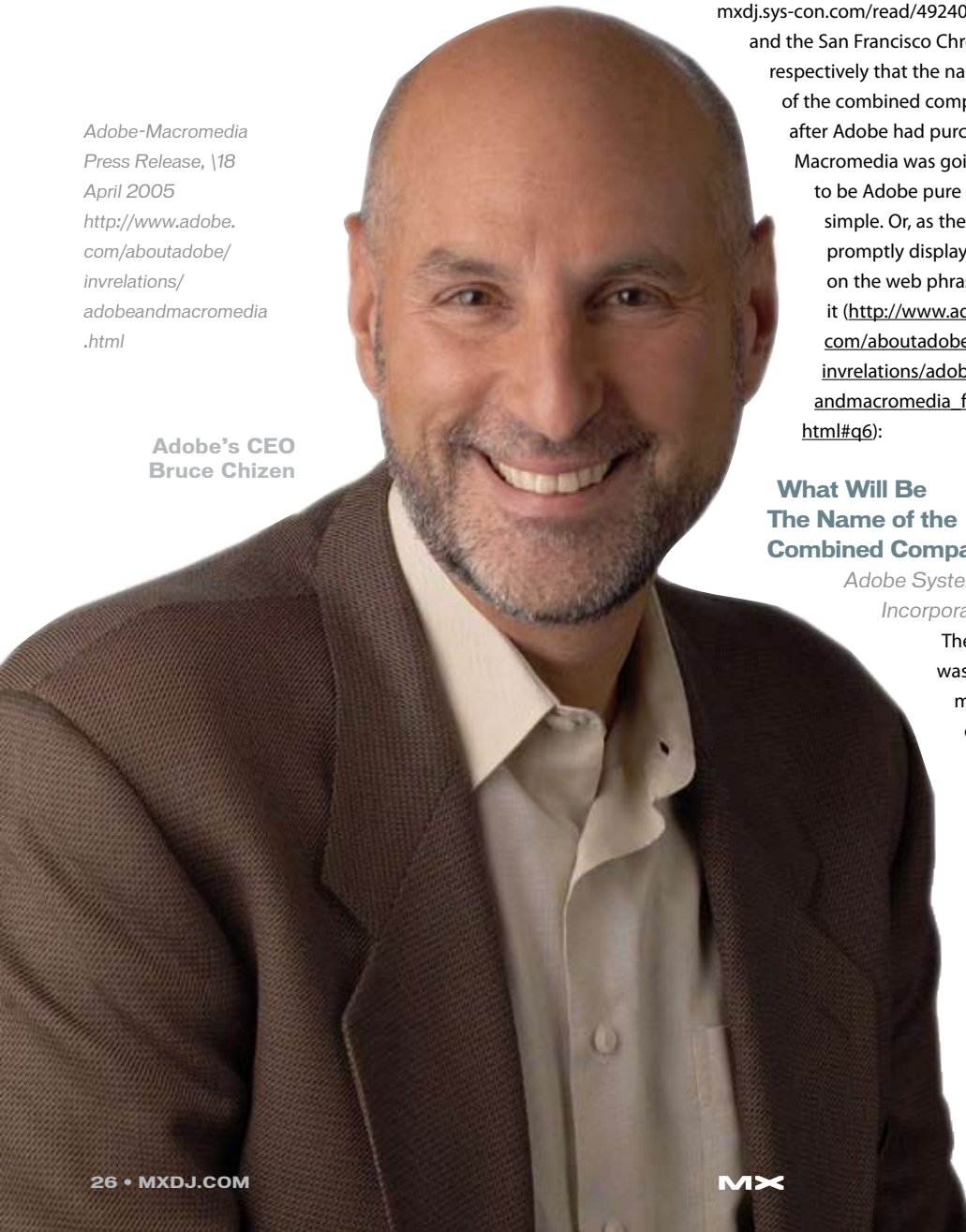
Bruce Chizen will be the chief executive officer of the combined company. Shantanu Narayen will be the president and chief operating officer reporting to Chizen. Macromedia's current chief executive officer, Stephen Elop, will be president, Worldwide Field Operations also reporting to Chizen. In this role, Elop will be responsible for Adobe's sales, field marketing, professional services, sales operations, customer service and technical support. Murray Demo will be executive vice president and chief financial officer reporting to Chizen.

*The FAQ added:*

Additionally upon close of the transaction, we anticipate other members of Macromedia's senior management will be joining the combined company in key leadership positions.

**MX**

> ## "By combining the passion, creativity, and technology of two leading-edge companies, we will continue to drive innovations that help people and organizations everywhere communicate better."
>
> *Adobe-Macromedia Press Release, 18 April 2005*

**Macrmedia's Stephen Elop**

## "Microsoft Is the Competitor"

The goal of the acquisition was and is for the post-transaction Adobe to be able to offer to the customers of the combined company "a broad set of tools, services and solutions for design, digital media, documents, and collaboration" as well as developing new market opportunities around mobile and enterprise solutions that build upon the Adobe and Flash platforms.

This is key. Adobe saw and sees the functionality of Adobe PDF and Macromedia Flash as complementary, enabling the deployment of an industry-defining, cross-media, rich-client technology platform across multiple operating systems and devices.

And where does Microsoft fit into all of this? The answer was already spelt out by Bruce Chizen in 2004, when he spoke to the Knowledge@Wharton newsletter published by the Wharton School of the University of Pennsylvania, recognized around the world for its innovative leadership and broad academic strengths.

"When I think about competitors," Chizen told the newsletter, "there's only one I really worry about. And it's one that happens to have $35 billion in revenues and $50 billion in the bank. And it happens to be in the software business. Microsoft is the competitor, and it's the one that keeps me up at night." Wharton legal studies professor Kevin Werbach was quick in April to say that the transaction makes a lot of sense for both firms:

"For Macromedia, it was unclear whether the company could have survived in the long run as an independent. While its business has been growing rapidly especially in non-PC gadgets such as cell phones and personal digital assistants."

As Macromedia's former CEO, Robert Burgess, explained in an interview with Knowledge@Wharton in October (http://knowledge.wharton.upenn.edu/index.cfm?fa=viewArticle&id=1059), Macromedia didn't have the girth to compete with larger companies like Microsoft.

A key passage in the Wharton interview came when Burgess was asked (remember, this was back in 2004) to what extent Adobe competed with Macromedia: "Very little" was Burgess's immediate response. He elaborated that the only two cases of point products where the two companies competed were Adobe Illustrator/FreeHand and GoLive/Dreamweaver:

"FreeHand competes with Illustrator – it's probably 85% [Adobe Illustrator] / 15% [Macromedia FreeHand] market share - something like that. Dreamweaver has about 95% market share and [Adobe] GoLive has about 5%. Those are the two cases of point products where we compete."

Although FlashPaper produces both a [Flash] SWF-based document format and a PDF format, Burgess was adamant:

"Seriously, I believe that the amount of overlap between Adobe and Macromedia - five years ago - was substantial. And now, it is very little."

When asked whether this a conscious move, Burgess explained that what happened was that Adobe concentrated on some businesses - and really got going with them.

"Adobe's been a document-centric company, and it's done very, very well. Adobe invested in Acrobat for a long time and it was unwavering. And it finally broke through - and that's a great business. Photoshop's a great business for Adobe - we don't have anything that competes with that. Video's a great business for them, as is PostScript. In all their

businesses, Adobe has lots of growth and lots of profit. We don't participate there." Meantime Macromedia took a different path, Burgess pointed out:

"And, similarly, we got going with web publishing - then multimedia on the Internet, and Breeze, and some of these high-growth products. Adobe doesn't have anything that competes with these products. So there is historical, legacy-level overlap, but it's really minor. When I look at where the companies are going, there's very little overlap. And I think Bruce Chizen would say the same thing."

As we now all know, a few months later...he did! From Adobe's perspective, the deal works because Macromedia is so certain to provide future growth opportunities. Kendall Whitehouse, senior director of information technology at Wharton, characterized the Adobe-Macromedia transaction as follows: "a classic case of merging for strategic reasons."

"Adobe has a broad product portfolio, but Macromedia provides a pathway to the future," Werbach observed. "Adobe has a strong publishing position, but that's being eaten away by the web. The PDF is a bridge from paper to the web that may not always be needed. Flash is in mobile phones and is the rich interface in Tivo boxes and airport kiosks."

Voices For – and Against

Sun's Tim Bray couldn't resist pitching in on the day the deal was announced back in April, via his "Ongoing" blog, with the following entry entitled: "Adobe + Macromedia = ?"

"Seems straightforward to me. Adobe is in at the center of print production (PhotoShop & friends, InDesign, PDF), while Macromedia's DreamWeaver is the single most important Web-design product. Dave Shea says this might be about Flash, but let me suggest exactly the opposite: if you're hitching your career

to Flash, it might be a good time to look at alternatives. Why's that? Because, near as I can tell, Macromedia has never made any serious money with Flash. They've accomplished one of the great, heroic, marketing coups of all time, getting the plug-in onto substantially every desktop on the planet; and this bought them, uh, what exactly? They sell authoring tools, but seriously, how many Flash designers does the world need? Anyhow, most of the good things you can do with Flash, you can do about as well with DHTML (oops that's called AJAX now) and your "back" button still works. I guess there's no reason to actually shut Flash down, the tool revenue must about cover the engineering costs. But Adobe, historically, has been good at focusing on what works and dropping the distractions. (Can you remember PageMill?) Flash is a distraction."

Before long he was set to rights be members of the Flash community worldwide, and soon afterwards added to his blog entry:

"[Update: Smell something burning? That would be me, sizzling in a torrent of Flash-flavored flame.]"

Macromedia's John Dowdell for example had a nice counter-quip:

"Funny, you'd sorta think Sun would be bullish on a cross-platform, cross-browser "write once play anywhere" kind of thingy, wouldn't you...? ;-)"

But what of those more bullish about the transaction? For example, Russell Beattie (http://www.russellbeattie.com/notebook/1008422.html) wrote:

"Of all the areas and products that Macromedia covers, for Adobe to point out specifically the mobile area in their merger FAQ means (to me) that Flash Lite isn't going to be forgotten. And honestly, with Adobe's worldwide market presence they might be able to do a much better job than Macromedia has done so far to get Flash on the handsets (in the West). I can see a combined Flash/SVG player (Flash Lite 1.1?) from Adobe becoming a really viable platform. I look forward to it because I think as the handsets mature, Flash will become a better way to create entertainment-oriented content than Java just like it has in the browser. Now Adobe can spend some of the energy they've been expending promoting SVG-T towards Flash as well, and that's a good

thing."

And Jeremy Allaire, former CTO of Macromedia and therefore a man whose view must surely be worth bearing strongly in mind, told PaidContent.org (http://www.paidcontent.org/pc/arch/2005_04_18.shtml#013267): "Macromedia lost the enterprise publishing race to Adobe, and Adobe lost it with the Web publishing community. So the deal combines the best of both worlds. It gives Macromedia a huge sales channel, especially on the enterprise side. This will probably make the channels as strong as say Microsoft has."

## July-August Update

In July, as it often does in deals involving software, with all its complications and nuances, the US Department of Justice requested additional information from the two companies. As arstechnica (http://arstechnica.com/news.ars/post/20050711-5079.html) noted at the time:

"The DOJ is especially interested in what will happen once the old GoLive vs. Dreamweaver and Illustrator vs. Freehand competition ceases under the suddenly larger Adobe umbrella."

"It's not unusual to see a second request (for information) in cases were the parties serve the same market, especially in software" attorney Connie Robinson told arstechnica (she heads up the antitrust department at Kilpatrick Stockton). "Unlike a widget, where you can see it and touch it," Robinson added, "software is harder to get your hands around and understand."

In August the most interesting development was probably the birth of http://blogs.adobe.com, which syndicates blogs from the likes of Mark Niemann-Ross, the Adobe Developer Evangelist working with third-party developers on InDesign, Illustrator and anything else that needs on the Creative Suite side of Adobe and Lori DeFurio, the Acrobat (and PDF) Developer Evangelist.

The founder of the site was Adobe Canada's Gavin McKenzie, who wrote (http://blogs.adobe.com/gavin.mckenzie/2005/08/beginnings.html):

"I've been working towards the launch of blogs.adobe.com for some time, along with a diverse virtual team, and at least for the very near term I will

continue to have a role in the care and feeding of the site. Over the coming weeks I fully expect to discover issues and areas for improvement — please let me know either via comments or email if you spot something that isn't working or have a suggestion. Suggestions for types of blogs that you wish to see are encouraged as well."

So that was in itself a strong indication that communicating directly with customers is a core value the combined company can be expected to maintain.

## Next Steps...

What next? Although we cannot know (or say) what is going on behind closed doors, and for legal reasons the combined company will not be able to create a joint product roadmap until after the transaction is closed, some clear pointers can perhaps nonetheless be given.

As anyone who enjoyed last month's historic Special Studio 8 issue already knows, while Macromedia may be moving beyond "MX" – which letters originated from its desire to underline the importance and uniqueness of the "Macromedia eXperience" – it is certainly not abandoning its commitment to the extent to which Experience Matters. "Great experiences enable great business" remains as true as ever.

Indeed we can all look forward to a widening and deepening of that commitment, with the addition – with this month's shipping of Studio 8 – of a second "E," namely Expressiveness.

As Macromedia's Flash evangelist Mike Downey said in the Special Issue:

"I think we've done a lot of major work in this release about productivity, standards support, and workflow. But the work we've done to allow designers and developers to be more expressive with their content will have the biggest impact on the web."

## DoJ Approval Is All That's Needed Now

On August 24, as this issue went to press, the respective shareholders of Adobe and Macromedia overwhelmingly approved the acquisition in separate special stockholder meetings. The stockholders of each company voted as follows: of the 75.0% of outstanding Adobe

shares voted, approximately 99.0% were cast in favor of the acquisition; of the 73.2% of outstanding Macromedia shares voted, approximately 99.8% were cast in favor of the acquisition.

In an accompanying announcement, the companies stated:

"Pursuant to the terms of the acquisition agreement, holders of Macromedia common stock will receive 1.38 shares of Adobe common stock for each share of Macromedia common stock they own at the closing of the acquisition. The companies anticipate that the transaction will close in Fall 2005, subject to appropriate regulatory approvals and the satisfaction of other closing conditions."

When the transaction closes, Macromedia's stockholders will own approximately 18% of the combined company on a pro forma basis. So far as products go, from here on the Adobe-Macromedia integration process will be managed by a so-called "Integration Program Office," consisting of one Integration Lead from each company. The Integration Leads are Adobe's vice president Corporate Services, Jim Briody, and Macromedia's executive vice president and CFO, Betsey Nelson, who joined Macromedia in 1996 to lead mergers and acquisitions and has served as the company's CFO since 1997.

The Integration Program Office will be overseen by an Integration Steering Committee chaired by Shantanu Narayen and consisting of: Bruce Chizen (pictured), CEO Adobe; Stephen Elop, president and CEO, Macromedia; Shantanu Narayen, president and COO, Adobe; Murray Demo, executive vice president and CFO, Adobe; and Theresa Townsley, senior vice president, Human Resources, Adobe.

### And the Last (Irreverent) Word Goes To...

In a world that is often dull, technology and laughter should not be complete strangers to one another. Life, as they say, is too short for that. Accordingly let's finish with the mischievous soul who made this delightfully mischievous post to Slashdot.org, when it reported the approval by both companies' shareholders of the deal (http://slashdot.org/comments.pl?sid=160364&cid=13424792): "Now I only have one corporation to hate on instead of two. This frees up hatred for new and upcoming businesses."

### Additional Resources
Adobe-Macromedia Acquisition website
http://www.adobe.com/aboutadobe/invrelations/adobe-andmacromedia.html

### Macromedia Blogs
http://weblogs.macromedia.com/mxna/

### Adobe Blogs
http://blogs.adobe.com

*The following e-mail was sent to all employees of Adobe Systems Incorporated on April 25, 2005:*

**Date:** April 25, 2005
**To:** All Adobe Employees
**From:** Bruce Chizen and Shantanu Narayen

### Re: Summing Up Last Week–Macromedia Acquisition

Last week was an exciting time for Adobe as we announced our plans to acquire Macromedia. We spent the majority of the week speaking with employees, customers, partners, investors, analysts and press, and we're pleased to report that all have been very supportive of our vision to bring the companies together.

Our energy and excitement about the future continues to grow each day. And, we've heard from many of you that you share the same feeling. Many of you have asked, "How can I help?" You can help in two important ways:

First, stay focused on our business–we must continue to operate independent of Macromedia until the close of the transaction. Our future success as a combined company is critically dependent upon how successful each company is in executing its own business strategy. Both Adobe and Macromedia have been very successful in the recent past. This is why many external parties see the logic of this deal and believe in our ability to successfully integrate the two companies. We need to continue our trend of success.

Second, be supportive of the integration process. Deals of this nature can take several months or longer to close, and due to its size and scope, this acquisition will require a very tightly controlled integration process. The Integration Program Office, under the leadership of Jim Briody, is forming–with the functional integration leads currently being selected by the ETeam. Look for email updates from the Integration Program Office in the next couple of weeks describing the integration process, structure, and the initial integration team members. Additionally, the Integration Program Office will send out periodic email updates on the integration planning.

We have a great year ahead with tremendous opportunity. Let's work together to ensure our future success by executing flawlessly on our business today!

–Bruce and Shantanu

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JDJ

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LinuxWorld Magazine

Linux Business News

Eclipse Developer's Journal

MX Developer's Journal

ColdFusion Developer's Journal

XML Journal

Wireless Business & Technology

Symbian Developer's Journal

WebSphere Journal

WLDJ

PowerBuilder Developer's Journal

**d**id you ever stop and wonder what the web might look like today if there were no standards? I think it would be a web of confusion. It reminds me of a file cabinet that I have full of important electronic data that I have accumulated over the years. I have accounting information on floppy disks from years past. The data was written by what is now long-obsolete software in file formats that I cannot access. If the World Wide Web were like my file cabinet it would be full of information written in Word 97 and Word Perfect and depending on the year I generated the files, some would be in the Apple Macintosh format while others would be in Microsoft PC format. I have images created in range of formats from TIFF to PCX. The files that I have generated over ten years ago are almost all in proprietary formats. What a limited and expensive World Wide Web it would be if there were no standards.

# Creating
# Standards-Compliant
# Web Pages

by kevin ruse
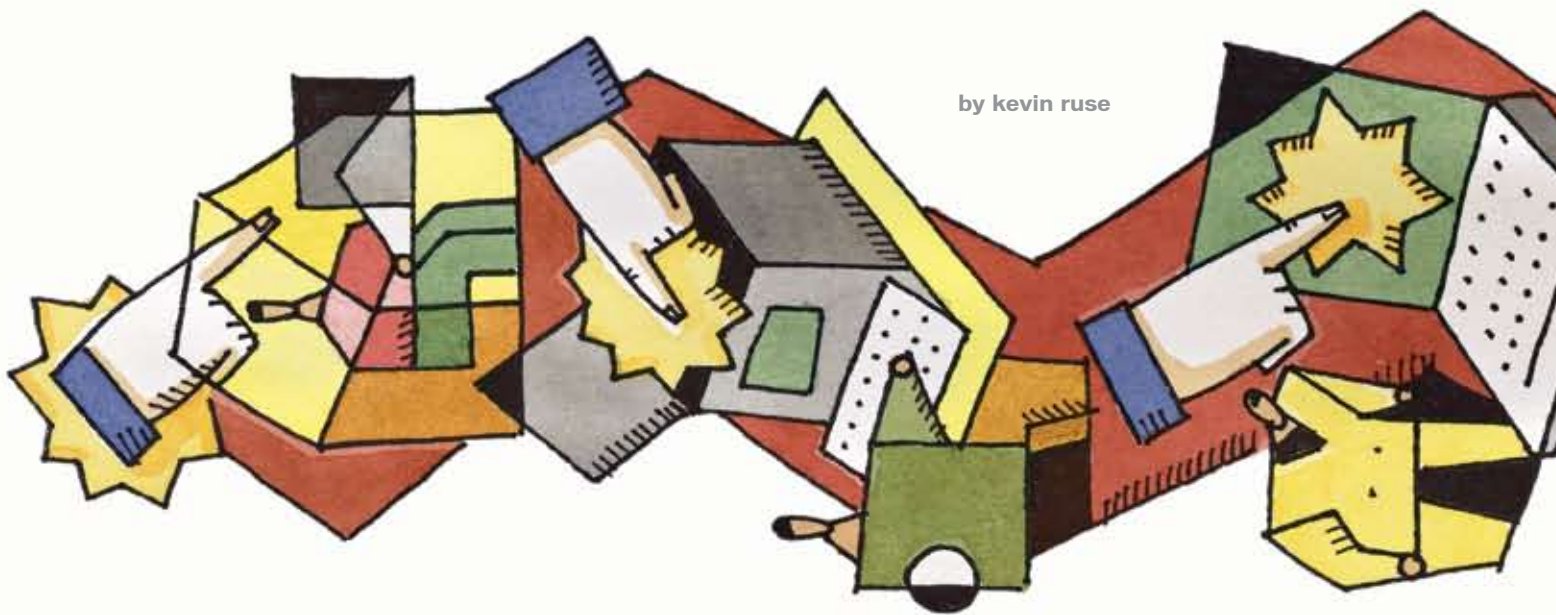
Fortunately for us, the World Wide Web's creator, Tim Berners-Lee, not only created a protocol for retrieving documents (the HyperText Transfer Protocol, HTTP), but he also created a standard language for creating the documents to be retrieved called the HyperText Markup Language (HTML). Those of us who have traveled the way of the Internet since its inception will recall how quickly it became proprietary in its structure and abilities. Prior to the so-called browser wars, the World Wide Web was fragmenting into competing languages, overlapping functionality, and proprietary code that turned any attempt at universal Web design into a frustrating experience. Many of us have felt the frustration of trying to write Cascading Style Sheets that displayed our designs in an identical, if not similar, fashion across multiple Web browsers and platforms. In addition to presentation problems, we also experienced functionality issues with JavaScript (from Netscape) vs. Jscript (from Microsoft). The browser wars between Netscape Navigator and Internet Explorer really brought the issue to the forefront as the two browsers competed to provide a richer, more dynamic experience for providers and end users alike.

The subsequent creation of the World Wide Web Consortium and its recommendations (read: standards) has done much to alleviate the problems caused by the browser wars. The browser manufacturers themselves have also contributed to the solution by upgrading their browsers to render HTML code in a more consistent way. Thus, we have seen a return to the original plan, which called for a Web document established upon a standards-based language.

While Web designers today understand the need to write code that works in all browsers and on all platforms, many simply do not appreciate the consequences of non-standard code. Today's Web browsers ask much from the humble HTML document. The Web page of late has become a starting-off point for information. Eventually the content of the Web page is used to formulate printed pieces, populate forms (including PDF pages), and some Web pages are components of an advanced Web application or software that runs via the Internet. Not all Web pages can fulfill these purposes. In order to use a Web page to create a PDF, or to populate a back-end database, or to feed a Flash application, the content must be consistent; it must be standard. The standard that promises the most possibilities is XHTML. Other standards that help multipurpose your content include Cascading Style Sheets, XSL-T, and XML.

The purpose of this article is to demonstrate how Dreamweaver MX 2004 can help you write standards-compliant code. You will learn how to ensure your documents are written in XHTML, or if you prefer, HTML 4.0, etc. You will learn how to build accessibility in your documents that will help your Web pages to be rendered by PDAs and cell phones, as well as desktop browsers and printers. By writing XHTML-compliant code and using an external stylesheet, you will be able to exploit all of the multipurposing possibilities that are available.

## What Type of Document Should You Write?

If you would like to repurpose the data in your Web page, the most flexible format is XHTML. When your document is written in XHTML it means that it is an XML application. As such, it is pure data and can be rendered for any purpose. For example, by using the XML stylesheet language called XSLT, you can transform XHTML Web pages into any other type of format, including any of the new Microsoft Office Markup languages that such as WordprocessingML for Microsoft Word and SpreadsheetML for Microsoft Excel. You can also transform the XHTML into an XML file that is suitable for import into many applications, including Flash to create dynamic Flash applications, and Adobe InDesign to create printed pieces. The possibilities are becoming endless as more applications become XML-compatible.

On the other hand, if you are reworking older Web pages that need to be viewed in early (before standards-based) browsers, you may want to ensure that they are written according to the rules of HTML that were in use at the time of the browser release (HTML 4.0, for example).

The solution in both cases is to declare a document type at the beginning of your Web page that announces to

**figure 1**

the Web browser what version of HTML you are writing. In the "New Document" dialog box, Dreamweaver offers the opportunity to ensure that you create XHTML. Figure 1 shows the "Make Document XHTML Compliant" checkbox. If you do not check this box, then Dreamweaver will write the Web page in HTML 4.01 Transitional, which means that the document may use deprecated presentational elements such as the font
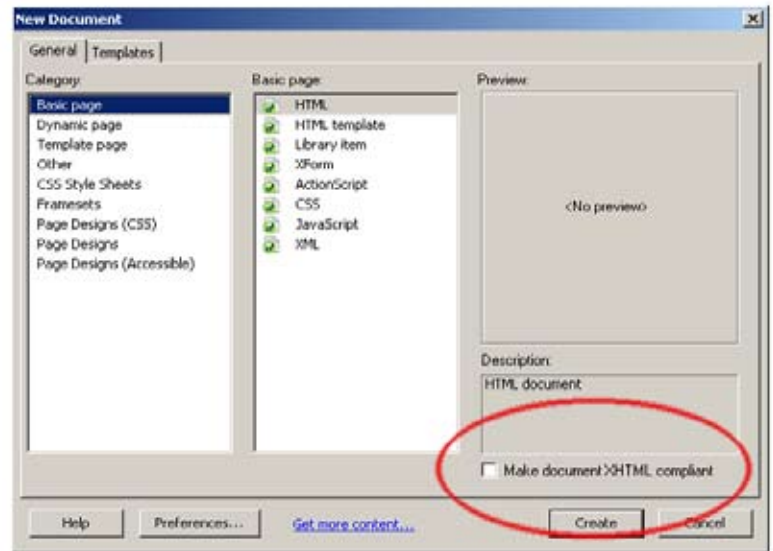
tag. This makes the document backwards compatible for older Web browsers. When creating a document that is not XHTML compliant, Dreamweaver generates the code shown in Listing 1. Enabling the "Make Document XHTML Compliant" checkbox would result in the DOCTYPE shown in code in Listing 2.

Once you have written your web page as XHTML, you can validate it within Dreamweaver to make sure that you have not broken any of the rules of the XHTML language. If you wish to exploit the XML capabilities of XHTML, your code must be valid. To validate your code using Dreamweaver:

1. Open the Web page you have written in XHTML.
2. From the Window Menu, choose "Results" or hit F7 to bring up the "Results Panel."
3. Click the Validation tab at the top of the Results Panel.
4. Click the green arrow on the left of the Results Panel and choose "Validate Current Document." Note that you can also validate an entire site, or selected files from the site. If the site contains no errors, the results panel will display as shown in Figure 2.

The Dreamweaver validator looks at the DOCTYPE declared in the beginning of the document and checks it for errors against that DOCTYPE. Because we chose to write XHTML Transitional, the results panel would not indicate any errors even if we used deprecated tags such as <font> and <b>. However if we change

the DOCTYPE to XHTML strict, the validator would find our errors, as shown in Figure 3. Dreamweaver does not provide a method for changing the DOCTYPE declaration other than the "Make Document XHTML Compliant" checkbox. Therefore, in order to write XHTML strict, you must manually change the DOCTYPE in code view. See the Macromedia exchange for an extension that allows DOCTYPE changes. For information on how to change the default DOCTYPE in Dreamweaver, see MX Developer's Journal online at http://mxdj.sys-con. com/read/45940.htm. The DOCTYPE should read as shown in Listing 3.

The results panel also allows you to save the validation results as an XML file and view the results in a Web browser as an HTML file. Double-clicking the error message will highlight the code in Dreamweaver.

Outside of Dreamweaver, you can also validate your code using the W3C's Validator Service at: http://validator. w3.org/. You can use the Validate by Upload section of the page and browse to the file you wish to validate. Figure 4 shows the results of validating the same page that Dreamweaver validated earlier (with the DOCTYPE XHTML Transitional) that indicated no errors. The W3C Validation Service is a bit fussier and returns an error message because our page uses an image tag without an alt attribute.
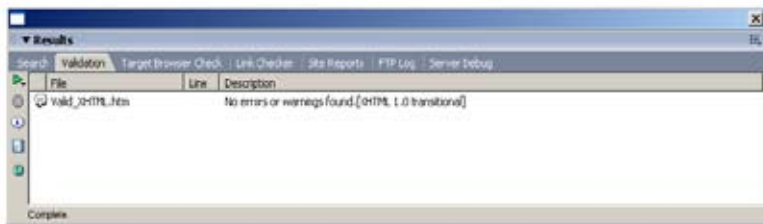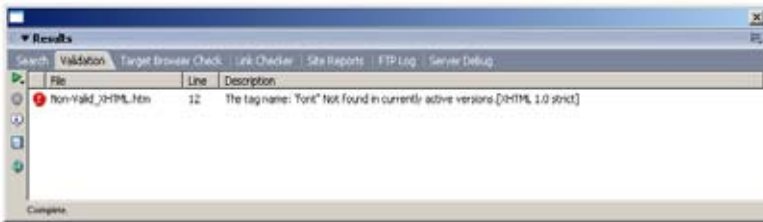
## The DOCTYPE Switch

Declaring DOCTYPES becomes espe-

cially helpful when you want to ensure that your CSS code is rendered as you intended. Today's standards-compliant Web browsers are really two browsers in one. Technically speaking, it is one Web browser that is capable of rendering in two modes: "standards-compliant mode" and "backwards-compatible mode," also known as "quirks mode." The Web browser reads the DOCTYPE line, which triggers the correct rendering mode. For example, if your DOCTYPE declares that you are writing XHTML 1 Strict (see Listing 3), this means that your code uses only XHTML elements that relate to the document structure (no deprecated markup is allowed); the presentation information is left entirely to a Cascading Style Sheet. How that Cascading Style Sheet is rendered depends on the browser's rendering mode (either standards-compliant or backwards-compatible).

Recall the browser wars and the subsequent years when Web browsers rendered CSS code differently from one browser to the other. One of the most prevalent problems has been the way the different browsers render DIV tags and their associated height, width, border, margins, and padding – the so-called box model. Essentially, the problem lies in the manner in which Internet Explorer understand this box. If you would like a div to be 100 pixels wide with padding of 10 and a border of 10, you simply write the CSS width property equal to 100 pixels. With Internet Explorer, however, your div box would be 40 pixels smaller than you expect, because it subtracts from the width the 10 pixel padding on the right and left

as well as the 10 pixel border on the right and left. This is just one of several problems with the way some older (non-standards compliant) browsers render CSS. There is a possible solution. Imagine having to rework an old Web site that is several hundred pages because the new browsers render the CSS in a standards-compliant way, but you wrote the page to work in the browsers in use at the time you created it (non-standard, work-arounds, CSS hacks, etc). Rather than upgrade several hundred pages, you can "downgrade" the browser. In other words, force the browser to render your page in "backwards-compatible" mode or "quirks mode." To do this you simply declare the correct DOCTYPE. Unfortunately, declaring the "correct" DOCTYPE can be tricky, because browsers can respond to the same DOCTYPEs differently. For example, the DOCTYPE in Listing 4 will trigger "standards-compliant" mode in Mozilla 1.0, Netscape 6.0+, Safari 1.0+, Internet Explorer 6.0+, and Opera 7.1+, but will trigger "quirks" mode in Internet Explorer 5 for the Mac.

You can use a simple JavaScript for testing purposes to see if the DOCTYPE you are using will trigger "standards-compliant mode" or "quirks mode." Copy Listing 5 to the head section of the Web page you wish to test in Dreamweaver and Preview in Browser.

You will also need to add a button to trigger the JavaScript. Copy the code in Listing 6 to the bottom of the Web page that you wish to test.

If your code triggers "standards-compliant" mode in Internet Explorer, you will see the alert box shown in Figure 5, otherwise IE will display "Backcompat." Opera

7.5+, Mozilla 1.0, Firefox 1.0 and Netscape 7.2+ will also display "CSS1Compat." If Opera is rendering in quirks mode the alert box will display "Quirksmode." If Firefox 1.0, Netscape 7.2+, or Mozilla 1.0 is rendering in quirks mode the dialog box will display "Backcompat."

Dreamweavers' ability to write standards-compliant code allows you to create Web pages that can then be used for other purposes. For example, XHTML can be transformed into XML, which can then be used to drive a Flash Web application. XHTML code can be reused in a similar way through ColdFusion, where the XML file replaces a database. Perhaps the greatest benefit in writing and validating our standards-compliant code is knowing that our code is ready for future browser releases, which means less re-work for us. As Web designers, we should commit ourselves to the future of the Internet by supporting standards. Macromedia as a software developer has committed itself to creating a product that writes code in accordance with the accepted standards of today.

*Kevin Ruse is the author of* Web Standards Design Guide *published by Charles River Media, Inc. The book explores the current standards: XML, XHTML, CSS, XForms, and XLink, as well as workflow issues that involve these standards. kevin@kevinruse.com*
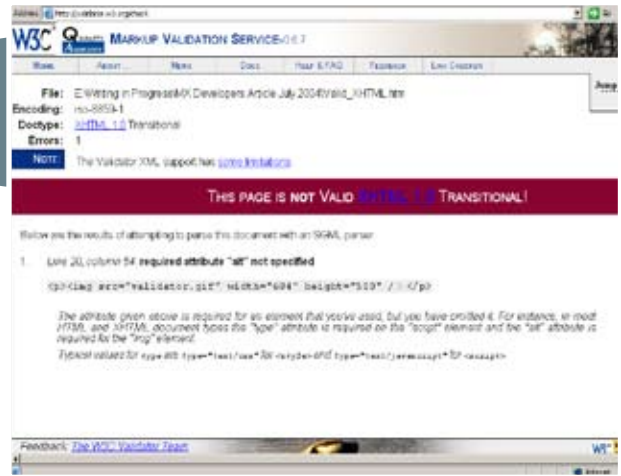
# Dreamweaver for Beginners

*Creating dynamic layers with interactive image rollovers*
**by benny alexander**

ayers are a special kind of HTML elements that can be used as a container to hold other HTML elements and to show them dynamically using JavaScripts. We can stack more than one layer on top of each other. One or more layer can be made visible dynamically, by hiding others. But using Macromedia Dreamweaver you can do all this without even knowing JavaScript or coding.

In this tutorial we are going to use multiple layers stacked over one another, and make it viewable, when you mouseover an image. In this case study I have taken 2 rollover images: Image1, Image 2, and three layers: Layer1, Layer2 and Layer3.

When we mouse over on the Image1, the second layer will appear while Layer1 and Layer 3 will be hidden along with its content. Likewise for the Image 3, Layer1 and 2 will be hidden and only Layer3 will

appear with its content. When we mouse out from the images, Layer 1 will come up again.

To achieve this follow the steps and enjoy!

## 1. Creating rollover Images

First as I said let us create 2 Images. We can use Macromedia Fireworks to create the images. In our case I have designed 4 buttons; 2 for the up state and 2 for the down state.

After designing the buttons, open a new page in Dreamweaver and create a 2X1 table. Now Insert the images using, Insert>Interactive Images>Rollover Image. Browse and select the first one for the up state and the second one for the down state. ( I am assuming you have put the images in the proper folder.)

Now do the same for the next image, so that both the images are in the first column of the table as shown in this example.
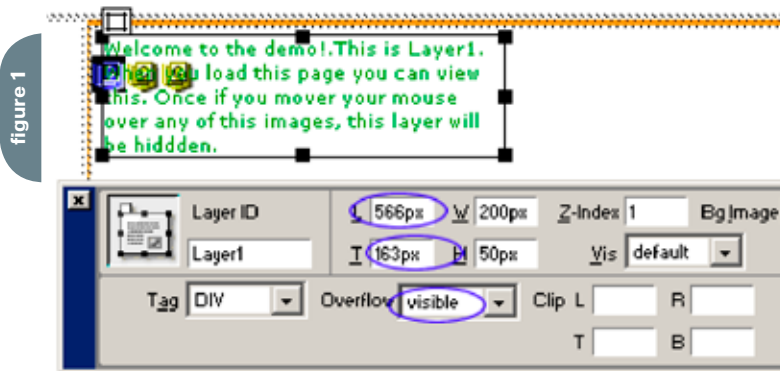


figure 1
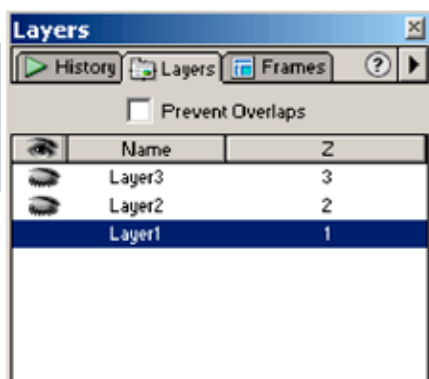
## 2. Placing Layers



figure 2

Open Insert>Layer and place the Layer1. Move the layer into column2 of the table. Now you can write the content inside the Layer. Select the layer in the Properties Inspector and select Overflow as 'visible'. This makes this first layer the default layer and makes it visible while the page is being loaded.

Note down the position of the Layer (566px and 163px). Insert the second and third layers on the same position, so that

they will sit over the first layer.

Now insert the text on those layers. (Note: Due to the overlapping of layers the text may not be clear. So, you can place the layers somewhere else, write down the text and then change the position of the layers to sit on the same position as the first layer.)

## 3. Changing the Layer Properties

Select Window>Layers. You will get the Layer Inspector, with all the three layer details. Select Layer2 and Layer3 and if the eye is open click on it to close it for both of them. In the properties Inspector you can see the OverFlow is selected as hidden for Layer2 and Layer3. This enables Layer2 and 3 to be hidden while the page is loaded.

## 4. Adding Behaviors

Now select the Image1 where we are going to add the dynamic Layer effects. Then Open Window > Behavior. You can see the Events and actions created by Dreamweaver for the Rollover Images which we did in step 1.

Click on the  button and select "Show-hide Layers". You will get this box to 'Show or Hide" the Layers.
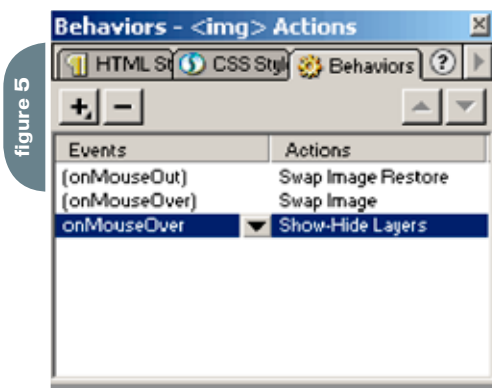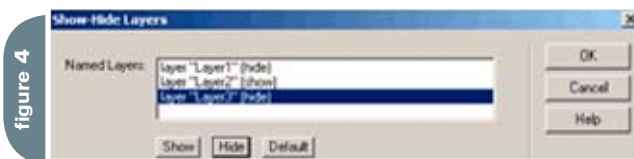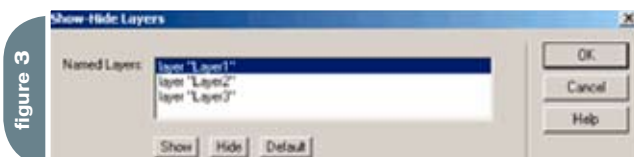
Now do the following:
a. Select Layer1 than click on 'Hide'
b. Select Layer2 and click on 'Show' then,
c. Select Layer3 and click on 'Hide'.

This action will make Layer1 and 3 disappear and show Layer2 whenever you mouseover Image1.

You can also see the new JavaScript events created by Dreamweaver in the Behaviors Inspector. Here the new onMouseOver and onMouseOut with Show-hide Layers as actions.

Note here that you can use other events also as you like. For example instead of onMouseOver you can use onClick. To do this you need to click on the tiny black, inverted arrow next to the event. Use this to select other events, ie

OnClick, Down etc.,.

At the foot of the list there is a category which allows you to choose which browsers to support, make sure a check is next to 4 and higher browsers. (Only after choosing the browser 4 or higher you will be able to see all the Events in a list)

Follow step 4 by selecting Image2. Then,

a. Select Layer1 than click on 'Hide';

b. Select Layer2 and click on 'Hide' then,

c. Select Layer3 and click on 'Show'.

This action will make the Layer1 and Layer2 disappear and show Layer2 while you move your mouse over Image1.

## 5. Bringing Default Layer Again

Now as a final step, you need to bring back Layer1 when you move your mouse out of the Image (or when you mouse away from the images to somewhere on that page). Select Image1 and click on the  button and select "Show-hide Layers". You will get a box to 'Show or Hide' the Layers.

Now do the following...

a. Select Layer1 than click on 'Show'

b. Select Layer2 and click on 'Hide' then,

c. Select Layer3 and click on 'Hide'.

This action will make Layer2 and Layer3 disappear and show Layer1 while you move your mouse out of the Image1. Also do not forget to change the Events to onMouseOut.

Repeat step 5 with Image2 also. Now you should get the Behavior Inspector like this Image, showing all the Events for both Image1 & Image2. ⌒⌒

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figure 3



figure 4



figure 5

**MX**

# Building a Simple Live Video Broadcaster and Receiver

*Learn how to leverage the power of Flash Communication Server MX to add video and audio communications to your Flash apps*

by stefan richter

**m**acromedia Flash Communication Server MX (popularly referred to as Flashcom) is becoming an increasingly popular platform for the efficient delivery of streaming video to large audiences. Many content delivery networks such as Speedera and Vitalstream have teamed up with Macromedia to offer their clients a platform to stream prerecorded videos easily and efficiently. However, the Flash Communication Server capabilities do by no means end there. The platform is also an ideal choice to deliver live-event broadcasts in real time across the globe – all through a familiar and v ery accessible Macromedia Flash front end.

In this article I will walk you through the development of a simple live broadcast application which captures your local microphone and camera sources and publishes them with the help of Flash Communication Server over the Internet. You will also learn how to build a player that is capable of subscribing to the broadcast and playing it back to your viewers.

Note: The sample FLA files are not needed to complete this tutorial but are provided for reference in case of any problems.

## Creating the Server-side Application

To set up an application on your Flash Communication Server, all you need to do is to create a folder inside your server's application directory. Most applications will also require some server-side code, usually in the form of a main.asc file. However, since this is a very basic application, you do not need any server-side code at all.

To create your application, simply create a new folder inside your Flash Communication Server application directory, and call it livecast. On Windows, this folder's default location is C:\Program Files\Macromedia\Flash Communication Server MX\applications\.

Note: There is no need to restart your server or vhost at this point. Remember, however, that every time you make changes to any server-side code you must restart the application that you have modified, or else you will not see your code changes reflected in your application logic.

## Building the Live Video Broadcaster

Both applications that you are about to build are very similar. Each one will connect to your Flash Communication Server application and stream audio and video data. The main difference between the two files is that the broadcaster will publish the video and audio whereas the receiver – you guessed it – receives it. Therefore the broadcaster will contain a little more code than the receiver, because it needs to access your camera and microphone as well as handle the NetConnection and NetStream objects.

Building the live video broadcaster involves the following steps:
1. Creating a new FLA file
2. Laying out the user interface
3. Connecting to your Flash Communication Server application
4. Creating a NetStream object and publishing your stream

### Step 1: Create a New FLA File

Open Flash MX 2004 and choose File > New or press Control+N to create a new FLA file. Rename your existing layer to UI. Create a new layer above your existing layer and name it actions. Save your FLA file in a directory of your choice and name it broadcaster.fla.
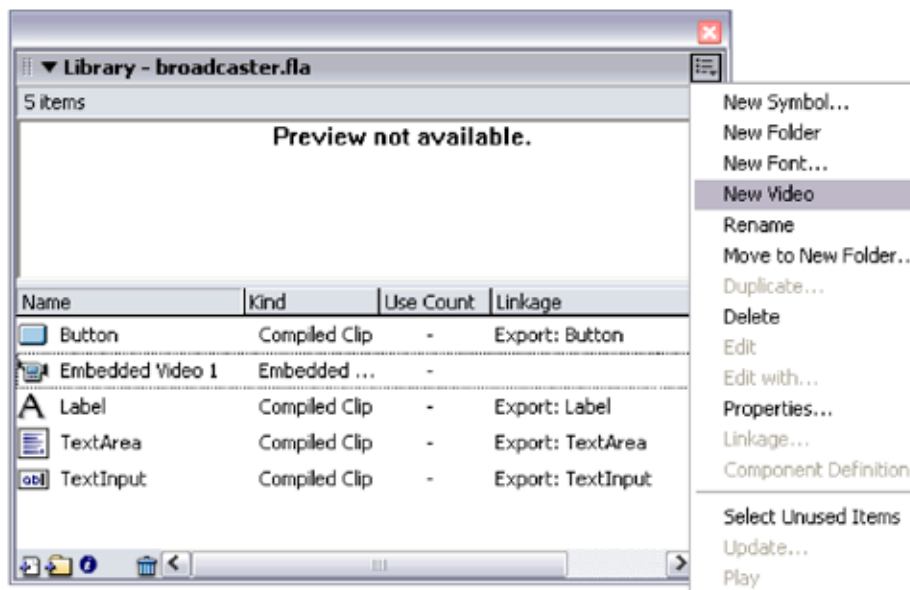
### Step 2: Lay Out the User Interface

Select Window > Development Panels > Components or press Control+F7 to open the components panel. Next drag the following components onto the Stage:
• Two TextInput components
• One TextArea component
• Three Label components
• Two Button components

Open your library (by selecting Window > Library or pressing Control+L)

figure 1

and add a new video object to it. To create a new video object, click the little button in the top right corner of your Library panel and select New Video (see Figure 1).

You will see a new symbol Embedded Video 1, in your library. Drag it onto the Stage and give it an instance name of myvid. Later you will display your local camera feed inside this video object. I also drew a thin outline around the video object in my application to make it visible before a video is being displayed. This border is optional.

Name one of your buttons on the Stage connect_pb and give it a label of Connect. Name the second button start-stop_pb and give this one a label of Start Broadcast.

Give your label components the text properties of rtmp address for the first component, stream name for the second component, and status output for the third component. The label components simply clarify the purpose of your text input and text area components. You can omit the labels altogether if you want, because they play no significant role in the actual application logic.

Give the two TextInput components instance names of rtmp_txt and stream-name_txt, respectively.

Name the text area component status_txt; you will be using it to output status and trace information.

Align all these elements as you see fit, or use my layout (see Figure 2).

## Step 3: Connect to Your Flash Communication Server Application

To successfully connect to a Flash Communication Server application instance, you must:
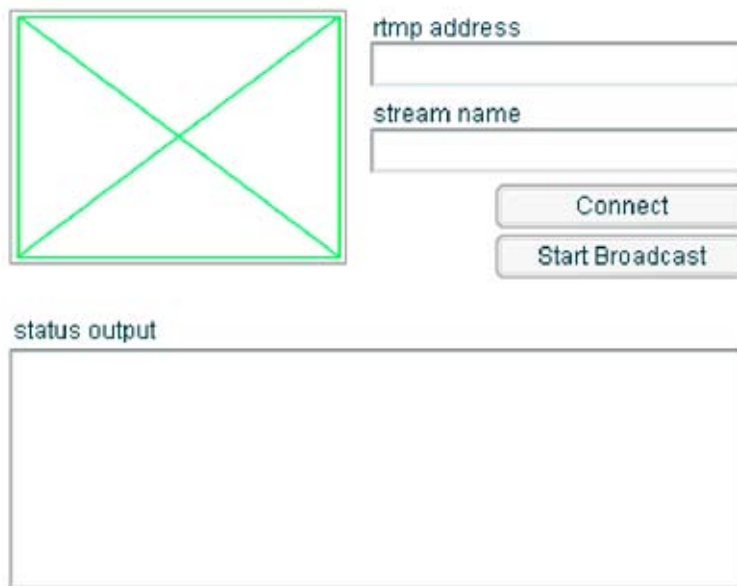1. Create a NetConnection object.
2. Define an onStatus() method for it.
3. Call the NetConnection object's connect() method.

Select Frame 1 of the actions layer and add the following code to it:

```
startstop_pb.enabled = false;

connect_pb.onRelease = function(){
    if(this.label == "Connect"){
        status_txt.text +=
"Connecting..." + newline;
        this.label = "Disconnect";
```



figure 2

```
        nc.connect(rtmp_txt.text);
    } else {
        status_txt.text +=
"Disconnecting." + newline;
        this.label = "Connect";
        startstop_pb.enabled = false;
        nc.close();
    }
}

nc = new NetConnection();
nc.onStatus = function(info) {
    status_txt.text += "NC.onStatus>
info.code: " + info.code + newline;
    if (info.code == "NetConnection.
Connect.Success") {
        status_txt.text += "Connected
to " + this.uri + newline;
        startstop_pb.enabled = true;
    } else if (info.code ==
"NetConnection.Connect.Closed") {
        startstop_pb.enabled = false;
        startstop_pb.label = "Start
Broadcast";
        myvid.attachVideo(null);
        myvid.clear();
    }
}
```

This code initiates the following actions. First it disables the startstop_pb button instance. You will enable it again after a successful connection to the server has been established.

Next comes the onRelease function for the connect_pb button instance. This code emulates a toggle state so that the button can be used to both connect and disconnect based on the current label. At the same time the code outputs status messages into the status_txt field on the Stage to help you visualize what's happening behind the scenes. The following code will disable the broadcast button when you close the connection to your server:

```
startstop_pb.enabled = false
```

The actual connection to Flash Communication Server is triggered by this line:

```
nc.connect(rtmp_txt.text);
```

As you may have noticed, this code grabs whatever text is currently displayed in the rtmp_txt text input field and passes it as a parameter to the NetConnection object's connect method. This enables you to connect to different servers (or applications) without having to hard code connection strings into the SWF file. If it makes live easier for you, then you can easily prefill the value for this input field inside the Flash authoring environment: Just highlight the component on the Stage, bring up the Properties panel and fill in the text value. Note that you must use the complete rtmp string to your server, including rtmp:/ or rtmp://.

At the bottom of this code block is the onStatus function for your NetConnection object. This function listens for a NetConnection.Connect. Success message and, after receiving one, enables the startstop_pb button instance as you are now ready to create a

MX

figure 3

NetStream function and start broadcasting.

The last code block disables the broadcast button and resets its label in case you get disconnected, either because you have chosen to or maybe because the connection has dropped for unknown reasons. It also cleans up the video object on the Stage by issuing the following:

```
myvid.attachVideo(null);
myvid.clear();
```

## Step 4: Create a NetStream Object and Publish the Stream

You will create a NetStream object after the startstop_pb button is clicked. The name for the stream will be based on whatever value the streamname_txt text field holds.

Add the following code underneath the existing code in frame 1:

```
startstop_pb.onRelease = function(){
    if (this.label == "Start
Broadcast"){
        status_txt.text += "Starting
broadcast" + newline;
        this.label = "Stop
Broadcast";
        ns = new NetStream(nc);
        ns.onStatus = function(info)
{
            status_txt.text += "NS.
onStatus> info.code: " + info.code +
newline;
```

```
mycam = Camera.get();
        mycam.setQuality(25600, 0);
        mymic = Microphone.get();
        mymic.setRate(11);
        ns.attachVideo(mycam);
        ns.attachAudio(mymic);
        myvid.attachVideo(mycam);
        ns.publish(streamname_txt.
text, "live");
    } else {
        status_txt.text += "Stopping
broadcast" + newline;
        this.label = "Start
Broadcast";
        myvid.attachVideo(null);
        myvid.clear();
        ns.close();
    }
}
```

This code is fairly self-explanatory:
1. First (if the current button label is Start Broadcast) it creates a new NetStream object on our existing NetConnection object (ns = new NetStream(nc);).
2. It then adds an onStatus handler (ns. onStatus = function(info)[...]), which enables you to see trace output inside the status_txt text area.
3. Next, it grabs a reference to the default camera that's installed mycam = Camera.get(); and calls the setQuality method with a parameter of 25600 bytes and 0 (best possible) image quality at that given bandwidth mycam. setQuality(25600, 0);. Feel free to adjust these settings as you see fit.

4. Next comes the equivalent action for the default microphone:
5. mymic = Microphone.get(); mymic.setRate(11);
6. To be able to send audio and video across the Internet, you must attach both sources to the NetStream object:
7. ns.attachVideo(mycam); ns.attachAudio(mymic);
8. Now you need to attach the local camera feed to the video object on the Stage. This will enable you to see the feed that you will be broadcasting. myvid.attachVideo(mycam);
9. By calling ns.publish(streamname_ txt.text, "live") you start the broadcast. You can omit the parameter "live" if you want, because the publish method would actually default to a live stream. However, using this parameter makes matters a little clearer I think.

For more information on setQuality, setRate and all the other Flash Communication Server–related objects and methods you should consult the excellent Flash Communication Server Documentation and Live Docs.

You are now ready for your first test run. Press Control+Enter or select Control > Test Movie to see what happens. Enter a valid rtmp address into the first text box (for example, rtmp:/livecast for local servers or rtmp://yourserver.com/livecast for remote servers), as well as a stream name into the text box below below. Click Connect. Your screen should look somewhat similar to Figure 3 (the cheeky grin is optional).

Did it work? Great. Pat yourself on the back—now let's build the live video receiver.

## Building the Live Video Receiver

The receiver is simply an adaptation of the broadcasting application. Make sure you save the broadcaster.fla file and then save a copy under the new name of receiver.fla.

Here's what your receiver needs to do:
1. Connect to Flash Communication Server.
2. Create a receiving NetStream object.
3. Display the stream. Sounds like you merely need to strip back some functionality rather than add anything new.

Start by removing the startstop_pb button, because you no longer need it. You can also remove the accompanying function from your code. You should delete startstop_pb.enabled = false on line 1 as well as the startstop_pb.onRelease function at the bottom of your code.

Also, the connect_pb.onRelease function can be stripped of the following line:

```
startstop_pb.enabled = false;
```

In fact, you can remove any references to startstop_pb.

```
connect_pb.onRelease = function(){
    if(this.label == "Connect"){
        status_txt.text +=
"Connecting..." + newline;
        this.label = "Disconnect";
        nc.connect(rtmp_txt.text);
    } else {
        status_txt.text +=
"Disconnecting." + newline;
        this.label = "Connect";
        nc.close();
    }
}
```

The NetConnection object's onStatus handler also needs some minor modifications. After a "NetConnection.Connect. Success" message is received, you need to create a NetStream object, add an onStatus handler to it (in order to see some trace output on the Stage) and attach the stream to your video object (myvid. attachVideo(ns)) in order to display the feed. There is no need to anything similar to the microphone or sound object, because the sound that is broadcast is contained within the same NetStream object. Therefore attachVideo in this case actually means attaching video and sound.

To finish, add the ns.play command at the end. Here's the completed code:

```
nc = new NetConnection();
nc.onStatus = function(info) {
    status_txt.text += "NC.onStatus>
info.code: " + info.code + newline;
    if (info.code == "NetConnection.
Connect.Success") {
        status_txt.text = "Connected
to " + this.uri + newline;
        ns = new NetStream(nc);
```

```
        ns.onStatus = function(info)
{
            status_txt.text += "NS.
onStatus> info.code: " + info.code +
newline;
        }
        myvid.attachVideo(ns);
        ns.play(streamname_txt.text,
-1)
    }
}
```

As you can see instead of attaching a camera and microphone to the NetStream object we instead call the play method and pass it the current value of streamname_txt as its first parameter. Of course this parameter (the name of the stream which should be played back) needs to match the name of the stream you will be broadcasting through the broadcaster application.

Time for another pat on the shoulder – you are now ready to go on the air.

## Lights, Camera, Action

Publish both movies, then open them side by side. You can either use two browser windows or two standalone Flash Player applications – the choice is yours.

Press the Connect button in both applications, followed by the Start Broadcast button in your broadcaster application. If you followed my directions, then your screen should look similar to Figure 4 (minus that funny-looking guy with glasses).

If you are having problems connecting to your server or the application isn't working as expected, then don't worry – you can download the completed source files from page 1 of this tutorial, and you can modify those to suit your needs.

First, however, make sure that you are using the correct rtmp string and that the server you are trying to connect to is actually running. Don't laugh, it happens all the time.

## Where to Go from Here

The example in this tutorial should give you a good basis for additional features. You may want to add a slider component to change your camera's broadcast settings on the fly. Or how about adding a NetStream.send command to send text information across the



**figure 4**

live stream? Or even simpler, try adding a microphone mute button, which enables you to start and stop audio transmissions independently from the video stream.

Please visit my forum at http://www.flashcomguru.com/forum/default.asp where you will find a thread accompanying this article. ∞

*Stefan Richter is a Certified Flash Developer and Team Macromedia member who has been involved with Flash Communication Server since its early days. As VP of Application Development and cofounder of POPview (www.popview.com), he has developed a variety of Rich Internet Applications using Flash Communication Server, Flash MX 2004 and ColdFusion. You can find more of Stefan's articles at www.flashcomguru.com. stefan@flashcomguru.com*

# Visual Programming in Macromedia Flash

f you are a visual programmer working in environments like Visual Basic, Delphi, REAL basic, or PowerBuilder, you may hesitate to take advantage of the benefits of Flash because of concerns about learning a new, unfamiliar environment. To show how easily you can transfer your existing knowledge to Flash MX Professional, in this article I will explain how you can create a simple web search application that queries the Google web API using SOAP web services:

**by ian bogost**

## Visual Programming in Macromedia Flash

As a visual programmer, you may have already tried your hand at a previous version of Flash – and been you were likely confused and overwhelmed by it. Flash has never been more inherently complex than Visual Basic 6, Visual Studio .NET, or Delphi, but it comes from a lineage of animation tools, not programming tools. This fundamental difference made Flash an impractical tool for visual programmers until Flash MX Professional 2004 came along and changed all that.

Flash 1 and 2 refined and improved the animation capabilities of the product. Flash 3 added the ability to individually animate movie clips and create stand-alone EXE files – the platform's first foray out of the browser. Flash 4 and 5 contributed major improvements to its scripting capabilities (called ActionScript), including XML support. Flash MX boasted more ECMA-compliant scripting, including objects and events, pre-built UI components like buttons and sliders, and a series of impressive add-ons for multiuser applications (Macromedia Flash Communication Server) and distributed application support (Macromedia Flash Remoting MX).

Despite these improvements, Flash development still required timeline-based authoring and manual coding. So Flash MX Professional added several major changes to Flash application authoring that helped visual programmers start creating their own Rich Internet Applications.

With 97 percent worldwide web browser penetration, Flash content can be viewed on almost any platform, including web, wireless, embedded devices, and – with Macromedia Central – on desktops. While platforms like Java and .NET promise code reuse for mobile development, Flash makes code truly reusable across platforms, especially on mobile devices.

Flash code is truly reusable, unlike Java code, which developers must often tweak for each platform (although the Flash Player is not available on as many mobile platforms as Java is). You can also move Flash applications among platforms without redesigning or recoding them, unlike other tools such as Visual Studio .NET mobile web forms.

## Building Flash Form Screens

The biggest change in Flash MX Professional was the addition of a true visual programming environment. Prior versions of Flash provided no way to easily define application screens like a login form or a display window. Flash developers had to kludge application screens into labeled Timeline keyframes or create custom movie clips that acted like application screens. Flash form applications make it possible to create structured applications that are independent of the Timeline.

Visual programmers familiar with Visual Basic, Delphi, and other environments will immediately notice how much more approachable forms make the Flash platform. As in Visual Basic, you can create a form quickly and add UI and data components to the form by dragging them from a toolbar in the IDE. Since Flash content lives primarily within web browsers and other containers, a Flash form is really a screen within the application, not a Windows form. You can use ActionScript commands to show and hide forms in your Flash application and control objects within them.

Another major difference between Windows forms and Flash form screens is that the latter are hierarchical and inherited (see Figure 1). When you create a form within a form, the child form inherits all the elements of its parent. Hierarchical forms take a bit of getting used to for Windows forms designers but the benefit is striking.

In VB, Delphi, and other environments, creating different areas that occupy the same form can be a nuisance (see Figure 2). Typically you use a Windows frame control to house different elements, but then you may have trouble viewing them in the designer. Hierarchical forms make it easy to move between subsections of a screen without the effort.

Here's how you create the framework for the Flash form application:

1. In Flash MX Professional, choose File > New and select Flash Form Application. This creates a default application with two nested form screens.
2. Change the instance name (in the Property inspector) of form1 to frmSearch. This form will contain the main search interface.

3. Right-click (Control-click) frmSearch and choose Insert Nested Screen. This creates a new form screen called form2 underneath frmSearch. Change the instance name of the new form screen to frmLoading.
4. Now you can add UI components (the equivalent of VB controls) to the forms. The application form is the parent of all the other forms in the application; anything you put on that form will also appear on any of its child forms. For this application, I placed a Google graphic in the upper left corner to show how this works.
5. Select the frmSearch form. In the Components panel, drag a Label, Button TextInput, and TextArea component onto the Stage. Arrange the components as shown in Figure 3. (Right-click and choose Free Transform to resize the components.)
6. Using the Property inspector, give the components the following instance names – Label: lblSearchTime; Button: btnSearch; TextInput: txtQuery; and TextArea: txtResults.

## Authoring Animations

You may have been intimidated at the prospect of authoring animations in Flash because the Timeline and drawing elements required a designer's skills. Besides getting such built-in Timeline effects as drop shadows in Flash MX Professional, you can animate elements in Flash forms as easily as you can animate objects in PowerPoint. You can also author your own motion graphics using movie clips and the standard Timeline. If not, the Timeline stays neatly out of the way.

Here's how you add a simple animated element to the application. For these purposes, add a "loading" element that lets the user know the search is executing:

1. Select the frmLoading form screen.
2. In the bottom right corner, add a graphical or text element that indicates "loading progress" to the user (see Figure 4). I added a barber pole–style progress bar that I made in a movie clip. You could just add a text tool element (that says "Loading..."), then add a Timeline Effect. To do this, right click the text tool element you created (control click on Mac) and choose > Timeline Effects > Effects and then
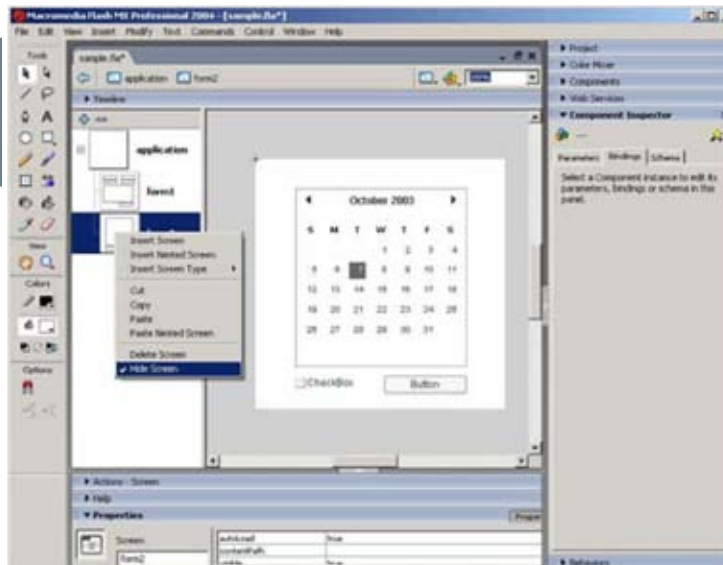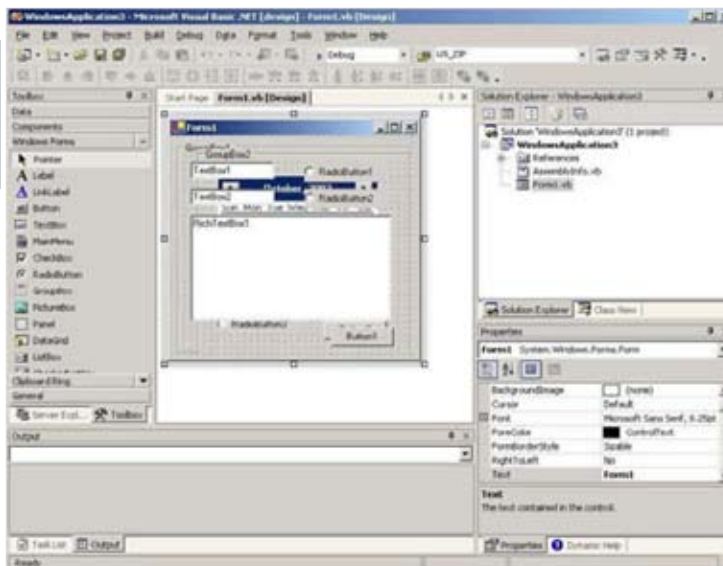
**figure 1**

**figure 2**

your selected effect to create an animation without any authoring at all.

3. Hide frmLoading by selecting it and changing the visible property in the Parameters inspector to false. This prevents the loading widget from appearing by default. Later you'll make this screen visible with ActionScript while the search is executing.

```
params.key          [Your Google Web API License Key]
params.start        0
params.maxResults   10
params.filter       true
params.restrict     [empty string]
params.safeSearch   true
params.lr           [empty string]
params.ie           [empty string]
params.oe           [empty string]
```

## Connecting to Data Sources with Components

Flash MX Professional sports a new component architecture, both for UI components and the new data components. In Flash, components aren't compiled code libraries like DLLs. Rather, they are equivalent to controls in VB or Delphi. Flash Professional adds XMLConnector and WebServiceConnector components to automate the interfaces with these two common data sources.

New component bindings allow you to define inputs and outputs for data components. Using the visual design panels built into the IDE, you wire XMLConnector or WebServiceConnector parameters directly to UI components in your forms. Flash features a Parameter tab on the Component inspector that works just like the property pages in VB.

Here's how you use these techniques to connect your application to the Google search service:

1. Drag a WebServiceConnector component from the Components panel to the frmSearch form screen. It doesn't matter where you put it; the component won't be visible in the published application. Give the component an instance name of GoogleSearch.

2. Select the GoogleSearch component and open the Component inspector. This is where you establish the web service settings. Select the Parameters tab and set the WSDLURL parameter to Google's WSDL URI (as of this writing, it's http://api.google. com/GoogleSearch.wsdl). Flash automatically queries the service and retrieves its available operations. From the operations pop-up menu, select doGoogleSearch (see Figure 5).

3. Select the Bindings tab in the Component inspector. This panel allows you to bind the web service inputs and outputs directly to a UI component in the application. Click the + icon to choose which parameters to bind. Input parameters are indicated by a right arrow and output parameters by a left arrow (see Figure 6). The Google interface requires all these input parameters, so add those one by one to the bindings list. Because you're also binding one output parameter, results.searchTime, add it to the list.

4. For each binding in the list, you need to set a UI component, a variable reference, or a literal value to pass to or from the web service. First select params.q from the binding list – the search query string to pass to the Google service. To bind it to the TextInput component on the frmSearch form, click the "find" icon in the Bound To row. Flash opens the Bound To dialog box, which displays a hierarchical list of components in your application. Find the txtQuery component instance, select it, and click OK (shown in Figure 7).

5. Fill in the rest of the input parameters for the Google service. The other parameters can take literal inputs. To define a literal input, follow the same procedure as in Step 4, except in the Bound To dialog check Use Constant Value and enter the literal into the cor-

responding text box. Listing 1 shows what values to use for each input parameter.

6. Repeat Step 4 for the results.searchTime output parameter, binding it to the lblSearchTime component instance on frmSearch. The component system allows you to format the input or output before binding. Since the searchTime parameter is just a floating-point number, format this value to make it more intelligible to users. From the Formatter pop-up menu, select Compose String. Then click Formatter Options, and enter the following string into the dialog box:

### Search time: ‹.› seconds

The parameter value will be substituted for the <.> placeholder when the component binds.

Note: By default, Macromedia Flash Player security restrictions prohibit Flash movies from accessing web services that reside outside the exact domain of the SWF attempting to access those web services. This restriction does not apply to SWFs that are run locally off your hard drive, only those that originate from a web server. A SWF can access a cross-domain web service if the server hosting that service contains a security policy file. Attaching Script Actions

Macromedia Flash MX 2004 features a new version of the application's native scripting language. ActionScript 2 is object-oriented and complies with ECMA-262 Edition 4. Still, visual programmers need to become familiar with the unique way that Flash attaches script actions to events in the application.

New behaviors make the process of triggering scripted UI component events much easier than in previous versions of Flash.

Here's how you use a behavior to trigger the web service and display its results:

1. Click the btnSearch button on frmSearch. In the Behaviors panel, click the + icon and choose Data > Trigger Data Source. In the resulting dialog box, select GoogleSearch WebServiceConnector and click OK (see Figure 8).

2. With btnSearch still selected, open the Actions panel. You'll see that Flash automatically added the code to trigger the web service when the user clicks the Search button.

3. Any web service output you don't bind in the Component inspector needs to be managed with code. Just before the trigger event, add the code in Listing 2. These event listeners allow you to intercept the web service's send and result events and perform additional operations with ActionScript.

```
on (click) {

// Trigger Data Source Behavior
// Macromedia 2003
this._parent.GoogleSearch.
addEventListener("send", onGoogle-
Search);
this._parent.GoogleSearch.addEventLis
tener("result", onGoogleSearchResult);
this._parent.GoogleSearch.trigger();

}
```

4. Add the ActionScript functions that handle these events. The code in Listing 3 does some interface work like enabling and disabling components while the search is in progress. Most importantly it iterates through the results returned from Google, formats them using HTML, and displays them in the txtResults TextArea instance (make sure you set txtResults' HTML parameter to true in the Component Inspector to display the HTML properly). If you want to change the data or formatting, consult the Web Services panel to see the output parameter schema returned from the doGoogleSearch operation.

```
on (click) {

var onGoogleSearch = function()
{
// Show the barber pole and disable
```

figure 3

figure 4
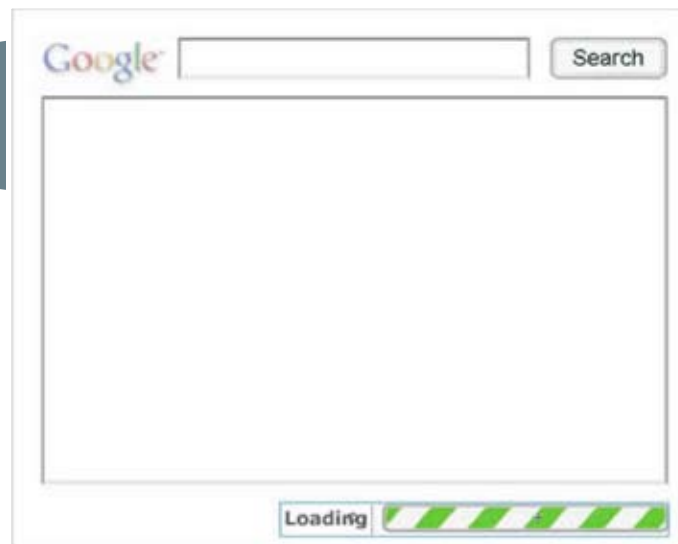
*Ian Bogost is an academic videogame researcher, game designer, and educational publisher. Ian is Assistant Professor of Literature Communication and Culture at Georgia Institute of Technology, where he teaches and researches in undergraduate and graduate programs in digital media. He is also the founder of two companies, Persuasive Games, a game studio that designs, builds, and distributes electronic games for persuasion, instruction, and activism and Open Texture, a publisher of cross-media education and enrichment materials for families. He has over a decade of experience in digital media production for film, music, games, advertising, and eBusiness. ian@persuasivegames.com*

```
search
 _root.application.frmSearch.frmLoad-
ing.visible = true;
 this._parent.txtResults.text = "";
 this._parent.lblSearchTime.text = "";
 this.enabled = false;
 this._parent.txtQuery.enabled =
false;
 }


 var onGoogleSearchResult = function()
{
 var res = this._parent.GoogleSearch.
results.resultElements; // shorthand
```
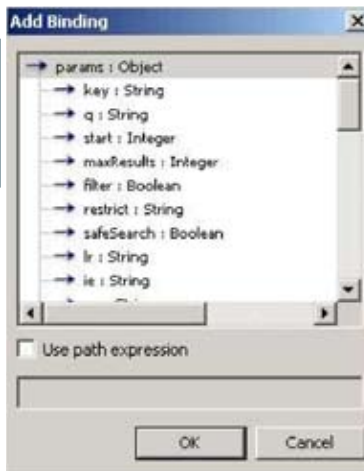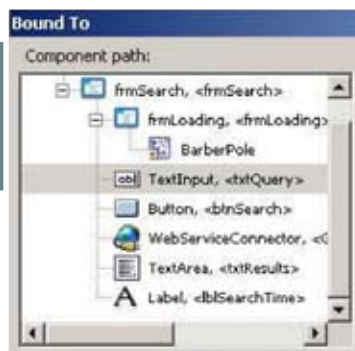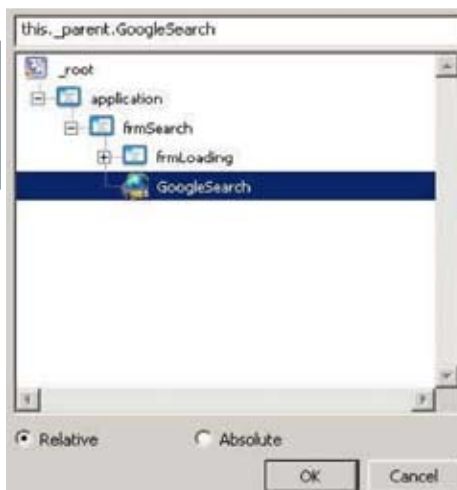
figure 6

```
for (var i = 0; i < res.
length; i++)
 {
  var s = "";
  s += "<a href=\"" +
res[i].URL + "\"><font
size=\"+1\"color=\
"#0000FF\"><u>" + res[i].
title + "</u></font></
a><br>";
  s += res[i].snippet +
"<br>";
  if (res[i].summary != "") {
s += "<font color=\"#999999\
">Description:</font>" + res[i].sum-
mary + "<br>"; }
  s += "<a href=\"" + res[i].URL +
"\"><font color=\"#009900\"><u>" +
res[i].URL + </u></font></a> - " +
res[i].cachedSize;
  s += "<br><br>";
  this._parent.txtResults.text += s;
 }


 // Hide the barber pole and reenable
the search
 _root.application.frmSearch.frmLoad-
ing.visible = false;
 this.enabled = true;
 this._parent.txtQuery.enabled = true;
 }


 // Trigger Data Source Behavior
 // Macromedia 2003
this._parent.GoogleSearch.
addEventListener("send", onGoogle-
Search);
 this._parent.GoogleSearch.addEventLis
tener("result", onGoogleSearchResult);
 this._parent.GoogleSearch.trigger();


}
```

figure 5

figure 7

figure 8

You're ready to publish your appli-
cation. Publishing is the equivalent of
building or compiling in Visual Studio and
other IDEs. Select File > Publish or just
press Control-Enter to publish using the
default settings.

Now try out some Google searches!

## Benefits of Flash

Let's review the benefits of Flash MX
Professional as a visual programming
environment:

• More like the visual programming
environment you know. There's no deny-
ing that Flash has a long heritage as a
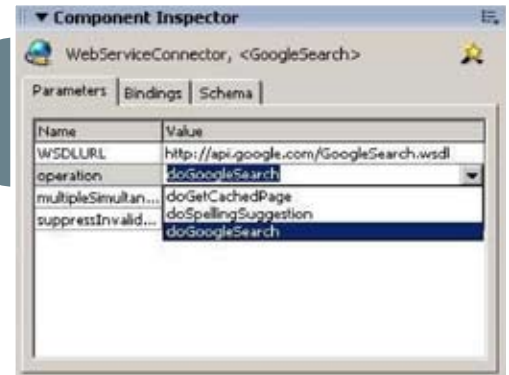
design and animation tool. With Flash
MX Professional visual programmers can
build visual applications that can – but
don't need to – take advantage of the
rich media capabilities of Flash. Forms,
object-oriented ECMA-262–compliant
ActionScript, components, and events
make Flash programming more like VB
programming than ever before. With
unique rich media capabilities at your
fingertips, Flash offers a lot more than
traditional visual programming tools.

• Rich applications. Even if you're not a
designer, you can take advantage of easy-
to-use Timeline effects and behaviors to
add motion graphics to your form appli-
cations. Try doing this in Visual Basic!

• True cross-platform, cross-device com-
patibility. Flash content can be viewed
on almost any platform, including web,
wireless, embedded devices, and (with
Macromedia Central) on the desktop.
Flash code is more reusable than Java
code. You can move Flash applications
among platforms without significant
redesigning or recoding. For instance,
converting the Google search applica-
tion so it works on mobile devices or
handhelds that support Flash Player
7 requires nothing more than resizing
or rearranging the components on the
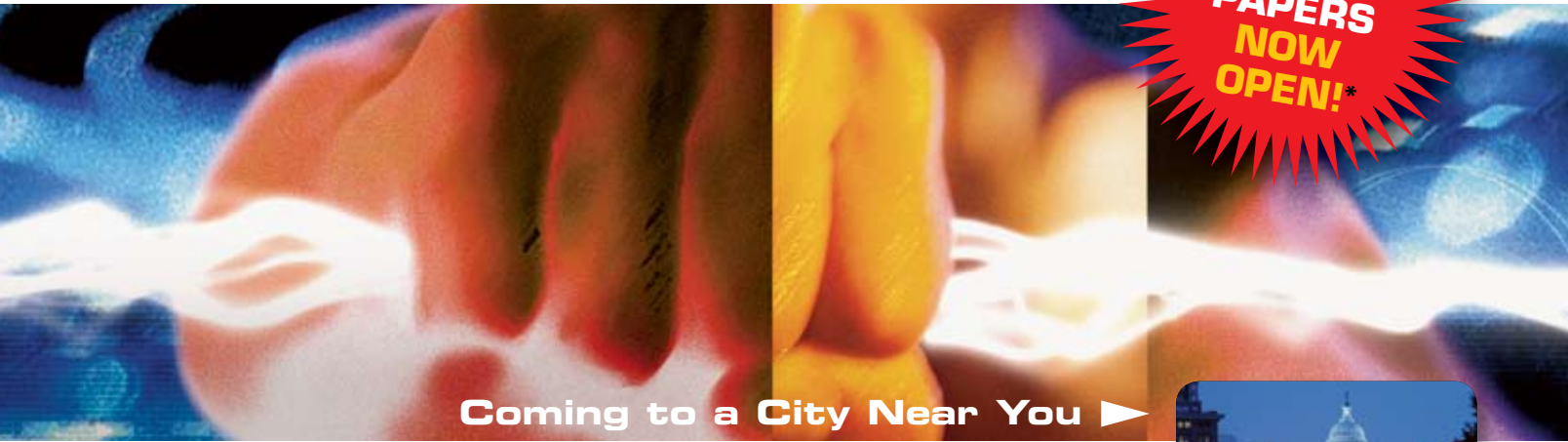Stage to fit a smaller screen size.

Macromedia Flash MX Professional
is not a replacement for a Windows
application IDE like Delphi or Visual
Studio. However, visual programmers
who want to author rich applications
for deployment online, on handhelds,
or on devices will discover familiar
scenery in this new version of Flash.

## References

Google API: www.google.com/apis/
To examine the entire project, down-
load the FLA source file:

• google_web_api.zip (1.4 MB)

# Generating Thumbnail Previews Using Progressive FLVs

*A workaround involving loading a non-existing FLV*
**by stefan richter**

We probably all know by now how to play a progressive FLV without Flashcom:

```
nc = new NetConnection();
nc.connect(null);
ns = new NetStream(my_nc);
ns.setBufferTime(0.1); // small buffer
to limit motion in preview
my_video.attachVideo(ns); // my_video
is a video object on stage
ns.play(thefile);
```

To turn this example into a thumbnail preview of the actual FLV you could do this:

```
ns.onStatus = function (info) {
    if(info.code == "NetStream.
Buffer.Full"){
        ns.pause();
    }
};
```

There's even a way of supressing the sound resulting in a silent preview:

```
// soundholder is a simple movieclip
on stage
soundholder.attachAudio(ns);
audio = new Sound(soundholder);
audio.setVolume(0);
```

You don't have to be a rocket scientist to take this example further using a 'play' button and kicking the video plus sound into life upon click.  But what's not so obvious is the fact that even if you pause the video, the FLV file will load in its entirety in the background, potentially clogging up a user's connection. This is even more of an issue if you want to display many previews at once.

I found out about this behavior using a neat little program called Netlimiter (http://www.netlimiter.com/). It allows you to see which applications are using what kind of bandwidth and it also enables you to throttle a fast connection on a per application basis, emulating dialup users for example.

I thought it would be easy enough to stop the FLV downloading by killing the NetConnection or close the NetStream similar to how this would work using Flashcom. Unfortunately I had no success with that approach, the FLV would continue downloading come what may.

Fortunately the workaround was surprisingly easy: try loading a non-existing FLV. Here's the code I used:

```
ns.onStatus = function (info) {
    if(info.code == "NetStream.
Buffer.Full"){
        my_video.attachVideo(null);
        ns.pause();
        ns.play("nonexist.flv");
    }
};
```

This seems to do the trick quite nicely, showing one frame of the previously loaded FLV without clearing the video object. A typical preview consumed only about 5 to 10 KB of data -- a big saving over a whole flv file which is potentially several MB in size.

The source for the finished example is here: http://www.flashcomguru.co.uk/downloads/flv_preview.zip

The sourcecode is a bit messy but I didn't have time to clean it up.

Let me emphasize again: if you only have a single FLV file on your page then the background download can be a great feature and even improve the user experience. But if you want to preview many different FLV files on one page then I recommend you use my approach above.

Hope this helps someone. ⌒

*Stefan Richter is a certified Flash Developer who has been involved with Flash Communication Server since its early days. Shortly after relocating from Germany to the UK, he was the driving force behind Europe's first Flashcom-centric hosting company flashcomstudio.com and now runs his own popular community at flash-comguru.com. Stefan@flashcomguru.com*

## "Netlimiter allows you to see which applications are using what kind of bandwidth"

A new tool for MX professional developers and designers...

MX

# DrawingArt

**d**rawingArt is a reference portfolio made in Flash-XML by Slovenian Web artist Miroslav Koljanin. He started his mission in Web design and development of advanced Web sites two years ago and since then he has built and designed a lot of Web sites using Flash-XML, HTML, PHP, ASP, CFM, MySQL, and CSS technologies. The DrawingArt Web site presents only picked-up works so that visitors can get an impresion of the knowledge and experiences of that Web designer. The design itself presents a bit of a retro/old look with some techy use of buttons and its content showcase. We can also expect a new redesign of the DrawingArt page soon in the first half of 2006. www.drawingart.org

<code />

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